

Climate Change: Causes and Consequences

Outline of Essay

- 1) Introduction:
 - 1.1: Hook
 - 1.2: Background
 - 1.3: Thesis statement: Climatic changes occur because of both anthropogenic (human based) and natural causes, each of which result in severe environmental, agricultural, health, economic and socio-political impacts.
- 2) Anthropogenic (human based) causes of climate change:
 - 2.1: Burning fossil fuels
 - 2.2: Deforestation
 - 2.3: Transport vehicles
 - 2.4: Decomposition of food waste
 - 2.5: Use of chemical fertilizers
 - 2.6: Livestock production
 - 2.7: Industrial and fluorinated gas emission.
- 3) Natural causes of climate change:
 - 3.1: Volcanic eruptions
 - 3.2: Natural forest fires
 - 3.3: Naturally occurring greenhouse gases
 - 3.4: Continental drifts
 - 3.5: Solar variations
- 4) Consequences of climate change:
 - 4.1: Environmental impacts
 - 4.1.1: Melting glaciers
 - 4.1.2: Rising sea levels
 - 4.1.3: Extreme weather events

4.2: Agricultural impacts

4.2.1: Crop failures

4.2.2: Food insecurity

4.3: Impacts on health

4.3.1: Spread of diseases in human

4.3.2: Spread of diseases in animals

4.4: Economic impacts

4.4.1: Damage to infrastructure

4.4.2: Increased disaster recovery cost

4.5: Social and political impacts

4.5.1: Climatic migrations may cause disputes over survival needs.

4.5.2: Governance challenges

5. Mitigation measures and adaptation strategies:

5.5.1: Mitigation: Energy transition, sustainable agriculture, ^{and} afforestation

5.5.2: Adaptation strategies: Infrastructure resilience, improve agriculture and food security, animal and public health protection, community preparedness

6. Conclusion

The Essay

Climate change is a relentless conqueror that invades and conquers every territory it passes by. This is not a myth but a living reality of our time; as with each passing day we observe how climate change is aggressively advancing and reshaping ecosystems, economies, and human lives globally. Floods in Pakistan, wildfires in Australia, hurricanes

in US and heatwaves in Europe are all occurring due to changes in climatic patterns. These changes in climate are occurring as a result of natural and anthropogenic (human based) factors, each of which are resulting in severe environmental, agricultural, health, economic and socio-political impacts. Since, the causes of climate change are well known so as responsible inhabitants of earth it is our duty to avoid harmful practices and to adopt expert guided mitigation measures and adaptation strategies to prevent further damage.

This essay examines both human driven and natural causes of climate change, along with their impacts on the planet. To begin with let us first analyze the human driven factors that are disrupting earth's climatic patterns. One of the foremost human driven cause of climate change is the burning of fossil fuels, which are coal, oil and natural gases. Burning these fuels, release massive amount of green house gases (including :- CO_2 , nitrous oxide, methane, fluorinated gases and water vapours) in the atmosphere which consequently pollute the environment. In addition to this, the increased concentration of these gases lead to higher atmospheric temperatures (global warming), ultimately leading to destabilization of planet's climatic system. Scientific reports

From IPCC (Intergovernmental Panel on Climate Change), confirm that fossil fuel combustion accounts for over 75% of global greenhouse emissions which are directly linked to rise in global temperatures. This abnormal rise in global temperature leads to floods, melting of glaciers and extreme weather events. These unchecked emissions not only erode environmental stability but also threaten human health, food security and economic resilience of the affected countries because farmers suffer crop failures, children inhale polluted air and families in flood prone areas lose their valuable assets. This reveals how the unchecked burning of carbon based fuels not only disrupts the climate but also pose a threat to human survival on our planet.

The second significant, human driven cause of climate change is deforestation. Forests are widely recognized as natural carbon absorbing shields which safeguard the ecosystem and its inhabitants against natural disasters and extreme weather events. However, when they are cleared, both our environment and its residents are exposed to calamities and climatic extremes like floods, droughts, storms etc; since deforestation disrupts carbon storage, rainfall cycles and temperature regulation globally. Scientific studies reveal

that forests absorb nearly one third of global carbon emissions. However, when trees are cleared for fuel or left to decompose they release carbon dioxide and methane, intensifying global warming. For instance, cutting down of Amazon rainforest in Brazil and loss of 460 hectares of natural forest in Pakistan in (2024); both contributed significantly to rise in greenhouse gases, disruption of water cycles and resulted in extreme weather events in both countries. Countless citizens in both countries suffered emotionally, physically, and financially due to deforestation; as they faced health issues due to polluted environment and economic hardships due to the loss of valuable assets. This demonstrates how excessive deforestation is not only eroding normal climatic patterns but also inflicting adverse effects on the population globally.

The third major (anthropogenic) (human driven) cause of climate change worldwide is the transport vehicles. These mobile vehicles either moving on the road, in the sea or in the air contribute equally to alterations in climatic pattern. These vehicles release massive amounts of greenhouse gases including carbon dioxide, methane, and nitrous oxide which are the major contributors to climate change because they cause environmental pollution. In addition, these

gases trap heat through greenhouse effect triggering global warming which directly leads to calamities globally. For instance, transport sector contributes 20-25% of global carbon dioxide emissions; which consequently intensify global warming and contribute to harsh weather. Moreover, trillions of people around the world struggle health related issues due to the toxic emissions by automobiles. These harmful emissions not only cause air pollution and global warming but also contribute to severe economic losses and create hazardous living conditions specially for the communities along the roads. The people living by the roadsides suffer respiratory illnesses, crop losses due to polluted atmosphere, extreme weather or floods due to rise in temperature. These losses not only affect people financially but also deteriorate them emotionally by eroding their hope to live. This illustrates how hazardous emissions from vehicles cause variations in climate and adversely affect habitants of the earth.

Digital Distractions

The swift pace of science and technological progress has introduced multiple challenges in today's world. Each passing day brings fresh discoveries reshaping the way we live. Among these challenges digital distractions stand out as a pressing issue affecting the people of all ages equally. Digital distractions are the interruptions caused by digital devices like mobiles, laptops, tablets etc. These distractions include social media applications, messaging applications, streaming and gaming platforms which we operate on our gadgets in daily routine. All of these digital disturbances impact us negatively by reducing our attention span, productivity, and affecting mental well-being. Firstly, they erode our ability to focus on the task in hand. For instance, let us hypothetically consider how frustrated a student might get when he sits down to study for an exam and continuously gets distracted due to messages popping up on the screen of mobile. This will not only make him frustrated but also make him feel scattered, anxious and guilty for wasting his time in reading messages rather than focusing on exam preparation. Secondly, tech distractions reduce productivity by depriving people of creative and critical thinking capabilities. For instance, due to spending hours on scrolling and switching from one application

to another, when people sit to create something, they struggle. This happens because their minds have become conditioned to instant rewards rather than hardwork. Lastly, these digital interruptions deteriorate mental health and cause stress, anxiety, insomnia and constant fatigue in people. Constant alerts popping on screens trigger sense of urgency, keeping brain in state of hyper-vigilance, this elevates the production of stress hormones. These stress hormones result in constant fatigue, anxiety and emotional instability. Since, it is known that unchecked and excessive exposure to digital devices is negatively impacting human beings globally; therefore people must set certain boundaries, take mindful breaks and schedule device free hours. This will enhance their overall well-being and foster a balanced lifestyle.