

Coral bleaching

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Coral Bleaching Imagine finally being able to afford a trip to experience the sandy beaches and beautiful turquoise waters of the Caribbean.

You have been saving for years, but small setbacks keep occurring. The air conditioner breaks and you have to buy a new one; your son's college tuition went up for the second time, but finally you can experience the fine, white sand in between your toes, the sweet scent of the salty air, and the opportunities to snorkel and swim. But imagine your surprise when you go snorkeling and all of the coral reefs have died? Where are the colorful fish, beautiful coral polyps, or other aquatic life, such as sea turtles that all of the brochures, websites, and pictures showed? Through your mask you can only see dead, grey, drab and fishless coral reefs due to coral bleaching. Coral bleaching is a phenomenon that has occurred because of the increased water temperatures. Even though coral reefs appear to be rocks, coral reefs, made up of coral polyps, are living invertebrates.

Coral polyps need food and nutrients to grow. Inside coral polyps are small algae bodies that feed the coral. When the water temperatures rises, the algae dies, starving the coral polyps (Spotts). Coral bleaching is a huge problem that affects the entire ocean food web, humans who rely on coral reefs for shoreline protection, and humans who rely on tourism of the coral reefs. Coral bleaching threatens every coral reef in every ocean; almost 67 percent of coral reefs have started to see the effects (Discover Magazine). Coral bleaching could be prevented if world leaders banded together to combat the emissions of green house gases that are destroying our planet.

Because of coral bleaching, the ocean food web is being destroyed and beaches no longer have a natural shoreline protection; government officials from all nations need to regulate coral reef protection agencies. The coral reef ecosystem accounts for 90 percent of living animals in the ocean; coral bleaching causes a loss of habitat for animals and affects the entire food chain, resulting in extinctions and endangered animals. There are several different zones in the ocean, the coastal zone, which contains the coral reefs receives the most sunlight. Because of this, coastal zones can heat up faster, and stay warmer longer. Coastal zones are the most affected by increased water temperature (Douglas). Without coral reefs millions of fish and hundreds of species will be homeless, and unprotected to predators.

With no safe place to live fish will be preyed upon by predators such as dolphins and sharks; "...a study in Papua New Guinea showed a decline in fish communities following declines in associated coral communities. Additionally, the study suggested that juvenile fish are more likely to recruit to areas that have high coral cover" (Bleaching Impacts). This can throw off the food chain and ruin food webs. Species may not evolve to accommodate the dead coral reefs, and species will certainly lose a source of food. Not only do coral reefs attract tourists, but also a lot of local businesses need the coral reefs to make a living. Locals can take people snorkeling or scuba diving to earn their living.

Government officials need to come together to protect coral reefs, the fishes and animals that live within the reef, and the towns and business that rely on them for income. Islands in the Caribbean are losing their natural shoreline protection, causing the whole island to fear losing their beaches and all jobs <https://assignbuster.com/coral-bleaching/>

that rely on tourism to the area. Coral reefs, typically located between 500 to 100 feet off the coast, act as a buffer to the shoreline. Due to increased global temperatures, coral bleaching is causing even further damage to the coast, and not just the animals living in the reefs. “ The loss of these fragile ecosystems would cost hundreds of billions of dollars in lost revenue from tourism and fishing industries, as well as damage to coastal regions that are currently protected by the coral reefs that line most tropical coastlines” (Hoegh-Guldberg). Without a natural buffer, shorelines are eroding, and flooding is occurring more often.

Islands and coasts are more susceptible to bad weather compared to places not surrounded by the ocean. Places can experience hurricanes; tsunamis, cyclones, and heavy rain all resulting in flooding. Researchers have seen an increase in the amount of flooding from 2005, a year with a vast amount of coral bleaching in the Caribbean (Neal). Without a protective front more property and lives are at stake when violent storms come into town. All of this could be prevented naturally if greenhouse gases were limited to help control the temperature of the earth and ocean.

Although many people believe that the Earth’s temperature is cyclical and the ocean temperatures go in cycles, modern science tells us that human emissions and pollutants are to blame for coral bleaching. While some people believe that human emissions have nothing to do with increased temperatures on land and in water, human emissions are in fact the main cause of increased temperatures and coral bleaching; “ Thousand year old corals that have weathered well and withstood geological changes in the past, are suddenly dying. Prior to 1979, there is no scientific record of

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massive reef bleaching” (Hoegh-Guldberg). There is proof that the earth has temperatures that cycle, but it has never been this extreme, and research shows that coral reefs have never died through coral bleaching before. Coral bleaching would never occur naturally, which further proves that global warming is a real problem, and green house gases need to be controlled by government officials. Coral bleaching does indicate that global warming and climate change is a real thing.

What may seem like a small consequence of human emissions can ultimately cause a chain of unfortunate events that affects more than just the coral reefs. With an increase temperature due to green gases coral reefs are dying. This causes disturbance to the food chain, and leaves species endangered and may even cause extinction. Islands and shores also lose their natural protection, which causes areas to erode and flood more often. Lastly, tourism will decrease for areas that rely on coral reefs, as people do not want to snorkel in “ dead reefs.” Coral bleaching has been occurring since 1998, but hardly anyone knows what coral bleaching entails.

It is time that our government officials band together to save the most diverse, colorful, and important part of our oceans before it is too late. Works Cited Fox, Douglas. “ Persistent Heat Decimates Coral Reefs.” Discover Magazine. Discover Magazine, 22 Dec.

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