



Trade Measures to Support Legal and Sustainable Agriculture in Brazil

Josh Gregory

December 2017



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Acronyms

APP	<i>Área de Preservação Permanente</i> (Permanent Preservation Area)
BAU	Business-as-usual
CAR	<i>Cadastro Ambiental Rural</i> (Rural Environmental Registry)
CRA	<i>Cota de Reserva Ambiental</i> (Environmental Reserve Quota)
EDF	Environmental Defense Fund
EII	Earth Innovation Institute
EU	European Union
FLEGT	Forest Law Enforcement, Governance and Trade
GATT 1994	General Agreement on Tariffs and Trade 1994
GCF	Governors' Climate and Forests Task Force
MFN	Most-favored nation
MRV	Monitoring, reporting and verification
NGO	Non-governmental organization
PCI	Produce-Conserve-Include
PPM	Process and production methods
PRA	<i>Programa de Regularização Ambiental</i> (Environmental Regularization Programme)
REDD+	Reducing Emissions from Deforestation and Forest Degradation (the "+" indicates the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries)
REM	REDD Early Movers
TFA2020	Tropical Forest Alliance 2020
TPS	Territorial Performance System
WTO	World Trade Organization
ZDZ	Zero-Deforestation, Zero-Illegality Zone

Executive Summary

Brazil is a major producer and exporter of agricultural commodities (such as beef, soy and cotton) that are associated with deforestation in the Amazon and surrounding regions. We propose that one or more of Brazil's major export markets implement a 'trade measure' to encourage reduced deforestation in Brazil. A trade measure can be defined as a border policy directed at imports or exports of particular products.

We consider two measures:

1. A "Forest Code measure" would discriminate in favor of imported Brazilian commodities that were produced on land which is compliant with the Brazilian Forest Code.
2. A "sustainable territories measure" would discriminate in favour of commodities produced within regions (such as the States of Mato Grosso and Para) that have achieved environmental standards, including reduction or elimination of deforestation, through a combination of private sector initiatives, government regulation and jurisdictional REDD+.

Both of these measures could involve a tariff reduction for "sustainable" imports, an increased tariff for "unsustainable" imports, and a prohibition on "unsustainable" imports.

We show how the Forest Code measure and the sustainable territories measure could be designed so as to provide the correct incentives for stakeholders, how they could be implemented in practice at the border, and, most importantly, how they could encourage reduced deforestation at a local and regional level.

Both trade measures would, on the face of it, infringe international trade rules and so they would need to be designed to allow the importing country to rely on a defence if challenged. For example, the importing country would need to (a) implement the measure as part of a programme of similar measures covering imports from other tropical forest countries, (b) create domestic rules that cover similar domestic commodity production, and (c) design the measure to be as least restrictive of trade as possible.

By value, Brazil's most important trading partners are China, the EU, and the USA. These countries might plausibly implement a trade measure: not only do they singly (and jointly) possess the market power to encourage change in agricultural practices. Furthermore, the EU and the USA are more likely to implement environmentally oriented trade measures than, say, Vietnam (a major destination for Brazil's cotton exports) or Chile (the largest export destination for Brazilian fresh beef).

We analyse existing tariff levels to assess whether they can be raised or lowered. China, the EU and the USA have 'bound' their tariffs on deforestation commodities at a certain rate, which means that tariff increases will violate their international commitments. On the other hand, it may be difficult to reduce tariffs. Although China, the EU, and the USA are legally permitted to reduce tariffs, their tariffs on many deforestation commodities are already very low.

China has room to reduce tariffs on sustainable Brazilian frozen beef, leather, soybeans, and soybean oil. Indeed, China has recently signed free trade agreements with New Zealand and Australia which reduce tariffs on beef imports, and so it could also offer a tariff reduction for sustainable Brazilian frozen beef.

There is less room for the EU to reduce tariffs on Brazilian deforestation commodities, as tariffs are either zero, or maintained at a high level to protect domestic industry. That said, the EU could reduce tariffs on sustainable Brazilian fresh beef. It could also reduce tariffs on sustainable Brazilian leather.

The USA has scope to reduce tariffs by a large amount on many deforestation commodities, but it does not import many deforestation commodities from Brazil. The only measure that could have impact would be a tariff reduction on sustainable Brazilian leather.

Given the legal, political, and economic issues around the implementation of trade measures, they should probably be used to support voluntary and/or bilateral initiatives with Brazil. However, recent trade rhetoric, and the ongoing failure of the Doha Round, show that there is perhaps more scope for forceful trade measures (such as tariff increases beyond 'bound' commitments) than the system of the past seventy years has allowed.

Introduction

Faced with growing consumer pressure, advocacy by non-profits, and increasing acceptance of climate-related risks and responsibilities, a growing number of companies have publicly committed to reduce deforestation from their supply chains. However, recent reports have highlighted significant gaps between companies' commitments and their reductions in practice.¹

Trade measures are a potential way to incentivise companies to meet their deforestation commitments, as well as encourage other companies to address deforestation in their supply chains. A trade measure, implemented by a national government, would discriminate between imports of commodities based on their deforestation footprint. It would therefore require all companies to perform due diligence on their supply chains and at the same time provide a cost impetus for reducing associated deforestation.

In this paper, we concentrate on the potential for trade measures to be applied to agricultural commodities imported from Brazil. Although deforestation in Brazil decreased by 84% between 2004 and 2012, since 2012 deforestation has increased year-on-year, partly as a result of poor governance and increasing international demand for agricultural commodities such as soy.² The Brazilian government is an important participant in the international climate change regime and has received significant bilateral and multilateral funding to tackle deforestation.³ The national government has invested in various enabling conditions for more sustainable production, for example by providing subsidised state loans for low-carbon agriculture and state-sponsored technical assistance to farmers, as well as projects and programmes that address deforestation on a broader level. Brazil has also invested heavily in technological solutions to monitor deforestation. However, domestic actions are dependent on political balance of power, and public finance – even subsidised by the international community – can only have so much effect.

Brazil's main legislative tool to control deforestation and encourage reforestation on private land is the Forest Code (see further in Box 1 below). However, for a variety of reasons, it has proved difficult to encourage landowners to comply with the Forest Code.⁴ One proposal is to provide zero-interest or subsidised loans to landowners to meet the costs of compliance.⁵ Separately, or in conjunction, supply chain companies could work with landowners to increase compliance, providing financial and technical assistance as appropriate.⁶ (The main benefit of supply chain action is that it is not dependent on the domestic political or financial situation in Brazil.)

Brazil's subnational regions have been pioneers in attempting to form 'sustainable territories' (see further in Box 2 below). Sustainable territories address deforestation at a regional scale through public-private cooperation and comprehensive programmes of interventions. The private sector benefits from the formation of sustainable territories: by preferentially sourcing from these areas, it is easier for companies to comply with zero-deforestation commitments. From the sustainable territories' point of view, they gain market access and become entitled to receive large amounts of climate finance. However, these programmes have been slow to take off.

In this paper, we propose two forms of trade measure. The first proposed measure would try to encourage farmers in Brazil to comply with the Forest Code, by discriminating between imports of commodities that have (not) been produced on land that complies with the provisions of the Forest Code. The second proposed measure would try to encourage the adoption of sustainable territories by discriminating between imports of commodities that have (not) been produced within a sustainable territory.

Both measures could incorporate tariff increases, decreases, or take the form of an outright prohibition on imports. We address the legal, political and economic ramifications of these different forms. (The EU is currently considering whether tariff reductions on sustainably produced commodities could help to address deforestation. In its draft report, it concludes that it

¹ See for example Supply Change: Tracking Corporate Commitments to Deforestation-Free Supply Chains, 2017. (http://www.forest-trends.org/documents/files/doc_5521.pdf).

² <https://e360.yale.edu/features/business-as-usual-a-resurgence-of-deforestation-in-the-brazilian-amazon>.

³ In September 2016, Brazil became a signatory to the Paris climate change agreement and committed to reduce greenhouse gas emissions by 37% over the period 2005 to 2025, and by 43% by 2030. (<http://www4.unfccc.int/submissions/INDC/Published%20Documents/Brazil/1/BRAZIL%20iNDC%20english%20FINAL.pdf>).

⁴ Soy producers in the Amazon biome have largely complied with the 'soy moratorium' (i.e. not have deforested since 2008), as this has a direct impact on their ability to sell their product, but few are in compliance with the legal reserve provisions of the Forest Code. (<https://www.elementascience.org/articles/10.12952/journal.elementa.000076/>).

⁵ http://www.forest-trends.org/documents/files/doc_5439.pdf.

⁶ <https://www.wwf.org.br/?43822/WWF-Brazil-wants-agricultural-commodities-markets-to-align-against-deforestation>.

would be unfeasible, partly because it would conflict with international trade rules, and partly because tariffs on the relevant commodities are already so low that the reduction would not provide an effective incentive.⁷ However, we make a broader assessment of the various options, as well as considering the potential for the USA and China to take action.)

By providing a constant regulatory environment for all importing companies, the trade measures will help companies meet deforestation commitments without potentially suffering increased costs vis-à-vis competitors and could also drive 'beyond BAU' compliance for companies seeking to competitively differentiate themselves in the eyes of consumers. Both measures should also drive a sustainable agricultural transition in Brazil and help Brazil meet its Nationally Determined Contributions under the Paris Agreement.

Structure of This Paper

In the first part of this report, we review the agricultural commodities that are driving large-scale deforestation in Brazil. We then review the countries which import these commodities, bearing in mind that larger trade partners are, overall, in a better position to implement trade measures due to their market power.

