

# Sustainability-driven Non-tariff Measures

## Assessing Risks to India's Foreign Trade

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## Executive summary

International trade has been a key determinant of global economic growth and development. Merchandise trade constituted 35 per cent of India's gross domestic product (GDP) in 2022 (World Bank 2022), and there is a continuous effort towards increasing export volumes in the future. The Government of India has set a target of USD 1 trillion by 2030 for merchandise exports (PIB 2022). To accrue maximum benefits, international trade must be kept free from trade protectionism, which can take the form of tariff and non-tariff measures (NTMs).

NTMs are policy measures other than ordinary customs tariffs that can have an economic effect on trade. While developed countries have lowered their tariff levels over time, they have gradually increased the issuance of NTMs. Regulatory differences between trading partners make compliance with these complex measures difficult for countries with relatively lax regulations, leading to restrictions in market access, specifically for emerging economies such as India.

In recent years, numerous NTMs have been implemented by developed countries to address issues of sustainability, environment, and climate change. These include measures for circularity and energy efficiency, carbon footprint, waste management, water management, and sustainable forestry, to list a few. Recent examples of sustainability-driven international regulations and incentive mechanisms that can prove to be barriers to free trade include the *EU's Carbon Border Adjustment Mechanism (CBAM) and Deforestation-free Regulation (EUDR)*, and the United States' (US) *Inflation Reduction Act (IRA)*.

The proportion of environment-related NTMs (E-NTMs) in total NTM notifications to the World Trade Organization (WTO) has increased from 8 per cent in 1997 to 19 per cent in 2021 (WTO 2021).

NTMs have impacted India's exports in the past, and case studies from the targeted sectors clearly establish this impact.

- **Rice:** India's rice exports have suffered due to the imposition of maximum residue level (MRL) limits, which is the highest level of pesticide residue that is legally acceptable in or on food or feed when pesticides are applied following good agricultural practices (FAO 2022). In 2017, the European Commission (EC) reduced the MRL limit for a fungicide used in rice cultivation, which led to a sharp drop in rice exports from India.
- **Chemicals:** Chemical exports from India were met with stringent regulations in the form of *Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)*, implemented by the European Union (EU) in 2007. According to our discussions with REACH experts in India, the regulation resulted in approximately 40 per cent of exporters withdrawing; further, compliance was costly.

**EU's REACH regulation (2007) resulted in 40% of Indian chemical exporters to withdraw from the export market.**

## A. Key findings: Indian exports at risk due to proposed EU regulations

Informed by past experiences of adverse NTM-driven implications, it is imperative to assess the potential risk that Indian exporters could face and prepare them for adverse market scenarios. While Indian exports face NTM-related risks from most key trading partners, this paper focuses on EU NTMs as a brief and indicative exercise. Some of the EU regulations that were at the proposal stage at this paper's inception have now been passed and notified to the WTO. Our analysis of the product categories targeted by the proposed EU regulations indicate the following -

- India's export of CBAM-affected sectors to the EU is approximately USD 9.5 billion, as of 2022.
- The other product categories at risk due to the proposed EU regulations include textiles, chemicals, selected consumer electronics products, plastics, and vehicles.
- These items accounted for 32 per cent of India's exports to the EU in 2022, valued at approximately USD 27 billion.
- If CBAM sectors are added to the list, then the exports of at-risk sectors amount to USD 37 billion, which is approximately 43 per cent of India's exports to the EU as of 2022.
- Concerning sectoral focus, some proposed regulations are generic, such as the *Green Claims Initiative*, which aims to introduce specific rules to verify the environmental claims by manufacturers selling their products in the EU market. Other proposed regulations have a sectoral impact, such as the *EU Strategy for Sustainable and Circular Textiles*, which is focused on the textile sector.

## B. Policy recommendations

With an increase in the issuance of E-NTMs by developed countries, India faces a serious challenge concerning its key export items. While India has taken significant steps to address this challenge, it still needs to develop a structured approach to deal with these measures to ensure that its exports are not impacted.

There are multiple ways in which we can ensure this readiness.

- Use bilateral free trade agreements (FTAs):** India can resort to bilateral FTA to develop mutual recognition of compliance assessment activities in the respective countries. Few EU trade agreements, such as the *EU-Canada Comprehensive Economic and Trade Agreement* (CETA) and the *EU-Vietnam Free Trade Agreement*, exemplify how this can be achieved. Existing India-specific bilateral agreements also provide examples for how to deal with NTM-related issues through the bilateral route. For instance, the *Comprehensive Economic Partnership Agreement* (CEPA) between India and the United Arab Emirates (UAE), which was signed on 18 February 2022, entails a commitment to fast-tracking product registrations for exporting Indian pharmaceutical products to the UAE that have received similar approvals from regulatory authorities in Australia, the EU, Japan, the United Kingdom (UK), or the US.
- Raise specific trade concerns (STCs) at the WTO:** India needs to act quickly in utilising the WTO framework to raise specific concerns with respect to NTM notifications by other WTO member countries. 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. To address technical barriers to trade (TBTs), STCs can be raised against draft TBT measures (the ones that have not yet been notified) and those that are already in force. STCs offer an effective way for WTO members to share their concerns, develop an understanding of the regulations, and exchange details relating to the compliance mechanism.
- Strengthen the compliance mechanism:** India needs to prepare its industry to comply with these strict regulations. The first step in this regard is to make the export firms aware of the possibility of such regulations being notified to the WTO by India's trading partners. This should be followed by providing the firms with information regarding

the compliance steps involved in each regulation. This calls for developing a common information-sharing platform where firms can be registered and the information can be tracked. The Government of India has already designated the Bureau of Indian Standards (BIS) as the TBT inquiry point for the Indian industry. It also holds regular meetings with the industry with updates about new TBT and sanitary and phytosanitary (SPS) notifications. A comprehensive approach with mechanisms to support affected exporters in dealing with expected NTMs should be adopted for better outcomes. This may also require specialised working groups with representation from various stakeholders, including exporters, line ministry representatives, accreditation and auditing agencies, and entities upstream of the exporter providing the input materials to the exporters.

- Develop independent standards:** India needs to ramp up its regulatory mechanism to introduce its own standards and NTMs, and use these to ensure the quality of its manufactured items. This will improve product quality in terms of sustainability impacts and strengthen India's capacity to comply with the complex regulations of its trading partners. The adoption of the *Indian National Strategy for Standardization* (INSS) in 2018 is a welcome regulatory initiative recognising the essential elements for domestic quality control and foreign market access. The challenge remains in the effective implementation of the strategy. Standard-setting agencies in India should also ensure that the standards and conformity assessment procedures align with global standards (such as the International Organization for Standardization and International Electrotechnical Commission) and procedures.

**Effective export compliance with foreign regulations requires a common information sharing platform and formulation of specialised working groups.**

## 1. Introduction to non-tariff measures

International trade has significantly contributed to global economic growth and development. The share of merchandise trade as a percentage of the world gross domestic product (GDP) stood at 50.5 per cent in 2022. It was approximately 35 per cent of India's GDP in 2022 (World Bank 2022), and there is a concerted push towards increasing export volumes in the future. The Government of India has set a target of USD 1 trillion by 2030 for merchandise exports (PIB 2022). International trade is important to most economies, and to accrue maximum benefits, international trade must be kept free from trade protectionism.

Trade protection implies placing barriers to free trade, and can take the form of tariff and non-tariff measures (NTMs). NTMs are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods, and change quantities traded or prices or both. NTMs are broadly implemented for health, safety, environmental, and labour-related concerns. NTMs can take the form of TBT, SPS measures, price controls, and export control measures. TBT includes measures such as labelling, standards on technical specifications and quality requirements, and other measures protecting the environment. SPS measures include restrictions on substances, ensuring food safety, and those for preventing the dissemination of diseases or pests. TBT and SPS measures are the two most widely used NTMs – more than 30 per cent of product lines and almost 70 per cent of world trade is affected by TBT measures. SPS measures affect almost 20 per cent of world trade (UNCTAD 2023a). Examples of TBT and SPS measures faced by India include registration, evaluation, authorisation and restriction of chemicals, eco-design requirements for power transformers, and control of wood packaging material used in the transport of specified commodities originating from India.

