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An Approach to Interoperability of U.S. and EU Systems for Determining GHG Emissions Intensity of Steel

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INTRODUCTION

In October of 2021, the United States and the European Union announced their intent to negotiate a "Global Arrangement on Sustainable Steel and Aluminum" (Global Arrangement) that would restrict market access for high carbon intensity steel and aluminum.[1] As an initial step, the parties agreed to form a technical working group to "confer on methodologies for calculating steel and aluminum carbon-intensity and share relevant data."[2] There have been similar calls from private sector initiatives for international coordination on procedures for determining carbon intensity—particularly with regard to steel.[3]

There is little agreement, however, on how this coordination would work and what form it would take. This paper outlines an approach for coordinating product-level emissions accounting procedures for steel under the Global Arrangement to provide for both flexibility and interoperability, reducing the burden on covered manufacturers in generating emissions intensity data that would comply with both U.S. and EU requirements. Most proposals for promoting interoperability of standards focus on a "vertical," top-down system based on international standards.[4] Although agreement on international standards for determining emissions intensity would be optimal, it appears unlikely that such standards will be approved at the multilateral level in the near future.

We propose as an alternative a "horizontal" approach linking the methodologies that are already being developed in the U.S. and the EU. For the EU, the obvious starting point is the procedures for determining embedded emissions under the Carbon Border Adjustment Mechanism (CBAM).[5] For the United States, the reference point is the approach being developed by the International Trade Commission (ITC) for determining the carbon intensity of steel.[6] The ITC investigation is much more limited in scope than the CBAM, aimed only at determining the average and highest emissions intensity of U.S. steel and aluminum production.[7] Nonetheless, the ITC's methodology provides an adequate basis for identifying potential avenues toward interoperability with the EU's approach under the CBAM. In the discussion below, we propose an approach combining three tools of international regulatory cooperation[8]—harmonization, mutual recognition, and horizontal consultation procedures—to align emissions accounting for steel in the U.S. and the EU, while permitting flexibility for variation among systems where necessary or appropriate.

I. HARMONIZATION

Full harmonization of regulatory standards from different countries is rare due to differences in legal processes and political priorities.[9] As one commentator has noted:

> harmonization . . . can be cumbersome, less responsive to local priorities and contexts, and less subject to learning from experimentation. Harmonization of existing regulations is also unattractive to industry and regulators where they have sunk significant investment in compliance with existing standards.[10]

Accordingly, it is unlikely that the U.S. and EU will, at least in the near term, adopt precisely the same emissions intensity accounting procedures. A more viable approach would be to require harmonization of only those elements of emissions accounting systems that must be uniform in order to be interoperable, while accommodating unavoidable variations. Critically, the system should provide clarity regarding any differences between U.S. and EU emissions intensity standards, by using a harmonized *reporting template*, *measurement unit*, and *taxonomy of emissions*.

Harmonization of other elements, including *covered gases*, *system boundaries*, and *procedures for measurement or calculation of emissions,* would be desirable, particularly if the intent is to develop a harmonized substantive policy—e.g., a shared system of import fees based on the emissions intensity of products like the Global Arrangement. Some variation on these issues, however, could be accommodated and made transparent through the reporting template. And deeper alignment on these elements could be pursued through the mutual recognition and consultation mechanisms discussed in Sections II and III.

REPORTING TEMPLATE

The same basic template for reporting product-level emissions data should be used in both the U.S. and the EU, even if there is some variation in the emissions covered. To accommodate any variation in covered gases or system boundaries, the reporting template could provide “line items” for different gases and emissions sources (e.g., additional material inputs) that would permit the determination of emissions intensity under different standards.

UNIT OF MEASUREMENT

The basic unit of measurement used for emissions should be harmonized to ensure interoperability. The U.S. approach[11] and the EU approach[12] for determining embedded emissions are harmonized on this point, both measuring emissions in tonnes of carbon dioxide equivalent emissions (tCO_2e).

TAXONOMY OF EMISSIONS

Harmonization of the taxonomy of covered emissions—*i.e.,* the categories or scopes of emissions that are included—is essential to ensuring interoperability. Ideally this would include both the categories themselves and the terminology used to describe those categories, although any differences in terminology could be addressed through clear definitions of the terms and relevant categories.

