WHY ARE CORAL REEFS SO IMPORTANT?

Coastal Protection

Reefs occupy less than 0.2% of the seabed, but they inhabit more than 150,000 km of coastline in over 100 countries and territories. Including its territories in the Pacific and Caribbean, the U.S. has over 3,100 km of reef-lined shoreline. In 2019, the estimated annual flood risk reduction provided by U.S. coral reefs was more than 18,000 lives and $1.8 billion.

Reefs effectively absorb and dissipate much of the incoming wave energy. This protects coastlines from strong currents as well as powerful waves, such as those generated during storms and hurricanes, and even from tsunamis. This, in turn, provides protection against coastal erosion, property damage, and loss of life.

Reefs also help provide sand that replenishes beaches naturally.

Habitat

Healthy reefs support more species per unit area than any other marine environment. About 4,000 species of fish, 800 species of hard corals, and hundreds of other species can be found within these ecosystems. Coral reefs are essential spawning, nursery, breeding, and feeding grounds for numerous species.

Food Resource

More than 275 million people live within 10 kilometers of coastline and within 30 kilometers of coral reefs. Almost 850 million people, or one-eighth of the world's population, live within 100 kilometers of a coral reef and likely benefit from the food source provided by the fish that grow and live on coral reefs. In many developing countries near the coasts, fish provide an important source of protein.

Many commercially important aquatic species, like grouper, snapper, and rock lobster, depend on coral reefs for food and shelter. Half of all U.S. fisheries depend on healthy coral reefs. An estimated $28.7 billion in sales come from commercial and recreational fishing industries in the state of Florida where most wild fish are reef raised.

Earthlabs: Corals – Lab 1
https://serc.carleton.edu/eslabs/corals/lab1.html

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Tourism & Recreation

Millions of people visit the Florida Keys annually, and 60% of Hawaii's tourist income comes from reef visitors. Scuba divers and snorkelers visit reefs for dive tours, and more tourists visit the nearby beaches protected by these reefs. Local reef economies are supported as visitors take recreational fishing trips, stay in hotels, and eat at restaurants.

Biological Wealth & Medicine

Many species, particularly slow-moving or stationary species, in coral ecosystems produce chemical compounds for defense or attack. Bioprospecting, the term for searching out potential new pharmaceuticals, has been done on terrestrial (land) environments for centuries. In fact, most drugs in use today come from nature – consider aspirin was derived from the willow tree and penicillin from common bread mold. However, bioprospecting is still relatively new in the marine environment. Creatures found in coral ecosystems are important sources of new medicines being developed, including those used to treat HIV and cancer.