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An Overview of India's Trade Performance & Environmental Sustainability and Impact on Sustainable Development Goals

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ABSTRACT

India's economic trajectory is defined by its increasing participation in international trade, concurrent emphasis on environmental sustainability initiatives, and dedication to accomplishing the Sustainable Development Goals (SDGs), with diverse but generally encouraging results. Over the past 20 years, India's overall commerce (exports plus imports) has increased significantly, demonstrating the country's remarkable growth and durability.

Despite the unpredictability of the world economy, exports have shown an upward tendency. Petroleum products, precious and semi-precious stones, pharmaceuticals, and increasingly electronics and semiconductors are important exports. In order to achieve net-zero emissions by 2070, India has set aggressive goals for increasing the capacity of renewable energy sources like solar and wind. The nation is on track to meet SDG 7 (Affordable and Clean Energy) by 2025–2026 thanks to a significant expansion in solar power capacity. The National Green Hydrogen Mission and Production-Linked Incentives (PLI) for the production of electric vehicles (EVs) and advanced clean technologies are two initiatives. Even though India's share in global trade is still very small, the country's environmental sustainability is at risk due to over exploitation of its natural resources, which support the country's key exports. So it indicates the need for the green products exports to make India's growth story even environmentally sustainable. In this backdrop this current paper will be concentrating on India's trade performance and environmental sustainability and its impact on sustainable development.

Keywords: Trade, Environmental Sustainability, Sustainable Development

JEL Classification: F18, Q5, Q51

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

Introduction:

India's economic trajectory is defined by its increasing participation in international trade, concurrent emphasis on environmental sustainability initiatives, and dedication to accomplishing the Sustainable Development Goals (SDGs), with diverse but generally encouraging results. Over the past 20 years, India's overall commerce (exports plus imports) has increased significantly, demonstrating the country's remarkable growth and durability.

Despite the unpredictability of the world economy, exports have shown an upward tendency. Petroleum products, precious and semi-precious stones, pharmaceuticals, and increasingly electronics and semiconductors are important exports. Increased commerce with the UAE, China, Vietnam, and other emerging economies is part of a strategic drive to diversify geographically and lessen dependence on established allies like the US. Additionally, imports have increased, mostly due to goods like machinery, precious stones, and mineral fuels. India usually maintains a merchandise trade deficit, which has occasionally gotten worse because of rising imports of goods like silver and gold. However, this is frequently countered by robust performance in remittances and service exports (such IT services), which aid in controlling the total Current Account Deficit (CAD).Through initiatives like approving bank guarantees for exporters and putting rules in place to streamline corporate operations and improve global competitiveness, the government is concentrating on increasing exports. India faces significant environmental challenges driven by population growth, rapid industrialization, and urbanization. However, the country is undertaking major policy shifts to address them. High levels of air pollution (from vehicular emissions, industry, and crop burning) and water pollution (from untreated sewage and industrial effluents) persist in many urban centres. The pressure on natural resources like water and land is immense, leading to issues like soil degradation and deforestation. India is highly vulnerable to the impacts of climate change, including extreme weather events.

In order to achieve net-zero emissions by 2070, India has set aggressive goals for increasing the capacity of renewable energy sources like solar and wind. The nation is on track to meet SDG 7 (Affordable and Clean Energy) by 2025–2026 thanks to a significant expansion in solar power capacity. The National Green Hydrogen Mission and Production-Linked Incentives (PLI) for the production of electric vehicles (EVs) and advanced clean technologies are two initiatives. India's commitment to equitable and environmentally responsible development is seen in the growing alignment of its trade and sustainability initiatives with the 17 SDGs.

In this backdrop this current paper will be concentrating on India’s trade performance and environmental sustainability and its impact on sustainable development consist of six sections. Section I explain Trade as an Engine of Growth, Section II will cover **India’s Trade**

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

Performance, Section III indicates Environment and Sustainable Development in India, Section IV deals with Trade-off between Exports and Environment, Section V explain Trade and Climate Change, Section VI deals with Mainstreaming trade to attain the Sustainable Development Goals and Section VII explain concluding Remarks.

Section I: Trade as an Engine of Growth :

Because it makes it easier to allocate resources globally, boosts productivity, encourages innovation, and opens up new markets—all of which eventually result in increased revenue and prosperity—trade is usually seen as an engine of economic progress. This idea, which has historically been highlighted by classical and neoclassical economists, benefits the participating economies in both static and dynamic ways.Trade promotes economic growth through several interconnected channels.