**In 2022, India notified 24 SPS and TBT measures to WTO, as compared to 188 and 542 by EU and US.**

While developed countries have lowered their tariff levels over time, they continue to have a relatively high number of NTMs. For instance, India's simple average applied tariff rate in 2022 was 18.1 per cent, while the rates were 5.2 and 3.3 per cent for the European Union (EU) and the United States (US), respectively (WTO 2022).<sup>1</sup> The total technical barriers to trade (TBT) and sanitary and phytosanitary (SPS) measures notified to the World Trade Organization (WTO) by India in 2022 stood at 24, compared to a significantly higher number notified by the EU and the US, at 188 and 542, respectively (WTO, ITC, and UN 2023). NTMs do not necessarily reduce trade and welfare; however, they can be non-tariff barriers (NTBs) if they act as a protectionist measure by discriminating against imports (Disdier and Fugazza 2019). Regulatory differences between trading partners make compliance with these complex measures difficult for countries with relatively lax regulations, leading to restricted market access. These market access issues can be more pronounced for developing countries when accessing developed countries' markets. NTMs targeting environmental protection and sustainability have undergone an unprecedented rise over the past few years as countries worldwide move towards their net-zero goals.

Recent examples of sustainability-driven international regulations and incentive mechanisms that could prove to be barriers to free trade include the *Carbon Border Adjustment Mechanism* (CBAM) and Deforestation-free Regulation (EUDR) of the EU, and the *Inflation Reduction Act* (IRA) of the US. The CBAM takes the form of taxes – EU importers will need to buy carbon certificates equivalent to the carbon price that would have been paid had the goods been domestically produced in the EU. The EUDR defines a product as deforestation-free when the product itself, its ingredients, or its derivatives are not produced on land subject to deforestation or forest degradation after the cut-off date of 31 December 2020. The items affected by this regulation include seven specific commodities – cocoa, coffee, soy, palm oil, wood, rubber, and cattle. The EUDR can potentially impact India's exports, as more than half of India's total coffee exports in 2022 went to the EU, and 2 per cent of India's total rubber exports goes to the EU. The IRA incentivises green energy production projects, with the condition of a certain degree of local content required in the manufacturing process.

1. The trade-weighted averages for India, the EU, and the US are 11.4, 3.2, and 2.8 per cent, respectively.

With a spike in such measures by developed countries, it is essential to assess the risk these measures pose to Indian exports. This paper attempts to trigger policy thinking to respond and adapt to these measures. The second section provides the extent of coverage of India's key exports under NTMs issued by the EU and the US. The trends in environment-related NTMs (E-NTMs) by the EU and the US and their spread across different sectors are discussed in Section 3. Section 4 flags sector-specific case studies on particular NTMs that have impacted India's exports in the past. Section 5 provides a detailed collation and assessment of specific EU regulations in the pipeline to be notified and their likelihood of impacting India's exports. Finally, Section 6 offers policy recommendations to address the issue of sustainability-driven trade barriers.

## 2. Non-tariff measures by major developed countries and impact on India

The EU and the US are India's top export destinations, with a share of approximately 19 and 18 per cent, respectively, in India's total exports in 2021 (World Bank 2021). NTMs restrict India's market access to them. In this regard, it is important to understand the extent of India's exports covered under the NTMs implemented by the EU and the US.

While the US has an overall higher number of NTMs since the 1990s till date – 9072 compared to the EU's 1690 (UNCTAD 2023b) – the EU's pace of introducing new NTMs has increased considerably in the recent past, with approximately 22 per cent of its total NTMs introduced between 2016–2021, compared to 13 per cent for the US. To assess the impact of EU and US NTMs on India's exports, the top 10 product categories imported by the EU and the US from India were identified based on 2021 data, and the number of NTMs corresponding to each product item in the list was tracked. As NTMs are designed to target broad product categories, the NTM mapping for this analysis was done at the two-digit HS<sup>2</sup> product category level to extract more insights. The exercise was undertaken for EU and US NTMs to date and for the recent time period of 2016–2021.

## 2.1 Observations on US NTMs

The top 10 import items from India constitute 68 per cent of the total US imports from India, amounting to USD 52 billion. Furthermore, these product categories are covered by approximately 29 per cent of the total NTMs to date, and 23 per cent of NTMs for the period 2016–2021 (Table 1).



Image: iStock

2. HS codes are developed by the World Customs Organization (WCO). HS stands for Harmonized System and identifies product categories and products with a standardised two- to six-digit nomenclature. The first two digits of the code indicate the product category. The next four to six digits indicate the subcategories the product fits into ([www.bdc.ca](http://www.bdc.ca)).

**Table 1** US NTMs and imports from India

S. No.	Sector	HS code	Import share (%)	Import value (USD billion)	NTM count (till date)	Share in total NTMs to date (%)	NTM count (2016-2021)	Share in total NTMs for 2016-2021 (%)
1.	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; and coin	71	20.8	16	57	0.6	12	1.0
2.	Pharmaceutical products	30	11.8	9.1	481	5.3	25	2.0
3.	Nuclear reactors, boilers, machinery, and mechanical appliances	84	6.2	4.8	533	5.9	47	3.8
4.	Organic chemicals	29	5.1	3.9	360	4.0	56	4.5
5.	Made up textile articles; sets; worn clothing and textile articles; and rags	63	4.9	3.8	150	1.6	11	0.9
6.	Electrical machinery, equipment, and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers; and parts and accessories of such articles	85	4.7	3.6	380	4.2	47	3.8
7.	Mineral fuels, oils, and products of their distillation; bituminous substances; and mineral waxes	27	4.2	3.2	184	2.0	29	2.3
8.	Fish and crustaceans, molluscs, and other aquatic invertebrates	03	3.6	2.8	189	2.1	26	2.1
9.	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	87	3.5	2.7	224	2.5	27	2.2
10.	Articles of apparel and clothing accessories, knitted or crocheted	61	3.0	2.3	66	0.7	4	0.3
	<b>Total</b>		<b>67.8</b>	<b>52.2</b>	<b>2624</b>	<b>28.90</b>	<b>284</b>	<b>22.7</b>

Source: Authors' calculations based on UNCTAD (2023b)

## 2.2 Observations on EU NTMs

The top 10 items imported by the EU from India constitute 61 per cent of the total EU imports from India, amounting to USD 33 billion. These items are covered by approximately 77 per cent of the total NTMs to date, and

42 per cent of NTMs for the 2016–2021 period (Table 2). Since 2016, the two sectors that have had the maximum number of NTMs have been electrical machinery and textiles (HS codes 85, 61, and 62).

**Table 2** EU NTMs and imports from India

S. No.	Sector	HS code	Import volume (USD billion)	Import share (%)	NTMs (till date)	Share in total NTMs to date (%)	NTMs (2016–2021)	Share in total NTMs for 2016–2021 (%)
1.	Organic chemicals	29	5.8	10.6	125	7.4	0	0.0
2.	Iron and steel	72	5.0	9.3	155	9.2	0	0.0
3.	Nuclear reactors, boilers, machinery, and mechanical appliances	84	4.4	8.2	259	15.3	0	0.0
4.	Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers; and parts and accessories of such articles	85	4.1	7.5	258	15.3	50	13.3
5.	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; and coin	71	3.4	6.2	30	1.8	1	0.3
6.	Mineral fuels, oils, and products of their distillation; bituminous substances; and mineral waxes	27	2.9	5.3	50	3.0	8	2.1
7.	Articles of apparel and clothing accessories, knitted or crocheted	61	2.2	4.1	54	3.2	41	10.9
8.	Pharmaceutical products	30	1.9	3.4	57	3.4	3	0.8
9.	Articles of apparel and clothing accessories, not knitted or crocheted	62	1.8	3.3	66	3.9	46	12.3
10.	Iron or steel articles	73	1.7	3.2	245	14.5	10	2.7
	<b>Total</b>		<b>33.2</b>	<b>61.0</b>	<b>1299</b>	<b>76.9</b>	<b>159</b>	<b>42.4</b>

Source: Authors' calculations based on the UNCTAD (2023b)

While EU NTMs cover a high share of Indian imports, US NTMs account for a large import volume. As these NTMs require the importing countries to comply with certain requirements, they act as trade restrictions if a developing country such as India is unable to completely comply with these measures. Chen et al. (2006) studied how foreign standards and technical regulations affect export decisions. They find that testing procedures and detailed inspection measures have an adverse effect on the ability of firms from developing countries to export, and this impact is significant for exporters of agricultural produce, which is perishable in nature.

