Briefing Note April 2025

TESS Forum on Trade, Environment, & the SDGs

Climate Mitigation Measures and Some Policy Interoperability Approaches

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TESS Forum on Trade, Environment, & the SDGs

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Acknowledgements

The author wishes to thank Mei Wang, Christophe Bellmann and Fabrice Lehmann of TESS, and Aaron Cosbey.

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Recommended citation: Vaughan, S. (2025). *Climate mitigation measures and some policy interoperability approaches*. Forum on Trade, Environment, & the SDGs (TESS).

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Abbreviations

CBAM	Carbon Border Adjustment Mechanism
CCS	Carbon Capture and Storage
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
COP	UN Climate Change Conference
EPA	Environmental Protection Agency
ETS	Emissions Trading System
EU	European Union
GHG	Greenhouse Gas
IMF	International Monetary Fund
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization of Standardization
ISSB	International Sustainability Standards Board
NDC	Nationally Determined Contribution
NIR	National Inventory Report
OECD	Organisation for Economic Co-operation and Development
SCC	Social Cost of Carbon
TBT	Technical Barriers to Trade
TCFD	Task Force on Climate-related Financial Disclosures
UNCTAD	UN Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WTO	World Trade Organization

1. Introduction

Steve Charnovitz, a brilliant and ceaselessly creative legal scholar whose work was instrumental in trade-environment linkages, often cited the "Konrad Hypothesis" which posited that unmanaged environmental issues spill over to become trade problems (Charnovitz, 2023).

Among the "problems" often cited by the trade community is the perceived proliferation of climate mitigation measures and standards. Certainly, one reason behind climate policy heterogeneity is the pervasiveness of greenhouse gas (GHG) emissions sources, which in turn require sector-based, demand-side, and economy-wide measures. Another is the design of the Paris Climate Agreement itself, which is based on bottom-up, non-prescriptive approaches whereby each party sets out its own climate mitigation measures that are communicated through nationally determined contributions (NDCs).

According to the Climate Change Laws of the world database, roughly 5,000 climate laws are in place (Grantham Research Institute, n.d.). Within the European Union (EU), its 27 member states administer roughly 2,200 climate mitigation measures, in addition to EU Green Deal and other directives. France administers 350 direct, indirect, or enabling measures; the Canadian federal government's federal climate policy framework comprises roughly 140 direct and indirect measures.[1]

Interest in narrowing climate policy heterogeneity has prompted interest among the trade community in the broad concept of interoperability. Examples include the Remaking Trade for a Sustainable Future (2024) Villars Framework and an expert panel hosted by the Forum on Trade, Environment, & the SDGs (TESS, 2025).

Broadly defined, interoperability entails processes that bridge differing standards, technical regulations, and policies as a means to simplify or declutter administrative processes. Interoperable standards generally result in lower administrative barriers, including trade barriers. For example, interoperability involving data and digital systems could bring about efficiency gains of an estimated $6 billion annually, leading to the unlocking of much more in new trade volumes (McKinsey & Company, 2022). Stronger operable linkages among national climate mitigation policies could reduce costs by an estimated 32% by 2030 and 54% by 2050 (World Bank Group, 2016).

More broadly, interoperability is associated with other benefits, not least in displacing duplicative or inefficient standards as well as increasing mutual learning and trust.

Interoperability is a cornerstone of the World Trade Organization (WTO) and other trading agreements through two basic approaches: procedures to determine the equivalency of non-uniform standards and policies, and the broad preference for the convergence to international standards.

In the area of equivalency, the WTO Agreement on Technical Barriers to Trade (TBT), for example, requires parties to consider as equivalent differing technical standards, provided they meet domestic requirements. The TBT's Conformity Assessment Procedures and Code of Good Practice (WTO, 1995) help determine the methods in determining equivalency, while guidelines are periodically updated (WTO, 2024).

In the area of international standards, the WTO encourages members to adopt appropriate international standards. Of note, the WTO TBT Agreement

1. A number of agencies and organizations, including the International Energy Agency's (n.d.) Policies database, the New Climate Institute's (n.d.) Climate Policy Database, and the Climate Policy Monitor (2024), regularly update climate measures.

encourages members to recognize positively international standards such as the International Organization of Standardization (ISO), while the WTO Agreement on Sanitary and Phytosanitary Measures Agreement references international standards, including Codex Alimentarius, or standards issued by the International Office of Epizootics and International Plant Protection Convention.

