



Deep sea nature-based solutions to climate change

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~66% of Earth's surface



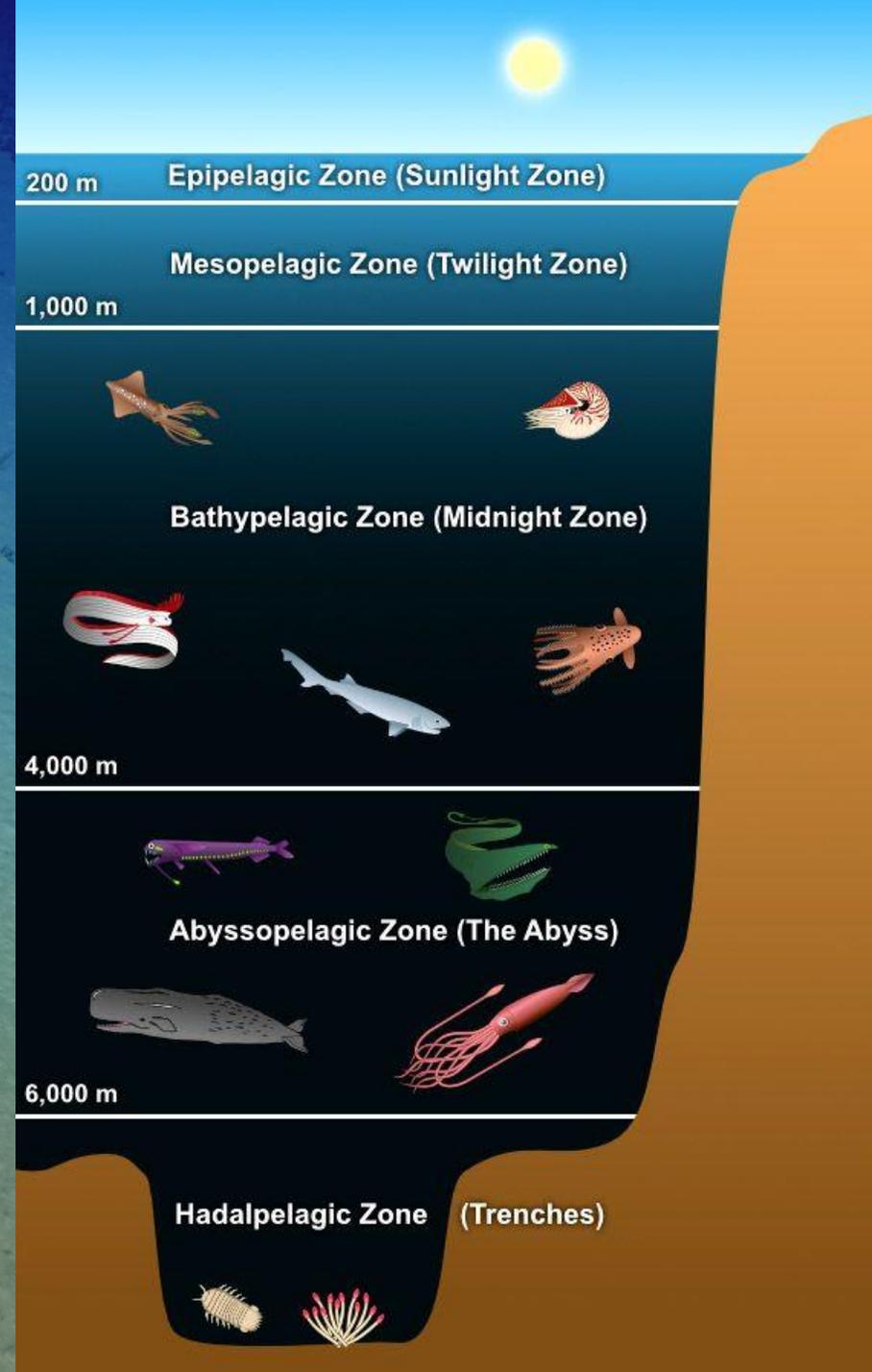
Climate Regulating

95% of livable habitat

Biodiversity value

The Deep Sea: Earth's Hidden Giant

- Deep sea everything below 200m
 - Average Depth of the oceans: 3,7 km
- Interconnected
 - Largest migration on Earth
- Diverse Habitats
 - Hydrothermal vents & Seeps
 - Seamounts & Knolls
 - Ridges, Plains, and Valleys