The EU uses the categories of direct emissions, indirect emissions, and emissions from precursors,[13] while the ITC uses the scope 1, 2, and 3 taxonomy in line with the Greenhouse Gas Protocol.[14] That said, there is still significant overlap in these classifications.[15]

Direct emissions under the CBAM and *Scope 1* emissions under the ITC investigation both include the emissions associated with fuel combustion within the facility. *Indirect* emissions and *Scope 2* emissions both include the emissions associated with purchased electricity. *Emissions from precursors* and *Scope 3* emissions both include the emissions associated with the production of upstream inputs within the system boundaries of each respective policy framework (see Table 1).

There are, however, discrepancies between the classification systems used by each party. *Direct* emissions under the CBAM include emissions from the production of heating and cooling, while these emissions are assigned to scope 2 emissions under the ITC investigation. Indirect emissions according to the EU framework include emissions associated with in-facility electricity production, but these emissions are assigned to scope 1 emissions in the U.S. framework (see Table 1).

Table 1: EU and U.S. Emissions Taxonomies
The green text represents commonalities, and the red text indicates divergence.

	EU CBAM	USITC Investigation
Category #1 Term	**Direct**	**Scope 1**
Includes	Emissions associated with fuel combustion and process emissions (the chemical and physical transformation of raw materials) within the facility; emissions from heating and cooling (regardless of location).[16]	Emissions associated with fuel combustion and process emissions (the chemical and physical transformation of raw materials) within the facility; emissions associated with in-facility electricity, heat, or steam production.[17]
Category #2 Term	**Indirect**	**Scope 2**
Includes	Emissions associated with purchased electricity; emissions associated with in-facility electricity production.[18]	Emissions associated with purchased electricity; emissions from purchased heating and cooling.[19]
Category #3 Term	**Precursors**[20]	**Scope 3**
Includes	Emissions associated with the production of upstream inputs within the system boundaries.[21]	Emissions associated with the production of upstream inputs within the system boundaries.[22]

COVERED GASES

The same gases should be covered to the extent possible,[23] although some divergence could be accommodated through the reporting mechanism discussed above, which would make any differences clear. The EU CBAM requires reporting of only CO_2 emissions for iron and steel.[24] The ITC's proposed methodology, in contrast, indicates that it will cover methane (CH_4) and nitrous oxide (N_2O) in addition to CO_2, as specified under the EPA's Greenhouse Gas Reporting Program (GHGRP) for large emitting facilities.[25]

SYSTEM BOUNDARIES

The U.S. and EU system boundaries are closely aligned for iron and steel products.[26] Most notably, the system boundaries of the U.S. and EU approaches both include the three major baskets of emissions: combustion emissions (direct/scope 1), emissions from electricity produced off-site (indirect/scope 2), and a limited set of upstream emissions (precursors/scope 3).

Both the U.S. and EU system boundaries for iron and steel exclude emissions from the mining process at the beginning of the supply chain. Both system boundaries also specify common upstream materials that need to be monitored and reported, which are referred to as "precursors" by the CBAM and as "intermediate products" by the ITC investigation. There is, however, a difference in the way that emissions embodied in these upstream inputs are counted that could be reflected in the reporting template. While system boundaries refer to the steps of the production process that require monitoring and reporting of emissions, we use the term "precursors" to refer to upstream materials that contribute to the total embedded emissions of an end-product. The EU CBAM's calculation methodology assigns zero embedded emissions to purchased coke whereas the ITC's does not, so we consider coke to be a precursor only for the ITC methodology and not for the EU CBAM in Table 2.[27]

Table 2: System boundaries for the EU CBAM and USITC Investigation
The CBAM language is taken from the EU regulations; ITC terminology is adjusted to illustrate commonalities in the system boundaries (ex. iron sinter → sintered ore).

	EU CBAM	USITC Investigation
Covered iron and steel precursors	Sintered ore, pig iron, direct-reduced iron, ferrous alloys, hydrogen, crude steel, and semi-finished steel products.[28]	Sintered ore, pig iron, direct-reduced iron, ferrous alloys, hydrogen, crude steel, semi-finished steel products, and coke.[29]

PROCEDURES FOR MEASUREMENT OR CALCULATION OF EMISSIONS

The acceptable methods of measuring or calculating emissions should also be harmonized to the greatest extent possible to ensure that reported data can be compared.[30] The EU CBAM and ITC investigation permit slightly different calculation methods. For example, both frameworks provide options for the generation of primary and the use of secondary data, but the CBAM will phase into a system that permits less

use of secondary data. The ITC, using the approach under the GHGRP,[31] provides a tiered system of calculation methodologies that specifies various degrees of reporting and calculation rigor depending on which fuels or processes are involved. Assuming that the U.S. and EU approaches yield essentially identical results, any variation could be addressed through a mutual recognition agreement, as discussed below.

