

# Climate change man-made argumentative essay sample

[Technology](#), [Development](#)



## **Thesis**

Earth is the only known planet with favorable climate conditions to support life. All the living beings on earth heavily rely on its climate, hence any variation in climate conditions may disturb life on earth. Humans started using tools centuries ago and now have developed large industries to produce various tools, equipment, machinery and consumer products etc. These industries produce heavy amount of emissions including Carbon Monoxide, Carbon Dioxide, and various other toxic gases through burning fossil fuels. These gases are mostly directly released in the earth's atmosphere causing earth's climate to change in various ways. " Various threatening climate changes will to occur due to various activities by humans".

## **Arguments**

1.

Average earth's surface temperature is raising.

a)

The earth's surface and climate get warmer during the day from sun's energy and most of this energy is then radiated back to space during the night which brings every region of earth back to its normal seasonal temperature. This emission of heat through radiation keeps a balance of temperature to support life on earth. About a century ago this cooling effect was about 18 degrees which has now come down to 15 degrees due to increase in greenhouse gases in earth's atmosphere .

b)

It is known that large amount of carbohydrates found in plants and large dead animals under earth got converted into fossil fuel over period of time. These fossil fuel mainly include oil, gas and coal. Fundamentally, fossil fuels consist of accumulated old biomasses which have been formed over hundreds of million years. Now a days, these fossil fuels are used in industries to get energy for further utilization. This energy is used in production of various industrial products. Furthermore various modes of transportation including aircrafts, ships, trains, busses, and cars etc. are also burning these fossil fuels. All of these ways of burning are utilized by human to facilitate his life in this world. Burning of fossil fuels result in heavy amount of CO<sub>2</sub> release in earth's atmosphere. The centuries' accumulated reserves of fossil fuels are widely used now a days resulting in about half of total world oil reserves depletion .

c)

The significant greenhouse gases include water vapors in the form of clouds, methane, and carbon dioxide. These gases together form a giant layer around earth and stop the heat radiations from escaping at night. This overall process is widely known as greenhouse effect. These gases allow the visible sun's light to come to earth during the daytime but stops the heat radiations to escape at night. Consequently an increase in overall temperature is observed in the earth's climate. This shows that there is some correlation between the amount of greenhouse gases and the average temperature of earth's climate. In other words, an increase in greenhouse gases will always result in an increase in overall earth's climate temperature

d)

Extents of the earth's external temperatures, calculated throughout the last century exhibit that the earth is becoming warmer every year due to increasing concentrations of greenhouse gasses. The average surface temperature has amplified since the 19th century by approximately 0.60 C. Measurements since 1970s have indicated a substantial temperature rise of 0.170 C every ten years. The measured temperature rise in the north is somewhat more than that in the south. Evidently, once scientists discuss about average temperature then there will be many regions which will be having variation in the temperatures from this average temperature. It is therefore typical to observe regions with greater temperature variations. For instance, observations taken during last thirty years in Switzerland describe that there is an increase of temperature in between one and two degrees whereas there is an increase of temperature of approximately 0.5 degrees for every 10 years. It is also common to find fewer regions in the world to become colder as well .

2.

Fossil fuel reserves are depleting due to activities by human.

a)

It is pertinent to mention here that the industrialized countries have heavy dependency on fossil fuel. All the industries around the world run on fossil fuels while the transportation of raw material as well as the finished products also takes place through means of burning more fossil fuel. The difficult question to answer at this stage is that if 50% of the world's known oil reserves have been depleted during last 50 years then how much more oil reserves are still to be discovered. Most of the scientists today who are

specialists in the subject of geology have firm belief that there are quite little oil reserves left to be discovered. The most suitable argument to convince general public is the fact that, although many modern technologies of searching oil reserves have been introduced, the largest oil reserves were found in between 1960 and 1970 .

b)

