A case for a differential global carbon tax

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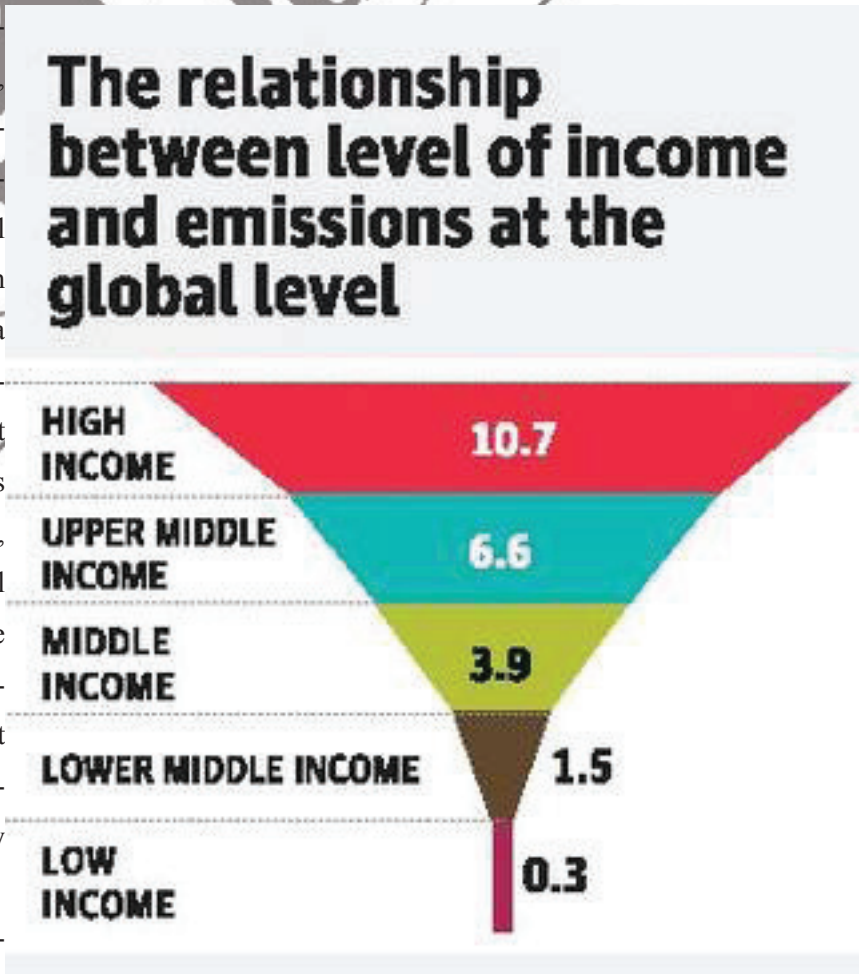
"All nations must climb down the emissions ladder without giving up on their standard of living."

Climate change is a global problem, and a global problem needs a global solution. The most recent Intergovernmental Panel on Climate Change (IPCC) report suggests that we, as humankind, might have just over a decade left to limit global warming. The IPCC says total global emissions will need to fall by 45% from 2010 levels by 2030 and reach net zero by 2050. If these targets are not met, tropical regions of the world, which are densely populated and happen to be mainly concentrated in the global South, are likely to be most negatively affected because of their low altitudes and pre-existing high temperatures. Some impact of this was already felt during the Tamil Nadu water crisis this year.

Sharing the burden

The global South, which has historically contributed less to the problem (and even at present its per capita carbon emissions are much smaller in comparison to the countries in the global North), happens to be at the receiving end of the lifestyle choices made by the global North. Although time is running out, a genuine global consensus on the mitigation of this problem is unfortunately missing. In the absence of a collective agreement, the environment is becoming the casualty. The bottom line is that both the worlds need to contribute to avert this danger in their self-interest. At the same time, the burden of adjustment cannot be equal when the underlying relationship between the two worlds has been historically unequal (climate injustice funnel). But what is the correct balance in terms of sharing this burden, something which can be politically and juridically just?



A just approach would involve a glob-

al sharing of the responsibility among countries according to their respective shares in global emissions. Currently, the most accepted model of mitigating strategy has been the carbon trading process. However, it has its own limitations. Our proposal, a Just Energy Transition (JET), on the contrary, is premised on a sense of global justice in terms of climatic fallouts and the respective contributions of the countries. It will also help the resource-poor developing countries to make the energy transition without having to worry about the finances unduly. Instead, the current experiences of the developing countries point to the contrary.

Correcting injustice

How can this injustice be corrected while making the planet a better place to live in for future generations? The first priority is to fundamentally change the energy infrastructure, which requires massive investments for the green energy programme across the world. What we propose here in some sense is a new global green deal. But how can it be financed? We suggest that those on the top of the funnel, apart from funding their own energy transition, partially support the transition for the countries at the bottom and this sharing of the burden of development be done in a way which inverts this injustice funnel. For a successful energy transition to greener renewable sources, countries have to spend around 1.5% of their GDP. We propose that the global energy transition be financed through a system of the global carbon tax. Since the total global carbon emissions are 36.1 billion metric tonnes of CO2, this amounts to a global carbon tax of $46.1 per metric tonne.

