

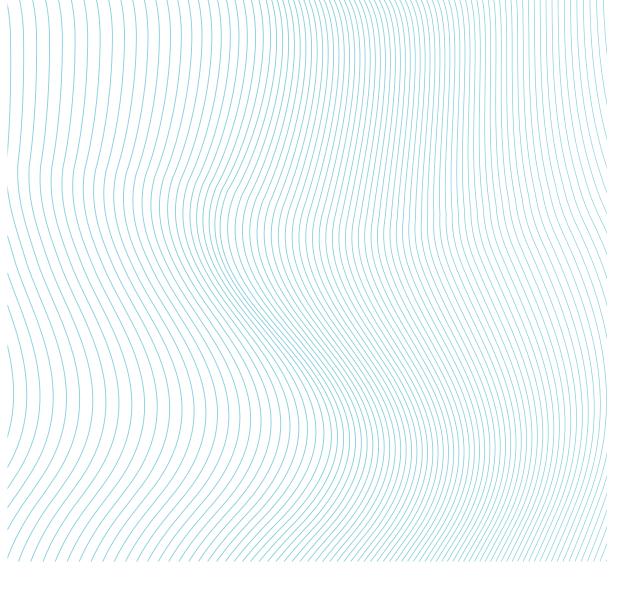
POLICY BRIEF TRADE AND CLIMATE CHANGE: A KEY AGENDA FOR THE G20



Task Force 2 **CLIMATE CHANGE AND ENVIRONMENT**

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فريق العمل الثاني **تغير المناخ والبيئة**

المؤلفون

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This policy brief investigates the interplay of two critically important Group of Twenty (G20) agenda items: trade and climate change. We argue that there is significant room for a stronger emphasis on climate-friendly trade measures that are in line with the global trade regime. We believe that the G20 should fully tap into this potential. We recommend (1) using preferential trade agreements to leverage climate action, (2) phasing out fossil fuel subsidies, (3) seeking international cooperation and consensus on the implementation of border carbon adjustments, (4) making use of investment law and, more generally, (5) fostering trade and climate linkages through the G20.

يدرس ملخّص السياسة هذا تفاعل بندين ذوي أهمية جوهرية من بنود جدول أعمال مجموعة العشرين؛ التجارة، والتغير المناخي. فنحن نرى أنه يوجد متسع لتأكيد أقوى على تدابير تجارية صديقة للمناخ تتسق مع النظام التجاري العالمي. ونعتقد أن مجموعة العشرين ينبغي أن تستفيد من هذه الاحتمالية بشكلٍ كامـل. ونوصي بالآتي: ١ـ اسـتخدام اتفاقـات تجاريـة تفضيليـة مـن أجـل الاسـتفادة مـن إجـراءات المنـاخ. ٢ـ التخلـص التدريجي مـن دعـم الوقـود الأحفـوري. ٣ـالسعي إلى التعـاون والإجمـاع الدولي على تنفيذ ضرائب الكربون على الحدود. ٤ـ اسـتخدام قانون الاسـتثمار، الأكثر عمومية. ٥ـ تعزيز الروابط التجارية والمناخية على مسـتوى مجموعـة العشـرين.



Having celebrated the adoption of the Paris Agreement in 2015 as a historical step, the signing parties must now progress toward achieving its goals. They must maintain the increase in global average temperature to "well below 2°C" compared to pre-industrial levels and "pursue efforts" to limit the increase to 1.5°C, achieving net zero emissions in the second half of this century. Going forward, a key option is to better harness international trade approaches that support the goals of the Paris Agreement, including the decarbonization of the global economy. At the same time, the international rules-based trade system is in crisis, and countries intensify regional and bilateral trade policy cooperation instead. In addition, the COVID-19 pandemic reminds us of the danger of "ignoring global problems until they threaten to overwhelm countries that refuse to prepare and cooperate" (Nordhaus 2020). This reiterates the urgency of "reimagining trade rules to address climate change in a post-pandemic world" (Bacchus 2020).

The Group of Twenty (G20) is responsible for the majority of international trade and investment flows and its member countries are key emitters of greenhouse gases. Therefore, concrete action by these major economies is required on the potentials and the limitations of using trade policy for enhanced climate action. Against this background, this policy brief investigates the interplay of two critically important G20 agenda items: trade and climate change. It discusses the relevant intersections of trade and climate change for G20 members and explores the issues that merit an integrated approach building on the current separate G20 workstreams: (1) using preferential trade agreements to leverage climate action, (2) phasing out fossil fuel subsidies, (3) reflecting on border carbon adjustment measures, (4) making use of investment law and, more generally, (5) fostering trade and climate linkages through the G20.