We then outline how a trade measure might be defined. Given the difficulties of discriminating in favour of 'sustainable' or against 'unsustainable' commodities, we propose alternative discrimination scenarios: whether or not the commodity is produced on land compliant with the Brazil Forest Code and whether or not the commodity is produced on a 'sustainable territory'. We visit these topics and their current status in Brazil and consider how effective these measures might be at driving a reduction in deforestation.

We then look at the practicalities of the trade measures: how they will impact on farmers, landowners and supply chain companies, considering the need for due diligence by importers, the current status of Forest Code compliance and the ongoing development of sustainable territories.

We next consider how these measures might be judged under the international trade regime. It will be open to Brazil and to other countries to challenge these measures in front of a World Trade Organization (WTO) dispute panel, and there are various relevant defences open to the importing country.

Given the legal context, we look at existing agreed tariff levels for major trading partners. For example, tariff reductions on sustainable commodities will only be possible where current tariffs are above zero. On the other hand, tariff increases on unsustainable commodities may not be possible where these increases break partners' international commitments on 'bound' tariff levels. In recognition that international trade operates in a wider context, we also discuss broader trade, economic and political relationships between Brazil and its major trading partners.

To conclude, we summarize our proposals and our analysis on their feasibility and mention some recent developments in world trade which mean that unilateral trade measures could have a greater chance of success.

⁷ http://illegallogging-deforestation-conference.eu/wp-content/uploads/2017/06/Draft_Feasibility_Study-PART_I-.pdf.

Deforestation Commodities

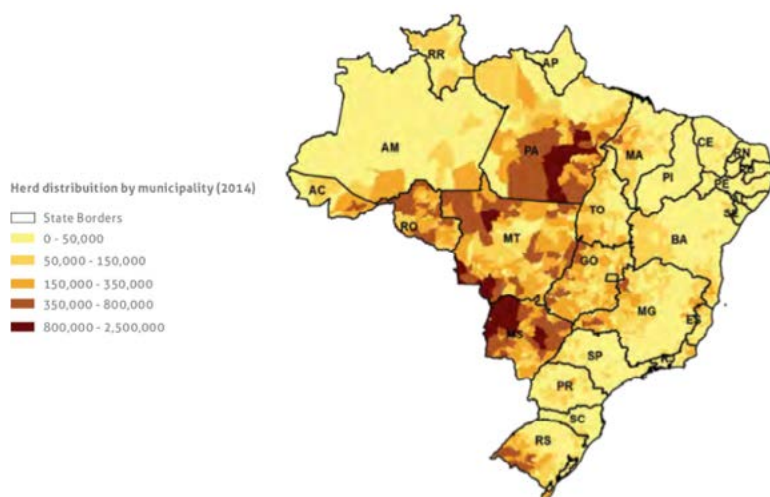
A major driver of deforestation in the Brazilian Legal Amazon is conversion of land for agricultural production, a large proportion of which is linked to international markets.^{8 9} In this section, we examine the major so-called ‘deforestation commodities’ that Brazil produces and exports.¹⁰

Beef and Leather

Brazil has the world’s largest herd of cattle, and although the majority of beef is sold to domestic markets, Brazil is still the world’s largest exporter of beef. Most Brazilian leather (in the form of hides and skins) is sold internationally.¹¹

Within Brazil, the state of Mato Grosso contains the largest cattle herd in Brazil (comprising 13.6% of all Brazilian cattle). A further 25% of Brazilian cattle are located in the Amazon states of Mato Grosso do Sul, Pará, and Rondônia.¹² See further in Figure 1 below.

Figure 1: Brazil: Cattle Distribution by Municipality



Source: http://www.newsprime.com.br/img/upload2/2016_FolderPerfil_EN.pdf.

The cattle industry has a major impact on forest cover, and conversion of forests for cattle ranching is the single largest driver of deforestation in the Amazon.¹³

To address this problem, in 2009, four major Brazilian meatpacking companies and several major leather processors made a public commitment to reduce deforestation from their supply chains in the so-called ‘Beef Moratorium’. This included no longer purchasing cattle from farms that were not registered with the Rural Environmental Registry (CAR) (see Box 1) or who had otherwise engaged in recent deforestation.¹⁴

The Beef Moratorium has successfully lowered the deforestation associated with cattle ranching.¹⁵ However, ranchers are free to sell their cattle to smaller meatpackers or meatpackers who are not participating in the moratorium (‘leakage’). Ranchers also

⁸ The Brazilian Legal Amazon is an administrative grouping that covers 61% of Brazil’s territory. It includes the states of Amazonas, Roraima, Acre, Rondônia, Mato Grosso, Pará, Amapá and Tocantins, as well as part of the states of Mato Grosso and Maranhão. (http://www.cifor.org/publications/pdf_files/WPapers/WP198CIFOR.pdf).

⁹ https://rainforests.mongabay.com/amazon/amazon_destruction.html.

¹⁰ Brazil is a major exporter of other agricultural commodities, such as palm oil, sugar, coffee and wood products. However, production of these commodities does not strongly drive deforestation, because (a) production currently takes place at a small scale (e.g., palm oil), or (b) the majority of production does not take place in the Amazon or cerrado region (e.g. wood products, sugar and coffee).

¹¹ <http://www.cicb.org.br/brazilian-leather/en/news/brazilian-hides-and-skins-exports-show-positive-results-in-2016>.

¹² http://www.newsprime.com.br/img/upload2/2016_FolderPerfil_EN.pdf.

¹³ <https://globalforestatlas.yale.edu/amazon/land-use>.

¹⁴ <https://news.mongabay.com/2009/10/brazilian-beef-giants-agree-to-moratorium-on-amazon-deforestation/>.

¹⁵ <https://www.theguardian.com/sustainable-business/2015/may/14/brazil-beef-industry-pledges-cut-amazon-deforestation-rate-in-half>.

engage in so-called ‘cattle laundering’, whereby cattle which are reared on non-compliant land are moved for a time onto compliant farms, allowing them then to be sold to moratorium meatpackers.¹⁶

Slaughtered cattle also provide hides, meaning that the leather supply chain is closely linked in its initial stages with the beef supply chain. However, as in the context of beef, implementation suffers from the problems of leakage and laundering.

In Table 1, we list the top export destinations for Brazilian beef and leather.

Table 1: Brazilian Beef and Leather Exports in 2016

Product HS92 Tariff line	Value of exports in 2016	Top export destinations (% of exports)
Fresh beef HS 0201	USD757 million	Chile (34%), Netherlands (13%), Lebanon (7.9%), Algeria (6.5%), Germany (6.1%)
Frozen beef HS 0202	USD3.59 billion	Hong Kong (20%), China (20%), Egypt (15%), Russia (11%), Iran (10%)
Leather (hides and skins) HS 4104	USD1.98 billion	China (29%), Italy (15%), USA (12%), Vietnam (7%), Hungary (5.7%)

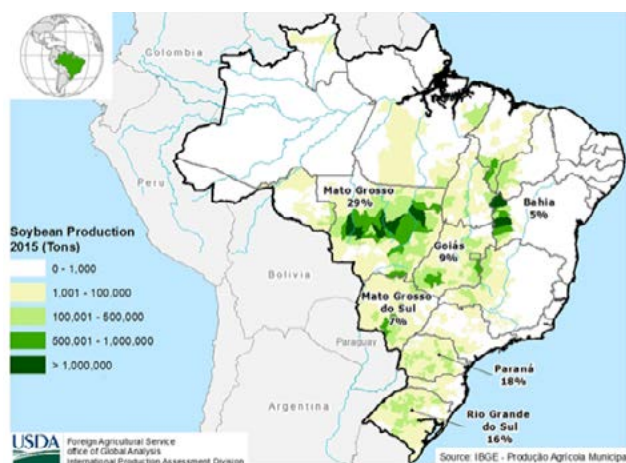
Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

Soy

Soybeans are an extremely important crop in Brazil. Brazil is the second largest producer of soybeans globally and the largest exporter. It is also the second largest exporter of soybean meal (mainly used for animal feed) and soybean oil (mainly used in cooking).

Soybeans are grown across the Brazilian Legal Amazon. The state of Mato Grosso accounts for almost one-third of Brazil’s soybean production.¹⁷ See further in Figure 2 below.

Figure 2: Brazil: Soybean Production by Municipality



Source: <https://ipad.fas.usda.gov/highlights/2017/09/Brazil/images/fig1.htm>.

Soybean production is usually an indirect driver of deforestation.¹⁸ The presence of the soybean industry enables cattle ranchers to engage in land speculation: forests are converted into pasturelands, then sold to soybean farmers for increased prices. Ranchers then expand their cattle ranches further into the forest frontier.¹⁹

¹⁶ <http://onlinelibrary.wiley.com/doi/10.1111/conl.12175/full>.

¹⁷ <https://www.agriculture.com/markets/newswire/brazils-mato-grosso-201718-soy-crop-sales-slower-than-last-year-imea>.

¹⁸ <http://iopscience.iop.org/article/10.1088/1748-9326/9/6/064010>.

¹⁹ <https://e360.yale.edu/features/business-as-usual-a-resurgence-of-deforestation-in-the-brazilian-amazon>.

In 2006, soybean processors and traders agreed a ‘Soy Moratorium’: not to buy, trade or finance soybeans produced on land that had been illegally deforested after 2006. The Soy Moratorium has been very successful at addressing deforestation.²⁰ However, it is limited to the Amazon biome, and cerrado (savannah) states such as Mato Grosso have seen a large expansion of soy production.

In Table 2, we list the top export destinations for Brazilian soy and soy derivatives.

