



**Q&A**

**1. How much it rains in the ocean?**

Atmospheric precipitation is the most important element of the water balance of the oceans, seas, continents, river basins, islands, nations and regions. Water vapor, evaporated from the ocean and land surfaces is the main source of atmospheric precipitation. Precipitation falling on the Earth's land surface is estimated as 800 mm. Atmospheric precipitation is the main incoming term of the world ocean water balance equation. In total, there is 4,58,000 km<sup>3</sup> of water that falls on the ocean surface during a year as atmospheric precipitation. This is ten times that of the water income from continents and islands to the ocean. This amount is 90% of the total evaporation from the World Ocean water surface. Least precipitation, 5300 km<sup>3</sup>/year, falls on the Arctic Ocean. In relation to the other oceans the annual depth of precipitation is very small here, only 361 mm.

**2. Why the ocean appears green in some places?**

The "color" of the ocean is determined by the interactions of incident light with substances or particles present in the water. The Atlantic off the East Coast of the United States usually appears green. This is due to the presence of algae and plant life. The most important light-absorbing substance in the oceans is chlorophyll, which phytoplankton use to produce carbon by photosynthesis. Chlorophyll, a green pigment, makes phytoplankton preferentially absorb the red and blue portions of the light spectrum and reflect green light. Ocean regions with high concentrations of phytoplankton have shades of blue-green depending upon the type and density of the phytoplankton population there. The basic principle behind the remote sensing of ocean color from space is that the more phytoplankton is in the water, the greener it is. The Gulf of Mexico along the Florida borders is called the emerald coast because it appears green in colour.

**Tsunami attack in Indonesia**

A tsunami triggered by a powerful 7.5 magnitude earthquake off the coast of the Indonesian island of Sulawesi crashed into at least two cities, including the popular tourist resort of Palu, killing almost 1000 people and injuring some 540 others. The tsunami, up to 6 metres high, swept away houses in Palu, the capital of central Sulawesi province. It also struck a smaller town, Donggala, closer to the epicenter of the earthquake which is 80 kilometres away. The National Disaster Mitigation Agency put the official death toll at 384 based on hospital reports, almost all of them in the hard-hit city of Palu. Almost 7,00,000 people live in Palu and Donggala. The Sulawesi capital is built around a narrow bay which supposedly intensified the tsunami's force as it crashed into the tight inlet. The wave damaged several buildings, including a mosque. The massive tremors could be felt hundreds of kilometres away from the epicenter. Strong aftershocks continued to be felt on Saturday morning. Such shallow quakes tend to be more destructive. Experts say the tremor was more powerful than the series of quakes that killed hundreds on the Indonesian island of Lombok in July and August 2018. Another smaller earthquake had struck the Palu area earlier. Indonesia, which is located on the "Ring of Fire" is prone to earthquakes. In December 2004, a magnitude 9.1 earthquake off the island of Sumatra triggered a tsunami across the Indian Ocean, killing nearly 2,30,000 people in 13 countries, including more than 1,20,000 in Indonesia.



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**3. Which is the largest mammal living in deep ocean?**

Blue whales are thought to be the largest mammal ever to live on the Earth. They reach lengths up to about 100 feet and weights of an amazing 100-150 tons. Blue whales are a type of baleen whale known as a rorqual. Despite their huge size, baleen whales like blue whales feed on small organisms.



The blue whale feeds primarily on krill and may eat 2 to 4 tons of krill per day during their feeding season. Their skin is a beautiful gray-blue color, often with a mottling of light spots. The second-biggest animal in the ocean is another baleen whale- the fin whale. At an average length of 60-80 feet, the fin whale is still pretty big, but not nearly as big as the blue whale.

Blue whales are found in North Atlantic, North Pacific oceans and in Southern Hemisphere and vicinity to Northern Indian Ocean, but their populations are not as large as they used to be due to whaling. After the invention of the grenade-tipped harpoon in the late 1800's, blue whales were subjected to relentless hunting. Blue whale populations had declined so much that the species was given protection from hunting in 1966 by the International Whaling Commission. Today, there are an estimated 10,000-15,000 blue whales in the world. Blue whales are much too large to be kept in captivity. To have a chance of seeing a blue whale in the wild, you could go on a whale watch off the coast of California, Mexico and Canada.

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