We argue that international trade and trade governance should play a key role in facilitating the Paris Agreement's implementation and effective climate policy more generally. The main objective of this policy brief is to urge the G20, based on empirical research findings, to better harness the mutually beneficial trade and climate interplay. Overall, there is significant room for a stronger emphasis on climate-friendly trade measures that are in line with the global trade regime, and the G20 should tap into this potential.



1. Using preferential trade agreements to leverage climate action

Trade agreements have the potential to complement multilateral climate governance. In contrast to the consensus-seeking process under the umbrella of the United Nations (UN) or the World Trade Organization (WTO), trade agreements bring together a limited number of partners who might have more leeway to explore new solutions to pursue trade and climate objectives simultaneously. This context fosters regulatory innovation and the elaboration of new commitments.

Some trade agreements already include provisions that directly address climate change. In fact, three trade agreements (the Lomé IV Convention from 1989 and the 1991 agreements between the European Community and Hungary and Poland respectively) already mentioned "climate change" or "climate warming" before the United Nations Framework Convention on Climate Change (UNFCCC) was concluded in 1992. Frequently, these climate-related provisions address renewable energy or energy efficiency. Some trade agreements also directly address climate mitigation and adaptation efforts. Other agreements require parties to ratify or implement the UNFCCC, the Kyoto Protocol, or the Paris Agreement.

A motivation for including climate-related provisions in trade agreements is to leverage their market access promises and strong dispute-settlement mechanisms to ensure party compliance with their commitments. Under some trade agreements (particularly involving the US), parties can use dispute-settlement mechanisms that also foresee fines and compensations to bring partner countries into compliance with environmental commitments.

However, despite its great potential, the contribution of trade agreements to climate governance remains underexplored (Morin and Jinnah 2018). Although some trade agreements include numerous and detailed commitments regarding biodiversity, forestry, fisheries, and endangered species, they include only sparse and vague commitments on climate change, if any.

The fact that even recent trade agreements ignore key issues at the very heart of trade, climate linkages, is rather striking: few trade agreements include meaningful provisions on carbon taxes, fossil fuel subsidies, carbon credits, or emission trading (see Berger et al. 2017). An easily achievable aim might be enhanced liberalization for climate-related goods and services, as it would contribute simultaneously to trade

liberalization and environmental protection. Yet, even this relatively uncontroversial issue remains ignored by the most recent trade agreements.

Thus far, the linkage between trade agreements and climate governance has been more clearly used as a leverage strategy to consolidate membership to the UN's climate agreements rather than to promote additional commitments. For example, the European Union (EU) requested Russia in 2004 to ratify the Kyoto Protocol before approving its accession to the WTO. More recently, the EU demanded not only the ratification but also the implementation of the Paris Agreement as a requirement to conclude a new trade agreement. The inclusion of references to the Paris Agreement in future trade agreements can further reduce the risk of withdrawal from this treaty. However, the experience with other environmental issues suggests that more can be done for the climate when countries leverage their trade power to promote additional commitments in trade agreements themselves. At the same time, trade measures could be used as incentives to participate in climate clubs, that is, "a coalition of nations that commit to strong steps to reduce emissions and mechanisms to penalize countries that do not participate" (Nordhaus 2020).

Keeping an eye on developing countries and how stringent environmental regulations in trade agreements might affect them is important. Environmental provisions in preferential trade agreements have the potential to promote environmental sustainability (Bastiaens and Postnikov 2017; Brandi, Blümer, and Morin 2019; Martínez-Zarzoso and Oueslati 2018; Kolcava, Nguyen, and Bernauer 2019). However, developing countries are concerned as to whether incorporating them into trade agreements exacerbates the alleged trade-off between protecting the environment and generating economic development. Yet, recent research indicates that environmental provisions can help decrease dirty exports and promote green exports from developing countries, which in turn, increases the options to create win-win scenarios for developing countries (Brandi et al. 2020). At the same time, there should be an adequate focus on support in finance, technology, and capacity building to enable developing countries to participate in tackling climate change in trade.

^{1.} Another option is to make better use of trade elements in Nationally Determined Contributions (NDCs) under the Paris Agreement (see Brandi 2017).

