

TEXTE

154/2023

Interim report

# Monitoring, Reporting and Verification in a Carbon Border Adjustment Mechanism

Which rules and standards for calculating and certifying product-related emissions?

by:

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**publisher:**

German Environment Agency



TEXTE 154/2023

Ressortforschungsplan of the Federal Ministry for the  
Environment, Nature Conservation, Nuclear Safety and  
Consumer Protection

Project No. (FKZ) 3721 42 504 0

Report No. (UBA-FB) FB001255/ENG

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On behalf of the German Environment Agency

## Imprint

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[buergerservice@uba.de](mailto:buergerservice@uba.de)  
Internet: [www.umweltbundesamt.de](http://www.umweltbundesamt.de)

### **Report performed by:**

Öko-Institut e.V.  
Borkumstr. 2  
13189 Berlin  
Germany

### **Report completed in:**

May 2023

**Edited by:** Section I 1.3 Environmental Law  
Dr. Dana Ruddigkeit

Publication as pdf:

<http://www.umweltbundesamt.de/publikationen>

ISSN 1862-4804

Dessau-Roßlau, November 2023

This publication is intended to contribute to the scientific debate on design options for a Carbon Border Adjustment Mechanism. Its content lies solely in the responsibility of the authors and does not reflect any kind of legal position of the Federal Environment Agency.

### **Abstract: Monitoring, Reporting and Verification in a Carbon Border Adjustment Mechanism**

The EU has adopted legislation that introduces a Carbon Border Adjustment mechanism (CBAM) to impose similar costs for embedded carbon emissions on imports as those faced by production covered by the European Emissions Trading Scheme (EU ETS). This plan raises complex issues regarding practical and legal feasibility, including potential legal challenges with respect to international trade law. A key aspect of the CBAM are effective rules for the monitoring, reporting and verification, (MRV) of emissions from imports. The creation of such standards has to meet seemingly contradictory objectives: On the one hand, MRV for a CBAM should ideally be as reliable and accurate as it is in the European ETS. If not, there would be a risk of importers declaring less emissions for imported products than is actually embedded in them. This would give competitive advantages to imports, which would exacerbate the risks of carbon leakage - the shift of emission-intensive production to less regulated countries - which the CBAM is supposed to mitigate. Such arguments could speak for applying the EU's MRV rules to the CBAM. On the other hand, there are strong arguments in favour of applying trans- or international standards: extending EU rules to imports could face opposition based on their lack of political legitimacy, and it might at first sight entail higher legal risks regarding WTO-law. This study analyses this state of affairs in detail and thus develops a general perspective towards a solution that keeps both objectives in mind.

### **Kurzbeschreibung: Überwachung, Berichterstattung und Prüfung in einem CO<sub>2</sub>-Grenzausgleichsmechanismus**

Jüngst hat die EU ein Gesetz zur Einführung eines Grenzausgleichsmechanismus erlassen. Dieses Gesetz wirft einige Fragen hinsichtlich der praktischen und rechtlichen Durchführbarkeit auf, einschließlich möglicher rechtlicher Herausforderungen im Hinblick auf das internationale Handelsrecht. Ein wichtiger Aspekt des CBAM sind effektive Vorgaben für die Überwachung und Berichterstattung (MRV) von Emissionen aus Importen. Diese müssen scheinbar widersprüchlichen Zielen gerecht werden: Einerseits sollte ein MRV-Mechanismus für ein CBAM genauso zuverlässig und genau sein wie im europäischen ETS. Andernfalls bestünde die Gefahr, dass Importeure für eingeführte Produkte weniger Emissionen deklarieren, als tatsächlich in ihnen enthalten ist. Dies würde den Importprodukten Wettbewerbsvorteile verschaffen, was das Risiko von Carbon Leakage - der Verlagerung emissions-intensiver Produktion in weniger stark regulierte Länder -, das durch den CBAM gerade eingedämmt werden soll, noch verschärfen könnte. Solche Argumente könnten für die Übertragung der europäischen MRV-Regeln auf den CBAM sprechen. Andererseits gibt es starke Argumente für die Anwendung trans- oder internationaler Standards: Die Ausweitung von EU-Standards auf Importe könnte auf Widerstand stoßen, der auf mangelnder politischer Legitimität beruht, und bringt zumindest prima facie höhere WTO-rechtliche Risiken mit sich. Die vorliegende Studie analysiert diesen Sachverhalt im Detail und entwickelt so eine grundsätzliche Perspektive für eine Lösung, die beide Ziele im Auge behält.

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## List of abbreviations

<b>CBAM</b>	Carbon Border Adjustment Mechanism
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalents
<b>DIN</b>	Deutsches Institut für Normung e.V.
<b>ECJ</b>	European Court of Justice
<b>EER</b>	Extraterritorially Extended Regulation Model
<b>ETS</b>	European Emissions Trading Scheme
<b>GATT</b>	General Agreement on Tariffs and Trade
<b>GHG</b>	greenhouse gas
<b>ISO</b>	ISO
<b>MR</b>	Monitoring and Reporting
<b>MRV</b>	Monitoring, Reporting, Verification
<b>PCR</b>	product category rules
<b>SMEs</b>	small and medium enterprises
<b>TBT</b>	WTO Agreement on Technical Barriers to Trade
<b>TIR</b>	Transnationally Integrated Regulation Model
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>WTO</b>	World Trade Organization

## Summary

The EU's new Carbon Border Adjustment Mechanism (CBAM) is supposed to impose similar costs on imports for embedded carbon emissions as those imposed on European companies covered by the European Emissions Trading Scheme (EU ETS). It aims at reducing competitive disadvantages for European companies and avoid the risk of carbon leakage. The introduction of a CBAM raises complex issues regarding its practical and legal feasibility, including potential legal challenges with respect to International Trade Law.

While debates and analyses mainly focus on the general legal compliance of a CBAM, this paper concentrates on a more specific issue: To be effectively implemented and enforced, a CBAM depends on reliable and practically manageable rules and standards for the monitoring methodology to determine emissions from imports, as well as for the reporting and verification of these emissions (Monitoring, Reporting and Verification, hereafter: MRV).

Without an accurate and reliable assessment of the emissions related to the production of imported goods, their embedded emissions cannot be priced at (approximately) comparable levels in relation to the products of European production sites subjected to the ETS regime. Deficiencies in the accuracy and reliability of MRV rules will typically result in fewer emissions being calculated and priced than are in fact embedded in products. In such cases, incentives to avoid competitive disadvantages from the ETS and to move production facilities abroad would remain. As a consequence, the purpose of the CBAM to avoid carbon leakage could be jeopardized.

The design of MR rules and standards for the CBAM can be guided by two general models, the **Extraterritorially Extended Regulation (EER)** model and the **Transnationally Integrated Standardization (TIR)** model. An EER model would transfer domestic rules on MRV to foreign manufacturers, while a TIR model would integrate international or transnational standards. While, in reality, elements of both models may be combined, we distinguish these two models to illustrate and discuss the arguments for and against the models.

Design decisions on the specification of CBAM-MRV rules take place in a certain field of tension. On the one hand, the effectiveness of a MRV regime in terms of a functioning CBAM depends on them being as comparable as possible to the MRV rules of the European ETS in terms of their scope, accuracy and reliability. The regulatory rationale of a CBAM thus presupposes a constant reconciliation of the MR requirements under the CBAM and the respective rules under the ETS. This means that the European legislator must have sufficient control over the content of these standards to ensure this comparability in the event of necessary changes to the ETS-MRV. The EER model has advantages in this respect.

On the other hand, normative considerations, but also aspects of effectiveness speak in favour of choosing cooperative, international procedures for standardization. Any unilateral provision of the regulatory basis for imposing a carbon price on foreign goods will probably face opposition from those states that have so far avoided effective carbon-mitigation policies and thereby have sustained competitive advantages for their manufacturers. As such, a MRV regime could be confronted with accusations of "legitimacy gaps",<sup>1</sup> which not only pose problems from a normative perspective. Granting trading partner countries a say in MRV rules might be a way of fostering legitimacy and international acceptance of the scheme. A general option to enable such a say is to refer to technical standards developed in international standardisation processes to substantiate the CBAM-MRV. In this paper, such an option has been

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<sup>1</sup> Hadjiyianni (2019), The EU as a global regulator for environmental protection, 297.



termed Transnationally Integrated Regulation (TIR-model). More specifically, it considers the possibility of the MRV mechanism being substantiated by reference to existing ISO standards.

The ambivalent assessment from a practical point of view is also reflected in the legal analysis of the two regulatory options. The legal analysis, however, allows us to draw a number of conclusions.

Indeed, the relevant WTO law privileges international standards and therefore seems, *prima facie*, to favour a TIR model: The introduction of MRV obligations for importers will create legally significant obstacles to trade. While such obstacles to trade can be justified under WTO law by legitimate policy objectives, such as combatting climate change, they must be coherent, fit-for-purpose and not create unjustifiable discrimination.<sup>2</sup> They might be easier to justify if they stem from international rules. On closer examination, however, WTO law also provides principles that temper the advantages of a TIR model referring to existing ISO standards: importantly, case law makes the legal prioritization of international standards increasingly conditional on the observance of substantial principles such as transparency, impartiality and consensus orientation in their elaboration, which are, according to some critics, still not sufficiently taken into account in ISO standardization processes. In addition, the effectiveness of the CBAM-MRV regime with regard to the objectives of the CBAM in terms of climate protection policy is also a relevant benchmark for their justifiability under international trade law. Hence, even a mechanism that follows a TIR model would have to be capable of ensuring the effective achievement of the CBAM's objectives.

EU law also provides evidence, on the one hand, that a MRV mechanism should at least take into account procedural principles like fairness, inclusiveness and transparency for the validity of private international standards. It is precisely when compliance with such principles, as in the case of reference to ISO standards, might be questioned, that it also becomes critical that the standards referred to are also technically and scientifically adequate. The effectiveness of MRV-rules to ensure the functioning of a CBAM thus may be seen as a decisive condition of the lawfulness of these rules. Since, according to our analysis, the existing ISO standards alone cannot fully ensure either effectiveness or input legitimacy, the TIR model examined here does not offer a simple solution.

In summary, instead of a clear recommendation for existing policy options, the analysis shows that the choice between design options for a CBAM-MRV has to take into account seemingly contradictory principles. Effectiveness and legality of a CBAM-MRV require both the control of the European legislator and a delegation of this competence to international processes. The solution to this conundrum will lie in a blend of the ideal types considered here: An EER model could be based substantially on recognised ISO standards, as far as possible, and supplement these standards unilaterally where effectiveness and reliability comparable to the EU ETS require it. In addition, the further development of the content of MRV rules that meet high standards of technical and scientific validity could take place in a transparent and inclusive international forum. It is precisely the technical and scientific orientation of such standards that make it seem easier to achieve pragmatic results through international cooperation compared to economic issues such as the level of the carbon price. Ongoing debates about a climate club might help to kick-start such a process.

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<sup>2</sup> See [https://www.wto.org/english/tratop\\_e/envir\\_e/climate\\_intro\\_e.htm#role](https://www.wto.org/english/tratop_e/envir_e/climate_intro_e.htm#role).

## Zusammenfassung

Die jüngst verabschiedete Verordnung der Europäischen Union über einen Grenzausgleichsmechanismus (Carbon Border Adjustment Mechanism - CBAM) zielt darauf ab, Importe mit vergleichbaren Kosten für die mit ihrer Herstellung verbundenen Kohlendioxidemissionen zu belasten, wie sie europäischen Unternehmen durch das Europäische Emissionshandelssystem (EU ETS) auferlegt werden. Dadurch sollen Wettbewerbsnachteile für europäische Unternehmen verringert und das Risiko der Verlagerung von Emissionen ins Ausland (das sog. Carbon Leakage) reduziert werden. Die Einführung eines CBAM wirft komplexe Fragen hinsichtlich dessen praktischer und rechtlicher Umsetzbarkeit auf, einschließlich seiner WTO-rechtlichen Zulässigkeit.

