

CLIMATE CHANGE AND GLOBAL WARMING

प्रश्नों की संख्या 10 जिए

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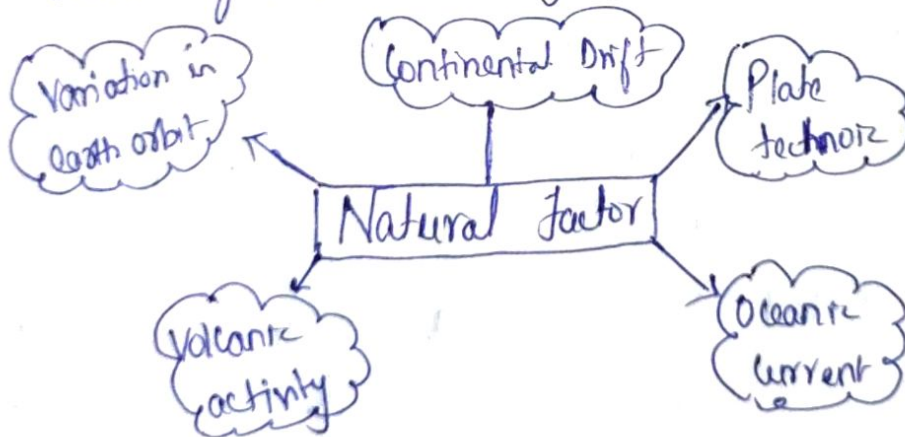
Climate change can be defined as a variation and shift in weather condition over space and time of different scale and magnitude resulting in the change of climate.

Cause of climate change

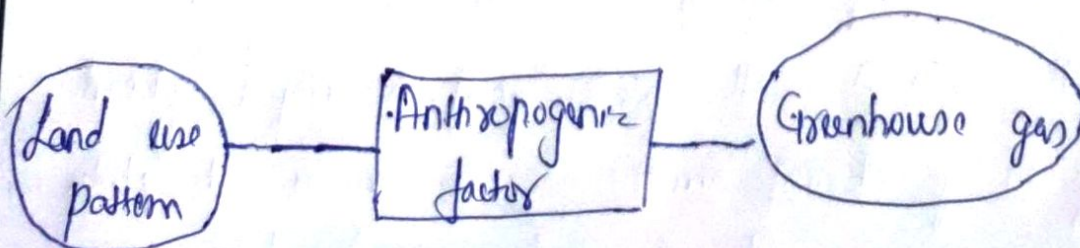
Natural factor

Anthropogenic factor

➤ Natural factors resulting in climate change:-



➤ Anthropogenic factor:-



DEFINITION

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① Land use patterns

The cutting down of forest on farmland, deforestation on high altitude and Tropical deforestation can alter Albedo effect, change insolar radiation pattern and cause climate change.

② Greenhouse Gas / Global warming:-

The earth atmosphere is covered with a natural layer of Green house effect where certain gases and water vapour maintain the absorbed insolar radiation and keep the surface temperature around 14°C . If it would not be there then the surface will remain around -19°C .

Increasing the concentration of Greenhouse gases in the atmosphere causes the Earth to heat more and the climate to change. This process is often called Global warming, but it is better to think of it as climate change. It is changing other aspects of climate as well as temperature.

* EVIDENT OF CLIMATE CHANGE & GLOBAL WARMING

- changes in rainfall and weather pattern
- an increase in the frequency of extreme weather events
- Sea level rises
- Melting of Glaciers
- Shift in the geographic ranges distribution of some plant and animal species
- Hampering the crop productivity
- Earlier unfolding of new leaves in spring
- changes in bird migration pattern.

* CHANGING CLIMATE AFFECTING AGRICULTURE:

- ① Extreme heat: - Heat waves, high temperature, reduction in precipitation and water availability have hampered the crop productivity and also bring the changes in the quality and quantity of water resources.
- ② Changing rainfall pattern: - Rainfall pattern have already began shifting across the country. This is likely to mean more intense periods of heavy rain and longer dry periods.

(11) Rising CO_2 concentration: - A rise in atmospheric CO_2 concentration disturbs crop production by changing photo-synthetic and transpiration rate.

(12) Climate change can disrupt rainfed agricultural food production which accounts for 60% of agricultural GDP of India.