Despite the proliferation of climate mitigation policies and standards, interoperability has been a steadfast priority of the international climate regime since its inception. This briefing note provides some examples of climate policy interoperability in the areas of equivalency and converging international standards.

2. Comparability, Clusters, and Convergence

Emission Equivalency

The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations in 1990 to provide a scientific and policy basis for subsequent treaty responses such as the 1992 United Nations Framework Convention on Climate Change (UNFCCC), the 1997 Kyoto Protocol, and 2015 Paris Agreement. From its first assessment report, the IPCC determined methods to express the equivalency of the main greenhouse gases—that is, carbon dioxide (CO2), methane (CH4), and nitrous oxide (N2O), perfluorocarbons (CF6, C2F6), hydrofluorocarbons (CHF3, CF3CH2F, CH3CHF2), sulfur hexafluoride (SF6) and other gases— by way of the common benchmark expressed as one tonne of CO2 equivalent (CO2e). For example, methane is roughly 80% more potent per molecule of emissions compared to the standard CO2e (UNEP, 2021). In addition, the IPCC (2007) provided an early international standard to compare the global warming potential of different gases, including sources like chlorofluorocarbons (CFCs), halons, and hydrofluorocarbons (HFCs) controlled under the Montreal Protocol to protect stratospheric ozone.

The UNFCCC also sets out the international standards by which parties are required to report their national GHG emissions, through national inventory reports (NIRs), intended to provide comparable GHG emissions reporting while taking into account differences between developed and developing countries. In practice, NIRs have fallen well short of basic international statistical quality standards. One response is the UNFCCC's Enhanced Transparency Framework, launched in 2024 to improve the accuracy and comparability of national GHG emissions reporting (UNFCCC, n.d.).

Common Sectors

The IPCC (n.d.), through Working Group III, also set out in its earliest work the sector-by-sector climate mitigation approach which forms the basis of virtually all national and sub-federal climate mitigation approaches. Those sectors comprise energy, transport, buildings, agriculture, forestry, and waste. Recent reviews of NDCs by parties to the Paris Agreement show that 161 countries are implementing climate mitigation measures in the energy sector, 138 measures in the transport sector, and 128 in the buildings sector (NDC Partnership, n.d.).

Certainly, there are important differences among jurisdictions in how more granular subsector approaches are weighted, notably for that of the industrial, agricultural, and waste sectors. Nevertheless, the IPCC's sectoral approach allows higher-level climate policy comparability.

Comparable Costs

The sector-by-sector approach has also allowed early comparisons across jurisdictions of average climate mitigation costs. For example, the McKinsey marginal abatement costs curve allows for a comparison of differing marginal cost curves across sectors (McKinsey

Sustainability, 2013). The literature comparing marginal abatement costs by sector is vast. For example, Gillingham and Stock (2018) estimate the comparative marginal costs of renewable and low-emission energy production technologies in reference to coal, using CO2e, with 2017 as the reference year.

Figure 1. New Source Generation Costs When Compared to Existing Coal Generation (2017)

Technology	Cost per tonne CO2e
Onshore wind	25
Natural gas combined cycle	27
Utility-scale solar	29
New natural gas with CCS	43
Advanced nuclear	59
Coal retrofit with CCS	85
New coal with CCS	95
Offshore wind	105
Solar thermal	133

Source: Gillingham and Stock (2018).

One example of how regulators have built on marginal costs is the United States (US) Environmental Protection Agency (EPA) 2024 rules for existing coal fired electricity plants and new performance standards for natural gas, which require coal to adopt a 90% carbon capture and storage (CCS) target, and new natural gas a 40% CCS target, effectively making coal uncompetitive compared with renewable energy options (EPA, n.d.). This EPA rule is likely to be rescinded.