NTMs can result in exporters withdrawing from the foreign market or an increase in the exporting cost through additional compliance formalities that an exporter has to undergo. For instance, the share of Indonesian agro-food exports destined for key advanced economies such as the EU, the US, and Japan dropped from 54 per cent in 2000 to 32 per cent in 2010, primarily due to producers' inability to conform to standards and/or gain requisite certification. And this decline was not even offset by the reduction in the EU's average applied tariffs to agricultural products from Indonesia over this period (Moisé et al. 2019).

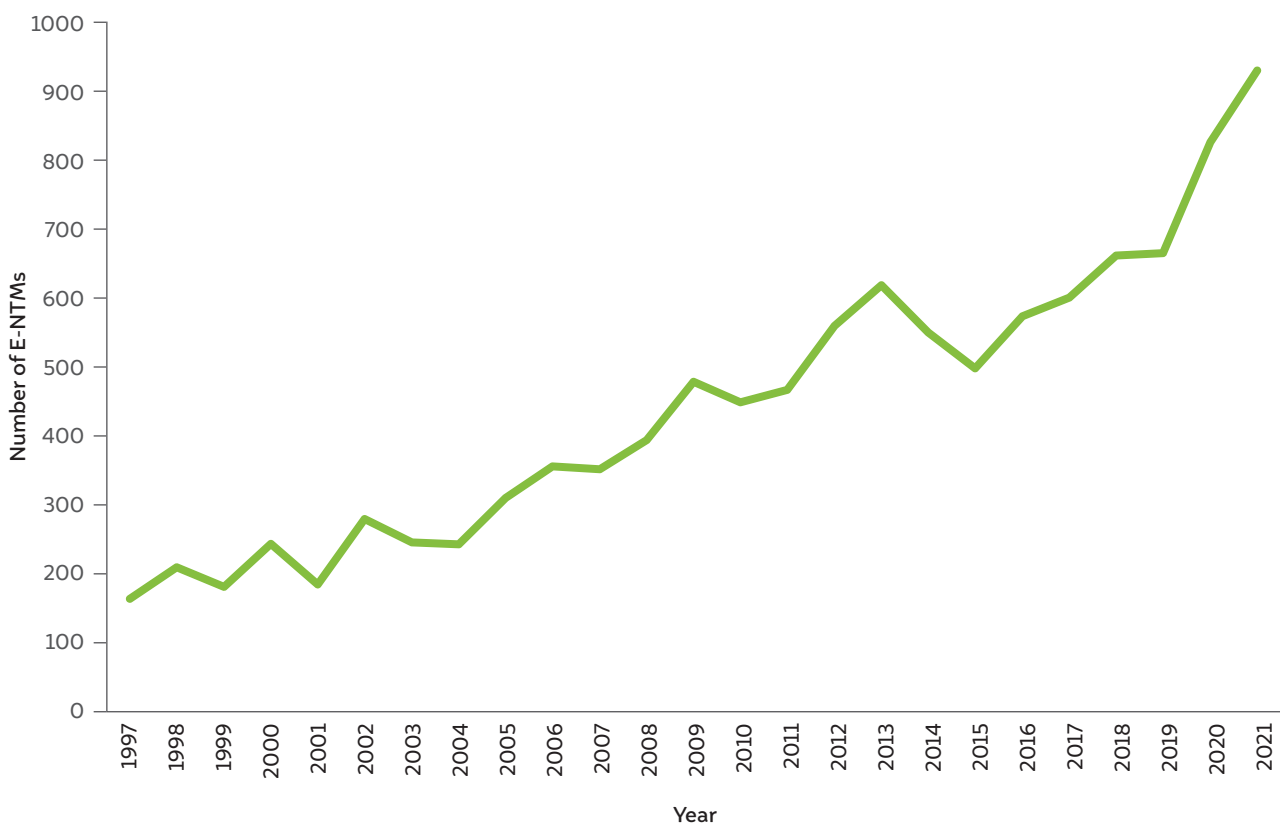
To understand the impact on India, Verma (2022) investigated the NTBs that Indian exporters faced while exporting to their key trading partners by discussing this issue with relevant industry stakeholders. Most of the concerns flagged by Indian exporters relate to compliance costs and additional delays as a result of regulations. For instance, following Brexit, the United Kingdom (UK) adopted the European Commission (EC) regulation for marking personal protective equipment (PPE), more specifically, oven gloves and potholders. The CE marking indicates the goods' conformity with European health, safety, and environmental protection standards. This certificate includes specific information such as size, colour, filling, and fabric. The issue raised by Indian exporters was that this certificate is valid only for a particular design and colour. For every new design and colour, Indian exporters have to get a new certificate, resulting in additional delays and costs. Exporters indicate that acquiring an EC certificate takes 12 to 16 weeks, and the cost of obtaining it is between INR 1,50,000 and 2,00,000. This specifically impacts small consignments from India. Similar issues have been raised by Indian exporters based in the US, United Arab Emirates (UAE), and other important markets. Exporters have expressed that these countries should work with India to collectively ease export rules to facilitate market access by limiting additional costs.

### 3. Environment-related non-tariff measures

In recent years, numerous NTMs have been implemented by developed countries to address issues of sustainability, the environment, and climate change. These include measures for circularity and energy efficiency, to list a few. E-NTMs are increasing at a high rate (Figure 1), and their proportion of the total notifications has increased from 8 per cent in 1997 to 19 per cent in 2021 (WTO 2021).

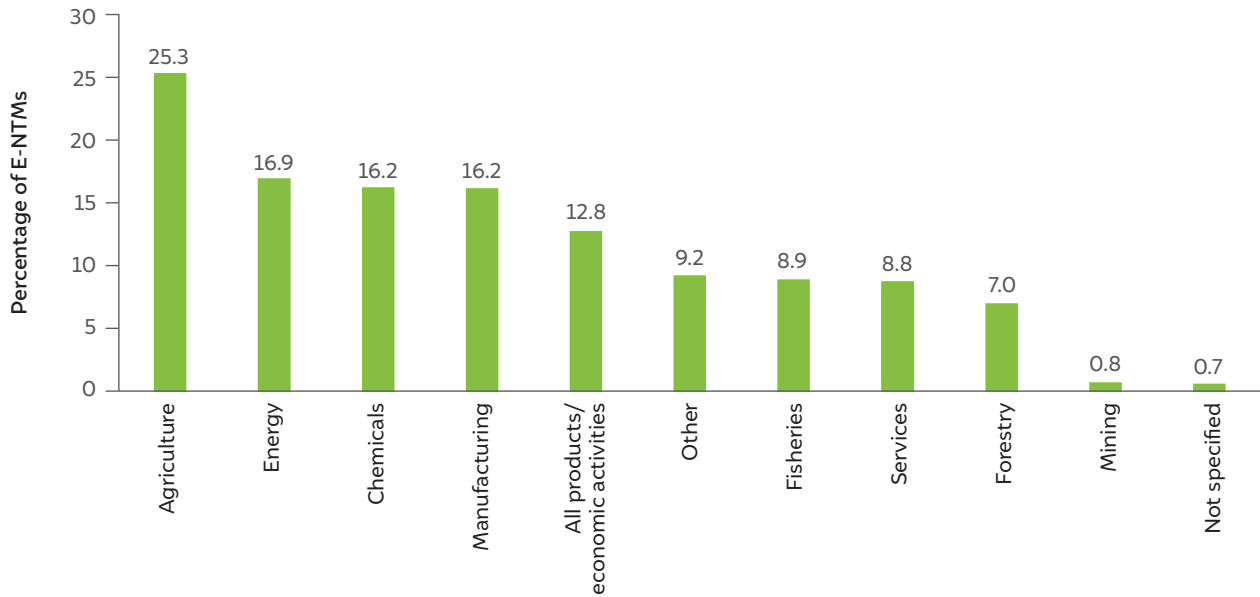
If we consider India's key trading partners, such as the EU and the US, we find that the overall US NTM count is higher, but the EU has a higher count of E-NTMs. For the period 2009–2021, E-NTMs for the EU and the US were 954 and 818, respectively. A granular look at EU E-NTMs for 2021 reveals that agriculture has the most coverage, followed by energy, chemicals, and manufacturing (Figure 2).