200 m Epipelagic Zone (Sunlight Zone)

Mesopelagic Zone (Twilight Zone)

1,000 m

Bathypelagic Zone (Midnight Zone)

4,000 m

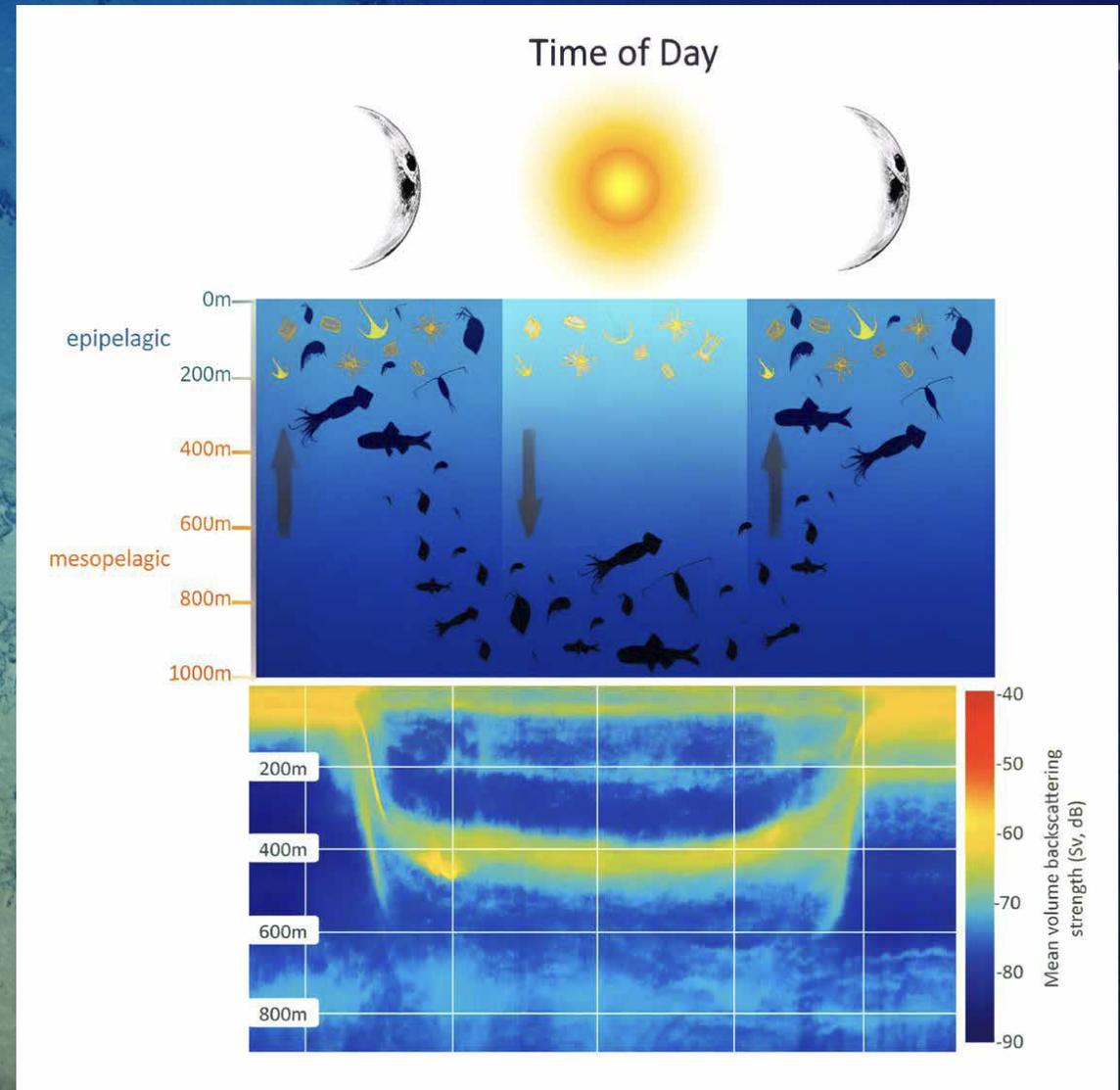
Abyssopelagic Zone (The Abyss)

