



ECONOMIC
LAWS
PRACTICE
ADVOCATES & SOLICITORS



Primer: Emissions Trading Systems in India and Around the World

Contents

The Relationship between Trade and Climate Change	3
What is an Emissions Trading System?	5
The Fundamentals of an Emissions Trading System	7
Different types of Emissions Trading Systems exist?	9
State of Play - India	14
Global Overview of Emission Trading Systems	16
The Indian ETS – Current Plans	21
Building an Effective Emissions Trading System	25
Recommendations for Business – The 4 Cs	30



The Relationship between Trade and Climate Change

Trade has an inextricable relationship with climate change.

On the one hand, research shows that open economies emit more CO₂ per person¹ as trade contributes to climate change through activities such as mining, power generation, manufacturing, transport, marketing and consumption. On the other hand, climate change hinders trade as well. Rising and falling water levels affect the amount of cargo that can be transported, wildfires affect supply routes and availability of workforce, and flooding in a single region can bottleneck an entire global supply chain.²

There is a growing recognition among Governments of the link between trade and climate change. One such method governments employ to address this is by issuing carbon credits. Carbon credits aim to reduce emissions in the private and private sectors while balancing considerations of competitiveness and equity. One of the most common mechanisms to operationalize such carbon credits is an Emissions Trading System (**ETS**) whereby emissions are bought and sold on the open market, financially incentivizing corporations to go green.

Measures such as the ETS have also led to the inception of Carbon-Border Adjustment Mechanisms (**CBAMs**). While ETSs levy an internal carbon price, CBAMs allow countries to subject imports to a carbon price as well in order to offset the carbon price paid by the domestic industry. CBAMs are an example of how trade measures seek to address environmental and economic goals simultaneously.

India also seeks to implement an ETS in the coming years as the Energy Conservation (Amendment) Bill, 2022, was passed on 8 August 2022, laying down the legislative framework to enable the implementation of a "carbon credit trading scheme".

In this primer, we examine the current state of play when it comes to ETSs. We look at what ETSs are, the ways in which they've been implemented, and the best practices that can be identified in designing an ETS. We use this to look at India's ETS and understand how to implement an ETS that works and is resilient to global changes.

¹ Harun Onder, *What does trade have to do with climate change?*, (Sep. 12, 2012), available at <https://cepr.org/voxeu/columns/what-does-trade-have-do-climate-change>.

² Jacques Leslie, *How Climate Change Is Disrupting the Global Supply Chain*, (Mar. 10, 2022), available at <https://e360.yale.edu/features/how-climate-change-is-disrupting-the-global-supply-chain>.



What is an Emissions Trading System?

An Emissions Trading System is a mechanism whereby emissions are measured and traded.

The idea behind an ETS is to implement the adoption of greenhouse-gasses (GHG) emission reduction processes and technologies in a manner that does not stifle growth.

While ETSs may possess different characteristics, one common feature of all ETSs is the presence of a tradeable instrument, such as an allowance or a credit. As discussed further, this instrument represents GHG emissions, often expressed in terms of tonnes of carbon dioxide (tCO₂) or tonnes of carbon dioxide equivalent (tCO₂e), and is given a monetary value. Thus, this instrument allows for GHG emissions to be expressed in terms of real-world currency, thereby creating a “price” for GHG emissions and making GHG emissions a cost of doing business.³ **This idea of pricing GHG emissions is the backbone of an ETS.**

ETSs use this “price” to promote GHG emissions reductions by establishing a requirement to buy the tradeable instrument so created. This purchasing requirement, which may take the form of mandatory surrendering of allowances or purchasing of credits in a certain proportion, ensures that GHG emissions are seen by commercial entities as a “cost” for operations. Therefore, entities must include this cost of GHG emissions in their operational plans and by extension, consider GHG emissions themselves.

Thus, ETSs represent a market-based mechanism where GHG emissions are disincentivized by making businesses consider the financial consequences of their GHG emissions. Additionally, the presence of a trading mechanism does not place a universal & equal burden on all entities to reduce emissions; entities for whom it is easier and faster to reduce emissions can benefit from the additional revenue generated by trading, while entities in sectors with hard-to-abate emissions can buy said credits, effectively funding the former entities’ emissions reductions.

³ EMISSIONS TRADING IN PRACTICE: A HANDBOOK ON DESIGN AND IMPLEMENTATION (ICAP, 2d ed.), page 17, available at https://icapcarbonaction.com/system/files/document/ets-handbook-2020_finalweb.pdf.



The Fundamentals of an Emissions Trading System

ETSs are not a homogenous concept; some ETSs may utilize a “cap-and-trade” system, while some may use a “baseline-and-credit” system, and some may use both. This confusion is only fuelled by terms like “credits”, “allowances”, “offsets”, “MRV” etc. Thus, before we begin to understand how ETSs operate in practicality, we must first understand the fundamentals of an ETS.

What is an Allowance?

An “Emission Allowance” or “Allowance” is essentially the Government allowing you to emit a certain amount of GHG emissions. These allowances take the form of certificates meant to represent a quantifiable amount of emissions, such as emissions equivalent to 1 tonne of carbon dioxide in the amount of global warming that they cause (i.e. 1 tCO₂e). Thus, they can be considered as a “permit” to cause emissions equivalent to the value and number of allowances held by an entity.

Since these allowances are permits issued by the Government to certain entities, it is the Government which generates them and may generate any number of allowances it wishes. In systems that use allowances, these allowances are to be “surrendered” to the Government at the end of each compliance cycle, with the number of allowances having to be surrendered as equal to the amount of emissions released by the entity. Entities may also trade in these allowances, as explored in detail below.

What is a Credit?

Conversely to allowances, “credits” can be considered as “rewards” generated by efficient entities, which can be sold for money to inefficient entities. Credits are generated with regards to a “baseline”, wherein entities that operate under their baseline receive credits, while entities operating in excess of their baseline have to purchase credits. This cycle is elaborated in further sections.

Some systems may also allow “offsets”. Offsets can be considered as a version of credits which are the results of actual GHG removal from the environment. Thus, while credits may simply represent an amount of GHG emissions not emitted into the environment, offsets instead represent existing GHG emissions taken out of the environment.