Table 2: Brazilian Soy Exports in 2016

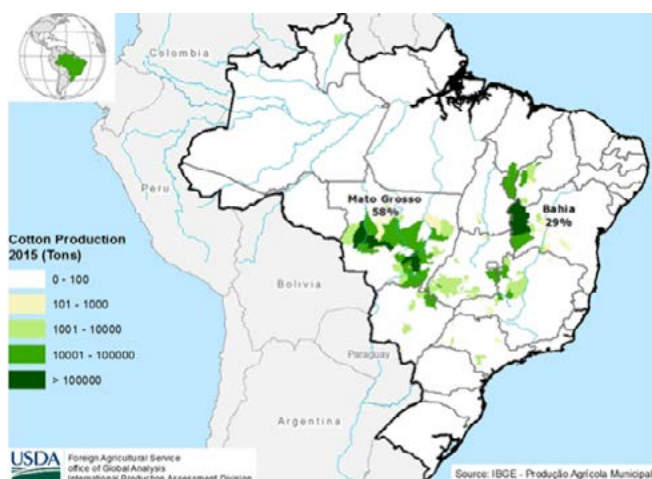
Product HS92 Tariff line	Value of exports in 2016	Top export destinations (% of exports)
Soybeans HS 1201	USD19 billion	China (76%), Spain (3.2%), Thailand (3.1%), Netherlands (3%), Iran (2.5%)
Soybean meal HS 2304	USD5.19 billion	Netherlands (21%), France (12%), Germany (10%), Thailand (10%), Indonesia (10%)
Soybean oil HS 1507	USD898 million	India (42%), China (19%), Algeria (9.9%), Bangladesh (5.8%), Cuba (5.5%)

Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

Cotton

Brazil is the fourth largest exporter of raw cotton internationally.²¹ Although a significant amount of cotton is produced in Bahia, which lies outside the Amazon region, the state of Mato Grosso is the largest producer of cotton in Latin America.^{22 23} See further in Figure 3 below.

Figure 3: Brazil: Cotton Production by Municipality



Source: <https://ipad.fas.usda.gov/highlights/2017/09/Brazil/images/fig6.htm>.

Like soy, cotton is not a direct driver of deforestation, but it is an important crop that can be planted in converted pasturelands (perennially or in rotation with soybeans). Also, there is no ‘Cotton Moratorium’, which means that farmers face no penalty for growing cotton on recently deforested land.

²⁰ <https://www.sciencedaily.com/releases/2017/04/170429095035.htm>.

²¹ <http://atlas.media.mit.edu/en/profile/country/bra/>.

²² <https://ipad.fas.usda.gov/highlights/2017/09/Brazil/index.htm>.

²³ <https://www.idhsustainabletrade.com/landscapes/mato-grosso-brazil/>.

In Table 3, we list the top export destinations for Brazilian cotton.

Table 3: Brazilian Cotton Exports in 2016

Product HS92 Tariff line	Value of exports in 2016	Top export destinations (% of exports)
Cotton HS 5201	USD1.18 billion	Indonesia (18%), South Korea (15%), Vietnam (14%), Turkey (12%), Pakistan (8.9%)

Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

Major Markets for Deforestation Commodities

In the previous section, we listed the top export destinations for each deforestation commodity. For the remainder of this paper, we consider just three markets: China, the European Union (EU) and the United States of America (USA). Firstly, this will simplify our analysis of the potential for trade measures. Secondly, there are practical reasons to concentrate on these markets: in 2016, they jointly took around half of Brazil's total exports, which gives them more power to act in concert or singly to enforce trade measures.²⁴ Finally, it could be argued that they are more likely, politically, to impose trade measures (although this will be assessed more thoroughly in section 6).

It is important to note that trade measures will only apply to commodities sold to specific international markets. However, the majority of agricultural commodities produced in Brazil are sold in domestic markets.²⁵ Therefore, trade measures will have a limited effect on addressing agricultural deforestation in Brazil.²⁶ Trade measures will also fail to address agricultural deforestation that is not linked to any type of market (for example, deforestation associated with subsistence farming).

Separately, the implementation of trade measures could lead to producers of non-compliant commodities selling to partners with less restrictive sustainability standards, whether in the domestic or international market. This implies a need for harmonised action by multiple trading partners (and, preferably, by Brazil).

China

China is Brazil's most important trading partner. It imported USD35.1bn of goods (19.2% of Brazil's total exports by value) in 2016.²⁷ In Table 4, we set out the value and proportion of Brazil's deforestation commodities exported to China.

Table 4: Brazilian Exports of Deforestation Commodities to China in 2016

Product HS92 Tariff line	Value of Brazilian exports to China in 2016	Proportion of exports
Fresh beef HS 0201	<USD1 million	0.1%
Frozen beef HS 0202*	USD1.42 billion	39.6%
Leather (hides and skins) HS4104**	USD669 million	33.7%
Soybeans HS 1201***	USD14.39 billion	75.7%
Soybean meal HS 2304	USD3.45 million	0.1%
Soybean oil HS 1507†	USD175 million	19.4%
Cotton HS 5201††	USD87.5 million	7.4%

Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

* Total includes exports to Hong Kong.

** Total includes exports to Hong Kong.

*** China is the world's largest importer of soybeans.

† China is the world's largest importer of soybeans.

†† China is the world's largest importer of cotton, consuming 22% of global exports. However, most of this cotton comes from the USA; Brazil is China's seventh largest source of cotton.

²⁴ Brazil's next largest trading partners in 2016 by value were Argentina (USD13.4bn / 7.4% of total exports), followed by Japan (USD4.6bn / 2.5% of total exports).

²⁵ <http://www.fao.org/3/a-bl945e.pdf>.

²⁶ For example, Brazil is the second largest consumer of beef globally, and in 2015, 80.3% of beef (by volume) was sold to the domestic market, while only 19.7% was exported. (<http://www.newsprime.com.br/img/upload2/sumario-ingles-010217.pdf>).

²⁷ <http://atlas.media.mit.edu/en/profile/country/bra/>.

European Union (EU)

As a trading bloc, the EU is Brazil's second largest trading partner, receiving USD33.4 billion worth of exports (18.4% by value of Brazil's total exports) in 2016.²⁸ In Table 5, we set out the value and proportion of Brazil's deforestation commodities exported to the EU.

Table 5: Brazilian Exports of Deforestation Commodities to the EU in 2016

Tariff line	Value of Brazilian exports to EU in 2016	Proportion of exports
Fresh beef <i>HS 0201*</i>	USD269 million	35.5%
Frozen beef <i>HS 0202</i>	USD229 million	6.4%
Leather (hides and skins) <i>HS4104</i>	USD535 million	27.0%
Soybeans <i>HS 1201</i>	USD1.98 billion	10.4%
Soybean meal <i>HS 2304</i>	USD2.86 billion	55.1%
Soybean oil <i>HS 1507</i>	<USD1 million	0.1%
Cotton <i>HS 5201</i>	USD15.85 million	1.3%

Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

* The EU placed restrictions on imports of Brazilian beef in 2017 due to food safety concerns. (<https://www.bloomberg.com/news/articles/2017-06-14/europe-raises-serious-concerns-over-brazil-meat-after-probe>).

United States of America

The USA is Brazil's third most important export market, importing USD23.3bn of Brazilian goods (12.8% of total exports by value) in 2016.²⁹ In Table 4, we set out the value and proportion of Brazil's deforestation commodities exported to the USA.

Table 6: Brazilian Exports of Deforestation Commodities to USA in 2016

Tariff line	Value of Brazilian exports to EU in 2016	Proportion of exports
Fresh beef <i>HS 0201*</i>	USD5 thousand	0.0%
Frozen beef <i>HS 0202</i>	USD3.35 million	0.1%
Leather (hides and skins) <i>HS4104</i>	USD243 million	12.3%
Soybeans <i>HS 1201**</i>	<USD1 million	0.0%
Soybean meal <i>HS 2304</i>	<USD1 million	0.0%
Soybean oil <i>HS 1507</i>	<USD1 million	0.0%
Cotton <i>HS 5201***</i>	USD8.8 million	0.7%

Source: <http://atlas.media.mit.edu/en/profile/country/bra/>.

* The USA is the largest beef consumer and importer in the world. In 2014, the USA lifted a ban on fresh (and frozen) Brazilian beef, after longstanding concerns over foot and mouth disease had been addressed. However, a ban on fresh beef was re-imposed in mid-2017 due to food safety concerns. (<http://www.reuters.com/article/us-usa-brazil-beef/u-s-bans-fresh-brazil-beef-imports-over-safety-concerns-idUSKBN19D2VE>).

** The USA is the world's largest soybean producer and therefore does not import soybeans or their derivatives.

*** The USA is a major cotton producer and the world's largest exporter and therefore does not import cotton.

Summary

The USA imports few deforestation commodities from Brazil. In fact, its top three categories of imports were metal products, crude oil and transportation equipment.³⁰ In 2016, the largest agricultural commodity (by value) imported by the USA from Brazil was coffee (4.1%, USD1.1bn). Apart from leather, then, the USA possesses little power to implement effective trade measures.

²⁸ <http://atlas.media.mit.edu/en/profile/country/bra/>.

²⁹ <http://atlas.media.mit.edu/en/profile/country/bra/>.

³⁰ https://www.uschamber.com/sites/default/files/documents/files/busbc_trade_agreement_initiative_report.pdf.

Beef and Leather

Taking over one-third of Brazilian fresh beef exports, the EU has some scope for a unilateral trade measure. The EU and China jointly take 46% of Brazilian frozen beef exports, so a joint package of trade measures could have some effect, although the two partners could act independently.

The EU, China and the USA together possess 73% of the market for rawhides: a group package of measures could have a major impact. They could also each act independently.

