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Climate Change and Economic Impact: A Case for Global Cooperation and India's Strategic Response

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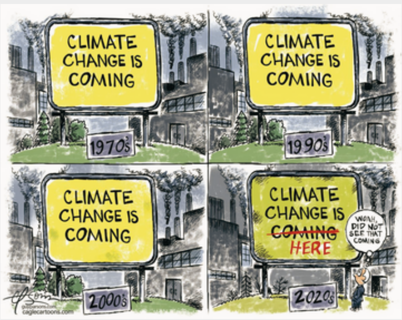
"The world is reaching the tipping point beyond which climate change may become irreversible. If this happens, we risk denying present and future generations the right to a healthy and sustainable planet – the whole of humanity stands to lose".
-Kofi Annan, former Secretary-General of the UN



There is great urgency in the world with countries determined to meet their commitments to the world in order to reduce their contribution to climate change. After all, it has been one of the most pressing agendas on the global forum lately. In its report, "The Economics Of Climate Change: No Action Not an Option," the Swiss Re Institute has warned that climate change could wipe off up to 18% of GDP off the worldwide economy by 2050 if global temperatures rise by 3.2°C, this number is predicted to be 4% if the Paris agreement targets are met. The Paris Agreement aims to keep the global temperature rise under 2 degrees celsius and pursue efforts to keep it under 1.5 degrees.

Asian countries are predicted to face the worst consequences of climate change, with a 5.5% hit to GDP in the best-case scenario, and a 26.5% hit in a severe scenario. For India, According to a report by the Reserve Bank of India (RBI), up to 4.5% of India's GDP could be at risk by 2030, due to lost labor hours from extreme heat and humidity. The same report states that Climate change manifested through rising temperatures and changing patterns of monsoon rainfall in India could cost the economy 2.8% of its GDP and depress the living standards of nearly half of its population by 2050.

An important part of the plans of action is a cut in emissions. The Paris Agreement aims to reduce Green House Gas(GHG) emissions by 43% and ensure they peak by 2025. Each country has set a target for itself and is supposed to communicate actions it will take to reduce its greenhouse gas emissions in order to reach the goals of the Paris Agreement in their Nationally Determined Contributions(NDCs). In their NDCs, countries also communicate the actions they will take to build resilience to adapt to the impacts of climate change. India has set the target of net zero carbon emissions by 2070, its NDC aims at raising the share of renewable energy and reducing the carbon emissions intensity of GDP by 2030.

The Long-Term Low Emission Development Strategy was launched by the Union Minister for Environment, Forest and Climate Change, Shri Bhupender Yadav, who led the Indian delegation to COP 27 in 2022. It focuses on rationally using national resources with due regard to energy strategy and has elaborated on long-term low-emissions development strategies. India also has a National Hydrogen Mission which was launched in 2021, which aims to make India a hub for green hydrogen. Despite having great requirements for energy as a developing nation and being home to approximately 17% of the population, India's share of contribution to cumulative global GHG emissions has remained minuscule, staying at about a third of the global average.

Cap and trade mechanisms are governments' regulatory programs that control the amount of emissions by giving industries tradeable permits to pollute, those who stand below the cap can sell their permits to those who exceed their caps This mechanism finds a mention in the Kyoto Protocol, which was signed in 1997 and set binding emission reduction targets for 37 developed nations. It recommended that the reductions be achieved by means of marketable emissions permits, with each permit allowing one ton of carbon emissions. However, that protocol was doomed before it even got ratified as it did not apply to developing nations, particularly the large ones such as India and China. Most countries, other than those in the European Union(EU), largely ignored the protocol. However, many developing countries started to build their own carbon trading mechanisms.

India has recently announced its plans to develop the Indian Carbon Market (ICM), where a national framework will be established with an objective to decarbonize the Indian economy by pricing the GHG emissions through the trading of Carbon Credit Certificates. One carbon credit will be equivalent to one tonne of CO_2 reduction. The Bureau of Energy Efficiency, Ministry of Power, along with the Ministry of