So too will the EPA's recent work in the area of social cost of carbon (SCC).[2] In late 2023, the EPA revised its estimate by as much as four times in light of rising damage costs of climate-linked extreme weather events, to a damage cost of $190 tonnes CO2e for every tonne emitted (EPA, 2023). The EPA's work has prompted other jurisdictions to use a similar methodology, including Canada and Germany,[3] as well as several US states, including California, Colorado, Minnesota, New York, and Washington State.

Comparable Prices

Comparing marginal costs by sector is useful in helping domestic climate policies identify lower hanging fruit. However, of more direct relevance to policy interoperability from a trade perspective is moving from sectoral costs to a determination of the carbon price equivalency of the climate mitigation policies.

Work to determine carbon price equivalency has been underway for many years.[4] However, interest has increased since the EU Carbon Border Adjustment Mechanism (CBAM) looks to require importers to report the carbon price equivalent of the exporting country. Cosbey (2021) notes that the purpose of border carbon adjustments is to "apply treatment at the border equivalent to what the foreign producer would have experienced had it been domestic." Determining equivalency in turn requires the expression of heterogeneous climate mitigation measures through a comparable average economic unit cost as a

2. Early work on the social cost of carbon include the report of the US National Academies of Sciences, Engineering, and Medicine (2017), which estimated that the SCC for each tonne of CO2 emitted in 2020 was $62 using a 2.5 percent rate, $42 using a 3.0 percent rate, and $12 using the 5.0 percent rate.
3. Canada adopted the EPA estimates largely unrevised. Germany's carbon value factors methodology report of 2024 proposes an SCC cost-benefit of €880 per tonne CO2e to include current and future welfare, with a zero discount rate, and €300 per tonne CO2e with an adjusted rate (German Environment Agency, 2024).
4. Methods to determine carbon price equivalency have some similarities to work during the Uruguay Round in the tariffication of non-tariff measures (Disdier & Fugazza, 2019).

means to establish carbon price parity (Sawyer & Gignac, 2022); in the case of CBAM this implies a determination of the emissions permit price under the EU Emissions Trading System (EU ETS) with comparable measures in place by the country of export.

Jurisdictions implement different types of climate measures for many reasons, including building on existing administrative and institutional authorities and practices, or more recently, forming part of a broader package linked to new green industrial policy frameworks.

The Organisation for Economic Co-operation and Development's (OECD) Climate Actions and Policies Measures Framework is a leading example of work to classify differing climate mitigation measures to enable carbon pricing equivalency estimations (OECD, 2023b). The OECD framework identifies some 120 climate measures being implemented in roughly 50 countries between 2000–2020. Policies are arranged into four categories or policy clusters, of which the two most important are (i) market-based instruments—including direct carbon pricing, fuel excise taxes, green subsidies for renewable energy, electric vehicles, or net zero industrialization—and (ii) non-market policies—including mandatory regulations, building codes, energy efficiency minimum performance standards, bans such as that of sales of new internal combustion engines, and other measures.[5] Different methods are then applied to determine the equivalency of differing measures by estimating the comparable stringency of climate measures by sector, including through the OECD's Environmental Policy Stringency index (OECD, 2023a).

An important focus of the OECD's work related to carbon price equivalency involves estimating the comparable stringency of market-based measures; that is, comparing the stringency of direct carbon pricing systems with emissions trading schemes as well as various fiscal measures like taxes and subsidies. Determining carbon price equivalency among carbon pricing schemes is technically complex, since in addition to the compliance price, or in the case of an ETS the permit price, systems differ in scope and sectoral coverage, apply dissimilar exemptions (for example to cushion distributional impacts), and have different treatment of bankable credits as well as other features which indirectly affect stringency.[6]

Various methods are used to determine the carbon price equivalent of 75 compliance carbon pricing schemes identified by the World Bank (2024). These include ongoing efforts by the OECD related to its climate cluster work, a different methodology applied in the OECD's (2023c) net effective carbon rates, work by the Resources for the Future (2022) World Carbon Pricing Database, and work of the International Monetary Fund (IMF) in estimating the average carbon price based on averaging all compliance markets (the IMF estimates $32 tonne CO2, well below the stringency level needed to meet the Paris goals).