Ein zentraler Aspekt eines CBAM ist die Überwachung und Berichterstattung (Monitoring, Reporting and Verification - MRV) von Emissionen aus Importen, die weitere Herausforderungen mit sich bringen. Ohne eine genaue und verlässliche Bewertung der Emissionen, die mit der Produktion importierter Waren verbunden sind, können die in diesen enthaltenen Emissionen nicht auf einem (annähernd) vergleichbaren Niveau mit den Produkten europäischer Produktionsstätten, die dem ETS-System unterliegen, bepreist werden. Unzulänglichkeiten bei der Genauigkeit und Zuverlässigkeit von MRV-Regeln können dazu führen, dass weniger Emissionen berechnet und bepreist werden, als tatsächlich in den Produkten enthalten sind. In solchen Fällen würden Anreize bestehen bleiben, Wettbewerbsnachteile durch das ETS zu vermeiden und Produktionsstätten ins Ausland zu verlagern. Infolgedessen wäre der Zweck der CBAM, die Verlagerung von CO<sub>2</sub>-Emissionen zu vermeiden, gefährdet.

Die Gestaltung von MRV-Regeln und Standards für CBAM kann sich an zwei idealtypischen Modellen orientieren, einer extraterritorial erweiterten Regulierung (EER) und einer transnational integrierten Regulierung (TIR). Das EER-Modell überträgt die inländischen MRV-Vorschriften auf ausländische Hersteller, während das TIR-Modell internationale oder transnationale Standards integriert. In der Praxis können Elemente beider Modelle kombiniert werden. Wir nehmen diese idealtypische Unterscheidung der beiden Modelle vor, um die Argumente für und gegen Regulierungsoptionen zu illustrieren und zu diskutieren.

Designentscheidungen zur Spezifikation von CBAM-MRV Regeln finden in einem Spannungsfeld statt. Einerseits hängt die Wirksamkeit von MRV-Regelungen im Sinne eines funktionierenden CBAM davon ab, dass diese hinsichtlich Umfang, Genauigkeit und Verlässlichkeit möglichst vergleichbar mit den MRV-Regeln des EU-ETS sind. Die regulatorische Logik des CBAM setzt daher einen stetigen Abgleich der MRV-Anforderungen des CBAM mit den entsprechenden Regeln des ETS voraus. Das bedeutet, dass der europäische Gesetzgeber eine ausreichende Kontrolle über den Inhalt dieser Normen haben muss, um diesen Abgleich im Falle notwendiger Änderungen der ETS-MRV zu gewährleisten. In dieser Hinsicht hat ein EER-Modell also Vorteile.

Andererseits sprechen normative Erwägungen, aber auch Aspekte der Effektivität für die Wahl internationaler, kooperativer Verfahren der Standardisierung. Eine unilaterale Setzung der regulatorischen Grundlage für die Bepreisung ausländischer Güter könnte mit dem Widerstand von Staaten konfrontiert werden, die bisher auf wirksame Maßnahmen zur Emissionsminderung verzichtet und dadurch Wettbewerbsvorteile für ihre Hersteller aufrechterhalten haben. Die EU könnte mit dem Vorwurf fehlender Legitimation konfrontiert werden, der nicht nur in normativer Hinsicht Probleme aufwirft. Internationalen Handelspartnern ein Mitspracherecht bei der Erarbeitung von MRV-Regeln einzuräumen, könnte die Legitimität und internationale Akzeptanz des Systems dagegen fördern. Die Bezugnahme auf technische Normen, die im Rahmen internationaler Standardisierungsprozesse entwickelt wurden, ist eine Option, um ein

solches Mitspracherecht zu schaffen. In diesem Papier wurde eine solche Option als transnational integrierte Regulierung (TIR-Modell) bezeichnet. Konkret wurde die Möglichkeit untersucht, den MRV-Mechanismus durch Verweis auf bestehende ISO-Standards zu untermauern.

Das ambivalente Ergebnis der Betrachtung aus praktischer Sicht spiegelt sich auch in der rechtlichen Analyse der beiden Regelungsoptionen wider. Dennoch lassen sich einige rechtliche Schlussfolgerungen ziehen:

Das einschlägige WTO-Recht privilegiert in der Tat internationale Normen und scheint daher prima facie ein TIR-Modell zu favorisieren: Es liegt auf der Hand, dass die Einführung von MRV-Verpflichtungen für Importeure zu rechtlich relevanten Handelshemmnissen führen kann. Solche Handelshemmnisse können zwar vor dem WTO-Recht gerechtfertigt werden, wenn damit legitime politische Ziele wie die Bekämpfung des Klimawandels verfolgt werden. Sie müssen jedoch kohärent und zweckmäßig sein und dürfen nicht zu einer ungerechtfertigten Diskriminierung führen. Eine solche Diskriminierung wäre wiederum leichter zu rechtfertigen, wenn sie auf international konsentierten Regeln zurückgeht. Bei näherer Betrachtung enthält das WTO-Recht jedoch auch Grundsätze, die die Vorteile eines TIR-Modells, das sich auf bestehende ISO-Normen bezieht, relativieren: Vor allem macht die WTO-Rechtsprechung die rechtliche Privilegierung internationaler Normen zunehmend von der Einhaltung von Prinzipien wie Transparenz, Unparteilichkeit und Konsensorientierung bei ihrer Ausarbeitung abhängig gemacht, die nach Ansicht einiger Kritiker in ISO-Normungsprozessen noch immer nicht ausreichend berücksichtigt werden. Die Effektivität der CBAM-MRV-Regeln im Hinblick auf die klimaschutzpolitischen Ziele des CBAM ist ebenfalls ein relevanter Maßstab für deren völkerrechtliche Vertretbarkeit. Auch ein Mechanismus, der einem TIR-Modell folgt, müsste also die effektive Zielerreichung des CBAM sicherstellen können.

Auch das europäische Recht liefert einerseits Anhaltspunkte dafür, dass die Rechtmäßigkeit eines MRV-Mechanismus zumindest der zunehmenden rechtlichen Bedeutung von Verfahrensgrundsätzen wie Fairness, Inklusivität und Transparenz für die Geltung privater internationaler Standards Rechnung tragen sollte. Gerade, wenn die Einhaltung solcher Grundsätze, wie im Fall der Bezugnahme auf ISO-Standards, in Frage gestellt werden könnte, wird es auch entscheidend, dass die in Bezug genommenen Normen auch in technischer und wissenschaftlicher Hinsicht angemessen sind. Die Effektivität von MRV-Normen zur Sicherstellung des Funktionierens eines CBAM kann somit als eine entscheidende Voraussetzung für die rechtliche Zulässigkeit dieser Regeln angesehen werden. Da, nach unserer Analyse, die bestehenden ISO-Normen allein weder Effektivität noch Input-Legitimität vollständig gewährleisten können, bietet das hier untersuchte TIR-Modell keine einfache Lösung.

Zusammenfassend bringt die Analyse keine eindeutige Empfehlung für eine einfache rechtspolitische Option zutage, sondern illustriert vielmehr, dass bei der Wahl zwischen den Gestaltungsoptionen für einen CBAM-MRV scheinbar widersprüchliche Prinzipien berücksichtigt werden müssen. Praktikabilität wie auch Rechtmäßigkeit eines CBAM-MRV erfordern sowohl die Kontrolle durch den europäischen Gesetzgeber, als auch die internationale Integration und Kooperation. Die Lösung für dieses Dilemma dürfte in einer Kombination der hier betrachteten Idealtypen liegen: Ein EER-Modell könnte sich auf anerkannte ISO-Standards stützen, soweit dies möglich ist, und diese Standards unilateral dort ergänzen, wo es die Vergleichbarkeit mit den Anforderungen des EU-ETS erfordert. Darüber hinaus könnte die inhaltliche Weiterentwicklung von anspruchsvollen MRV-Standards in einem transparenten und integrativen internationalen Forum erfolgen. Im Verhältnis zu ökonomischen Fragen wie der nach der CO<sup>2</sup>-Bepreisung dürfte die internationale Kooperation hinsichtlich technischer und wissenschaftlicher Aspekte wie MRV-Standards leichter und schneller zu Ergebnissen führen.

Laufende Debatten über einen Klima-Club könnten dazu beitragen, einen solchen Prozess in Gang zu bringen.

## 1 Introduction

The new EU regulation for a Carbon Border Adjustment Mechanism (CBAM)<sup>3</sup> is currently the subject of lively debate in academia, business, and politics. A CBAM obliges EU importers of electricity and certain products supplied from abroad to purchase emission allowances. Its goal is to impose costs on imports for embedded CO<sub>2</sub>e emissions that are comparable to the costs imposed on European companies covered by the European Emissions Trading Scheme (ETS). A CBAM thereby aims at reducing competitive disadvantages for European companies and to reduce risks of so-called carbon leakage which can arise when the production of carbon intensive products in one country, as a reaction to rising costs due to local emissions policies, such as an Emissions Trading Scheme, is shifted to less regulated countries, resulting in higher overall carbon emissions.

The unilateral introduction of a CBAM raises complex issues regarding its practical and legal feasibility. A CBAM-Mechanism necessarily stipulates specific obligations for producers in third countries, which may imply certain legal or de facto obstacles for trade and thus pose legal challenges with respect to WTO-Law, which, if certain conditions aren't met, may prohibit such regulatory obstacles. While debates and analyses mainly focus on the legality of a CBAM, this paper concentrates on a more specific issue: To be effectively implemented and enforced, a CBAM depends on reliable and practically manageable rules and standards for the monitoring methodology to determine emissions from imports, as well as for the reporting and verification of these emissions (Monitoring, Reporting and Verification, hereafter: MRV). The need to collect the relevant data for reporting at facilities abroad in a transparent and reliable manner, as well as the verification of emissions reports, poses new practical challenges. The specific design, the legal nature and the – national or international – provenance of the rules and standards for MRV could also be relevant for the compliance of a CBAM-regulation with International Trade Law.

The design of such rules and standards for MRV could be guided by two general models: According to the first model, domestic rules on MRV, more specifically the rules of the EU ETS Monitoring and Reporting Regulation (MR regulation, EU 2018/2066) and the Verification Regulation (EU 2018/2067), could be transferred as far as possible to MRV-standards of a CBAM, so that foreign manufacturers are practically obliged to comply with European rules (hereafter: Extraterritorially Extended Regulation: EER-Model). According to the second model, the Commission could integrate *international or transnational standards* into the regulation (Transnationally Integrated Regulation: TIR-Model): In particular, a CBAM Regulation could refer to private international standards and standardisation processes to reflect the transnational character of the commodity flows to be regulated.

The adopted CBAM sticks to the first model in some respects – for example, it integrates the European standards for the verification and accreditation in the context of the ETS<sup>4</sup>. The more specific issue, of how reliable and sufficiently ambitious MRV-methods should be integrated into the regulation, however, is largely left to be settled in implementing acts.

Both for the evaluation of the CBAM and with respect to forthcoming discussions on the implementing acts, a well-founded discussion of the arguments for and against the inclusion of international standards as opposed to European standards is required. This paper aims to contribute to this weighing up of different design options focussing on direct emissions of

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<sup>3</sup> REGULATION (EU) 2023/956 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 10 May 2023 establishing a carbon border adjustment mechanism, online zugänglich unter <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0956>.

<sup>4</sup> Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 on the verification of data and on the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council.

industrial products. After first outlining the main features of the MRV mechanism in its differences to the ETS, it considers some practical arguments in favour of the inclusion of existing international standards or, conversely, the reference to European standards. In a second step, legal arguments for and against one or the other design option are made. The focus here is primarily on global trade law issues.

In the discussion of option 2 (a TIR-model), the legal requirements regarding the content and legal nature of an international standard are also clarified. While, in reality, elements of both approaches might be combined, the assessment is based on the ideal-typical models to highlight the differences and the specific advantages and disadvantages.

An alternative scenario, the negotiation of an international agreement including MRV rules prior to the introduction of a CBAM is not assessed in this paper for several reasons. First, if the international community would undertake comparable efforts to reduce emissions, there would be no risk of carbon leakage due to EU climate policies. Carbon leakage protection measures such as free allocation of allowances and/or the CBAM would not be needed any longer. If the international community cannot commit to comparable efforts, it seems unlikely that they would easily agree to a CBAM agreement. Second, even if the countries trading with the EU supported such negotiations, the process is expected to take several years and thus delay the introduction of the CBAM.

