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THE FEASIBILITY OF GOAL ON COAL FOR CLIMATE NEGOTIATIONS-THE CASE OF INDIA

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ABSTRACT

The history of the 21st century will undoubtedly be riddled by catastrophic climate scenarios, the instances of which have now frequently started cropping up. The gravity of scientific evidence on climate change has compelled environmental diplomacy especially because climate change is one mission which cannot be tackled alone. Only a dedicated adaptation to climate action will save the planet. The recent IPCC report [Aug 09 2021] has stated that the past decade 2011-2020 was warmer by 1.09°C than the period 1850-1900. Limiting the temperature rise to the threshold of 1.5°C is a herculean task. Emissions Gap Report of UNEP updates the emission reduction pledges made by countries for 2030 and warns that a projected emission reduction of 7.5°% for 2030 against the needed 30%-55% cuts (to remain at 1.5°C rise) has put the globe on a track to a 2.7° C rise in temperature by the end of the century. Ranked the 7th most affected country by weather extremes (Global Climate Risk Index 2021) India will face the most intense heat waves, heavy monsoons and a rise in weather extremes. The poorer half of the world have not contributed to the problem but is faced with the disastrous and catastrophic consequences which add to their problems of poverty and unemployment. There is a need to analyse the practical difficulties which countries like India face when they are on a race to phase out coal.

The principle of common but differentiated responsibilities compatible with development levels requires more from major emitters- China, USA and the European Union. U.S and E U have together contributed to approximately 45% of the emissions and point towards the disproportionate appropriation of global common resources. India accounting for 17.5% of global population is responsible for only 4.3% of cumulative emissions. India produces 1.8 metric tonnes of carbon emissions per capita against 15.2 metric tonnes produced by the U.S [World Bank-2018]. India's Per Capita emissions is less than half the world average and taking in both stock and flow concept of global emissions India's share is low and is not rising dramatically like China's. India is only the sixth largest emitter when historical emissions are considered. When accounting for its population, it is one of the lowest per capita emitters. The lion's share of the global carbon budget are claimed by China, US and EU and will add to the breaching of the 1.5°C cap on temperature rise. There is a need to challenge the 40-year-old global climate policy which blames the developing world. Scientific reports confirm that unsustainable life styles and wasteful consumption

patterns are the reasons for the global warming and resulting climate change and the use of coal as resource by countries like India contributes only a negligible portion.

KEY WORDS; Climate change, Carbon budget, Per capita emissions, Climate Equity Monitor, Carbon-space, Climate justice. Cumulative emissions, Polluter Pays Principle.

THE RATIONALITY ON COAL

India is the second largest producer and consumer of coal after China[Statistical Review of World Energy-2015] India is also among the top 5 coal reserves in the world. As of March 2020, India had 344 billion metric tons (379 billion short tons) of the resource. The country may not be equipped to meet the goal on coal because currently India meets70% of its electricity needs from coal. Increasing the renewable capacity to 500 GW by 2030 and reducing carbon emissions by 1 billion tonnes in a decade would mean increasing the share of renewable sources in electricity generation from the current 12% to a whopping 50% by 2030.The phase -down promised at the COP-26 is generous on India's part but the transition to clean energy may be harder and may drag down growth. The countries like India should be given more room or carbon space for using and phasing down coal since it is also the cheapest of fuels. The focus on coal diverts global attention from oil and natural gas which are heavily used by the developed nations. The disparity between the emissions of developed and developing countries is the base for demanding climate justice. A resource-strapped Indian economy has to claim a fair share of the global carbon budget to bootstrap out of the low income status, expand and modernize and eradicate poverty and unemployment.

TABLE-1

PRODUCTION OF RAW COAL IN INDIA [QUANTITY IN MILLION TONNES]

YEAR	PRODUCTION
2010-11	532.69
2011-12	539.95
2012-13	556.40
2013-14	565.77
2014-15	609.18
2015-16	639.23
2016-17	657.87
2017-18	675.40
2018-19	728.72
2019-20	730.87

PROVISIONAL COAL STATISTICS 2019-20 GOVERNMENT OF INDIA MINISTRY OF COAL, COAL CONTROLLER'S ORGANISATION KOLKATA

Coal India Limited, a state-controlled mining company, is the largest coal producing company in the world. In 2020, the company had produced approximately 602 million metric tons of coal. Coal generated more than 70% of electricity produced in 2017–18, while lignite accounted for 3.6% of electricity generation. It consumed over 70% of the coal produced in the country in 2013.