Soy

As China takes such a large proportion of Brazilian soybeans, a trade measure would immediately have a transformative effect. If the EU joined in a similar action, they would jointly capture 86.1% of Brazilian exports. (The EU could implement a soybean measure on its own, but with much reduced effect.)

The EU takes over half of Brazil's soymeal exports and could therefore take unilateral action.

China takes around one-fifth of Brazilian soybean oil, so there is some potential for it to take action.

Cotton

The EU and the USA have little market power (combined, they take 2% of Brazilian exports). China takes 7.4% of Brazilian exports, which means that a trade measure could have a small, but measurable, effect.

The majority of Brazil's raw cotton exports are directed to textile-producing countries in South and South-East Asia. Indonesia, South Korea, Vietnam and Turkey jointly take 59.1% of the Brazil's raw cotton exports; were they to implement trade measures singly or in cooperation, they would have a noticeable effect.

Outline of Proposed Trade Measures and Practical Issues

Introduction

We have described the commodities that most drive deforestation in Brazil and identified three of the largest export destinations for those commodities. We now address how a trade measure might be designed to drive a reduction in deforestation and what the practicalities around such a measure might be.

A trade measure hinges on some form of discrimination between similar products. For example, imports of a product from one country might qualify for a lower tariff than imports of the same product from another country.

There is an existing literature covering the question of whether it would be possible for an importing country to discriminate between products which are otherwise identical, based on whether they have been produced sustainably or not.³¹ However, it can be difficult to define 'sustainable production'.

Instead, we propose two measures that discriminate based on the context of production. These measures should be relatively simple for importers to comply with, and for customs authorities to assess. We tackle the legal ramifications of discrimination in section 5.

Forest Code Measure

The first border measure would be based on whether a commodity imported from Brazil has been produced on land which is compliant with the Forest Code.³²

³¹ See, for example, the discussion in Brack, D. & Bailey, R. (2013) Ending Global Deforestation: Policy Options for Consumer Countries. London, UK, Chatham House/Forest Trends (http://www.forest-trends.org/documents/files/doc_4091.pdf).

³² We propose that, at least initially, trade measures should cover imports of raw, or minimally processed, commodities. This is recognition of the fact that, although Brazil exports processed goods as well as primary commodities, and these goods also have a 'deforestation footprint', companies may face practical difficulties in complying with due diligence requirements related to the source of a commodity where there is an extensive domestic value chain.

This measure will have a direct correlation to reduced deforestation, as the Forest Code requires landowners to maintain a significant percentage of land under forest cover, including reforestation where necessary (for more details on the Forest Code, see Box 1 below).

However, the measure does not specify environmental characteristics of production, such as decreased use of pesticides, as these are out of the remit of the Forest Code.

Definition of Measure

Given the complexities of Forest Code implementation and the fact that implementation varies from state to state, compliance with the Forest Code could be judged in a number of ways. However, where a state has set up a Rural Environmental Registry (CAR), an importer will be able to check online whether a property is one of the following:

- Property registered under the CAR
- Landowner enrolled in the Environmental Regularisation Programme (PRA) and in process of regularisation
- Property registered by the state as fully regularised/compliant

Clearly, the higher the standard, the greater the impact the measure will have but the greater the burden on farmers.

Scope of Measure

Even though the measure would be intended to address Forest Code compliance in the Amazon and neighbouring regions of Brazil, trade measures are applied on a product and origin basis at the national level, so the measure would have to apply to relevant commodities sourced from all regions of Brazil. Although this would bring more companies into the measure's remit, and could therefore be more unpopular, it would be a greater incentive effect towards compliance across Brazil.

Form of Measure

The border measure could take three forms, in increasing order of 'severity':

- (a) A tariff reduction for imports from Forest Code-compliant land (applied *ad valorem*³³)
- (b) An increased tariff for imports from non-Forest Code-compliant land (applied *ad valorem*)
- (c) A prohibition on imports from non-Forest Code-compliant land

Practical Implications for Customs Authorities

Customs authorities already require various pieces of information from importers to assess tariffs. The Forest Code measure would require the importers to make an additional statement concerning the farms of origin. It would be presumed that they sourced from 'unsustainable' areas unless they certified otherwise (and potentially provided evidence to that effect).

Given the direction of the burden of proof, the customs authorities could perhaps allow for subsequent provision of information to obtain, respectively (a) a discount, (b) a refund, or (c) release from impoundment of non-compliant products.

All three forms of border measure would slow down border processes and result in increased costs for customs authorities. Given that importer statements on Forest Code compliance could prove difficult for customs authorities to check, provision of false or misleading information would need to carry a penalty. As a final note, a measure which increases tariffs could, all else being equal, result in higher revenue to compensate for increased costs.

Practical Implications for Importers

Importers will need to engage with their local supply chain to determine the specific parcels of land where commodities are grown. However, once they have obtained this information, it should be easy to check whether the land is in compliance with the Forest Code. It should be noted, however, that the Forest Code is a federal law which depends on implementation at the state level. As of writing, not all states have passed the relevant legislation – Mato Grosso only established a CAR in June 2017.³⁴

³³ A duty charged *ad valorem* is calculated as a percentage of the import's value (e.g. 5%). The WTO prefers duties to be calculated *ad valorem* rather than using other methodologies.

³⁴ <https://www.idhsustainabletrade.com/news/government-mato-grosso-idh-join-forces-sustainable-production-forest-protection/>.

From the importers' perspective, the prohibition would create the largest barrier to trade, followed by the tariff increase. The tariff reduction would simply create an extra optional cost saving, to be claimed by importers once they are able to source sustainably. In addition, the tariff reduction will be more popular with importers who do not source from the Amazon region, who could argue that they are not the true target of the measure.

Practical Implications for Farmers

A trade measure based on Forest Code compliance would be relatively fair to farmers. Although companies will probably find it relatively easy to switch from non-compliant farmers to compliant farmers, the non-compliant farmers have individual capacity to maintain market access through complying with the Forest Code.

Where companies are in long-term trading relationships with particular sets of farmers, they may be willing to contribute financial and technical assistance to aid those farmers to comply with the Forest Code, perhaps as part of existing supply chain development programmes. In situations where farmers are less tightly associated with particular supply chains, state support for compliance with the Forest Code, such as subsidised public loans and technical assistance programmes, will be useful.

Applicability beyond Brazil

Most tropical forest countries have a legal and regulatory regime that restricts land-uses in particular areas, along with some degree of enforcement capacity. However, Brazil's Forest Code is unique in terms of its scope, ambition, and technical capacity to enforce. On the face of it, this measure has limited replicability to other countries that export deforestation commodities. See further the discussion in section 5.2.2 below.

Box 1: The Brazil Forest Code

Brazil's Law on the Protection of Native Forests (known as the Forest Code) is the main legislation covering forest protection on private lands in Brazil. Receiving a major revision in 2012, the Forest Code provides for two types of conservation on private land – Permanent Preservation Areas (*Áreas de Preservação Permanente*, or APPs) and the Legal Forest Reserve (*Reserva Legal*).*

Deforestation is prohibited in APPs, due to their role in providing important ecosystem services such as erosion protection or conserving biodiversity. Landowners must also set aside a percentage of their property as a Legal Forest Reserve. The percentage varies according to the location in Brazil (for example, in the Amazônia Legal region, from 20% to 80% of land should be set aside depending on the biome, whereas outside the Amazônia Legal the set-aside is 20% regardless of the biome).

A special regime applies for certain properties that were deforested prior to July 2008, under the Environmental Regularisation Programme (Programa de Regularização Ambiental, or PRA). The PRA gives these landowners a number of alternatives to restoring a particular property up to the Legal Forest Reserve, for example by offsetting 'surplus' Legal Forest Reserves on their other properties, or buying Environmental Reserve Quotas (Cotas de Reserva Ambiental, or CRAs) from other landowners who themselves have surplus Legal Forest Reserves.

The Forest Code also requires that every private property be registered on the Rural Environmental Registry (Cadastro Ambiental Rural, or CAR), an online registry, accessible by the public, that provides information on each property's APP and Legal Forest Reserve. The CAR helps inform land-use planning and assists with monitoring and enforcement of the Forest Code.

*All information in this section is sourced from <https://climatepolicyinitiative.org/publication/brazils-new-forest-code-how-to-navigate-the-complexity/>.

Sustainable Territories Measure

The second border measure would be based on whether a commodity imported from Brazil has been produced on land within a 'sustainable territory'. As with the Forest Code measure, this measure directly correlates to reduced deforestation, as sustainable territories (by definition) have managed to control deforestation or reduce it to zero at a territorial scale (see Box 2 below).

As with the Forest Code measure, however, there will be no correlation with particular methods of environmental production, unless these are dictated under territorial criteria.

Definition of Measure

There is no universal definition of a sustainable territory. The importer country would need to create a generalised set of criteria that could be applied widely in different contexts, perhaps defining it as a territory which has achieved environmental standards including reduction or elimination of deforestation, through a combination of private sector initiatives, government regulation and jurisdictional REDD+ (an international framework for financially rewarding reductions in deforestation).

Scope of Measure

Again, trade measures are applied on the basis of products and origins at the national level, so the measure would have to apply to relevant commodities sourced from all regions of Brazil. This would lead to it having a greater effect on uptake of sustainable territories, but could be unpopular (see section 4.3.5 below).

Form of Measure

The border measure could take three forms, in increasing order of 'severity':

- (a) A tariff reduction for imports from sustainable territories (applied ad valorem)
- (b) An increased tariff for imports from outside sustainable territories (applied ad valorem)
- (c) A prohibition on imports from outside sustainable territories

Practical Implications for Customs Authorities

The same observations on border procedure apply as for the Forest Code measure.

