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English 2010

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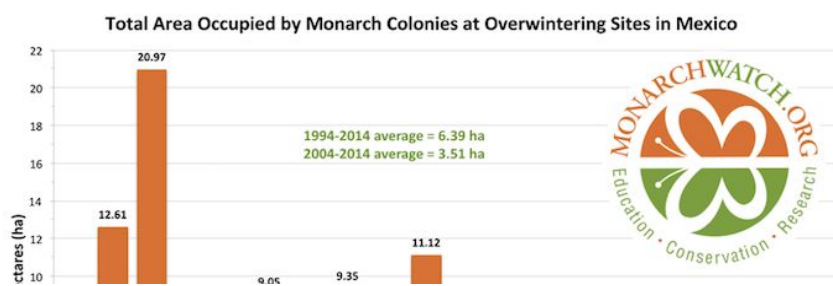
The Biggest Challenge of our Species

Introduction

“We’re facing the biggest environmental challenge our species has ever seen.” (“The Effects of Climate Change”). Climate change is a big challenge, it is changing the world around us each day. It causes ice caps to melt, and the water levels to rise. These big changes cause problems in all life that inhabits the Earth, which includes humans. Although the causes of climate change can be debated, the effects can be seen and felt in every corner of the world. The activities we do and the way we live our lives speeds up climate change and the effects it has on the planet.

Insects

Insects play a crucial role in the ecosystem they are responsible for plant growth and upkeep, as well as food for smaller animals. In recent years climate change has been an issue with insect populations. Andrew Liebhold and Barbra Bentz, researchers for the US Forest Service which is apart of the United States Department of Agriculture (USDA), say that changes in climate such as less precipitation can have a big impact on the pine trees in the forest, which in return damages the insect population that inhabits them. Long winters can also have a big impact on the mortality of insect species (Liebhold). Michael Parrella, president of Entomological Society of America and a



Dean and the University of Idaho, discusses how we are all linked through food webs and that insects are a key component (Parrella). A slight decrease in insect population can have a detrimental impact on the entire ecosystem. If the climate continues to change the way it is, it will continue to claim insects as victims (Parrella).

Animals

According to the article “The Effects of Climate Change”, it states that “Many of the world’s threatened species live in areas that will be severely affected by climate change”. Due to climate change from happening too quickly, it is difficult for many animals to adapt to these new changes. Climate change is one of the greatest causes for many species to become extinct (“The Effects of Climate Change”).

African elephants are one of the many animals that are affected by climate change. In Africa, the changes in rainfall can bring too much rain, which causes floods. As well as, receiving little rain, resulting in drought and wildfires. African elephants can drink up to 225 liters of water each day, the change of the weather pattern can cause the elephants to travel further away from home to search for water--away from their protected areas. The fluctuation of rainfall in Africa can cause the land to be unsuitable for certain species to live in (“The Effects of Climate Change”).

Polar bears are to be considered “Impressively powerful predators, but they’re at risk from man-made global warming” (“Polar Bears”). Polar bears are in danger due to the Arctic warming almost twice as fast as the global average, resulting in the ice that the polar bears depend on to melt away. This makes it difficult for the female polar bears to



get onto land during the late autumn to den and onto the sea ice during spring to feed. The Arctic warming is causing the polar bears to fast for longer, which can dramatically reduce their body weight and physical condition--making it more difficult for them to survive during the summer season (“The Effects of Climate Change”).

World Climate

Declining ice sheets, glacial retreat, and dwindling sea ice is one of the main ways climate change can be seen.

According to NASA, Greenland lost 286 billion tons of ice, as well as creating huge rivers of flowing water that lead to the ocean (“Climate Change Evidence: How Do We Know?”).