The rate of depletion of fossil fuels can also be estimated through quantity of CO<sub>2</sub> emissions globally. The CO<sub>2</sub> emissions in the atmosphere by human only increased from approximately 280 ppm (parts per million) about a century ago to about 370 ppm now. This is due to the consumption of fossil fuel especially in developed industrialized regions. This consumption of fuel has significantly increased the concentration of greenhouse gases in earth's climate. If humanity continues to follow the current patterns then approximately 450 ppm of CO<sub>2</sub> concentrations is forecasted by the year 2030 which is estimated to increase up to 600 ppm by the end of this century. The per person greenhouse gases for these countries reach up to 12. 3 tons per year. Considering only the emissions by United States, It is found that US has emitted about 5500 million tons / year which corresponds to approximately 20 tons per person. For other industrialized countries it is much lesser. By considering same parameter for other countries the result is for Canada 14. 4 tons, Germany 9. 7 tons, and 5. 7 tons for Switzerland. By comparing these results with lesser industrialized countries it is found that for China it is 2. 3 tons, India 1. 1 tons, and Pakistan 0. 7 tons. These facts and figures clearly indicate that the greenhouse gases emission is more in the industrialized countries then others. It is pertinent to mention here that

the CO<sub>2</sub> produced and, released in atmosphere remains for at least two centuries. Consequently, it can be concluded that even if the CO<sub>2</sub> emissions are controlled today, the concentrations which are already released will keep the atmosphere at about 450 ppm for at least next 30 years .

3.

Man-made climate changes have bad effects on earth

a)

Due to the rising temperature of earth's climate, a fast rate glaciers melting has been observed in most regions of the world except Antarctica. These regions include Himalaya, Greenland, Alaska, and many other mountain regions including Arctic ice shelf. There has been sizable reduction observed in most of the glaciers around the world. This glacier melting has significant effects on oceans' rising levels. This rising oceans levels has threatened various coastal areas around the globe .

b)

Global warming has reduced duration of winter season in most parts of the world. This reduction in winter season has consequently affected the season cycle as well which has devastating effects on crops and overall ecological chain of various regions. Birds' migration cycle has also been observed to change according to the climate variations. The overall snow fall level has been reduced and snow covered area has decreased significantly. The mountain vegetation is also affected by these climate changes. These changes can be observed easily at high mountain regions. The older people of these regions can tell the variation between past and current snow coverage .

c)

The problem with studying these variations in earth's climate is that the calculations to determine the exact quantity of variations are very complex and inaccurate due to heavy dependency on large number of factors. For instance, it is extremely difficult to define an average yearly temperature for complete earth's climate, and seems impossible to carry out these calculations for a century or more. It is also an important aspect to consider that landscape of almost every region changes considerably within a century which causes further confusion in measuring the average earth's surface temperature. Furthermore, all the data can't be taken to calculate the average world parameters . Considering modest calculations and assumptions for CO<sub>2</sub> emissions in future, it is predicted that global average temperature may rise from two to five degrees in next 50 to 100 years. The record rise in temperature was observed in central Europe in 2003 when two to three degrees of average rise in temperature was observed . It is a well-known fact that the climate of earth has changed due to various industrial developments by man in recent years. Whereas the global temperature also vary for various regions around the world due to natural variations but these variations in temperature take place over thousands of years due to the naturally occurring counter balancing effects. These changes are observed to be around 5 degrees over 5, 000 years which is not as significant as the man made climate changes. The most rapid natural average temperature variation corresponds to 0. 15-0. 2o C during a century. As result of man-made climate changes it is seen that nine of ten warmest years are found after 1990 in the last century and the top three warmest years were after

1997. The summer of year 2003 in central Europe especially convinced most of the people about the devastating increase in world's temperature .

Various modern techniques and simulation models have demonstrated the correlation between the CO<sub>2</sub> emissions and global warming. These techniques included data from previous years and calculated the effects through specialized simulation models. Furthermore these climate models can also demonstrate the physical mechanism of global temperature rise in various regions of the world. These models may not be used to demonstrate all the climatic effects of greenhouse gasses etc. but these models seem to be effective in correlating the CO<sub>2</sub> emission and global warming.

Furthermore these models work accurately for northern hemisphere but produce somewhat inaccurate results in the southern hemisphere due to difference in landscapes of both the regions .

f)

The global warming may also result in release of methane gas in the permafrost area which is located in northern hemisphere. This release of large quantity of methane gas will also add effects of global warming due to the reason that methane is itself a greenhouse gas. This effect will be more devastating due to the accumulative impact due to correlation between global warming and release of methane gas . The main question which arises here is whether the predicted results of climate changes due to increase in CO<sub>2</sub> concentrations are correct or not. The main issue is that nobody exactly knows what will occur due to numerous modeling factors which can be inaccurate. Therefore, even the frequently described higher value of predicted temperature increase of 5o C may seem very much optimistic and



at this temperature rise, we can still encounter catastrophes. For instance, an increasing temperature of about eight degrees may result in melting of ice shield in Antarctic which may result in raising the level of oceans by several meters. This rise in ocean level may result in bringing many coastal areas under water all around the world. This situation will result in migration of millions of people from coastal to other areas with threatening consequences .