Table 3: Permitted calculation methods

The three categories of 1) direct emissions, 2) indirect emissions, and 3) material inputs/precursors are meant to reconcile the inconsistent taxonomies laid out in Table 1.

	EU CBAM	USITC Investigation
Direct emissions	Provides three different options: A. Calculation-based approach 1. Operators can use the standard method of calculating emissions using input data, output data, and calculation factors.[32] 2. Operators can use the mass-balance method to subtract the mass of output from that of inputs, allocating the lost emissions to the output products.[33] B. Measurement-based approach – operators install a Continuous Emissions Measurement System (CEMS) at suitable points to track emissions outputs directly.[34]	Uses GHGRP methodologies, which requires that facilities calculate or measure CO_2 emissions from stationary combustion using one of these methods:[35] A. Calculation (tiers 1-3) – calculate emissions using annual fuel combustion data and fuel-specific CO_2 emission factors. Each tier requires an increasing level of specificity and rigor from data reporting. B. Tier 4 – Direct measurement of CO_2 emissions from CEMS.
Indirect emissions	If the electricity is generated within the installation or by a source with a direct technical link, an operator can report the precise emissions associated with consumed electricity.[36] Otherwise, operators should calculate their indirect emissions using the average emission factors of the grid in the country of origin from the International Energy Agency (IEA) or other publicly available data.[37]	ITC allows for two distinct methods of calculating indirect emissions:[38] A. Location-based method – uses a subregional electricity emissions factor published by EPA's eGRID. B. Market-based method – allows facilities to use a residual mix of emissions factors accounting for dedicated generation (onsite or through power purchase agreement) if sufficient data is available.
Material Inputs/ Precursors	The calculation requirements for emissions associated with precursors mirror the direct and indirect emissions calculation requirements listed above.[39]	Multiply quantity of product by emissions factors, either derived from data directly related to specific production in the reporting company's value chain or from industry averages.[40]

II. MUTUAL RECOGNITION

Because of the difficulty of achieving harmonization of international standards, much of the focus of efforts to promote international regulatory cooperation has shifted to mutual recognition.[41] Mutual recognition refers to agreements between countries to recognize elements of each other's regulatory regimes as legally adequate.[42] Mutual recognition is most commonly used to provide for the acceptance of the competence of "conformity assessment bodies" (CABs) in participating countries to certify that products produced in one country comply with the standards of another.[43] These arrangements are implemented through "mutual recognition agreements" (MRAs).[44] The U.S. and the EU have MRAs covering a number of sectors, including telecommunications equipment, pharmaceutical goods manufacturing practices, and medical devices.[45]

The U.S. and the EU could, accordingly, enter into an MRA addressing mutual recognition of "verifiers" (the term used under the CBAM) of data submitted regarding emissions intensity. Under the CBAM, data submitted regarding emissions intensity will be certified by a verifier that is accredited pursuant to the procedures used for data submitted under the EU's Emissions Trading System (ETS).[46] The European Commission is authorized to adopt additional guidelines regarding the verification process.[47] The Commission is also authorized to issue additional rules on accreditation of verifiers, including standards for mutual recognition of accreditation bodies.[48] A mutual recognition agreement between the EU and the U.S. regarding accreditation of verifiers would therefore be consistent with the design of the CBAM and permit steel producers in both the U.S. and the EU to use the same verifiers in determining the emissions intensity of traded steel under the Global Arrangement.

Mutual recognition could also be used to address any variation between U.S. and EU approaches to measurement or calculation of data, if they are deemed to be essentially equivalent.[49] Mutual recognition, however, is very rare with regard to different regulatory standards,[50] and would therefore be less appropriate for addressing any inconsistencies in covered gases or system boundaries if those differences significantly affected the determination of emissions intensity.

III. HORIZONTAL COOPERATION MECHANISMS

In addition to harmonization and mutual recognition, achieving interoperability of emissions accounting for steel will require procedural mechanisms for consultation, coordination, and information sharing.[51] Models for a joint body to carry out these functions include the Western Climate Initiative, Inc. (WCI) for linking subnational emissions trading programs in the U.S. and Canada, and the Joint Committee established to link Switzerland's and the EU's emissions trading systems.