## 2 Comparison of emission monitoring and reporting standards

### 2.1 Monitoring, Reporting und Verification Rules in the EU ETS and CBAM

In the EU ETS, operators report emissions at installation level. The Monitoring and Reporting Regulation<sup>5</sup> specifies the rules in detail. Monitoring rules lay down how emissions are measured. Most operators calculate their emissions stemming from fuels by multiplying the amount used by fuel specific emission factors; only few operators use continuous measuring of emissions. Reporting refers to the transmission of monitoring information in a defined format to the competent authorities as well as timing and periodicity of these reports. The report must be accompanied by a verification report “that concludes with reasonable assurance that the operator's or aircraft operator's report is free from material misstatements” (Verification Regulation EU 2018/2067, Art. 7 (1)).

Operators of installations subject to emissions trading must draw up a monitoring plan to be approved by the national competent authority. Based on the monitoring plan, emissions are reported annually by the operator, those reports are verified by a verifier<sup>6</sup> and reviewed by the national competent authority in relation to anomalies and key issues. Emission reporting is carried out for the entire installation; emissions are not allocated to the products of the installation. Further regulations<sup>7</sup> specify the data reporting needs to receive free allocation, which includes information on production levels.

In a border adjustment, emissions are allocated to the individual product (so called ‘embedded emissions’). In the CBAM Regulation<sup>8</sup>, monitoring principles are laid down in Article 7 and Annex IV. The EU Commission is to be empowered to lay down detailed rules on calculation methods (Art 7(7)). This includes the definition of the system boundaries of the production processes covered, the emission factors as well as plant-specific actual emission values, default emission values and methods to ensure the data reliability to determine default emission values. In doing so, the EU Commission shall build on existing regulations, in particular the Implementing Regulation 2018/2067 on the verification of data and the accreditation of verifiers and the MR regulation (EU 2018/2066) itself. When it comes to building on these existing rules, however, the Commission again has some leeway. For example, the default values in the implementing acts should be adaptable, where necessary, to particular areas, regions or countries to take into account specific objective factors such as geography, natural resources, market conditions, prevailing energy sources or industrial processes.

Annex IV. specifies the embedded emissions to be reported for simple goods (produced entirely from input materials and energy sources that do not include embedded emissions) and complex goods (goods that also include simple goods as inputs).

For simple goods, the formula is as follows:

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<sup>5</sup> Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012 (OJ L 334, 31.12.2018, pp. 1–93).

<sup>6</sup> Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018 on the verification of data and on the accreditation of verifiers pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L 334, 31.12.2018, pp. 94–134);

<sup>7</sup> Commission Implementing Regulation (EU) 2019/1842 of 31 October 2019 laying down rules for the application of Directive 2003/87/EC of the European Parliament and of the Council as regards further arrangements for the adjustments to free allocation of emission allowances due to activity level changes (OJ L 282, 4.11.2019, p. 20–24).

<sup>8</sup> See above, fn. 3.

### Simple goods:

Specific embedded emissions (CO<sub>2</sub>e/t product) = Assigned emissions (CO<sub>2</sub>e) / Production volume in the reporting period (t product)

The assigned emissions are defined as the direct emissions assigned to the production process of the good. Here, the system boundary is highly relevant.

The emissions to be reported for complex goods is proposed to follow the same principle, except that the sum of the assigned emissions is supplemented by the embedded emissions of the input goods (precursors). When defining the system boundary, it is necessary to determine which inputs are considered precursors. It can be assumed that all basic materials produced in installations covered by the EU ETS should be considered as precursors if they serve as an input to finished or semi-finished products.

### Complex goods:

Specific embedded emissions (CO<sub>2</sub>e/t product) = (Assigned emissions (CO<sub>2</sub>e) + embedded emissions of precursors (CO<sub>2</sub>e)) / Production volume in the reporting period (t product)

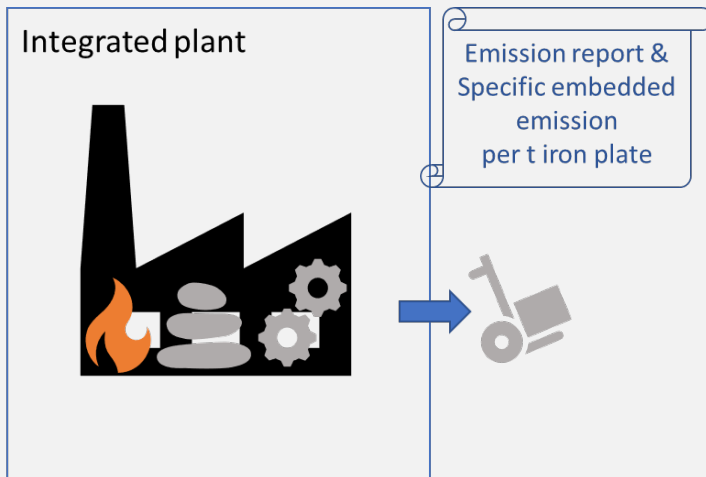
The verification of embedded emissions is regulated in Article 8 and Annex VI. It stipulates the following principles: attitude of professional scepticism, absence of material misstatements and material non-conformities ensured with reasonable assurance, mandatory site visits (unless specific criteria to waive this visit are met) and use the thresholds given in the implementing acts to be adopted by the Commission and the verifiers expert judgment to decide whether misstatements and non-conformities are material.



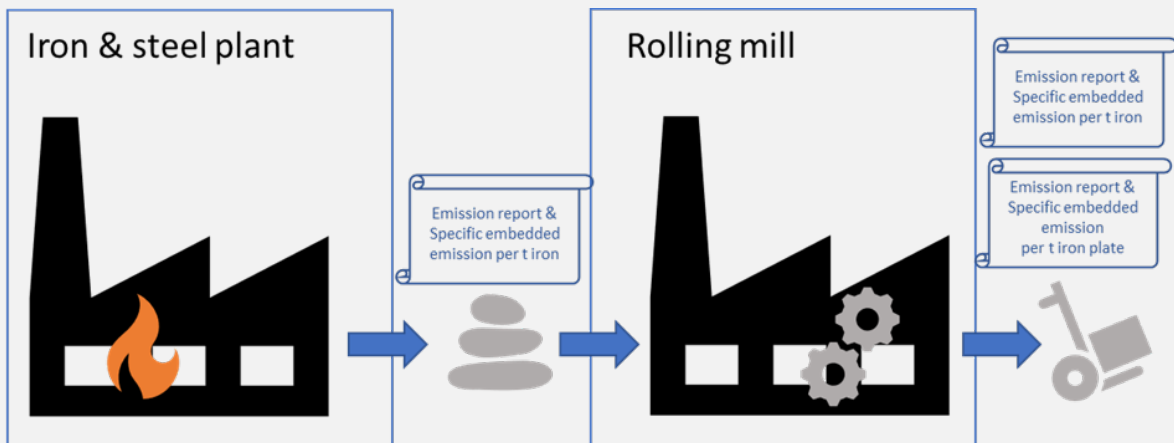
### Excursus: Iron and iron plate as examples for simple and complex goods<sup>9</sup>

Iron in ingots, blocks or other crude forms can be considered a simple product covered by the CBAM as it is produced entirely from input materials and energy sources that do not include embedded emissions. The production of iron plates uses iron as an input and iron plates can thus be classified as a complex good.

If the iron plate is produced in an integrated plant including iron production the total GHG emissions of the plant are calculated based on defined MR rules and then divided by the production output of the defined time period.



If the iron in crude form is produced in an iron & steel plant and sold to a second plant to be rolled to become iron plates, the iron in crude form would classify as a precursor and needs to be accompanied by an emission report specifying the emission per t iron.



Source: Author's own.

<sup>9</sup> This text is an interpretation of the regulation, as the relevant input materials (precursors) for complex goods are to be defined in the implementing act adopted pursuant to Article 7(6). Compare Annex IV, 3. Determination of actual embedded emissions for complex goods. REGULATION (EU) 2023/956 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 10 May 2023 establishing a carbon border adjustment mechanism, online zugänglich unter <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0956>

## 2.2 Choice of standards

It is essential for any emissions trading scheme to ensure that the emissions reported are correct and comparable no matter in which installation the product is produced. Therefore, reporting rules need to be defined and reports checked.

There is a long list of reporting schemes, carbon footprint methodologies and national regulations already established around the world.<sup>10</sup> Letting firms choose the reporting system themselves could reduce their administrative burden but would not ensure equal treatment: identically produced goods could be attributed different embedded emissions depending on the reporting rules they follow. This would lead to an unfair advantage of those applying less stringent standards and incentivise picking rules that favour them whereas European installations must follow a uniform reporting requirement defined in the MR regulation. Therefore, a single reporting standard should apply to all producers of CBAM products imported to the EU.

We compare two options for the measurement and reporting of embedded emissions as ideal types: an extraterritorially extended regulation (application of adapted EU ETS MRV rules) and transnationally integrated regulation. While in reality elements of both approaches might be combined, the assessment is based on the ideal types to highlight the differences and the specific advantages and disadvantages. The options are compared based on the following criteria:

- ▶ System boundaries: Are they apt to calculate embedded emissions as defined in the CBAM?
- ▶ Comparable requirement: Are the requirements concerning accuracy, transparency, and verification comparable to the EU ETS rules?
- ▶ Acceptance & Application: Are they internationally known and accepted? Is there international capacity to build on?
- ▶ Legal status: How are they regarded by WTO rules? (Chapter 3).

The option 1, an extraterritorially extended regulation (EER), implies that current EU ETS rules for MRV and allocation are adapted and complemented in a way to serve as a basis to report embedded emissions.

For option 2, a transnationally integrated regulation (TIR), we suggest basing the approach on an existing ISO norm. The International Organization for Standardisation (ISO) is a recognized body for standardisation under the TBT agreement<sup>11</sup> (see chapter 3.2). The ISO has 167 national standards bodies as members<sup>12</sup> and thus covers most of the countries CBAM products are imported from.

Emissions at product level are often reported as carbon footprints. There are many initiatives measuring and reporting carbon footprints e.g. to guide consumer choices.<sup>13</sup> A major difference

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<sup>10</sup> See Appendix C 'MRV Legislation, Guidance, and Tools in Carbon Pricing Instruments' and Appendix D 'Internationally Recognized Standards Used in Carbon Pricing Instruments' for a comprehensive list of standards worldwide: World Bank, 2020. Developing Emissions Quantifications Protocols for Carbon Pricing: A Guide to Options and Choices for Policy Makers. World Bank, Washington, DC, <https://openknowledge.worldbank.org/bitstream/handle/10986/34388/A-Guide-to-Options-and-Choices-for-Policy-Makers.pdf>.

<sup>11</sup> Will (2019), Climate Border Adjustments and WTO Law, p. 254.

<sup>12</sup> <https://www.iso.org/about-us.html>, accessed 07.07.2022.

<sup>13</sup> European Commission 2021/546 as of 14 July 2021: Proposal for a Regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, [https://ec.europa.eu/info/sites/default/files/carbon\\_border\\_adjustment\\_mechanism\\_0.pdf](https://ec.europa.eu/info/sites/default/files/carbon_border_adjustment_mechanism_0.pdf) in chapter 5.2.1.2 Measuring the carbon content referring to electricity, Ramboll et. al (2021): Study on the possibility to set up a carbon border adjustment mechanism on

between different approaches is the definition of system boundaries, the widest approach includes all emissions from the mining of raw materials and related to inputs to the production process, the production itself, the transportation and end-use including the disposal of the product (dubbed as ‘cradle to grave’). This is well beyond the definition of embedded emissions foreseen in the CBAM. The ISO norm 14067 ‘Greenhouse gases – Carbon footprint of products’ is cited by various authors.<sup>14</sup> Reasons to choose this ISO norm include the focus on greenhouse gas emissions and the possibility of a partial product carbon footprint tailored to the CBAM needs. It would require product category rules (PCR) to ensure the results are comparable to the MRV rules in the ETS.

We do not suggest developing a new ISO standard. Building on existing ISO standards has several advantages. 1) It is quicker – the elaboration of a new ISO standard usually takes about three years<sup>15</sup> and European policy makers cannot be sure that it will be adopted in time for implementing CBAM. 2) The outcome of the international process for a new ISO standard may differ from the EU legislators need – national standard bodies representing their countries vote on the standards. This includes the risk that certain members oppose or slow down the development of a CBAM standard due to political considerations. 3) The ISO decision process is not as transparent as European legislation procedures. The decision-making process can be captured by power politics and economic interests of both States and industries involved.<sup>16</sup>

### 2.3 System boundaries / coverage of emissions

Life cycle assessment tend to include a wider scope of emissions than the EU ETS. The embedded emissions in the CBAM are defined as those emissions occurring in the production process itself – so if coal is burnt to generate heat the CO<sub>2</sub> emissions related to the combustion are included, but the CO<sub>2</sub>-emissions that can be attributed to the mining and transportation of the coal are not. For complex goods embedded emissions of certain input material (precursors) must be reported and included in the monitoring.