In order to produce goods and services where they have a competitive advantage, nations concentrate their resources (land, labour, and capital). Compared to their trading partners, they can produce them at a cheaper opportunity cost. By expanding global output and enabling nations to consume a variety of commodities and services that would not be possible without trade, this specialisation results in a more effective use of the world's resources (i.e., going beyond their production possibility frontier).Businesses can greatly boost their production output by selling to a wider international market rather than simply a home one. Businesses can achieve economies of scale through increased output, which lowers the average cost of manufacturing per unit. Prices are lowered as a result, which helps consumers and increases aggregate demand, both of which support economic growth.

In order to thrive, domestic businesses must innovate, become more efficient, and raise the calibre of their goods and services. It is possible for less productive businesses to close, freeing up resources for more fruitful endeavours. Long-term economic growth is largely driven by an increase in the nation's overall productivity. Technology, information, skills, and organisational best practices are transferred from developed to developing economies through international commerce, particularly through imports of capital goods (machines, advanced equipment) and involvement in Global Value Chains (GVCs). Access to cutting-edge technology and foreign expertise, sometimes known as "technological spill overs," greatly increases productivity and speeds up a nation's potential for long-term prosperity.

Export-oriented industries experience higher profits and greater capacity utilization, encouraging domestic and foreign direct investment (FDI). FDI brings not only capital but also management expertise. Higher rates of investment lead to an expansion of the country's productive capacity,

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

which sustains higher economic growth. Exports also provide the foreign currency (foreign exchange) necessary to pay for essential imported capital goods and raw materials.

Historically, integration into the global trading system has been a crucial factor in the rapid development of many economies, particularly those in Asia, often following an export-led growth strategy. Benefits of consumer out of trade are a)Lower Prices: Competition from imports keeps domestic prices down and b) Greater Variety: Consumers gain access to a wider selection of goods and services from around the world (e.g., specialty foods, foreign cars, electronics). On the other side the benefits of producer are as follows: a) Market Expansion: Access to a much larger global market beyond domestic borders and b) Cheaper Inputs: Ability to import cheaper or higher-quality raw materials, intermediate goods, or components (like energy or specialized machinery) that are unavailable or more expensive domestically.Trade is therefore not just a way to exchange existing goods (a static benefit) but a powerful force that dynamically changes the production possibilities of a country over time by fostering technological change, investment, and productivity improvements

Section II: India's Trade Performance:

In this section we will concentrate on composition of India's foreign trade as well as trade openness. Composition of Trade means the commodities and products which are included in the exports from India to other countries and Imports from other countries in India. Indian foreign trade registered a number of structural changes during the panning period. The percentage of non-traditional goods in total exports has continuously increased the exports of chemical and engineering goods have shown a high growth rate. During past few years hand made goods including gems and jewelries have become one of the important export commodities. India is making exports of few traditional items including tea, coffee, rice, pulses, spices, tobacco, jute, iron ore etc.

Besides the imports of petroleum products, capital goods, carbon chemical and compounds, medical and pharmaceuticals products are also imported in Indian Economy. Pulse, gems and stones are also important on large scale but after their processing these are exported from the country. Other imports include edible oils, fertilizers non-ferrous metals, paper and paper boards, pulp and wastepaper etc. Before 2014-15 there were different categories of exportable commodities but now it has been changed.

1. Agriculture and Allied Products-which includes coffee, tea, rice, wheat, raw cotton, tobacco, cashew, spices, oil meal, marine products, sugar and molasses. In 2009-10 Agriculture and allied products export was 62419 crore which increased to 218589 crores in 2020-21 we made 20 categories for exports and 21 categories for imports.

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

2. Ores and Minerals - Includes iron ore, and all processed minerals which also increased40214 crore in 2009-10 to64233 crore in 2020-21.

3. Leather & Manufactures– One of the traditional items of Indian Export is raw hides and skins. India earned about 15551 crores in 2009-10. It touched US $ 6030.5 million in 2014-15 and increase to 24403 crores in 2020-21.

4. Gems & Jewellery- The export of Gems & Jewellery during 2009-10 was 3350 in crore and in 2020-21 it was increased to 22535 in crore.

5. Chemicals & Related Products- This category includes basic chemicals, pharmaceuticals, cosmetics, plastic, linoleum, rubber, glass, paints, enamels, residual chemicals and allied products. This category also showed increasing trend year to year. In 2009-10 drugs and pharmaceuticals, organic & inorganic chemicals and plastic & linoleum was 135874 in crore which increased to 191906 in crore in 2020-21 respectively.