6,000 m

Hadalpelagic Zone (Trenches)

The Deep Sea: Earth's Hidden Giant

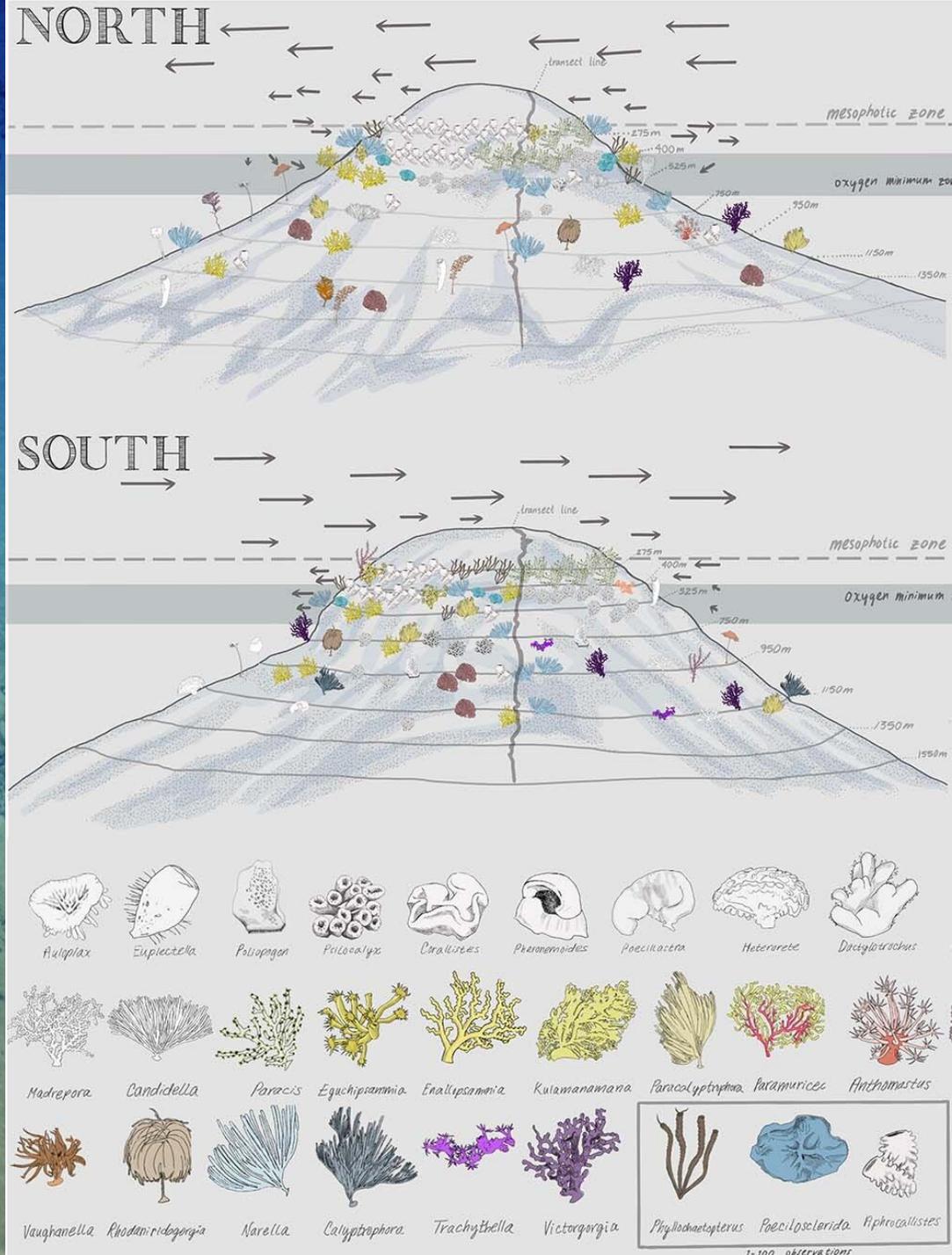
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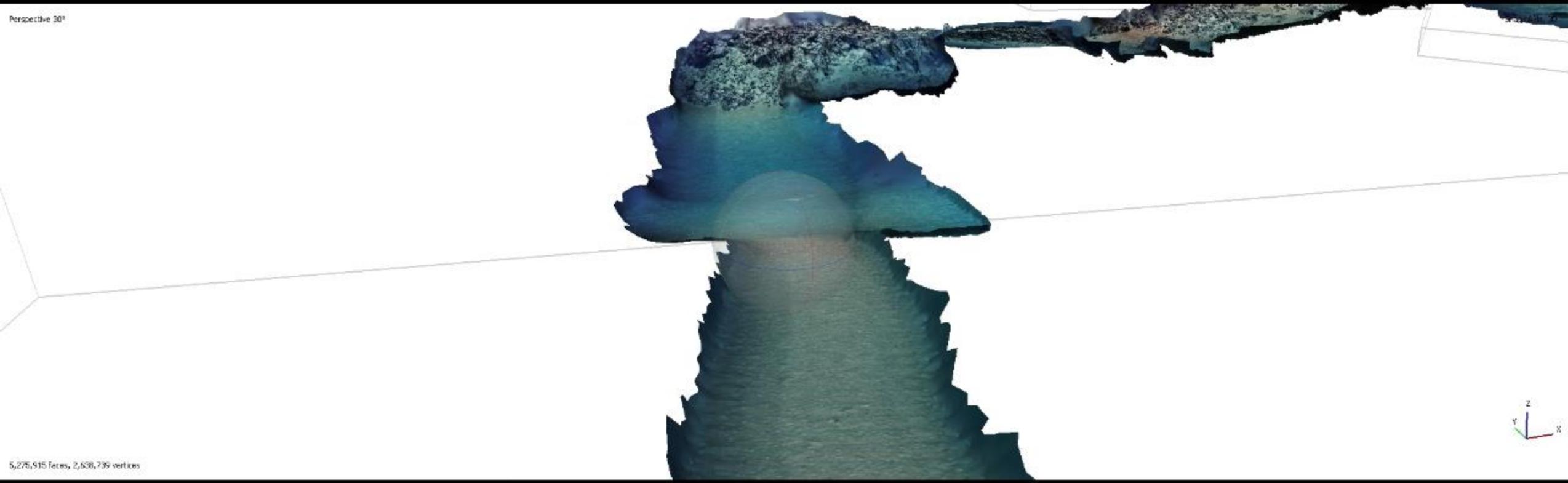


