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International Trade and Environmental Standards in the Context of India – A Descriptive Analysis

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ABSTRACT:

The globe, as a community deals with climate change, loss of bio diversity, plastic waste and pollution, the presence of equity in the ecology of an economy is very essential and crucial than ever before. In the whole complexity of international trade policies, environmental concerns are critical since trade is even more momentous than ever. The need for conservation and sustainable use of natural resources has been expressed in the scriptures of Bharat (India), more than three thousand years old and is reflected in the constitutional legislative policy framework as also in the international commitments of the country. The overall aim of this paper lies on presenting a short and pragmatic image of the main aspects concerning the impact of international trade on the environment, on the one hand, and the impact of environmental policies and regulations on the international trade, on the other hand with special reference to the economy of India. This article also examines the multilateral environmental agreements (MEAs) focused on the use of environmental trade measures.

Keywords: Natural Resources, Sustainability, Environmental Policies

INTRODUCTION:

The relationship between trade and environment is a complex and highly debated issue. Addressing this relationship is fundamental in order to achieve sustainable development. As a result of increasing global economic interdependence and further trade liberalization as well as growing

pressure on the environment and the use of natural resources, there is an ever growing interface between trade and environment. It is widely recognized that trade and environment can be mutually supportive, but, differences remain on effective implementation. The Commission Communication on Trade and Environment, adopted in 1996, underlined that a mutually supportive relationship between trade and environment can occur but is in no way automatic. In fact, trade liberalization and trade policy have positive and negative impacts on the environment. (Mukhopadyhay,K.,et.al 2005) However, a number of conditions should be met to ensure that the net gains deriving from trade liberalization will support and reinforce the protection of the environment.

One essential condition for making sure that trade and environment are mutually supportive is to ensure that the trade liberalization process is paralleled with the development and strengthening of effective and non-protectionist environmental legislation, at national, regional and international levels. Environmental policies could, in turn, provide an incentive for technological innovations, promote economic efficiency and, consequently, improve productivity. Having recognized the need for such policies, one should also ensure that trade rules do not unnecessarily constrain but rather support and promote the ability of countries to develop and implement adequate and non-protectionist environmental measures, at both national and international levels.

SUSTAINABILITY AND TRADE POLICIES:

Trade policy has also a role to play in actively supporting sustainable trade flows and, in particular, environmentally friendly trade. Trade policy and trade related instruments should be further encouraged to act as a sustainable driver by providing incentives for more sustainable trade flows. This is valid at the multilateral level but even more so at the regional and bilateral levels where the identification of positive synergies among trading partners as well as convergence and co-operation should be easier than is the case at the international level. Trade tools could, for instance, be instrumental in making tangible progress towards more sustainable consumption and production patterns. Economic instruments also need to be more actively developed, notably with a view to allow for the necessary internalization of external environmental costs. In addition, positive synergies between trade, environment and development should be further considered, particularly regarding the elimination of environmentally damaging subsidies and the promotion of environmentally friendly goods and services, with a special focus on those originating in Developing Countries (DCs).

International trade contributes to economic growth, benefits all participating countries, while growth, in turn, increases the demand for environmental quality and provides the financial resource for environmental protection. It is commonly assumed by economists and environmentalists alike that greater economic openness will lead to increase pollution in developing countries, as free trade will increase environmental degradation in developing countries. Thus there are points at which trade and environmental objectives are in potential conflict. If left unattended, these conflicts can weaken the trade system and become an obstacle to sustainable development. (Jha and Rabindran, 2004)

DISCUSSION

India's Export Destinations:

In terms of export destinations for Indian goods and services, the United States and the United Arab Emirates (UAE) have remained key markets, with India diversifying in terms of export destinations over recent years. More than 17% of the country's exports of goods went to the United States in 2022/23. But recently, destinations such as Bangladesh, Indonesia and the Netherlands have grown among India's export preferences. The web of trade is expanding.

