Improving the Interoperability of Trade-related Climate Measures (TrCMs)

Two practical examples

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Thematic Session on "Trade-related climate measures, including interoperability and development aspects"
WTO Committee on Trade and Environment

Introduction

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Research field

Climate change policy — Japan and global

Focus today

Trade-related climate measures (TrCMs): carbon border adjustment and emissions trading

Part of a RIETI research project
(Research Institute of Economy, Trade and Industry)

"Comprehensive Research on Japanese Climate Policy: GX, EU Carbon Border Adjustment Mechanism and U.S. Policy"

Project leaders



Prof. Toshi H. Arimura
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Aim of this presentation

Making “interoperability” of TrCMs tangible through two examples

What “interoperability” means

The ability to transform information collected under one system into information that meets the criteria of another system



Two examples in this presentation

1 **Default values for embedded emissions**

Japan's GX-ETS vs. the EU CBAM

2 **Verification of embedded emissions**

EU CBAM vs. UK CBAM

Example 1

Default values for embedded emissions

Japan's GX-ETS benchmark vs. the EU CBAM default value for Japanese steel

Japan's GX-ETS and the EU CBAM land on the same number

In 2026 both systems calculate an average intensity for Japanese steel

GX-ETS benchmark

2.11 tCO2 / t

Blast-furnace ironmaking (upstream process), top-50% level — basis for free allocation

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EU CBAM default value

2.10 tCO2 / t

Japanese hot-rolled flat steel — used when actual emissions are not reported

Nearly identical — but interoperable?

No. The technical assumptions differ; the match is a coincidence.

The same number rests on different assumptions

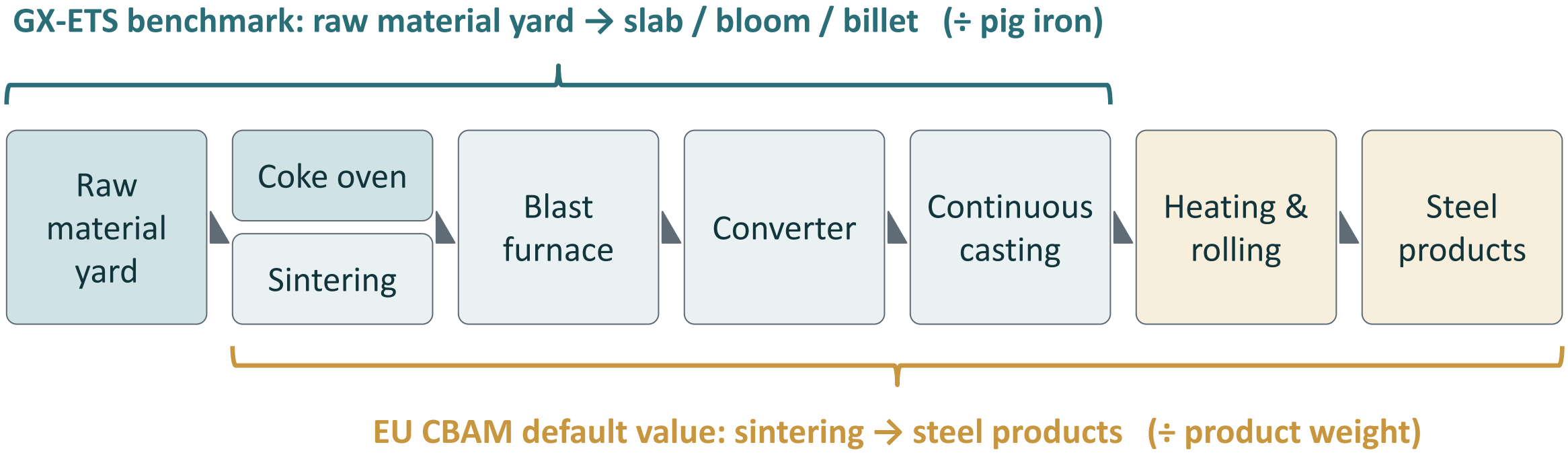
Emissions counted in one system may be excluded from the other — and vice versa

Assumption	GX-ETS benchmark	EU CBAM default value
Coke oven & on-site power	Included	Excluded
By-product gas	Fully included	Treatment unclear
Numerator: process scope	Raw material yard → continuous casting	Up to each product
Denominator: output	Pig-iron weight	Product weight
Statistic used	Top-50% level on the operator production–intensity curve	Country average (mean)

Neither value can be converted into the other until these assumptions are known and their effects on emission intensities quantified.

The two boundaries overlap only in the middle

Integrated steelworks: where each system starts and stops counting



On-site power & boilers: in the GX-ETS benchmark, outside EU CBAM.