Another piece of evidence are glaciers. Glaciers have remained around the world ever since the last ice age, yet in today across the earth, glaciers are disappearing. In the photograph of glacier

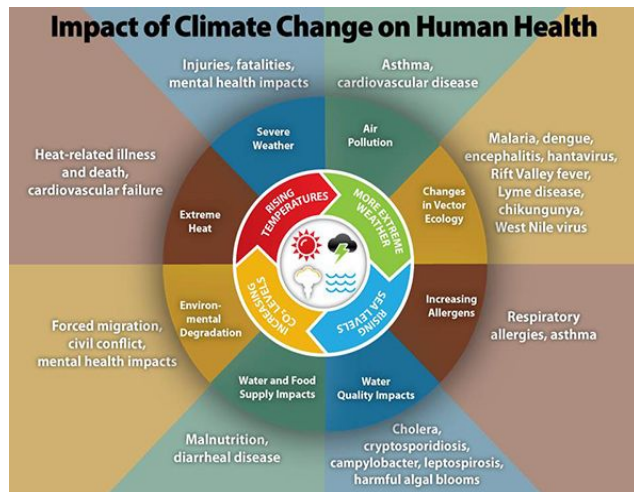


national park, from 1977 to 2006 where the glacier is virtually gone. Something more vital, for the ecosystem, than glaciers is Arctic sea ice. Arctic sea ice has been on the decline rapidly through the last several decades. These lows mean more fresh water in the ocean changing the chemical balance of the ecosystem.

The atmosphere also holds evidence of global warming. Since the 1950's, the number of high-temperature events such as, hurricanes, floods, intense rainfall, droughts, and forest fires have all been on the rise (“Climate Change Evidence: How do we know?”). The frequency of wildfires has been on the increase from the 1980's, localized in dry regions of the US, like California (“Climate Change Indicators: Wildfires | US EPA”). The Eastern coastlines, like

Florida are also affected. The high temperatures can cause hurricanes, and intense storms that ravage the cities.

Humans



“Climate change is affecting the American people in far-reaching ways. Impacts related to climate change are evident across regions and in many sectors important to society...” (“Climate Change and Health”). As climate change continues to affect the Earth we have seen the impacts it has on physical, mental,

and community health. Some of the effects of climate change we are seeing that have had an impact on human health are frequency/strength of extreme weather, rising sea levels, temperature changes, and a decrease in air quality. With all of these impacts from climate change, it has begun to threaten society and the health of humans. These impacts have affected agriculture, food and water supply, transportation, energy, and many other things. With all of these aspects and impacts of climate change, we are seeing an increasing impact on human health, quality of life, and will only see it continue. According to Global Change. Gov “...The impacts of climate change are projected to increase over the next century, certain existing health threats will intensify and new health threats may emerge” (*globalchange.org*).

Counterargument

Although the causes of climate change are debated over by many individuals, some believe that it is due to a natural cycle. OSS (Open Source Systems, Science, Solutions) states

that, “For the past million years the natural climate has oscillated between warm periods and ice ages”. This means climate has changed over and over again without any human interference. Which is “about 80-90,000 years of ice age with about 10-20,000 years of a warm period, give or take some thousands of years” (Global Warming Natural Cycle). These warm and cold periods are started by the changes in the Earth's orbit around the sun, which is called Milankovitch cycles. “The orbital changes occur slowly over time, influencing where solar radiation is received on the Earth's surface during different seasons” (“Natural Climate Cycles”). Even though many believe this is the main cause of climate change, these changes are not strong enough to be causing the large temperature changes. According to the OSS, “Recent significant changes in climate forcing due to human cause, factors have produced a net positive forcing causing temperatures to rise. This is a departure from the natural cycle.” (“Global Warming Natural Cycle”). In other words, human lifestyles are quickening climate change and making the effects worse.

Conclusion

Climate change is something that people can't change overnight and it is a big challenge that all individuals are facing today whether they acknowledge it or not. However, people can change small habits that can make a bigger change over time. Climate change is not only affecting humans but as well as, all of the other species living on Earth. Climate change has been making itself known all around the world. It has ranged from ice caps melting to the water levels to rise. People can't get rid of climate change immediately but it is possible to make changes now to make the planet a better place.

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