Considering the urgency of the climate crisis, the upcoming G20 communique should include a reference to the great potential of trade agreements for leveraging climate protection in order to contribute to diffusing these types of trade-climate-linkage among G20 members. Moreover, international organizations should be called upon to foster policy learning and dialogue to harmonize and leverage these innovations in trade agreements.

2. Phasing out fossil fuel subsidies

In 2009, G20 members committed to a reduction and eventual phase-out of inefficient fossil fuel subsidies (G20 2009). These subsidies contribute enormously to the production and consumption of fossil fuels, and thus to climate change (Gerasimchuk et al. 2017). Fossil fuel combustion contributes roughly 65% to total greenhouse gas emissions (IPCC 2014). Achieving the Paris Agreement's climate target of below 2°C warming implies that only a fraction of known reserves can be burned, and that firms operating in the fossil fuel industries risk a carbon bubble with regard to their asset values (McGlade and Ekins 2014).

Moreover, there are fiscal reasons for governments to review their use of fossil fuel subsidies. According to the International Energy Agency (IEA), these subsidies represent 25–30% of government expenditures in 40 (mostly developing) countries (IEA 2014). In times of declining revenues, subsidy cuts or tax increases could be entwined with taxation reform to free up fiscal space for important public policy goals—an agenda that has played out in G20 countries in the past (UNEP 2019). Those goals include poverty alleviation. Only in a few selected instances, however, do the data show that fossil fuel subsidies can benefit the poor (cf. kerosene subsidies in India), while most existing subsidies are regressive: they disproportionately benefit middle class and high-income energy consumers (Coady, Flamini, and Sears 2015). As benefits from such fiscal reform vary across countries, a full analysis of the incidence is important. Any impacts on the poor should be addressed with complementary policies.

Trade rules could support rationalizing fossil fuel subsidies (Verkuijl et al. 2019). This is not foreign territory for trade agreements, which already discipline trade-distorting subsidies. Moreover, the WTO's Doha Round has a mandate to reduce fisheries subsidies in part for environmental reasons, and expected progress in this area by the end of the year, despite the postponement of the 12th Ministerial Conference, could set a blueprint for similar progress on fossil fuel subsidies.

G20 members could improve the transparency of overall use of fossil fuel subsidies by notifying them to the WTO Committee on Subsidies and Countervailing Measures, as they do with other trade-distorting subsidies. If WTO members undertake commitments on fossil fuel subsidy reform, the WTO's Trade Policy Review Mechanism would be an obvious venue for discussing progress (or lack thereof).

The Agreement on Subsidies and Countervailing Measures provides a legal framework under the WTO for restricting subsidy use. It has a narrow definition of subsidies, and consumption subsidies (which make up 80% of fossil fuel subsidies) probably do not meet the WTO criteria for subsidies. However, there are also solutions; in the fisheries subsidies negotiations, it has been proposed that certain types of subsidies be declared prohibited, which would eliminate the need for showing specificity or adverse effects.

Preferential trade agreements may also provide for innovative solutions: specific rules for eliminating fossil fuel subsidies are currently under negotiation under the Agreement on Climate Change, Trade and Sustainability, with the aim of capturing subsidies based on their adverse effects on climate change rather than on their trade distortions. The negotiations could thus offer important lessons on designing rules on fossil fuel subsidies that could work for the green economy.

Ultimately, the reduction of fossil fuel subsidies is a question of political will. The key question is whether there are G20 countries with enough interest in this agenda to carry it forward, despite the reduced interest that some members have shown since the 2009 declaration.

3. Border carbon adjustments: Working to find consensus and cooperation among G20 members

In light of the piecemeal bottom-up approach of the Paris Agreement and the absence of a global price on carbon, national climate policies could be undercut by the so-called carbon leakage, that is, the outsourcing of carbon-intensive production to jurisdictions with weaker regulations. Such outsourcing can undermine both the NDC implementation of destination countries, and the credibility of climate action in countries of origin. The aim of border carbon adjustments (BCAs) is to prevent carbon leakage and thereby avert a weakening of the effectiveness of national climate policies (Cosbey et al. 2019).

Some G20 members with a national climate policy agenda and carbon pricing are ventilating BCAs. For example, they were mentioned in several federal US carbon pricing proposals, an application exists in the US state California for the import of electricity, and the European Commission considers BCA as part of its European Green Deal that was announced in December 2019. In order to address the economic, diplomatic, and political risks of BCAs, and in the absence of a dedicated multilateral forum, the G20 forum could play a key role in creating an accompanying diplomatic process.

