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Climate Change due to Human-Induced Activities

**Introduction**

 According to NASA, the average global temperature of the entire world has increased at an alarming rate in the past 50 years. Ninety-seven percent of the climate scientists identify that in the recent few decades, human-induced activities are contributing to climate change. The emission of carbon dioxide from burning of fossil fuels is a major reason behind climate change. Since pre-industrial times, concentration of carbon dioxide has increased up to 380 parts per million from 280 ppm (Bullock). Melting glaciers, rising sea levels, and destruction of coral reefs indicate that climate is changing at an alarming rate. The emission of methane from cows also contributes to global warming. However, some people argue that climate change is a natural process, and humans have nothing to do with that. Emission of methane from cows and carbon dioxide from burning of fossil fuel is responsible for climate change.

**Discussion**

The temperature of the entire world is increasing at a higher rate due to human-induced changes. Industries and transportation sectors are getting a major portion of energy from fossil fuel. Burning of fossil fuels for industrial and transportation purpose release a huge amount of carbon dioxide every year, which results in global warming (Adger et al.). Changes in sea levels and extensive melting of glaciers are significant evidence that justifies the phenomenon of climate change. Climate change has changed ocean currents due to which many regions of the world are facing severe weather conditions. Excessive period of drought and rainfall has been observed in various regions of the world that indicates that global warming and climate change are real (Trenberth et al.). The emission of methane from cows also contributes to global warming. However, some people argue that climate change is a natural process, and humans have nothing to do with that. Emission of methane from cows and carbon dioxide from the burning of fossil fuel are responsible for climate change. In the recent decade, raising livestock has been increased, which results in excessive emission of methane (Gillard). Methane is also responsible for raising the temperature of the world, which contributes to climate change. People believe that humans are eating beef since prehistoric times, so it is not possible that the raising of livestock contributes to global warming and climate change. Human-induced changes are responsible for global warming and climate change.

After the industrial revolution, people are excessively using fossil fuels in order to get energy. That energy is then utilized for various purposes, such as electricity, transportation, and industries (Gillard). Excessive burning of fossil fuel results in the emission of carbon dioxide that contributes towards global warming. The concentration of carbon dioxide has been increased in the recent few decades, from 280 ppm to 360 ppm. Such high concentration is continuously trapping heat from the sun and warming the entire world. Carbon dioxide concentration in the atmosphere has increased from 280 ppm to 360 ppm. The majority of industries after industrial revolution are burning more fossil fuel in order to get energy. The United States is among big producers of carbon dioxide as compared to rest of the world. Human-induced activities such as deforestation, the aerosol releases, and land alterations are also contributing towards climate change (Romm). In the recent few decades, deforestation has increased in order to provide space for residents. Excessive deforestation is the second leading cause of climate change. Trees act as a source of carbon sink as they mainly absorb a major portion of emitted carbon gas. Scientists argue that deforestation in tropical rainforests is an increasing prevalence of global warming. The process of deforestation can come in many forms, such as livestock ranching, clear-cutting of agriculture, and wildfire (Romm). Due to these man-induced activities, the prevalence of deforestation is increasing, which ultimately allows more carbon dioxide to accumulate in the atmosphere and results in global warming. Sea level has been rising at a rate of 2 millimeters per year in the past 100 years. This rate has increased up to 10 millimeters per year in the past 20 years due to human-induced activities (Toniuc, Daniel, and Groza). Glaciers are rapidly melting due to warmer atmosphere in many regions of the world. Due to the melting of glaciers, water is accumulating in the seas. Since the industrial revolution, temperature of the entire world has raised by carbon dioxide and other greenhouse gases. Scientists demonstrate that glaciers are calving off into the sea due to warm weather conditions. Approximately 95 percent of the thickest ice sheets have already gone due to temperature variations in the poles. The high rate of glacier melting and rising sea levels prove that climate change is real.

Furthermore, raising livestock for meat also contributes to global warming as they emit methane, which is more powerful than carbon dioxide. The emission of methane from cows contributes to climate change. On average, cows release 70 to 120 kg of methane per year (Pradhan). One must need to consider the fact that a little puff of methane releases into the atmosphere when a cow burps or passes gas. Each of these puffs accumulates together and can have a significant impact on climate. The excessive raising of livestock for meat contributes to global warming. Scientists observe that the concentration of methane has doubled in the recent few decades. Methane’s impact is 34 times greater as compared to carbon dioxide, which results in climate change. In the last few decades, the number of livestock has increased in the entire world. Approximately 20 percent of global warming is attributed to methane. Odds of worsening drought has been increased due to climate change in major portions of the world. Intense drought and rainfall in different regions of the world are clear indications that the climate is changing dramatically.

