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POLCC410 (GLOBAL POLITICS)

SEMESTER IV

Climate Change

Introduction:

This unit deals with the issue of climate change. The unit covers the meaning and definition of climate change, the causes responsible for climate change, the impact of it on mankind and the importance of sustainable development in the wake of ever increasing detrimental climate change due to man's greed to harness nature for their own vested interest unmindful of its impact on planet Earth. Mankind with their intelligence and technology have penetrated into hitherto unexplored areas and also harnessed natural resources to an extent that it has crippled the sustainability capacity of Mother Earth. In the past 25 years world population has increased 3.7 billion to over 6 billion which further curbs the capacity of Nature to nurture mankind. Ecological footprint is a phrase used to depict the amount of land and water area a human population would need to provide the necessary resources to support itself and to absorb its wastes. The term Human footprint was coined by Canadian ecologist William Rees in 1992 and is now widely used as an indicator of environmental sustainability. Human footprint has exceeded the bio-capacity of the planet by 25 % (Gregory et.al. 2009).

Climate change: Meaning and Definition

The term climate change is generally used to refer to on-going climate changes in contemporary times. These changes involve the deep oceans and ocean surface temperatures as well as terrestrial changes in the biosphere periodic events such as volcanic eruptions (Gregory et.al. 2009). The United States Environmental Protection agency (EPA) defines climate change as a significant change in the indicators of climate lasting for an extended period of time. These changes cover temperature, precipitation and wind patterns and any other effects that occur over several decades or longer (United States Environmental Protection Agency 2017).

Causes of climate change:

Almost all of the energy that affects the climate on the Earth originates from the Sun. The energy emitted by the sun passes through space until it hits the Earth's atmosphere. Only about 40 per cent of the solar energy intercepted at the top of the atmosphere passes through to the Earth's surface. The rest is reflected or absorbed by the atmosphere. The energy output of the sun is not constant, it varies over time and it has an impact on our climate. Carbon

dioxide, methane and water vapour present on the earth's surface trap solar radiation (electromagnetic radiation emitted by the Sun) in the Earth's atmosphere, making the climate warmer.

Global warming:

Many people think of climate change and global warming as synonymous but scientists prefer to use the term climate change when describing the complex shifts now affecting our planet's weather and climate systems. Global warming is only one aspect of climate change. It occurs because of the increase in the concentration of the Green House Gases (GHGs) in the atmosphere. Most of the GHGs emit from burning of fossil fuels to produce energy. The other causes include growing deforestation, industrialization and even due to some agricultural practices. The harmful GHGs cover the earth like a blanket and trap energy in the atmosphere causing it to heat. Since 1906 the global average temperature has increased by more than 1.6 degree Celsius Fahrenheit (National Geographic). The biggest concern in contemporary times is the increase in the level of Carbon-dioxide level caused by burning of fossil fuels.

Impact of climate change:

The change in climate has far reaching impacts some of which can be outlined as below (National Geographic 2019):

Rise in sea levels and warming up of oceans

Both the extent and thickness of the Arctic sea ice have declined rapidly over the last several decades resulting in increase in the level of sea. Sea levels are expected to rise between 10-32 inches or higher by the end of this century. Global sea levels are rising 0.13 inches a year.

Impact on species

Ecosystems will continue to change. As temperature increases many species are on the move. Some species will move further north or become more successful. Others such as polar bears won't be able to adapt and survive and could become extinct. Some species including mosquitoes, ticks, jellyfish and crop pests are thriving. Thus one finds that rising temperatures are affecting wildlife and their habitats.

Impact on precipitation

Rain and snowfall has increased across the globe on average. Hurricanes and storms are likely to become stronger. Yet some regimes are experiencing more severe drought and floods and droughts will become more common in the coming future.

Solutions to climate change:

Climate change can greatly be attributed to reckless human activity for development be it economical, social, political or cultural. The solution therefore lies in managing development

in a way which is harmony with the nature; a development which can be sustained by nature i.e. sustainable development.

Sustainable development:

The word sustainability was used for the first time in 1712 by the German forester and scientist Han Carl von Carlowitz. French and English scientists adopted the concept of planting trees and used the term sustained yield forestry (Gregory et.al. 2009). The 1987 Brundtland Report defined sustainable development as development that “meets the needs of the present generation without compromising the ability of the future generations to meet their own needs”. The term sustainable development was adopted by the Agenda 21 programme of the UN. The 1995 World Summit on Development further defined this term as “the framework for our efforts to achieve a higher quality of life for all people in which economic development, social development and environmental protection are interdependent and mutually reinforcing components. The 2002 World Summit on Sustainable Development expanded this definition identifying three overarching objectives of sustainable development to be (Gregory et.al. 2009):

1. Eradicating poverty
2. Protecting natural resources
3. Changing unsustainable production and consumption patterns

With burgeoning world population on land and ocean resources, tension on the geopolitical spheres and the spectre of global climate change in the next century, sustainability will attain increased attention in world summits to ensure future generations survival on Earth. While there is no denying the fact that both developing and developed countries need to reorient their policies to meet the Sustainable Development Goals but there is a division between the developing and the developed nations over sharing of their responsibilities. The developing nations argue that industrialization first took place in developed countries and hence they have contributed the most to climate change and hence should contribute more to its mitigation not to forget the technological edge which these countries enjoy over the developing countries. The developing countries lack technology and it is much cheaper for them to go with traditional sources of energy like coal for their production purposes which in turn contribute more to environmental degradation. Thus the developing countries want the developed nations to share their technology in curbing climate change without additional costs. The developed nations are not ready to accept these demands and hence the debate continues.

Sustainable development does not solely focus on environmental issues. It is the source of financing that matters in climate governance. With the US pulling out of the Paris agreement, the COP23 saw the introduction of an unofficial financing US coalition named “we are still in” which claimed to be the real US representation (EPW Engage). Though led by political representatives the coalition was made up of 2500 businesses and political leaders, arguing that non-state action would be sufficient to meet US targets. The coalition received tremendous publicity from the United Nations Framework Convention on Climate Change

(UNFCCC). Such a trend involves great danger since such a move not only depreciates the role of nation states, it also curbs the limited resources available to the developing countries (EPW Engage).

Conclusion:

Thus one can conclude that climate change is a real problem which needs to be addressed earnestly by all the parties concerned or else our future generations will not be able to enjoy many of the resources we are enjoying now. Development can't be stopped but it could be balanced with the nature. We need to adopt policies which will make a balance between growth and sustainability.

References:

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