

TOPIC: MARINE AQUATIC BIOMES

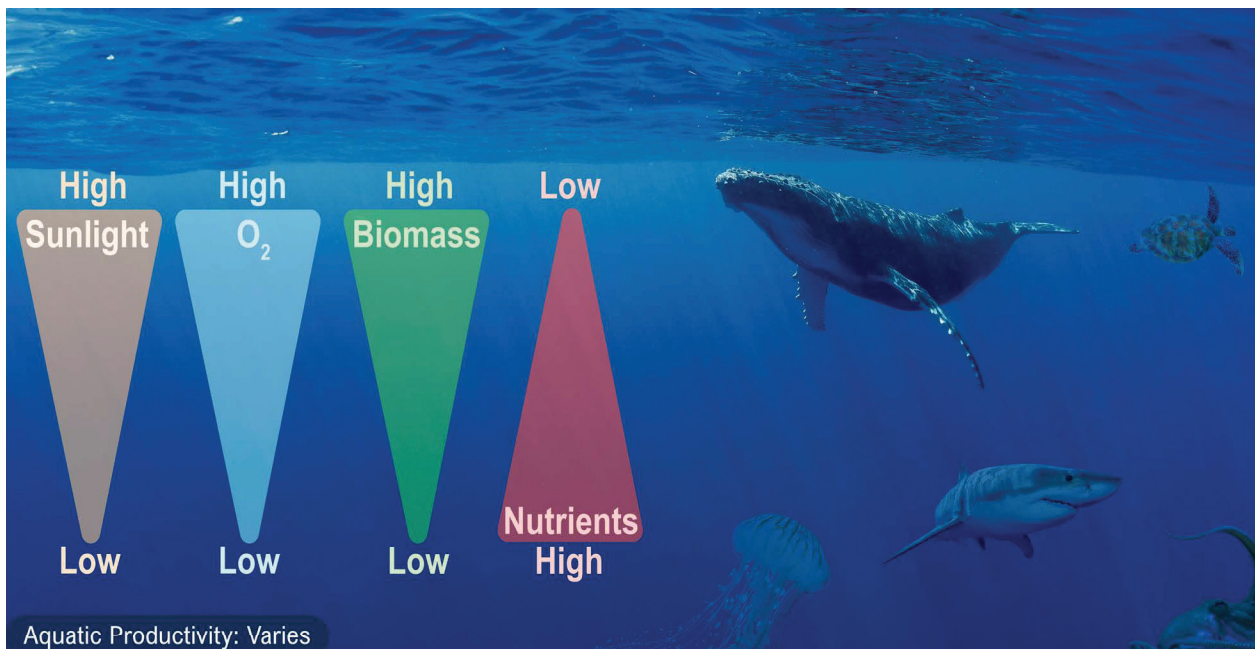
Intertidal Zones

- ◆ **Intertidal Zone:** coastal shore area between the low & high _____.
- Periodically exposed to air & _____ by ocean water (tides occur twice a day).
- Oxygen & nutrient levels replenished with each high tide.



Marine Pelagic Zone

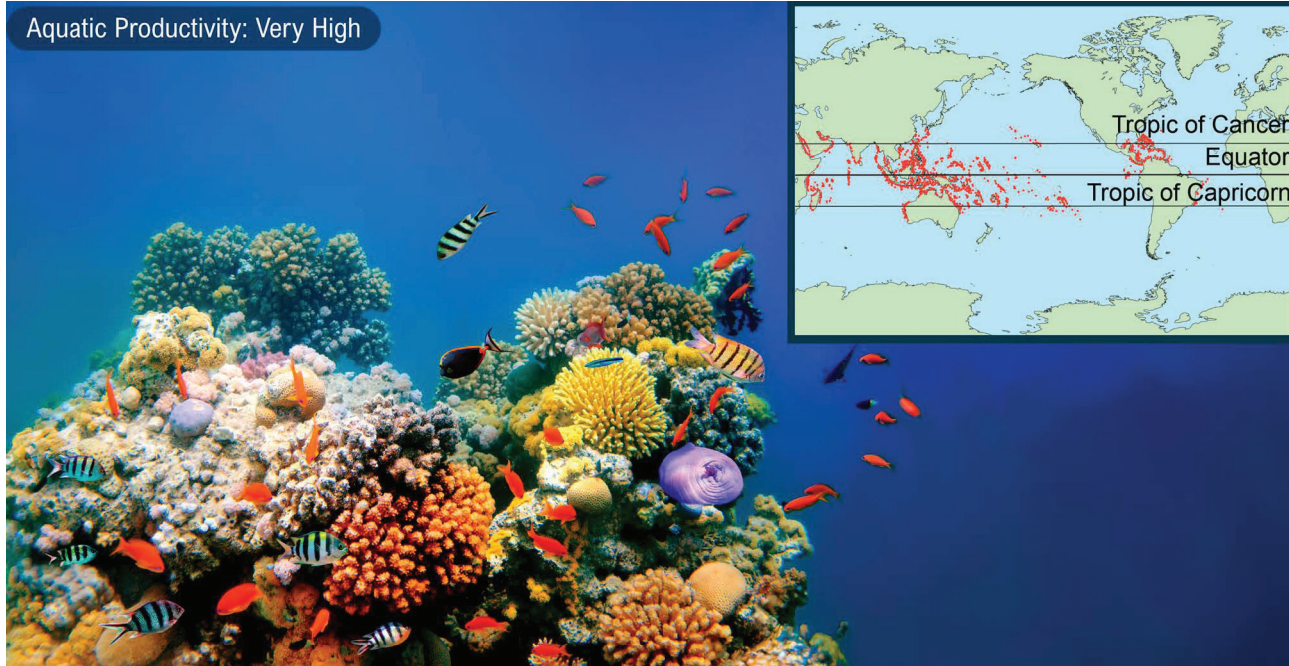
- ◆ Also known as the “open ocean”; consists of entire ocean from surface down to just above ocean floor.
- Generally, a *decreasing* biomass gradient but _____ nutrient gradient exists with depth.