COAL- THE GLOBAL SCENARIO-

Coal has powered industrialization through thermal electricity generation and also as an ingredient for manufacturing processes. In spite of the efforts to decarbonize the global energy system, it still remains the biggest source of world's electricity generation accounting for 38% of global share in 2019[International Energy Agency]. Thermal coal and lignite made up 86% of production of 7.9 billion tonnes of global coal in 2019, remaining being metallurgical coal.

TABLE-2

GLOBAL COAL RESERVES

COUNTRY	RESERVES [IN TONNES]	WORLD SHARE[IN %]
USA	254,197,000,000	22.3
RUSSIA	176,770,840,800	15.5
AUSTRALIA	159,634, 176329,600	14
CHINA	149,818,259,000	13.1
INDIA	107,726,551,700	9.5
GERMANY	39,802,209,480	3.5
SOUTH AFRICA	35,053,458,000	3.1
INDONESIA	24,910, 001,380	2.8%

SOURCE; WORLD COAL STATISTICS, STATISTICAL REVIEW OF WORLD ENERGY, U.S ENERGY INFORMATION ADMINISTRATION.

TABLE-3

GLOBAL LEADERS IN PRODUCTION AND CONSUMPTION OF COAL-2018

COUNTRIES	PRODUCTION OF COAL [MILLION TONNES]	CONSUMPTION OF COAL [IN MILLION TONNES]
CHINA	3743	3830
INDIA	779	976
INDONESIA	551	139
USA	488	419
AUSTRALIA	473	99
RUSSIA	386	205
SOUTH AFRICA	247	169
GERMANY	105	138

SOURCE; GLOBAL ENERGY STATISTICAL YEAR BOOK-2021

China leads in the production of coal and contributes approximately 47% of global production of coal. India which is the second largest producer only produces approximately one-fifth of the Chinese production of coal contributing to approximately 10% of the global production. China also leads in consumption of coal and contributes approximately 50% of the global share whereas India has 11% of the global consumption.

TABLE-4

SHARE OF COAL IN ELECTRICITY PRODUCTION

COUNTRIES	ELECTRICITY PRODUCTION FROM COAL 2015 [% OF TOTAL]
CHINA	70.3
INDIA	75.3
INDONESIA	55.8
USA	34.2
AUSTRALIA	62.9
RUSSIA	14.8
SOUTH AFRICA	92.7
GERMANY	44.3

SOURCE; THE WORLD BANK

The extent and intensity of global warming which causes climate change can be traced to the emission of Green House Gases ie. Carbon Di oxide and Methane. Though Methane is rarer than Carbon Di Oxide, it is much deadlier. We can compare the total emissions as well as per capita emissions. Among the largest polluters in terms of emissions per inhabitants are wealthy countries of the Middle East chiefly because of the huge quantity of emissions released during the extraction of natural gas and crude oil and also the operation of refineries.

