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Implementing a Differential Carbon Border Adjustment Mechanism: How to Design a CBAM Compliant with International Law

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Increasing concerns about anthropogenic climate change have motivated governments to strengthen policies to reduce greenhouse gas (GHG) emissions. One of the most novel policy issues under discussion in the European Union is the implementation of a carbon border adjustment mechanism (CBAM) to equalize carbon prices on EU-produced and foreign-produced carbon-intensive goods. A CBAM aims to solve two main problems resulting from the absence of global coordination or a common price on carbon. First, a country adopting more stringent carbon policies may lose competitiveness in its carbon-intensive industries due to partial displacement of domestic production by imports of goods from countries with less strict policies. Second, the potential relocation of production to those other countries may shift rather than reduce global GHG emissions, a phenomenon commonly known as ‘carbon leakage’.

In July 2021, the European Commission released a proposal to implement a CBAM as part of the European Union’s ‘Fit for 55’ package. CBAM is expected to work parallel with the EU’s Emissions Trading System (EU ETS) by mirroring ETS requirements on imported goods. The Council of the European Union has recently reached agreement on the European Commission CBAM proposal and is expected to continue deliberation later this year. Despite the merits of the mechanism, the implementation of a CBAM raises several legal issues (I have addressed some of these issues in greater detail in a [recent paper published in the Canadian Tax Journal](#)). This blog draws on my latest paper to discuss one specific concern. Among other potential conflicts with international law norms, a CBAM may violate the principle of common but differentiated responsibilities (CBDR). The principle was most clearly articulated in the [1992 Rio Declaration on Environment and Development](#). The principle was then expressed in treaty form in the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#). Several subsequent international agreements have included reference to it.

CBDR has two normative components. The *common responsibilities* component recognises that the risks associated with climate change affect every person and nation. As a result, all countries share the responsibility to “cooperate in good faith and in a spirit of partnership” (the expression appears in Principle 27 of the 1992 Rio Declaration). The *differentiated responsibilities* component indicates that shared responsibility must be differentiated between countries on the basis of two factors: historical responsibility for current environmental degradation and capability to address the

problem.[1] Both factors require developed countries to “take the lead in combating climate change and the adverse effects thereof” (the expression appears in article 3(1) of the UNFCCC).

While the commonality of obligations (“common responsibilities”) requires the participation of all countries, it is the differentiation within such obligations (“differentiated responsibilities”) that makes CBDR a potential impediment to the implementation of a CBAM. Because one of the primary outcomes of a CBAM is to equalize carbon pricing regardless of origin, it effectively imposes the same level of carbon policy on all countries. A CBAM that applies uniformly to all countries (which I call “a uniform CBAM”) will violate CBDR because its implementation will compel exporting, developing countries to adopt carbon policies equivalent to those in place in the implementing, developed country. A uniform CBAM would unilaterally impose the implementing country’s carbon policy on developing countries’ exporters and thus equalize emission reduction commitments worldwide, pushing for equal rather than differentiated responsibilities. To comply with CBDR, a CBAM must apply differently to developed and developing countries by either setting a lower rate or price for the latter or fully exempting them (I call this “a differential CBAM”).

If a *uniform CBAM* violates CBDR, the main question is how to design a *differential CBAM* compliant with CBDR. Although the UNFCCC does little to clarify CBDR’s practical consequences, one can draw some helpful guidelines from the general purpose of the principle and its articulation in the UNFCCC’s text. Three main questions should guide the design of a CBDR-compliant CBAM:

1. What mechanism should be used for differentiation?
2. Which countries should be included in the differentiation?
3. How might the criteria for differentiation be determined?

The following will discuss each of these questions.

Mechanisms for a differential CBAM

The first question concerns the suitable instrument for differentiation. The most obvious and straightforward way to advance differentiation is through the differentiated application of a CBAM, in simple terms, differentiated rates/amounts for different countries. This would entail a reduction or full exemption for developing countries. Some have, however, advocated for an alternative policy that would impose a *uniform CBAM* across the globe but offset the negative impacts on developing countries through compensatory mechanisms. In its [Proposal for a Regulation Establishing a Carbon Border Adjustment Mechanism](#) on 14 July 2021, the European Commission acknowledged the potential negative impacts of a CBAM on exporting developing countries, particularly least-developed countries. Still, it has argued that an exemption would encourage those countries to increase their emission levels. The proposal has instead recommended adopting “compensating mechanisms” to provide developing countries with technical assistance, technology transfer, capacity building, and financial support. The European Commission considered that these measures would ensure compliance with CBDR.[2] The [draft currently under consideration](#) by the Council of the European Union also supports a *uniform CBAM* with the provision of technical assistance to developing and least developed countries.