More recent work by Agnolucci et al. (2023) proposes to disentangle the complex and dynamic relationship between direct and indirect carbon pricing systems, which include feed-in-tariffs, production fuel subsidies, tradeable performance standards, clean energy standards and public transportation infrastructure spending, to provide a more thorough calculation of the carbon price measured as the total carbon price.

If measuring the price equivalency of market-based measures poses significant methodological challenges, what of measuring equivalency in the second OECD climate cluster comprised of non-pricing measures like regulations? Certainly, comparing pricing to regulatory approaches has been extensively examined s ince Weitzman's (1973) seminal work on price-based versus quantity-based pollution measures. It is also, or should be, a regular part of any environmental agency administrative

5. The two other OECD climate cluster groups are (iii) cross-sectoral measures—including research and development and early technology and system innovation—and (iv) international commitments—including public overseas climate financing.
6. One example of carbon pricing equivalency involved the four carbon pricing systems that were in place in Canada, comprised of a federal consumer carbon tax for certain fuels, a distinct consumer-based carbon price in British Colombia, an emissions trading scheme in Quebec, and a national output pricing system applied to some industrial sectors. Methods to determine equivalency were then referenced to a mandatory minimal benchmark or backstop price which distinct systems needed to meet (Government of Canada, n.d.). As of March 2025, both the pan-Canadian and British Colombia carbon pricing systems have been rescinded.

review in selecting an optimal mechanism choice that should entail an ongoing review of statutory authority, legal instruments, new tools, data sources, actors, and other factors (Glicksman & Markell, 2018). Particularly, US courts regularly compare regulatory with non-regulatory environmental measures in determining state-level variance from federal standards.[7]

While possible, Cosbey (2021) argues that it makes no sense to accept as equivalent under a border carbon adjustment scheme non-pricing measures such as regulations, and instead proposes that other avenues be pursued, notably in a country of export challenging the assumptions and parameters behind the default emissions intensity standard used by the importing country.

3. International Climate Standards

The other dimension of interoperability involves international standards. Clearly, the first best approach to reducing climate mitigation complexity is through the adoption of a common global carbon pricing system, an idea proposed by the heads of the WTO and OECD (Financial Times, 2024). This option seems even less likely in 2025. However, there are a growing number of international standards and common approaches to support effective climate mitigation. Below are some examples.

International Sectoral Approaches

As noted above, a common reference for all climate measures involves sector-based approaches. There are numerous private low-carbon or net-zero sector-based transition platforms and alliances aiming at carbon neutrality targets. In the case of steel, examples of industry-led initiatives include SteelZero, Net-zero Steel, the Net-Zero Steel Initiative, the Global Steel Climate Council, and many others. Other international net-zero sector-based initiatives include aluminium, cement, and chemicals, as well as dozens of consumption-based initiatives including soft commodities, fashion and textiles, and many intermediate and final goods. To date, most of these initiatives illustrate standards proliferation. However, some may consolidate and converge towards prevailing international standards, based on the percentage of firms or of sector-based emissions.

In contrast to private, voluntary initiatives, there are a limited number of international sector-based approaches based on formal multilateral cooperation. One example of a multilateral, sector-based climate mitigation approach involves steps to address GHG emissions from international aviation. The UN's Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)—administered by the International Civil Aviation Organization—has begun its first phase in GHG emission mitigation and offsetting (ICAO, 2024). A similar sector-based multilateral approach has emerged from the International Maritime Organization (IMO) towards net-zero shipping by or around 2050 through approval in April 2025 of the IMO Net-zero Framework (IMO, 2025).

Carbon Removal Standards

Four private standardization bodies—Verra, Gold Standard, ACR, and Climate Action Reserve—dominate the global private or voluntary carbon markets; that is, private markets that facilitate the purchasing and selling of carbon offset credits. Voluntary markets have witnessed slower growth than forecast in large part due to problems related to poor carbon credit quality stemming from unclear private standards or their uneven and unsupervised application and verification.

