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CAUSES OF CLIMATE CHANGE

The Earth's climate has always varied, so the term climate change is now generally used to describe the changes caused by human activity - specifically, greenhouse emissions such as carbon dioxide and methane, which build up in the atmosphere and cause heat. So climate change can be a synonym to global warming [4, c. 1].

We consider it's very important to highlight this issue and overthink our actions and behavior. Majority of Earth has already understood the damage we cause and are trying to do everything they can, so our mission is to touch up others.

Unfortunately, average temperatures have risen 0.4 C since the 1970s. Scientists are certain this change can be blamed on human emissions because the increase is too big to be explained by natural causes [2].

Researchers assure that although natural factors such as changes in the sun and large volcanic eruptions are known to have warmed and cooled the planet in the past, these effects are not powerful enough to explain the rapid warming seen now . Only an increased greenhouse effect caused by bigger amounts of heat-trapping gases in the atmosphere can explain it.

Water vapor also produces enormous amount of greenhouse gases. It was in balance for years but conditions have changed and now human emissions, even small, tip that balance.

One more reason of climate change is as follows. Carbon dioxide is the chief greenhouse gas produced by human activity. It is produced when we burn fossil

fuels: oil, gas and coal. The level of carbon dioxide in the atmosphere is measured in parts per million (ppm).

After researches we have compared different articles [1], [4] and then we came to the outcome. We found out that the carbon dioxide level was about 280 ppm before the industrial revolution, but now it is 386 ppm and is rising by 2-3 ppm each year. The total level in the atmosphere with other gases like methane, known as the carbon dioxide equivalent, is up to 440 ppm [2].

To work out when continued emissions will cause a heat, scientists use computer models based on the programs which can find out the future weather.

Prediction is that if emissions continue to rise at the present rate, average temperatures will most likely increase by 4 C by 2100. It is a killing result. So oceans and all water resources, forests and soils could release their massive stocks of carbon as the planet warms, leading to much greater temperature rises than human emissions alone would cause.

Thus, lots of species of plants and animals have evolved to live in a fairly narrow ecological niche. Some will move to find more comfortable places for life, others will be able to adapt. Those that cannot move or adapt will constantly die out. Some animals, such as the polar bear, have nowhere to move to right now. We can also say that global warming can cause hunger for some species.

As a result a warmer weather will also affect agriculture, water availability and the next generations' health. Increased temperatures are also expected to limit rainfall in some regions and bring more extreme weather events such as storms to others. Sea levels will rise, glaciers will melt and humanity will have a lack of fresh water which is very essential for our health [1].

In conclusion we have to say that firstly we must understand that everything depends only on us! We can reduce our personal carbon emissions. But to fully prevent from global warming, we must promote some rules in our society.

- increase the use of renewable energy and transform our energy system to one that is cleaner and less dependent on coal and other fossil fuels.

- increase vehicle fuel efficiency and support other solutions that reduce U.S. oil use. Bicycle is a great alternative to a car.
- place limits on the amount of carbon that polluters are allowed to emit.
- stop the deforestation.

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