For imports, China remains a dominant supplier to the Indian market. But the recent spike in imports from Russia in 2022/23, especially since the invasion of Ukraine, suggests a strategic shift, which is likely to have been driven by increased oil imports. This highlights another side to increased globalisation – a closer connection and vulnerability to international events.

Russia's share in India's total merchandise imports was 6.5% in 2022/23, with over two-thirds of this coming from crude oil imports. From being the 20th largest import source for India in 2021/22, Russia became the fourth largest in 2022/23, purely on the back of Indian oil companies getting better deals from Russian suppliers. Russia ended up meeting 20% of India's crude oil demand in 2022/23. How this plays out in terms of India's international reputation remains to be seen.

India's trade agreements and global economic relations:

India's journey with respect to the signing of international trade agreements has been a combination of strategic shifts and evolving economic narratives. To date, the country has signed 13 regional/free trade agreements (FTAs), all differing in their nature and scope. The partners include Japan, South Korea and Sri Lanka, along with the Association of Southeast Asian Nations (ASEAN) and, more recently, Australia, the European Free Trade Association (EFTA), Mauritius and the UAE.

India's focus has traditionally been on the eastern front. This has changed in recent times, as the country is pushing to sign more agreements with countries in the West. In addition to the FTAs, India has signed preferential trade agreements (PTAs) with regions such as Mercosur (Argentina, Bolivia, Brazil, Paraguay and Uruguay).

The initial agreements, such as the South Asian free trade area (SAFTA) and the ASEAN-India FTA, were executed with the objectives of fulfilling these untapped markets. But India was faced with limited success in this regard, especially in the cases of ASEAN, Japan and South Korea.

These experiences pushed India to recalibrate its approach to signing FTAs. As a result, the country was more cautious about signing any FTAs in the 2010s. But in recent years, Indian policy-makers have renewed their focus on negotiating comprehensive deals with the developed world, with Australia, EFTA and the UAE being the latest partners.

Given India's past experiences, policy-makers were extremely careful with respect to the clauses included in the latest round of trade agreements. For example, the India-UAE 'comprehensive economic partnership agreement' (CEPA) has stringent product-specific rules of origin, where the

partner country's goods should have at least 40% domestic value content. This was done to prevent third-party goods routed through the partner country from getting preferential treatment.

Currently, India is also negotiating trade agreements with the European Union and the UK, with discussions with the latter now in their final stages. As of 2023, 13 rounds of negotiations have taken place between India and the UK government. While both countries are hoping to conclude the talks in the coming months, issues related to business mobility, automobiles, Scotch whisky, pharmaceuticals and rules of origin remain unresolved. Nevertheless, India's recent approach to exploring potential economic agreements with the West marks a new chapter in its trade policy.

India's Green Exports:

India's potential in addressing the global demand for wind turbines, with the Indian market being approximately four times oversupplied based on the expected average annual wind additions of around 4 GW between 2024 and 2030. The manufacturing landscape in India is dominated by Western turbine makers who supply markets outside China, particularly in Europe and the US.

In the solar PV sector, India is leading expansions outside mainland China, driven by local incentive programs and duties. "India has now significant solar PV module manufacturing to serve the growing domestic market and to export to international markets, mostly the US,"

India's exports to the European Union (EU), worth $37 billion, could be impacted due to the trade bloc's proposed Carbon Border Adjustment Mechanism (CBAM) and other green initiatives according to a Delhi-based think tank's report.

The impact would translate into 43 per cent of India's exports to the EU, which is among India's key export markets after the United States (US).

The Centre for Energy, Environment and Water's report noted several categories in India's foreign trade at risk due to the EU regulations. These include textiles, chemicals, certain consumer electronics products, plastics, and vehicles which account for 32 per cent of India's exports to the EU in 2022.

It is noted that lately numerous non-tariff measures have been implemented by developed countries to address sustainability, environment, and climate change. These include measures for energy efficiency, carbon footprint, waste management, water management, and sustainable forestry.