Taking the production of iron plate as an example the MR regulation EU 2018/2066 specifies the following (Annex IV, 5.): “The operator shall include at least the following potential sources of CO<sub>2</sub> emissions: raw materials (calcination of limestone, dolomite and carbonatic iron ores, including FeCO<sub>3</sub>), conventional fuels (natural gas, coal and coke), reducing agents (including coke, coal and plastics), process gases (coke oven gas – COG, blast furnace gas – BFG and basic oxygen furnace gas – BOFG), consumption of graphite electrodes, other fuels and waste gas scrubbing.” It further defines the monitoring methods for different tiers. The MR regulation EU 2018/2066 does not include production figures, which are needed to calculate specific emissions. It could be complemented based on the relevant parts of the implementing regulation for the adjustment of free allocation due to activity level changes (EU 2019/1842) as this refers to production data as far as relevant for free allocation.

The ISO 14067 standard does not define the emission scope and the sector specific methodologies in this detail. There are other norms, though, specifying industry specific rules. ISO 19694 ‘The Determination of greenhouse gas (GHG) emissions in energy-intensive

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selected sectors, [https://clustercollaboration.eu/sites/default/files/news\\_attachment/Final%20report%20CBAM%20study\\_0.pdf](https://clustercollaboration.eu/sites/default/files/news_attachment/Final%20report%20CBAM%20study_0.pdf), 104, Will (2019), Climate Border Adjustments and WTO Law, p. 254.

<sup>14</sup> Ramboll et. al (2021): Study on the possibility to set up a carbon border adjustment mechanism on selected sectors, [https://clustercollaboration.eu/sites/default/files/news\\_attachment/Final%20report%20CBAM%20study\\_0.pdf](https://clustercollaboration.eu/sites/default/files/news_attachment/Final%20report%20CBAM%20study_0.pdf), 105, Will, Climate Border Adjustments and WTO Law, 2019, p. 254.

<sup>15</sup> ISO, Developing standards, <https://www.iso.org/developing-standards.html>, accessed on 12. September 2022.

<sup>16</sup> Delimatsis (2018), Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process, Duke Journal of Comparative & International Law 28 (2018), p. 289

industries' covers general aspects (part 1) and the following industries: iron and steel (part 2), cement (part 3), aluminium (part 4) lime (part 5) and ferroalloy (part 6). If the CBAM is based on ISO norms, industry specific standards could be the starting point. Again, further specification concerning e.g. system boundaries/coverage, material levels and treatment of transferred CO<sub>2</sub> as well as precursors need to be provided in order to make emission reporting comparable.

## 2.4 Comparable requirements for monitoring and reporting

Section 2 of the MR regulation stipulates the general principles. Monitoring and reporting shall be complete, consistent, comparable, transparent, accurate, integer in methodology and continuously improved. The general principles cited in ISO 14067<sup>17</sup> are very similar. The method is less defined, though: the scope of the life cycle to be covered as well as the functional or declared unit is defined in the beginning of the process. If ISO 14067 is used to report embedded emissions covered by the CBAM those methodological choices will need to be spelled out to ensure comparability.

The main differences are to be found when it comes to the detail. The EU ETS MR regulation spells out in detail the minimum contents of the monitoring plan (which must be approved by the national competent authority), the categorisation of installations, source streams and emission sources, the tiers to be used, the monitoring methodologies for calculation and for measurement of emissions and the data management and control requirements. Compared to this, ISO 14067 is a preliminary framework.

The aim to prevent carbon leakage implies that the measurement and reporting of emissions both in the EU and in the countries of origin of imported goods must be of equal accuracy. Industry representatives have voiced concerns that while in the EU a regulatory infrastructure and control has been established to ensure the accuracy of the emission reports, only few countries have similar experience and reporting schemes in place and less accurate reporting or even manipulation of data would constitute an unfair competitive advantage.<sup>18</sup> The document summarizing the consultation in preparation of the CBAM impact assessment finds that “a number of respondents specified that the carbon content of imported products should be verified by an independent third party, with respondents from third countries showing less enthusiastic on that option.”<sup>19</sup> This is a good illustration of the high interest of European stakeholders that the European standard which involves third party verification is applied to producers in third countries as well whereas the interest is not shared by exporting countries and – therefore a robust system in third countries is essential to avoid unfair advantages.

On the other hand, developing countries might argue that the CBAM in general and monitoring and reporting requirements specifically imply major administrative efforts and costs for their production facilities and thus do not reflect the principle of ‘Common but differentiated responsibilities and respective capabilities, in the light of different national circumstances’ in the United Nations Framework Convention on Climate Change (UNFCCC) and the subsequent Paris Agreement. Especially in the first years setting up the scheme requires a higher effort and cost than in the following years. To gain support for the scheme Graf and Buck argue that the EU should use revenues from the CBAM to “support capacity building for monitoring, reporting and

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<sup>17</sup> ISO 14067:2018, Greenhouse gases – Carbon footprint of products – Requirements and guidelines for quantification, chapter 5.

<sup>18</sup> Stiftung Arbeit und Umwelt der IG BCE (2020): Diskussionspapier – Klimaneutrale Industrie: Mögliche Varianten für zukunftsfesten Carbon-Leakage-Schutz im Vergleich. Berlin, p.24.

<sup>19</sup> European Commissions (2021): Commission Staff Working Document. Impact Assessment Report. Accompanying the document Proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, Part 2/2, SWD (2021) 643 final, p. 15.

verification in developing countries. The EU should prioritize work to improve the availability, quality and comparability of data on embedded emissions in basic materials and in intermediate products. Such data is essential for a transparent, non-discriminatory application of a CBAM.”<sup>20</sup>

The current CBAM does not include simplified rules for small market participants. Compliance costs for small and medium enterprises (SMEs) are expected to be relatively higher compared to large enterprises but given the nature of covered products which are mainly produced by large enterprises no SME test was carried out in the impact assessment.<sup>21</sup> Furthermore, it is argued that small and medium enterprises may choose the fall-back approach with standard emission values if they are hesitant to install an emission monitoring and reporting system in their production site.

## 2.5 Acceptance and application of MRV rules

The unilateral introduction of the EU CBAM is likely to raise concern in countries being major exports to the EU such as China and the US.<sup>22</sup> The opposition to the inclusion of international aviation into the EU ETS is an example of the reluctance of those countries to be affected by EU climate policy. Therefore, it seems crucial to build acceptance for the policy measure and this includes reports on embedded emissions and thus the MRV rules. Granting other trading partner countries a say in MRV rules might be a way of fostering international acceptance of the scheme.

At the G7 summit 2022 in Germany, countries issued a joint statement<sup>23</sup> on Climate Club explicitly mentioning the strengthening of emissions measurement and reporting mechanisms as measures to advance ambitious and transparent climate mitigation policies and inviting other countries to join. Szulecki et al. (2022)<sup>24</sup> argue that the CBAM constitutes a de facto Climate Club: Members have unrestricted access to the internal market and the carbon border adjustment fees represent the sanctions. Besides the EU, the countries cited in the Annex “Countries and territories outside the scope of this Regulation” of the CBAM regulation are the Climate Club Members. The entry condition is a carbon price aligned to that of the EU ETS. The authors point out that there is a trade-off between control and legitimacy when deciding whether the EU should set the MRV rules unilaterally or whether to see trade partners as potential Climate Club members and define rules multilaterally.

In principle, both the application of rules based on the EU ETS MR regulation or on ISO standards can be discussed multilaterally or not. ISO standards might be viewed less critical in this regard as ISO is an international organisation. Also, national experts in the EU's trading partners might be familiar with the standard already which could ease the implementation and application of the CBAM. On the other hand, ISO is a private organization, and their standards need to be purchased by users. This could be viewed as an additional barrier especially for smaller firms. The EU should therefore strive to find a way to provide the necessary information without additional cost.

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<sup>20</sup> Graf & Buck (2021), 10 Benchmarks for a Successful July “Fit for 55” Package, [https://static.agora-energiawende.de/fileadmin/Projekte/2021/2021\\_04\\_EU\\_Fit55-Benchmarks/A-EW\\_211\\_Fit-55-Benchmarks-Success\\_WEB.pdf](https://static.agora-energiawende.de/fileadmin/Projekte/2021/2021_04_EU_Fit55-Benchmarks/A-EW_211_Fit-55-Benchmarks-Success_WEB.pdf), 13.

<sup>21</sup> European Commissions (2021), Commission Staff Working Document. Impact Assessment Report. Accompanying the document Proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, Part 2/2, SWD (2021) 643 final, p. 10.

<sup>22</sup> Tu, Sartor & Zhang-Class (2021), EU-China Roundtable on Carbon Border Adjustment Mechanism, [https://static.agora-energiawende.de/fileadmin/Projekte/2021/2021-02\\_EU\\_Lead\\_markets/A-EW\\_222\\_EU-China\\_CBAM\\_WEB.pdf](https://static.agora-energiawende.de/fileadmin/Projekte/2021/2021-02_EU_Lead_markets/A-EW_222_EU-China_CBAM_WEB.pdf).

<sup>23</sup> G7 Germany (2022), G7 Statement on Climate Club, <https://www.g7germany.de/resource/blob/974430/2057926/2a7cd9f10213a481924492942dd660a1/2022-06-28-g7-climate-club-data.pdf>

<sup>24</sup> Szulecki, Overland & Smith (2022), The European Union’s CBAM as a de facto Climate Club: The Governance Challenges. *Frontiers in Climate*, <https://www.frontiersin.org/articles/10.3389/fclim.2022.942583/full>

The verified emission reports need to be checked by designated authorities in the EU. The closer the rules are to the existing MRV system in the EU, the easier the implementation for the administration. Nevertheless, it is likely that a new system will need to be built up tailored to the new reports and additional staff will be required in competent authorities in the EU.

## 2.6 Preliminary conclusions: practicability of standards

At the heart of any cap-and-trade scheme is the accurate monitoring and reporting of emissions, it has to be ensured that all market participants fulfil those requirements with comparable accuracy and reliability. Market participants have an economic interest to underestimate their emissions. If reporting is not complete, those market participants would gain an unfair economic advantage. Therefore, in the EU ETS the MR regulation (EU 2018/2066) details the monitoring and reporting requirements per type of activity, emission reports are verified by a third party and checked by competent authorities.

The introduction of a carbon border adjustment measure implies that embedded emissions of imported goods covered by the CBAM need to be reported. In general, the MRV rules can follow two ideal types:

- ▶ An extraterritorially extended regulation (EER), or
- ▶ A transnationally integrated regulation (TIR).

If the MR rules currently used in the EU ETS are applied also in third countries, this would represent the approach of an extraterritorially extended regulation (EER). An ISO norm is an example for a transnationally integrated regulation (TIR), the existing ISO norm 14067:2018 defines requirements for carbon footprint of products. In both cases the available rules will have to be further specified and adapted to be used to monitor and report embedded emissions of CBAM products. The EU ETS MRV rules focus on the installation whereas the embedded emissions of imports refer to products. Reporting embedded emissions based on the EU ETS MRV rules will therefore imply further elaboration on how emissions are attributed to specific products and the way embedded emissions of precursors are to be covered. Building upon the ISO 14067 standard would need further specification of e.g. the scope and the emission factors to be used.

An extraterritorially extended standard has the advantage that it is expected to mirror both the scope of emissions and the requirements concerning accuracy and completeness of emission reports according to the ETS best. This option seems well suited to counter concerns of unfair competitive advantage due to less accurate or even manipulated data. Furthermore, EU ETS MRV rules are tailored to the EU ETS needs and tested on the ground, known to competent authority and EU verifiers. The main danger with this approach is that it might hinder acceptance of the CBAM in third countries.

While TIR may struggle to meet the EU ETS level of accuracy and comparability of emission monitoring, they can help to build international acceptance for the CBAM. If reporting requirements are elaborated jointly with partner countries, the EU will lose control over the process but may gain political momentum as hoped for by the establishment of carbon clubs. If an ISO standard forms the basis, it has the advantage of having been elaborated in an international process – it can be assumed that both producers and verifiers in third countries can built upon their experience with the norm.

