

Analysis of Developmental Agenda: India's National interests in Climate Change Regime

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Abstract : *Climate change is an immense threat to the existence of life on the Earth. The issue of climate change is a multi dimensional issue and hence, required to be addressed in larger context of national interests. According to the IPCC 5th assessment report (AR5) released in 2014, the world is just left with 1000 Gt of carbon space by 2030 to keep the rise in average global temperature less than 2°C to avert the adverse effects of climate change. To save the earth, under the 'Paris Agreement', the world has agreed for drastic reduction in GHG emissions beyond the year 2020. Despite the global consensus to reduce GHG emission, it is still a contentious issue that how to decide the degree of responsibility and how to share the burden of mitigation actions. The reduction in GHG emission essentially, involves switching the economy on low carbon path. Moving apart from traditional energy sources is expensive and thus, adversely affect the developmental prospects of a country. India's largest population still deprived of basic human needs and development is inevitable to eradicate their poverty. For development, energy is a primary essential and thus, energy, economic development and Human development are interlinked. The present paper is an attempt to explore this relationship in context of Indian scenario. The present paper also explored the logic behind India's denial to take on binding emission reduction targets under the climate change regime.*

Key Words: *Climate Change, National Interests, IPCC, Carbon Space, GHG, Human Development*

Introduction

In international politics, achieving, maintaining, securing and enhancing the national interests is an ultimate goal of foreign policy and therefore climate change is not an exceptional. The climate change regime is also turning as the conflict of national interests of countries despite the unanimous agreement over the certainty of climate change and its adverse effects on the existence of life on the earth.

Often, national interests are defined as the goals of foreign policy in international relations. However, it is always difficult to precisely define and identify national interests of a country as they are dynamic in nature and subject to change in changing international circumstances. The climate change regime is also a battlefield of national interests where each country is marching to achieve the common and unanimous goal of protecting the earth from getting dangerously warm but their

efforts are vary in intensity and predominately guided by their enshrined national interests.

Van Dyke defined national interests "as an interest which the states seek to protect or achieve in relation to each other."ⁱ

Morgenthau defined as "National Interest is the political tradition and the total culture context within which a nation formulates its foreign policy"ⁱⁱ.

In its simplest form, the national interest is the perceived needs and desires of one sovereign state in relation to the world policies, nations competing and opposing each other for power. Each country pursue to protect their physical, political, economic and cultural identity against intrusion by other countries.ⁱⁱⁱ

The definitions mentioned above, collectively draw a conclusion that national interests are goals of foreign policy that have to be secure, maintain and enhance in relation to other countries. India's foreign climate policy cannot be assumed as working in isolation rather it has to be seen in broader context of foreign policy. In context of climate change regime, India's national interests have not been officially disclosed by government and it is difficult to explicitly identify and isolate them from the broad spectrum of national interests of the country. However, fair indication can be drawn from the Indian position at global negotiations under the auspices of the UNFCCC.

Development

Climate change is well established fact and various IPCC reports have been proved it beyond any reasonable doubts that it is attributed to anthropogenic emission. The Western model of development is GDP driven and economic growth is fuelled by intensive use of fossil fuel which resulted in huge carbon stock in the atmosphere. The Southern countries, which are commonly referred as developing countries, home of billions of poor people, still struggling to provide basic human needs. For developing countries, economic growth is inevitable to provide an essential minimum level of living standard. Therefore the issue of climate change is closely linked with development and to avert climate change drastic reduction in Ghg emission is the only solution.

Apparently, the equitation looks quite simple but, indeed, very complex in nature, especially in context of developing countries.

Mr. Srikant has rightly pointed out in his words "While achieving 'Development' remains as major challenge of the developing countries; most of them are not in a position to ensure basic need such as food, shelter, clothing and minimum 'standard' of living to all of their citizens. Getting rid from poverty, employment, literacy, lack of basic access to primary health care and education, free from malnutrition, stabilizing population, reduction in infant mortality rate, ensuring safe drinking water and sanitation; still remains far off for the more than the 90% population of the world today."^{iv} From Indian perspective, it was well recognized that development

should be the primary concern rather than climate change. Mrs. Gandhi said “poverty is the greatest polluter” this statement was recognized as the voice of developing countries and laid down the foundation stone of India’s foreign climate policy.