6. Engineering and Electronic Goods- Engineering goods include manufacture of metals machinery, instruments transport equipment, iron & steel and all electronic goods. In 2009- 10 this was 71856 in crore which increased 318464 in crore in 2020-21.

7. Textiles & Textile Products- It includes cotton yarn, natural silk yarn, manmade yarn, carpet, handicraft, woolen yarn fabrics made up. In 2009-10 this was 101168 in crore which increased to 217731 in crore in 2020-21.

8. Petroleum Products - This section shows continuously decreasing trend after 2013-14. In 2009-10 this was 147137 in crore which increasing to 246118 in crore in 2020-21.

India's trade performance is characterized by a widening merchandise trade deficit and a strong surplus in the services sector, with recent data highlighting a record-high deficit driven by specific import surges. Here is a breakdown of India's recent trade performance, primarily focusing on data up to October 2025.

The merchandise trade deficit has recently widened significantly:

- October 2025 Deficit: Reached a record high of $41.68 billion, up sharply from $32.15 billion in September 2025.
- Exports: Declined by 11.8% year-on-year to $34.38 billion in October 2025.
- Imports: Surged by 16.63% year-on-year to $76.06 billion in October 2025, reaching an all-time high.

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

The primary factor driving the record deficit in October 2025 was a massive surge in imports, particularly:

- Gold and Silver: Gold imports alone jumped to $14.72 billion (nearly tripling from the previous year) due to festive demand (Diwali). Silver and other precious metal imports also spiked.
- US Tariffs: Exports, particularly to the US, have been negatively impacted by the imposition of steep tariffs (up to 50%) by the US administration, hitting sectors like textiles, shrimp, gems & jewellery, and engineering goods.

The Services Sector: A Bright Spot

In contrast to the merchandise trade, the services sector continues to perform strongly, providing a crucial offset to the overall trade balance.

- Services Surplus: Rose to nearly $20 billion in October 2025, supported by steady growth in IT and business services.
- Services Exports: Increased to $38.52 billion in October 2025.

Table 1: Key Commodities in India's Trade

Category	Top Export Commodities (April-Oct 2025)	Top Import Commodities (April-Oct 2025)
Goods	Engineering Goods, Petroleum Products, Electronic Goods, Drugs & Pharmaceuticals, Gems & Jewellery	Petroleum, Crude & Products, Electronic Goods, Gold, Machinery, Transport Equipment
Sector Growth	Electronic Goods exports have been a key bright spot, showing strong growth.	Gold and Crude Petroleum imports are major components.

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

Table 2: Major Trading Partners (April-Oct 2025)

Category	Top 3 Partners	Key Trend
Export Destinations	1. United States ($52.12 bn)	The largest destination, driven by engineering goods and pharmaceuticals, but facing challenges from US tariffs.
	2. UAE ($22.14 bn)	
	3. Netherlands ($11.98 bn)	
Import Sources	1. China ($73.99 bn)	The largest source of imports, mainly electronic components and machinery.
	2. UAE ($40.36 bn)	Primarily crude oil and precious metals.
	3. Russia ($35.97 bn)	Largely discounted crude oil.

In summary, while India's merchandise trade is facing headwinds from global slowdown, commodity prices, and new US tariffs, leading to a record deficit, the strong services sector surplus is providing vital support to the country's overall current account balance.

A) Trends in Indian Exports :

In this part we will concentrate on time trends of 31 exportable commodities. We have calculated growth of these exportable items during 2014/15-2024/25. The highest growth rate (26.49%) is borne by iron ore during the period under study. This is followed by electronic goods (25.58%), organic and inorganic chemicals (14.98%) and others. Total exports is grown at the rate of 8.75% during the period under study. The growth of all exportable are shown in Table 3.