No matter which approach is taken, dialogue with major trading partners will be essential to the success of the scheme. Furthermore, part of the revenues could and should be used to support building up MRV capacity especially in developing nations.

### 3 Evaluation Criterion Legality

As explained above, the hitherto rather abstract and general provisions of the CBAM can be specified on the one hand in orientation towards a model that extends European rules extraterritorially (EER model) and on the other hand through the integration of transnational standards (TIR model). In addition to practical considerations, legal aspects, especially in international trade law, may argue for the choice of one or the other model. A starting hypothesis for such legal considerations is that, compared to the ambivalent assessment from a practical point of view, considerations based on world trade law could speak rather in favour of a TIR model. This hypothesis effectively forms a legal "translation" of the political argument, which points to the potentially increased acceptability of a TIR model: from this point of view, consideration of international standards and cooperative procedures, which may be intended to protect the interests of states in the global South in particular, might reduce "legitimacy gaps"<sup>25</sup> of extraterritorial instruments such as the CBAM. On the other hand, it must be clarified which requirements are to be placed on the reliability and substantive quality of MRV rules from a legal perspective.

Against this background, this section first analyses the requirements to be observed under the relevant WTO law when integrating or substantiating an MRV mechanism. In doing so, the analysis has to clarify two closely related, but distinct issues: on the one hand - and in the focus here - the question has to be answered whether a TIR model entails advantages for the legality of a MRV mechanism as such under WTO Law. In a second step, the requirements to be placed on an international standard from a national and, in particular, European legal perspective should be discussed. In particular, the question arises under which conditions private standards may be used to substantiate the CBAM-MRV.

#### 3.1 Applicable law

The WTO Agreement on Technical Barriers to Trade (TBT Agreement, hereafter: TBT) provides the applicable rules for the legal assessment of a MRV regime. The TBT Agreement aims at ensuring that technical regulations, standards, testing and certification procedures do not create unnecessary barriers to international trade. More specifically, the Agreement's requirements of national treatment and most-favoured-nation treatment (Art. 2.1 TBT), as well as the prohibition of unjustified restrictions on trade (Art. 2.2 TBT) are of relevance in the given context. In addition, the agreement contains a number of further requirements for the introduction and implementation of technical regulations: For example, the transparency requirements of the TBT Agreement must be complied with when introducing technical regulations. A notification procedure, which obliges all WTO members to send their draft technical regulations or conformity assessment procedures to the other members via the WTO Secretariat, is intended to ensure the transparency of the procedure. Furthermore, the "Code of Good Practice" in Annex 3 of the TBT Agreement must be observed, which contains guidelines for the preparation, adoption, and application of standards.<sup>26</sup>

In contrast to CBAM as a whole, for which the requirements of the GATT must be observed,<sup>27</sup> the TBT Agreement is the authoritative legal framework under international law, at least for

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<sup>25</sup> Hadjiyianni (2019), *The EU as a global regulator for environmental protection*, p. 297.

<sup>26</sup> See Herrmann, Gailhofer & Schomerus (2019), *Producer responsibility of third-country producers in e-commerce*, UBA Texte | 191/2020, p. 136; Hermann & Keimeyer (2015), *Rechtliche Rahmenbedingungen eines Allgemeinen Nachhaltigkeitssiegels*, expert opinion for the German Bundestag – submitted to the Office of Technology Assessment at the German Bundestag (TAB).), p. 54 et seq.

<sup>27</sup> See Ruddigkeit (2009), *Border Tax Adjustment an der Schnittstelle von Welthandelsrecht und Klimaschutz vor dem Hintergrund des Europäischen Emissionszertifikatehandels* (Halle: Institut für Wirtschaftsrecht, 2009), <https://telc.jura.uni->



essential elements of an MRV mechanism. According to the Appellate Body, all WTO obligations apply cumulatively.<sup>28</sup> However, a general rule of interpretation in Annex 1A of the WTO Agreement clarifies that the provisions of the agreements contained in the Annex (and thus also those of the TBT Agreement) take precedence over the GATT in the event of a conflict.<sup>29</sup> The analysis of the TBT Agreement can thus have precedence over the analysis of the GATT (*lex specialis*) if the norms or standards in question are covered by the Agreement. Both agreements can be applied cumulatively to the extent that the TBT Agreement does not cover the measure at issue, or if there is no conflict between the two sets of rules. Different aspects of one and the same measure can thus fall under different agreements.<sup>30</sup> Even if it therefore cannot be ruled out that an MRV mechanism or elements of such a mechanism may be subsumed under the GATT rules in the event of a dispute, the following focuses on the provisions of the TBT.

Annex 1 TBT defines the criteria a measure must fulfil to fall under the Agreement, which accordingly covers technical regulations, standards, and conformity assessment procedures. Again, a concrete classification of the MRV mechanism of the CBAM under these criteria is not possible because the standards are not yet known in detail.<sup>31</sup>

MRV rules to be integrated in a CBAM do not classify as "standards" under the TBT – i.e. as rules, guidelines or characteristics, for common and repeated use, for products or related processes and production methods [...], see Annex 1.2. TBT. In principle, the rules of the TBT extend to standards in this sense, if they are issued by a recognised body or recognised by such a body.<sup>32</sup> Standards in the sense of the TBT Agreement, however, are not mandatory, Annex 1.2. TBT. If a regulatory measure refers to a standard, however, it can become a binding technical regulation. A formerly voluntary, e.g., private international standard for MRV thus can be considered binding, if they are integrated in the CBAM mechanism to calculate, report, or verify emissions.<sup>33</sup> Since the issue at hand concerns precisely MRV standards integrated into a binding CBAM mechanism, the classification is more likely to be considered not as a standard, but as a technical regulation in the sense of the agreement.

Under Art. 1.2, Annex 1.1 TBT Agreement, technical regulations can be found in a

*“Document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.”*

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halle.de/sites/default/files/altbe-stand/Heft89.pdf; Pauwelyn & Kleimann, Trade Related Aspects of a Carbon Border Adjustment Mechanism. A Legal Assessment' (Straßburg: Europäisches Parlament, 2020), [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/603502/EXPO\\_BRI\(2020\)603502\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/603502/EXPO_BRI(2020)603502_EN.pdf), p. 9.

<sup>28</sup> On the question - which has not yet been conclusively clarified in detail - of the relationship between the GATT and the TBT Agreement, see, for example Klein (2011), Umweltinformationen im Völker- und Europarecht, 389 et seq., with further references.

<sup>29</sup> [https://www.wto.org/english/docs\\_e/legal\\_e/05-anx1a\\_e.htm](https://www.wto.org/english/docs_e/legal_e/05-anx1a_e.htm).

<sup>30</sup> Will (2019), Climate Border Adjustments and WTO Law, 248 et. seq. Panel Report, European Communities – Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/R and Add.1, adopted 5 April 2001, as modified by the Appellate Body Report, WT/DS135/AB/R, mn. 8.16.

<sup>31</sup> In addition, the differentiation between a technical regulation and a standard is to be made on a case by case basis, taking into account factors such as whether the measure at issue is a law or regulation and whether the measure alone determines how a particular matter can be addressed, Appellate Body Report, US — Tuna II (Mexico), WTO Doc WT/DS381/AB/R, [188]; cf. Meltzer/Porges, Beyond discrimination? The WTO parses the TBT Agreement in US-Clove Cigarettes, US – Tuna II (Mexico) and US – COOL, Melbourne Journal of International Law 14 (2013), p. 711.

<sup>32</sup> Cf. Appellate Body Report, US — Tuna II (Mexico), WTO Doc WT/DS381/AB/R [355], The ISO is the relevant recognised body in the sense of the agreement which is not least reflected in the fact that Annex 1 refers to ISO standards; Will, Climate Border Adjustments and WTO Law, 2019, p. 251 et seq.

<sup>33</sup> Cf. Will (2019), Climate Border Adjustments and WTO Law, p. 254.

The existence of a technical regulation is examined by the WTO dispute settlement bodies in three steps: In addition to the binding nature of the regulation which must be established as a first step, the second requirement is the existence of an identifiable product or group of products. Thirdly, the application of the regulation to a product or related processes or production methods ("requirements, as they apply to a product, process or production method") must be examined.<sup>34</sup> Given the list of products included in Annex I CBAM, it can be assumed that the products are identifiable. However, the obligation would also have to refer to a characteristic of the respective products or product groups, i.e., it would have to prescribe or ensure product characteristics in a binding manner. This requirement is to be understood broadly, however, so that it also covers properties indirectly linked to a product (such as its presentation or ingredients).<sup>35</sup> This also includes requirements for terminology, symbols, packaging or labelling if they relate to a product, processes, or production methods.

At least some of the provisions of an MRV mechanism could be understood as technical regulations. Against the background of the so-called ppm ("process and production measures") doctrine, the applicability of the agreement (as well as of other WTO law) to regulations dealing with "non-product related processes and production methods" (npr-ppm) has long been a controversial issue.<sup>36</sup> Some argue that strictly process-related regulations are not covered by the TBT Agreement from the outset - at least insofar as they do not have any physical effect on the products in question.<sup>37</sup> Standards for calculating embedded carbon emissions are not reflected in the physical<sup>38</sup> characteristics of the products concerned and could therefore fall outside the scope of the agreement. Others believe that strictly process-related ppm in general,<sup>39</sup> or at least with regard to the measures under sentence 2 Annex 1.1 TBT<sup>40</sup> are covered by the scope of the Agreement. The Appellate Body in the Tuna Dolphin II decision<sup>41</sup> also upheld the application of the TBT Agreement, although the requirements in question (tuna fishing regulations) are in no way perceptibly represented in the physical properties of the end product.<sup>42</sup> Following this decision, one may ask with good reason, whether the PPM distinction may not have come to an end.<sup>43</sup>

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<sup>34</sup> "United States – Measures concerning the importation, marketing and sale of Tuna and Tuna Products", Appellate Body Report, May 2012, WT/DS381/AB/R, S. 72, para. 179, 183 ff.; "European Communities – Trade description of Sardines", Appellate Body Report, September 2002, WT/DS231/AB/R, S. 44, para. 176; "European Communities – Measures affecting Asbestos and Asbestos-containing products", Appellate Body Report, March 2001, WT/DS135/AB/R, S. 24, mn. 61.

<sup>35</sup> Appellate Body, EC – Asbestos, para. 67, 171.

<sup>36</sup> For an overview of the different positions taken, see Glinski (2014), Competing Transnational Regimes under WTO Law, Utrecht Journal of International and European Law, 30(78), Vranes (2009), Trade and the Environment: Fundamental Issues in International and WTO Law, and Legal Theory (International Economic Law).

<sup>37</sup> Cf. Tietje & Wolf (2005), REACH Registration of imported substances – Compatibility with WTO-Rules, Beiträge zum Transnationalen Wirtschaftsrecht, Heft 42., p. 12; Stökl (2003), Der welthandelsrechtliche Gentechnikkonflikt, with further references.

<sup>38</sup> It might, however, still be a *virtual* attribute of a product, cf. Will, Climate Border Adjustments and WTO Law, 2019, p. 256.

<sup>39</sup> Vranes argues that the contrary view is based on the misunderstanding that the non-applicability of the TBT Agreement to npr-ppm would imply that these are generally prohibited. This is not the case, however, as the TBT does not regulate permissions for measures that would otherwise be prohibited but imposes new obligations. Since the TBT Agreement is stricter than the GATT, which is otherwise applicable to npr-ppm, those (especially countries of the Global South) who are concerned about the impact of such measures should in fact advocate the TBT Agreements applicability, see Vranes (2011), Climate Labelling and the WTO: The 2010 EU Ecolabelling Programme as a Test Case Under WTO Law, European Yearbook of International Economic Law 2011, 214.

<sup>40</sup> Since it does not require that the process has an effect on the physical properties of the end product, Stökl (2003) Der welthandelsrechtliche Gentechnikkonflikt, p.141 et. seq.

<sup>41</sup> WTO/DS381/R, 7.71 et. seq..

<sup>42</sup> Pauwelyn, Wessel & Wouters (2012), Informal International Lawmaking.