At the 2024 UN Climate Change Conference (COP29), parties to the Paris Agreement formally adopted new, detailed, and binding international standards covering

7. A notable example involves challenges between federal Corporate Average Fuel Economy (CAFE) standards and California (California, Air Resources Board, 2008). It appears likely US federal CAFE regulations will also be rescinded.

international carbon markets under the agreement's Article 6 (Di Leva & Vaughan, 2024). These rules represent the final completion of the Paris Agreement rulebook. That those rules took nine years to complete reflects the complexity of carbon offset or removal standards. At COP29, governments adopted a package of mandatory standards comprised of some 40 binding rules (expressed as shall obligations) covering the design, accounting, verification, safeguards, and other measures required to allow Article 6 international carbon market deals to proceed. It will take several years to determine whether the new UN carbon market standards and voluntary carbon markets will converge towards comparable standards.

Within hours of the passage of those international standards, all private bodies welcomed the COP29 decision and offered to work with governments and others in laying the technical steps required to begin international carbon credit trades under Article 6. As of early March 2025, over 1,000 international carbon credit deals have been notified by governments (UNEP Copenhagen Climate Centre, n.d.).

Embodied Carbon Accounting Standards

Among the most pressing technical issues related to border carbon adjustments are standards and methods used to calculate the embedded carbon emissions of traded products. For example, CBAM is expected to require the determination of the embedded carbon emissions of shipments of cement, aluminium, fertilizers, iron and steel, hydrogen, and electricity. The European Commission has published various methodological guidance regarding calculating embedded carbon. International standardization bodies such as ISO 14067 (ISO, 2018) and the Greenhouse Gas Protocol (2011) Product Life Cycle Accounting and Reporting Standard have also set out embodied carbon footprint methods.

However, more work will be needed to arrive at a single international standard to calculate embedded emissions that takes into account varying circumstances of exporting countries. A welcome addition to this debate is a recent report proposing the principles and steps needed towards the development of an international standard to measure embedded emissions accounting (White et al., 2024).

Climate Finance

One of the most striking examples of the convergence of standards towards a new international standard involves climate finance. In 2021, the G20 Sustainable Working Group called for greater comparability, interoperability, and transparency in sustainable financing. Recent events have surpassed that recommendation, in large part because of the interest of the private sector in adopting new international accounting standards.

Climate Reporting

A particularly crowded area of private standardization involves green finance, dominated by climate finance and more general products that include green bonds, ESG funds, and other financing. One estimate by the IMF counted more than 200 climate-related standards bodies, with leaders including SASB, CDSB, CDP, IIRC, GRI, PRI, the Science-Based Targets initiative (SBTi), the Impact Measurement Project (IMP), and the Capitals Coalition among others. Most of these groups reference recommendations of the 2017 Task Force on Climate-related Financial Disclosures (TCFD, 2017), which included calls for firms to disclose through regular reporting their exposure to climate risk.

One of the most successful examples of international standards convergence is that of the International Sustainability Standards Board (ISSB, n.d.), a financial accounting standardization body of the IFRS Foundation, the largest international private sector accounting standards body. Since ISSB was launched in late 2021, the TCFD has concluded its operations and folded into ISSB; several private standardization bodies including SASB, CDSB, and IIRC have also consolidated their work into ISSB.

ISSB has signed several technical standard interoperability agreements with other bodies, including CDP, the ISO,

the global securities regulator IOSCO (International Organization of Securities Commission), the European Financial Reporting Advisory Group (EFRAG), the European Sustainability Reporting Standards (ESRS), GRI, and others.

In roughly four years, ISSB has emerged as the leading international climate risk standard, which has been adopted in 400 jurisdictions and among more than 10,000 firms. This uptake is especially relevant to carbon border adjustment technical areas such as estimation of the scope of carbon footprint coverage—ISSB climate risk disclosure standards require entity-level reporting of scope 1, scope 2, and scope 3 GHG emissions.

Greenhouse Gas Protocol

While the Paris system of NIRs is unfit for firm-level GHG emission reporting, that role has been filled by the Greenhouse Gas Protocol (n.d.), an independent body jointly run by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The Greenhouse Gas Protocol is the standard GHG metrics measurement system referenced in the ISSB climate risk disclosure standard (IFRS Foundation, 2023), as well as within numerous mandatory climate risk reporting rules, including those of the EU (notably the Corporate Sustainability Reporting Directive and Sustainable Finance Disclosure Regulations) as well as Australia, California, Canada, China, Hong Kong, New Zealand, and Singapore among others. The Greenhouse Gas Protocol has become in effect the single most important international standard to measure firm-level GHG metrics and measurement, including scope 3 supply chain emissions.