From the beginning of climate change regime, India’s foreign climate policy has been consistently focused on the development and economic growth to eradicate poverty and for social development. The Former Prime Minister Dr. Manmohan Singh Said, “For a poor country like ours, development and eradication of poverty is the supreme concern. So we have to marry the concern of management of global climate with the concern for development, for removal of poverty.”^v

India is the home of around 17.5% of the world population, while accounts only 2.4% of the world surface area. Around 30% of global poor houses in India; around 24% of global population without electricity living in India; around 92 million people have no access to safe drinking water. In 2011, the annual consumption of energy (average) was merely 0.6 tonnes of oil equivalent (toe) per capita as compared to 1.88toe of global average in terms of per capita.^{vi} The domestic economic and social aspects of development (life expectancy, education level and incomes etc.) are denoted by Human Development Index (HDI) which globally ranked India at 135 positions out of 187 countries with a HDI of 0.586 in 2013. The Human Development Report released on 24th July 2014 by UNDP said that India was the lowest performing country among the BRICS in all categories except life expectancy which was lower in S.Africa due to the HIV epidemic. The report placed India under medium human development group with HDI 0.614> India HDI 0.586; again the South Asian average 0.588 was also greater than India’s HDI.^{vii}

According to the World Economic Outlook (2015) released by International Monetary Fund (IMF), in 2014, India’s GDP (nominal) per capita was \$1627 compared to \$1508 in 2013. Despite the fact that India is 9th largest economy of the world, it was ranked 145 position on the basis of GDP (nominal) per capita due to its huge population around 1026 billion. India’s per capita income is 6.69 times lower in comparison of world’s average of \$10880.

India is 9th largest economy of the world, however, wide social and economical disparities still exists amongst its regions and people. Around 30% of population (363 million) live in poverty, around 5% of the population (aged 15 year and above) have no employment and around 1.77 million people is homeless. India has only 917Kwh electricity consumption per capita which is barely 1/3 of the world average consumption.^{viii}

India is rapidly growing and following key micro indicators denotes the future needs of India with growing population and urbanization.

Table No 1

Indicators	India2014	India2030
Population(billion) ^a	1.2	1.5
Urban population(million) ^b	377(2011)	609
GDP@2011-12 price(trillion) ^c	INR106.44, USD 1.69	INR 397, USD 6.31
Electricity Demand(Twh) ^c	776(2012)	2499

Sources: a-population Foundation of India, b-Un World Urbanization prospects, c-Government India. Data quoted in INDC.

The predictions are very clear that India will be large in every aspect of development and to support this huge requirement of development and economic growth, India needs consistent and secure energy supply. In fact, economic growth in term of GDP is inevitable for the development of every human aspect and economic growth depends upon energy availability. Thus, economic growth, development and energy security are correlated . This correlation is explored in following section.

Energy Development Linkage

Energy and development are strongly correlated to each other; in fact, energy is a prerequisite to the development and economic growth. Every aspect of development; housing, infrastructure, manufacturing, education, life expectancy, health,, mining, transportation, agriculture require energy. Energy can be produce from various sources; broadly divided into conventional sources like coal, wood and oil (emission intensive but cheaply available) and non conventional or renewable like solar, hydro and wind (expensive but nearly zero emissions).

The common form of energy which is widely used is electricity and largest part of fossil fuel is used to produce electricity. Therefore, to explore the linkage data related to electric consumption, development (in HDI) and economic growth (in GDP) is significant, presented below in a table.

Table No 2. **Correlation of Electric Consumption With HDI and GDP(nominal) 2014**

Country	E. Consumption(Kwh) Per Capita*	HDI**	GDP in \$US per capita***
Canada	15546	0.919	50397
USA	12987	0.918	54596
Australia	10059	0.937	61219
Germany	7035	0.924	47590
France	6938	0.894	44538
UK	5130	0.908	45653
S.Africa	4198	0.665	6482
China	3927	0.734	7589
Brazil	2601	0.754	11604
India	806	0.615	1627

Sources: *Statistctimes; **World Bank; *** World Bank

The data presented in table no clearly shows that countries with higher per capita electric consumption have higher HDI and their GDP per capita is also higher. On the other hand , developing countries are lower side of per capita electric consumption with lower HDI and per capita GDP.

