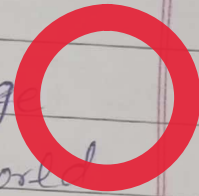


How Technological Developments leads to Climate change and Consequent changes in Natural and Societal System? Also Furnish Possible Adaptation options to Climate Change.

1: Introduction:

Climate change continuously effecting the world in general and Pakistan in particular. The technological developments since industrial revolution started the changes in climate. Carbon emission from industries, Chloroflourocarbons carbon emission from home appliances and automobiles playing havoc in climate change. This change in climate imparting global warming, disastess such as glauia melting and floods, increased sea-level, food insecurity and extreme weather conditions. These all orisis can be fixed by focusing

Add helping verb



Avoid cutting

on sustainable development and agricultural practices. The whole world have to implement the environmental treaties and strengthening of environmental institutions, otherwise the world would not be habitable any more.

2:- Understanding The Term Climate Change:

According to United Nations climate change can be defined as;

"It refers to the gradual change in the weather patterns in long-terms."

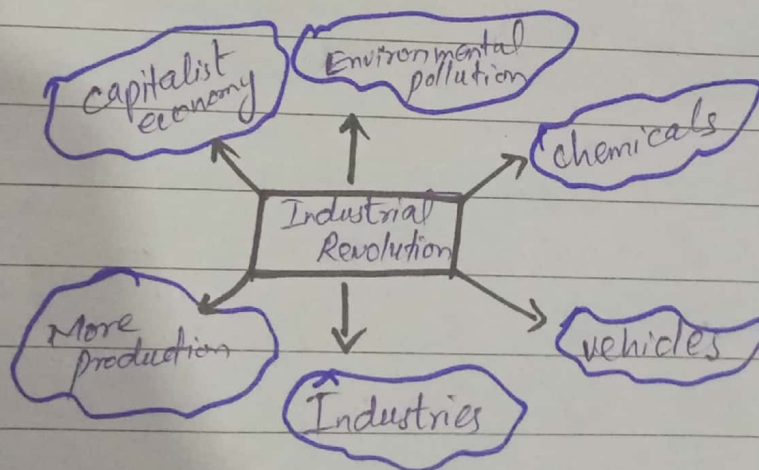
3: Technological Developments Which are Leading Towards Climate Change:

Technology helped us and

provided ease in human life in one way and is playing catastrophic role in another way. Some technological developments which are resulting in climate change are;

3.1: Industrial Revolution:

Industrial revolution which started centuries ago in Great Britain paved the way of environmental degradation and climate change.



Industrial revolution did wonders to human life but it also the

source of climate change.

3.2: Carbon Emission From Industrial Discharges:

Industries increased the rate of productivities but the unsustainable use of industries and its in-effective management contributing to climate change by continuously emitting carbon in the atmosphere which is leading to environmental pollution ultimately changing climate.

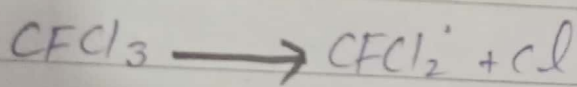
According to UN;

"Pakistan's share in global emissions is less than 1%. but it is 8th most vulnerable country effected by climate change".

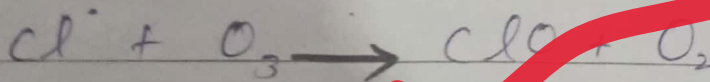
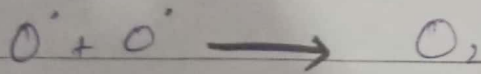
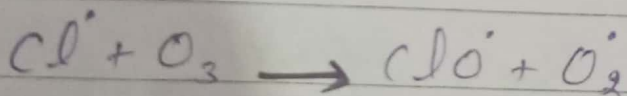
How's this related to what has been asked?

3.3: - Home Appliances - Sources of Chlorofluorocarbons which are causing ozone depletion.

Technology made our lives easier in case of air conditioners and refrigerators but these home appliances are sources of chlorofluorocarbon emission. CFCs go to stratosphere and destroy the protective ozone layer.



One chlorine radical can destroy more than one million O_3 molecules.



