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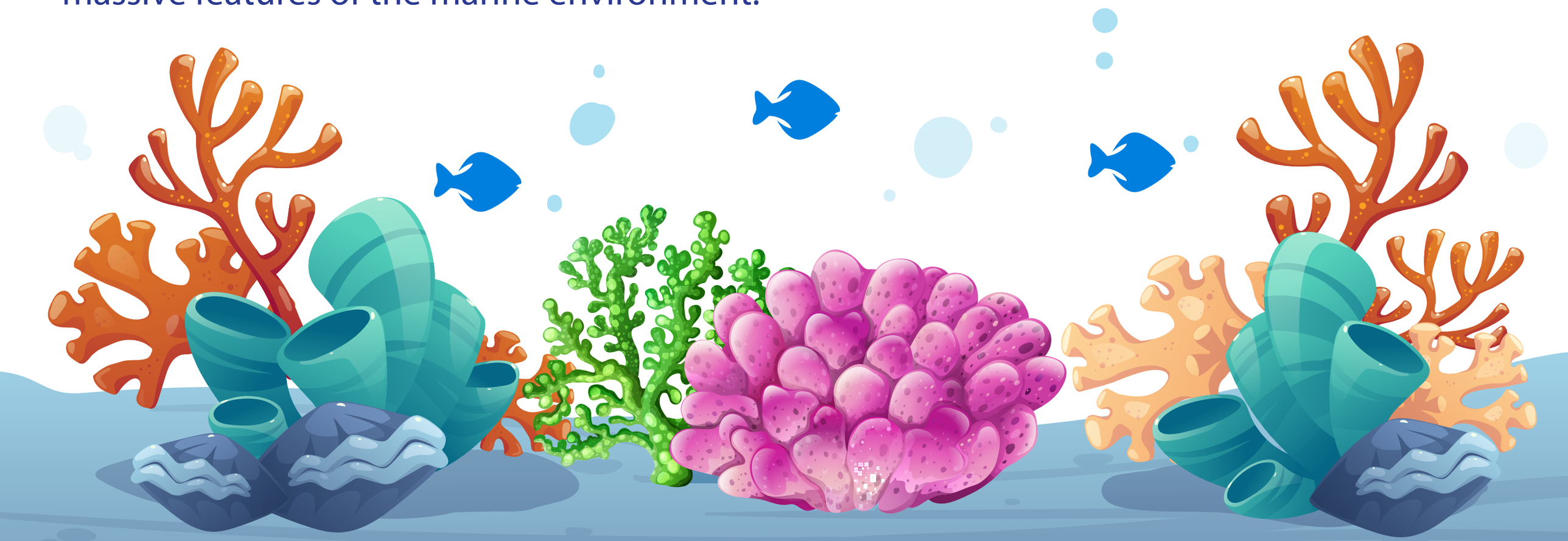
Coral Reefs

What are coral reefs?

- Coral reefs are large underwater structures composed of the skeletons of colonial marine invertebrates called coral.

- The coral species that build reefs are known as hermatypic, or "hard," corals because they extract calcium carbonate from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies.

- Each individual coral is referred to as a polyp. Coral polyps live on the calcium carbonate exoskeletons of their ancestors, adding their own exoskeleton to the existing coral structure. As the centuries pass, the coral reef gradually grows, one tiny exoskeleton at a time, until they become massive features of the marine environment.



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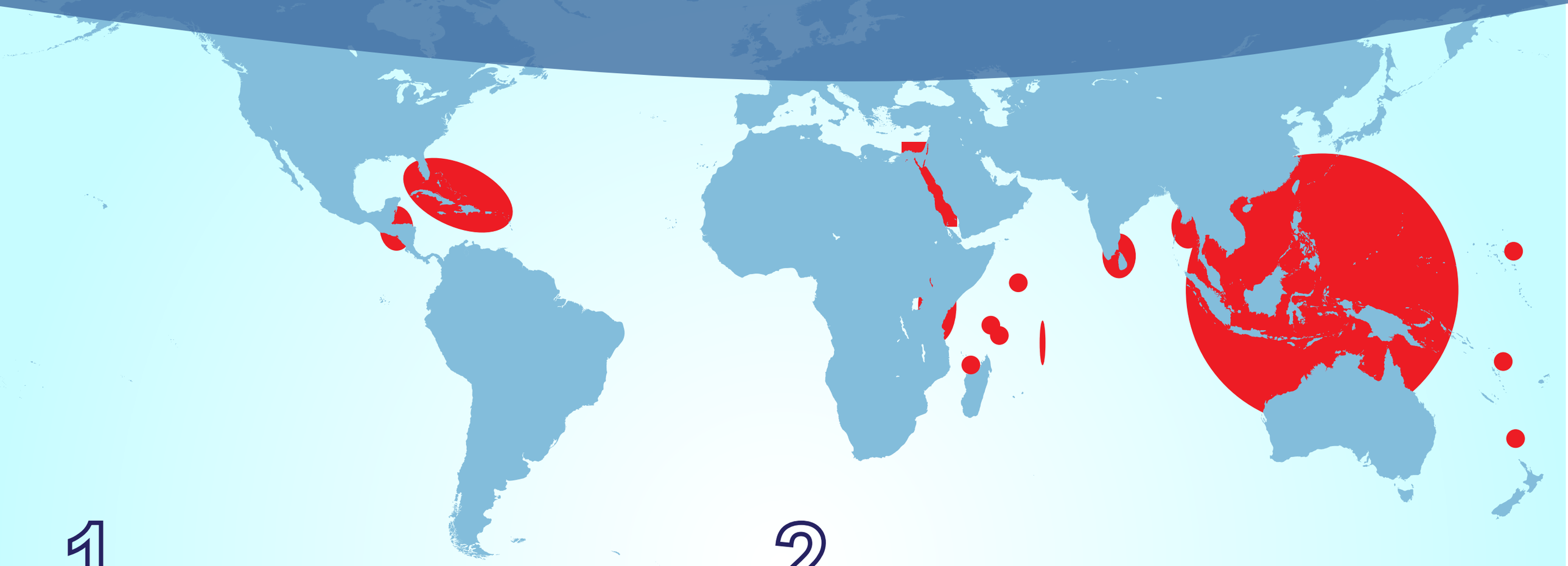
Where are coral reefs found?