Girish Sant and Ashwin Gambhir has elaborated these correlation as “These linkages are strong but also somewhat flexible. It is correctly argued that GDP growth in itself is an insufficient measure of development. Special policies are required for eliminating hunger and poverty from the lives of large section of the population, however, an increase in GDP is an important part of poverty reduction. Productive employment is associated with increased income and increased consumption of goods and services, both of which require increased energy use.”^{ix}

It is estimated that in 2030, India’s population will be around 1.5 billion and approx 609 million people will live in urban areas. In this scenario, consistent energy supply is necessary to support India’s future growth. In Indian perspective, which is fairly relevant to other developing countries also, the real challenge is associated with the emission of energy sources as most of the developing nations heavily rely on the fossil fuel for their energy demand.

Development/ Economic Growth and Energy Emission Linkages

It is well established correlation that energy is inevitable for the overall growth of a country. The Western model of development, which is energy intensive and largely fuelled by fossil fuel, mainly responsible for the climate change. This fossil fuel based model of development is commonly followed by the most of developing countries including India. Fossil fuels are relatively cheap and easily available therefore, developing countries not willing or hesitant to shift on non fossil fuel based energy sources due to the excessive cost and lack of technology.

India is not exceptional; India is mostly depended on fossil fuel for its energy needs. It is anticipated that India will grow rapidly in coming years and in the new policies scenario a dramatic and fundamental shift in the energy matrix is unlikely.

Table No 3. Primary Energy demand by Fuel in India In the New policies Scenario(Mtoe)

Energy Source	2000	2013	2020	2030	2040	Share in %		2013-2040	
						2013	2040	Change	CA GR
Oil	112	176	229	329	458	23%	24%	282	3.6%
N.Gas	23	45	58	103	149	6%	8%	104	4.6%
Coal	146	341	476	690	934	44%	49%	592	3.8%
Nuclear	04	9	17	43	70	1%	4%	61	7.9%
Rene wable	155	204	237	274	297	26%	16%	93	1.4%
Fossil Fuel Share	64%	72%	75%	78%	81%	72%	81%	8%	N.A.
Total	441	775	1018	1140	1908	100%	100%	11.33	3.4%

Source: India Energy Outlook, IEA 2015

It can be concluded from the table that coal will remain at central position in energy matrix of India, increasing its overall share from 44% (2013) to 49% (2040). India was 3rd largest producer of coal in 2012 with 7.0% of global reserve.^x Coal is an important source of energy and mostly used for power generation as production cost is 2.5-3.5 Rs per Kwh which is cheapest in comparison of other sources like wind (3.5-5.3Rs.) and solar (11-12.5Rs.). In India, coal fired power plants produce most of its installed power capacity.

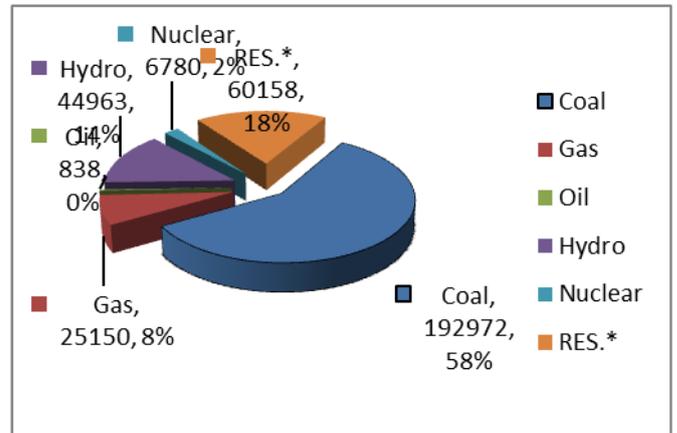


Fig. no 1A Installed Power Capacity by Source

Source: Central Electricity Authority (installed capacity as in 2017)

Above figure shows that coal alone produce 58% of India’s installed power capacity which is about 192972MW of total installed capacity330861MW.