3.4: Emissions from Automobiles exhaust:

Technological developments in transport department helped

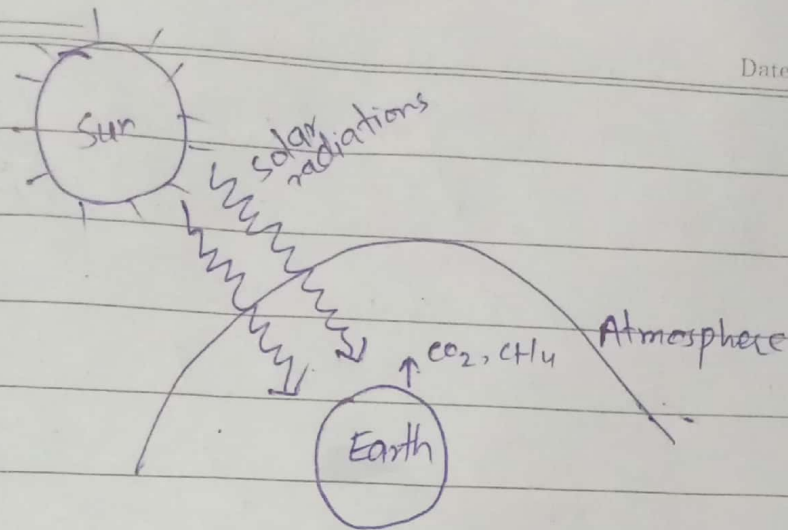
us with cars, motor bikes, railways, aeroplanes but these automobiles consumes hydrocarbon and emit different gases in the environment such as CH_4 , NO_2 , CO , NO_2 , NO_3 , SO_2 , SO_3

4: Consequent Changes of Climate change in Natural and Societal system:

climate changes may impart following consequences;

4.1: Green-House Effect:

The emission of greenhouse gases such as CH_4 , CO_2 , NO_x in the atmosphere act like the glass of greenhouse trapping the solar radiations within the atmosphere.



4.2: Global Warming:

The major consequence of climate change is global warming. The temperature of the earth has been increased upto 1.5°C since industrial revolution and it will increase upto 3°C till 2030 according to united Nations.

4.3: Increased Disaster Risk such as floods, glacier melting:

Global warming and climate change are responsible for melting of ice-caps and

glaciers and therefore the risks of disasters land sliding and floods have been increased.

Pakistan has experienced too many floods in last 4 years. The most catastrophic flood was of 2022 which affected more than 7m people according to world bank.

4.4. Increased sea-level and submerging coastal areas.

Glacier and ice-caps melting incorporates flooding which results in increased sea-level due to which low-laying coastal areas are submerging in sea leaving the habitable areas no more habitable.

According to an International Report small Ice-lands such as Maldives, Haiti will disappear since 2050.

Day: _____

Date: _____

4.5:- Food Insecurity and Migration:

These frequent disasters and climate change led to food insecurity due to low production of agriculture due to which many have to migrate towards other regions for food.

Be specific
Add reports

4.6. Extreme Weather Conditions:

Climate change has made the weather conditions extreme. The weather conditions of today are more severe and catastrophic than previous.

"The Year 2024 is declared the hottest year since the earth history".

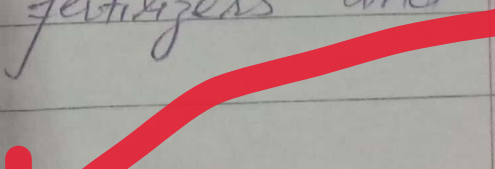
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5. Possible Adaptation Options to Climate Change:

Climate change consequences can be mitigated by adopting following possible adaptations.

5.1: Sustainable Industrial and Agricultural Development:

To mitigate the effect the focus of the world should be on sustainable practices in industry and agriculture by cutting down the use of fertilizers, pesticides and hydrocarbon fuels. rather using alternative renewable clean energy sources and bio-degradable fertilizers and pesticides.



5.2: Global Environmental treaties and their Implementation.

The world has been awoken since 1992 and had made many environmental treaties to combat environmental onis is such as.

- * Rio- Declaration
- * Paris- Agreement
- * Stockholm Declaration
- * Conference on all Parties (COP)

But these treaties will be effective only when implemented religiously.

5.3:- Public Awareness:

Public and masses should have been awared through speeches, seminars, articles and book about climate, environment its degradation and its effects on their lives.

5.4. Re-Structuring and Strengthening Environmental Institutions:

At local level Pakistan should have re-structure and strengthen the environmental institutions so that they can work for the improvement of environment.

6. Conclusion:

Climate change has worsen the quality of environment but the quality of climate and environment can be improved by sustainable use of industries and development and implementing the environmental treaties and strengthening the environmental institutions.

Concise your conclusion

You need to focus more on what's been asked

Give viable solutions, try and relate them to the technological aspect, and give societal and natural solutions based on the problem's intensity

You have got potential

Focus in your grammar etc

Good luck!