The WCI is a non-profit corporation created in 2011 to provide technical, administrative, and IT support for developing and implementing the greenhouse gas emissions trading programs of participating jurisdictions, which currently include California, Washington, Nova Scotia, and Quebec.[52] The WCI plays a key role in facilitating the operation and governance of California and Quebec's linked emissions trading systems, providing technical and administrative support, market oversight, policy coordination, capacity building, and stakeholder engagement. However, the WCI does not exert direct authority over the emissions trading systems. Instead, it is a collaborative effort among participants, with "all participating jurisdictions retain[ing] all policy control and full oversight authority over their programs."[53]

The WCI requires member jurisdictions to have "rigorous reporting and verification" of GHG emissions, and "consistent methods for emissions reporting, within a sector and across sectors, must be applied by covered entities and is subject to independent third-party verification from accredited auditors."[54] The WCI incorporates elements of both vertical and horizontal approaches to regulatory cooperation, encouraging alignment with both international and national standards including the IPCC Guidelines, ISO Standards (14064), WRI's GHG Protocol, National Inventories (often based on IPCC guidelines), and Sector-Specific Guidelines (EPA or Environment Canada). In 2010, WCI aimed to harmonize its greenhouse gas reporting requirements with the U.S. EPA's "Mandatory GHG Reporting Rule" to ease compliance burdens.[55] In its effort to harmonize its reporting requirements and the EPA's rule, the WCI released detailed reporting guidelines.[56] The WCI builds off the U.S. EPA reporting rule to support an ETS program, providing additional calculations when needed.

The Swiss-EU Joint Committee was created by an agreement that entered into force in January 2020.[57] Comprised of representatives from each party, the Joint Committee oversees the regular exchange of information and consultation regarding a party's development, proposal, or adoption of a legislative act of relevance.[58] It also coordinates on implementation of the agreement,[59] conducts periodic reviews of major developments in either ETS,[60] and settles disputes.[61] For each party, the agreement specifies the essential criteria that stationary installations must follow in their monitoring and reporting of emissions.[62] The Joint Committee consults and coordinates on any developments concerning either parties' relevant laws. As with the WCI, the Joint Committee functions in a coordinating capacity, with the EU and Switzerland maintaining control over their respective ETSs.

A similar joint body could be established by the U.S. and the EU to coordinate and ensure the interoperability of their programs for determining the emissions intensity of traded steel. Specific functions of the body could include promoting harmonization of reporting templates, taxonomies, systems boundaries, and covered gases; mutual recognition of verifiers; and measurement and calculation procedures.

CONCLUSION

The U.S. and EU approaches to determining the emissions intensity of steel are in many respects already aligned and could be made functionally interoperable using a combination of tools of international regulatory cooperation. ***Harmonization*** could be used to align the process for calculating and reporting emissions. A ***mutual recognition*** agreement could reduce the cost and compliance burden by eliminating the need for redundant verification procedures. And ***horizontal cooperation mechanisms***, modeled on the WCI and the Switzerland-EU agreement, could be used to facilitate coordination of the U.S. and EU systems for determining emissions intensity.

Although this paper has focused on an approach to interoperability specifically regarding the determination of emissions intensity for steel under the Global Arrangement, it could also be used with other products and with additional countries for compliance with the growing number of policies that will use emissions intensity as a metric for trade measures. For example, climate and trade measures have been proposed or are being developed in Taiwan,[63] Canada,[64] Australia,[65] South Korea,[66] Japan,[67] and India.[68] By aligning their approaches on steel, the U.S. and the EU have an opportunity as "first movers" to set the model for broader interoperability in product-level emissions measurement systems.

ENDNOTES

[1] *Steel and Aluminum U.S.-EU Joint Statement* (Oct. 31, 2021), https://ustr.gov/sites/default/files/files/Statements/US-EU%20Joint%20Deal%20Statement.pdf.