**Figure 1** The number of E-NTMs has been rapidly rising over the years



Source: WTO (2021)



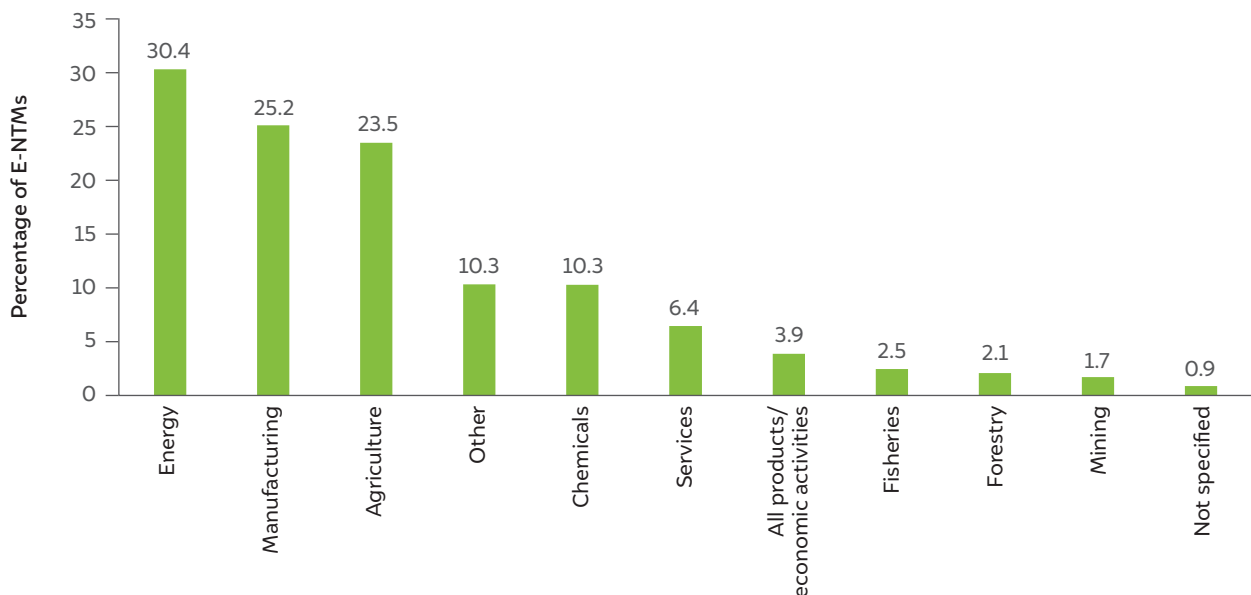
**Figure 2** Agriculture dominated EU E-NTMs in 2021

Source: WTO (2021)

In the agricultural sector, approximately 86 E-NTMs relate to subsidies and countervailing measures such as loans, grants and tax concessions; about 25 are SPS measures such as regulating the animal nutrition content, and 12 are TBTs such as certificates for organic food. The manufacturing sector is covered by 27 TBTs, such as a simulation tool to objectively compare the performance of heavy-duty vehicles in terms of CO<sub>2</sub> emissions and fuel consumption; in-service monitoring requirements for internal combustion engines installed in non-road mobile machinery for engines other than sub-categories Non Road Engines (NRE)-v-5;

sustainability, safety, labelling, and information requirements with respect to the maximum carbon footprint over the life cycle, due diligence requirements for economic operators, and requirements for the end-of-life treatment of waste batteries. In the energy sector, all E-NTMs take the form of subsidies and countervailing measures such as loans, grants, and tax concessions for green energy deployment.

A granular look at US E-NTMs for 2021 reveals that the energy sector has the most coverage, followed by manufacturing and agriculture (Figure 3).

**Figure 3** The energy sector dominated US E-NTMs in 2021

Source: WTO (2021)

Approximately 99 NTMs in the energy sector pertain to subsidies and countervailing measures in the form of tax concessions, grants, loans etc. In the manufacturing sector, most NTMs take the form of TBTs (42), such as hazardous materials regulations; the *Toxic Substances Control Act of 1976*; marine engineering standards; test procedures for variable refrigerant flow multi-split air conditioners and heat pumps (VRF multi-split systems); test procedure, sampling, and rating requirements; and enforcement provisions for circulator pumps. In agriculture, most NTMs (76) are under the *Agreement on Agriculture (AoA)* that extends grants, loans, and direct payments for the agriculture sector.

The growing number of E-NTMs is set to increase compliance complexity and can prove detrimental to India's export outlook. This is not the first time that Indian exports will suffer due to complex rules and regulations set by developed countries. With several such examples from the past, Indian exports face the risk of increasing market access restrictions in the coming years.

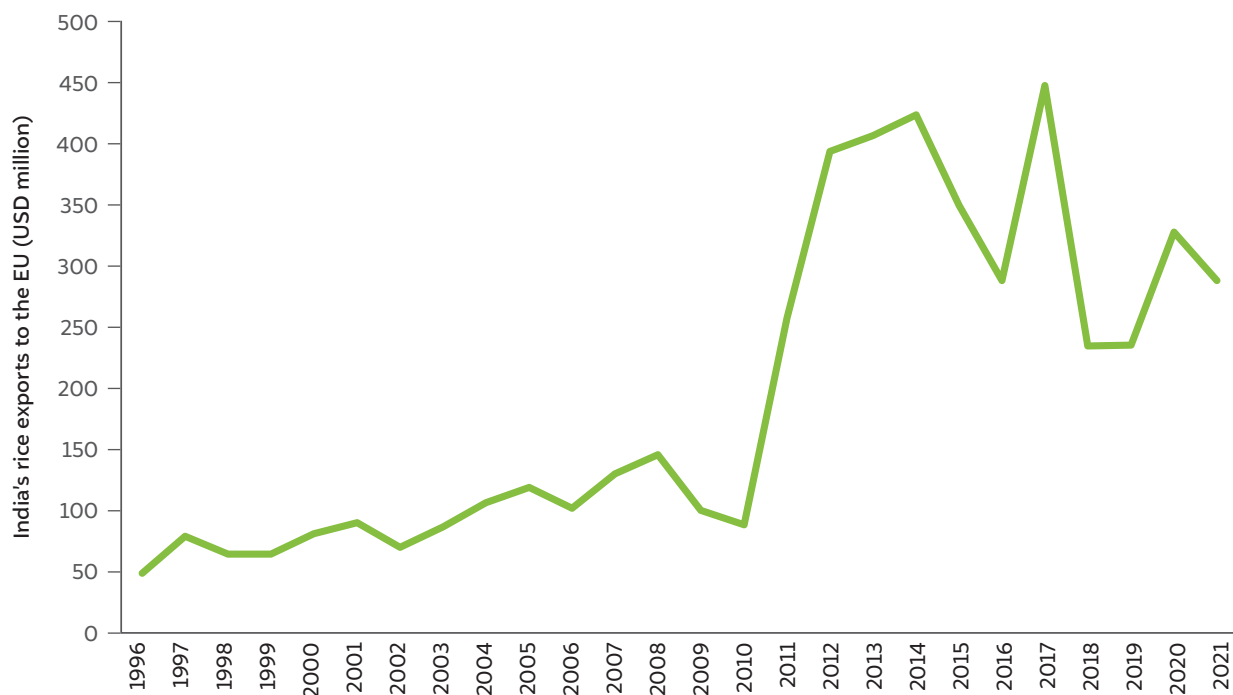
## 4. Case studies

As NTMs have impacted Indian exports in the past, this section delves into case studies from specific sectors – rice and chemicals – that have borne the brunt of NTM-related restrictions. Details were gathered from secondary data as well as stakeholder discussions. The approach focused on engaging with the concerned stakeholders and deriving insights on respective NTMs and their impact on Indian exports.