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

Table 3: Trends in Indian Exports Trade during 2014/15 to 2024/25

Commodity	Growth
1. Tea	5.17
2. Coffee	9.85
3. Rice	10.17
4. Other cereals	8.79
5. Tobacco	8.71
6. Spices	9.54
7. Cashew	-7.85
8. Oil Meals	9.58
9. Oil seeds	2.44
10. Fruits & Vegetables	8.94
11. Cereal preparations & miscellaneous processed items	13.93
12. Marine Products	7.13
13. Meat, dairy & poultry products	2.29
14. Iron Ore	26.49
15. Mica, Coal & Other Ores, Minerals including processed minerals	7.05
16. Leather & leather products	-0.15
17. Ceramic products & glassware	14.36
18. Gems & Jewellery	0.12
19. Drugs & Pharmaceuticals	10.57
20. Organic & Inorganic Chemicals	14.98
21. Engineering Goods	9.60
22. Electronic Goods	25.58
23. Cotton Yarn/Fabs./made-ups, Handloom Products etc.	5.18
24. Man-made Yarn/Fabs./made-ups etc.	3.12
25. RMG of all Textiles	1.85
26. Jute Mfg. including Floor Covering	6.84
27. Carpet	3.83
28. Handicrafts excl. hand made carpet	4.50
29. Petroleum Products	11.56
30. Plastic & Linoleum	8.22
31. Other Commodities	7.96
Total Exports	8.75

Source: RBI and calculations are done by the Scholars

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

B) Trends in Indian Imports Trade :

In this part we will concentrate on time trends of 31 importable commodities. We have calculated growth of these importable items during 2014/15-2024/25. The highest growth rate (14.68%) is borne by chemical materials and products during the period under study. This is followed by Electronic goods (13.62%) Coal, Coke & Briquettes, etc.(13.60%), Non-ferrous metals(12.81%) and others. Total imports is grown at the rate of 9.80% during the period under study. The growth of all exportable are shown in Table 4.

Table 4: Trends of Indian Import during 2014/15-2024/25

Commodity	Growth
1. Cotton Raw & Waste	8.69
2. Vegetable Oil	9.84
3. Pulses	3.85
4. Fruits & vegetables	9.90
5. Pulp and Waste paper	11.97
6. Textile yarn Fabric, made-up articles	7.69
7. Fertilisers, Crude & manufactured	11.30
8. Sulphur & Unroasted Iron Pyrites	8.08
9. Metaliferrous ores & other minerals	5.72
10. Coal, Coke & Briquettes, etc.	13.60
11. Petroleum, Crude & products	10.44
12. Wood & Wood products	6.10
13. Leather & leather products	2.16
14. Organic & Inorganic Chemicals	9.68
15. Dyeing/tanning/colouring mtrls.	10.94
16. Artificial resins, plastic materials, etc.	11.17
17. Chemical material & products	14.68
18. Newsprint	-6.09
19. Pearls, precious & Semi-precious stones	2.96
20. Iron & Steel	8.38
21. Non-ferrous metals	12.81
22. Machine tools	9.27
23. Machinery, electrical & non-electrical	9.66
24. Transport equipment	8.52
25. Project goods	-6.69
26. Professional instrument, Optical goods, etc.	12.33
27. Electronic goods	13.62

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

28. Medcnl. & Pharmaceutical products	9.67
29. Gold	8.41
30. Silver	6.52
31. Other Commodities	6.28
Total Imports	9.80

Source: RBI and calculations are done by the Scholars

Section III: Environment and Sustainable Development :

India is tackling environmental problems through sustainable development, focusing on subjects like waste management, sustainable agriculture, and renewable energy, by finding a balance between economic growth and environmental preservation.The National Solar Mission, Swachh Bharat Mission, and Jal Jeevan Mission are important programs that support the Sustainable Development Goals (SDGs) of the United Nations. Additionally, India wants to reach net-zero emissions by 2070.India has undertaken continuous initiatives in terms of policies, programmes and strategies to promote sustainable development. Government of India recognizes the need for well-balanced inter-linkages of economic, social and environmental aspects in order to confront the challenges for sustainable development. Direct Reference to Environment and Sustainability in SDGs: Environment and Sustainability is directly mentioned in six of the UNSDGs dealing with Goal 6 (ensure access to water and sanitation for all), Goal 11 (make cities inclusive, safe, resilient and sustainable), Goal 12 (ensure sustainable consumption and production patterns), Goal 13 (take urgent action to combat climate change and its impacts, Goal 14 (conserve and sustainably use the oceans, seas and marine resources and Goal 15 (sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss).

Indirect Reference to Environment and Sustainability in SDGs: Indirectly or partially, Environment and Sustainability is linked to four UNSDGs, dealing with Goal 2 (end hunger, achieve food security and improved nutrition and promote sustainable agriculture), Goal 3 (ensure healthy lives and promote well-being for all at all ages), Goal 8 (promote inclusive and sustainable economic growth, employment and decent work for all) and Goal 9 (build resilient infrastructure, promote sustainable industrialization and foster innovation).