India needs a structured approach to deal with such EU measures and ensure that its exports are not impacted. For instance, India can resort to bilateral free trade agreements (FTAs) to develop mutual recognition of compliance assessment activities in the respective countries. EU trade agreements, such as the EU-Canada Comprehensive Economic and Trade Agreement (CETA) and the EU-Vietnam Free Trade Agreement explain how this can be achieved.

India needs to act quickly in utilising the World Trade Organization (WTO) framework to raise specific concerns with respect to non-trade measures notifications by other member nations. *Though India's participation in the WTO has increased in recent times, strategies should be formulated to use the WTO mechanism in the future for raising concerns and seeking solutions," (* Prabhakar and Mallya,

2023)

Emissions in Different Countries of the World:

While carbon emissions are a consequence of economic activities, these are not evenly distributed among the world population. This inequity in emissions exists across multiple levels, including the historical and current emissions of countries, as well as per capita emissions. To illustrate, in 2020, per capita CO2 emissions in Saudi Arabia and the United States were 14.2 and 13 metric tonnes, while the per capita emissions of Brazil and India were only 1.94 and 1.57 metric tonnes, respectively. (World Bank n.d. (b)

Moreover, of the cumulative 2,450 billion metric tonnes of carbon emitted during 1850–2019, North America and Europe accounted for 27 and 22 per cent, respectively. On the other hand, South and Southeast Asia accounted for 9 per cent, Latin America for 6 per cent, MENA for 6 per cent, and Sub-Saharan Africa for 4 per cent (Chancel et al. 2022). More specifically, in this period, the US and Europe emitted a cumulative 400 and 348 gigatonnes (Gt) of CO2, respectively. In comparison, developing countries such as India and Brazil contributed approximately 53 and 15 Gt CO2, respectively. (Malyan and Chaturvedi. 2021)

An Intergovernmental Panel on Climate Change (IPCC) report indicates that from 2020, only 500 Gt of CO2 will remain in the carbon budget to limit warming to 1.5 degrees with a 50 per cent probability (IPCC 2022). With a shrinking carbon budget, the current global climate discourse revolves around equity and Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC), as Article 3 of the United Nations Framework Convention on Climate Change (UNFCCC) notes. At the annual Conference of Parties (COP), this has become a pressing issue.

Beyond the country-wise inequities in emissions, there is also a correlation between per capita emissions and income. Globally, the top 10 per cent of emitters were responsible for almost half of the energy-related CO2 emissions in 2021, while the lowest 10 per cent contributed a minimal 0.2 per cent. (Cozzi, Chen, and Kim 2023). This indicates the stark contrast between the emission footprints of the affluent versus the less privileged, raising critical questions about environmental justice and shared responsibility at the national and international levels.

From 1990 to 2015, consumption-driven CO2 emissions increased by approximately 60 per cent, and half of this growth can be attributed to the world's richest 10 per cent (Kartha et al. 2020). It is crucial to recognise that the affluent, particularly in developed nations, have significantly contributed to global carbon emissions. While the top 10 per cent of emitters are distributed across various global regions, approximately 85 per cent of them are from developed nations, such as the US, UK, Australia, Japan, Canada, Korea, the EU, and China. (Cozzi, Chen, and Kim 2023). Further, an analysis of the investment portfolios of the 125 most affluent billionaires worldwide revealed that, on average, they emit a million times more than an average individual in the bottom 90 per cent of the population (Maitland et al. 2022). Notably, only 1 per cent of the world's population is responsible for half of the

emissions generated by flying. (Gössling and Humpe 2020). Therefore, the distribution of emissions becomes critical both within and between countries.

The richest 10% of developed nations and China can save more than 3.4 billion tonnes of CO2 annually.

