How to Design Border Carbon Adjustments that Work for the Climate

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Climate Strategies

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With the entry into force of the Paris Agreement, climate cooperation has broadened and heterogeneity of domestic action has become an accepted feature. This means efforts remain asymmetrical across countries, raising concern about emissions leakage and competitiveness impacts.

Emissions leakage can seriously undermine climate action. It refers to a situation where some or all of the emissions reduction achieved by a country is offset by an increase in emissions elsewhere as production and investment relocate or fuel consumption is displaced.

Concern about leakage, possibly heightened by national entrenchment and protectionism in some countries, will generate pressure to retain or apply response measures. Unless it is addressed, this pressure will only grow as countries engage in more ambitious action.

So far, the risk of leakage has mostly been dealt with through measures behind the border, from output-based rebates and free allocation of emission allowances to full exemption of affected emitters. A growing body of evidence suggests, however, that these approaches have not performed as intended, with regulatory capture, perverse incentives, and windfall profits. As parties to the Paris Agreement take climate action, the need for more suitable instruments will persist.

Border carbon adjustments (BCAs) could be an answer, as they can level the competitive playing field, reduce emissions leakage, and incentivise trade partners to strengthen their own climate efforts. Economic modelling studies suggest that the effectiveness of BCAs in tackling leakage may vary from moderate to very high.

What are border carbon adjustments (BCAs)?

BCAs are instruments that address the problem of uneven climate efforts by including imports in, or exempting exports from, a carbon constraint. In their most elementary form, they can be a tariff or other fiscal measure applied to imported goods. They can also be implemented by extending other regulatory obligations to imports, such as the requirement to purchase emission allowances. Or they can be applied to exports, for instance through tax or regulatory relief.

Based on a survey of academic literature and existing case studies, we suggest a way to design a BCA that balances risks, costs and benefits, keeping in view legal vulnerability, administrative difficulty and environmental performance. Although the parameters we outline cannot avoid all legal uncertainty and technical complexities, even an imperfect BCA could compare favourably to other instruments in use. Moreover, the revenue it would generate can be used to accelerate climate action and transparency among trade partners. If successful, the need for BCAs should wane over time, as climate ambition across trade partners increasingly converges.

Six Steps in the Design of a BCA and a Suggested Process to Ensure Fairness and Transparency

1 Determine Scope and Coverage

Scope and coverage relates to products and trade flows, affected countries, and types of carbon constraints to adjust for. The BCA should:

- Apply only to imports to hedge against classification as a prohibited export subsidy under the WTO Agreement on Subsidies and Countervailing Measures, and to avoid incentivising domestic producers to increase the carbon intensity of exports;
- Cover only primary goods, i.e. commodities from sectors with high carbon cost and trade exposure, and limited ability to pass through the cost to consumers. This reduces the administrative and technical burden while delivering a majority of environmental benefits;
- Have a sectoral focus to observe the Most Favoured Nation principle and prevent avoidance ('trans-shipment') strategies by importers;
- Exempt Least Developed Countries to respect differentiation provisions in the climate and trade regimes without undermining environmental objectives;
- Determine covered policies for which to adjust differences in ambition. This is easiest with policies that create an explicit carbon price, a natural starting point for a BCA, although additional carbon constraints may be included in its scope.

2 Calculate the Embedded Carbon

Determining the amount of carbon emitted during production of a good depends on the scope of emissions that are included and the methodology used to calculate those emissions. This should consider:

- Direct emissions plus indirect emissions from energy, that is: emissions originating from the production process and emissions from electricity and heat used as inputs for production, as these cover the majority of product-related emissions, without unduly adding technical complexity;
- Global average sectoral benchmarks for direct emissions (multiple benchmarks may be needed in some sectors to reflect different production technologies) to strike a balance between legal concerns, fairness, and incentivizing emission reductions;
- Regional or local emission factors for indirect emissions to avoid a legally problematic link to country-specific characteristics and more accurately reflect real-world energy markets;
- A transparent, accessible process, allowing foreign producers to document actual emissions and improved performance using third-party-verified data.

3 Determine Adjustment Level

Once embedded emissions have been calculated, the level of the BCA needs to be determined. As a default, the adjustment will be based on the sectoral benchmark multiplied by an explicit carbon price and the amount of product, which, in the case of a variable carbon price (e.g. in an emissions trading system), may have to be averaged out across a specified period.

Prospectively, for policies that do not generate an explicit carbon price, or where the importing jurisdiction has introduced multiple instruments in the covered sector, the benchmark can be multiplied by an effective carbon rate, based on the average abatement cost across that sector. Determining the effective carbon rate is challenging, but can build on existing methodologies.

The BCA is only meant to adjust for the differential between the foreign and domestic climate policy cost in covered sectors. So the level of the BCA has to reflect any exemptions, rebates or free allocation in the importing country, as well as carbon constraints applied to imports in their country of origin, all of which are then deducted from the determined level.

4 Determine Revenue Use

Rather than accrue to the general budget or be recycled to the public, any revenue collected through the application of a BCA should be used to further its environmental objective and benefit developing countries affected by it.

