

## Assignment #3:

Body Paragraphs:① Climate Change

Combustion of Fossil Fuels is one of the leading causes of Climate change. Among low to middle-income groups, there is persistent reliance on coal, oil and gas as a means to keep warm during winters. Whether by burning them or using them as an energy source to power their heaters, the act of combustion releases great amounts of Carbon Dioxide ( $\text{CO}_2$ ) into the atmosphere, increasing the amount of heat trapped. Moreover, as global population grows, there is an increased need for such fuel in order to cook and feed an ever-expanding number of mouths. This act too, releases more  $\text{CO}_2$  into the atmosphere as fossil fuels, ~~are~~ primarily Natural Gas, are used as fuel for stoves. Similarly, with ~~the~~ ~~increase~~ the increase in global population, transportation demands have increased too. Many need vehicles in order to travel to work, travel with family etc. Such vehicles require oil to function and as vehicles demand increases, so too does oil consumption as fuel, and so too does the release of  $\text{CO}_2$  into the atmosphere. Thus, combustion of fossil fuels is a major contributor to Climate Change.

Another reason behind the steadily worsening climate crisis is deforestation. Development begets infrastructure, and to make room for roads, housing societies, signal towers etc. great swathes of forestry must be cleared out.

In Pakistan, many housing schemes such as the Defence Housing Authority projects are an example of this phenomenon, with hillsides cut and flattened, and trees cleared out in great number ~~to~~ to meet housing demands. This poses a problem as trees are absorbers of  $\text{CO}_2$ , so destroying them not only decreases the world's capacity to absorb  $\text{CO}_2$ , but it also causes the currently stored  $\text{CO}_2$  to be released into the atmosphere. Beyond that, the population boom has led to increasing food demands. In order to rear livestock and cultivate enough crops to meet this rising demand, more forests are cleared in order to make farmland. Therefore, the cycle of increasing human demands leads to more deforestation, which in itself contributes to climate change.

Building upon the point of <sup>crop cultivation and</sup> livestock rearing, the act in itself is also a major contributor to climate change. The usage of fertilizer to raise crop yields is very common. However, due to lack of regulations and education, often farmers introduce excess fertilizer into the soil. Nitrogen is a staple component in many fertilizers and plants only absorb a set amount. As for the excess, bacteria in the soil break down ~~the excess~~ <sup>nitrate ( $\text{NO}_3$ ) and ammonium</sup> fertilizer into Nitrogen Dioxide ( $\text{N}_2\text{O}$ ) in a process called Nitrification. The issue is that  $\text{N}_2\text{O}$  has almost 300 times the warming potential of  $\text{CO}_2$ , so this activity is extremely dangerous with respect to exacerbating climate change. Similarly, Livestock farming is also a major contributing factor. Cattle and sheep in particular

are notorious for producing large amounts of methane ( $\text{CH}_4$ ) during digestion which is then released into the atmosphere. Its warming potential is about 80 times that of  $\text{CO}_2$  and though it doesn't last for centuries, it still lasts many years. So the impact it has on the climate crisis cannot be ignored. ~~Thus~~ Hence, agricultural activities are a major driver of climate change.