[2] *Id.* ("Through the working group, the United States and the EU will, among other things, confer on methodologies for calculating steel and aluminum carbon-intensity and share relevant data.") https://ustr.gov/sites/default/files/files/Statements/US-EU%20Joint%20Deal%20Statement.pdf

[3] *See Steel Standards Principles—Common Emissions Measurement Methodologies to Accelerate the Transition to Net Zero* (2023), https://www.wto.org/english/tratop_e/envir_e/steel_standards_principles_e.pdf;

International Energy Agency, *Emissions Measurement and Data Collection for a Net Zero Steel Industry* (April 2023), https://www.iea.org/reports/emissions-measurement-and-data-collection-for-a-net-zero-steel-industry; Global Steel Climate Council, *The Steel Climate Standard* (August 2023), https://globalsteelclimatecouncil.org/wp-content/uploads/2023/12/GSCC-Standard-August2023.pdf; Responsible Steel International Standard version 2.0 (Sept. 2022), https://www.responsiblesteel.org/wp-content/uploads/2022/10/ResponsibleSteel-Standard-2.0.1.pdf.

[4] The WTO's Agreement on Technical Barriers to Trade (TBT Agreement) encourages WTO Member countries to base their "technical regulations" (mandatory product standards) on international standards. *See Id.*, art. 2.4:

> Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them, or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfilment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems.

available at https://www.wto.org/english/docs_e/legal_e/17-tbt.pdf.

[5] Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism ("CBAM Regulation"), Annex IV, Article 3(22), *available at* https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0956.

[6] *See Notice of Investigation and Scheduling of a Public Hearing, Greenhouse Gas Emissions Intensities of the U.S. Steel and Aluminum Industries at the Product Level*, Investigation No. 332–598, 88 Fed. Reg. 43633 (July 10, 2023) ("Notice of Investigation"), https://www.federalregister.gov/documents/2023/07/10/2023-14500/greenhouse-gas-emissions-intensities-of-the-us-steel-and-aluminum-industries-at-the-product-level. The investigation was requested by U.S. Trade Representative Katherine Tai to support the U.S. negotiations with the EU on the Global Arrangement. *See Letter from Ambassador Katherine Tai to the Honorable David Johanson, Chairman, U.S. International Trade Commission* (June 5, 2018) ("Tai Letter"), https://ustr.gov/sites/default/files/Section%20332%20Request%20Letter_Steel%20and%20Aluminum%20GHG%20Emissions.docx.pdf .

[7] *See id.* at 2 (requesting "that the Commission use information obtained through the questionnaires and external data sources to estimate the highest (e.g., the 50th through the 90th percentiles) and the average GHG emissions intensity of steel and aluminum produced in the United States by product category in 2022.")

[8] *See generally OECD Best Practice Principles for Regulatory Policy*: *International Regulatory Co-operation* (2021),https://www.regulation.org.uk/library/2021-OECD-International_Regulatory_Cooperation-Best_Practice_Principles.pdf.

[9] *See* Alan O. Sykes, *The (Limited) Role of Regulatory Harmonization in International Goods and Services markets*, 2 J. Int'l Econ. L. 49 (1999) ("harmonization will often lack any political constituency and thus instances of true harmonization will be rare.")

[10] Gregory Shaffer, *Alternatives for Regulatory Governance under TTIP: Building from the Past,* 22 Colum. J. Eur. L. 403 (2016) at 405.

[11] *See* Tai Letter, *supra*, at 2 ("For purposes of this investigation, GHG emissions intensity refers to the quantity of GHG emissions (in metric tons of CO_2 equivalent terms) per metric ton of steel or aluminum produced …")

[12] *See* CBAM Regulation, *supra*, Annex IV, para. 1(c) ("'specific embedded emissions' means the embedded emissions of one tonne of goods, expressed as tonnes of CO_2e emissions per tonne of goods").

[13] European Commission, *Guidance Document on CBAM Implementation for Installation Operators Outside the EU* (December 8, 2023) ("EC Guidance Document"), https://taxation-customs.ec.europa.eu/system/files/2023-12/Guidance%20document%20on%20CBAM%20implementation%20for%20installation%20operators%20outside%20the%20EU.pdf, Section 4.2.

[14] *See* Notice of Investigation, *supra***.**

[15] Congressional Research Service, *EPA's Greenhouse Gas Reporting Program* (March 20, 2023), https://crsreports.congress.gov/product/pdf/IF/IF11754.

[16] CBAM Regulation, Article 3; CBAM Regulation, Article 3; European Commission, *Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023* ("EC Implementing Reg."), Annex II, Section 1, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_228_R_0006#d1e40-94-1 .

[17] U.S. International Trade Commission, *Proposed Methodology for Generating Product-Level Emissions of U.S. Steel and Aluminum*, Section II ("ITC Proposed Methodology") (copy on file with author), Sections IV and V.

