Acidic Ocean: Causes And Consequences

As a result of society burning fossil fuels and land use our oceans are becoming more acidic. This problem causes a threat to our animals that live underwater life. Most of our seafood industries are affected by this issue and it is costing them money. It is also jeopardizing them from supplying for the coastal communities. Environmental Defense Fund (EDF) states nearly a third of carbon dioxide emissions end up in the oceans which triggers the chemistry in the ocean water that makes it more acidic which dissolves the shells of sea creatures. (Environmental Defense Fund, 2020).

A lot of us are not aware of what acidic ocean is so here is a little background of it. Acidic ocean is when carbon dioxide enters the ocean and turns into saltwater. However, it is a process before it becomes into saltwater. It first forms into carbonic acid, this acid breaks apart and produces bicarbonate and hydrogen ions. An increase of hydrogen ions and a reduction in carbonate ions due to the large intake of carbon dioxide results in an acidic ocean. Society has made this problem increase by burning fossil fuels and changing land-use practices. An article by the Union of Concerned Scientist states “Surface waters are now 30 percent more acidic than they were at the start of the industrial era. Ocean acidification is now happening at a faster rate than at any point in the last 66 million years, and possibly in the last 300 million years. And projections show that by the end of this century, ocean surface waters could be more than twice as acidic as they were at the end of last century if we do not reduce our carbon emissions.” (CO2 and Ocean Acidification: Causes, Impacts, Solutions, 2019)

Acidic oceans are affecting local businesses and costing them millions of dollars as well. It is expected to reduce the population of Dungeness crabs which is a big seller in Washington and Oregon. Some local companies are already suffering from the warming temperatures of the oceans. The warming temperatures have caused an increase in toxic algal blooms. Toxic algae produce domoic acid, a dangerous neurotoxin, that builds up in the bodies of shellfish, posing a risk to human health. Some businesses may be are forced to shut down and may come across some challenges in the future because they will not have the items they need to keep their businesses afloat.

This issue is also a major problem because it is preventing coral polyps from growing shells. A coral polyp is an important orgasm of the sea. It is a tiny organism that attaches to a rock on the seafloor and divides into clones to create a reef. Reefs protect the coastline from floods and erosions. An article states “The US National Oceanic and Atmospheric Administration, for example, estimates that about half a billion people live within 100 kilometers of a coral reef and benefit from the protection and natural resources it offers. Globally, coral reefs may provide goods and services worth $375 billion each year, which means threats to reefs have profound ripple effects.”(Global Warming’s Evil Twin: Ocean Acidification, 2016) Not only does the economy lose billions of dollars from eventually may not having enough reefs but it can also lack protection for the coastline as well. If there is not a result for ocean acidic this can affect coral reefs from providing food for sea animals and some humans rely on these sea animals for protein. According to the United Nations Environmental Programme, “fish, including shellfish, contribute 15 percent of animal protein for 3 billion people worldwide. A further 1 billion people rely on fisheries for their primary source of protein.” (Carsen, 2017)

Now that we are aware of the issue of ocean acidification we need to come together as a society to stop the issue since we are the major cause of it. Everyone needs to practice living a greener life. Fossil fuels are one of the major problems of ocean acidification. One we can help the issue is by using less electricity, if we use less electricity it reduces the energy power plants need to produce electricity. Recycling is also a big factor as well. If we recycle more we will not have to constantly make new products and get more materials to make more products. Transportation is another factor for this issue if we would drive less or carpool more often it will help to decrease ocean acidification. Driving the vehicle is not always the problem either, keep your vehicle up to par plays a factor as well so we need to make sure we regularly get our vehicles checked. Less pollution can also help for our coral reefs to grow healthy and not have any issues. Purchasing products that are grown in coexistence with forests and rainforests decreases the need for deforestation for agriculture. Even eating sustainable seafood can make a difference, because healthy fish populations are essential to the overall success of the coral reefs and the ocean.

Overall we need to come together as a society and encourage each other to live a greener life. We need to stop polluting our earth because it is putting us in danger more than we know. We need to use less energy and electricity to we can save our ocean. Everyone needs to start coming together and taking turns carpooling so that our vehicles can stop using as much energy and the fumes from our vehicles can stop polluting our air. The most important one we need to stop burning so many fossil fuels.