Practical Implications for Importers

Again, importers will need to engage in dialogue with their supply chain, but the process will be relatively simple and require a minimum of supply chain transparency. This is one of the rationales for the formation of sustainable territories.

Where importers are already sourcing from sustainable territories, compliance with the measure will require minimal effort. On the other hand, importers who are sourcing from non-compliant areas regions will need to judge whether the burden of the measure is such as to provide an incentive to transition their supply chains. This will in turn depend on whether they are faced with an outright prohibition or a tariff increase, or whether they could qualify for a tariff reduction by moving their supply chain.

Importers which do not move their supply chain will be incentivised to work together with regional governments and other stakeholders on how to upgrade territory to meet environmental criteria, including perhaps through providing finance.

It should be noted that, given the small number of sustainable territories in Brazil (depending on the definition, the State of Acre could perhaps be considered the closest to qualifying, but nowhere else), a prohibition, or even a tariff increase applied to imports from non-sustainable territories, would erect a considerable barrier to trade. A tariff reduction for sustainable territories would be much less restrictive.

Practical Implications for Farmers

This measure could have a large impact on farmers who are located outside sustainable territories. They can hardly move their farms, and individually they may have limited influence over their region's entrance into 'sustainable territory' programmes. Indeed, individual farmers could be in compliance with all relevant environmental legislation (including the Forest Code), but yet be disadvantaged in accessing major markets.

Again, this provides an incentive for farmers to create groupings and work with companies and regional governments towards qualifying as a sustainable territory. In the meantime, the measure might need to be applied in a phased manner. For example, farmers in territories that are in the process of qualifying as sustainable territories might be able to continue to sell to importing countries, at least for a specified period. Otherwise there is a danger that farmers end up selling to domestic markets or to trade partners who have not implemented measures (see further in section 3.4 above).

Applicability beyond Brazil

In contrast to the Forest Code measure, it should be easy to apply this measure more widely to different countries, as long as the definition of ‘sustainable territory’ is drafted in an appropriately neutral fashion.³⁵ See further in section 5.2.3 below.

Box 2: Sustainable Territories in Brazil

The ‘territorial approach’ is a modality of addressing deforestation that acts at a territorial (i.e. at the level of a state or region), rather than at a project level. In this way, territorial approaches seek to have a greater impact on overall deforestation and address the problem of ‘leakage’ (displacement of deforesting activities to other areas within a territory).

Although there are a variety of perspectives on how to implement a territorial approach, in general it will involve high-level collaboration by a broad range of public and private stakeholders within a jurisdiction, with the aim of agreeing a comprehensive, cross-sectoral package of instruments, initiatives and programmes to address deforestation at a territorial level. Deforestation is monitored using territorial indicators under the REDD+ monitoring, reporting and verification (MRV) framework.

There are a variety of interpretations of the territorial approaches and a corresponding variety of terminologies. In this paper, we refer to territories that have followed a territorial approach and achieved territorial reductions in deforestation as ‘sustainable territories’.

There are currently few examples of sustainable territories in the Brazilian Legal Amazon. However, there are a number of initiatives seeking to help territories implement the territorial approach and thereby qualify as sustainable territories. We note several below.

State of Acre

The state of Acre is located in the Amazon at the border of Peru and Bolivia. It has long been known for environmental protection and indigenous activism, and over the past decade has been able to reduce deforestation through development of a green economy.

Acre is a beneficiary of REDD Early Movers (REM), an initiative of the German government that supports national and sub-national governments who are in the final stages of developing jurisdictional REDD+ programmes.* As of 2017, Acre has received payments from REM totalling EUR25m. This funding has been channelled to local forest communities and governmental programmes that address deforestation.**

Acre is a member of the Governors’ Climate and Forests Task Force (GCF), a stakeholder platform that brings together 32 sub-national regions from ten different tropical forest countries, including all nine states in the Brazilian Amazon region.*** The GCF’s aim is to help these regions develop territorial approaches to addressing deforestation.

State of Mato Grosso

The state of Mato Grosso, on the frontier between the Amazon and savannah (cerrado) biomes, is a major commodity-producing region. Deforestation in Mato Grosso is driven by demand for three main commodities: soy, beef, and cotton.†

Mato Grosso has been at the forefront of the territorial approach. For example, the government of Mato Grosso announced the Produce-Conserve-Include (PCI) strategy in 2015. A green growth initiative supported by a cross-section of industry associations, private companies, local governments and non-governmental organisations (NGOs), the PCI seeks to preserve existing forests and reforest on degraded land, while at the same time improve livelihoods and double economic output by 2030.††

* https://unfccc.int/files/cooperation_and_support/financial_mechanism/standing_committee/application/pdf/rem_wfc_09_15_final.pdf.

** <https://www.bmz.de/en/issues/klimaschutz/forests-and-climate/cooperation-in-action/REDD-in-Brazil-reward-for-pioneers/index.html>.

*** <https://gctf.org>.

† <https://www.idhsustainabletrade.com/landscapes/mato-grosso-brazil/>.

†† <https://www.idhsustainabletrade.com/news/government-mato-grosso-idh-join-forces-sustainable-production-forest-protection/>.

³⁵ Indeed, sub-national jurisdictions in a number of other tropical forest countries, such as Peru, Colombia and Indonesia, are seeking to form ‘sustainable territories’.

Also, the US NGO, Environmental Defense Fund (EDF), is developing a ‘Zero-Deforestation, Zero-Illegality Zone’ (ZDZ) in Mato Grosso. A ZDZ is a type of sustainable territory with an emphasis on links to national and international agricultural businesses. Companies who source preferentially from ZDZs should find it easier to meet commitments to cut deforestation in their supply chains. Private sector links should also help the programme become self-sustaining, as maintenance of ZDZ status would become economically important for the region.

The German government is currently in discussions with the state of Mato Grosso to establish a programme of payments for results similar to the REM programme in Acre. Again, Mato Grosso is a member of the GCF.

Earth Innovation Institute (EII), a US NGO, has proposed the ‘territorial performance system’ (TPS), a framework for supporting and financing jurisdictions to transition to low-emission development through alignment of public policies and links to international commodity supply chains. EII is developing a TPS for Mato Grosso.^{†††}

Finally, Mato Grosso is a partner of Tropical Forest Alliance 2020 (TFA2020), founded in 2012 by the Consumer Goods Forum. TFA2020 brings together public and private stakeholders to achieve zero net deforestation in agricultural supply chains by 2020. Private sector partners include Cargill, Carrefour, Kellogg’s, Marfrig, Marks & Spencer, Mars, McDonalds, Mondelez, Nestle, PepsiCo, Unilever, Walmart and Wilmar.[‡]

State of Para

Para has the largest economy of all the states in the Legal Amazon, and has experienced some of the highest rates of deforestation. EDF is currently developing a ZDZ in Para. Para is also a member of the GCF.

^{†††} http://earthinnovation.org/wp-content/uploads/2015/06/EII_TPS_EN_2015.pdf.

[‡] <https://www.tfa2020.org/en/about-tfa/partners/>.

Treatment of Trade Measures Under International Trade Law

Introduction

The laws that govern international trade are found in a variety of bilateral, regional and multilateral trade agreements. The most important agreement for the purposes of this paper is the General Agreement on Tariffs and Trade 1994 (GATT 1994).

This section considers whether the two proposed trade measures could violate various provisions of GATT 1994 and outlines some possible justifications for the importing country if a violation were found.

The Most-favored Nation Obligation

Article I

Article I GATT 1994 contains the ‘most-favoured nation’ (MFN) obligation, which requires that a country should accord all countries with the trading privileges extended to their ‘most favoured’ trade partner. This has the practical consequence that any trade concessions offered to one country in respect of a particular import must be offered to all other countries.³⁶ The MFN obligation applies to all customs duties as well as prohibitions.

A key concept for the interpretation of Article I is the concept of ‘like’-ness. Products which are ‘like’ should be granted the same advantages, irrespective of origin. In EC – Asbestos (2001), the Appellate Body of the WTO stated that the following factors would be considered in an assessment of ‘like’-ness: (a) the products’ physical properties, nature and quality, (b) the products’ end uses,

³⁶ GATT 1994 provides for various circumstances in which countries can charge lower tariffs to particular trade partners and not be obliged to offer them to other trade partners. These are detailed in section 6.1 below.

(c) consumers' tastes and habits in respect of the products (i.e. their perceptions of substitutability), and (d) the products' tariff classifications.³⁷

This raises the question: is a sustainable product 'like' an unsustainable product? This issue has traditionally been seen as an issue of process and production methods (PPM). PPM are not generally considered relevant in discriminating between products, where the physical characteristics of the end-products are identical. This principle was affirmed in an environmental context in US – Tuna (Mexico) (1991), which determined that dolphin-friendly tuna was identical to non-dolphin-friendly tuna.³⁸ On this basis, sustainable products are 'like' the equivalent unsustainable products.

However, this logic may be changing. In Spain – Unroasted Coffee (1981), the WTO panel found that different coffee varieties (e.g. arabica and robusta) were 'like', partly based on their shared uses and their substitutability in the perceptions of consumers.³⁹ But it is questionable whether the panel would make the same decision today, given the increasing sophistication of consumers and segmentation of coffee markets. On this modern logic, 'sustainable' and 'unsustainable' commodities might not be considered 'like', as they increasingly access different consumer markets.

Forest Code Measure: Article I

First, we consider whether an import from a farm that complies with the Forest Code and an import from a farm (in Brazil or any other country) that does not comply with the Forest Code will be deemed as 'like'. In this case, the difference between the commodities is purely about context of production (the landowner's compliance with a particular set of laws). There will be no inherent difference between the commodities and the products will be deemed 'like'.