* EXTEND OF WATER CRISIS IN INDIA:-

→ India has only 4% of the world's renewable water resources but is home to nearly 18% of the world's population

→ A/c to composite water management index of NITI Aayog, 21 major cities will reach zero groundwater levels by 2020, affecting access for 100 million people

→ The per capita annual water availability has reduced from 1816 cubic meter in 2001 to 1544 cubic metre in 2011

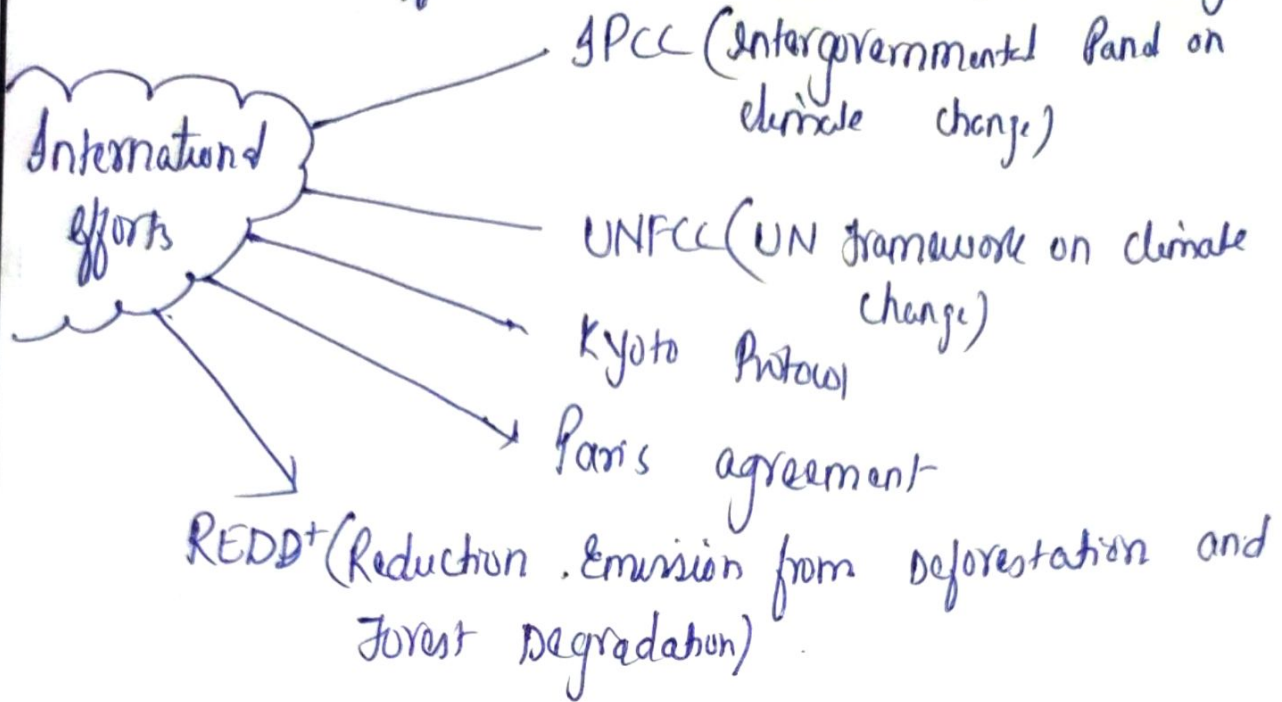
→ Average temperature has risen by around $0.7^\circ C$ during the last century, due to which though affected area increased by 1.3% per decade.

* MEASURES TAKEN BY Gov. TO COMBAT CLIMATE CHANGE:-

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- India is taking numerous measures to adapt and mitigate climate change by increasing energy efficiency, promoting greener economic model, promoting use of renewable energy, promoting crop diversification, zero-budget natural farming and altering changes in land use pattern.
- Clean India is among the few countries that have increased the clean energy cap on coal.
- The gov is increasing investment for afforestation to increase carbon sink.
- Gov has launched Jal Jeevan Mission to ensure sustainability of water supply system.
- Adopting international practices for grey water management.
- Mandating Rain water Harvesting Mechanism to reduce water crisis.

* International efforts to combat climate change:-



* CONCLUSION:-

The efforts to combat climate change will have to focus on mitigation & adaptation efforts across all sector. And we have to reduce our dependency on fossil fuel and put thrust on less carbon emission fuel.