

RESEARCH ARTICLE

Supply chain divergence challenges a ‘Brussels effect’ from Europe's human rights and environmental due diligence laws

Mairon G. Bastos Lima¹  | Almut Schilling-Vacaflor^{2,3} 

¹The Stockholm Environment Institute, Stockholm, Sweden

²Institute of Social Sciences, University of Osnabrück, Osnabrück, Germany

³Chair of International Business, Society and Sustainability, Friedrich-Alexander-University, Erlangen-Nürnberg, Germany

Correspondence

Mairon G. Bastos Lima, Stockholm Environment Institute, Linnegatan 87D, 111 23 Stockholm, Sweden.
Email: mairon.bastoslima@sei.org

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Abstract

Human rights violations and pressing environmental issues have tainted agricultural trade. The role of international market demand for commodities such as soy in causing those problems is clear, yet they remain mostly unaddressed. Therefore, European countries have led a new global trend on mandatory human rights and environmental due diligence (HREDD), advancing the EU's growing global regulatory ambitions. Here, we analyse the prospects for successful externalisation of Europe's sustainability standards – a ‘Brussels Effect’ – using Brazilian soy as a case. Our analysis exposes how the practice of supply chain divergence (i.e., the segmentation of exports tailored to different consumer requirements) can easily evade policy impacts and negate their additionality where Europe commands a minor market share. To avoid becoming just a niche market in these cases, the EU would need to expand on its actions, (i) engaging with other major consumer countries to export its standards, (ii) doubling down on HREDD's coverage to include financial actors and companies trading with other markets, or (iii) moving beyond ‘do no harm’ policies to adopt more strategically targeted ‘do good’ instruments to counter drivers of deforestation on the landscape level.

Scruples must have a term: how sugar is raised is what you need not trouble yourselves about, so long as you do not direct the raising it

– Jeremy Bentham (1793, p.42).

1 | THE TROUBLES OF HUMAN RIGHTS AND AGRICULTURAL SUSTAINABILITY IN THE 21ST CENTURY

Normative considerations about global agricultural trade are not new. They surfaced in the 18th century concerning European imports of sugar produced by slave labour, for example. Recently, a broader set of human rights and environmental concerns have also come to bear on it. Agriculture currently drives as much as 90–99% of all tropical deforestation (Pendrill et al., 2022), resulting in

massive biodiversity loss and greenhouse gas emissions (IPBES, 2019; IPCC, 2019). Many human rights issues, such as modern slavery and rural conflicts over land or water, have also tainted international agricultural supply chains (Pinheiro et al., 2019; Russo Lopes et al., 2021).

Yet, the world has become more complex since Bentham (1793) recommended that Europe emancipate its colonies and refrain from scrutinising how *they* would conduct their businesses as independent sovereign states. Europe, for one, has increasingly moved away from a free-trade paradigm and towards using trade as a tool to ‘manage’ globalisation according to its values and interests (Eliasson & Garcia-Duran, 2023). Moreover, the global environmental implications of tropical deforestation – as well as greater supply chain transparency and stronger sensibilities to ecosystem destruction or human rights violations – make it much harder for consumers or traders to avoid scrutiny about

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the practices they support (Gardner et al., 2019; Grabs & Carodenuto, 2021).

Indeed, a lack of accountability for social or environmental damages inflicted abroad has long been noted as a critical policy shortcoming (Newig et al., 2020; Park & Kramarz, 2019; Ruggie, 2018). For a while, private sustainability certification appeared to be a market-based panacea for solving such issues, but its effectiveness has proven limited (Dietz et al., 2022; Poynton, 2015). Authors have increasingly advocated for 're-centring the state' (Bartley, 2014; Moser & Leipold, 2021), and a new paradigm of demand-side supply chain policies has emerged with Europe as a leading player (Gustafsson et al., 2023; Mueller et al., 2023). This approach is centred around human rights and environmental due diligence (HREDD), which draws from the UN Guiding Principles on Business and Human Rights (UNGPs) and the OECD Guidelines for Multinational Enterprises, requiring companies to assess and address risks throughout their supply chains.

France, Germany, and Norway have been frontrunners in adopting mandatory HREDD policies, paving the way for an EU deforestation regulation (EUDR) and a Corporate Sustainability Due Diligence Directive (CSDDD). These laws further position the EU as a 'global regulator' using trade to seek behavioural change from its partners and multinational companies (Young, 2015). Bradford (2020) documents the increasing attempts to create what she calls a 'Brussels Effect' in different policy areas when, thanks to its attractiveness as a trade bloc and its regulatory capacity, the EU succeeds in making its rules a global benchmark.