Carbon dioxide makes up a small portion of atmospheric gases, so it cannot contribute to climate change. People often argue that carbon dioxide cannot contribute to global warming as it is already a part of the atmosphere since the beginning. By keeping in view the phenomenon of reflection, earth constantly receives energy from the sun. After reaching the Earth Surface, that energy radiates back into space (Bullock). Furthermore, nitrogen contributes to nearly seventy-one percent of the atmosphere rather than carbon dioxide. Therefore, some people believe that it is unlikely for Carbon dioxide to contribute to global warming. Moreover, people argue that humans are eating beef since pre-historical times, so it’s unlikely that their emitted methane can contribute to climate change. Some scientists claim that methane is not responsible for global warming as its levels are less than 1.75 ppm as compared to 360 ppm of carbon gas (Bullock). Methane is a potent greenhouse gas, which has the potential to alter atmosphere. However, significantly low levels of methane are less likely to make any significant change in global warming. Consequently, it is not possible that the raising of livestock contributes to global warming and climate change.

People should need to understand that carbon particles have heat-absorbing qualities as compared to other major gases in the atmosphere; therefore, these carbon particles are more likely to warm the entire atmosphere. Characteristics of carbon dioxide allow it to stay longer in the atmosphere as compared to other greenhouse gases. According to the Union of Concerned Scientists, carbon dioxide remains more than 100 years in the atmosphere as compared to methane, which only requires a decade to leave the atmosphere (Savaresi). Experiments reveal that even in the presence of other atmospheric gases such as nitrogen, carbon dioxide possesses strong heat-absorbing qualities due to which it is a major gas that contributes to climate change. Consequently, it is obvious that carbon dioxide can degrade the atmosphere for a longer period. In the recent few decades, the number of livestock has dramatically increased due to which concentration of methane in the atmosphere has also increased (Savaresi). As discussed above, concentration of methane is less as compared to carbon dioxide; however, it is stronger in degrading atmosphere as compared to any other greenhouse gas. Since 1750, concentration of methane has increased up to 150 percent, which clearly indicates a dramatic increase in livestock (Savaresi). Raising livestock has increased due to a large population of the world.

It is noteworthy to consider that carbon particles possess heating absorbing quality due to which they trap heat and raise the overall temperature of the earth. Global warming is taking place due to the burning of fossil fuels for energy purposes (Urry). Scientists prove that carbon dioxide is released when coal or oil is burned. Emitted carbon gases reach into the atmosphere where it traps heat from the sun. This entire phenomenon of carbon emission contributes to global warming and climate change. Carbon sequestration is the process of capturing carbon gas and storing it into a reservoir. Forests and trees act as a carbon sink as they capture carbon dioxide and release oxygen into the atmosphere (Toniuc, Daniel, and Groza). However, excessive deforestation has minimized the natural phenomenon of carbon sequestration, which eventually increased global warming. Governments of various countries are working to develop such technologies that can keep greenhouse gases out of the atmosphere. Although the natural process of carbon sequestration is significantly reduced by human-induced activities, there is a need to develop some artificial processes in order to trap carbon dioxide in the atmosphere (Toniuc, Daniel, and Groza). The increased raising of livestock results in the emission of methane, which is responsible for global warming. Hence, it is essential to minimize the consumption of beef by switching to meat. It is obvious that excessive burning of fossil fuel and the raising of livestock has increased the concentration of carbon dioxide and methane, which ultimately contributed towards climate change.

**Conclusion**

 In a nutshell, human-induced activities are highly responsible for increased warming in the entire world. For industrial purposes, oil and coal are excessively used in order to get energy for running turbines and other plants. Transportation industry is also using fossil fuels for that purpose. Due to such excessive use of fossil fuels, the overall temperature of the entire world is rising, which leads to climate change. Glaciers are rapidly melting due to warm temperatures, and they are responsible for high sea levels and floods. The high heat absorbing power of carbon dioxide is a major reason behind global warming. The emission of methane from cows and other livestock also contributes to global warming and climate change.

 Changes in the frequency of extreme weather conditions and rainfall patterns can be minimized if humans switch from fossil fuel to another alternative source in order to get energy. It can be possible with the help of renewable energy resources such as sun and wind. Use of solar and wind energy to run industries and to make electricity is effective in order to minimize the prevalence of global warming. Furthermore, it will also be effective if humans switch from beef to meat.

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