<sup>43</sup> Pauwelyn (2012), Tuna: The End of the PPM distinction? The Rise of International Standards?; online available at: <https://worldtradelaw.typepad.com/ielpblog/2012/05/tuna-the-end-of-the-ppm-distinction-the-rise-of-international-standards.html>.

At least any regulations on issuing labels in an MRV mechanism are likely to fall under the TBT Agreement since these are explicitly mentioned in Annex I TBT. In addition, there are good reasons for including requirements for the monitoring of embedded emissions in the scope of the agreement. On the one hand, such requirements could be combined with a label. Such requirements would thus define the technical criteria for an instrument that is explicitly covered by Annex 1.1. of the TBT. On the other hand, the definition of sectors or products to which the CBAM applies or of product-based monitoring methods depend on product characteristics and could fall under Annex 1.1. TBT. Specifically, the presence of relevant raw materials in a final product might be a product characteristic in terms of Annex 1.1 TBT.<sup>44</sup>

Lastly, the MRV provisions of a CBAM could also be regarded as a conformity assessment procedure. According to Art. 1.2. in conjunction with Annex 1.3 TBT, a conformity assessment procedure is any procedure intended to ensure, directly or indirectly, that the requirements of a technical regulation or standard are met. Conformity assessment procedures are thus subject to the TBT Agreement insofar as they relate to the assessment of technical regulations and standards subject to the TBT Agreement. These may include sampling, testing and inspection, evaluation, verification and attestation of conformity, registration, accreditation, and approval, as well as a combination of these. For example, regulations on the registration of declarants and the accreditation of verifiers, but also substantive standards for the verification of the proper collection and calculation of relevant emissions are likely to be considered as conformity assessment procedures.<sup>45</sup>

### 3.2 Legal conditions for CBAM MR standards in the TBT

Assuming that the MRV rules are fully or partially covered by the TBT Agreement, different questions arise.

#### 3.2.1 National Treatment Obligation

Comparable to Art. III.4. GATT –<sup>46</sup> Art. 2.1. TBT prohibits measures that discriminate between domestic and imported goods on the basis of their national origin. A discrimination may arise if the MR standards to be established treat products from third countries less favourably than similar products from the domestic market.

First of all, the likeness of the imported product compared to domestic products and products of other origins ("like products") has to be examined. This comparison must be made between a group of imported products and a group of like products from the domestic market. In a second step, it must be clarified whether the imported product is treated less favourably in relation to the "like" domestic product or products from other third countries ("treatment no less favourable"). In light of these criteria, an imbalanced design of an MRV mechanism for imported products could lead to the assumption that they are treated less favourably relative to similar EU products.<sup>47</sup>

Beginning with the question of "like" products, according to the Appellate Body, "[...] the determination of likeness under Article 2.1 of the TBT Agreement, [...], is a determination about the

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<sup>44</sup> Will (2019), Climate Border Adjustments and WTO Law, p. 256.

<sup>45</sup> Cf. Hermann, Schomerus & Gailhofer (2020), Producer responsibility of third-country producers in e-commerce, UBA Texte 191/2020, p.135.

<sup>46</sup> The GATT provides, according to the Appellate Body, 'relevant context' for interpreting Art 2.1. TBT, Appellate Body Report, US — Clove Cigarettes, WTO Doc WT/DS406/AB/R, [100]; cf. Meltzer/Porges (2019), Beyond discrimination? The WTO parses the TBT Agreement in US-Clove Cigarettes, US - Tuna II (Mexico) and US - COOL, Melbourne Journal of International Law 14 (2013), p. 707.

<sup>47</sup> Will (2019), Climate Border Adjustments and WTO Law, p. 260.

*nature and extent of a competitive relationship between and among the products at issue*".<sup>48</sup> The comparability of a product under competitive conditions is to be determined primarily based on its physical characteristics, its end-use in a given market, and the tastes and habits of the consumer.<sup>49</sup> Comparing the "foreign product groups" defined in Annex I CBAM, which are not subject to the ETS, with the corresponding European product group, it can be argued with regard to the criterion of consumer habits that we are dealing with unlike products. The growing tendency of consumers to prefer more sustainable products, since they are comparatively less damaging to the climate, to non-sustainable products, could suggest that these products are not comparable within the meaning of Art. 2.1. TBT due to differing characteristics.<sup>50</sup> It has been widely assumed, however, that such customer expectations do not yet have sufficient weight in the legal assessment of "likeness" under WTO law to suggest that there are relevant differences between products. With reference to Art. III.4. GATT regarding the regulation of non-product related production and process methods (npr-ppm), it has been argued that these are only to be taken into account in the determination of similarity if they are reflected in the physical characteristics of products.<sup>51</sup> This is supposed to apply irrespective of whether such methods are relevant to wide circles of consumers.<sup>52</sup> Case law and doctrine thus do not allow a definite answer to the question whether like products are given. Since the CO<sub>2</sub> footprint is not reflected in the physical characteristics of a product, it is at least conceivable that WTO bodies assume "like" product groups in the event of a dispute.

Assuming that the imported products are, in the sense of Art. 2.1 TBT, "like" EU products, a less favourable treatment compared to the EU products could be considered because of a different burden caused by applying different MRV mechanisms. This possibility is of particular relevance in view of the significant differences between the installations-based design of the ETS and the product-based CBAM. In particular, the fact that the ETS provides for thresholds according to which small installations are exempted from the ETS and its associated MRV obligations could be regarded as discrimination against imported like products. This is because small domestic producers that do not fall within the scope of the ETS due to these thresholds do not have to make the administrative effort of registering in the EU ETS system. In contrast, under the proposed CBAM, every importer, regardless of their size, must register, verify, and apply for authorisation of the emissions associated with their imports.

The de-minimis rule provided for in the CBAM will hardly remedy the risks of such a potential discrimination. This rule provides for inclusion by the CBAM only if the value of the imported goods is above 150 euros per delivery/transport in the luggage of travellers, while the scope of the EU ETS is based on certain characteristics of the installation concerned. With regard to small imports, the risk of discrimination could hence be reduced. However, the possibility of unequal treatment of like products remains. This is because CBAM certificates would have to be acquired for imported products, irrespective of the plant in which they are manufactured, as long as the delivery/transport of goods exceeds a value of 150 euros. In contrast, no emission allowances

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<sup>48</sup> Appellate Body Report "United States – Measures affecting the production and sale of clove cigarettes", WT/DS406/AB/R, April 2012, p.47.

<sup>49</sup> Appellate Body Report, „United States – Measures affecting the production and sale of clove cigarettes“,WT/DS406/AB/R, April 2012, p. 47-48.

<sup>50</sup> Cf. Hermann & Keimeyer (2013), *Rechtliche Rahmenbedingungen eines Allgemeinen Nachhaltigkeitssiegels*, p. 57.

<sup>51</sup> See Krajewski (2021), *Wirtschaftsvölkerrecht*, Mn. 336; cf. Bäuml, *Nachhaltiges Wirtschaften in globalen Lieferketten: Gesetzliche Sorgfaltspflichten von Unternehmen im Lichte des WTO-Rechts*, AVR 2020, p. 485 et. seq.

<sup>52</sup> V. Arnaud (2018), *Klausurenkurs im Völkerrecht*, p. 177.

would have to be issued for products from European plants outside the scope of the ETS, even if they are delivered in quantities exceeding 150 euros in value.<sup>53</sup>

A measure may, however, be permissible even in the case of unequal treatment of like products. The Appellate Body emphasises that less favourable treatment is not to be presumed if the adverse effect on like imported goods stems exclusively from a legitimate regulatory distinction: *'Article 2.1 should not be interpreted as prohibiting any detrimental impact on competitive opportunities for imports in cases where such detrimental impact on imports stems exclusively from legitimate regulatory distinctions'*<sup>54</sup> According to the Appellate Body, the second recital of the TBT Agreement confirms that the TBT and GATT "overlap in scope and pursue similar objectives"; recitals 5 and 6 show that the TBT Agreement, in a manner comparable to Article XX of the GATT, seeks a "balance" between the Agreement's obligations to avoid unnecessary obstacles to international trade and the Members' right to regulate.<sup>55</sup> In accordance with the panel's EC-seals decision, the issue about whether the disparate impact stems from legitimate distinctions, is further subdivided into two questions: First of all, whether there is a "legitimate regulatory purpose", and second whether the regulation pursues that purpose "even-handedly". The question about legitimate regulatory purpose corresponds to the question whether the measure comes within one of the specific sub-paragraphs of GATT XX; and question two, about 'even-handedness', corresponds to the question whether the measure satisfies the chapeau of GATT XX.<sup>56</sup>

As for the first question, environmental protection measures that serve to protect the states' own environment and population can fall under the admissible regulatory purposes of Art. XX GATT. The protection of global environmental goods, such as the climate or biodiversity, can be considered a legitimate regulatory goal, all the more so if the protective measures comply with international agreements, as these are an expression of the shared conviction of the international community.<sup>57</sup>

With regard to the second question, in order to avoid a violation of the requirement of even-handedness, even a regulation that falls under an exception of Art. XX GATT must not lead to an arbitrary and unjustified discrimination between countries in which similar conditions exist, or lead to a disguised restriction of international trade.<sup>58</sup>

The differentiation between European products included in the ETS and foreign products for which certificates have to be acquired based on a product-based monitoring, does not appear arbitrary when measured against this standard. It is true that, by their very nature, only foreign products are subject to potentially divergent MRV requirements; smaller manufacturers are only subject to these requirements if they originate from abroad. At the same time, the product-specificity of the CBAM-MRV appears to be without alternative: an installation-based border

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<sup>53</sup> See Reichwein et. al., (2023), Ad-hoc Stellungnahme zum europäischen CBAM-Vorschlag, Ecologic, p. 35. It is difficult to assess whether there will be a large number of unequal treatments due to these differences in the design of the instruments. This will mainly depend on whether and to what extent small installations abroad, which would be below the threshold of the EU ETS, import their products into the EU. At the same time, with the entry into force of ETS II in 2027, installations that have so far been exempted because they fall under the threshold should also be included in the ETS. Nonetheless, the possibility of unequal treatment due to the product-related design of the CBAM (currently) remains a legal problem that needs to be addressed.

<sup>54</sup> Appellate Body Report, *US — Clove Cigarettes*, WTO Doc WT/DS406/AB/R, [174].

<sup>55</sup> Meltzer & Porges (2013), *Beyond discrimination? The WTO parses the TBT Agreement in US-Clove Cigarettes, US – Tuna II (Mexico) and US – COOL*, *Melbourne Journal of International Law* 14 (2013), p. 715.

<sup>56</sup> Levy & Regan (2015), *EC-Seal Products: Seals and Sensitivities*, *World Trade Review* 14, pp. 337-379.

<sup>57</sup> Bäumler (2020), *Nachhaltiges Wirtschaften in globalen Lieferketten: Gesetzliche Sorgfaltspflichten von Unternehmen im Lichte des WTO-Rechts*, AVR 58, p. 464–501, 495.

<sup>58</sup> Bäumler (2020), *Nachhaltiges Wirtschaften in globalen Lieferketten: Gesetzliche Sorgfaltspflichten von Unternehmen im Lichte des WTO-Rechts*, AVR 58, p. 464–501, 496.

adjustment mechanism is hardly conceivable. Therefore, once the EU designed its ETS installation-based, then the distinction between domestic products covered by the installation-based ETS and foreign products subject to product-based MRV standards lies in the nature of things and does not appear to be "arbitrary" *per se*.<sup>59</sup>

In view of the unequivocal unequal treatment of foreign products by means of a differing MRV mechanism, the legality of such standards may, however, depend on their concrete design: In particular, it will be necessary that the methods to determine the embedded emissions are technically and scientifically sound, as well as objectively suitable and necessary to ensure the functioning of the CBAM in order to prevent an arbitrary discrimination of imported products. For example, arbitrary discrimination is likely if a CBAM based on a carbon footprint includes post-production emissions (Scope 3) that cannot be taken into account in the ETS due to its reference to emissions from production facilities. As will be explained further below, the integration of internationally agreed standards, such as ISO-norms, is also an important criterion for the justifiability of an MR mechanism.<sup>60</sup>

### 3.2.2 Art. 2.2 TBT: Unnecessary obstacles to trade

The compliance of the MRV mechanisms of a CBAM with the TBT further requires that they do not constitute an "unnecessary obstacle to international trade", Article 2.2. TBT. Firstly, it is therefore, again similar to Article XX GATT, necessary that the regulation aims at a legitimate objective. Secondly, the technical regulation must not be more trade restrictive than necessary to fulfil this legitimate objective, taking account of the risks non-fulfilment would create.