The top 10 per cent in any country emits about 3-5 times more CO2 than their national average (in per capita terms). However, if these top earners were to reduce their emissions, a substantial amount of carbon emissions could be mitigated. Even if individuals within the top 10 per cent of income earners in developed countries and China were to reduce their emissions by 50 per cent, they would free up more than 3.4 billion CO2 of carbon space annually based on 2019 data. Yet, they would still emit 1.5 to 2.5 times more than their national average per capita emissions. The saved carbon space could then be made available for lower-income groups, especially in developing countries, allowing them to progress towards a better quality of life without adding to the total quantity of emissions.(Arora, et.al,2023)

India's Trade Facilitation Initiatives:

Effective trade facilitation is essential for enabling Indian exporters to improve their efficiencies and take advantage of the various FTAs that India has already signed or is negotiating. The emphasis also connects well to India's ongoing engagement with the Indo-Pacific Economic Framework for Prosperity, (Amitendu Palit, 2023)

RESULTS

COP 28, the 28th United Nations climate change conference took place in Dubai, UAE in 2023 wherein there was a recognition of the need to transition away from fossil fuels. The conference also addressed the establishment of a loss and damage fund to assist vulnerable nations in dealing with climate-related disasters

India, took a powerful stand in the conference and mentioned that the Focus should be on reducing emissions and not choice of fuel.

India, also detailed the voice of global south was that it was for the developed countries to cut down emissions first. Developed countries are emitting at a faster pace than other countries. 80% of total legacy carbon dioxide load is contributed by developed countries, whose population is one third of global population. On the other hand, India's contribution to the carbon dioxide load is only 3%, though our population is 17% of world population. Our per capita emissions are 2.19 tons per year or one third of global average, while the global per capita average is 6.8 tons per year. So, it is for developed countries whose per capita emissions are 2 – 3 times the global average, to cut down emissions first.

India pointed out that there was also indication of the fact that India's rate of energy transition is the fastest in the world

In India, FDI in the renewable energy sector has seen significant growth, reaching US$2.5 billion in FY23, marking a 56 percent YoY increase. Q1 FY23 alone witnessed US$949.4 million in

FDI, with Q4 FY23 showing a remarkable 102 percent YoY increase at US$838 million. As of December 2022, total FDI in the sector amounted to US$12.47 billion, and since 2014, it has surpassed US$78 billion. Key investor countries include Singapore, Mauritius, The Netherlands, and Japan.

India's renewable energy landscape is attractive for investment due to abundant labor, easy access to affordable capital, streamlined regulatory clearances, mandates for green hydrogen use, and various incentive schemes. The Bank of America anticipates India's renewables domain to draw up to US$800 billion in investments over the next decade. Within this, the renewable energy sector could attract around US$250 billion in investments, batteries US$250 million, and supporting grid infrastructure and other segments like green hydrogen, equipment and system could garner US$300 billion in total investment. The bank expects India, given its scale, to be a preferred destination for strategic investors targeting net-zero goals.

Leading Indian corporates, including Reliance Industries, Tata group, Mahindra Group, and the TVS Group, have already laid out ambitious plans to enter the green energy sector. Reliance Industries, for instance, aims to achieve carbon-neutrality by 2035 and has made substantial acquisitions in solar, battery, and hydrogen, totalling over US$1.5 billion, to offset emissions from its oil and petrochemicals business. RIL has also been focused on manufacturing polysilicon, wafers, cells, modules, electric vehicles, grid storage batteries, electrolysers and fuel cells, according to an April 2023 note from Goldman Sachs. Information from the Bank of America notes its advisory services on recent deal activity in the green energy and renewables sector has amounted to over US$5 billion.

Despite a spurt in activity in block deals and the primary IPO market, the consumer technology segment has seen a valuation reset. Bank of America notes that new private raisings are limited to top-quartile companies, and while absolute valuation levels remain protected, multiples have decreased. Block deals in the listed space continue, but transaction sizes have reduced, indicating sellers choosing to monetize partially while retaining potential upside.