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Perspective 30°



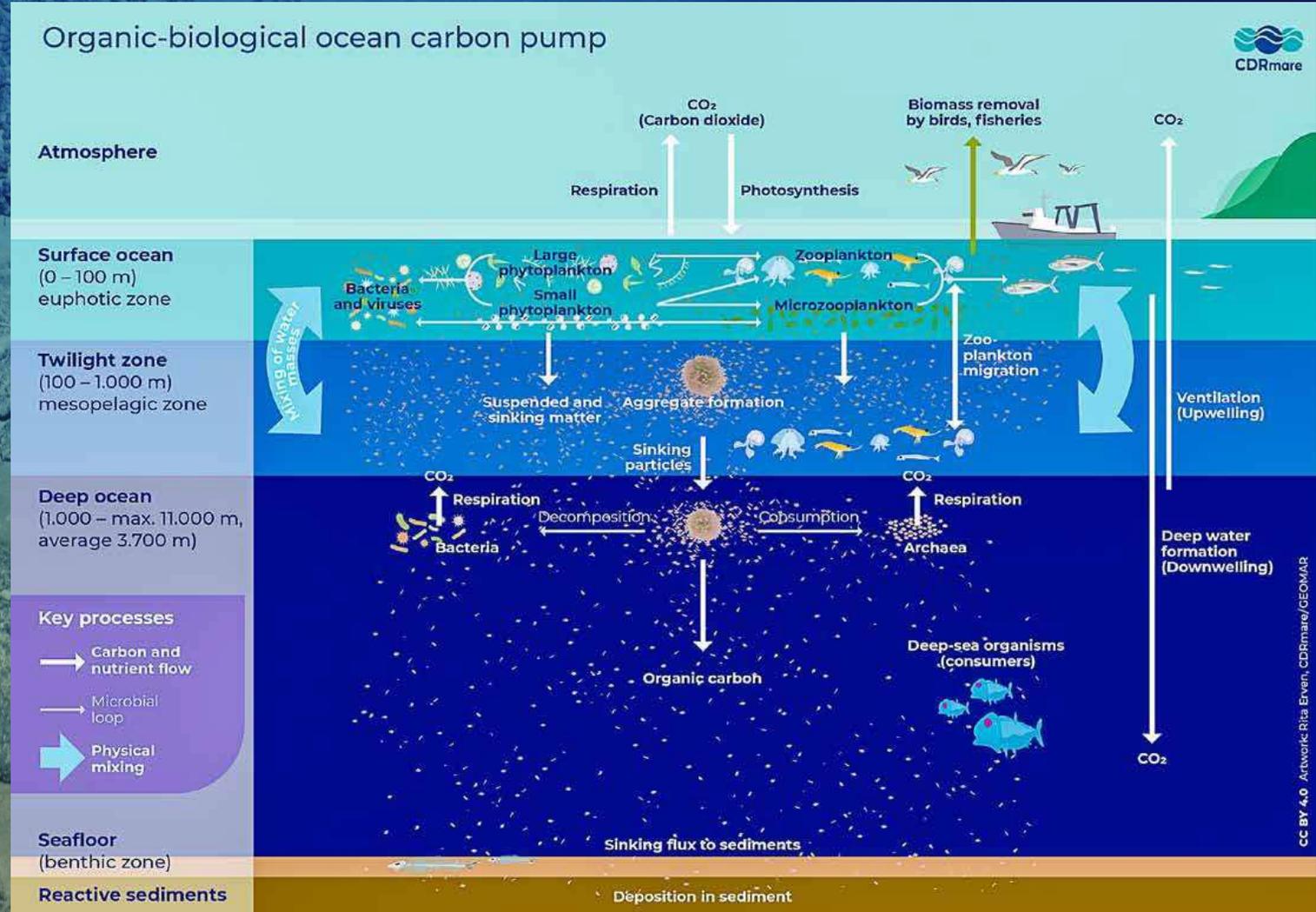