On this basis, a tariff reduction granted by an importing country to imports from Forest Code-compliant land will be discriminatory in fact and therefore a violation of Article I. This would be the case even if the reduction did not explicitly specify Brazil, as no other country would be able to take advantage of the reduction. Another country with competing imports could take this violation to the WTO.

A solution would be to design a trade measure that targets compliance with the Brazilian Forest Code and at the same time compliance with similar laws in other country. The risk is that the measure satisfies Article I, as it is drafted and offered widely, but is too vague to be effective in actually addressing the issue of commodity production in non-legally compliant land in any country. In addition, a widely drafted measure or package of measures will also have greater political and economic ramifications, as well as being more difficult to implement at the border.

Brazil could claim that a tariff increase for imports from non-Forest Code-compliant land also violates Article I unless it receives, on a universal basis, the lower tariff applied to imports of 'like' products from other countries.

We have no suggestions regarding this potential violation of international trade law. The justifications for discrimination contained in Article XX (see below) may be relevant.

Sustainable Territories Measure: Article I

Again, we consider whether an import from a farm located in a region meeting certain environmental standards and an import from a farm (in Brazil or any other country) in a region which does not meet those standards will be deemed as 'like'. Again, the difference between the commodities is purely about the context of production, and at an even higher level than in the Forest Code measure. There will be no inherent difference between the commodities, and the products will be deemed 'like'.

On this basis, and as per the discussion above, a tariff decrease or increase would likely violate Article I.

To deal with the potential violation arising from a tariff decrease, the measure could be designed to cover imports from sustainable territories in a country-neutral fashion and therefore allow all importing countries to take advantage of it. For this to work, the importing country will need to be careful in how 'sustainable territory' is defined. It should further be noted that there are currently very few sustainable territories globally. To avoid major economic and political issues, it would be better if the measure took a phased/stepped approach or be based on positive incentives (such as tariff reductions).

³⁷ *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135.

³⁸ GATT Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R.

³⁹ GATT Panel Report, *Spain – Tariff Treatment of Unroasted Coffee*, L/5135.

Again, we have no suggestions regarding the second potential violation, i.e. the tariff increase to Brazilian imports from outside sustainable territories. Brazil could argue that these are 'like' imports from other countries and therefore the tariff increase should not apply. The justifications for discrimination contained in Article XX (see below) may be relevant.

The Rule Against Quantitative Restrictions

Article XI

Article XI GATT 1994 contains a general rule against members of the WTO maintaining so-called 'quantitative restrictions'. These restrictions could be in the form of quotas, outright bans or other measures that prohibit or restrict imports or exports. Furthermore, in Article 4.2 of the WTO Agreement on Agriculture (1995) countries agreed to eliminate quantitative import restrictions on agricultural products and not to create any new ones.

Forest Code Measure: Article XI

A measure that prohibits commodities grown on non-Forest Code compliant land is likely to violate Article XI GATT 1994 (and Article 4.2 of the WTO Agreement on Agriculture).

Sustainable Territories Measure: Article XI

A measure that prohibits commodities grown on land outside a sustainable territory will is likely to violate Article XI GATT 1994 (and Article 4.2 of the WTO Agreement on Agriculture).

Justifications for Rule Breaches Contained in Article XX

Article XX(b) and (g)

Article XX GATT 1994 provides a number of justifications that countries can use if they violate other articles of the agreement (such as Article I and Article XI).⁴⁰

Specifically, two paragraphs of Article XX provide justifications for measures aimed at protecting the environment. Article XX(b) allows countries to adopt a trade measure that is 'necessary to protect human, animal or plant life or health', and Article XX(g) permits trade measures 'relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption'.

Both Article XX(b) and (g) are subject to overriding requirements detailed in the chapeau (introductory clause) to Article XX: that the measure does not arbitrarily or unjustifiably discriminate between countries where the same conditions prevail or constitute a 'disguised restriction on international trade'. The purpose of the chapeau is to ensure that the Article XX exceptions are not applied in a way that would constitute abuse.

As a general observation, both proposed measures are based on a public interest in the importing country to protect the forest in Brazil. However, it is not clear whether Article XX can justify a measure motivated by a particular societal value or interest where the specific resource being protected lies outside the territory of the country.

At the very least, there should be a 'nexus' or relationship between the resources being protected and the importing country.⁴¹ This could be the fact that forest conservation has an impact on the global climate, although this is an intangible nexus and could be argued against.

Forest Code Measure: Article XX(b)

Given that the Forest Code is intended to safeguard and regenerate Brazil's natural forest cover, a trade measure assessed on whether a producer has fully complied with the Forest Code could be viewed as important to 'protect... plant life or health'.

⁴⁰ If a member of the WTO violates GATT 1994, another member can challenge them via the WTO dispute settlement system. Although members must first attempt to resolve a solution amicably, a complainant can request a panel to hear the dispute, and the WTO Appellate Body will consider appeals over issues of law. All adjudications are legally binding, and remedies include compensation and retaliation.

⁴¹ *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58.

However, would the measure be ‘necessary’ to that objective? The Appellate Body has said that the following factors are important in considering whether a measure is necessary: (a) the importance of the interests and values at stake, (b) the extent of the measure’s contribution to the achievement of the objective, and (c) the measure’s trade restrictiveness. The panel will also consider whether there are reasonably available (and equally effective) alternatives that would be less trade restrictive.⁴²

What does this mean in practice? The conservation and restoration of forest cover is an important value held by many people all over the world (and, presumably, it is a value held by the public in the importer country, otherwise the trade measure would not have been implemented). Also, the trade measure could have a material contribution to achieving forest conservation, at least in those farms which are linked to international commodity supply chains.

But the trade restrictiveness of the measure may well cause a problem. An import ban on non-Forest Code compliant commodities would be the most trade restrictive of all the proposed actions, although a ban can sometimes pass the test nonetheless.⁴³ The importing country would have to prove that other actions to increase compliance with the Forest Code (such as supporting specific commodity companies to work with farmers on a voluntary basis or working with Brazil to provide technical and financial assistance) would be less effective than a trade measure. This could be hard to argue.

Forest Code Measure: Article XX(g)

What about Article XX(g)? This presents an easier test: the measure need only ‘relate to’ the conservation of trees (rather than be ‘necessary’ to it). Trees, as a living species, would qualify as ‘exhaustible natural resources’.⁴⁴ Conservation can also mean replenishment, so would presumably include reforestation under the Forest Code.⁴⁵

However, Article XX(g) requires the measure must also be made effective in conjunction with restrictions on domestic production or consumption, to ensure an ‘even-handedness’.⁴⁶

Although there would not need to be an identical domestic policy, the importing country would need to show rules against domestic products sourced from land that does not comply with important environmental legislation.⁴⁷

Forest Code Measure: Article XX’s chapeau

To avoid the charge of arbitrary or unjustifiable discrimination between countries, the importing country should show that the Forest Code measure was part of a larger programme of measures aimed at combatting imports of commodities from any country where ‘the same conditions prevail’. Although no other country has an identical regime to the Forest Code, similar regimes exist. So, the programme could target production on land in contravention of important environmental legislation (for example, palm oil from illegally cleared land in Malaysia).

The importing country must also have made serious efforts, in good faith, to negotiate a multilateral solution before resorting to unilateral measures.⁴⁸ The Forest Code was passed in the context of Brazil’s participation in multilateral climate change agreements, and its implementation will help Brazil meet its emission reduction and reforestation obligations under the Paris Agreement. It also supports Brazil’s commitment to restore 12 million hectares of land under the Bonn Challenge.⁴⁹ The Forest Code’s success is arguably a matter of international concern. But these parallel efforts are ongoing in parallel, and a trade measure should be seen as a last resort. At the very least, the importing country should perhaps have made an offer to work with Brazil to provide financial and/or technical support for Forest Code compliance.

Sustainable Territories Measure: Article XX(b)

A trade measure intended to encourage importers to source from inside a sustainable territory could be seen as intended to ‘protect... plant life or health’.

⁴² *Brazil – Measures Affecting Imports of Retreaded Tyres*, WT/DS332.

⁴³ *Ibid.*

⁴⁴ *US – Shrimp (1998)*.

⁴⁵ *China – Measures Related to the Exportation of Rare Earths, Tungsten, and Molybdenum*, WT/DS431 / WT/DS432 / WT/DS433.

⁴⁶ *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2.

⁴⁷ *Ibid.*

⁴⁸ *US – Shrimp (1998)*.

⁴⁹ <http://www.bonnchallenge.org/content/brazil>.

However, again we run into whether the measure could be viewed as ‘necessary’. As argued above, many people think it is important to conserve forests. And (at least in theory) this measure, by increasing demand for commodities grown in sustainable jurisdictions, should have a material contribution to the conservation of forests. Key will be whether the measure is seen as restrictive of trade, and this will depend on the actual form of the measure: a tariff reduction will probably be the least restrictive of trade, followed by a tariff increase, and finally a blanket prohibition on all commodities not sourced from a sustainable territory. The importing country could also have implemented a number of effective alternatives to the measure: government procurement policies, support to sustainable trade initiatives, and international development aid conditioned on environmental milestones.

Sustainable Territories Measure: Article XX(g)

It will be fairly straightforward to assert that a sustainable territories measure falls under the ambit of ‘conservation of exhaustible natural resources’.

The requirement for domestic equivalence means that the importing country should be able to show domestic rules against similar products from areas that have not achieved environmental protection at a territorial level. This might be difficult.