The main objectives for Environment & Sustainability will include:

1. Prevention of air, water and soil pollution
2. Reducing dependence on natural resources and promote recycling
3. Proactive governance and policy regime for improving air, water and soil quality

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

4. Sustainable management of biodiversity and eco-systems through people's participation and local governance
5. Building sustainability in all development projects
6. Increasing the green cover of the State through extensive social and urban forestry activities
7. Preserving, restoring and enhancing the forest resources of the State
8. Sustainable production of forest produce and services to meet industrial and social needs of the State
9. Management of climate change through neutralisation of carbon emissions and control of invasive species
10. Building resilience towards climate change.

Linkage between Environment and SDGs

Main Goals			
	 Ensure access to water and sanitation for all	 Make cities inclusive, safe, resilient and sustainable	 Ensure sustainable consumption and production patterns
	 Take urgent action to combat climate change and its impacts	 Conserve and sustainably use the oceans, seas and marine resources	 Sustainably manage forests, combat desertification, halt and reverse land degradation,

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

				halt biodiversity loss
Ancillary Goals				
	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	Ensure healthy lives and promote well-being for all at all ages	**Promote inclusive and sustainable economic growth, employment and decent work for all**	Build resilient infrastructure, promote sustainable industrialization and foster innovation

Source : UNDP Report 2024

Section IV: Trade-off between Exports and Environment:

In this section we will concentrate on trade- off between exports and environment. To show this we will calculate the correlation between exports and CO2 emission. CO2 emission is the principle component of environment. Our estimates table 5 and 6 reveals that the amount of exports and Fossils CO2 emissions are rising during 2014/15 to 2022/23. It indicates a positive relationship between these two. The interpretation of this leads to high correlation (081) between two. Thus we can conclude though exports has increased but the environment condition become worse. So, the exports growth are not environmentally sustainable.

Table 5: Exports and Fossil CO2 Emission during 2014/15 to 2022/23

Year	Total Exports(rupees)	Fossil CO2 emissions (tons)
2014-15	1896445	2,24,34,61,160
2015-16	1716384	2,26,04,82,790
2016-17	1849434	2,30,37,36,300
2017-18	1956515	2,43,41,23,800
2018-19	2307726	2,57,36,06,310
2019-20	2218233	2,54,13,65,980
2020-21	2159043	2,32,06,78,660
2021-22	3147021	2,52,81,33,480
2022-23	3621550	2,69,30,34,100

Source: RBI data and CPCB, Ministry of Environment

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

Table 5: Correlation Coefficient between Exports and Fossil CO2 Emission

	Total Exports(rupees)	Fossil CO2 emissions (tons)
Total Exports(rupees)	1	0.81
Fossil CO2 emissions (tons)	0.81	1

Source: RBI data and CPCB, Ministry of Environment and Calculation is done by the Scholars

After doing a correlation analysis, there is a 0.81 link between India's exports and CO2 emissions. The positive association indicates that pollution levels are rising along with commerce, which is detrimental to the Indian economy from an environmental perspective. India's trade is not environmentally sustainable, as evidenced by the positive correlation between the country's exports and the major pollutant CO2. The country should work to make its trade environmentally sustainable by switching from dirty and polluting export goods to exportable green products. This can be accomplished by encouraging the use of eco-friendly production techniques and replacing polluting exports with eco-friendly ones.

Section V : Trade and Climate Change :

India's trade is impacted by climate change in a number of ways, including reduced agricultural output owing to unpredictable weather, transportation infrastructure interruption from extreme events like droughts and floods, and the need to switch to more environmentally friendly products and sustainable trading methods. India is navigating international trade and climate agreements to safeguard its interests while concentrating on adaption techniques, investing in sustainable infrastructure, and promoting climate-friendly products to be competitive.

A) Consequences of Climate Change :

Between 1991 and 2024, the average temperature in India rose by about 0.7°C. By the end of the twenty-first century, climate estimates indicate a further increase of two to four degrees Celsius, which would have impacts on the manufacturing, service, and agricultural sectors. Crop cycles are impacted by erratic rainfall and delayed monsoons, which result in lower yields and unstable markets. Monsoon volatility has an impact on irrigation, making farmers more dependent on groundwater and raising their expenses. Heat waves, cyclones, floods, and droughts are becoming more frequent, which affects industrial and agricultural production. Natural disaster-related infrastructure damage raises logistics costs and hamper nation’s trade. India's coastal commercial hubs, including Mumbai, Chennai, and Kolkata, are at risk from rising sea levels. Supply chains are being disrupted and expenses are rising as ports and export-import terminals become more vulnerable.India is a major performer in international trade, importing and exporting a wide range of goods and services, including energy, technology, and agricultural products. However, the nation's trading patterns are becoming more and more influenced by

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

climate change, which is disrupting transportation infrastructure, industrial output, and agricultural productivity.