A case for a differential global carbon tax

Who subsidises whom and by how much? Those countries which emit more than the global per capita average pay for their own transition plus fund a part of the energy transition of those who are below this average. So, those at the receiving end of climate injustice are duly compensated for even as the entire world transitions to greener earth as a result of this process of carbon tax sharing. Currently, the global average of carbon emissions is 4.97 metric tonne per capita. All the countries with emissions above this level (68 in all) are "payers" to finance energy transition for 'beneficiary' countries (135 in number), which are emitting below this level.

The total amount of "carbon compensation" made by the payer nations comes to around $570 billion. The distribution of this amount across the payer countries is based on their distance from the global average (controlled for their population size). The other side of the same coin is the compensated countries, and the distribution of this fund across them is also based on how lower their emissions are in comparison to the global average. Once you add (subtract) the carbon compensation amount to (from) each of the countries, you get the effective carbon tax for them.

The two top 'payer' countries in terms of absolute amounts of transfers are the U.S. and China since their emissions are higher than the global average. What's interesting is that despite being a payer country, the effective tax rate for the Chinese is lower than the possible universal tax rate of $46.1 per metric tonne and that's because their own energy transition (1.5% of China's GDP) plus the global compensation they make requires a tax rate only of $34.4 per metric tonne. So, in that sense, the burden of adjustment is only partially falling on their shoulder and only because they emit more than the global average.

Robin Hood tax

In terms of 'compensated' countries, India comes at the top due to its population size and its distance from the global emissions' average (India has per capita emissions of 1.73 metric tonne). The other suspects are all countries from the global South, but this list springs a few surprises like France, Sweden, and Switzerland. What this tells us is that even high-income countries which have currently kept their per capita emissions low are beneficiaries of this globally-just policy. With China in the first list and some of the first world countries in the second, it's obvious what this policy wants to achieve. It wants all nations to climb down the emissions ladder without necessarily having to give up on their standard of living. It's a global green Robin Hood tax!

Intergovernmental Panel on Climate Change (IPCC) Report

Why in discussion?

- Recently a new report has been released by the Intergovernmental Panel on Climate Change, which presents a holistic analysis on land and climate change.
- The report also indicated the contribution of global warming by food production activities.
- The report said that if activities such as cattle rearing and transport, energy and food processing are taken into account, there contribute to 37% of total greenhouse gas emissions each year.
- The report stated that about 25% of all food produced is wasted which decomposes as waste and increases emissions.
- Last year, the IPCC prepared a special report on the feasibility of restricting the global rise in temperature to within 1.5 ° C from pre-industrial times.
- This year's report talks about the contribution of land related activities such as agriculture, industry, forestry, animal husbandry and urbanization to global warming.

Main point

- The Intergovernmental Panel on Climate Change has for the first time given a climate change report focused on the land sector.
- Changes in land use and land use have always affected climate change because land serves as a source of carbon as well as a carbon sink.
- Activities such as agriculture and animal husbandry are major sources of methane and nitrous oxide, both of which are hundreds of times more dangerous than carbon dioxide as a greenhouse gas.
- Forests absorb carbon dioxide through photosynthesis, reducing the amount of carbon dioxide in the overall atmosphere.This is why large-scale land use changes, such as defo
- estation, urbanization, and even changes in crop patterns, have a direct impact on overall emissions of greenhouse gases.
- Land and oceans absorb about 50% of greenhouse gases each year through natural processes in the carbon cycle.
- Land and oceans as carbon sinks contribute significantly to global efforts against climate change.
- Forest is an important component in India's Action Plan on Climate Change. India has said that it will increase its forest cover and create an additional carbon sink of 2.5 billion to 3 billion tons by 2032.

Impact of climate change

- The report estimates annual emissions of greenhouse gases to be around 49 billion tonnes of carbon dioxide.
- According to the IPCC report, the amount of carbon dioxide, methane and nitrous oxide in the atmosphere increased significantly between 2007 and 2016 from land used for activities such as agriculture and forest harvesting.
- Such activities are also damaging wetlands and natural forests.
- Fertility of some animals is also being affected by extreme temperatures.
- The deforestation of the Amazon rainforests, melting of permafrost in the Arctic regions and the use of more nitrogen fertilizers by South American farmers are increasing the amount of greenhouse gases in the atmosphere.
- According to New York-based NASA's Goddard Institute for Space Studies, consumption of red meat causes more greenhouse gas emissions than vegetarian diets.

Expected Questions (Prelims Exams)

1. Consider the measures to be taken to reduce carbon emissions-

1. The first priority will be to basicaly change the energy infrastructure.
2. There is a need for large scale investment on green energy programme.
3. The global energy transition should be funded with the help of the global carbon tax.

Code:-

(a) 1 and 3

(b) 1 and 2

(c) 2 and 3

(d) All of the above

Expected Questions (Mains Exams)

Q. What are the global challenges regarding the carbon tax? Why is it necessary to establish a common thinking in this world? Discuss. (250 Words)

Note: Answer of Prelims Expected Question given on 11 Sept. is 1 (c)