TABLE-5

COUNTRY-WISE PERCAPITA EMISSIONS OF CO2 AND METHANE

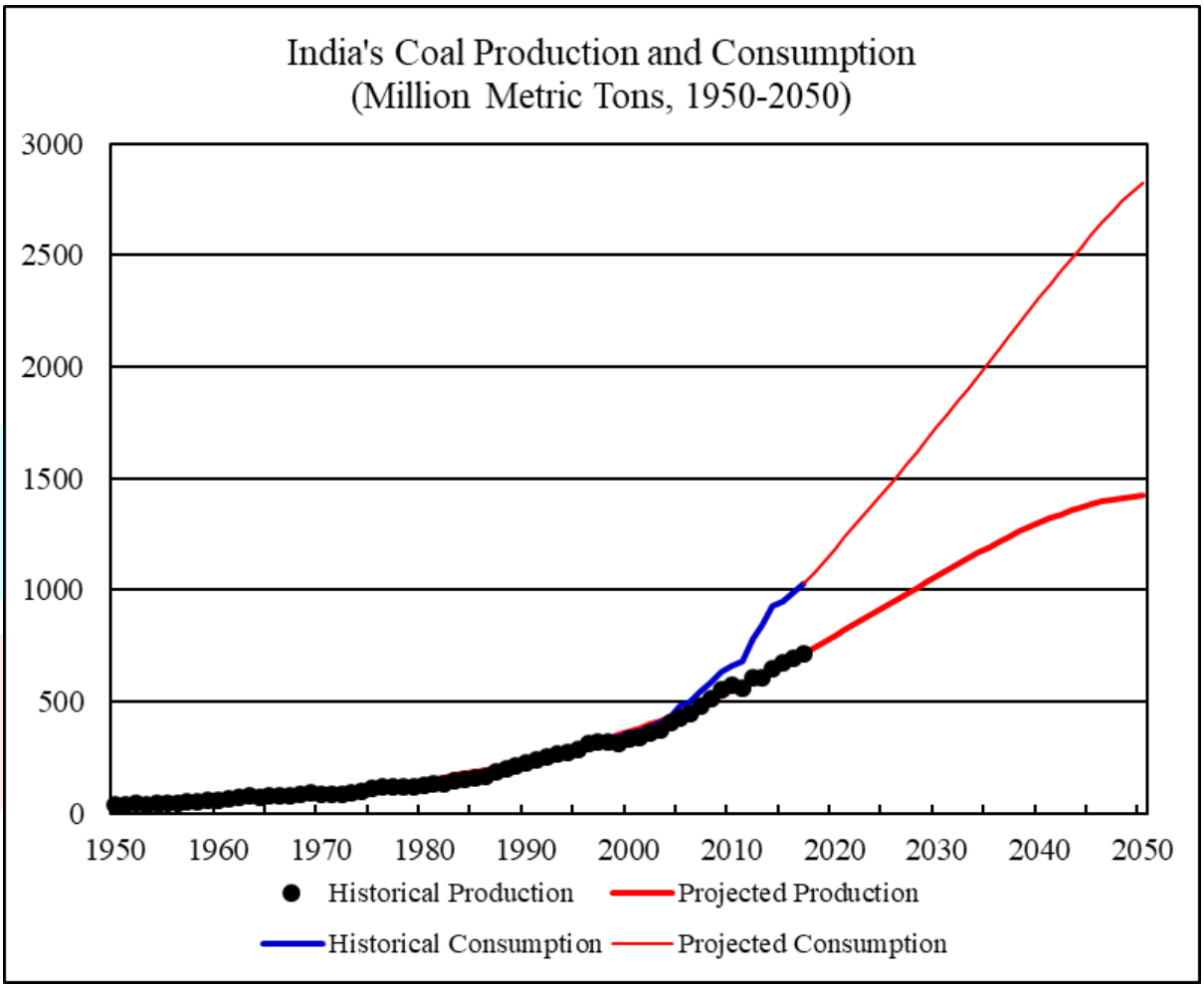
COUNTRY	TOTAL CO2 EMISSIONS	PERCAPITA CO2 EMISSIONS [IN TONS]	TOTAL METHANE[IN CO2 EQUIVALENTS]	PERCAPITA METHANE EMISSIONS [IN TONS]	TOTAL PERCAPITA GHG EMISSIONS[TONS]
BRUNEI	7.14 MT	16.32	8.83 MT	20.18	36.50
QATAR	90.17 MT	31.30	8.11MT	2.81	34.1
BAHRA IN	30.75 MT	18.07	14.85MT	8.73	26.80
U A E	200.30 MT	20.25	52.96 MT	5.35	25.6
KUWAIT	89.46 MT	20.95	6.08 MT	1.42	22.3
AUSTRALIA	386.62MT	15.05	139.07 MT	5.41	20.47
USA	4980 MT	15.12	622.59 MT	1.89	17.01
GERMANY	709.54 MT	8.52	53.37 MT	0.64	9.17
CHINA	10,310 M T	7.36	1240 MT	0.88	8.24
INDIA	2430 MT	1.76	666.5MT	0.48	2.25

SOURCE; EMISSION DATA BASE FOR GLOBAL ATMOSPHERIC RESEARCH[EDGAR]-EUROPEAN COMMISSION, CARBON DI OXIDE INFORMATION ANALYSIS CENTRE-2018.