There is growing momentum around HREDD, with the EU Parliament announcing with great fanfare the 'EU's quest to save the world's forests' (Hansen, 2023). Yet a critical analysis may be in order. Using Brazilian soy – a key commodity motivating importing countries' legislative action – as an in-depth case study, this article outlines the Brussels Effect theory underlying European action and provides a reality check on its ability to address agricultural sustainability. To do so, we review the adverse environmental and human rights impacts associated with soy expansion in Brazil, Europe's HREDD policies coming into place, and analyse why we might or might not expect a Brussels Effect in soy supply chains. We particularly focus on the difficulty posed by supply chain divergence, i.e., the segmentation of more and less sustainable flows.

Our examination exposes how the EU's diminishing market share can undermine the Brussels Effect and, thus, the additionality of its policies vis-à-vis key deforestation drivers such as soy. Moreover, we show that the divisibility of production to skirt around regulations and avoid a Brussels Effect does not need to be (costly) performed by a single producer but can easily spread across a sector, with different producers catering to distinct consumers and their requirements. We then

Policy implications

- Europe's diminishing market share of forest-risk commodities such as soy and exporters' proven ability to segment supply chains to meet different consumer requirements (i.e., supply chain divergence) severely limit the impact of human rights and environmental due diligence laws. Additional policies are needed to prevent Europe from simply becoming a niche market.
- A 'Brussels Effect', i.e., the adoption of environmental and human rights standards beyond Europe's supply chains to make more than just a dent in tropical deforestation and other sustainability issues, depends either on their adoption by Asian consumer markets or on Europe imposing its standards on companies that trade or finance those commodities irrespective of who consumes them.
- Yet, sustainability transformations in critical landscapes of concern such as the Amazon or the Cerrado require that 'do no harm' policies such as human rights and environmental due diligence be strategically combined with 'do good' policies, supporting alternatives that meet local development needs sustainably.
- Concerned demand-side actors in Europe or elsewhere can proportionately play a much more significant and outsized role by catalysing landscape-level transformations through engagement with other producer country actors – outside forest-risk commodity supply chains – devoted to more sustainable land uses (e.g., Indigenous peoples, smallholder farmers), who would benefit from financial support and could hedge against drivers of deforestation. This requires thinking beyond the due diligence toolbox to strategically combine it with foreign development aid and possibly foster new sustainable supply chains.

discuss three possible pathways forward for addressing such shortcomings.

2 | THE REGULATION OF AGRICULTURAL SUPPLY CHAINS AND THE BRUSSELS EFFECT

Global agricultural supply chains have accumulated myriad environmental and human rights issues. Although these issues have become increasingly evident, they remain difficult to resolve. Besides

biodiversity loss and greenhouse gas emissions from deforestation (IPBES, 2019; IPCC, 2019), labour issues, including modern slavery, have been prevalent (Pinheiro et al., 2019). Pesticide contamination (Bombardi, 2017) and violations of indigenous peoples' or peasant communities' rights to land, water, and food have also further tainted agricultural supply chains (CPT, 2021; Russo Lopes et al., 2021). Still, there are no binding multilateral agreements on land-use sustainability (Dimitrov, 2020). Private certification instruments have limited scope and uptake (Le Baron et al., 2017; Poynton, 2015), and law enforcement is weak in many producing countries (Rajão et al., 2020). Finally, there is trading companies' lack of legal liability for the human rights and environmental performance of their suppliers and subsidiaries – something that has recently started to change (Ruggie, 2018).

2.1 | The Road to HREDD

HREDD efforts gained momentum when Professor John Ruggie, then UN's Special Representative on Business and Human Rights, drafted the soft law framework 'Protect, Respect and Remedy' and the accompanying UNGPs, which the UN Human Rights Council unanimously adopted in 2011. Human rights due diligence is a central concept in the UNGPs, to which the OECD Guidelines for Multinational Enterprises then added environmental issues, preparing the ground for HREDD. HREDD means that companies shall assess and address environmental and human rights risks in their supply chains, adopt prevention and mitigation measures in response to identified risks, track the progress of adopted standards, put grievance mechanisms in place, consult with stakeholders and rightsholders, as well as report upon their due diligence systems.

The UNGPs stipulate that states should use a 'smart mix' of measures to implement HREDD principles. At first, governments tried to steer company behaviour through voluntary actions, but few European companies did so (Smit et al., 2020). Therefore, European civil society organisations – supported by leftist and green political parties – advocated for a 'hardening' of due diligence requirements (see Schilling-Vacaflor & Lenschow, 2021). The assumption behind HREDD laws is that by establishing legal duties and a 'shadow of hierarchy' (Héritier & Lehmkuhl, 2008), companies are pressured to carry out changes in their (sustainability) management structures and practices (Bueno & Bright, 2020; Smit et al., 2020).

2.2 | The Brussels effect

In her book 'The Brussels Effect: How the European Union rules the world', Bradford (2020) describes how

the EU has long pursued the goals of bloc integration and legal harmonisation through regulation. In time, it also became a deliberate external agenda to establish the EU as 'the global regulatory hegemon' (Bradford, 2020). The externalisation of EU norms and standards beyond its jurisdiction has been possible thanks to its market size, regulatory capacity, and a preference for stringent rules alongside precautionary policymaking as opposed to post-fact litigation (Bradford, 2020). The underlying logic of the Brussels Effect is that producers and multinational companies would not want to forgo Europe's large and affluent market. Instead, they will find it more cost-efficient to streamline their operations according to those higher standards, triggering a form of convergence to the top (see Vogel, 1997).

