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Thursday

Environmental Science

Q7. What are salient requirements of the United Nations Framework Convention on Climate Change? Why there was a need for supplementary Kyoto Protocol? Elaborate the controversies associated with the protocol.

Introduction:

The UNFCCC, established in 1992 at the Earth Summit in Rio de Janeiro, aimed to address the growing concerns about global climate change and its impact.

The framework set foundational guidelines to limit greenhouse gas (GHG) emissions globally, emphasizing cooperation, responsibility and sustainable development.

"The Convention establishes a long-term goal and provides a framework for the development of specific legal instruments aimed at progressively ensuring that human activities do not disrupt the climate system"

(UNFCCC)

These are following key requirements include as:

1. Stabilization of Greenhouse Gas Levels:

The main objective of the UNFCCC is to stabilize GHG concentrations in the atmosphere at level that would prevent dangerous human interference with the climate system.

"The science is clear: human influence on the climate system is clear and growing with impacts observed on all continents"
(UNFCCC statement)

2. Common but Differentiated Responsibilities: (CBDR)

Recognizing that industrialized nations bear a higher historical responsibility for climate change. The UNFCCC incorporated the principle of CBDR, assigning greater obligations to developed countries.

3. National Reporting:

Member countries are required to submit national inventories of GHG emissions and details of steps, they are taking to mitigate climate change. This was designed to create transparency and accountability.

"Developed country parties should take the lead in combating climate change and the adverse effects thereof."

(UNFCCC, Article 3)

4. Adaptation Measures:

The UNFCCC emphasizes the need for member countries to implement adaptation measures to help communities and ecosystems cope with the adverse effects of climate change.

5. Financial Support:

Developed countries are expected to provide financial assistance to developing nations for climate-related projects, especially those focused on adaptation and sustainable development.

6. Research and Public Awareness:

The framework encourages countries to enhance research and technological development related to climate change, as well as to promote public awareness and education.

To address climate change, countries adopted the Paris Agreement to limit global warming to well below 2°C and pursue efforts to limit it to 1.5°C .

II. Need for the Supplementary Kyoto Protocol:

While the UNFCCC established a framework for addressing climate change, it lacked legally binding targets or enforcement mechanisms for GHG reduction. This limitation need for a supplementary agreement with stricter, enforceable provisions. The Kyoto Protocol adopted in 1997 and entered into force in 2005, aimed to address this gap.

The specific needs that led to the Kyoto Protocol include:

a. Legally Binding Targets:

The Kyoto Protocol set binding GHG reduction targets for industrialized countries (Annex I countries) to ensure a significant reduction in emissions, unlike the non-binding nature of the UNFCCC.

"Legally binding emission targets offer a strong signal to industries and investors, showing that governments are serious about a low-carbon future"
(Ban Ki-Moon)

b. Market-Based Mechanisms:

The Protocol introduced mechanisms such as the Clean Development Mechanism (CDM), Joint Implementation (JI), and Emissions Trading to allow countries flexibility in achieving their emission reduction goals.

c. Enforcement Mechanisms:

To ensure compliance, the Protocol included penalties and provisions for non-compliance, distinguishing it from the UNFCCC's voluntary approach.

d. Recognition of Developed Nations'

Responsibilities:

The Protocol continued the CDR principle but with more emphasis on developed nations' roles, obliging them to take the lead in reducing emissions.

III. Controversies Associated with the Kyoto Protocol:

The Kyoto Protocol, while groundbreaking was also highly controversial, key controversies includes as:

1. Exclusion of Developing Nations:

Developing countries, including major emitters like China and India were not required to adhere to binding targets.

This exemption drew criticism, particularly from the **United States** which argued it placed an unfair burden on developed countries.

2. US Withdrawal:

In **2001**, the **United States**, under President George W. Bush withdrew from the protocol, citing concerns over economic impacts and the exclusions of developing nations. The withdrawal weakened global participation and cast doubt on the protocol's efficacy.

"I was elected to represent the citizens of Pittsburgh, not Paris"
(Donald Trump)

3. Economic Impact on Developed Nations:

Some industrialized countries argued that meeting emissions reduction targets would hurt their economies, leading to debates on balancing economic growth with environmental responsibility.

4. Lack of Enforcement on Non-Compliance:

Although the protocol introduced penalties, enforcement was challenging, especially when countries like Canada chose to withdraw from their commitments without facing severe repercussions.

"A 2019 United Nations Environment Programme (UNEP) report estimated that current NDCs would result in a temperature rise of around 3.2°C by 2100."

5. Limited Emission Reductions:

Critics argued that the protocol's targets were insufficient to significantly curb climate change, as global emissions continued to rise even with some countries meeting their targets.

6. Complexity of Market Mechanisms:

The market-based mechanisms especially the CDM were criticized for their complexity, bureaucracy and potential for exploitation.

and potential for exploitation with some major projects achieving little in terms of real emission reductions.

Conclusion:

The UNFCCC laid the foundation for international cooperation on climate change but the lack of enforceable targets exposed the need for the Kyoto Protocol. The Protocol sought to impose binding commitments but it faced significant challenges and controversies, including the absence of major developing nations in binding obligations, economic concerns and issues with enforcement. While the Kyoto Protocol was an important step, these controversies underscored the complexity of achieving global consensus on climate action. Ultimately, it paved the way for later agreements such as the Paris Agreement of 2015, which aimed to address some of these issues by involving all nations in climate commitments.