Transparency first, then quantify the differences

Average emission intensities are comparable once the technical assumptions are consistent

1

Make the assumptions transparent

Internationally, for benchmarks and default values — in TrCMs and in domestic carbon pricing alike.
Necessary for objective, interoperable intensities

2

Quantify each difference

Once the effect of each assumption on the intensity is known, a value from one system can be converted into the other's

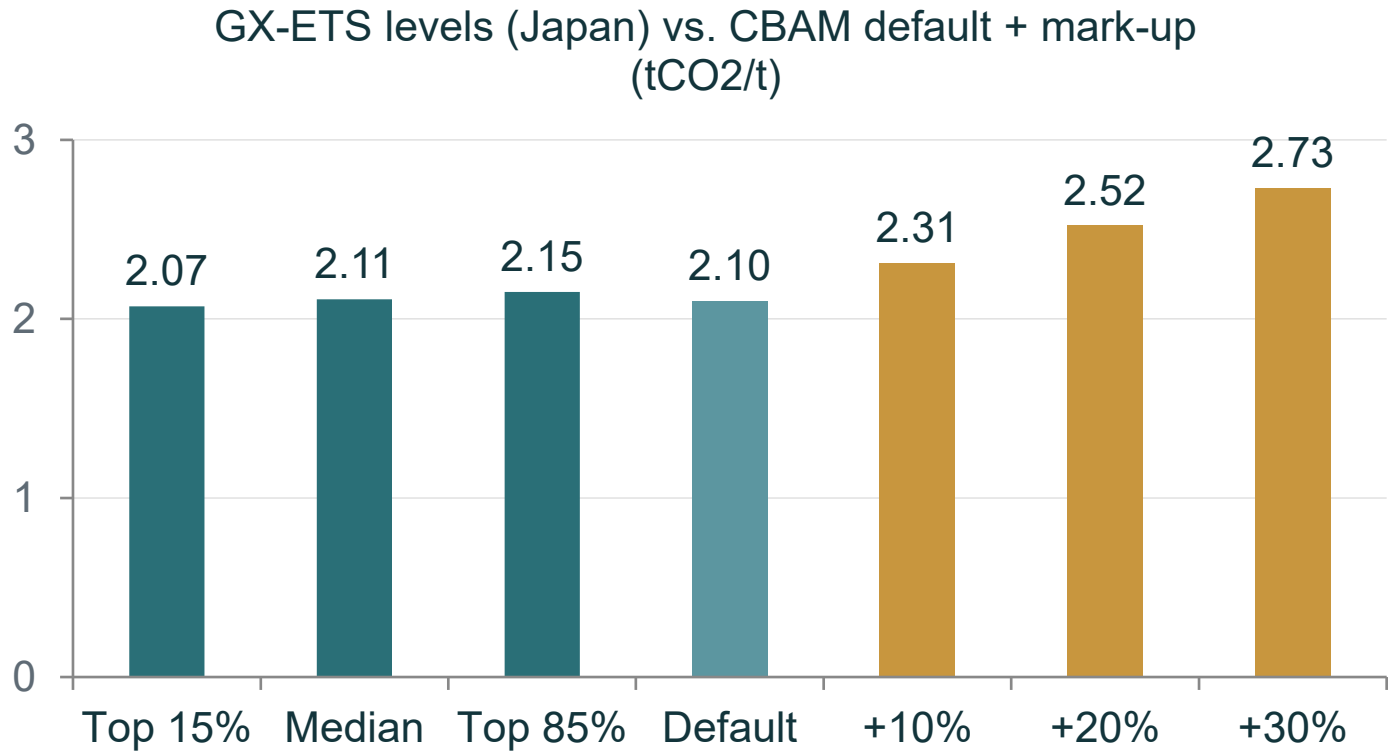
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Support low-income countries and LDCs

Default values matter most where actual emissions are hard to measure; help in quantifying intensities also contains their MRV costs

The uniform mark-up far exceeds Japan's spread

EU CBAM adds 10% (2026), 20% (2027), 30% (2028–) to default values for every country



EU: why one uniform rate?

Installation data from third countries are hard to verify, so the spread among EU installations is used as a proxy for all countries (Reg. 2025/2621, Recital 4)

Japan: under 4% between operators

Installations vary more than operators — but not by 10–30%

Implication: international transparency of intensities would allow country-specific mark-ups

Example 2

Verification of embedded emissions

EU CBAM vs. UK CBAM — who may verify, and can one verification serve both?

The UK accepts foreign accreditation; the EU does not

Both require third-party verification of actual emissions and verifiers to be accredited by designated accreditation bodies.

EU CBAM **Closed**

- Verifier accredited by an EU Member State's national body
- UK-only accreditation is not accepted

UK CBAM **Open**

- Verifier accredited by a full member of Global ACI meeting international standards
- Third-country (incl. EU) accreditation accepted

Global ACI: the global umbrella body of accreditation bodies

One measurement first

The UK design is more interoperable with other systems.
But does one verification then serve both? Not yet.

1 Today

The UK does not accept a verification done for the EU CBAM; even the same verifier must verify again under UK rules

2 Why

A verification checks compliance with one calculation methodology — different methodologies mean different verifications

Way forward: one measurement first

A single verification for different systems needs a common methodology for measuring actual emissions (the “M” in MRV) — the UK is moving to align much of its methodology with the EU's

Two ways to keep verification costs down

Verification is a heavy financial burden for exporters, especially SMEs

1

Accept verifiers accredited by any full member of Global ACI

As UK CBAM does — so that companies don’t need to look for different verifiers depending on the export destination

2

Adopt common emissions measurement methodologies to the extent possible

And make residual differences interoperable — so that the same verification can be used across systems, cutting the burden further

Three steps toward interoperable TrCMs

Lessons from the two examples

1. **Transparency of benchmarks and default values**

   Publish the technical assumptions so differences become visible — and convertible

2. **Common methodologies for actual emissions**

   So that the emissions never need multiple verifications

3. **Common accreditation for verifiers**

   Accept verifiers accredited by any full member of Global ACI

Thank you!

References

Ueno, T. (2026). “The Devil is in the Subheadings: Estimating product- and country-specific carbon costs imposed on imports under the EU CBAM and their implications for trade,” RIETI Discussion Paper 26-J-034.

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