India is a significant contributor to global municipal solid waste (MSW), generating over 62 million tons annually, but only 43 million tons are collected and 12 million tons treated. Inadequate waste management infrastructure poses environmental and health challenges. Hazardous, plastic, e-waste, and biomedical waste are increasing, with projections from the Central Pollution Control Board (CPCB) suggesting India's annual waste generation will reach 165 million tons by 2030.

The country's solid waste management market is segmented into collection, transportation, treatment, and disposal. Collection and transportation dominate due to inadequate infrastructure, while treatment and disposal are expected to grow with a focus on sustainable practices. While government initiatives and rule amendments aim to improve waste management, there is significant variation in technology adoption and waste processing capacity across states and union territories (UT).

The estimated size of the Indian waste management market was US$32.09 billion in 2023, projected to reach US$35.87 billion by 2028, with a compound annual growth rate (CAGR) of 2.25 percent during the forecast period (2023-2028).

The waste management market is characterized by its fragmentation, with various players working towards reducing waste generation and optimizing recycling processes. Numerous startups are, however, spearheading initiatives for environmentally friendly waste disposal. Key market players include A2Z Green Waste Management Ltd, BVG India Ltd, Ecowise Waste Management Pvt. Ltd, Tatva Global Environment Ltd, and Hanjer Biotech Energies Pvt. Ltd.

India's Investment Integration with the World:

India's external financial assets and liabilities have grown from a little over 1 per cent of GDP in 1990 to more than 30 per cent in 2017 (Figure 13). Outward FDI has also become prominent in the last decade or so, though portfolio investment abroad is negligible. Outward FDI flows are much lower than inward FDI but are growing and significant in sectors like minerals and energy.

Over the past two decades, capital inflows have been prominent in areas like telecommunications, transport infrastructure and information technology. This has helped boost productivity and create employment opportunities through transfers of technology and skills.

Regulatory improvements have supported these trends. Foreign investors can now, in principle, invest in most sectors with minimal government policy barriers (though transaction costs on the ground still remain high). Investment in government and corporate bonds has also been deregulated gradually in the last few years.

Despite this growth, India's investment rate as a proportion of GDP is relatively low compared to some other major Asian economies. This is related to India's services-led growth which requires less capital per unit of output than heavy manufacturing. The recent downward trajectory highlights India's struggle to attract investment. Foreign investment is still impeded by high levels of corporate debt, financial sector stress and regulatory and policy challenges.

CONCLUSION:

India is addressing its challenges and capitalising on new opportunities of environmental policies.

In terms of its trade landscape, India has potential on the global stage. It is currently navigating a range of experiments and opportunities that will significantly affect its influence in global commerce. The path to globalisation is not entirely straight.

Over the past decade or so, there have been substantial improvements in Indian infrastructure and logistics. India's overall logistics performance index (LPI) score has risen from 3.08 in 2014 to 3.40 in 2023, and its global rank has improved from 54^{th} to 38^{th}.

But critical gaps still remain to be resolved in customs efficiency and infrastructural quality. For example, delayed clearances and inadequate handling facilities at ports add to costs. These challenges not only elevate trade costs, but also hinder the timeliness and reliability of shipments, which are important for maintaining competitiveness in the export market. Becoming a global player means raising standards at home.

Further compounding these long-standing issues are short-term global issues such as the recent Red Sea crisis, which has led to a big rise in freight rates, increasing by up to 600% in some cases. This particular instance also highlights the sensitivity of India's trade networks to global geopolitical tensions.

In addition, despite showing signs of improvement, India's port infrastructure is yet to meet the global standards required for handling ultra-large vessels. This weakness not only prevents India from drawing on economies of scale, but also becomes a barrier to the country's aspiration to integrate deeper into global value chains. It is one thing to have trade agreements in place, but the country needs the physical port facilities to match its ambitions.

In contrast, the National Logistics Policy (NLP), which was launched by the government in 2022, has emerged as a vital opportunity. This policy aims to reduce Indian logistics costs, pushing them down to the level of developed nations.