Green Taxonomies

A final example of international standards convergence in the financial sector involves green taxonomies, launched by the EU in 2020 as a tool to help investors identify sustainable and in particular low-carbon sectors and areas. Work began soon after its release in identifying green taxonomy interoperability between the EU and China (European Commission, 2023), leading to an estimated converge of 80% of the taxonomies by 2023. Under the Association of Southeast Asian Nations (ASEAN), the development of a common green taxonomy is underway (Lee, 2024).

4. Conclusion

A welcome addition to climate policy interoperability is the October 2024 joint report of the WTO, OECD, IMF, UNCTAD, and World Bank Group on carbon pricing (OECD et al., 2024). The report's proposed practical steps include moving towards a common carbon pricing metric, building on work already underway by the World Bank, OECD, and others noted above. The report suggests creating an enhanced reporting and transparency platform drawing on existing sources such as the UNFCCC's Enhanced Transparency Framework as well as work of the World Bank, OECD, IMF, and UNCTAD.

The WTO, in turn, could consider taking two steps to enhance carbon measure equivalency. First, by setting out the principles and methods for carbon pricing equivalency and embedded carbon methodologies informed by existing practices like the TBT's conformity assessment methodology and updated guidance. Second, by initiating a non-binding special notification system within the WTO's environmental database to include climate mitigation measures and, if available, their equivalence.

A final word is that climate measure comparability and interoperability will become more important in light of policy regression underway in several jurisdictions. In early 2025, the US again exited the Paris Agreement, Canada rescinded its federal consumer-based carbon tax, British Colombia rescinded one of the world's most established carbon pricing schemes, and the European Commission narrowed the scope of mandatory ESG and climate disclosure reporting.

References

Agnolucci, P., Fischer, C., Heine, D. et al. (2023). *Measuring total carbon pricing*. https://academic.oup.com/wbro/article/39/2/227/7283905

California Air Resources Board. (2008). *Comparison of greenhouse gas reductions under CAFE standards and ARB regulations adopted pursuant to ab1493*. https://ww2.arb.ca.gov/sites/default/files/2020-03/ab1493_v_cafe_study_ac.pdf

Charnovitz, S. (2023). *International trade cooperation in an era of turbulence*. Remarks at the Informal Meeting of EU Trade Ministers, Valencia, Spain, 19 October. https://charnovitz.org/publications/Charnovitz_Valencia_talk.pdf

Climate Policy Monitor. (2024). *Climate Policy Monitor*. https://climatepolicymonitor.ox.ac.uk/

Cosbey. (2021). *Enabling climate ambition: Border carbon adjustment in Canada and abroad. International Institute for Sustainable Development (IISD).* https://www.iisd.org/publications/enabling-climate-ambition-border-carbon-adjustment-canada

Di Leva, C. & Vaughan, S. (2024). *Will new Article 6 rules restore confidence in carbon markets?* https://illuminem.com/illuminemvoices/will-new-article-6-rules-restore-confidence-in-carbon-markets

Disdier, A-C. & Fugazza, M. (2019). *A practical guide to the economic analysis of non-tariff measures*. World Trade Organization and United Nations Conference on Trade and Development. https://www.wto.org/english/res_e/publications_e/non_tariff_measures_e.htm

Environmental Protection Agency (EPA). (n.d.). *Greenhouse gas standards and guidelines for fossil fuel-fired power plants.* https://www.epa.gov/stationary-sources-air-pollution/greenhouse-gas-standards-and-guidelines-fossil-fuel-fired-power

Environmental Protection Agency (EPA). (2023). Report on the social cost of greenhouse gases: Estimates incorporating recent scientific advances. https://www.epa.gov/system/files/documents/2023-12/epa_scghg_2023_report_final.pdf