What does MRV mean?

“**MRV**” is a common term used in most ETSs and stands for “Monitoring, Reporting and Verification”. This involves activities undertaken by entities relating to monitoring emissions released (or not released), reporting of this emissions data to the enforcing authority, and verifying said data by the enforcing authority. MRV represents the three activities which are the backbone of ensuring that entities comply with an ETS, and thus, a robust MRV mechanism is a crucial aspect of implementing an ETS.



Different types of Emissions Trading Systems exist?

ETSs may possess multiple different characteristics, but these characteristics can be grouped into two broad mechanisms: “cap-and-trade” mechanisms, and “baseline-and-credit” mechanisms.

Cap-and-Trade Systems

A cap-and-trade system is an ETS where a cap is set on the amount of GHG emissions the covered entities can generate, and an equivalent number of allowances are issued and distributed. At the end of a specific period, entities must surrender to the Government an amount of allowances equal to the amount of GHG emissions generated by them in that period. Distributing these allowances to covered entities may be done through auctioning or being granted for free. Regardless of the mode of distribution, these allowances may be bought and sold between entities, thus creating a situation where entities are not only incentivized to reduce their GHG emissions to have to buy a lesser number of allowances but also reduce emissions and use extra allowances to generate additional revenue.

Baseline-and-Credit Systems

Conversely, a baseline-and-credit system does not impose a cap on the amount of GHG emissions. It simply establishes a “baseline” for covered entities, where entities emitting below their baseline are allotted credits, while entities emitting above their baseline are required to surrender credits equivalent to the amount of emissions above their baseline. While baseline-and-credit systems operate in a manner similar to cap-and-trade systems, the former only price GHG emissions above baselines. Thus, in a baseline-and-credit system, credits do not need to be surrendered for every GHG emission but only for those in excess of the baselines.⁴

Conceptually, the difference between cap-and-trade systems and baseline-and-credit systems can be illustrated as follows:

Aspect	Cap-and-Trade	Baseline-and-Credit
What are these systems?	In cap-and-trade, a limit is set on emissions for subjects. Entities shall operate within this limit and surrender allowances equal to their emissions.	In baseline-and-credit, a baseline is determined for subjects. Entities falling under this baseline receive credits to sell to entities above the baseline.

⁴ EMISSIONS TRADING IN PRACTICE: A HANDBOOK ON DESIGN AND IMPLEMENTATION (ICAP, 2d ed.), page 16, available at https://icapcarbonaction.com/system/files/document/ets-handbook-2020_finalweb.pdf.

What is their objective?	To make entities pay for all emissions.	To allow entities under baselines to generate revenue by selling credits to entities above baselines.
What does the trading unit mean?	The trading unit is usually an “allowance”; one allowance is the Government “allowing” you to emit one tonne of GHG gasses.	The units are usually “credits” where credits are basically rewards generated by efficient entities to be bought by inefficient entities. Some systems may also allow “offsets”, which are results of GHG removal as given below.
How are baselines calculated?	The number of allowances generated depends on the amount of reductions sought. For example, a country with GHG emissions in 2022 amounting to 1 million tonnes of CO ₂ , and wants to achieve a 30% reduction in 2023, would generate allowances equal to 700,000 tonnes of CO ₂ for 2023. Thus, finite allowances represent finite emissions, hence creating a “limit”.	Baselines are calculated by adopting a “Business-as-Usual” approach where current emissions are used to calculate future emissions if all entities under the system continue operating as they currently do. These expected future emissions become the baseline for entities. Baselines may be calculated on a project level, individual level or sector/industry level.
Who generates the trading units?	Allowances are generated by Government and are finite in number.	Baseline-and-credit systems may allow credit generation in different ways. Some may allow credits to be generated in proportion to the level of emissions lower than the baseline.

		Some systems may allow credits called “offsets” for activities like carbon sequestration, which actively remove CO ₂ from the air. Herein the baseline is the existing amount of GHG emissions in the atmosphere, and offsets can be given for these activities in proportion to the amount of existing GHG emissions taken out from the atmosphere.
How do entities receive these units?	<p>Allowances are, ideally, to be sold by the Government, and entities have to buy the amount of allowances equal to their emissions.</p> <p>However, since making every entity buy allowances for emissions would cause a number of issues, systems also “allot” some allowances for free. This is to prevent carbon leakage/not unfairly burden entities that cannot comply.</p>	Credits are generated by entities based on their performance in relation to the baseline. Once the Government verifies the entities’ emissions, credits are formally granted by the Government to entities.
How are prices determined?	Both systems are similar in this regard as prices may be determined via market mechanisms or regulatory processes. There is no single pricing mechanism unique to either system.	
For what do entities have to pay?	All emissions covered under the ETS.	Only for those emissions above the baseline.
Who are the Buyers?	The buyers are supposed to be all entities under the system. However, in practice, certain	<p>The buyers are those entities that exceed the baseline.</p> <p>Some buyers outside of the system may also buy credits for CSR/ESG purposes.</p>

	sectors may get free allowances as noted above.	Some systems may also require state entities to purchase these credits as an additional means to provide revenue to generating entities.
Who are the sellers?	The sellers are the Government and entities under the system who are comfortable with selling an amount of allowances not needed for compliance.	The sellers are the generating entities that gain revenue by selling credits.
Examples	The EU ETS (EU), the Regional Greenhouse Gas Initiative (USA), the K-ETS (South Korea).	The PAT scheme (India), the Kyoto Protocol's Clean Development Mechanism (International), Renewable Energy Target (Australia).



State of Play - India



Currently, India has not yet implemented a nationwide, market-based mechanism that aims to reduce GHG emissions. That is not to say that the concept of ETSs is foreign to the country; initiatives exist on a state-level, such as the Gujarat ETS.⁵ In addition to this, India employs the “Perform, Achieve and Trade” (**PAT**) Scheme.

PAT is a nationwide baseline-and-credit system that regulates energy consumption by regulated entities. It aims to promote energy efficiency and applies to specific producers notified by the Government to be Designated Consumers (**DCs**). Under the PAT, the Bureau sets a cap for energy consumption for each DC, wherein energy consumption below the cap by a DC entitles it to receive Energy Saving Certificates (**ESCerts**). This cap is relative to each DC, and energy consumption in excess of the cap requires DCs to buy ESCerts proportional to the additional energy consumed.⁶ The cap is output based and is expressed as the ratio of energy consumption to the ratio of output produced by DC.