## **Conclusion**

The effects of climate changes as consequences of deeds of humans will be threatening to all forms of life on this planet. There should be more speculative as well as reflex ways chosen to deal with the issue of climate change in order to avoid the disastrous effects of climate changes.

Furthermore, provided all known facts, various possibilities and inaccuracies must be taken into account to deal with the issue while modeling the situation. It looks like perhaps the thinking time has gone and a global awareness of climate change should be initiated and proper corrective measures are required to be taken. These corrective measures include not only minimizing burning of fossil fuel but also planting more trees and plants to reduce the greenhouse gases. If rational way is applied while thinking about the issue of climate change then humans should consider this issue to be ethical and social in nature and feel the responsibility to resolve it at individual as well as collective level. The very first step towards such awareness can be describing the alarming consequences of climate changes to people involved in burning fossil fuel.

The most suitable way to stop humanity from burning the fossil fuel is to incorporate the consequences of each industrial or any other fuel burning process with its implementation plan. This will bring awareness to the people who are actually involved in burning fossil fuel. There are various organizations which are actively participating in the process of making people aware of the threats of climate changes and are trying their best to minimize global warming. These organizations are mostly NGOs and various local and international bodies which have taken initiatives on their own and no funding is done to these organizations from any government department. Furthermore it is better to avoid using fossil fuels for industrial as well as domestic purposes and be replaced with renewable energy sources like solar, wind and water. These sources have no pollution effects associated with them and always produce clean energy without disturbing climate in any form.

There are many significant figures who think that we should wait and see the results and then take remedial actions. Some other people who have joined these people are those who think that nothing can be done to reverse the effects of climate changes. There is another group of people who are mainly from developed countries, think that climate change will have positive effects on the cold regions including theirs and bring a better life to them. This is the dilemma of humanity that we only see what concerns us at individual level and we don't bother to empathize with others. This state of mind has brought the humanity to such worst conditions that all other life forms on this planet are also facing threat from the deeds of humanity.

As the closing statement it can be said that humanity can avoid sufferings of

climate changes through initiating the process of remedial action at its earliest. In other words “ Even a journey of a Thousand Miles starts from One Step” .

## **Bibliography**

Alper Baba, G. T. O. G. K. W. H. M. J. F. A. C., 2011. Climate Change and its Effects on Water Resources: Issues of National and Global Security. Berlin: Springer.

Alvin Silverstein, V. B. S. V. S. L. S. N., 2009. Global Warming. Minnesota: Twenty-First Century Books.

Backlund, P., 2009. Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. Pensilvania: DIANE Publishing.

Carlo Giupponi, M. S., 2003. Climate Change in the Mediterranean: Socio-Economic Perspectives of Impacts, Vulnerability and Adaptation. Massachusetts: Edward Elgar Publishing.

Carter, R., 2010. Climate: The Counter Consensus. London: Stacey International.

Houghton, J., 2004. Global Warming: The Complete Briefing. 3rd ed. Cambridge: Cambridge University Press.

Igor Linkov, T. S. B., 2011. Climate: Global Change and Local Adaptation. Berlin: Springer.

Lamb, H. H., 1990. Climate: Past, Present and Future. London: Routledge.

Maslin, D. M., 2007. Global Warming: Causes, Effects, and the Future. Norwalk: MBI Publishing Company.

Matthias Ruth, M. E. I., 2009. Distributional Impacts of Climate Change and Disasters: Concepts and Cases. Massachusetts: Edward Elgar Publishing.

Patrick McDermott, F. A., 2004. Karate's Supreme Ultimate: The Taikyoku Kata in Five Rings. Indiana: iUniverse.

Peter Newell, M. P., 2010. Climate Capitalism: Global Warming and the Transformation of the Global Economy. Cambridge: Cambridge University Press.

Pittock, A., 2009. Climate Change: The Science, Impacts and Solutions. Sydney: Csiro Publishing.

Sharon L. Spray, K. L. M., 2002. Global Climate Change. Maryland: Rowman & Littlefield.

Washington, W., 2007. Odyssey in Climate Modeling, Global Warming, and Advising Five Presidents. North California: Lulu. com.