B) Climate Change Sectoral Impacts on Trade :

A large percentage of India's exports, including rice, wheat, sugar, tea, and spices, come from agriculture. Crop failures brought on by climate change pose a danger to India's capacity to sustain export levels. Pest outbreaks, water scarcity, and heat stress reduce wheat and rice yields. Grain and vegetable nutritional and economic value are reduced by high heat. Growing expenditures for crop insurance, fertilizers, and irrigation make a company less competitive in international markets. Water-intensive industries like textiles, steel, and chemicals face operational disruptions due to declining water availability. Thermal power plants struggle with water shortages, leading to electricity disruptions that impact industrial production. Logistics and supply chain delays due to extreme weather events increase trade costs. Rising ocean temperatures and acidification impact marine biodiversity, reducing fish populations and threatening India's seafood exports. Increased frequency of cyclones affects coastal fishing operations and disrupts exports. Declining domestic agricultural output leads to increased imports of pulses, edible oils, and grains. Climate-related disruptions in oil-producing nations affect India s crude oil imports. Rising demand for climate-resilient technologies, such as solar panels, leads to higher imports.

C) Climate Change and Trade Agreements :

Trade Agreements, Both Bilateral and Multilateral Climate concerns are becoming more and more important in India's trade agreements with the US, EU, and ASEAN. India's exports may be impacted by carbon border tariffs like the EU's Carbon Border Adjustment Mechanism (CBAM).Sustainable trade policies are being promoted by the World Trade Organization (WTO). India might have to adjust to new international laws that support low-carbon and green products.

Summary of India's Major Trade Agreements and Climate-Related Clauses :

Trade Agreement	Partner Countries	Climate-Related Clauses
India-EU FTA	European Union	Focus on carbon-neutral trade and renewable energy promotion.
India-ASEAN FTA	ASEAN Nations	Cooperation on sustainable agriculture and disaster management

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

India-US Trade Policy Forum	United States	Inclusion of climate-resilient trade policies and green technology exchange
Regional Comprehensive Economic Partnership (RCEP)	Asia-Pacific Nations	Promotes low-carbon industries and environmental standards.
WTO Trade and Environment Agreement	WTO Member Nations	Encourages trade in environmental goods and sustainable practices

D) Future Prospect and Recommendation :

i) Climate-resilient agriculture is supported by the National Adaptation Fund by the Government for Climate Change (NAFCC). In order to lessen reliance on fossil fuels, renewable energy is promoted through programs like solar energy growth. Blue economy development to guarantee fisheries exports and sustainable maritime trade.

ii) Strengthening ports, highways, and railways to withstand extreme weather events.

Investing in climate-smart storage facilities to reduce post-harvest losses.

iii) Encouraging green manufacturing and exports of environmentally sustainable products and implementing carbon-neutral trade strategies.

iv) Investing money into water-efficient industrial processes and crop varieties that are adaptable to climate change and creating trade analytics powered by AI to forecast market changes brought on by climate change.

v) Strengthening cooperation on climate-resilient trade frameworks with international partners and advocating for developing countries by taking part in trade summits related to climate change.

vi) Extending insurance programs for farmers and climate-affected sectors. promoting environmentally friendly finance choices for long-term company operations.

Global trade agreements, industrial production, and agricultural output are all being impacted by climate change, which is changing India's trading landscape. India must prioritise climate adaption plans, make investments in sustainable infrastructure, and conform to changing

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

international trade regulations in order to preserve its trade competitiveness. India's future Proactive steps in international cooperation, technological innovation, and policymaking are necessary for trade resilience.

Section VI : Mainstreaming trade to attain the Sustainable Development Goals :

In order to fulfill the 2030 Agenda for Sustainable Development Goals (SDGs), which establish goals to be met by 2030 in sectors like education, health, poverty alleviation, and the environment. The SDGs acknowledge the contribution that the WTO can contribute to the 2030 Agenda and place a strong emphasis on the role that trade plays in advancing sustainable development.

Trade contributes to delivering key Sustainable Development Goals are as follows :

1) **SDG 1 : No Poverty**

   There is mounting proof that carefully thought out and properly implemented trade policy initiatives can have a favorable effect on long-term poverty alleviation. Additionally, trade liberalization has raised living standards by increasing productivity, boosting competition, giving consumers more options, and improving market prices.