The proposal for a uniform CBAM with compensatory mechanisms fails to recognize that CBDR entails two separate, cumulative normative requirements:

1. the requirement to differentiate commitments and standards between developing and developed countries (article 4(2)(a)); and
2. the obligation for more affluent countries to provide financial and technical assistance to less affluent ones to help them implement their obligations (articles 4(1)(c) and (3)).

Addressing the second requirement does not displace or replace the first. Since developed countries are already under the obligation to provide developing countries with technological and financial assistance, compliance with that obligation does not authorize developed countries to unilaterally compel developing countries to undertake similar commitments concerning their carbon policies. Further, technology transfer and financial assistance are critical to achieving a satisfactory reduction of global emissions, but they will likely produce positive results in the mid- and long term. In contrast, a uniform CBAM would have immediate negative impacts on developing countries that would not, at least in the short term, be offset by developed countries' "compensatory" assistance. Therefore, a uniform CBAM will violate CBDR regardless of any concurrent aid provided by the government implementing the CBAM.

How much differentiation

An often-disputed question regarding implementing policies that comply with CBDR is the adequate level of differentiation. Would differentiation in two groups—developed and developing countries—or even three—developed, developing, and least-developed countries—satisfy CBDR? Or does CBDR require further differentiation among countries within these groups? In the past, most developing countries favoured dividing jurisdictions into two broad groups, but many developed and developing countries have more recently endorsed differentiation within these groups.

For instance, the Bali action plan, negotiated between UNFCCC parties in 2007, proposed that the determination of countries' commitments to reducing emissions consider several factors, including social and economic conditions. The plan further refers to "nationally appropriate mitigation actions," indicating that CBDR would lead not only to further differentiation among groups but also to individual levels of commitment per country. Earlier agreements, such as the 1994 sulphur protocol and the 1997 Kyoto protocol, had already shown signs of acceptance of the more nuanced approach when they adopted differentiated commitments with individual emission reduction targets for each party. From a normative viewpoint, differentiation of countries based on discrete, artificial groupings makes little sense. CBDR's normative requirement to distinguish countries based on historical contributions and existing capabilities warrants more nuanced differentiation. Accordingly, a differential CBAM that differentiates countries at a granular level is more likely to comply with CBDR.

How to differentiate

A further complex issue is determining what criteria to use for differentiation. As explained earlier, CBDR is based on two moral justifications: historical responsibility for current environmental degradation and the capability to address the problem.

From a practical perspective, differentiation in CBAMs might be achieved in several ways. One possible approach is to apply differential requirements to foreign countries based on their different levels of per capita income (to account for capability) and per capita emissions (to account for historical responsibility) in relation to the per capita income and per capita emissions of the

country implementing the CBAM. Under this approach, the CBAM uses a varying rate adjustment, which I will call “the differential adjustment” (*DA*). *DA* will apply to the standard CBAM—that is, the import duty’s rate (if ad valorem), the import duty’s amount per unit (if specific), the required allowance purchases, or the export rebate—already adjusted according to the level of carbon policy adopted in the foreign country. *DA* has an upper limit of 1 because any amount higher than 1 would increase the standard CBAM and thus violate the WTO national treatment principle.

Additionally, for equity and practicality reasons, a minimum threshold may be established to exempt countries with significantly low per capita income or per capita emissions. *DA* would be the weighted average of the ratio of the per capita income of the foreign country (Y_f) to that of the implementing country (Y_i) and the ratio of the per capita emissions in the foreign country (E_f) to that in the implementing country (E_i). The weight of each factor (per capita income and per capita emissions) will be attributed based on equity and policy reasons and is represented by α (weight of per capita income) and β (weight of per capita emissions), such that α and β sum to 1. For instance, if per capita income and per capita emissions are to be equally relevant for differentiation, each will have a value of 0.5. This formula can be expressed as follows:

$$DA = \alpha \times Y_f / Y_i + \beta \times E_f / E_i, \text{ where } DA \text{ equals } 1 \text{ for all } DA > 1.$$

Although more detailed factors could be considered relevant for a more accurate formula,^[3] a plausible simplified approach would be to remove per capita emissions altogether and adjust only on the basis of per capita income. There are two reasons why disregarding per capita emissions seems preferable. First, current per capita emissions are a poor proxy for historical responsibility. Although most of the greatest polluters in the past still play a significant role in today’s emissions, many developing countries that played only a marginal role in the past have recently increased their emissions. Using current per capita emissions does not accurately reflect past contributions and unjustifiably disfavours developing countries. Second, calculating responsibility on the basis of current production instead of consumption puts an unfair burden on developing countries. Although policymakers have justified the use of CBAMs as a way to address carbon leakage, most of the world’s carbon leakage has been caused not by differences in carbon policies but rather by the growing relocation of carbon-intensive production to developing countries. Developed countries have effectively outsourced GHG emissions while steadily increasing their consumption of cheap carbon-intensive imports. Emission reductions in the developed world have occurred in the form of leakage to the developing world.