### 4.1 Rice exports

As of 2021, the share of rice in India's total exports was 2.4 per cent. India's rice exports have suffered in the past due to the maximum residue level (MRL) limits. According to the Food and Agriculture Organization (FAO), MRL is the highest level of pesticide residue that is legally tolerated in or on food or feed when pesticides are applied in accordance with good agricultural practices (FAO 2022). In 2017, the EC reduced the MRL limit for a fungicide that is used in rice cultivation, which led to a sharp drop in rice exports from India (Figure 4). The rice exports were not revived until the COVID-19-induced lockdown led countries such as

Figure 4 India's rice exports to the EU are impacted by the EU's MRL requirements



Source: World Integrated Trade Solution (WITS), World Bank (2021)

3. The Codex Alimentarius is a collection of internationally recognised standards, codes of practice, guidelines, and other recommendations published by the Food and Agriculture Organization (FAO), relating to food, food production, food labelling, and food safety.

Thailand and Vietnam to ban exports for a short duration due to food security concerns. As India did not adopt similar bans, it ended up meeting the rice demand of markets such as Bangladesh, China and Vietnam.

The EU's MRL rules do not account for local geographic, climatic, and soil conditions that necessitate the use of pesticides and insecticides. The EU has also disregarded the Codex Alimentarius<sup>3</sup> recommendations for MRLs by using a risk-based approach towards SPS measures.

Our discussions with the All-India Rice Exporters Association (AIREA) corroborated this fact. Issues related to pesticide residues are hampering exports to the EU, in particular. This is a farm-based issue as pesticides are used to control harmful pests, and due to higher than stringent norms of residues in the EU, we are facing issues. Our export to the EU has drastically come down from around 4,00,000 tonnes a few years ago to half of that (AIREA official, Email to author, April 10, 2023).

## 4.2 Chemicals

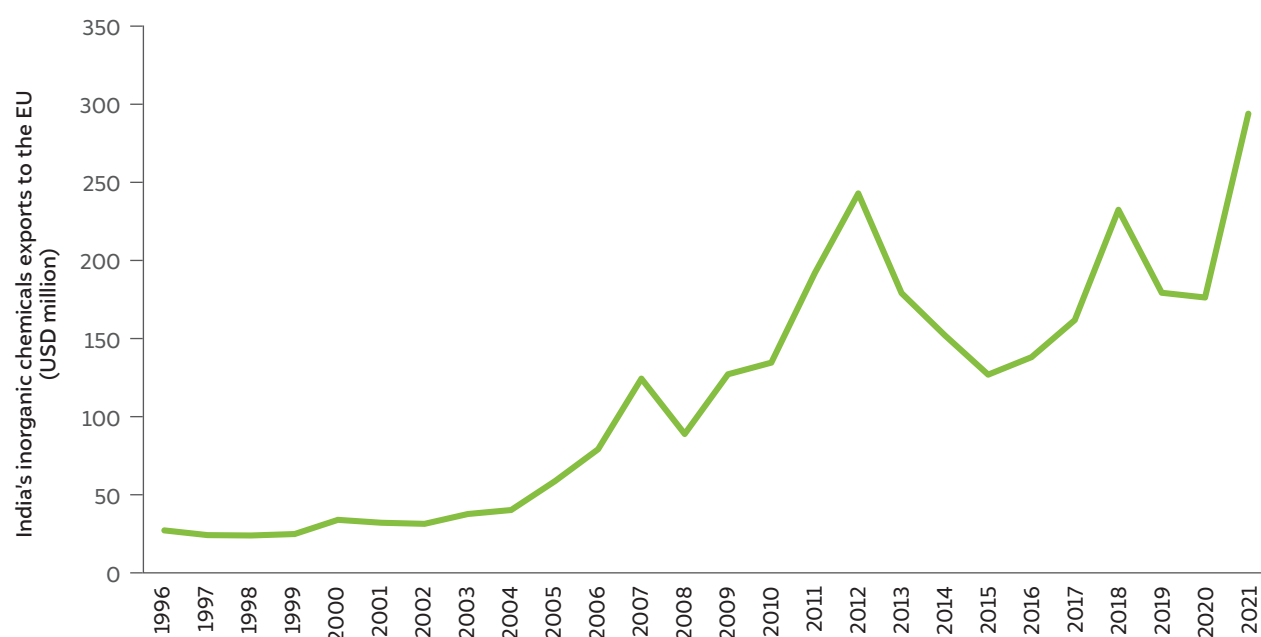
As of 2021, the chemical sector accounted for 14 per cent of India's total exports, and inorganic chemicals specifically accounted for 0.6 per cent of India's total exports. Chemical exports from India faced stringent regulations due to the *Registration, Evaluation, Authorisation, and Restriction of Chemicals* (REACH), implemented by the EU in 2007. According to the

European Chemicals Agency (ECHA), the regulation was adopted to improve the protection of human health and the environment from the risks that can be posed by chemicals, while enhancing the competitiveness of the EU chemicals industry.

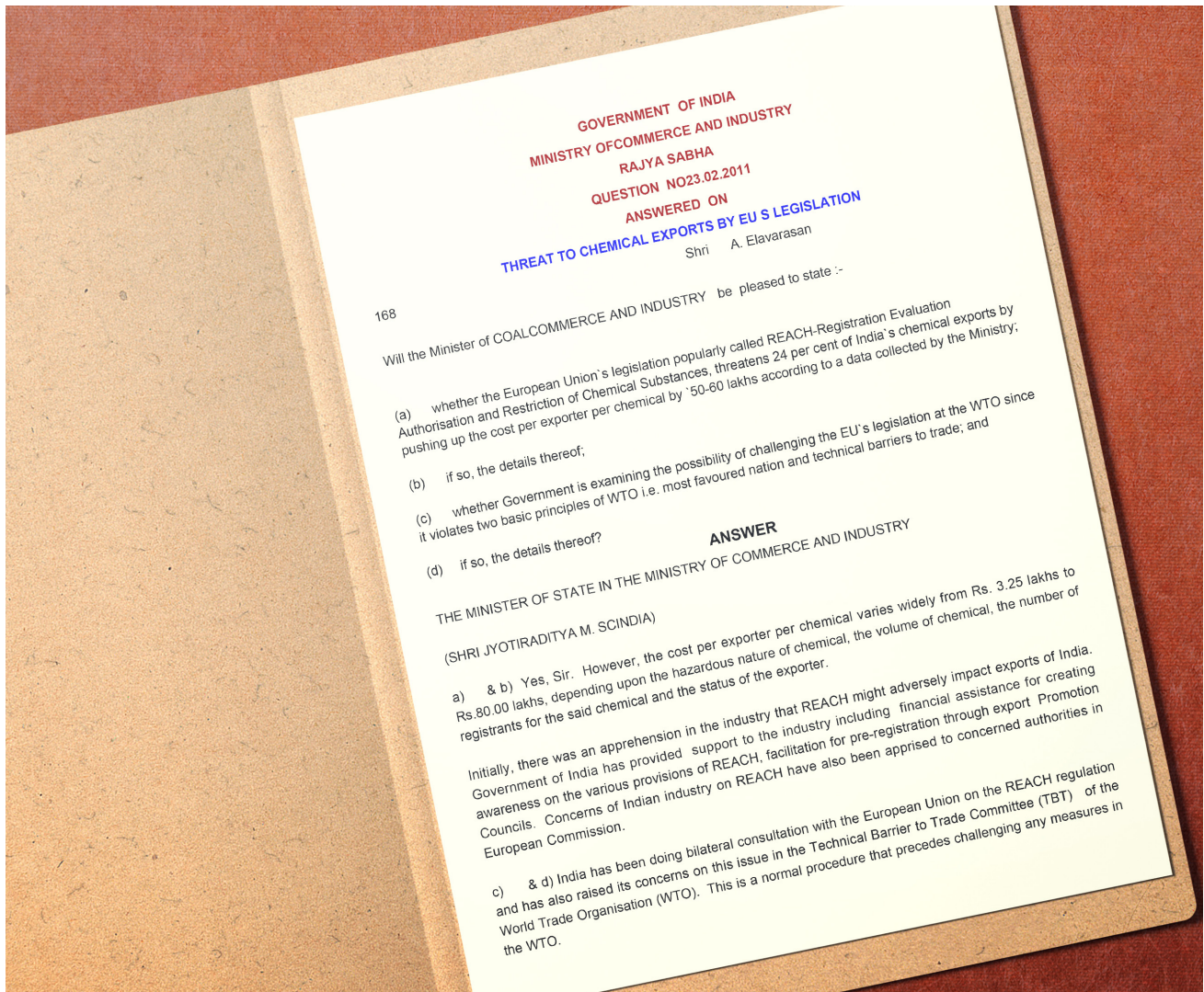
REACH established procedures for collecting and assessing information on the properties and hazards of substances and required chemical firms to register their substances. While the regulation entered into force in 2007, it was implemented in a phased manner; the registrations were started in 2010, depending on the quantity of chemicals that were manufactured. The chemicals belonging to the category of 1000 tonnes/annum of imports had to be registered by 1 December 2010, 100 tonnes/annum by 1 June 2013, and 1 tonne/annum by 1 June 2018. In addition, chemicals of higher concern or toxicity were to meet the 2010 deadline.