2) **SDG 2 : Zero Hunger**

   Eliminating agricultural market inefficiencies caused by subsidies will result in more equitable and competitive markets that benefit farmers and customers while promoting food security. Target 2.B of this goal was achieved when the WTO's 2015 export competition ruling outlawed export subsidies in agriculture.

3) **SDG 3 : Good Health and Well-being**

   Ensuring that everyone has access to reasonably priced medications is one of SDG 3's primary goals. A significant modification to the WTO's TRIPS agreement just went into effect. In keeping with this goal's Target 3.B, this step will make it simpler for developing nations to have a safe legal route to obtain reasonably priced medications.

4) **SDG 5 : Gender Equality**

   Women's employment and economic growth can be facilitated by trade. Through trade, women's employment prospects have grew considerably. Additionally, jobs in export-oriented industries typically offer higher compensation and working conditions. In emerging nations, export industries are a significant source of employment for women.

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

5) SDG 8 : Decent Work and Economic Growth

Inclusive economic growth driven by trade improves a nation's ability to generate revenue, which is one of the necessary conditions for accomplishing sustainable growth. The Aid for Trade program of the WTO might have a significant impact on augmenting domestic construction initiatives, trading capacity, and SDG 8 includes a particular goal for nations help boost the initiative's support.

6) SDG 9 : Industry, Innovation and Infrastructure

By boosting competition and facilitating the transfer of innovation, technology, and information, trade generates dynamic economic gains. Open marketplaces have been found to be a major factor in trade and investment between rich and developing nations, facilitating the transfer of technology that lead to industrialization and development and aid in the achievement of SDG 9.

7) SDG 10 : Reduced Inequalities

The prospects of the world's poorest people have changed due to shifts in development patterns, which have reduced inequality between nations. Through the concept of Special and Differential Treatment for Developing Countries, WTO regulations aim to lessen the effects of current disparities. This enables developing and least-developed nations to apply flexibilities to accommodate for their capacity limitations.

8) SDG 14 : Life Below Water

Under SDG 14, the WTO is crucial in assisting local, regional, and international initiatives to address ocean environmental degradation. The WTO's December 2017 Decision on Fisheries Subsidies, which commits members to outlawing subsidies that support overcapacity and overfishing as well as eliminating subsidies that support illegal, unreported, and unregulated fishing with special and differential treatment for developing and least-developed nations, represents a step forward in multilateral efforts to comply with SDG Target 14.6. By the 12th Ministerial Conference, members pledged to carry out this commitment.