European Commission. (2023). *International Platform on Sustainable Finance presents the Multi-Jurisdiction Common Ground Taxonomy to enhance interoperability of taxonomies across EU, China and Singapore*. https://finance.ec.europa.eu/document/download/0e76f418-792a-4ede-b382-eb3cfcbbd633_en?filename=241113-press-release-multi-jurisdiction-common-ground-taxonomy_en.pdf

Financial Times. (2024, September 2022). *The path to global carbon pricing*. The Editorial Board. https://www.ft.com/content/0a4ac951-5b95-4527-82fc-0ec587483ac5

Forum on Trade, Environment, & the SDGs (TESS). (2025). *Fostering coherence, fairness, and interoperability in the design of trade-related climate measures: Options for inclusive cooperation at the WTO?* Roundtable held online on 19 February 2025. https://tessforum.org/latest/fostering-coherence-fairness-and-interoperability-in-the-design-of-trade-related-climate-measures-options-for-inclusive-cooperation-at-the-wto

German Environment Agency. (2024). *Methodological Convention 3.2 for the assessment of environmental costs – Value factors.* https://www.umweltbundesamt.de/sites/default/files/medien/479/publikationen/methodological_convention_3_2_value_factors_bf.pdf

Gillingham, K. & Stock, J.H. (2018). *The cost of reducing greenhouse gas emissions*. https://scholar.harvard.edu/files/stock/files/gillingham_stock_cost_080218_posted.pdf

Glicksman, R., & Markell, D. (2028). Unraveling the administrative state: Mechanism choice, key actors, and regulatory tools. *Virginia Environmental Law Journal*, Vol. 36, No.3. http://dx.doi.org/10.2139/ssrn.3125675

Government of Canada. (n.d.). *How carbon pricing works*. https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/putting-price-on-carbon-pollution.html

Grantham Research Institute on Climate Change and the Environment. (n.d.). *Climate Change Laws of the world* [Database]. https://climate-laws.org/

Greenhouse Gas Protocol. (n.d.). Greenhouse Gas Protocol. https://ghgprotocol.org/

Greenhouse Gas Protocol. (2011). *Product life cycle accounting and reporting standard*. World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD). https://ghgprotocol.org/product-standard

IFRS Foundation. (2023). *IFRS S2 Climate-related disclosures*. https://www.ifrs.org/issued-standards/ifrs-sustainability-standards-navigator/ifrs-s2-climate-related-disclosures/

Intergovernmental Panel on Climate Change. (n.d.). *Working Group III – Mitigation of climate change*. https://www.ipcc.ch/working-group/wg3/

Intergovernmental Panel on Climate Change. (2007). *Direct global warming potentials*. https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

International Civil Aviation Organization (ICAO). (2024). *Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) — Frequently Asked Questions (FAQs).* https://www.icao.int/environmental-protection/CORSIA/Documents/CORSIA_FAQs_Apr2024.pdf

International Energy Agency (IEA). (n.d.). *Policies database* [Database]. https://www.iea.org/policies

International Maritime Organization (IMO). (2025, April 11). *IMO approves net-zero regulations for global shipping* [Press release]. https://www.imo.org/en/MediaCentre/PressBriefings/pages/IMO-approves-netzero-regulations.aspx

International Organization of Standardization (ISO). (2018). *ISO 14067:2018, Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification*. https://www.iso.org/standard/71206.html

International Sustainability Standards Board (ISSB). (n.d.). *About the International Sustainability Standards Board.* https://www.ifrs.org/groups/international-sustainability-standards-board/

Lee, K. (2024). *How Asean designed a green taxonomy for an Asia of contrasts*. Green Central Banking. https://greencentralbanking.com/2024/04/10/asean-south-east-asia-taxonomy/

McKinsey & Company. (2022). *The multi-billion-dollar paper jam: Unlocking trade by digitalizing documentation.* https://www.mckinsey.com/industries/logistics/our-insights/the-multi-billion-dollar-paper-jam-unlocking-trade-by-digitalizing-documentation

McKinsey Sustainability. (2010). *Impact of the financial crisis on carbon economics: Version 2.1 of the global greenhouse gas abatement cost curve*. https://www.mckinsey.com/capabilities/sustainability/our-insights/impact-of-the-financial-crisis-on-carbon-economics-version-21