Currently, the PAT involves a compliance cycle consisting of three years, but a new cycle of PAT is initiated every year. The MRV process under the PAT is as follows:

- A DC has to monitor both energy consumed by it, as well as output produced by it, for a compliance cycle. The unit for expressing energy used is “tonne of oil equivalent”.
- The DC then submits disaggregated data for energy consumed by it at the end of each 3 year period.
- After reporting, said data is initially verified by an Accredited Energy Auditor (**AEA**), which then submits a report to the Bureau of Energy Efficiency for each DC audited by it.
- The Bureau then verifies the report submitted by the AEA, and on its satisfaction, provides a recommendation to the Government for issuance of ESCerts to the concerned DC.

Lastly, under the PAT, the cap set for a DC in a cycle becomes its baseline for the next cycle. Entities may trade ESCerts on power exchanges such as the PXIL and the Indian Energy Exchange, where the price of ESCerts is determined purely by the market. The ESCerts market is regulated by the Central Electricity Regulatory Commission, and the Power System Operation Corporation Limited operates as the registry for the aforesaid markets.

⁵ *Emissions Trading Scheme (Pilot Project)*, (last visited Apr. 17, 2023), available at <https://gpcb.gujarat.gov.in/webcontroller/page/emissions-trading-scheme-pilot-project>.

⁶ Rules 11-13, Energy Conservation (Energy Consumption Norms and Standards for Designated Consumers, Form, Time within which, and Manner of Preparation and Implementation of Scheme, Procedure for Issue of Energy Savings Certificate and Value of Per Metric Ton of Oil Equivalent of Energy Consumed) Rules, 2012.

Global Overview of Emission Trading Systems



The aforementioned harmony between emissions reduction and ease of business is reflected in the rapid growth of ETSs around the globe. A tracker by the World Bank states that as of April 2022, 34 ETSs have been implemented, covering 39 national jurisdictions. This is a steep rise from just 6 implemented ETSs in 2012.⁷ In this section, key ETS systems are examined in an attempt to give an overview of the global state of play for ETSs.

The European Union's ETS

Being the first international ETS to be implemented in 2005, the EU ETS can be considered a prototype for the modern ETS. The ETS revolves around allowances where one allowance represents emissions (regardless of their nature) equivalent to one tonne of carbon dioxide (tCO₂e), and entities must surrender an amount of allowances equal to their GHG emissions in a year.⁸ Allowances can be traded freely between sectors and entities, despite their mode of distribution. The ETS covers activities in the manufacturing, construction, aviation, chemicals and mining sectors and is slated to also cover the shipping, road transport and building sectors in the coming years.⁹

Considering that the EU ETS is an international ETS covering the 27 Members of the EU along with Norway, Iceland and Liechtenstein (**Member States**), the ETS possess characteristics that are unique to it. Allowances for the entire ETS are generated on a commission level and are then allotted to individual member states based on the proportion of emissions made in the year 2005 or the average emissions of that State between years 2005-2007, whichever is higher.¹⁰ This total level of allowances under the system decreases annually, reducing by 4.3% from 2024 to 4.4% from 2028. Notably, the economic inequality within the EU necessitates that the EU ETS also possess special rules affecting the distribution of allowances between Member States, allowing poorer states to get a higher number of allowances to facilitate climate resilience.¹¹

However, the issue of the distribution of allowances remains a source of controversy. Allowances are meant to be auctioned to achieve the dual objectives of generating State revenue and maintaining a high price for allowances. Yet Member States are also allowed to distribute a certain number of allowances for free – this includes the manufacturing industry, district heating, the energy sector, and specific other industries at risk of carbon leakage.¹² This free allocation is done to ensure that the added compliance burden does not disproportionately hamper certain sectors and activities or to prevent entities from simply relocating outside of the EU to avoid their carbon costs. Yet despite these objectives, free

⁷ *Carbon Pricing Dashboard*, (last visited Apr. 5, 2023), available at <https://carbonpricingdashboard.worldbank.org>.

⁸ *EU Emissions Trading System (EU ETS)*, (last visited Apr. 5, 2023), available at https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en.

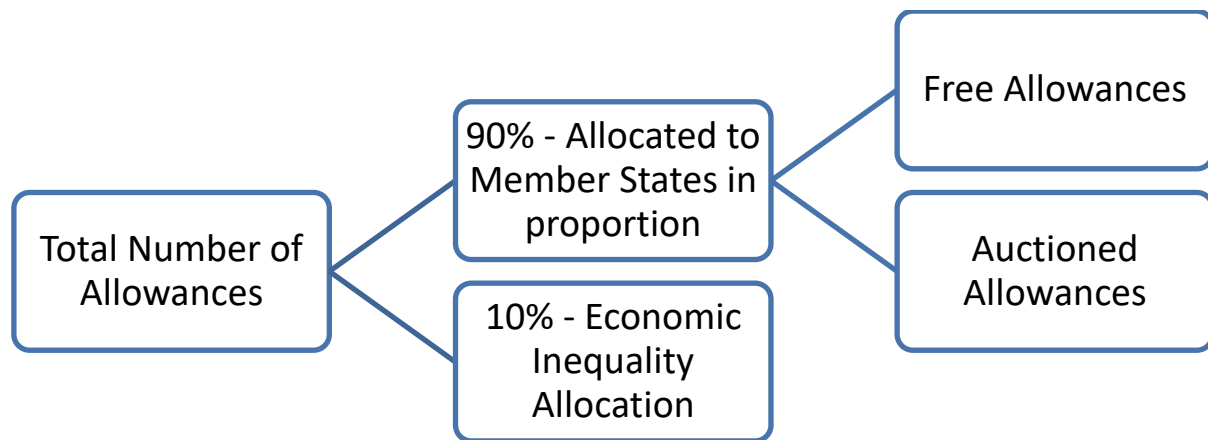
⁹ EU Proposal on Amendments to the EU ETS, (Jul. 14, 2023), available at https://commission.europa.eu/system/files/2021-07/revision-eu-ets_with-annex_en_0.pdf, pages 16 & 19.