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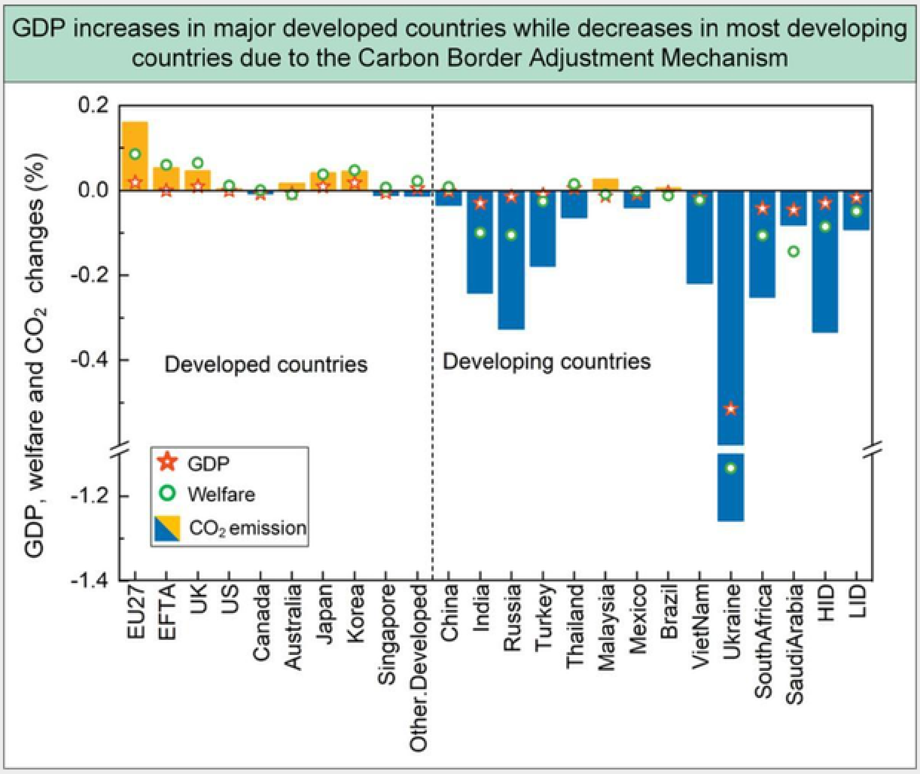
Environment, Forest & Climate Change are developing the Carbon Credit Trading Scheme for this purpose after the Energy Conservation Act, 2001 was amended in December 2022 to introduce it. The 'Draft Green Credit Programme Implementation Rules, 2023' were also announced in 2023. The Green Credits Programme extends its focus beyond greenhouse gas emissions reduction or removal, encompassing activities such as tree plantation, water conservation, sustainable agriculture, and more. Currently, India's energy savings-based market mechanism regulates the industry. Perform, Achieve and Trade (PAT) is a regulatory instrument to reduce Specific Energy Consumption in energy-intensive industries, with an associated market-based mechanism to enhance the cost-effectiveness through certification of excess energy saving which can be traded.

The approach India plans to take is different from the EU's compliance market which directly sets a cap for the absolute volume of emissions, and it is more commonly used among developing countries with growing energy demand and industrial production. The EU has an Emissions Trading System(ETS) in place where companies covered under the scheme have to buy allowances corresponding to their GHG emissions. They are given financial incentives to cut emissions, but many energy-intensive industries are also given free allowance to maintain their competitiveness. Since 2005, the EU ETS has helped bring down emissions from power and industry plants by 37%.

The EU also established a Carbon Border Adjustment Mechanism(CBAM) that aims to place import duties on non-EU carbon-intensive industries to combat carbon leakage. Carbon leakage occurs when companies based in the EU move carbon-intensive production abroad to countries where less stringent climate policies are in place than in the EU, or when EU products get replaced by more carbon-intensive imports. India is reportedly among the top countries that will be affected by this. In 2022, 27% of India's exports of iron, steel, and aluminum products went to EU.

Tightening its own mechanisms would reduce the competitiveness of its domestic industries, which serves another role in implementing these policies. It will eventually act as a trade barrier for developing countries. This move is in



contradiction with The Paris Agreement Article 4, paragraph 19 which states, "All Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies, mindful of Article 2 taking into account their common but differentiated responsibilities and respective capabilities, in the light of different national circumstances."

Common but Differentiated Responsibilities and Respective Capabilities (CBDR–RC) is a principle within the United Nations Framework Convention on Climate Change (UNFCCC) that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change.

Major developing countries have protested against the CBAM as it shifts the economic burden of developed-world climate policies to the developing world through terms-of-trade effects and aims to protect of EU domestic production. In addition, the CBAM may be charged with violating the General Agreement on Tariffs and Trade (GATT) because it favours domestic companies.

The Summary for Policy Makers (SPM) of the Working Group III contribution to the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) [2022] has noted clearly that the contribution of the entire Southern Asia is only about 4% of historical cumulative net anthropogenic emissions between 1850 and 2019, even though the region includes almost 24% of the global population. North America and Europe alone have contributed almost 10 times more to global cumulative emissions in this period, though they have only ~13% of the global population.

The developed nations must work hand in hand with the developing nations to make sustainable climate policies that do not put too much burden on the developing nations. Moreover, The Paris Agreement reaffirms that developed countries should take the lead in providing financial assistance to countries that are less endowed and more vulnerable. Instead of reducing the volume of such imports, the EU can invest more in green technology for the developing countries that export to it. This would be more beneficial on a global scale. Inter-country alliances to

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combat climate change are the need of the hour.

India has already challenged this provision in the World Trade Organisation under the special and differential treatment provisions. Union minister for commerce, Piyush Goyal stated in an address that India is "work(ing) and fight(ing) for a fair deal".

Aadya Bakshi, Batch of 2026

Aadya Bakshi, a second-year Economics Honours student, currently contributes as a member of the Editorial Board at the Ramjas Economic Review (RER). Her areas of interest are international relations, public policy, and macroeconomics, demonstrating her passionate interest in these crucial areas of economic research.