A risk is that the introduction of BCAs could be interpreted by trading partners as a purely protectionist measure. This could lead to countermeasures by affected countries and the result might be a protectionist vicious cycle. In the worst case, BCAs could increase mutual distrust and negatively impact global cooperation in combating climate change as well as attempts to reform the WTO (see Ravikumar 2020).

Therefore, as a first guiding principle, BCAs must be designed in such a way that they are compatible with the rules of the WTO, in particular, with respect to General Agreement on Tariffs and Trade (GATT) Art I and III (non-discrimination) and GATT Art XX (e.g., Mehling et al. 2019). WTO law prohibits discrimination between imports and domestic products that are alike, but also justifies otherwise inconsistent measures when they genuinely pursue legitimate environmental goals. To be permissible under WTO law, BCAs thus have to be designed in such a way that they actually serve primarily to preserve the mitigation potential of national climate policies (by addressing carbon leakage).

BCAs should, therefore, be limited to a few primary goods such as cement, steel, and aluminum, as these basic standardized commodities are traded extensively and are associated with high CO2 emissions. This sectoral orientation would improve the effectiveness of BCAs from an environmental perspective, as the leakage potential is high, and thus, the prospects of compatibility with international trade law.

Moreover, BCAs should work in a way that makes them redundant over time. They are meant to do more than just incentivize cleaner production in the jurisdiction imposing a carbon price. Along this line of thinking, a temporary adjustment for a CO2 cost differential at the border would signal to producers that deliver their goods to that jurisdiction that efforts to produce cleaner would pay off. Their efforts in this respect must be taken into account over time.

A calculation of embedded CO2 based on the CO2 footprint can be easier for cement, steel, and other material sectors compared to calculations for their end uses. A calculation can be sufficiently approximated through standardized benchmarks of the importing country (while still allowing importers to prove actual levels of emissions when lower than the benchmark).

Recent research finds that the negative impacts of BCAs are significant for developing countries that depend on the markets in which they are introduced (see Böhringer, Carbone, and Rutherford 2018; Böhringer, Müller, and Schneider 2015; Babiker and Rutherford 2005). The design of BCAs should thus tend to the perspectives of less developed countries: in light of Special and Differential Treatment in the WTO and the principle of Common but Differentiated Responsibilities and Respective Capabilities (UNFCCC), exports from least developed countries (LDCs) should be exempt from BCAs. In addition, the revenues from BCAs on imports should be earmarked to assist vulnerable low-income countries that do not fall under the category of LDCs under international trade law.

The G20 is a forum for enabling transparency on BCAs. Frictions with trading partners and potential retaliation could be addressed by a process that actively seeks an exchange on specific plans, objections, principles, and methodologies. A number of G20 members are driving forward the global climate agenda, and for this, the G20 sets a multilateral context plus a trade and finance context.

4. Making use of investment law

The energy transition required to achieve the Paris Agreement's 2°C target will imply abandoning the current fossil-fuel centric model and, in turn, stranding a significant value of assets. According to recent estimates, stranding of fossil fuel assets may lead to global losses of between USD 1–4 trillion by 2050.²

To the extent that fossil fuels assets become stranded as a result of national laws and regulations, states may be held liable to pay damages under existing international investment agreements (IIAs), that is, bilateral investment treaties and multilateral treaties or investment chapters in free trade agreements. IIAs offer protection to investors against certain types of state actions, such as expropriation without due process, and unfair discrimination. They also confer on investors the right to force binding arbitration over alleged state misconduct, through the so-called investor-state dispute settlement.

Most IIAs also include fair and equitable treatment (FET) clauses, which have been interpreted by arbitral tribunals to mean, among other things, that "legitimate expectations" of investors should not be violated by state regulatory actions. We can expect to see investors invoke the FET standard when disruptive legislation strands their fossil fuel assets. In fact, arguments revolving around the alleged violation of the standard have already been made in a number of pending investment disputes with such characteristics:

- In Rockhopper vs. Italy, the investor argues it is due compensation for its investments (€30 million) plus expected future profits after Italy's ban on offshore oil and gas exploration and extraction.
- In Lone Pine Resources vs. Canada, the investor claims damages of CAD 119 million after Quebec's ban on oil and gas exploration and development in the St. Lawrence River.
- In TransCanada Corp. vs USA, the investor claimed damages of USD 15 billion after the US rejection of approval—in part on climate change grounds—for a pipeline from Canada's oil sands to US refineries.³

^{2.} The variation depends on how low-cost producers will behave in the face of declining demand and prices (Mercure et al. 2018). Losses are a combination of market value loss from stranded assets and associated gross domestic product/employment impacts. Dollar figures are the present value of 2050 losses, using a 10% discount rate.