¹⁰ Article 10(2), Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading (EU).

¹¹ Annex IIa, Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading (EU).

¹² Articles 10a-10c, Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading (EU).

allowances inherently reduce the demand for allowances in the open market, thereby reducing the carbon price sought set by the ETS. Where allowances are not priced substantially enough, entities don't have the incentive to reduce their emissions.



Thus, despite doing several things right, the EU ETS is also not immune from the whims of the free market. An over issuance of allowances in its early days resulted in the price of allowances falling to zero,¹³ and the ETS continued to be plagued by bouts of volatility in future years. This necessitated the creation of a Market Stability Reserve in 2019 as a means to protect the allowance market from volatility. This feature has since become a staple in ETSs around the world.

USA

The USA's federal structure makes implementing a nationwide ETS a challenging task, and as such, most ETSs operate on a state-level. This makes the Regional Greenhouse Gas Initiative (**RGGI**) worth examining as it is the only mandatory ETS in the USA, and presently covers eleven states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia.¹⁴

Keeping in mind the aforementioned federal structure, the RGGI is also enforced on a state level by individual legislation and procedures. However, some aspects remain constant throughout the RGGI, such as its coverage: The RGGI only covers carbon dioxide and sets a region-wide cap in which individual states can generate RGGI CO₂ allowances based on their share of the regional cap.¹⁵ It only covers entities in the power sector that are fossil-fuel based and have a production capacity of 25 megawatts or greater (except for New York, which has a threshold of 15 megawatts).¹⁶

¹³ *Development of EU ETS (2005-2020)*, (last visited Apr. 5, 2023), available at https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en.

¹⁴ *The Regional Greenhouse Gas Initiative*, (last visited Apr. 5, 2023), available at <https://www.rggi.org/program-overview-and-design/elements>.

¹⁵ *USA - Regional Greenhouse Gas Initiative (RGGI)*, (last visited Apr. 5, 2023), available at <https://icapcarbonaction.com/en/ets/usa-regional-greenhouse-gas-initiative-rggi>.

¹⁶ RGGI 101 Factsheet, (Jan. 2023), page 1, available at https://www.rggi.org/sites/default/files/Uploads/Fact%20Sheets/RGGI_101_Factsheet.pdf.

Like the EU ETS, an entity must acquire an amount of RGGI CO₂ allowances equal to its carbon dioxide emissions, and allowances are freely transferrable between entities and states. Most allowances generated by a state are distributed via free-market auctions every quarter, but a small percentage of allowances can be “set-aside” by states to distribute to entities outside of auctioning in consonance with state-specific programs.¹⁷ The regional cap is meant to decrease by 30% from 2020-2030 in order to ensure an objective fall in emissions, and the compliance period for the RGGI is three years.

Notably, the RGGI possesses two market stability mechanisms: the Cost Containment Reserve and the Emissions Containment Reserve. The Cost Containment Reserve began in 2014 as a means to combat undersupply of allowances and contains an additional number of allowances equal to 10% of the regional cap. This reserve triggers when allowances reach a certain price (USD 14.88 in 2023) and releases the contained allowances in the market in an attempt to bring down prices. The relevance of this mechanism is reflected in the fact that in both 2014 and 2015, all allowances stored in reserve were sold.

Conversely, the Emissions Containment Reserve combats the oversupply of allowances and removes allowances from the market, subject to a maximum of 10% of total allowances available. It triggers when the price of allowances falls below a certain threshold (USD 6.87) and allowances removed from the market cannot be re-offered for sale.¹⁸

Korea RP

The Korean ETS was Asia’s second-implemented national ETS (following Kazakhstan) and remained the second-largest cap-and-trade system in the world until the introduction of China’s ETS in 2017.¹⁹ It is one of the most comprehensive ETSs in the world, applying to the industry, power & energy, building, transportation and waste sectors while also covering a range of six different GHG emissions. In addition to direct emissions, indirect emissions from the consumption of electricity are also included. Companies emitting more than 125,000 tCO₂e per year, or single facilities emitting more than 25,000 tCO₂e per year, are mandatorily required to comply with the ETS.²⁰

Yet while the Korean ETS draws strength from its comprehensiveness, it is also weakened by its complex allowance system. Unlike other ETSs covered in this primer, the Korean ETS has three different tradeable instruments: Korea Allowance Units (**KAUs**), Korea Offset Credits (**KOCs**) and Korea Credit Unit (**KCUs**). KAUs represent 1tCO₂e and are the main allowances under the ETS, requiring to be surrendered for compliance. KOCs are offset credits that are converted from credits generated under the Kyoto Protocol, and KCUs are offset credits

¹⁷ *Allowance Distribution*, (last visited Apr. 5, 2023), available at <https://www.rggi.org/allowance-tracking/allowance-distribution>.

¹⁸ *USA - Regional Greenhouse Gas Initiative (RGGI)*, ICAP, pages 5-6, available at https://icapcarbonaction.com/system/files/ets_pdfs/icap-etsmap-factsheet-50.pdf.

¹⁹ *THE KOREA EMISSIONS TRADING SCHEME: CHALLENGES AND EMERGING OPPORTUNITIES* (ADB, 2018), page 7, available at <https://www.adb.org/sites/default/files/publication/469821/korea-emissions-trading-scheme.pdf>.

²⁰ *Korea - Emissions Trading Scheme*, (last visited Apr. 5, 2023), available at <https://icapcarbonaction.com/en/ets/korea-emissions-trading-scheme>.

converted from KOCs. To add to this complexity, KCUs can be used for ETS compliance while KOCs cannot, yet a KCU, once converted, cannot be reconverted into a KOC.²¹

In terms of distribution of allowances, KAUs under the Korean ETS are mainly distributed for free, and only a minimum of 10% of total allowances shall be auctioned. Additionally, “EITE” sectors, i.e., energy intensive and trade-exposed sectors, can receive up to 100% of their allowances for free.²²

Fig. 1 – Summary of Covered Emissions Trading Systems

Emissions Trading System	Country/Region Covered	Emissions Covered	Sectors Covered
EU	The European Union, Norway, Iceland, and Liechtenstein.	Carbon Dioxide, Nitrous Oxide, Perfluorocarbons.	Manufacturing, Construction, Aviation, Chemicals, Mining; Shipping, Road Transport, Building (proposed).
RGGI	Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont and Virginia.	Carbon Dioxide.	Power.
Korea RP	The Republic of South Korea	Carbon Dioxide, Methane, Nitrous Oxide, Perfluorocarbons, Hydrochlorofluorocarbons, Sulfur hexafluoride.	Industry, Power, Building, Transportation, Waste.