According to Art. 2.2. sentence 3 TBT, which exemplifies permissible objectives,<sup>61</sup> legitimate objectives are inter alia: national security requirements; the prevention of deceptive practices; protection of human health or safety, animal or plant life or health, or the environment. In assessing such risks, relevant elements of consideration are, inter alia: available technical and scientific information, related processing technology or intended end-uses of products. The climate policy objectives of the MRV standards of a CBAM may, as explained above, be considered legitimate with regard to these explicitly permissible objectives – in particular the protection of the environment, human health and safety. By contrast, the question of whether and under what conditions the regulations are more trade-restrictive than necessary deserves closer consideration.

In the context of Article 2.2, the assessment of "necessity" involves a relational analysis of the trade-restrictiveness of the technical regulation, the degree of contribution that it makes to the achievement of a legitimate objective, and the risks non-fulfilment would create.<sup>62</sup> These criteria of the Appellate Body indicate that the effectiveness of MRV rules to achieve the regulatory objective, namely the prevention of carbon leakage and thus effective climate protection, are relevant from the perspective of international trade law. The significance of an adequate MRV mechanism for an effective national carbon trading scheme has been highlighted above: only a reliable assessment of the emissions of imported products, comparable in its requirements to the ETS MRV, can ensure that their embedded CO<sub>2</sub> is priced at (approximately) comparable

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<sup>59</sup> The only plausible alternative in the form of an installation-based system would be to monitor the installations concerned abroad through a system corresponding to the ETS. This alternative is provided for in Annex II of the regulation for individual countries (e.g. Switzerland).

<sup>60</sup> Will (2019), *Climate Border Adjustments and WTO Law*, pp. 260, 271.

<sup>61</sup> Tietje & Wolf (2015): *REACH Registration of imported substances – Compatibility with WTO-Rules*, *Beiträge zum Transnationalen Wirtschaftsrecht*, Heft 42., p. 36.

<sup>62</sup> Appellate Body Report, *US — Tuna II (Mexico)*, WTO Doc WT/DS381/AB/R, [318].

levels and that carbon leakage is avoided as a consequence of the ETS being limited to the EU.<sup>63</sup> MRV mechanisms that are comparable to those of the ETS in terms of their conclusiveness and reliability are therefore an indispensable component of a CBAM, which in turn ensures a national carbon trading scheme that functions in terms of climate protection. The risk of non-fulfilment would be that monitoring and reporting would be too "weak" for the CBAM, that emissions would not be taken into account to a significant extent and that foreign producers would gain a competitive advantage due to a significantly lower implementation effort. The consequence of realizing this risk would be to exacerbate carbon leakage and substantially weaken the effectiveness of the ETS and its associated climate change mitigation effects. Article 2.2 TBT thus makes it clear that the technically and scientifically adequate design of the CBAM-MRV is not only a practical condition of effectiveness, but also a decisive condition of the compliance of these rules with the TBT.

### 3.2.3 Justification of obstacles to trade and the role of International Standards

WTO law in general and the TBT Agreement in particular assign an important role to international standards and other forms of international cooperation in assessing the legality of measures; the Appellate Body considers international standards as relevant benchmarks for assessing the WTO compatibility of national measures.<sup>64</sup>

As Delimatsis explains in more detail, the TBT Agreement privileges measures based on international standards in different ways. Pursuant to Article 2.4 of the TBT, relevant international standards or relevant parts thereof shall be used as a basis for domestic technical regulations unless they are ineffective or inappropriate for meeting the legitimate objectives. Importantly, Article 2.5 incorporates a presumption of TBT-compatibility for those technical regulations that are in accordance with relevant international standards and pursue a legitimate objective. Article 2.9 imposes additional notification requirements in case relevant international standards are not used, and thus imposes additional burdensome conditions that members need to abide by if they disregard or decide not to use international standards.<sup>65</sup>

Prima facie, these specifications give rise to some fundamental arguments in favour of a TIR model: If and to the extent that there is an international standard that is suitable for achieving the purposes of the CBAM, it would have to be applied in accordance with Article 2.4. TBT - regardless of whether it is a mandatory or a voluntary standard.<sup>66</sup> More concretely, the benefits of a TIR-model are also seen with regard to the question of whether unequal treatment caused by a CBAM-MRV based on a carbon footprint approach is permissible or arbitrary: These problems become more relevant, if the EU decides not to use or align its approach with the existing international standards: ISO 14067 and ISO 14044.<sup>67</sup>

The benefits in terms of justifying unavoidable unequal treatments and with regard to specified procedures thus seem to speak in favour of a TIR-model. As explained above<sup>68</sup> however, the relevant ISO standards would need further specification in order to be sufficiently comparable with ETS-MRV rules and thereby fulfil their function in a CBAM. Adapting the ISO standards for

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<sup>63</sup> See above, 2.4.

<sup>64</sup> S. Appellate Body Report, *European Communities – Trade Description of Sardines*, WT/DS231/AB/R (Sep. 26, 2002) [EC – Sardines]; Delimatsis (2018), *Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process*, *Duke Journal of Comparative & International Law* 28 (2018), p. 276.

<sup>65</sup> Delimatsis (2018), *Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process*, *Duke Journal of Comparative & International Law* 28 (2018), p. 280.

<sup>66</sup> Will (2019) *Climate Border Adjustments and WTO Law*, p. 262.

<sup>67</sup> Cf. Will (2019) *Climate Border Adjustments and WTO Law*, p. 260.

<sup>68</sup> At 2.4.

the purpose of CBAM-MRV could violate Art. 2.4 TBT, *unless* the ISO standards are an “ineffective or inappropriate means” of fulfilling the CBAM-MRV’s objective (see above). It is difficult to predict whether, in the event of a legal challenge to an EER solution, a panel would follow this argument that the ISO standards in unamended form are ineffective or inappropriate for ensuring a level playing field between imported and EU products in terms of MRV.

In any event, however, it may be mistaken to conclude from the TBT Agreement’s clear preference for international standards that world trade law favours the use of a TIR model in every case. To be sure, as Delimatsis notes, the TBT Agreement, by its unconditional privileging of international standards, “[q]uite astonishingly, [contains] a delegation of regulatory power without any inquiry into the actual processes used throughout the development of international technical standards.” This alleged indifference of the Agreement to the “input legitimacy” of technical standards however has been increasingly replaced by a view that subjects the emergence and content of private standards to closer scrutiny. Requirements on procedural fairness have been laid down in the TBT Committee’s Decision on Principles for the Development of International Standards. The Appellate Body in US-Tuna II reiterated and emphasised these requirements and suggested that “the larger the number of countries that participate in the development of a standard, the more likely it can be said that the respective body’s activities in standardization are ‘recognized’” in the sense of Annex 1.2. TBT.<sup>69</sup> It is also deduced from the decision of the Appellate Body that the wide recognition of the validity and legality of even a single standard and compliance with substantial principles such as transparency, impartiality and consensus orientation in the development of standards would influence the decision as to whether certain standardization activities are “recognized”. The WTO institutions could accordingly develop from an ex post-legitimiser of international standards per default as per Article 2.4. TBT to an ex post-arbiter of their legitimacy or a third-level authoritative monitoring and enforcement device for international standardization in general.<sup>70</sup>

According to the above, a TIR model with reference to ISO standards could be objected to, given that ISO standardization procedures are often criticised to have significant deficits with regard to their input legitimacy, namely the procedural and substantive guarantees that are in place to ensure that international standards adopted in international standardization forums are in line with basic tenets of due process or transparency.<sup>71</sup> The emerging emphasis on the inclusiveness of procedures and the general acceptance of standards suggests that opponents of an EER-model might not be able to simply argue that the EU should use ISO standards “as they are” in order to comply with the TBT. Arguably, the EU could respond that because of the questions around procedural legitimacy, the ISO standards are ineffective or inappropriate for the purposes of CBAM-MRV.

Regardless of which standards a CBAM MRV specifically refers to, international cooperation and coordination in the selection or development of these standards is likely to be quite relevant from a perspective of international trade law. The chances of MRV rules being admissible thus are likely to be all the better if they are developed in international forums, taking into account procedural principles such as transparency and openness, and in accordance with recognized substantive standards. In this sense, the Appellate Body in US - Shrimp decided with regard to

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<sup>69</sup> “United States – Measures concerning the importation, marketing and sale of Tuna and Tuna Products”, Appellate Body Report, May 2012, WT/DS381/AB/R; Delimatsis, *Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process*, *Duke Journal of Comparative & International Law* 28 (2018), p. 282.

<sup>70</sup> Delimatsis (2018, *Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process*, *Duke Journal of Comparative & International Law* 28 (2018), p. 283, 286.

<sup>71</sup> Delimatsis (2018), *Global Standard Setting 2.0.: How the WTO spotlights ISO and impacts the transnational standard-setting process*, *Duke Journal of Comparative & International Law* 28 (2018), p. 323.



the chapeau of Article XX GATT that the measure in question was not justified because of the “failure of the United States to engage the appellees, as well as other States, in serious, across-the-board negotiations with the objective of concluding bilateral or multilateral agreements [...]”.<sup>72</sup> This suggests that a serious effort by the EU to set international standards, even if this effort fails, would improve the odds for the justification for unilateral MRV.

### 3.3 Prerequisites for integrating transnational standards from the perspective of national and European law

National and European law also provide criteria for whether and in what way a CBAM-MRV should integrate external standards. For example, German law cannot directly incorporate a general, dynamic reference to (national or international) private standards. Such a dynamic reference is considered to constitute an indirect transfer of legislative activity to private parties since modifications of standards would not be foreseeable and controllable for the legislator. The parliament would delegate its legislative powers to private parties which would infringe the democratic principle, Article 20 of the German Constitution.<sup>73</sup> Dynamic references to private technical regulations (e.g. specifications of the Deutsches Institut für Normung e.V. – DIN) thus are inadmissible for constitutional reasons. In contrast, a reference to private sets of norms is conceivable as a *static* reference, which specifies the exact set of standards which the national legislature adopted by mere referencing.<sup>74</sup> A *static* reference to individual, precisely designated soft law standards accordingly does not raise constitutional objections.<sup>75</sup>

The extensive possibilities of delegating regulatory responsibility and thus the transfer of public powers to private parties in European law are increasingly seen as problematic. This is because, despite their legal significance, serious deficiencies are observed with respect to effective judicial control and legal protection for such standards, their protection by copyrights and related failure to meet basic demands of publicity in law making and the fact that, although they are regarded as “part of EU law,” they are not subject to equivalent legal requirements applicable to analogous EU bodies.<sup>76</sup>

In a recent ruling on the *Stichting Rookpreventie* case,<sup>77</sup> the ECJ confirmed basic features of its case law on the subject and specified them in a manner relevant to the issue at hand. The court had to decide on the admissibility of the reference by Directive 2014/40 (“Tobacco Directive”) to relevant ISO standards on methods for measuring tar, nicotine and carbon monoxide emissions from cigarettes. The applicants had raised various doubts regarding the suitability of these ISO-Norms to adequately determine the level of cigarette emissions established by Article 3 (1) of the directive. At the same time, they had pointed to deficits of the ISO standardization processes which allegedly entailed conflicts of interests towards the tobacco industry.<sup>78</sup>

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<sup>72</sup> WTO United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R (1998), para.166; see Krebs (2023), in: Gailhofer et al. (2023), *Corporate Liability for Transboundary Environmental Harm*, p.336.

<sup>73</sup> Krebs et al. (2020), *Von der menschenrechtlichen zur umweltbezogenen Sorgfaltspflicht*, Umweltbundesamt, March 2020, March 2020, 41, 51 with reference to Federal Ministry of Justice (ed.), *Manual for Drafting Legislation*, 2008, para. 247 and BVerfGE 143, 38 [56].

<sup>74</sup> Federal Ministry of Justice (ed.), *Manual for Drafting Legislation*, 2008, para. 242, Krebs et al., *Von der menschenrechtlichen zur umweltbezogenen Sorgfaltspflicht*, Umweltbundesamt March 2020, March 2020, p. 41, 51.