The real challenge for India stems from these coal fired power plants as coal is highly GHG emission intensive source of energy. According to the first Biennial Update Report (BUR) submitted by India to the UNFCCC, in2010, India emitted 2136.84 million tones CO₂eq. GHGs. The largest contribution was came from energy sector around 71% (Fig.***). The energy sector is comprised of mainly electricity generation which is largest contributor of GHGs emission due to the intensive use of coal as a primary source to produce power. Another sectors contributed in total inventory of GHGs are agriculture (18%), Industrial process and product use (8%) and waste (3%). This is illustrated n figure No 2B

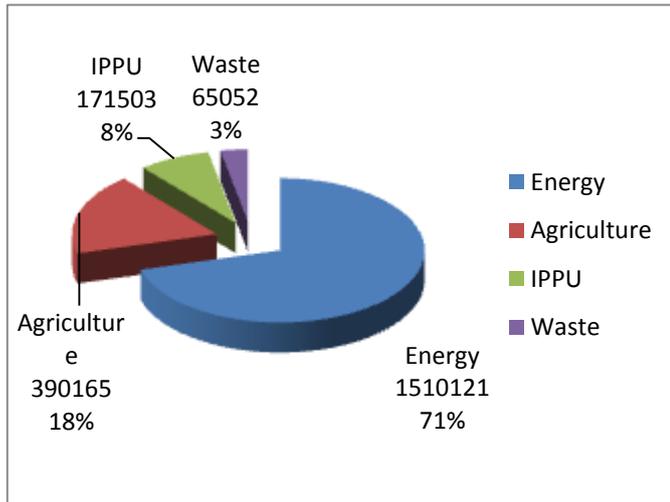


Figure No2B GHG emissions, by sector, 2010 (values in Gg CO₂eq)

Source: First Biennial Update Report2015 to the UNFCCC, MoEFCC, GoI.

The energy sector which is vital for economic growth of India is comprised of energy industries, manufacturing, transport, fugitive and other emission. It is shown in figure no

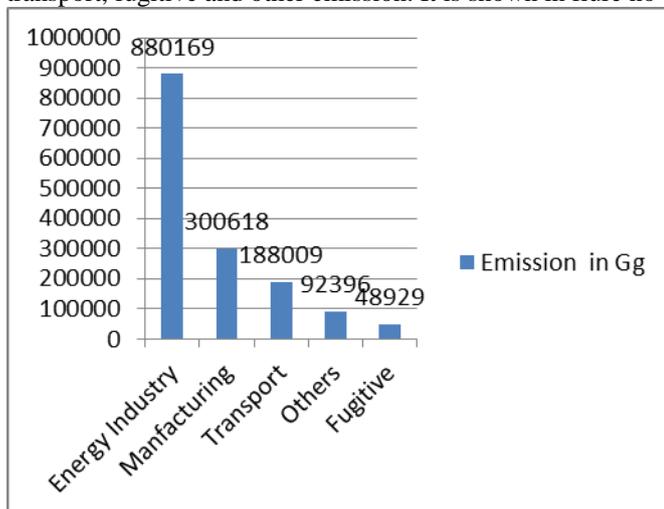


Figure No Distribution of CO₂eq emissions (Gg) across the energy sector categories in 2010

Source: Biennial Update Report2015 to the UNFCCC, MoEFCC, GoI.

Conclusively, it is very clear from above analysis that in climate change regime, the right of development is first priority of India to eradicate poverty with the sustainable economic growth. India is not willing to take any imposed mitigation efforts that can interfere with its economic development. However, being a responsible member of international community, India has pledged to reduce its GHGs emission 20-25% of its GDP intensity by 2020 compared to 2005 level. Before Paris conference, India further raised its ambitious goal to reduce the emission intensity of GDP by 33-35% by 2030 from 2005 level.

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