²¹ REPUBLIC OF KOREA: AN EMISSIONS TRADING CASE STUDY (EDF, 2016) page 4, available at https://www.edf.org/sites/default/files/korean_case_study.pdf.

²² *Id.*



The Indian ETS – Current Plans

As per reports, India plans to notify its ETS Mechanism by June, 2023.²³ The legislative framework has already been laid out in the Energy Conservation Act 2001, wherein s.14 has recently been amended to empower the Government to “specify the carbon credit trading scheme”.²⁴ The Ministry of Power recently released draft regulations for a “Carbon Credit Trading Scheme” for stakeholder consultation.²⁵

While the draft does not provide guidance on the contours of the proposed scheme, it does lay down the institutional groundwork for the same by creating an Indian Carbon Market Governing Board. Guidance can instead be sought from a recent policy paper on the “Indian Carbon Market” issued by the Bureau of Energy Efficiency (BEE).²⁶

As per the BEE, **India’s ETS will not be an entirely new system but will instead convert the already existing Perform Achieve & Trade (PAT) system into a cap-and-trade mechanism.** This is due to PAT already having been implemented with similar coverage as an ETS and established rules for estimating benchmarks, issuing certificates, trading, monitoring & verification, etc.²⁷ However, PAT is plagued by demand-supply issues stemming from a high supply and low demand of ESCerts.²⁸ Thus, the Indian ETS is aimed as a means to achieve India’s climate ambitions while relying upon the existing reporting & monitoring competencies established by PAT.²⁹

In converting the PAT to an ETS, the BEE has proposed a two-phase process:

- Phase 1 – Introducing carbon credits, increasing demand and coverage (2023-2025)
- Phase 2 – Implementing the cap-and-trade system (2026 onwards).

Phase I

Phase 1 is a pseudo-transitional phase to facilitate stakeholder buy-in and build capacity for the ETS. Herein, the scope of PAT will be expanded from just DCs to also include voluntary buyers, Electricity Distribution Companies, State Development Authorities & the Aviation sector. However, a significant change sought to be implemented at this stage is the creation of Carbon Credit Certificates (CCCs). CCCs will be the tradeable instrument under the Indian

²³ Jacob Koshy, *Centre in final stages of notifying emissions trading scheme*, (Feb. 20, 2023), available at <https://www.thehindu.com/news/national/centre-in-final-stages-of-notifying-emissions-trading-scheme/article66532660.ece>.

²⁴ Energy Conservation (Amendment) Act, 2022.

²⁵ *Govt seeks comments on draft carbon credit trading scheme*, (Mar. 27, 2023), available at <https://www.livemint.com/industry/energy/govt-seeks-comments-on-draft-carbon-credit-trading-scheme-11679924801142.html>.

²⁶ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), available at https://cer.iitk.ac.in/odf/assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.

²⁷ NATIONAL CARBON MARKET: DRAFT BLUEPRINT FOR STAKEHOLDER CONSULTATION (BEE, 2022), page 16, available at <https://beeindia.gov.in/sites/default/files/publications/files/NCM%20Final.pdf>.

²⁸ NATIONAL CARBON MARKET: DRAFT BLUEPRINT FOR STAKEHOLDER CONSULTATION (BEE, 2022), pages 10-11, available at <https://beeindia.gov.in/sites/default/files/publications/files/NCM%20Final.pdf>.

²⁹ NATIONAL CARBON MARKET: DRAFT BLUEPRINT FOR STAKEHOLDER CONSULTATION (BEE, 2022), pages 10-12, available at <https://beeindia.gov.in/sites/default/files/publications/files/NCM%20Final.pdf>.

ETS and would facilitate shifting to an emissions-based compliance system from PAT's energy-based system. The BEE also aims to allow existing ESCerts to be converted to CCCs to resolve the existing oversupply of ESCerts.³⁰

As per the policy paper, CCCs will be further categorized into three types:

- C-CCCs, which are ESCerts converted into CCCs.
- M-CCCs, which are generated under the mandatory ETS.
- O-CCCs, which are CCCs generated by entities not mandatorily required to comply with the ETS, but are generated as offsets to sell to other voluntary buyers or to sell a portion to entities under the M-CCCs.³¹

The idea behind these different categories seems to be an attempt to secure further climate financing from existing instruments. C-CCCs will not be able to be used by entities to comply with the ETS,³² and this may reflect the Government's intention to liquidate the existing oversupply of ESCerts without crashing the price of compliance within the ETS. Similarly, O-CCCs are offset credits generated from projects. While an entity may use a small amount of O-CCCs to comply with the ETS, these certificates are more likely to be sold in international carbon markets (such as the Kyoto Protocol Clean Development Mechanism³³) to bring climate-based revenue.

Phase II

Phase II initiates the actual cap-and-trade system under the ETS. The ETS will have an output-based cap which is expressed individually for each entity (such as in "tCO₂/MWh" or "tCO₂/aluminium"). The cap will be established on a sectoral level based on the contribution of the sector to the country's overall emissions, set against the reduction sought in line with India's Nationally Determined Contributions ("NDCs") under the Paris Agreement.³⁴

The ETS is slated to cover the following sectors:

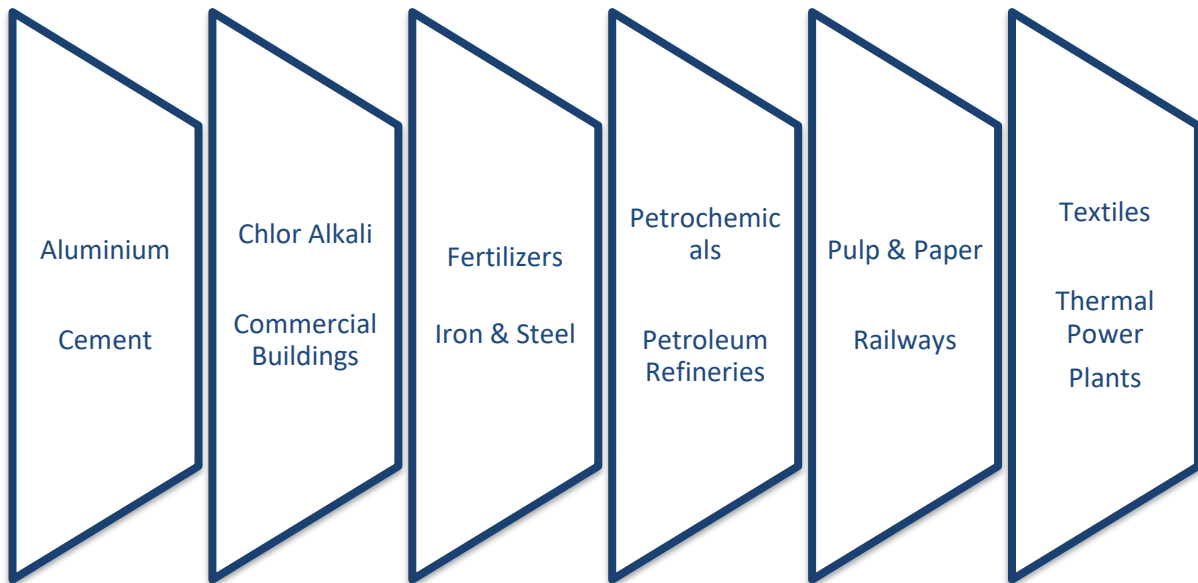
³⁰ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), pages 27-28, available at https://cer.iitk.ac.in/odf_assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.

³¹ *Id.*

³² *Id.*

³³ Before the advent of ETSs, the Kyoto Protocol's Clean Development Mechanism ("CDM") attempted to promote emissions reduction via trade. The Kyoto Protocol required developed countries to reduce or limit emissions, and the CDM allowed said countries to finance projects in developing countries that reduced emissions. This allowed developing countries to get climate financing to implement green technologies, while allowing developed countries to meet their obligations through such financing. See *What is the CDM*, (last visited Apr. 5, 2023), available at <https://cdm.unfccc.int/about/index.html>.

³⁴ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), pages 30-31, available at https://cer.iitk.ac.in/odf_assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.



The Indian ETS would also have a one-year compliance period instead of the existing three-year compliance period under PAT, and emissions would be calculated based on fuel consumption. Thus, the PAT excludes process-based emissions.³⁵ Emissions data would also have to be verified by an Accredited Energy Auditor (**AEA**), and based on emissions data, entities would be allowed purchase or sell CCCs.³⁶

³⁵ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), page 33, available at https://cer.iitk.ac.in/odf_assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.

³⁶ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), pages 41-42, available at https://cer.iitk.ac.in/odf_assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.

Building an Effective Emissions Trading System



Naturally, the growing global focus on environmental protection brings its own global challenges. One of these challenges is the growing discussion on environmental measures' impact on the free trade regime espoused by the World Trade Organization (**WTO**) framework. The nascent stage of the Indian ETS presents an apposite opportunity to understand the challenges it could face on a global level, as well as the support it may provide for India's trade ambitions.

The Externalisation of Carbon Pricing

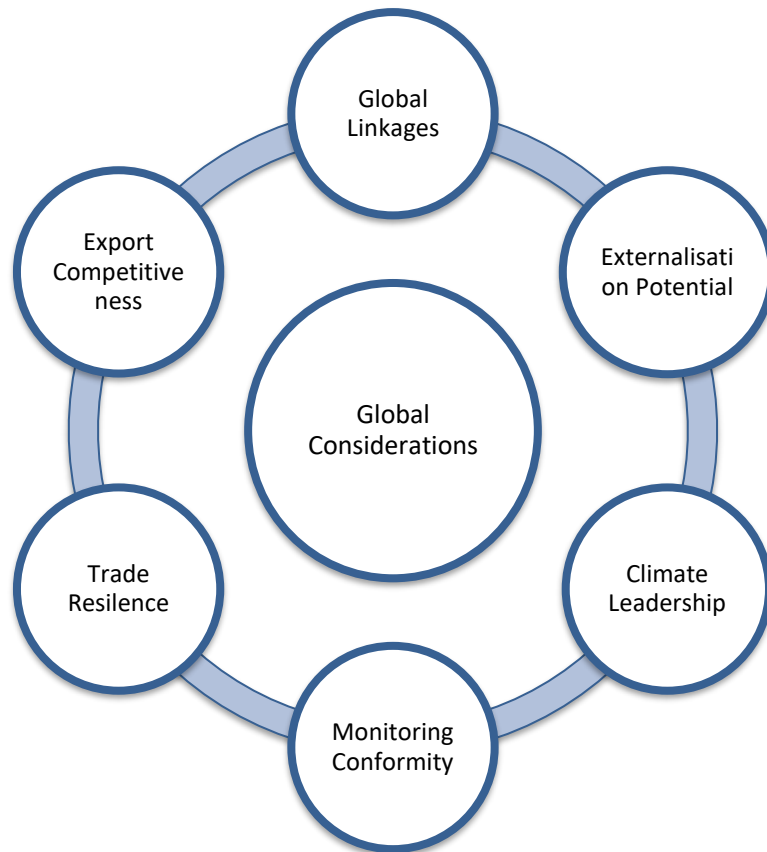
The EU recently announced its plans to implement a Carbon-Border Adjustment Mechanism (**CBAM**).³⁷ Under this CBAM, the EU plans to impose a "carbon tax" on imports from countries the EU does not deem to possess climate mitigation measures equivalent to the ones implemented by the EU. The amount of this carbon tax would be equivalent to the carbon price existing under the EU ETS. ETSs are inherently domestic-looking measures, but through a CBAM, a State may enforce its domestic carbon prices onto other countries, ensuring that it is not the only country that pays a carbon price.