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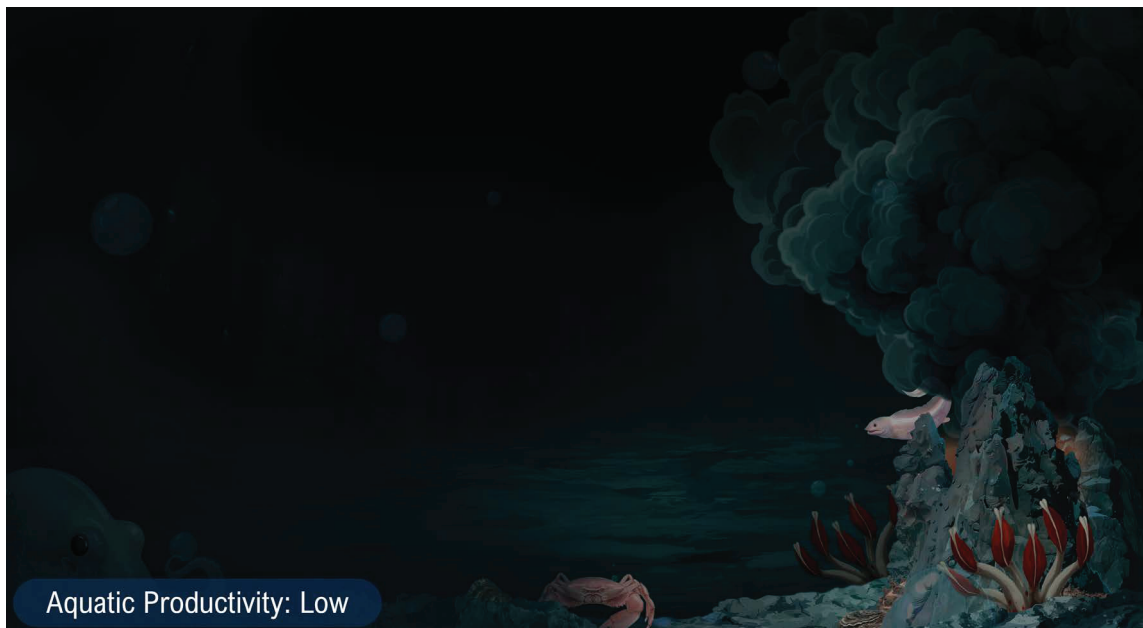
Coral Reefs

- ◆ Ridges formed by the CaCO_3 exoskeletons of _____; located in shallow, warm tropical & subtropical waters.
 - Have _____ biodiversity of all aquatic biomes (known as “rainforests of the sea”).



Marine Benthic Zone

- ◆ **Benthic Zone:** consists of the entire ocean _____.
 - *Most* of it receives no sunlight; however, deep sea *hydrothermal* _____ provide unique source of energy.
 - Nutrient-_____, due to decomposing dead organisms (detritus) falling to the sea floor (marine “snow” effect).



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EXAMPLE

Which of the following marine biomes could experience turnover in the spring & fall?

- | | |
|---------------------|-------------------------|
| a) Pelagic zone. | c) Coral reefs. |
| b) Intertidal zone. | d) Marine benthic zone. |

PRACTICE

In which marine biome would you expect to find organisms that are adapted to withstand extremely high temperatures & a complete lack of sunlight?

- | | |
|---------------------|-------------------------|
| a) Pelagic zone. | c) Coral reefs. |
| b) Intertidal zone. | d) Marine benthic zone. |

PRACTICE

Which of the following marine zones experiences the most fluctuation in temperature?

- | | |
|---------------------|------------------|
| a) Pelagic zone. | c) Neritic zone. |
| b) Intertidal zone. | d) Photic zone. |