National Academies of Sciences, Engineering, and Medicine. (2017). *Report recommends new framework for estimating the social cost of carbon*. https://www.nationalacademies.org/news/2017/01/report-recommends-new-framework-for-estimating-the-social-cost-of-carbon

NDC Partnership. (n.d.). *NDC content*. https://ndcpartnership.org/knowledge-portal/ndc-content

New Climate Institute. (n.d.). *Climate Policy Database* [Database]. https://climatepolicydatabase.org/

Organisation for Economic Co-operation and Development (OECD). (2023a). *Environmental policy stringency and CO2 emissions. Evidence from cross-country sector-level data*. OECD Economics Department Working Papers. https://www.oecd.org/en/publications/environmental-policy-stringency-and-co2-emissions_53ddcef7-en.html

Organisation for Economic Co-operation and Development (OECD). (2023b). *Identifying and tracking climate change mitigation strategies. A cluster-based assessment*. OECD Economics Department Working Papers. https://www.oecd.org/en/publications/identifying-and-tracking-climate-change-mitigation-strategies_a23b43c5-en.html

Organisation for Economic Co-operation and Development (OECD). (2023c). *Net effective carbon rates*. https://www.oecd.org/en/publications/net-effective-carbon-rates_279e049e-en.html

Organisation for Economic Co-operation and Development (OECD) et al. (2024). Working together for better climate action: Carbon *Pricing, Policy Spillovers, and Global Climate Goals*. OECD Publishing. https://doi.org/10.1787/2b90fa2c-en

Remaking Trade for a Sustainable Future. (2024). *Villars framework for a sustainable global trade system*. https://remakingtradeproject.org/villars-framework

Resources for the Future. (2022). *World Carbon Pricing Database*. https://www.rff.org/publications/data-tools/world-carbon-pricing-database/

Sawyer, D. & Gignac, R. (2022). *Border carbon adjustments – The case for a cooperative, principles-based approach*. https://climateinstitute.ca/publications/border-carbon-adjustments/

Task Force on Climate-related Financial Disclosures (TCFD). (2017). *Final Report – Recommendations of the Task Force on Climate-related Financial Disclosures*. https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf

United Nations Environment Programme (UNEP). (2021). *Methane emissions are driving climate change*. Here's how to reduce them. *https://www.unep.org/news-and-stories/story/methane-emissions-are-driving-climate-change-heres-how-reduce-them*

United Nations Environment Programme (UNEP) Copenhagen Climate Centre. (n.d.). *Article 6 pipeline*. Accessed in March 2025. https://unepccc.org/article-6-pipeline/

United Nations Framework Convention on Climate Change (UNFCCC). (n.d.). *Preparing for the Enhanced Transparency Framework*. https://unfccc.int/process-and-meetings/transparency-and-reporting/preparing-for-the-ETF

Weitzman, M. (1973). *Prices vs. quantities*. https://scholar.harvard.edu/files/weitzman/files/prices_vs_quantities.pdf

White, L. V., Aisbett, E., Pearce, O., & Cheng, W. (2024). Principles for embedded emissions accounting to support trade-related climate policy. *Climate Policy*, 25(1), 109–125. https://doi.org/10.1080/14693062.2024.2356803

World Bank. (2024). *State and trends of carbon pricing 2024*. https://openknowledge.worldbank.org/entities/publication/b0d66765-299c-4fb8-921f-61f6bb979087

World Bank Group. (2016). *World Bank Group Climate Change Action Plan 2016-2020*. https://hdl.handle.net/10986/24451

World Trade Organization (WTO). (1995). *WTO analytical index – Article 4 of the Agreement on Technical Barriers to Trade.* https://www.wto.org/english/res_e/publications_e/ai17_e/tbt_art4_oth.pdf

World Trade Organization (WTO). (2024). *Guidelines on conformity assessment procedures*. Committee on Technical Barriers to Trade, WTO Doc. G/TBT/54 (19 March 2024). https://worldtradescanner.com/TBT-54.pdf

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Published by the Forum on Trade, Environment, & the SDGs (TESS)

Geneva Graduate Institute
Chemin Eugène-Rigot 2
CH-1202 Genève
Switzerland

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