5,276,915 faces, 2,638,739 vertices

Climate Regulation

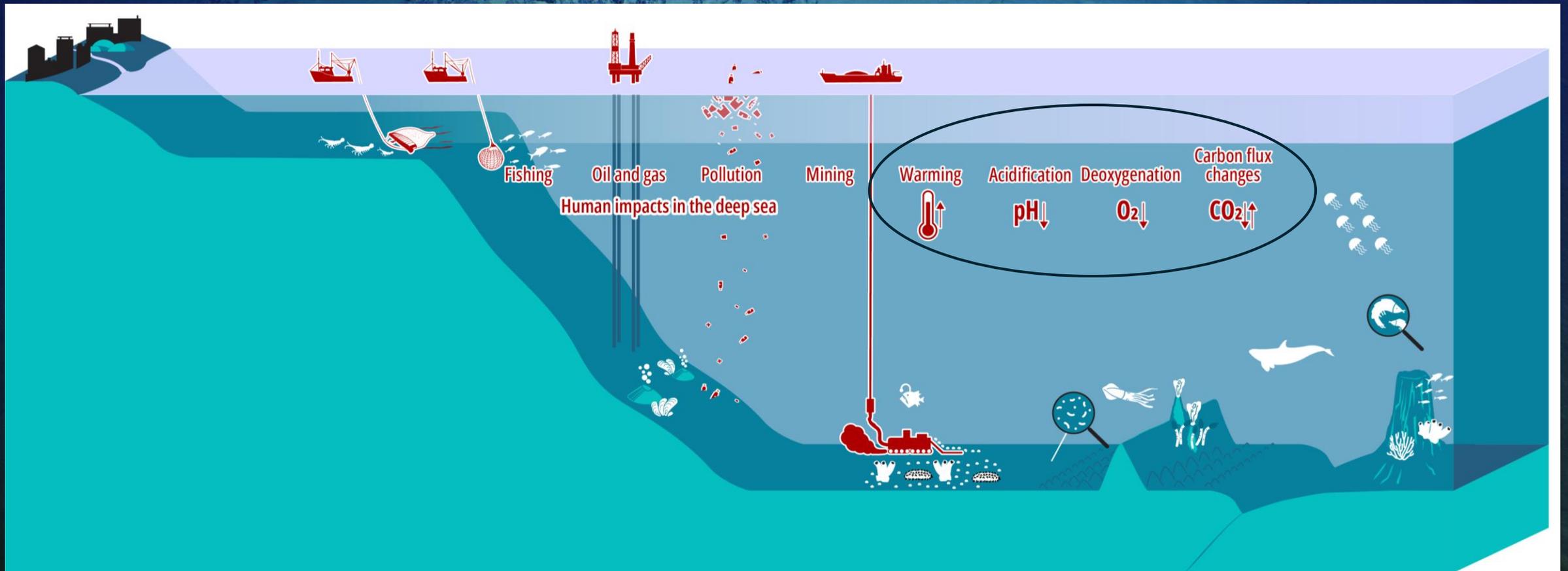
- Storing ~ 30% of the yearly CO₂ emissions