Sustainable Territories Measure: Article XX’s Chapeau

Again, to avoid a charge of arbitrary or unjustifiable discrimination, the importing country should show that the sustainable territories measure was part of a larger programme of measures targeting imports of commodities from any country where ‘the same conditions prevail’. This would presumably include other countries with tropical forest threatened by deforestation. So, the programme could define ‘sustainable territory’ broadly and target production in areas that had not achieved environmental protection at a territorial level.

Finally, the trade measure must have followed serious, good faith efforts to negotiate a multilateral solution to the problem of deforestation in Brazil. The jurisdictional approach to tackling deforestation has been proposed under multilateral climate change agreements, and Germany has helped the State of Acre to set up a jurisdictional REDD+ scheme under the REM programme. A trade measure that discriminated in favour of commodities produced in a sustainable territory would arguably support these multilateral and bilateral initiatives, but again these initiatives are ongoing, rather than being a failure.

Summary

A unilateral trade measure aimed at protecting forests in Brazil is likely to infringe GATT 1994. In the first place, it could violate Article I and be challenged by Brazil or other affected countries in front of the WTO dispute panel. Furthermore, a prohibition on imports is likely to violate Article XI (and Article 4.2 of the Agreement on Agriculture).

If an importing country is nevertheless committed to implementing a trade measure, one way to manage risk would be to design the measure so it has the highest chance of relying on an Article XX justification in a potential challenge.

A successful justification can never be guaranteed, given that the WTO dispute panel is not bound by previous decisions. Each case will be considered on its own taking into account the factual and legal circumstances.⁵⁰ But a perception that an Article XX justification might apply could act to deter a challenge in the first place.

So, generalising, we could say that (a) the measure should form part of a programme of similar measures addressing similar imports from other relevant countries ‘where the same conditions prevail’, (b) the importing country should have similar rules to cover domestic production of similar commodities, and (c) the measure should be as least restrictive of trade as possible.

This argues in favour of a tariff reduction for ‘sustainable’ imports over the other proposed measures. In particular, a prohibition on ‘unsustainable’ imports will be more difficult to justify under Article XX as it will be extremely restrictive of trade.

However, will a tariff reduction for ‘sustainable’ imports be possible in practice? In the following section, we address this question.

⁵⁰ *US – Gasoline (1996)*.

Tariff Adjustments in Practice

Introduction

GATT 1994 permits countries to use customs duties ('tariffs') as an instrument of trade policy.

The standard tariff that a country levies on imports of a particular product is known as the MFN applied tariff.⁵¹

Over the past seventy years, countries have met in a series of negotiations to agree mutual tariff reductions. In each of these rounds of negotiation, countries have committed to bind their tariffs at a certain rate on a variety of imports and, although there are procedures for withdrawing tariff concessions, Article II GATT 1994 generally prohibits countries from increasing tariffs above bound levels.

The bound rate thus sets a legal ceiling on MFN applied tariffs. But countries are free to set their MFN applied tariffs at a level which is below the bound rate. The difference between the MFN applied tariff and the bound tariff is known as the 'binding overhang'.⁵² Where there is a binding overhang, a country can increase its MFN applied tariff up to the bound rate.

A small binding overhang will not be much use, as space available to increase tariffs on unsustainable imports will be small and not have much of a disincentive effect. However, a tariff increase beyond the bound rate will violate Article II. A violation of Article II could be justified using Article XX (see previous section). However, it would be a highly contentious act from a political perspective and would require powerful justification.

Similarly, a prohibition on unsustainable commodities from entering the market would be contentious from a political and economic perspective and would face pushback from exporters and importers alike.

As highlighted in the previous section, the least contentious option is to reduce tariff on sustainable commodities. However, this may not be feasible for many developed countries. After successive rounds of trade negotiations, tariffs on many agricultural commodities are very low (if not 0%), which means that the incentive effect of a tariff reduction for sustainable production in Brazil may be minimal.⁵³ And it may be difficult to reduce the tariffs that remain, as they may be intended to support domestic agricultural sectors.

We consider the options below in Brazil's three most important markets.

China's Tariffs on Deforestation Commodities

As China does not have a preferential trade agreement with Brazil, the MFN applied tariff will apply on imports from Brazil.⁵⁴

China has bound tariffs at the MFN applied rate for all of the relevant commodities.⁵⁵ With no binding overhang, tariff increases are highly likely to violate Article II GATT 1994. On the other hand, tariff reductions would be possible in all cases, in particular in the context of beef and cotton (although see footnote regarding cotton tariff rate quotas). See further in Table 7 below.

In section 3.4, we concluded that China has sufficient market power to influence Brazil's commodity production in frozen beef, leather, soybeans and soybean oil. Our analysis of tariff levels now shows scope for tariff reductions on all of these products. Could this happen in practice?

Although China has a significant domestic herd of cattle, its demand for beef is growing. Under recently signed preferential trade agreements, China charges a 0% tariff on imports of fresh and frozen beef from New Zealand and charges reduced tariffs on beef imports from Australia.⁵⁶ There could, therefore, be domestic political scope for reducing tariffs on sustainable beef from Brazil.

⁵¹ The MFN applied tariff is in practice the highest tariff that members of the WTO charge to one another. GATT 1994 allows countries to charge lower tariffs to other countries under preferential trade agreements. Furthermore, some developed countries offer developing countries unilateral preferential tariffs.

⁵² Beshkar, M., Bond, E. & Rho, Y. (2012) *Tariff Binding and Overhang: Theory and Evidence*. Nashville, Tennessee, Vanderbilt University.

⁵³ For example, the EU imposes a 0% tariff on imports of soybeans and soybean meal.

⁵⁴ <http://fta.mofcom.gov.cn/english/>.

⁵⁵ China bound 100% of its tariffs when it acceded to the WTO in 2001. In 2016, China's average bound tariff for agricultural products was 15.7%, and its average MFN applied tariff was 15.5%, giving it an average binding overhang of 0.2% (https://www.wto.org/english/res_e/booksp_e/tariff_profiles17_e.pdf).

⁵⁶ <https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/os-markets/red-meat-market-snapshots/mla-china-beef-snapshot-2017.pdf>.

Table 7: Tariffs Charged by China on Deforestation Commodities in 2015

Product HS92 Tariff line	MFN-applied tariff	Bound tariff	Binding overhang
Fresh beef HS 0201	12 - 20%	12 - 20%	0
Frozen beef HS 0202	12 - 25%	12 - 25%	0
Leather (hides and skins) HS 4104	5 - 8%	5 - 8.4%	0*
Soybeans for crushing HS 120190	3%	2.4%	0**
Soybean meal HS 2304	5%	5%	0
Soybean oil HS 1507	9%	9%	0
Cotton HS 5201***	40%	40%	0

Source: https://www.wto.org/english/tratop_e/tariffs_e/tariff_data_e.htm.

* China's tariffs on fresh beef were bound according to the HS96 classification, but current tariffs are assessed according to the HS12 classification.

** China's tariffs on soybeans for crushing were bound according to the HS96 classification, but current tariffs are assessed according to the HS12 classification.

*** A tariff rate quota applies to cotton imports: annual cotton imports up to around 900,000 tons qualify for a reduced tariff of 1%. Imports above that threshold face a punitive tariff of 40%, making imports commercially impractical. (https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Cotton%20and%20Products%20Annual_Beijing_China%20-%20Peoples%20Republic%20of_3-31-2017.pdf).

In the context of soybeans, the Chinese domestic soy-crushing industry has extremely low or negative margins and relies on large import volumes to stay in business. A tariff reduction for sustainable soy, if it led to an increase in overall imports, could therefore be popular. Furthermore, there are signs of cooperation between Brazil and China at the state level and through company commitments to responsible soy procurement. For example, the Sustainable Soy Trade Platform brings together major Chinese soybean importers and crushers to encourage responsible soy procurement. Seven of these importers are members of the Roundtable on Responsible Soy, and five have no-deforestation policies.⁵⁷

The EU's Tariffs on Deforestation Commodities

Brazil has a bilateral Partnership and Cooperation agreement with the EU.⁵⁸ However, this agreement does not contain tariff concessions. Furthermore, Brazil is not part of the EU's Generalised System of Preferences.⁵⁹ Tariffs on Brazilian imports are therefore charged at the MFN applied rate.

The EU has bound tariffs at the MFN applied rate for all the relevant deforestation commodities.⁶⁰ With no binding overhang, tariff increases are highly likely to violate Article II GATT 1994. On the other hand, tariff reductions would be possible in the context of beef, leather and soybean oil. See further in Table 8 below.

In section 3.4 we concluded that the EU has sufficient market power to influence Brazil's commodity production in fresh beef, leather, soybeans and soybean meal. Our analysis of tariff levels now shows scope to reduce tariffs on fresh beef and leather. Could this happen in practice?

The EU is known for having a progressive view of the links between trade and the environment and indeed originated the FLEGT model to address legality of imported timber.⁶¹

⁵⁷ <https://www.solidaridadnetwork.org/sites/solidaridadnetwork.org/files/publications/China%20Soy%20report.pdf>.

⁵⁸ As part of the Mercosur grouping (which includes Argentina, Paraguay and Uruguay), Brazil has been negotiating a free trade agreement with the European Union to reduce barriers to trade and foreign direct investment between the two regions. The agreement is expected to be finalised in late 2017. (<https://www.euractiv.com/section/economy-jobs/news/mercosur-nations-prioritise-end-of-year-eu-trade-deal/>).

⁵⁹ The EU's General System of Preferences zero-rates tariffs for many types of imports from developing countries. (http://ec.europa.eu/trade/policy/countries-and-regions/development/generalised-scheme-of-preferences/index_en.htm).

