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The Causes of Glacier Melts and its Ongoing Concern

Throughout hundreds of years, the Earth has experience different natural cycles of warm and cold years. Though this concept is no surprise to the scientific community, the recent concern is that the warm climate is causing glaciers to increase at a more rapid pace than ever before. The growing concern now is that this trend will increasingly bring new and worsening problems to the environmental problem’s humans are facing today. While there are many other environmental concerns, glacier melt is a continual problem due to how slowly the melting process is, but how quickly it creates increasing and daunting environmental regards. Some of the main environmental threats are problems such as global warming, loss of habitat loss, and the concern for new and surprising environmental problems as well. Glacier melting is a hard subject to understand because the process of melting normally is a small and/or long process, and so on a wide scale does not seem like a big deal. When in actual reality the melting of the ice is as rapid and concerning as any other environmental problem. An interesting reason why glacier melt has become a bigger problem is that when glacier starts to melt it causes another glacier as well as its own to melt faster. This is due to a continual cycle of destruction. Another way of looking at it is when an athlete gets injured, recovers, plays, and gets injured again. Though an athlete job is to perform it is also destroying themselves by slowly weakening parts of their body, such as continually spraining the ankle.

So, while there is no solution to stop what has already melted, we may be able to change our ways and slow the glaciers melting. While most glaciers are in the arctic and either extreme south or north of the world, glaciers in national parks are also losing is size at an alarming rate (Glick). These factors causing the melting of glaciers have been not only affecting the environment today but will increasingly destroy the environment the more arctic glaciers melt. An article in National Geographic talks more specifically about glacier melting named “The Big Thaw” and how in actuality the rapid pace that glacier melts (Glick). “Things that normally happen in geological time are happening during the span of a human lifetime” (Glick). Though there is no solution to reverse the arctic melting, as community and caretakers of Earth, humans can change behavior and take preventive measure to preserve the arctic glaciers now.

“Everywhere on Earth ice is changing” (Glick). One of the biggest impacts about the increase in glacier melt is the rising of sea level. “When temperatures rise and ice melts, more water flows to the seas from glaciers and ice caps, and ocean water warms and expands in volume” (Glick). Sea level rise if an environmental problem of its own. This is because the increase in sea level rise means the decrease in the land. This environmental threat hit me strongly due to me living off the coast. Being in Virginia Beach with the rise of sea level means my childhood home, memories, and overall livelihood would be underwater. As someone who loves that water and love living on the coast, understanding and educating others about glacier melts is an important topic.

Though my home town have not seen the devastating effects yet, other communities already have due to the rapid melting of glaciers. “The Big Thaw” did not only contain the information about how the rapid pace of glaciers are melting, it also considers sea level rise in areas living off the coast (Glick). “In southern Louisiana coasts are literally sinking by about three feet a century” (Glick). As sea level rise continues to increase then preventative measure must be taken place to ensure to safety of those living also the coast. To avoid devastation from flooding cities that live along the coast must ensure a strong defense against flooding (Nicholls). Although sea level rise means the destruction of coastlines, it also disturbs “enormous biogenesis and ecosystems” (Nistor). A study based on sea level rise and ice sheets had some interesting points about the subject of glacier melting. The study was specially about making a probability framework for ice sheet contributions to sea level changes (Little). The study specifically wanted to “quantifying the future rate of sea level rise for it is critical for climate change mitigation and coastal planning efforts” (Little). Due to climate change causing glaciers to melt, it has therefore caused an increase in sea levels. Without environmental solutions being conducted now artic glaciers will continue to melt and more environmental problems will increase.

Though not many organisms directly live on glaciers, the ones who so have has an increase in struggling for survival. The most popular organism that has faced multiple threats due to glacier melting are the polar bears. Polar bears live in the Arctic and have faced many survival hurdles due to human involvement (LoPresti). History between human interaction with polar bears is not a sunny picture. Due to the poaching of polar bears they’re already declining population was substantially decreased due to human involvement. An organization called EarthSky wrote a thought-provoking article about how the population of polar bears have declined, as well as what the glacier melts are affecting the wild polar bears environment (LoPresti). “Somewhere between 100 and 900 polar bears were poached each year between 1870 to 1970” (LoPresti). Now currently with the increase in glacier melts the polar bear are under a new threat. This severally impact the polar bears because ice caps are a platform for which polar bears hunt and travel on. This topic is a reminder of the emotional and thought-provoking conservation commercials of the baby cub on a small glacier floating away from its mom. It is not only a saddening realization of how polar bears are so quickly losing their home but is another reminder of how crucial glaciers and ice caps are.

While there have been new and ongoing efforts about how ice caps affect the environment, there is still more to be discovered. One specific research project was about how there is a ton of information about sea level rise and its affect to the environment, but little is known about volume of a mass number of glaciers (Huss). The project being done is the distribution of ice thickness of glaciers all around the globe (Huss). This research is valuable because it gives a great idea of how big or small glacier are and see the future sizes and thickness in the future. Though not all research is to present glacier melting, there are many that also help monitor and or keep track for a more accurate understating of glacier melt. There have been other theories and ideas being thought about. One recent idea is that ice caps have trapped different type of bacteria and fungus. Though this seem harmless, if the glaciers and ice caps keep melting it could introduce this fungus and/or bacteria and could being lethal or have destructive qualities such as disease. An article published by the World Economic Forum have some great insight to what specifically is the threat that the bacteria or fungi can cause to human health (McKenna). Though in this article it states that so far there is not threat to human life, viruses have been found and can cause potential threats to humans (McKenna). “While there has yet to expose any ancient viruses harmful to humans, it has begun re-exposing more familiar diseases that modern society thought it had eradicated” (McKenna). This is cause of concern due to the viruses not being active or even subjected to humans and environmental change for hundreds of years (McKenna). While this theory is a new concept and much is being done to research and find answers on the topic, it is not the only theory of what glacier melting means to humans and the environment. Other theories are also being brought up and researched every day.

Though the general population can not research new ways and solutions to fix the glacier melts there are ways to help and contribute. The most obvious way is to fund for projects and research that are based on glacier melting. Though some have that privilege, many such as me, do not. However free speech and right to congregate is something that we can empower and use. Around the world more and more people are voting for environmental laws and regulations. Peaceful gatherings for policy changes is another option for the strong and passionate at heart on the subject. What I think is the most important way that the general public can contribute is to inform and educate others about the problem of glacier melts. Without others knowing what is truly happing the glaciers and the problem it creates, then nothing will improve.

As an overall human population who have done brilliant and fascinating discoveries. It should be a sake of duty to take care of the planet on which we live on. With the increase in glacier melts comes numerous of problems. One of the most daunting and frightening is sea levels rising. Though there are some solutions to hold sea level rise at bay, it is short term and can cause more detrimental damage to the environment. A common example of this is the building of a sea wall. Though a sea wall is a popular solution it is a short-term solution and causes more damage due to sediment replacement then good. While glacier melting is a continuous threat to environmental homeostasis, understanding and being educated about the subject already gives you and me the power and knowledge about what is wrong and what needs to be fixed. As continuous research is being conducted so must be the spreading of education and information of what glacier melting is and the problem that is already causing as well as the potential problem in the future.

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