- Biomass
- Water
- Sediment
- Rocks

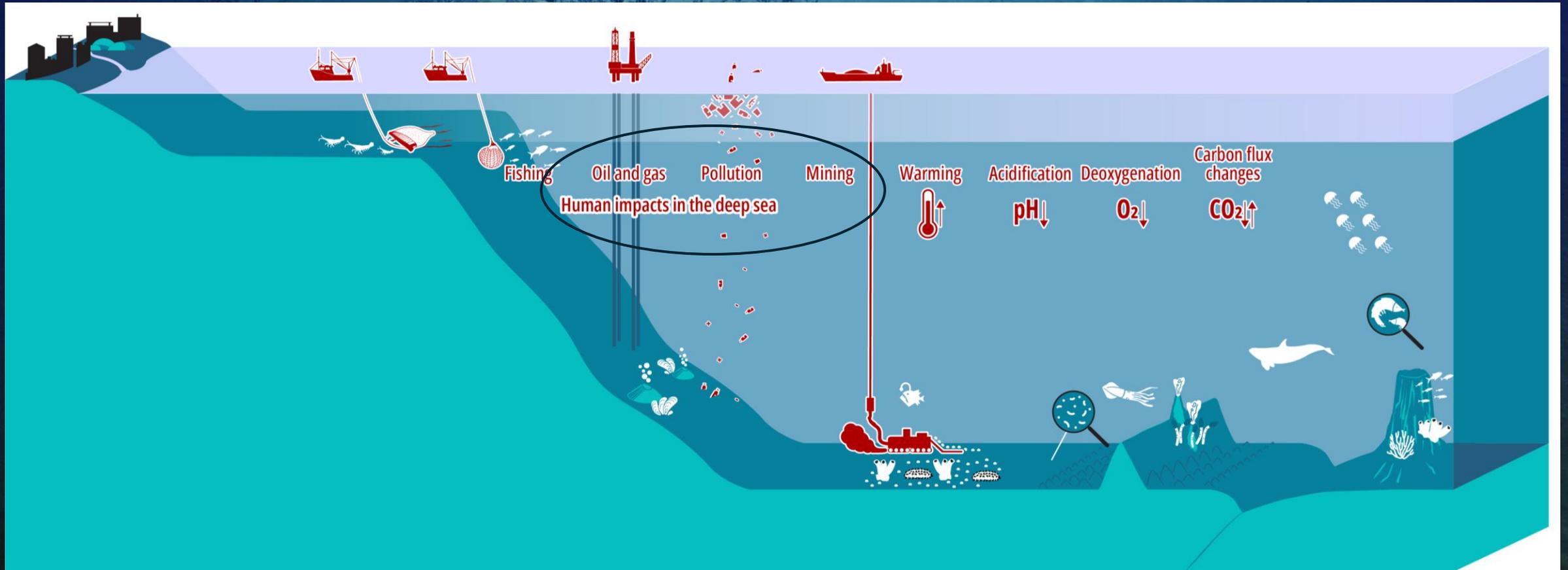
- Absorbs over 90% of the excess heat generated by human-induced climate change