⁶⁰ During the Uruguay Round, which ended in 2000, the EU bound 100% of its tariffs. In 2016, the EU's average bound tariff for agricultural products was 11.9%, and its average MFN applied tariff was 11.1%, giving it an average binding overhang of 0.8%. (https://www.wto.org/english/res_e/booksp_e/tariff_profiles17_e.pdf).

⁶¹ <http://www.euflegt.efi.int/what-is-flegt>.

Table 8: Tariffs Charged by the EU on Deforestation Commodities in 2015

Product HS92 Tariff line	MFN-applied tariff	Bound tariff	Binding overhang
Fresh beef <i>HS 0201*</i>	12.8% plus €141.40 - €303.40 per 100kg	12.8% plus €141.40 - €303.40 per 100kg	0
Frozen beef <i>HS 0202**</i>	12.8% plus €141.40 - €304.10 per 100kg	12.8% plus €141.40 - €304.10 per 100kg	0
Leather (hides and skins) <i>HS 4104</i>	0 - 6.5%	0 - 6.5%	0
Soybeans for crushing <i>HS 120190</i>	0%	0%	0
Soybean meal <i>HS 2304</i>	0%	0%	0
Soybean oil <i>HS 1507</i>	3.2 to 9.6%	3.2 to 9.6%	0
Cotton <i>HS 5201</i>	0%	0%	0

Source: https://www.wto.org/english/tratop_e/tariffs_e/tariff_data_e.htm.

* The EU operates several tariff rate quotas for imported beef. Under the so-called ‘High Quality Beef’ quota, a fixed amount of premium beef is permitted to enter the EU each year at a tariff of 20%. Brazil is allocated part of this quota. Imports in excess of the quota are subject to punitive tariff levels. (<http://beefandlamb.ahdb.org.uk/market-intelligence-news/eu-autonomous-beef-quota-spotlight/>).

** See above.

However, we make two observations. Firstly, the MFN applied tariffs for beef (i.e. outside tariff rate quotas) are set so as to protect domestic producers, by providing a significant cost to importers.⁶² Given the power of the EU farming lobby, it will be difficult to lower the MFN applied tariff by any meaningful degree.

Secondly, the tariffs on leather range from 0 to 6.5%. However, most of the tariffs for ‘wet-blue’ hides are at 0%, which means that tariff reductions could only be applied to ‘crust’ hides. However, of the unprocessed leather that Brazil exports, it is mainly in the form of wet-blue hides.⁶³

The USA's Tariffs on Deforestation Commodities

There is no preferential trade agreement between the US and Brazil, so tariffs on Brazilian imports are charged at the MFN applied rate.

The USA has bound tariffs at the MFN applied rate for all the relevant deforestation commodities.⁶⁴ With no binding overhang, tariff increases are highly likely to violate Article II GATT 1994. On the other hand, tariff reductions would be possible in most cases. See further in Table 9 below.

In section 3.4, we concluded that, overall, the USA possesses too little market power to influence Brazil’s deforestation commodity production. However, the USA does import significant amounts of Brazilian leather. Furthermore, it may be possible to reduce tariffs on leather.

Summary

None of the countries we assess have scope for increasing tariffs on unsustainable imports without violating their binding commitments and Article II GATT 1994. Similarly, any prohibition on unsustainable imports is highly likely to violate Article XI. Article XX could provide a justification for both of these actions, however, a successful defence would not be assured, and there would be political and economic pushback, both domestically and internationally.

⁶² https://ahdb.org.uk/brexit/documents/BeefandLamb_bitesize.pdf.

⁶³ <http://www.cicb.org.br/wp-content-bl/uploads/2017/01/TOTAL-ENG-DEC16.pdf>.

⁶⁴ As of 2016, the USA had bound 99.9% of its tariffs. In 2016, the USA’s average bound tariff for agricultural products was 4.8%, and its average MFN applied tariff was 5.2%, giving it an average binding overhang of -0.4%. (https://www.wto.org/english/res_e/booksp_e/tariff_profiles17_e.pdf).

Table 9: Tariffs Charged by the USA on Deforestation Commodities in 2015

Product HS92 Tariff line	MFN-applied tariff	Bound tariff	Binding overhang
Fresh beef <i>HS 0201</i>	4 - 26.4% plus 0 - 4.4 cents per kg	4 - 26.4% plus 0 - 4.4 cents per kg	0
Frozen beef <i>HS 0202</i>	4 - 26.4% plus 0 - 4.4 cents per kg	4 - 26.4% plus 0 - 4.4 cents per kg	0
Leather (hides and skins) <i>HS 4104</i>	0 - 5%	0 - 5%	0
Soybeans for crushing <i>HS 120190</i>	0%	0%	0
Soybean meal <i>HS 2304</i>	0.45 cents per kg	0.45 cents per kg	0
Soybean oil <i>HS 1507</i>	0 - 19.1%	0 - 19.1%	0
Cotton <i>HS 5201</i>	0% plus 0 - 31.4 cents per kg	0% plus 0 - 31.4 cents per kg	0

Source: https://www.wto.org/english/tratop_e/tariffs_e/tariff_data_e.htm.

Legally and practically, the best route forward would be to reduce tariffs for sustainable imports. This could raise an Article I objection, but a tailored package of measures (see our suggestions in section 5.5) could permit an Article XX justification. However, it should be noted that tariffs often act to protect domestic industry from cheaper foreign imports. Domestic lobby groups will not view tariff reductions as a ‘victimless crime’.

In particular:

- China maintains high tariffs on many agricultural imports, and it could have real impact by reducing tariffs on sustainable frozen beef, leather, soybeans and soybean oil. At least in the context of soy, there are signs of a growing movement towards responsible sourcing, but this may not translate into trade measures at a national level for the time being. There may be more scope for China to implement a measure around sustainable frozen beef.
- In the EU, tariffs on deforestation commodities are split into two categories: they are either zero, or maintained at a high level to protect domestic industry. The EU could have impact by reducing tariffs on sustainable fresh beef, but there are powerful domestic headwinds against such an action. It could also reduce tariffs on sustainable leather, but given the type of raw leather exported by Brazil, it might not create much of an incentive for change.
- The USA has scope to reduce tariffs by a large amount on many deforestation commodities, but its market share of Brazilian deforestation commodities is minimal. The only measure that could have impact would be a tariff reduction on sustainable leather.

Summary and Concluding Observations

We have articulated how a Forest Code and a sustainable territories measure could be defined, how they would be perceived by stakeholders, and how they could function in practice. In an ideal world, provided they were implemented in a positive fashion (i.e. based on tariff reductions), these measures could help companies meet their zero-deforestation commitments and help Brazil (and other countries) meet their international climate change obligations.

However, we have considered the legal, political and economic context for these measures and found that (apart from in the context of China, with respect to soy and beef), there is perhaps little space for them to be implemented in the real world.

It could be argued that, except where they support bilateral cooperation, trade measures should be used as a last resort. There are more subtle ways of influencing demand for sustainable and unsustainable commodities. The voluntary partnership model

pioneered by the EU in its FLEGT initiative is a good example. Also, governments can increase demand for sustainable products by implementing 'green' procurement policies. For example, the government of the United Kingdom has a green procurement policy for timber products, and the government of China has a green procurement policy for many products.^{65 66}

And there are 'softer' ways of encouraging companies to address deforestation in their supply chains, including through creation of rankings based on publicly available information, detailed company disclosure and analysis, and shareholder divestment.^{67 68 69}

That said, the analysis in this paper is based on current application of international trade rules, and the international mood may be shifting. For example, the Doha round of trade talks, launched in 2001, has failed to reach agreement on greater trade liberalisation, and there is a sense that the era of multilateralism, and in particular the WTO, is in retreat. Furthermore, the USA's recent withdrawal from the Trans-Pacific Partnership may indicate a move away from regional agreements. Bilateral, preferential trade agreements are perhaps the way forward, and these could contain environmental chapters and include financial support for compliance with the Forest Code or establishment of sustainable territories.⁷⁰

It is also worth mentioning that, although the United Kingdom is a relatively minor export destination for Brazilian agricultural commodities, its prospective departure from the European Union presents a unique opportunity to set progressive environmental standards in a new set of trade agreements.

Finally, recent trade rhetoric between the USA and China shows that there is perhaps more scope for forceful trade measures (such as tariff increases and prohibitions) than the system of the past seventy years has allowed. So far, however, measures have been placed in the context of dumping. There is a great deal of domestic pressure towards combatting dumping, as it can have a catastrophic effect on equivalent domestic industries. Unfortunately, domestic industries are not calling for governments to address tropical deforestation.

⁶⁵ <https://www.gov.uk/guidance/timber-procurement-policy-tpp-prove-legality-and-sustainability>.

⁶⁶ Although agricultural products are not yet included. See <https://www.iisd.org/sites/default/files/publications/green-public-procurement-china-quantifying-benefits-en.pdf>.

⁶⁷ See for example Forest Trends' Supply Change (<http://supply-change.org>).

⁶⁸ See for example the CDP Forest Program (<https://www.cdp.net/en/forests>).

⁶⁹ See for example the Norway sovereign wealth fund's 2015 divestment from 11 companies that it had determined were involved in deforestation. (<http://www.straitstimes.com/asia/se-asia/norway-fund-drops-11-firms-over-deforestation>).

⁷⁰ Mercosur has struggled to build momentum for a free trade agreement with the EU, partly due to strong pushback over lowering of agricultural tariffs in the EU. (It is by no means certain that a free trade agreement will be signed by the end of 2017.) But the draft text currently contains a chapter addressing trade and sustainable development, including mutual commitments to abide by international environmental agreements. It could also include technical and financial support for environmental objectives, if there was political will. As regards the USA, there is domestic support for a free trade agreement with Brazil, and also in China, based on the volume of the soy trade.



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