Adjusting CBAM for CBDR solely on the basis of per capita income may present problems. Still, this approach seems to provide the most accurate (and the simplest) approximation to CBDR’s normative requirement.

Why differentiation matters

The primary international economic effect of a CBAM is to impose on foreign-produced goods the same level of carbon prices set domestically. The primary international policy effect is to compel countries with lower carbon prices to raise them to the level adopted in the country implementing the CBAM. These effects raise concerns with respect to developing countries. Developing countries tend to have less stringent climate policies, and their production is generally more carbon-intensive than that of OECD countries. As a result, developing countries are expected to be more significantly affected by a CBAM. The impact of a CBAM will be even more consequential to newly industrialized and industrializing developing countries, which tend to be net carbon

exporters.

From a global perspective, addressing climate change requires considering two interrelated concerns: reducing global carbon emissions and meeting the development needs of developing countries. Although a uniform CBAM might potentially address the former, it would significantly undermine the latter. Requiring less affluent countries to achieve emission reductions at a level equivalent to that of developed economies overlooks historical and ethical considerations. From a historical viewpoint, such a requirement fails to acknowledge the responsibility of developed countries for the harms resulting from their higher emissions in the past. From an ethical perspective, it neglects that per capita emissions in many developing countries are remarkably lower than those in the developed world. In practice, emission cuts in developing countries would impact energy costs and consumption distribution, further reducing per capita income in those countries beyond levels that are already low. Imposing such a level of reduction in emissions would also result in prohibitive costs for developing countries attempting to fulfill their need for substantial expansion in energy, transportation, agricultural production, and urbanization.

The explicit violation of CBDR, which is often regarded as the foundational principle of the UNFCCC, would lead to political distrust and likely stifle international cooperation on a subject matter (climate change) that can only be tackled effectively as a cooperative enterprise. A (uniform) CBAM that violated the cornerstone of the UNFCCC would likely hamper rather than promote the reduction of global carbon emissions.

Other relevant legal issues

The implementation of a differential CBAM raises several other legal questions. One may question whether a differential CBAM would contradict the WTO requirement of non-discrimination, particularly the most-favoured-nation (MFN) principle, which prohibits a WTO country from providing different treatment among WTO trading partners beyond the exceptions allowed in WTO law. Should the contradiction exist, it remains to be determined how the normative conflict between CBDR and WTO law ought to be resolved. Additional questions about the binding force of CBDR in international law persist. And granted that CBDR has binding force in international law, uncertainty remains about CBDR's legal implications in the absence of an adjudicatory body to enforce the UNFCCC. I refer the reader to [my full-length article *Designing an Equitable Border Carbon Adjustment Mechanism*](#) for a comprehensive analysis of these and other questions.

[1] The dual normative justification underlies the preamble of the UNFCCC (“Noting that *the largest share of historical and current global emissions of greenhouse gases has originated in developed countries*, that per capita emissions in developing countries are still relatively low and that *the share of global emissions originating in developing countries will grow to meet their social and development needs, ...*” and “Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and *respective capabilities and their social and economic conditions*”). See also Derek Bell, “Global Climate Justice, Historic Emissions, and Excusable Ignorance” (2011) 94:3 *Monist* 391-411 at 391 (arguing that the differentiation component of CBDR is based on both historical emissions and ability to pay).

[2] See European Commission, Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism, COM/2021/564 final, July 14,

2021 (“In the absence of such compensating mechanisms, LDCs could argue that the introduction of a CBAM will be a disproportionate burden for them and that they conflict with the UNFCCC principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances.”).

[3] For a comprehensive analysis of different criteria used by countries to justify their nationally determined contributions (NDCs), see Lavanya Rajamani et al, “National ‘Fair Shares’ in Reducing Greenhouse Gas Emissions within the Principled Framework of International Environmental Law (2021) 21:8 Climate Policy 983. Indicators considered to speak to CBDR include historic responsibility, emissions per capita, GDP per capita, classification as SIDS or LDCs, cumulative GHG emissions relating to historical responsibility, and current and projected environmental harm.

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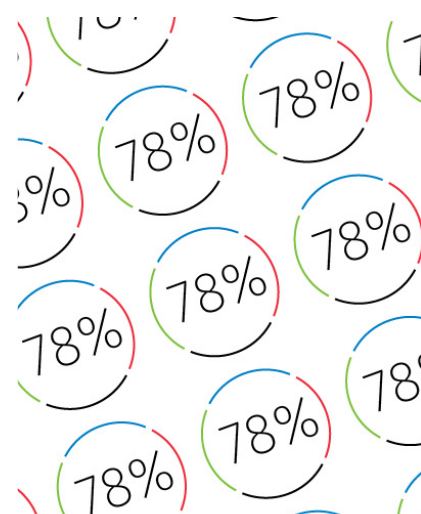
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