1 Corals can be found throughout the world's oceans, in both shallow and deep water.

2 However, the reef-building corals that rely on a symbiotic relationship with algae need shallow, clear water allowing light penetration for photosynthesis.

3 Stony corals also require tropical or subtropical temperatures, which exist in a band 30 degrees north to 30 degrees south of the equator.

4 The major reef formations in India are restricted to the Gulf of Mannar, Palk Bay, Gulf of Kutch, Andaman and Nicobar Islands and the Lakshadweep islands. While the Lakshadweep reefs are atolls, the others are all fringing reefs. Patchy coral is present in the inter-tidal areas of the central west coast of the country.

Why are coral reefs important?

- Coral reefs are among the most biologically diverse and valuable ecosystems on Earth. An estimated 25 per cent of all marine life, including over 4,000 species of fish, depend on coral reefs at some point in their life cycle.

- Healthy coral reefs provide:

- An estimated 1 billion people worldwide benefit from the many ecosystem services coral reefs provide including food, coastal protection, and income from tourism and fisheries.

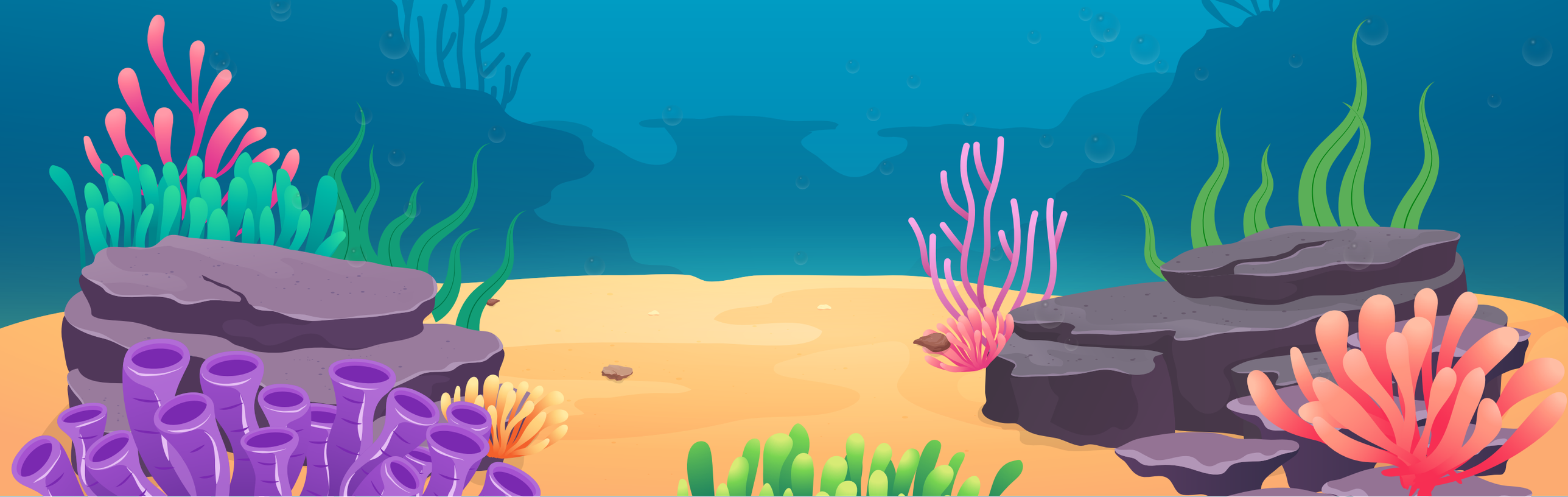
Habitat, feeding, spawning, and nursery grounds for over 1 million aquatic species, including commercially harvested fish species.

Food for people living near coral reefs, especially on small islands.

Recreation and tourism opportunities, such as fishing, scuba diving, and snorkelling, contribute billions of dollars to local economies.

Protection of coastal infrastructure and prevention of loss of life from storms, tsunamis, floods, and erosion.

Sources of new medicines that can be used to treat diseases and other health problems.



Threats to coral reefs

- Physical damage or destruction
- Pollution that originates on land: Sedimentation, Nutrients, Pathogens, Toxic substances and Trash & micro-plastics.
- Overfishing
- Coral harvesting