^{3.} This arbitration was suspended when the new US administration approved the project.

• In Vattenfall vs Germany (II), the investor argues it is due roughly €1.4 billion in compensation after Germany's disruptive phase out of nuclear power.⁴

While current exposure to FET claims is limited, it can be expected that the climate action necessary to achieve the Paris Agreement goal will result in increased state liability, a concern that could either deter necessary action or imply the transfer of massive costs to taxpayers.

The G20 could be instrumental in promoting a more climate change-informed approach to incorporating and interpreting investor protection clauses in IIAs, with a view to realizing a recalibration in international investment law. A number of G20 members have already advocated for a stronger assertion of state regulatory powers in IIAs, but this has not yet led to a standardized practice nor has it been specifically climate change-informed. The G20 could start off a diplomatic process aimed at garnering support for a model treaty on sustainable investment for climate change mitigation and adaptation (or one such possibility, see Brauch et al. 2019).

5. Fostering trade and climate linkages through the G20

Proponents of leveraging the benefits of a stronger alignment of trade and climate policies, as well as dealing with the challenges, do not have a multilateral forum to do so. Although the UNFCCC's Article 3.5 includes a commitment to refrain from climate-related trade measures that involve arbitrary and unjustifiable discrimination or disguised restrictions on international trade, the UNFCCC rarely deals with trade-related aspects of climate policy. The WTO, too, is largely inapt to deal with the interaction of trade and climate policy-making. Due to the deep institutional crisis faced by the WTO and its members, the appetite and ability to expand its rule-book to incorporate climate-related disciplines is low. Furthermore, even bilateral and regional forums such as preferential trade agreements (PTAs) have not been used to the extent possible to systematically address trade and climate linkages (see above).

The G20 is an international forum that can help fill this governance gap that prevents more integrated policy-making across the trade and climate policy spheres (Cosbey 2018). While the G20 has not been immune to the tide turning against international cooperation and more nationalist policy-making that has plagued many international fora, it remains one of the key forums to foster stronger linkages between trade and

^{4.} This arbitration is not over regulations stranding fossil fuel assets. However, the legal arguments against a disruptive law, based on environmental considerations, are identical.

climate. The G20 brings together heads of states who can provide the necessary momentum to promote policy initiatives, in particular, across policy spheres (Bauer, Berger, and Iacobuta 2019). The G20, however, is more than just a two-day summit of heads of state and government; it includes a year-long process that brings together senior officials as well as ministers from a broad range of line ministries in dedicated working groups, task forces, and ministerial meetings.

Within the G20, climate issues are discussed both in the Sherpa and Finance tracks. In the Sherpa track, a dedicated working group deals with issues of trade and investment. The G20's strength in brokering broad commitments as well as fostering policy dialogue, instead of developing concrete rules, can be used to promote stronger linkages between trade and climate policy-making. For example, G20 countries agreed to over a trillion dollars of stimulus post the global financial crisis 2008, as well as agreeing to reforms subsequently that helped with the recovery and strengthened the global financial system. In recent years, the G20 has developed into a platform or focal point that facilitates networking and policy dialogue at the intergovernmental as well as transnational levels (Cooper 2020). Various international organizations have a seat at the negotiation table and the G20 has intensified its dialogue and networking with societal actors (business, civil-society, labor, women organizations, think tanks, etc.). For instance, the G20 hosts policy dialogue on climate change, as mentioned above, and one of the resulting broad commitments was to reduce and eventually eliminate inefficient fossil fuel subsidies. The support for the international tax agenda and the Organisation for Economic Co-operation and Development's Base Erosion and Profit Shifting project, in particular, are examples of the G20's role as a broker of international commitments and strategies carried out in other fora.