NLP strategies include improving transport efficiency, facilitating private investment in warehousing, and enhancing supply chain reliability through digitalisation. It focuses on multi-modal infrastructure development, promoting standards in warehousing, and streamlining regulatory processes for smoother operations. If successful in its objectives, the NLP will enhance the competitiveness of Indian exports in the global market. Ambition could soon turn to reality.

REFERENCES:

1. Amitendu Palit, 'Trade facilitation a major policy objective for India; world's fifth largest economy must adopt TFA+ approach', Financial Express, 24 March 2023, https://www.financialexpress.com/economy/trade-facilitation-a-major-policy-objective-for-india-worlds-fifth-largest-economy-must-adopt-tfa-approach/3020658/
2. Arora Chetna , Pallavi Das, and Vaibhav Chaturvedi, "The Emissions Divide Inequity Across Countries and Income Classes", November 2023, https://www.ceew.in/sites/default/files/Carbon-Emissions-Divide-And-Footprint-Inequalities-Across-Countries-And-Income-Classes.pdf
3. (Chancel et al. 2022). Chancel, Lucas, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman. 2022. World Inequality Report. World Inequality Lab. https://wir2022.wid.world/www-site/uploads/2023/03/D_FINAL_WIL_RIM_RAPPORT_2303.pdf.
4. Cozzi, Laura, Olivia Chen, and Hyeji Kim. 2023. "The World's Top 1% of Emitters Produce Over 1000 Times More CO2 Than the Bottom 1%." International Energy Agency. February 22. https://www.iea.org/commentaries/theworld-s-top-1-of-emitters-produce-over-1000-times-moreco2-than-the-bottom-1
5. Gössling, Stefan, and Andreas Humpe. 2020. "The Global Scale, Distribution and Growth of Aviation: Implications for Climate Change." Global Environmental Change 25:102194. https://www.sciencedirect.com/science/article/ pii/S0959378020307779?via%3Dihub

6. Kartha, Sivan, Eric Kemp-Benedict, Emily Ghosh, Anisha Nazareth, and Tim Gore. 2020. "The Carbon Inequality Era: An Assessment of the Global Distribution of Consumption Emissions among Individuals From 1990 to 2015 and Beyond." Stockholm Environment Institute and OXFAM. https://www.sei.org/wp-content/uploads/2020/09/ research-report-carbon-inequality-era.pdf.
7. Maitland, Alex, et al. 2022. "Carbon Billionaires: The Investment Emissions of the World's Richest People." OXFAM Briefing Note. Http://doi.org/10.21201/2022.9684. (Maitland et al. 2022).
8. Malyan Ankur and Vaibhav Chaturvedi. 2021. The Carbon Space Implications of Net Negative Targets. CEEW Issue Brief, November 3. The Council on Energy Environment and Water. https://www.ceew.in/publications/implications-ofnegative-carbon-emissions-on-global-carbon-budget-space
9. Mukhopadyhay,K., Chakravorty, D. and Dietzenbacher, E., (2005): ―Pollution Haven and factor endowment hypotheses revisited: Evidence from Indiaǁ, paper presented in the 5th international input-output conference at Renmin university in Beijing, China, during June-July
10. Prerna Prabhakar and Hemant Mallya, " Sustainability driven Non-Tariff Measures" Assessing Risks to India's Foreign Trade https://www.ceew.in/sites/default/files/sustainability-driven-non-tariff-measures-and-assessing-risks-foreign-trade-risks-india.pdf
11. Shreyasi Jha and Shanti Gamper-Rabindran, 2004 "Environmental Impact of India's Trade Liberalization", https://papers.ssrn.com/sol3/papers.cfm?abstract_id=574161
12. World Bank n.d. (b)-"CO2 Emissions (metric tons per capita)." World Bank. https://data.worldbank.org/indicator/ EN.ATM.CO2E.PC