Discussions on CBAMs and Border-Carbon Adjustments (**BCAs**) have picked up steam in recent years with ongoing deliberations in Canada, the United Kingdom, and the US, and it is expected that more countries will follow suit.³⁸ Notably, the EU CBAM allows countries with climate protection measures equivalent to the EU's ETS to be exempt (fully or partly) from the operation of the CBAM. It is possible that other such BCAs may also incorporate some exemptions for carbon prices already paid in the home country of the exported goods.

Thus, countries seeking to tax imports based on their domestic carbon trading mechanisms present challenges for Indian exporters, who will necessarily have to comply with these measures to maintain their export competitiveness. In this section, we examine potential issues an Indian ETS must address in order to future-proof itself against the growing wave of CBAMs and BCAs.

³⁷ Shuting Pomerlau, *What's in the latest EU carbon border adjustment provisional agreement?*, (Jan. 9, 2023), available at <https://www.niskanencenter.org/whats-in-the-latest-eu-carbon-border-adjustment-provisional-agreement/>.

³⁸ Martin Dietrich Brauch, Jack Arnold, Elena Klonsky, and Fanny Everard, *Event Highlights: Carbon Border Adjustments in the EU, the U.S., and Beyond*, (Nov. 19, 2021), available at <https://ccsi.columbia.edu/content/event-highlights-carbon-border-adjustments-eu-us-and-beyond>.



Trade Resilience

The Indian ETS must provide resilience to Indian trade in a global landscape where environmental protection can be used as a protectionist measure. This involves adopting language in harmony with global ETS regulations, matching scope in terms of sectoral coverage as well as emissions coverage, and adopting best practices in terms of monitoring and enforcement to ensure that the Indian ETS is primed to be considered as a corresponding measure for any CBAM or BCA.

Monitoring Conformity

A key challenge for the Indian ETS is also ensuring conformity in monitoring, reporting and verification standards with global ETSs. This is because the effectiveness of an ETS hinges on the credibility of the data within it, placing an extremely high importance on monitoring, reporting and verification mechanisms.

In this regard, the Indian ETS would do well to mirror global monitoring procedures as closely as possible, such as the GHG Protocol,³⁹ which is currently the de-facto global carbon

³⁹ The GHG Protocol is a global accounting framework which lays down standardized frameworks for corporate and public agencies to measure GHG emissions in their value chains. The GHG protocol gives guidance on measuring emissions, collecting activity data, identifying other emission sources, quality control practices, etc. See *Standards*, (last visited Apr. 5, 2023), available at <https://ghgprotocol.org/standards>.

accounting standard.⁴⁰ Conformity with global standards for monitoring and reporting emissions can preclude negative impacts of future measures like CBAMs by not only adopting processes that are not subjective to a country's geographic, demographic and economic conditions but may also provide assistance to India when challenging disproportionate and protectionist measures.

Global Linkages

The BEE has expressed its intention to link the Indian Carbon Market with other global markets,⁴¹ and the idea of C-CCCs and O-CCCs can facilitate revenue from foreign sources through the sale of said instruments. Trading credits within other markets can bring in additional revenue for the Indian Government, and since the implementation of greener technologies and energies requires substantial additional funding, the revenue brought in from global credit trading can act as the climate financing justifiably called for by India.⁴²

Additionally, global linkages also allow an opportunity for India to legitimize its ETS in the global scenario, which can, in turn, aid the contextualization of the Indian ETS as a corresponding and equivalent measure if the linking country implements a CBAM or a BCA.

Export Competitiveness

An ETS prices GHG emissions, which are a part of almost every supply chain on the planet. This can naturally raise prices as and when these costs are reflected onto the final products and services, which can negatively affect export competitiveness in foreign markets compared to other exporters without such a carbon price. These effects can also be compounded throughout India's supply chain due to the effects of a carbon price on energy prices.

Thus, the implementation of the Indian ETS will necessarily have to be balanced against the potential losses in export competitiveness, either by way of free allowances or some other form of differential treatment for trade-exposed sectors. Notably, a number of ETSs around the globe implement some form of differential treatment to ensure that the ETS does not lead to disproportionate trade losses.

India's Own Externalisation Potential

⁴⁰ Robert S. Kaplan and Karthik Ramanna, *We Need Better Carbon Accounting. Here's How to Get There*, (Apr. 12, 2022), available at <https://hbr.org/2022/04/we-need-better-carbon-accounting-heres-how-to-get-there>.

⁴¹ POLICY PAPER ON INDIAN CARBON MARKET, (BEE, 2022), pages 28-29, available at https://cer.iitk.ac.in/odf/assets/upload_files/blog/Draft_Carbon_Market_Policy_DocumentFor_Stakeholder_Consultation.pdf.

⁴² *India calls for enhanced climate ambition beyond \$100 bln per year pledge*, (Nov. 4, 2022), available at [https://www.reuters.com/business/environment/india-says-more-clarity-needed-climate-finance-definition-2022-11-04/#:~:text=India%20calls%20for%20enhanced%20climate%20ambition%20beyond%20%24100%20bln%20per%20year%20pledge,-Reuters&text=NEW%20DELHI%2C%20Nov%204%20\(Reuters,future%20years%20at%20next%20week's](https://www.reuters.com/business/environment/india-says-more-clarity-needed-climate-finance-definition-2022-11-04/#:~:text=India%20calls%20for%20enhanced%20climate%20ambition%20beyond%20%24100%20bln%20per%20year%20pledge,-Reuters&text=NEW%20DELHI%2C%20Nov%204%20(Reuters,future%20years%20at%20next%20week's).

Moving forward, a globally oriented and trade-resilient ETS can allow India also to implement a CBAM or BCA of its own. This can ensure that domestic industries do not lose competitiveness within the Indian market due to paying a carbon price compared to exporting countries that do not pay such a price. In this regard, conformity with global best practices and scope can ensure that compliance with the CBAM or BCA is not unreasonable or arbitrary, and thus, can provide legitimacy to the future CBAM or BCA sought to be implemented.