Key recommendations

The G20 can support stronger linkages between trade and climate policy-making by adopting a substantive and strong commitment, initiating policy learning as well as dialogue. At the next summit in Riyadh in November 2020, the G20 leaders should adopt a commitment that mentions key issues to better use the potentials of linkages between trade and climate. In particular, such a commitment should:

• Recognize the innovations to better integrate climate policy objectives in trade agreements taking place on the level of PTAs calling upon international organizations to foster policy learning and dialogue to harmonize and scale-up these innovations,

- Initiate an international policy dialogue on national climate policies that have potential trade-related effects, including the use of BCAs,
- Encourage G20 members to improve the transparency of the overall use of fossil fuel subsidies by, for example, notifying them to the WTO Committee on Subsidies and Countervailing Measures (SCM), and to explore agreed avenues by which the WTO's SCM Agreement might be brought to bear on fossil fuel subsidy reform,
- Kick-start a diplomatic process aimed at garnering support for a model treaty on sustainable investment for climate change mitigation and adaptation,
- Initiate a joint Sherpa track study group on trade and climate change, in close collaboration with the working groups on climate and trade/investment, to consider ways how the G20, within its mandate and capability, could contribute to the coordination needed to realize the goals set out in those and other areas, and
- · Include engagement groups in joint policy learning and dialogue initiatives.

Finally, we call upon experts and colleagues within the Think 20 (T20) Task Forces to work in a more integrated and strategic way. It should be worthwhile not only to call upon G20 work streams to bridge policy silos but also to work across research silos (Bauer, Berger, and Iacobuta 2019). Brainstorming across task forces should help identify the key action areas to better facilitate linkages between trade and climate policy-making, to create aggregate messages that speak to a number of G20 working groups rather than only the obvious silo-counterpart, and thereby gain traction within the G20 process.

DisclaimerThis policy brief was developed and written by the authors and has undergone a peer review process. The views and opinions expressed in this policy brief are those of the authors and do not necessarily reflect the official policy or position of the authors' organizations or the T20 Secretariat.



Babiker, Mustafa H, and Thomas F. Rutherford. 2005. "The economic effects of border measures in subglobal climate agreements." The Energy Journal 26 (4): 99–125.

Bacchus, James. 2020. Reimagining Trade Rules to Address Climate Change in a Post-Pandemic World, Presentation at Chatham House, 5 May 2020.

Bastiaens, Ida, and Evgeny Postnikov. 2017. "Greening up: the effects of environmental standards in EU and US trade agreements." Environmental Politics 26 (5): 847–869.

Bauer, Steffen, Axel Berger, and Gabriela Iacobuta. 2019. With or without you: How the G20 could advance global action towards climate-friendly sustainable development, Briefing Paper 10/2019.

Berger, Axel, Clara Brandi, Dominique Bruhn, and Jean-Frédéric Morin. 2017. "TREND Analytics—Environmental Provisions in Preferential Trade Agreements." German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), Bonn, Germany, and Université Laval, Canada. DOI: 10.23661/trendanalytics_2017_1.0

Böhringer, Christoph, Jared C. Carbone, and Thomas F. Rutherford. 2018. "Embodied Carbon Tariffs." The Scandinavian Journal of Economics 120 (1): 183–210.

Böhringer, Christoph, André Müller, and Jan Schneider. 2015. "Carbon Tariffs Revisited." Journal of the Association of Environmental and Resource Economists 2 (4): 629–672.

Brandi, Clara. 2017. Trade elements in countries' climate contributions under the Paris Agreement. International Centre for Trade and Sustainable Development (ICTSD), Geneva.

Brandi, Clara, Dominique Blümer, and Jean-Frédéric Morin. 2019. "When Do International Treaties Matter for Domestic Environmental Legislation?" Global Environmental Politics 19 (4): 14–44.

Brandi, Clara, Jakob Schwab, Axel Berger, and Jean-Frédéric Morin. 2020. "Do environmental provisions in trade agreements make exports from developing countries greener?" World Development 129, 104899.

Brauch, Martin Dietrich, Nathalie Bernasconi-Osterwalder, Aaron Cosbey, Maria Bisila Torao Garcia, Ivetta Gerasimchuk, Erica Petrofsky, Temur Potaskaevi, Lourdes Sanchez, and Yanick Touchette. 2019. "Treaty on Sustainable Investment for Climate Change Mitigation and Adaptation: Aligning international investment law with the urgent need for climate change action." Journal of International Arbitration 36: 7–35.