India's coal consumption is projected to rise from 1,032 million metric tons in 2020 to 1,730 million tons in 2030, 2,314 million tons in 2040, and 2,822 million tons in 2050. Under the projections, India's net coal imports (consumption less production) will rise from 316 million metric tons in 2017, to 665 million tons in 2030, 1,010 million tons in 2040, and 1,396 million tons in 2050. This will be equivalent to 18 percent of the world coal production in 2017. [World Energy Annual Report]

The developed countries powered its own industrial revolution with the resource coal and now corner the developing countries to phase out coal. Increasing automobile emissions growing at a faster rate are left -out. A kind of carbon colonialism is being practiced in climate agreements and summits.

FIGURE-1



World Coal 2018-2050: World Energy Annual Report (Part 4)

The Climate Equity Monitor website officially endorsed by India prior to the Glasgow summit developed by Indian climate experts [Climate Change Group at MS Swaminathan Research Foundation and National Institute of Advanced Studies at Bengaluru] provides database to highlight the disparity between emissions of developed and developing countries. Countries like U S A, Canada, Australia and Western Europe are shown in the monitor to have net carbon debt where as countries like India and China have net carbon credit. It is therefore only fair that developed countries commit to steeper targets than the developing nations. This evidence-based perspective on climate justice should be at the heart of all climate negotiations.

CONCLUSION

If global carbon budget is to be fairly distributed considering both stock and flow aspects, a restriction of committed emissions of major polluters is warranted, otherwise the mitigation efforts of developing countries like India will be wasted and will only ease the way for free riding by the developed world leading to more disproportionate appropriation. The complementary agenda of compensating for the unavoidable impacts based on polluter pays principle has received only a lip service from the developed world and the climate finance commitment of $100 billion [made at COP15 at Coppenhagen] has not been met, much to the frustration of the developing world. The COP 26 Summit has just expressed a diplomatic deep regret at the failure of not meeting the commitment. Promises not kept prove to be the death knell for cooperation in the long run and countries may be compelled to say Cop-Out than Coal -Out.

In spite of the meagre share in cumulative emissions India has always kept up the mitigation efforts by reducing emission intensity, enhancing renewable capacity and restoring forest and carbon sink. The target of 500 GW of renewable energy capacity by 2030, the commitment under Bonn Challenge to restore 26MHA of degraded and deforested land by 2030 etc have been mitigation efforts in the right direction [India has already restored 9.8 million hectares since 2011]. Energy from the coal and oil plants support big industries, not the world's poorest. The poor not only take the brunt of the climate impacts of increased fossil fuel emissions and impacts from local pollution, but they are also not receiving the energy from the same projects that damage their livelihoods. With so many in the world without energy and basic facilities governments must prioritize investments that ensure increased energy access for the poor instead of prioritizing fossil fuel projects for industrial use.

The enhanced Net Zero pledges at Glasgow has given ambience to long term aspirational targets to keep 1.5°C alive. What appears more important is short term targets for which current governments will be accountable. As John Maynard Keynes correctly pointed out, long run is a misleading guide to current affairs and in the long run we are all dead. An accelerated climate action is the need of the hour and a strong political will and prudence which goes beyond the Paris Promise and pledges is necessitated.

REFERENCES

1 T. Jayaraman [2021]; Why India should not sign on to net zero, The Hindu, Oct 27, p.7

2.State of the World's Forest Report,2020

3.World Bank data 2018.

4.G. Ananthakrishnan [2021]; The Race to Tackle Global Warming, The Hindu, Oct 31, p.13.

5.Coal.gov.in/en/major statistics/production-and-supplies.-Ministry of Coal, Govt. of India.

6. Energy Statistics 2021" (PDF). *Ministry of Statistics and Programme Implementation*. Retrieved 22 September 2021.

7. "Key World Energy Statistics" (PDF). International Energy Agency. 2013. Retrieved 18 June 2014

8. PROVISIONAL COAL STATISTICS 2019-20 GOVERNMENT OF INDIA MINISTRY OF COAL, COAL CONTROLLER'S ORGANISATION KOLKATA

9. https://peakoilbarrel.com/world-coal-2018-2050-world-energy-annual-report-part-4/

10. PR Newswire, Oct. 6, 2010.

11. https://climateequitymonitor.in/

12. https://data.worldbank.org/indicator/EG.ELC.COAL.ZS