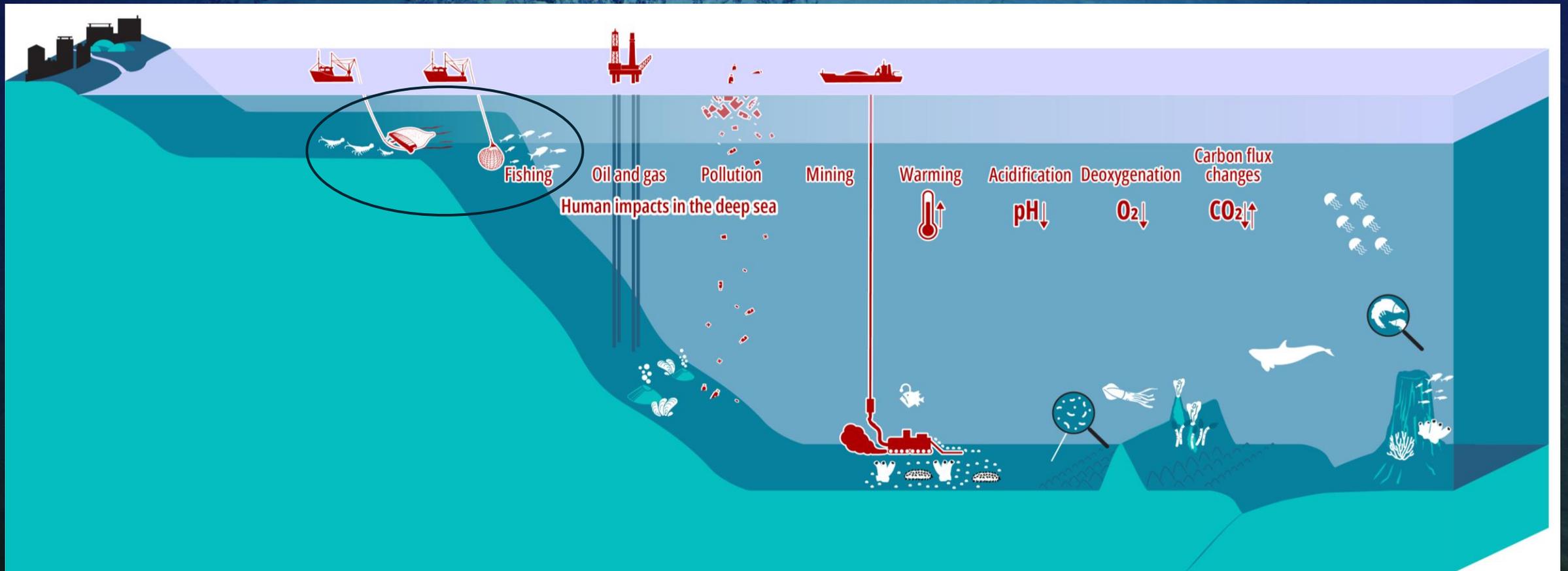
Threats



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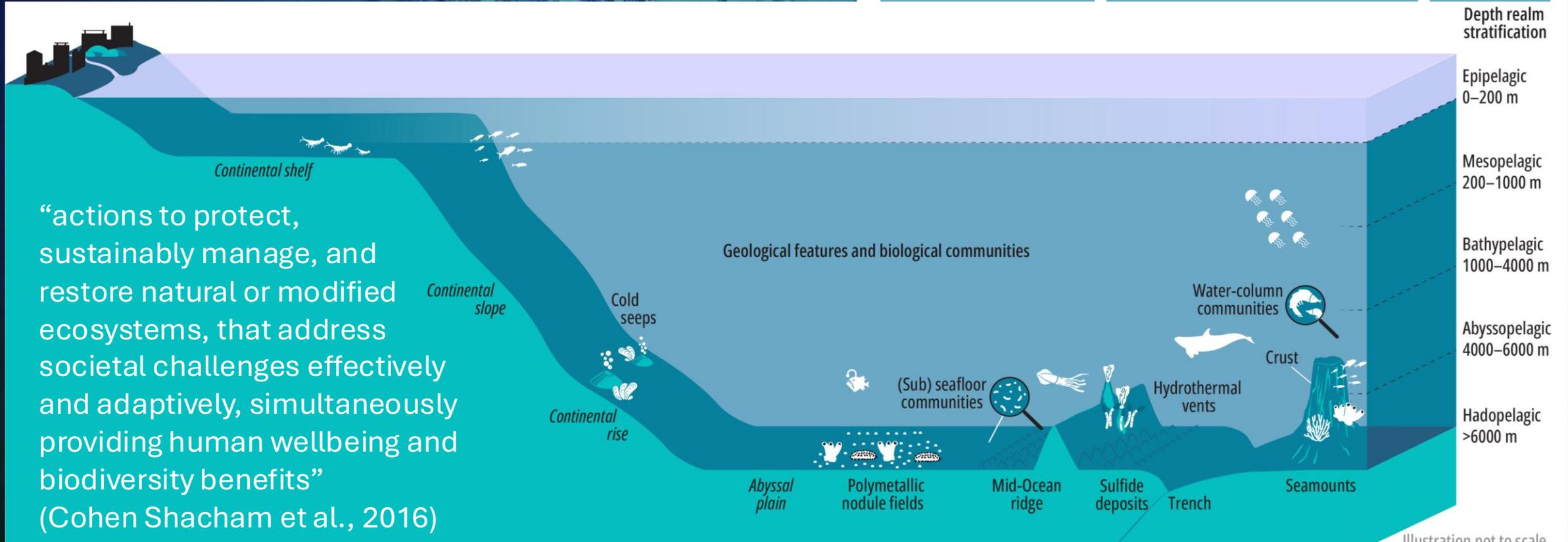
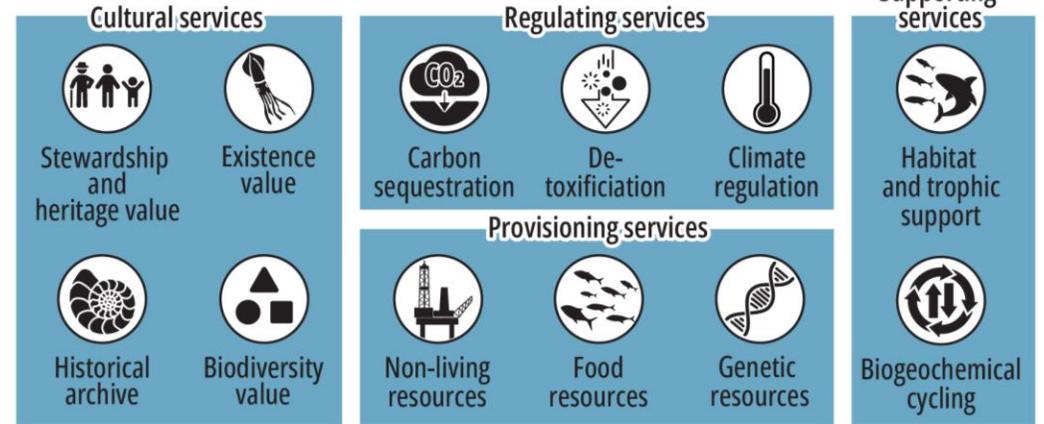


Threats



Beyond Carbon: A Holistic View

Ecosystem services



What can be done

- International agreements (Paris Agreement, SDGs, High Seas Treaty).
- Tools: Marine Protected Areas, Environmental Impact Assessments, Fisheries Management, Baseline Studies, Pollution Reduction.
- Importance of governance and cooperation — it belongs to all humanity.



Take-Home Message

- The deep sea is vital to life on Earth.
- It already protects us from the worst of climate change.
- But its ability to help us depends on how we protect it.
- The best nature-based solution is to leave the deep sea alive and thriving.



Thank you very much
for your Attention!

■ Ocean-Climate Intervention Method

Color-coded Ocean Changes

 Biogeochemical changes	 Animal responses
 Light availability changes	 Altered food supply