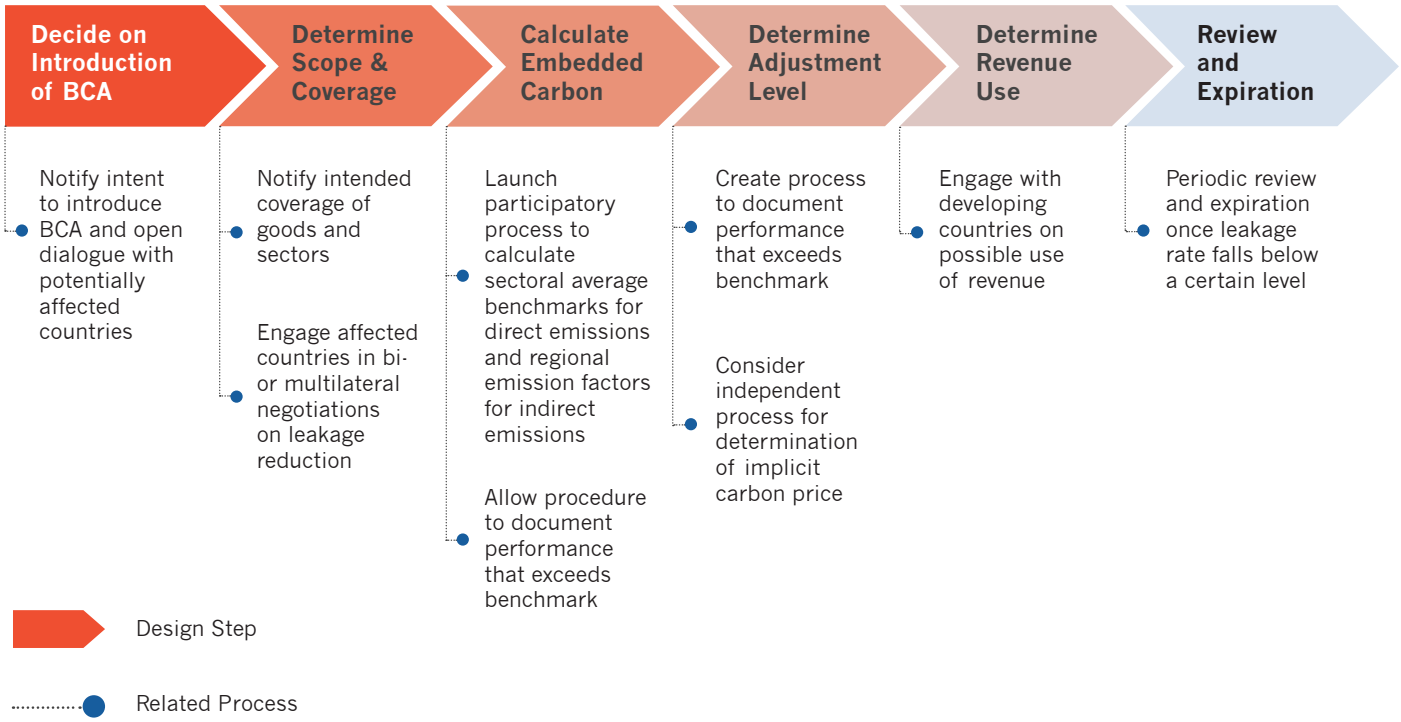
5 Decide Expiration

Instruments that generate revenue can become entrenched even after their primary objective has been achieved. To avert that risk, a BCA should be temporary in nature and contain a sunset clause prescribing its periodic review and expiration once the leakage rate falls below a certain level.

6 Provide for a Fair and Transparent Process

Throughout the design and implementation of a BCA, a process should be followed that ensures fairness, transparency and predictability, and that provides opportunities for participation by affected countries, as well as appeal and review procedures.

Design Steps and Related Process



Frequently Proposed, Rarely Implemented: Experience with BCAs

BCA	Year	Jurisdiction	Applied	Coverage
Future Allowance Import Requirement (FAIR)	**2007**	**European Union**	No	Imports and exports of goods at risk of carbon leakage, in relation to countries without comparable action.
Carbon Inclusion Mechanism (CIM)	**2009**	**European Union**	No	Imported and exported goods at risk of carbon leakage, in relation to countries which do not cooperate under a new international climate agreement on mitigation, or without carbon pricing for the sectors covered by the EU ETS.
Border Adjustment Proposal for the Cement Sector	**2016**	**European Union**	No	Imported cement and clinker from countries without adequate mitigation efforts and/or carbon content pricing equivalent to EU.
American Climate and Energy Security Act (HR 2454)	**2009**	**United States**	No	Goods from eligible industrial sectors and manufactured items for consumption from countries that do not meet specific standards outlined in the bill, and that are not exempted for low emissions or a low level of development.
Californian Emissions Trading System	**2011**	**California**	Yes	Electricity imported into California from neighbouring states, provided these are not linked to the Californian Emissions Trading System.
Climate Leadership Council	**2017**	**United States**	No	Exports from sectors with greater than 5% energy cost in final value to have any carbon taxes rebated, and non-emissive fossil fuel products be exempt.

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http://climatestrategies.org/projects/making-the-international-trading-system-work-for-climate-change/

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