Climate Leadership

India has made clear its ambitions to be considered a leading voice in the global climate change discussion, and a globally oriented ETS would provide substantial weight to India's advocacy. This can also allow India to potentially shape future global climate change policy and acquire a higher status in the global pecking order. Reliance can be drawn on the experience of the EU with its ETS, wherein even though the EU was by far not the first entity to implement an ETS, yet by the comprehensive nature of the ETS coupled with consistent climate advocacy, the EU is now considered as a "poster child" for climate mitigation.⁴³

Leveraging Trade Agreements

Lastly, as India seeks to enter into more Free Trade Agreements (**FTAs**), a robust ETS system can bolster India's position during trade negotiations. A robust and objective ETS can be leveraged when negotiating chapters on trade and environment to obtain favourable treatment for Indian producers that are required to comply with the ETS. These benefits can be realized in terms of harmonization of standards, mutual recognition for processes & products, potential exemptions or more favourable timelines for implementation for vulnerable sectors such as MSMEs etc.

⁴³ *EU, The Poster Child?*, (last visited Apr. 5, 2023), available at https://ebrary.net/259354/philosophy/poster_child.



Recommendations for Business – The 4 Cs

Regardless of its modalities or functioning, the coming of the Indian ETS is inevitable. This fast-changing climate regulatory landscape, both domestically and globally, can create challenges for businesses' future plans. Thus, Indian businesses need to consider such developments and take steps to not only prepare themselves for the Indian ETS, but also to future-proof themselves against foreign climate measures.

Identify Your Risk of Coverage

Before implementing substantial changes involving time, resources and manpower, businesses must first identify the actual risk they face of being covered in the Indian ETS. Businesses can refer to the abovementioned proposed sectoral coverage of the Indian ETS to gain a preliminary idea of their coverage under the ETS. An inward risk analysis can supplement this by taking stock of the carbon profile of the business in terms of its fuel consumption, final products/services, and supply chain emissions. By developing awareness regarding these factors, businesses can reasonably identify their chances of being affected by ETSs worldwide and, thus, prepare accordingly.

Converse with Industry

In addition to identifying risk, conversations within their industries would further equip businesses. In terms of the Indian ETS, businesses can reach out to existing Designated Consumers under PAT and understand the logistical, financial and organizational challenges that compliance with the Indian ETS might bring. Additionally, the Government is proactively holding stakeholder consultations during this stage of development of the Indian ETS, and participation in these consultations can help businesses understand the direction future regulations may take and can also allow businesses to raise unaddressed concerns.

Consider an ESG Framework

An Environmental, Social, and Governance (**ESG**) Framework is a growing business proposition where businesses proactively address their operations' environmental, social and governance aspects. This usually entails adding environmental, social and governance metrics to their internal statutory reporting obligations, thereby clarifying its current ESG metrics and future ESG plans. Adopting a voluntary ESG framework would assist in building capacity for businesses in the event they are subjected to an ETS, while also allowing for room to learn, which might not be present under actual ETS compliance. Additionally, ESG reporting is increasingly being implemented in jurisdictions around the world,⁴⁴ including India,⁴⁵ and

⁴⁴ *SEC Proposes to Enhance Disclosures by Certain Investment Advisers and Investment Companies About ESG Investment Practices*, (May 25, 2022), available at <https://www.sec.gov/news/press-release/2022-92>.

⁴⁵ Shailesh Tyagi & Chaitanya Kalia, *How ESG reporting landscape is evolving in India*, (Aug. 26, 2021), available at https://www.ey.com/en_in/climate-change-sustainability-services/how-esg-reporting-landscape-is-evolving-in-india.

thus, early adoption of an ESG framework can also future-proof businesses against regulatory changes.

Collect Data and Monitor Developments

As mentioned earlier, countries are increasingly adopting climate change mitigation measures, which can only be expected to continue. Thus, by implementing internal monitoring frameworks in terms of direct GHG emissions, fuel consumption, waste generation, supply chain emissions and internal mitigating opportunities, as well as tracking global developments, businesses can get in front of the growing environmental corporate regulatory landscape. This can also reduce shocks from sudden regulatory changes and unforeseen challenges arising from the same.

We hope you have enjoyed reading this primer. For further information please write to us at insights@elp-in.com or connect with our authors:

Sanjay Notani, Partner – Email – SanjayNotani@elp-in.com

Parthasarathi Jha, Partner – Email – ParthJha@elp-in.com

Naghm Ghei, Principal Associate – Email – NaghmGhei@elp-in.com



**ECONOMIC
LAWS
PRACTICE**
ADVOCATES & SOLICITORS

MUMBAI

9th Floor, Mafatlal Centre
Vidhan Bhavan Marg Nariman Point
Mumbai 400 021
T: +91 22 6636 7000

NEW DELHI

801 A, 8th Floor, Konnectus Tower, Bhavbhuti Marg
Opp. Ajmeri Gate Railway Station, Nr. Minto Bridge
New Delhi 110 001
T: +91 11 4152 8400

AHMEDABAD

C-507/508, 5th Floor, Titanium Square
Thaltej Cross Roads, SG Highway,
Ahmedabad – 380054
T: +91 79460 04854

PUNE

202, 2nd Floor, Vascon Eco Tower
Baner Pashan Road
Pune 411 045
T: +91 20 4912 7400

BENGALURU

6th Floor, Rockline Centre
54, Richmond Road
Bengaluru 560 025
T: +91 80 4168 5530/1

CHENNAI

No 18, BBC Homes, Flat-7 Block A
South Boag Road
Chennai 600 017
T: +91 44 4210 4863

GIFT CITY

Unit No. 605, Signature, 6th Floor
Block 13B, Zone - I
GIFT SEZ, Gandhinagar 382355
E: elplaw@elp-in.com



elplaw.in



insights@elp-in.com



[/elplaw.in](https://www.facebook.com/elplaw.in)



[/ELPIndia](https://twitter.com/ELPIndia)



[/company/economic-law-practice](https://www.linkedin.com/company/economic-law-practice)



elppodcast.buzzsprout.com

DISCLAIMER:

The information contained in this document is intended for informational purposes only and does not constitute legal opinion or advice. This document is not intended to address the circumstances of any particular individual or corporate body. Readers should not act on the information provided herein without appropriate professional advice after a thorough examination of the facts and circumstances of a particular situation. There can be no assurance that the judicial/quasi judicial authorities may not take a position contrary to the views mentioned herein.

© Economic Laws Practice 2023