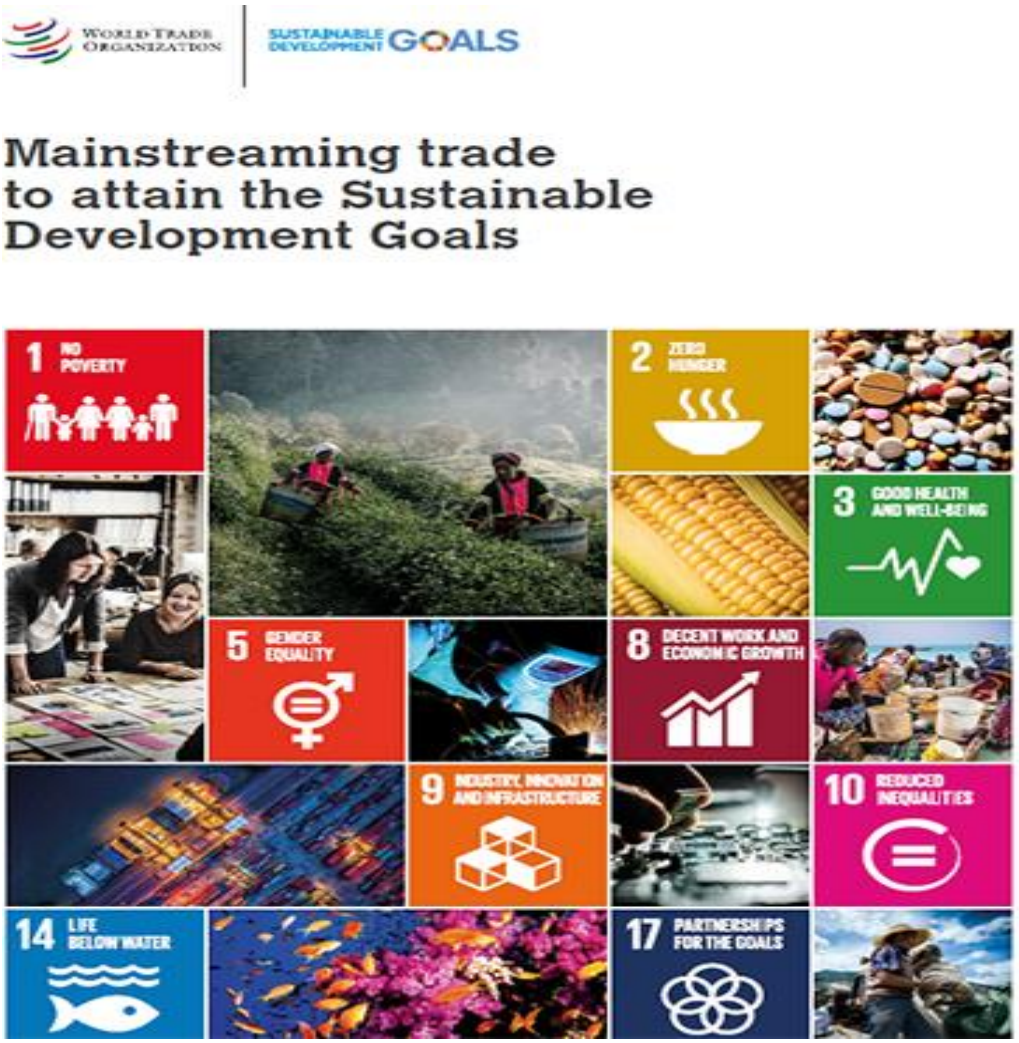
9) SDG 17 : Partnership for the Goals

SDG 17 acknowledges commerce as a way to carry out the 2030 Agenda. This goal's objectives include: nations to advance an open, universal, rules-based, non-discriminatory and fair multilateral trading system; the expansion of exports from developing nations and the doubling of the proportion of exports from least-developed countries (LDCs); and

ISSN: 2455-8834

Volume:11, Issue:02 "February 2026"

the introduction of duty-free and quota-free market access for LDCs with clear and straightforward rules of origin for exported goods. The WTO is the main conduit for achieving these objectives.



Section VII : Concluding Remarks:

A basic trade-off between the short-term necessity of economic expansion and the long-term imperative of ecological preservation characterises the intricate and dynamic relationship between India's trade performance and environmental sustainability. This link influences India's achievement of the Sustainable Development Goals (SDGs) in both good and negative ways. Like many developing countries, India has historically had to deal with a "development first" strategy that prioritises export-driven economic growth, sometimes at the sacrifice of environmental quality. Trade liberalization and an expansion of exports, particularly in

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Volume:11, Issue:02 "February 2026"

traditional, resource-intensive sectors, impose a significant environmental burden on India. There is a concern that India's weaker environmental enforcement regime, compared to its developed trading partners, may attract pollution-intensive industries (e.g., in chemicals, textiles, mining, and refining). Research has shown that after trade liberalisation, pollution-intensive exports and foreign direct investment (FDI) in these industries increased somewhat. Water pollution, air pollution (particulate matter, greenhouse gases), and soil erosion are all significantly impacted by the manufacture of India's main exports, which include petroleum products, agricultural products, textiles, and chemicals. Increased trade volumes and general economic growth simply result in a rise in manufacturing size, which inevitably necessitates a greater use of natural resources and produces more waste and emissions. India's environmental sustainability is threatened by the over-exploitation of natural resources caused by export-oriented demand for commodities (such as minerals, stones, and particular agricultural crops) (SDGs 12 and 15).

By allowing the transfer of clean technologies, generating "green" market opportunities, and increasing economic ability to participate in remediation, trade is also a critical driver for attaining environmental goals. Environmental technology imports are crucial to India's clean transition. India is a major importer of solar panel components, water/wastewater management equipment, and air pollution control equipment. Cleaner domestic production can be adopted more quickly if trade policy lowers tariffs on these green intermediate items (SDG 9 and 12). India is making a concerted effort to export more green goods and services, including solar cells, wind turbines, and green chemicals..With this emphasis, India is positioned as a major supplier in the worldwide transition to renewable energy, directly supporting SDGs 13 (Climate Action) and 7 (Affordable and Clean Energy). Moving away from the straightforward trade-off and purposefully using trade as a tool to finance, acquire, and spread the clean technologies and practices required to meet its Net Zero by 2070 aim and the more general SDGs is necessary for India's path to sustainable development.

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