After peaking in 2010, Indian exports of inorganic chemicals to the EU saw a sharp dip and took approximately five years to recover when the compliance procedures were better understood by the Indian exporters (Figure 5). According to our discussions with REACH experts in India, the regulation resulted in approximately 40 per cent of exporters withdrawing; further, compliance was costly. Since there was no registration system in India, Indian exporters had to use EU and US systems to register the chemicals, which cost approximately EUR 22,000 per chemical registration.

**Figure 5** India's chemical exports were hit by the implementation of the EU's REACH



Source: World Integrated Trade Solution (WITS), World Bank (2021)



Response dated February 23, 2011, by Minister of State, Ministry of Commerce and Industry, to the Rajya Sabha question on EU's REACH regulation

Source: Ministry of Commerce and Industry, Government of India, 2011

Questions regarding the REACH policy were also raised in Rajya Sabha in 2011, and the then minister of state in the Ministry of Commerce and Industry said that around 24 per cent of Indian chemical exporters were threatened due to the regulation, and cost per chemical per exporter varied from INR 3.25 lakh to INR 80 lakh. According to textile industry organisations, REACH compliance has become better; however, environmental measures are getting tougher with time. For instance, the EU's proposed fibre blend requirements are more detailed than the chemical use requirements and are expected to make compliance difficult.

The discussed case studies clearly highlight the adverse impact of NTMs on Indian exports. The associated risks are higher, specifically when E-NTMs are being adopted at an unprecedented rate. As India expands its manufacturing and export base, it is likely to face NTM-driven barriers to enter the EU market. Considering

China, it is evident that the likelihood of NTM-related complexities and rejections increases with the scale of exports. For instance, between 2018 and 2022, a total of 10,616 consignments were rejected in the EU, of which approximately 50 per cent (around 5380) were Chinese exports, accounting for 22 per cent of total EU imports (as of 2021). Of the 5380 rejections, 219 were due to environment-related factors. Indian consignment rejections during the same period, on the other hand, accounted for 1 per cent of the total rejections by the EU, and none of these were related to the environment (European Commission 2022). The relative rejection rate of Indian consignments is low, as the total scale of its exports to the EU is lower, accounting for 2.2 per cent of the total EU imports in 2021.

**NTM related issues are likely to rise as India plans to increase its scale of exports.**

## 5. Risk analysis based on the proposed EU regulations

Indian exporters already face NTM-related challenges from most of their key trading partners, such as the US, the EU, China, Japan, and the UAE. However, specific new EU policies are likely to further impact Indian exports in the coming years. This section offers a brief prognosis.

NTMs by the EU have challenged Indian exporters in the past. The impact was acute because the industry was not prepared then for the change and, therefore, saw a dip in exports before reviving again. Now, the EU is notifying E-NTMs at a faster pace. For instance, the EU's *Green Claims Initiative*, which calls for verification of environmental claims made by any product, was proposed in the EU in March 2023. It has now been notified to the WTO under the TBT agreement and is open for comments from other WTO members. It is imperative to assess the risk that lies ahead for Indian exporters, to prepare them for adverse market scenarios. For this purpose, recent EU regulations and draft proposals<sup>4</sup> were tracked to identify potentially impacted sectors (Table 3).

Many of these regulations cater to the goals set as part of the *European Green Deal* (EGD) that was presented by the EC in December 2019, and the first set of legislative proposals was launched in July 2021. The deal comprises several policies, such as the *Farm to Fork* (F2F) strategy and the *New Circular Economy Action Plan* (CEAP), meant to transform the EU into a climate-neutral and resource-efficient economy by 2050. The F2F strategy seeks to reduce food waste to ensure that there is a sufficient and affordable supply of foods for its citizens while also guaranteeing that farmers receive a fair price for their products and that the EU remains competitive on a global scale. The CEAP is a set of interrelated initiatives which aim to reduce pressure on natural

**India's export to EU of product categories targeted by recently proposed EU regulations stood at USD 37 billion in 2022.**

resources by transforming the design, production, and consumption of products so that no waste is produced. Mentions of the potential impact on third and non-EU countries were tracked to gauge the possibility of WTO notifications in the future. For instance, the EU's *Nature Restoration Law* proposes to set rules to reduce the use of chemical pesticides and ensure more sustainable food systems by 2030. This law clearly mentions the inclusion of importing countries into the ambit of regulation. According to the text of the proposal, "Imported food containing measurable residues of prohibited substances should, over time, not be marketed in the EU".

Regarding the sectoral impacts, few proposed regulations are generic in nature. For instance, the *Green Claims Initiative* aims to introduce specific rules to verify the environmental claims by manufacturers selling their products in the EU market to check greenwashing activities. Apart from greenwashing-related regulations, other proposed regulations have a sectoral impact. For instance, the *EU Strategy for Sustainable and Circular Textiles* aims to ensure that textile products placed on the EU market are long-lived and recyclable, to a great extent made of recycled fibres, free of hazardous substances, and produced respecting social rights and the environment.

We identified the broadly targeted sectors that would be impacted by the proposed regulations and estimated the export value of these sectors in the current scenario. Though we have considered the entire identified product category for the analysis, in reality, a fraction of this product category may be at risk because of the proposed regulations.

The product categories that are at risk include textiles, chemicals, selected consumer electronics products, plastics and vehicles. These items account for 32 per cent of the total value of India's exports to the EU in 2022 and are valued at approximately USD 27 billion. This figure can be lower if only specific product items in the entire product category are eventually affected by the regulation. If we add the CBAM-affected sectors to this list, whose exports amount to approximately USD 9.5 billion, then the exports of affected sectors amount to USD 37 billion, which is approximately 43 per cent of India's exports to the EU (Table 4).

4. This is a non-exhaustive list. There could be more sustainability-driven EU regulations that might eventually pose a risk to Indian exports.

**Table 3** The EU's environment regulations and potential impact on Indian exports

S. No.	Regulation	Status	Objective	Sector
1.	Ecodesign and Energy Labelling Working Plan 2022–2024	Working plan prepared in 2022	To lay out the priorities and plan for energy-related products (ErPs) to achieve energy-saving outcomes	ErPs
2.	End-of-life vehicles directive	Proposal to be presented by the EC in 2023	To make the dismantling, recycling, and reusing of these vehicles more environment friendly	Vehicle and batteries (likely restriction of lead use)
3.	Review of the Construction Products Regulation	Proposal submitted in March 2022	To enhance the circularity of construction products	Construction products
4.	EU Strategy for Sustainable and Circular Textiles	Strategy announced in March 2023	To promote durable and recyclable textiles made of recycled fibres, free of hazardous substances	Textiles
5.	Revision for persistent organic pollutants (POPs) in waste	Regulation adopted in November 2022, applicable from June 2023	To manage waste that contains POPs	Waste substances in textiles
6.	Microplastics pollution	Proposal for regulation shared in November 2021	To reduce the presence of unintentionally released microplastics <sup>5</sup> from tyres, textiles, and plastic pellets in the environment; the focus is on labelling, certification, and regulatory measures for the main sources of these plastics	Main sources of microplastic
7.	End-of-life waste criteria for plastic	First assessment completed in April 2022	To identify the priority list of waste streams	Plastic and textiles
8.	Rules to reduce the use of chemical pesticides as part of the Nature Restoration Law	Proposal made in June 2022	To reduce the use of chemical pesticides and ensure more sustainable food systems by 2030	Agriculture and pesticides
9.	Ecodesign for Sustainable Products Regulation (ESPR)	Proposed in March 2022	To encourage more environmentally sustainable and circular products	Textiles, construction products, and consumer electronics
10.	Proposal for a revision of EU legislation on packaging and packaging waste	Proposed in November 2022	To ensure that all packaging is reusable or recyclable in an economically feasible way by 2030	Self-packaging or packaged products; also likely to impact every packaged item that is exported to the EU
11.	Revision of the Regulation on Classification, Labelling, and Packaging of Chemicals (CLP)	Proposed in December 2022	To introduce new hazard classes for endocrine disruptors and other harmful chemical substances	Chemicals