[18] CBAM Regulation, Article 3.

[19] ITC Proposed Methodology, Section VI.

[20] In the CBAM framework's product-level emissions calculations, emissions from precursors are then allocated to either direct or indirect emissions based on the existing definitions. The isolation of the "precursor" category in this table is meant to draw comparison between the taxonomies of each framework, not to address how emissions will be tallied in the calculation stage.

[21] EC Guidance Document, Section 4.2.

[22] ITC Proposed Methodology, Section VII.

[23] Both the U.S. and EU approaches use the IPCC standards for Global Warming Potentials. *See* 40 CFR Part 98, Subpart A, Table A–1 ("Global Warming Potentials"), https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-98; EC Guidance Document, 6.1.4, at 87, footnotes 59 & 60.

[24] European Commission, *Commission Implementing Regulation (EU) 2023/1773 of 17 August 2023* ("EC Implementing Reg."), Annex II, Section 2, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2023_228_R_0006#d1e40-94-1.

[25] U.S. International Trade Commission, *Proposed Methodology for Generating Product-Level Emissions of U.S. Steel and Aluminum*, Section II ("ITC Proposed Methodology") (copy on file with author); EPA, Iron *and Steel Production—Final Rule: Mandatory Reporting of Greenhouse Gases*, https://www.epa.gov/sites/default/files/2015-02/documents/infosheetqironandsteelproduction.pdf .

[26] EC Guidance Document, Section 5.6; ITC Proposed Methodology, Section II.

[27] EC Guidance Document, Section 5.6.3.1, Figure 5-6.

[28] Commission Implementing Reg., Annex II, Section 3.11-16.

[29] ITC Proposed Methodology, *USITC*, Section II.

[30] Harmonization of measurement processes is generally viewed as less burdensome than harmonization of substantive regulatory standards. *See* Shaffer, *supra* at 405 n.7 ("A less ambitious variant of harmonized product standards is the harmonization of testing procedures and data requirements.")

[31] ITC Proposed Methodology, Section V.

[32] EC Implementing Reg., Annex III, Section B.3.1.

[33] EC Implementing Reg., Annex III, Section B.3.2.

[34] EC Implementing Reg., Annex III, Section B.6.1.

[35] Section V; "Subpart C–General Stationary Fuel Combustion Sources," *Code of Federal Regulations*, https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-98/subpart-C, §98.33.b.

[36] EC Implementing Reg., Annex III, Section A.1.1.d.

[37] EC Implementing Reg., Annex III, Section D.2.

[38] ITC Proposed Methodology, Section VI.

[39] EC Guidance Document, Section 6.8.2.

[40] ITC Proposed Methodology, Section VII.

[41] OECD, Public Governance and Territorial Development Directorate Regulatory Policy Committee, *International Regulatory Cooperation: Rules for a Global World,* GOV/RPC(2012)8/REV1 (2013), at 7 ("To keep pace with the need to regulate across borders, the nature of IRC has changed from complete 'harmonisation' of regulation (i.e., uniformity of laws) to more flexible options – such as mutual recognition agreements.")

[42] *See generally* Correia de Brito, A., C. Kauffmann and J. Pelkmans, *The Contribution of Mutual Recognition to International Regulatory Cooperation*, *OECD Regulatory Policy Working Papers*, No. 2, OECD Publishing, Paris (2016) ("OECD (2016)"), https://www.oecd.org/regreform/WP2_Contribution-of-mutual-recognition-to-IRC.pdf .

[43] *See* OECD (2106) at 10:

> Although the principle of mutual recognition is employed with [mutual recognition agreements], it is strictly confined to the recognition of technical competence of designated foreign bodies, in the exporting country, in specific product markets, to perform conformity assessment for products to the rules and procedures of the importing country. The latter country neither gives up nor adapts any safety, health, environment and consumer protection objectives, nor does it have to change any existing procedure for conformity assessment.

See also Shaffer, *supra*, at 405-06 ("although there would be no mutual recognition of standards, the mutual recognition of CABs would permit a CAB within the jurisdiction of one party to assess and certify the conformity of a product to the standards of the other party to the agreement. . . reduc[ing] compliance costs.")

[44] Article 6.3 of the TBT Agreement, *supra,* encourages the use of MRAs for conformity assessment procedures: "Members are encouraged, at the request of other Members, to be willing to enter into negotiations for the conclusion of agreements for the mutual recognition of results of each other's conformity assessment procedures."