Coady, David, Valentina Flamini, and Louis Sears. 2015. The Unequal Benefits of Fuel Subsidies Revisited: Evidence for Developing Countries; IMF Working Paper WP/15/250, https://www.imf.org/external/pubs/ft/wp/2015/wp15250.pdf

Cooper, Andrew. 2020. "The G20 is dead as a crisis or steering committee: Long live the G20 as hybrid focal point." South African Journal of International Affairs 26 (4): 505–520.

Cosbey, Aaron. 2018. Trade and Climate Change: Issues for the G20 Agenda. Policy Brief on Trade and Environmental Policy #3. Konrad Adenauer Stiftung/ Sociedad Peruana de Derecho Ambiental.

Cosbey, Aaron, Susanne Droege, Carolyn Fischer, and Clayton Munnings. 2019. "Developing Guidance for Implementing Border Carbon Adjustments: Lessons, Cautions, and Research Needs from the Literature." Review of Environmental Economics and Policy 13 (1): 3–22. https://doi.org/10.1093/reep/rey020

G20 (Group of Twenty). 2009. "Rationalize and phase out over the medium term inefficient fossil fuel subsidies that encourage wasteful consumption." G20 Leaders Statement—The Pittsburgh Summit.

Gerasimchuk, Ivetta, Andrea M. Bassi, Carlos Dominguez Ordonez, Alexander Doukas, Laura Merrill, and Shelagh Whitley. 2017. Zombie Energy: Climate benefits of ending subsidies to fossil fuel production. IISD-Global Subsidies Initiative/ Overseas Development Institute Working Paper. https://www.iisd.org/sites/default/files/publications/zombie-energy-climate-benefits-ending-subsidies-fossil-fuel-production.pdf.

IEA (International Energy Agency). 2014. World Energy Outlook 2014. Paris: IEA.

IPCC (Intergovernmental Panel on Climate Change). 2014. Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Edited by Ottmar Edenhofer, Ramón Pichs-Madruga, Youba Sokona, Ellie Farahani, Susanne Kadner, Kristin Seyboth, Anna Adler, et al. Cambridge, UK and New York, USA: Cambridge University Press.

Kolcava, Dennis, Quynh Nguyen, and Thomas Bernauer. 2019. "Does Trade Liberalization Lead to Environmental Burden Shifting in the Global Economy?" Ecological Economics 163: 98–112.

Martínez-Zarzoso, Inmaculada, and Walid Oueslati. 2018. "Do deep and comprehensive regional trade agreements help in reducing air pollution?" International Environmental Agreements: Politics, Law and Economics 18 (6): 743–777.

McGlade, Christophe and Paul Ekins. 2014. "Unburnable oil: An examination of oil resource utilisation in a decarbonised energy system." Energy Policy 64: 102–112.

Mehling, Michael A., Harro Van Asselt, Kasturi Das, Susanne Droege, and Cleo Verkuijl. 2019. "Designing Border Carbon Adjustments for Enhanced Climate Action." American Journal of International Law 113 (3): 433–481. https://doi.org/10.1017/ajil.2019.22

Mercure, J-F., Hector Pollitt, Jorge E. Viñuales, Neil R. Edwards, Philip B. Holden, Unnada Chewpreecha, Pablo Salas, et al. 2018. "Macroeconomic impact of stranded fossil fuel assets." Nature Climate Change 8 (7): 588–593.

Morin, Jean-Frédéric, and Sikina Jinnah. 2018. "The Untapped Potential of Preferential Trade Agreements for Climate Governance." Environmental Politics 27 (3): 541–565.

Nordhaus, William. 2020. The Climate Club. How to Fix a Failing Global Effort, Foreign Affairs, May/June 2020, https://www.foreignaffairs.com/articles/united-states/2020-04-10/climate-club.

Ravikumar, Arvind P. 2020. Carbon Border Taxes are Unjust, MIT Technology Review. Opinion. 27 July 2020, https://www.technologyreview.com/2020/07/27/1005641/carbon-border-taxes-eu-climate-change-opinion

UNEP (United Nations Environment Programme). 2019. Emissions Gap Report 2019, Executive Summary, https://wedocs.unep.org/bitstream/handle/20.500.11822/30798/ EGR19ESEN.pdf?sequence=13

Verkuijl, Cleo, Harro van Asselt, Tom Moerenhout, Liesbeth Casier, and Peter Wooders. 2019. "Tackling Fossil Fuel Subsidies Through Trade Agreements." Virginia Journal of International Law 48: 309–368. https://vjilorg.files.wordpress.com/2019/02/verkuijl_final-draft.pdf



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