5. Microplastics are small pieces of plastic, usually smaller than 5 mm.

S. No.	Regulation	Status	Objective	Sector
12.	Sustainable and circular batteries	Political agreement reached between the European Parliament and Council on the new rules on batteries in December 2022	To promote circularity of batteries	Batteries of all types, i.e., industrial, automotive, electric vehicle, and portable
13.	Regulation on new test methods for chemicals	Regulation passed in March 2023	To develop an EU chemicals strategy for sustainability	Chemicals
14.	Green Claims Initiative	Proposed in March 2023	To check greenwashing	All
15.	Amending consumer rights directives	Proposed in March 2023	To check greenwashing	All
16.	Unfair Commercial Practices Directive (UCPD) amendment	Guidance issued in 2021	To check greenwashing	All
17.	Proposal on common rules promoting the repair of goods	Proposed in March 2023	To check greenwashing	All
18.	Corporate sustainability due diligence	Proposal made in February 2022	To check greenwashing	All
19.	Carbon Border Adjustment Mechanism (CBAM)	Entry into force from October 2023	To check carbon leakage	Iron and steel, cement, aluminium, fertilisers, electricity, and hydrogen
20.	REPowerEU	Plan proposed in May 2022	To phase out fossil fuels	Green hydrogen

Source: Authors' analysis based on official documents issued by European Commission (2021-2023)

Note: Cells with a darker shade of green indicate that the EU policy or regulation mentions the applicability of the regulation to non-EU countries, and cells with a lighter shade of green indicate otherwise.



**Table 4** The export value of product categories at risk due to EU environment regulations

Product HS code	Product description	Export value (USD billion) in 2022
2523	Portland cement, aluminous cement ('cement fondu'), slag cement, super sulphate cement, and similar hydraulic cement, whether or not coloured or in the form of clinkers	0
28-38_Chemicals	Chemicals	11.9
39	Plastics and articles thereof	1.7
4819	Cartons, boxes, cases, bags, and other packing containers of paper, paperboard, cellulose wadding, or webs of cellulose fibres; box files, letter trays, and similar articles of paper or paperboard of the kind used in offices, shops or the like	0.05
50-63_TextCloth	Textiles and clothing	9.6
68	Articles of stone, plaster, and cement	0.4
69	Ceramic products	0.3
8422	Dishwashing machines	0.03
8450	Household or laundry-type washing	0.003
8504	Electrical transformers, static converters (for example, rectifiers), and inductors, and parts thereof	0.7
8507	Electric accumulators	0.1
8516	Electric instantaneous or storage water heaters and immersion heaters; electric space-heating apparatuses and soil-heating apparatuses; electro-thermic hairdressing apparatuses; electric smoothing irons; other electro-thermic appliances of the kind used for domestic purposes; and electric heating resistors and parts thereof	0.05
87	Vehicles other than railway or tramway rolling stock, and parts and accessories thereof	2.3
	<b>Total</b>	<b>27</b>
	<b>CBAM impacted sectors</b>	
72	Iron and steel	4.4
73	Articles of iron or steel	2.5
76	Aluminium and articles thereof	2.6
9028	Gas, liquid or electricity supply or production meters, including calibrating meters	0.03
31	Fertilisers	0.0002
	<b>Total</b>	<b>9.5</b>

Source: Authors' analysis based on World Integrated Trade Solution (WITS), World Bank

This is an indicative exercise to highlight the cost in terms of export value that India faces due to the widespread adoption of regulations that form NTBs to trade. If we extend this analysis to other developed countries, such as the US and Japan, it is likely that the cost impact will be much higher. For instance, the IRA includes USD 369 billion in funding for pushing clean

energy production and investment in the US. While it is not likely to impact the high exporting sectors of India, it poses a risk of capital flight from India, given the domestic investment incentives provided by the US. This necessitates an early policy response to address the possible adverse impacts of these barriers on India's exports.



## 6. Overcoming the challenge from non-tariff measures

The case studies and risk analysis of various regulations discussed in previous sections indicate the adverse impact of developed countries' NTMs on Indian exports. With the increased issuance of E-NTMs by developed countries, India faces a serious challenge with respect to its key export items. While India has taken some significant initiatives in this regard, it needs to develop a comprehensive approach to deal with these measures such that its exports are not impacted. There are multiple ways in which we can ensure this readiness.

### 6.1 Increase the utilisation of the World Trade Organization dispute settlement mechanism

At the multilateral level, NTMs can be addressed through the WTO's dispute settlement mechanism. For instance, India can raise disputes on recent EU regulations, such as the ban on the use of specific active substances to manage MRLs with an environmental objective, CBAM, and deforestation regulation. India also needs to act quickly in using the WTO route to raise concerns when these measures are notified to the WTO. While India's participation in the WTO has increased in recent times, future strategies should be formulated to use the WTO mechanism for raising concerns and seeking solutions in advance of NTMs being notified to the WTO. For this, it is important that India continuously track new measures and prepare its responses and concerns. Specific trade concerns (STCs) can be raised for the TBT draft measures notified to the WTO for comments from other members, where the concerned member can inform the TBT committee as well as the notifying member about its concerns. Concerned members may also raise STCs regarding unnotified measures. Finally, STCs can also be raised for measures that are already in force, specifically where a technical regulation or a conformity assessment procedure was enacted immediately as a matter of urgency (Holzer 2018). These concerns are then discussed in the TBT committee meetings. There is also an option to take this up in informal bilateral discussions before the TBT

committee meeting. Overall, STCs are an effective way for WTO members to share their concerns, develop an understanding of the regulations, and exchange details relating to the compliance mechanism.

However, India has not been very active in using the STC route to raise concerns, but it does support other countries that use STCs. To date, India has raised 36 STCs, which is quite low compared to 321 and 325 STCs raised by the EU and the US, respectively. In addition to STCs, India can consider submitting working papers to different WTO bodies, highlighting its market access concerns. It may also be useful to explore better utilisation of the established national TBT inquiry points in different countries to raise concerns regarding TBT measures and obtain information regarding their operation.

### 6.2 Leverage free trade agreements to adapt to non-tariff measures efficiently

India must include these issues in bilateral FTA negotiations with regions and countries such as the EU and the UK. In this context, it is important to develop mutual recognition of the assessment activities of compliance in respective countries. Some of the EU trade agreements provide examples of how this can be achieved. The *EU-Vietnam Free Trade Agreement* contains provisions for eliminating and preventing NTBs to bilateral trade and promoting the compatibility and convergence of regulations based on international standards for motor vehicles and their parts and components. The *Comprehensive Economic and Trade Agreement (CETA)* is a trade agreement between the EU and Canada, provisionally entered into force in 2017. According to the official document of the agreement, both parties agreed to accept each other's conformity assessment<sup>6</sup> certificates in areas such as electrical goods, electronic and radio equipment, toys, machinery, and measuring equipment. This suggests that a conformity assessment body in the EU

**India-UAE CEPA demonstrates the way in which FTAs can be used to facilitate export compliance with country specific regulations.**

6. A conformity assessment refers to any activity that determines whether a product, system, service, and sometimes people, fulfil the requirements and characteristics described in a standard or specification.

can test EU products for export to Canada according to Canadian rules and vice versa, taking away the burden from exporters of getting the product tested in both countries. The agreement also proposes to set up a voluntary Regulatory Cooperation Forum to enable regulators to exchange experiences and information and help identify areas where regulators could work together. This knowledge exchange is likely to enhance information flows and understanding of various aspects of compliance with a particular regulation.