<sup>75</sup> Krebs et al. (2020), *Von der menschenrechtlichen zur umweltbezogenen Sorgfaltspflicht*, Umweltbundesamt, March 2020, p. 41, 51.

<sup>76</sup> Vallejo (2021), *The Private Administrative Law of Technical Standardization*, *Yearbook of European Law*, Vol. 40, No. 1 (2021), p. 175.

<sup>77</sup> ECJ, Judgment of the Court (Grand Chamber) 22 February 2022, ECLI:EU:C:2022:101.

<sup>78</sup> Vallejo (2021), *The Private Administrative Law of Technical Standardization*, *Yearbook of European Law*, Vol. 40, No. 1 (2021), p. 227.

In its decision, the ECJ first reaffirmed its existing case law to the effect that, in principle, the EU legislator is free to refer in its legislative acts to technical standards laid down by a standardization organization such as ISO.<sup>79</sup> The court also did not find fault with the mere participation of the tobacco industry in the development of the standards. However, it explicated relevant procedural and substantive requirements for the regulatory technique of reference.

The mere fact that relevant provisions of the directive refer to an unpublished ISO standard does not, however, contradict either the principle of transparency under European law or the principle of legal certainty, in the court's view. The compliance of the regulatory technique of reference to ISO standards with the principle of transparency accordingly is guaranteed by the possibility to submit a valid request pursuant to Regulation 1049/2001 concerning access to those standards.<sup>80</sup> With regard to the principle of legal certainty, however, the court emphasizes the need to be clear and precise and predictable in their effects for the norm addressee. In principle, technical standards can therefore only impose an obligation on an individual if they themselves have been published in the Official Journal of the European Union; in the case of amendments to the standards by the standard-setting organization, that principle also means that only the version of those standards that has been published is binding on the public generally. In view of their absence of publication, the ISO standards to which the directive refers could, against this background, only be seen to impose an obligation on their addressees if they have access to the official and authentic version of these standards. Against this background, applicability of the ISO standards would result only because the specific features of the system established by ISO, which consists of a network of national standards bodies, enabling those national bodies to grant, upon request, access to the official and authentic version of the standards determined by ISO.<sup>81</sup> The court thereby draws a clear distinction between the public generally, who is bound by technical standards only if they have been published in the Official Journal of the European Union, and undertakings, which can get access to the official and authentic version of the standards through the national standardisation bodies.<sup>82</sup>

As the relevant ISO standards do not impose obligations on individuals that are no undertakings, the ECJ considers that it is for the referring court to determine whether the methods that were actually used to measure the emission levels of the substances in question are in line with the objectives of the Directive. In particular, the applied standards must therefore effectively meet the objective expressed in the Directive of ensuring a high level of protection of human health. In addition, the procedures must take into account scientific and technical developments and

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<sup>79</sup> At Mn. 44 with reference to ECJ Judgement 30 January 2019, *Planta Tabak*, C220/17, EU:C:2019:76, Mn. 44.

<sup>80</sup> ECJ, Judgment of the Court (Grand Chamber) 22 February 2022, ECLI:EU:C:2022:101, Mn. 48-53. According to Volpato this assumption, in its concrete application, is strongly doubtful. Pursuant to Article 4(2) of that Regulation, EU institutions must refuse access to a document where disclosure would undermine the protection of intellectual property, including copyright. Therefore, although valid, the request to have access to the text of standards will be definitely nugatory in practice, see Volpato (2022), *Transparency and legal certainty of the references to international standards in EU law: smoke signals from Luxembourg?*, available online at: <https://www.maastrichtuniversity.nl/blog/2022/03/transparency-and-legal-certainty-references-international-standards-eu-law-smoke>. This critique is supported by recent decisions of the ECJ, see for example JUDGMENT OF THE GENERAL COURT (Fifth Chamber, Extended Composition) of 14 July 2021, ECLI:EU:T:2021:445.

<sup>81</sup> Volpato (2022), *Transparency and legal certainty of the references to international standards in EU law: smoke signals from Luxembourg?* Available online at: <https://www.maastrichtuniversity.nl/blog/2022/03/transparency-and-legal-certainty-references-international-standards-eu-law-smoke>.

<sup>82</sup> Volpato (2022), *Transparency and legal certainty of the references to international standards in EU law: smoke signals from Luxembourg?* Available online at: <https://www.maastrichtuniversity.nl/blog/2022/03/transparency-and-legal-certainty-references-international-standards-eu-law-smoke>. Volpato however convincingly argues that such a formal distinction based on a differentiated accessibility for certain actors is hardly tenable as the possibilities to have access to the text of standards does not differ for the two categories: the sale of standards is not available only to undertakings, nor it is granted at different conditions to undertakings or individuals. The fact that this access is granted on payment for the copyright is neither mentioned nor discussed.

internationally agreed standards, and the laboratories conducting the tests must not be owned or under the direct or indirect control of the tobacco industry.<sup>83</sup>

Although the ruling in the *Stichting Rookpreventie* case does not answer all questions on the legality of regulatory reference to private standards in EU law convincingly, it does allow some conclusions to be drawn which could be of interest for the development of MRV standards. For example, the question could arise whether the binding nature of ISO standards could also be established vis-à-vis companies in non-European countries according to the criteria developed by the court. This is because such undertakings, specifically smaller producers in the global South, may not have access to ISO standards comparable to European undertakings, which routinely use ISO standards or are even indirectly involved in their development via corporate organizations. In particular if citizens take legal action against MR standards or the legal rules referring to them, the courts, according to the principles developed by the ECJ, would have to examine the effectiveness and proper implementation of the standards and procedures put in practice.

Again, the judgment suggests that private standards and procedures potentially referred to in CBAM-MRV rules should be appropriate to effectively achieve the regulatory objectives of a CBAM in order to withstand judicial scrutiny in the event of a dispute.

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<sup>83</sup> ECJ, Judgment of the Court (Grand Chamber) 22 February 2022, ECLI:EU:C:2022:101, Mn. 76.

## 4 Key conclusions regarding the design of CBAM-MR

Rules and procedures for an accurate monitoring, reporting and verification of emissions (MRV-standards) are a fundamental prerequisite for an effective CBAM mechanism. Without an accurate and reliable assessment of the emissions related to the production of imported goods, their embedded emissions cannot be priced at (approximately) comparable levels in relation to the products of European companies subjected to the EU ETS. Deficiencies in the accuracy and reliability of MRV rules will typically result in fewer emissions being calculated and priced than are in fact embedded in products. If it is significantly easier and cheaper to comply with a CBAM-MRV compared to the ETS-MRV, e.g. with regard to the emission scope or sector specific methodologies, this also might lead to relevant competitive advantages. In such cases, incentives to avoid competitive disadvantages from the ETS and to move production facilities abroad would remain, and the purpose of the CBAM to avoid carbon leakage could be jeopardized. The regulatory rationale of a CBAM thus presupposes a constant reconciliation of the requirements of the CBAM-MRV and the respective rules under the ETS.

Provided that the EU does not want to leave key parameters of its emissions trading system to the mechanisms and dynamics of international politics, it therefore might seek to determine the contents of a CBAM-MRV on its own, aligned with the standards and requirements of the ETS: foreign manufacturers would be practically obliged to monitor and report emissions according to European standards. This general regulatory option has been referred to in this paper as extraterritorially extended regulation (EER). Such an extraterritorial extension of a CBAM-MRV however would carry its own challenges. Any unilateral provision of the regulatory basis for imposing a carbon price on foreign goods will probably face opposition from those states that have so far avoided effective carbon-mitigation policies and thereby have sustained competitive advantages for their manufacturers, even if the carbon price is charged only on imports of these goods to the EU single market. As such, MRV regulations could be confronted with accusations of "legitimacy gaps",<sup>84</sup> which not only pose problems from a normative perspective. Rather, an extension of the EU MRV rules might fuel a perception of the EU as a self-declared "global regulator for climate protection".<sup>85</sup> Such an interpretation of EU policies would be problematic, notably because the functioning of a CBAM-MRV will depend not least on its acceptance to ensure effective implementation by foreign companies and independent third parties at the production sites abroad. The MRV rules of a CBAM could therefore be confronted with challenges that make it necessary to place particular emphasis on the acceptance and implementability of the rules on the part of third countries, certifiers and foreign companies, even beyond considerations of legitimacy.

Granting trading partner countries a say in MRV rules might be a way of fostering legitimacy and international acceptances. A general option to enable such a say is to refer to technical standards developed in international standardisation processes to substantiate the CBAM-MRV. In this paper, such an option has been termed Transnationally Integrated Regulation (TIR-model). More specifically, it considered the possibility of the MRV mechanism being substantiated by reference to existing ISO standards (see above 2.2.).

Design decisions on the specification of a CBAM-MRV regime after all take place in a certain field of tension. On the one hand, the effectiveness of MRV regulations in terms of a functioning CBAM depends on them being as comparable as possible to the MRV rules of the European ETS in terms of their scope, accuracy, and reliability. This means that the European legislator must have

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<sup>84</sup> Hadjiyianni (2019), *The EU as a global regulator for environmental protection*, 297.

<sup>85</sup> Hadjiyianni (2019), *The EU as a global regulator for environmental protection*.

sufficient control over the content of these standards to ensure this comparability in the event of necessary changes to the ETS-MRV. On the other hand, not only normative considerations, but also aspects of effectiveness speak in favour of choosing cooperative, international procedures for standardization.

The ambivalent consideration from a practical point of view is also reflected in the legal analysis of the two regulatory options. However, some legal conclusions on the matter can be drawn:

Indeed, the relevant WTO law privileges international standards and therefore seems, *prima facie*, to favour a TIR model: It is clear that the introduction of MRV obligations for importers can create legally relevant obstacles to trade. While such obstacles can be justified before the WTO law by legitimate policy objectives, such as combatting climate change, they must be coherent, fit-for-purpose and not create unjustifiable discrimination. They might be easier to defend if they stem from international rules. On closer examination, however, WTO law also provides principles that temper the advantages of a TIR model referring to existing ISO standards: importantly, the legal privileging of international standards is increasingly made conditional on the observance of substantial principles such as transparency, impartiality and consensus orientation in their elaboration, which are, according to critics, still insufficiently taken into account in ISO standardization processes. Effectiveness and functionality of the CBAM-MRV with regard to the objectives of the CBAM in terms of climate protection policy are also relevant benchmarks for their justifiability under trade law.

European law also provides evidence, on the one hand, that the legality of a MRV mechanism should at least take into account the increasing emphasis on the relevance of procedural principles like fairness, inclusiveness and transparency for the validity of private international standards. It is precisely when compliance with such principles, as in the case of reference to ISO standards, might be questioned, that it also becomes critical that the standards referred to are also technically and scientifically adequate. The effectiveness of a MRV-regime to ensure the functioning of a CBAM thus may be seen a decisive condition of the legality of these rules. Since, according to our analysis, the existing ISO standards alone cannot fully ensure either effectiveness or input legitimacy, the TIR model examined here does not offer a simple solution.

In summary, instead of a clear recommendation for existing policy options, the analysis shows that the choice between design options for a CBAM-MRV has to take into account seemingly contradictory principles. Effectiveness and legality of a CBAM-MRV require both the control of the European legislator and the delegation of this competence to international processes. The solution to this conundrum could lie in a blend of the ideal types considered here: An EER-model could be based (implicitly or explicitly) on recognised ISO standards, as far as possible, and supplement these standards unilaterally where the specifications of effectiveness and reliability comparable to the ETS require it. In line with this, it is to be stated that the general principles of the EU ETS MRV rules are already similar to ISO 14067 (see chapter 2.4 above). However, to the extent that there are no sufficiently detailed international standards at hand, the EU can only try to achieve an international consensus on those details.

In addition, the further development of the content of MRV rules that meet high standards of technical and scientific validity could take place in a transparent and inclusive international forum. It is precisely the technical and scientific orientation of such standards that makes it seem easier to achieve quick results through international cooperation compared to more economic issues such as the level of the carbon price. Ongoing debates about a climate club might help to kick-start such a process. The CBAM Regulation sees this potential: In recital (72) it *“calls for the development of bilateral, multilateral and international cooperation with third countries”* and acknowledges that a “Climate Club” should *“also support the comparability of*

*relevant climate measures by ensuring the quality of climate monitoring, reporting and verification among its members and providing means for engagement and transparency between the Union and its trade partners”.*

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