[45] See 1997 U.S.-EU MRA.

[46] *See* CBAM Regulation, Article 8 ("Verification of embedded emissions") Article 18 ("Accreditation of Verifiers"), and Annex VI ("Verification principles and content of verification reports for the purpose of Article 8").

[47] Article 8(3),

[48] Article 18(1) & (3).

[49] Shaffer, *supra*, at 405 (discussing "*mutual recognition of standards* pursuant to which one country must accept a product from another regardless of the detailed regulatory requirements that other country adopts, provided that country's regulatory requirements are essentially equivalent.")

[50] *See* OECD (2106) at 10:

> there are only two examples of . . . mutual recognition [of substantive standards] – the EU and Trans-Tasman – and they have been made possible by a uniquely deep form of economic integration and some common institutional framework with responsibilities at high political level.

[51] *See* Shaffer, *supra*, at 406.

[52] "Greenhouse Gas Emissions Trading: A Cost-Effective Solution to Climate Change | WCI, Inc.", wci-inc.org/.

[53] "Purpose | Our Work." n.d. WCI, Inc. Accessed February 9, 2024. https://wci-inc.org/our-work/purpose.

[54] "Approach | Our Work." n.d. WCI, Inc. Accessed January 30, 2024. https://wci-inc.org/our-work/approach.

[55] Design for the WCI Regional Program, 2010. https://wcitestbucket.s3.us-east-2.amazonaws.com/amazon-s3-bucket/documents/en/wci-program-design-archive/WCI-ProgramDesign-20100727-EN.pdf. (p.7)

[56] See WCI, *Final Essential Requirements of Mandatory Reporting* (2010, amended for Canadian Harmonization), https://www2.gov.bc.ca/assets/gov/environment/climate-change/ind/quantification/wci-2011.pdf. Some Canadian jurisdictions are developing a one window GHG reporting interface, which would meet federal and provincial requirements.

[57] Federal Office for the Environment (Switzerland), *Linking the Swiss and EU emissions trading systems,*" https://www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/reduction-measures/ets/linking-swiss-eu.html; European Council *Linking of Switzerland to the EU emissions trading system - entry into force on 1 January 2020*, (December 9, 2019), https://www.consilium.europa.eu/en/press/press-releases/2019/12/09/linking-of-switzerland-to-the-eu-emissions-trading-system-entry-into-force-on-1-january-2020/.

[58] *Agreement between the European Union and the Swiss Confederation on the linking of their greenhouse gas emissions trading systems*, Official Journal of the European Union (December 7, 2017)("EU-Swiss Agreement"), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A22017A1207%2801%29, Chapter VI, Article 12; Chapter V, Article 10.

[59] *Id.*, Chapter V, Article 11.

[60] *Id.*, Chapter VI, Article 13.

[61] *Id.*, Chapter VII, Article 14.

[62] EU-Swiss Agreement, Annex I, Section A**.** For the EU ETS, the Agreement stipulates Article 14 and Annex IV of Directive 2003/87/EC ("Directive 2003/87/EC of the European Parliament and of the Council," *Official Journal of the European Union*, October 13, 2003, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003L0087) as well as Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council. "Commission Regulation (EU) No 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council," *Official Journal of the European Union*, June 21, 2012, https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32012R0601.

For the Swiss ETS, the Agreement references Article 20 of the CO_2 Act ("Federal Act on the Reduction of CO_2 Emissions," *The Federal Assembly of the Swiss Confederation*, December 23, 2011, https://www.fedlex.admin.ch/eli/cc/2012/855/en.) and Articles 49, 50-53, and 55 of the CO_2 ordinance. "Ordinance on the Reduction of CO_2 Emissions," *The Federal Assembly of the Swiss Confederation*, November 30, 2012, https://climate-laws.org/documents/ordinance-for-the-reduction-of-co2-emissions-co2-ordinance-sr-641-711_7fff?id=ordinance-for-the-reduction-of-co2-emissions-co2-ordinance-sr-641-711_bb30.

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[64] Government of Canada*, Exploring Border Carbon Adjustments for Canada* (2021), https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments/exploring-border-carbon-adjustments-canada.html.

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[66] Tomas Gutierrez, *South Korea to Negotiate CBAM Recognition, Kallanish Commodities*,(October 4, 2023), https://www.kallanish.com/en/news/steel/market-reports/article-details/south-korea-to-negotiate-cbam-recognition-1022/.

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