Some India-specific bilateral agreements also provide examples of how to deal with NTM-related issues using the bilateral route. While the *India-Singapore FTA* covers some basic elements in this regard, the *Comprehensive Economic Partnership Agreement (CEPA)* between India and the UAE, which was signed on 18 February 2022, includes a comprehensive commitment towards fast-tracking product registrations for exporting Indian pharmaceutical products to the UAE that have received similar approvals from regulatory authorities in Australia, the EU, Japan, the UK, or the US. This is a clear example of how bilateral trade agreements can be used to facilitate market access by offering NTM-related relaxations and incentives. Another example in this regard pertains to the services sector in the *India-Australia Economic Cooperation and Trade Agreement*, which was signed on 2 April 2022. It has provisions for mutual recognition of licensed and regulated professional services such as nursing, architecture, and other professional services. These examples pave the way for the possibility of resorting to bilateral trade agreements to extend support towards easing the NTMs across trading partners.

### 6.3 Share information expeditiously and develop working groups

India needs to prepare its industry for compliance with these strict regulations. The first step in this regard is to make export firms aware of the possibility of such regulations being notified to the WTO by India's trading partners. It should be followed by providing them with information regarding the compliance steps involved in each of these regulations. This calls for the development of a common information-sharing platform

where the firms register and track the information. The Government of India has already designated the Bureau of Indian Standards (BIS) as the TBT inquiry point for the Indian industry, and holds regular meetings with the industry with updates about new TBT and SPS notifications. A comprehensive approach that includes mechanisms to support affected exporters in dealing with expected NTMs should be adopted for better outcomes. This may also require specialised working groups with representation from various stakeholders, including exporters, line ministry representatives, accreditation and auditing agencies, and entities upstream of the exporter providing input materials to the exporters. Additionally, businesses can be made aware of how to utilise existing WTO resources and tools such as the WTO Documents Online; the TBT Information Management System; the TBT Notification Submission System; and ePing.<sup>7</sup>

### 6.4 Enhance domestic standards and regulatory mechanisms

India needs to ramp up its regulatory mechanisms to introduce its own standards and NTMs to use these to improve and sustain the quality of its manufactured items. Special efforts should be extended and resources provided to help medium and small enterprises (MSMEs) adopt these standards as well. This will not only improve product quality in terms of sustainability, but will also strengthen India's capacity to comply with the complex regulations of its trading partners. Kaplinsky and Morris (2017) discuss the impact of sustainability regulations and standards for low- and middle-income countries in Africa, Asia, and Latin America and recommend that policymakers correct for market failures that limit the ability of producers to meet standards and regulations. This includes filling information gaps, financing certification costs, and assisting producers in upgrading capabilities to meet standards. According to the authors, there is a need to assist the capacities of poor and marginalised producers. Along similar lines, a 2016 Agricultural and Processed Food Products Export Development Authority (APEDA) study examines the regulatory gaps in the Indian agriculture sector that pose a disadvantage to exporters. In the case of fruits and vegetables, it is important to procure the produce only from registered

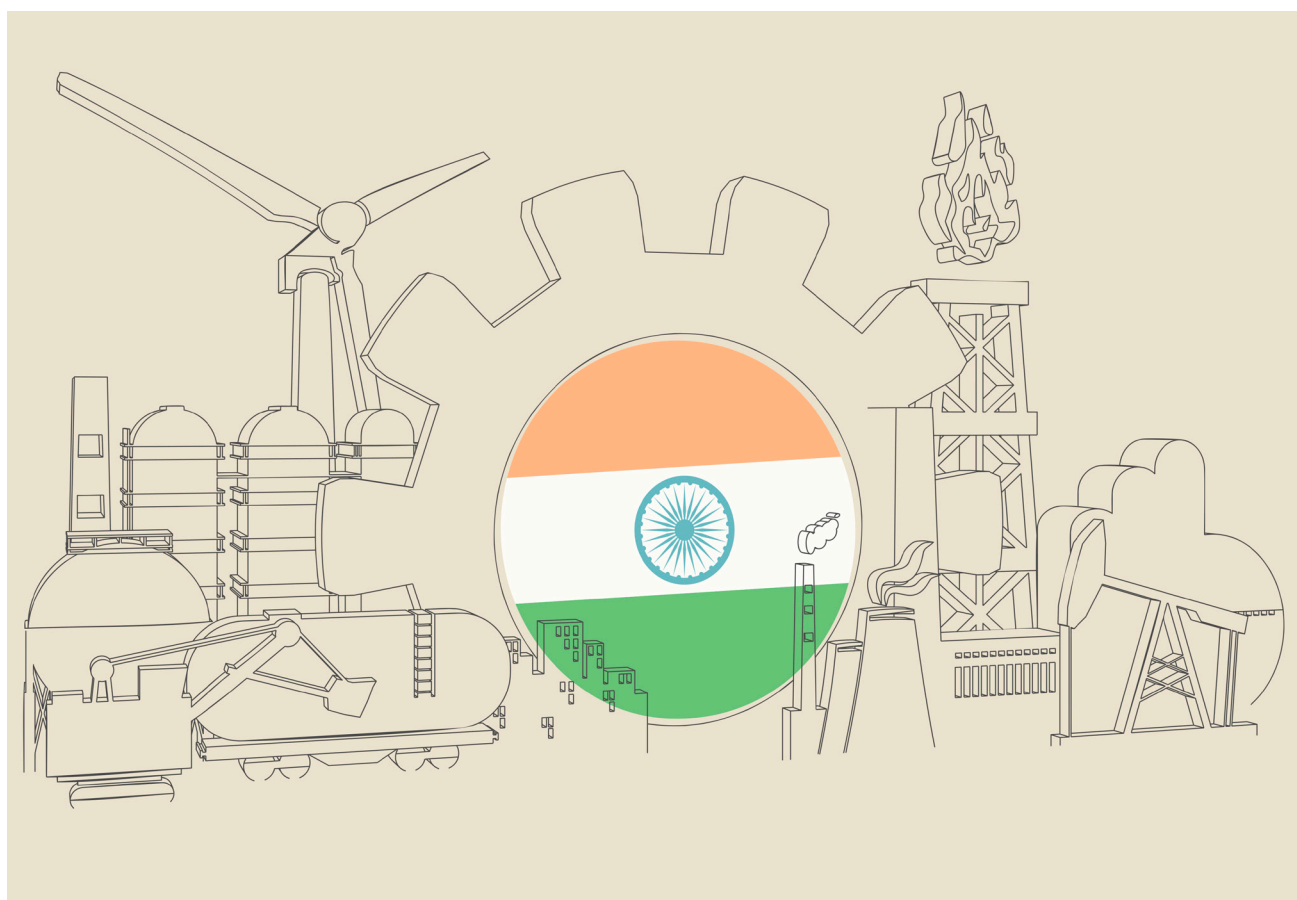
7. ePing is a platform, jointly managed by the World Trade Organization, International Trade Centre, and the United Nations, to facilitate tracking SPS and TBT measures.

farmers to comply with the norms of importing nations. In such instances, farmer registration is an important regulatory requirement and is likely to ensure greater market access.

The adoption of the *Indian National Strategy for Standardization* (INSS) in 2018 is a welcome regulatory initiative. It recognises the important elements for domestic quality control as well as foreign market access. The challenge now pertains to the effective implementation of the strategy. For efficient outcomes, standard-setting agencies in India should ensure that the standards and conformity assessment procedures align with global standards (such as the International Organization for Standardization and International Electrotechnical Commission) and procedures. If this does not happen, India's negotiating position may be compromised when it comes to mutual recognition. The *Toys (Quality Control) Order 2020* is another key step in this direction that has strengthened the quality control norms for the toys sector, thereby improving the quality

of domestically produced items, limiting the import of substandard toys, and enhancing the possibility of greater foreign market access. This can be replicated in other key sectors. A number of STCs that have been raised against the administrative hurdles caused by Indian quality control orders (QCOs) should also be addressed while rectifying existing standards and designing new ones.

The case studies and analysis undertaken in this paper indicate the NTM-related challenges that Indian exports have faced in the past and the risk that lies ahead for potential exports from India. With an increasing focus on sustainability, NTMs are likely to be a key factor in determining the global competitiveness of exports. In this regard, it is imperative that India makes policy decisions to support its own standard development for better sustainability outcomes. This will help us meet our net-zero goals and allow our exports to attain competitiveness in foreign markets.



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