There are some conditions for the Brussels Effect to take hold, however. For one, it depends on the sustained attractiveness of the European market. As Bradford (2020, p. 27) puts it, 'the lower the adjustment costs relative to the benefits of market access, the more likely the producer will adjust to the importing country's standard and enter the market', while 'the better the exporter's ability to divert trade to third-country markets or increase demand in its home market, the less likely the Brussels Effect will occur'.

The Brussels Effect also depends on the non-divisibility of production due to technical, legal, or economic constraints. Its theory posits that if companies are able and prefer to customise their operations according to different requirements rather than standardising, the effect will fail to materialise (Bradford, 2020). If, however, companies choose to streamline their operations according to European standards, we have what Bradford (2020) calls the *de facto* Brussels Effect, as has happened in many domains such as data privacy, product safety, and consumer health. Alternatively, there can also be what she refers to as the *de jure* Brussels Effect, when other countries choose to follow suit and adopt similar policies (Bradford, 2020).

Yet, whether and how the Brussels Effect can take hold on agricultural supply chains remains to be determined. Food consumption is an inelastic target, related to a geographically bound consumer market that cannot flee to a less-regulated jurisdiction (in the way capital markets could, for example), which is a pre-condition for the Brussels Effect (Bradford, 2020). Nevertheless, Europe's loss of market share to emerging countries such as China and India raises questions about its ability to set a global normative standard in this sector. Agricultural commodities also have increasingly found other uses within producer countries (e.g., biofuels), which then become less dependent on exports (Bastos Lima, 2021). Furthermore, implementing sustainability requirements incurs costs for which many producers resent not being sufficiently rewarded (Ruysschaert & Salles, 2014; VanWey & Richards, 2014). Finally, the

non-divisibility of agricultural commodity production cannot be taken for granted, as we shall see in the case of Brazilian soy.

3 | RESEARCH METHODS

This analysis utilises qualitative and quantitative data to assess the extent to which new HREDD laws may create a Brussels Effect on Brazilian soy supply chains. Our study relies on a mixed-methods approach that combines (a) analysis of primary documents, (b) trade data on soy flows from Brazil and their association with deforestation, and (c) semi-structured interviews to assess how different actors (e.g., producers, traders) are likely to respond to such new legal obligations.

First, we reviewed the supply chain sustainability governance literature and various European HREDD policies to offer a state-of-the-art assessment. Second, for studying transnational soy flows and sourcing patterns from Brazil, we utilised quantitative data from Trase,¹ a supply chain transparency initiative. Trase provides municipal-level data on Brazil's soy exports and, therefore, granularly connects consumer countries to specific commodity traders, places of importation, and the issues therein. We also used its deforestation-exposure indicator, which shows how much ecosystem conversion those consumers may be 'importing' with their soy. That, alongside data on the destinations of certified soy, helped us appraise the extent to which there are indications of supply chain divergence in Brazil's soy sector.

Finally, to understand how European policies might affect Brazil's soy supply chain, we conducted semi-structured interviews with business representatives, soy farmers, producers' associations, as well as civil society organisations on both sides of the supply chain. They included over 120 interviews in Brazil and 32 in Europe (in France, Germany, and Belgium) done between 2017 and 2022. The interviews were conducted in German, English, or Brazilian Portuguese by one of the authors, without interpreters, and lasted for about an hour. Most interviews were recorded and transcribed, though some interviewees preferred not to be recorded and, thus, field notes were taken. All the interviews were manually coded and analysed in terms of topic.

In particular, we coded the perceptions and experiences of interviewees with HREDD requirements, statements referring to the traceability of Brazilian agricultural supply chains, export patterns to different consumer markets, and information about sustainability governance (e.g., the use of grievance mechanisms by rightsholders, relationships between subsidiaries and mother companies, employer-employee relations, stakeholder consultations, alliances between Brazilian and European civil society organisations).

The interviewees were prompted to answer not only on European HREDD policies but also on the environmental and human rights issues linked to soy cultivation in Brazil. While not all the interview content relates directly to the analysis in this article, it has served as a fundamental background and has been important for contextualisation. We also use these interviews for quotations that present the stakeholders' views in their own voices. Due to the political sensitivity of such debates, all quotes have been anonymised.

4 | BRAZILIAN SOY IN AN EMERGING POLICY LANDSCAPE

Soy (*Glycine max*) has increasingly become Brazil's flagship crop. The country's cultivated area leapt from 10 million hectares (Mha) in 1990 to a whopping 36 Mha in the 2021/2022 harvest (CONAB, 2022). That increase was fuelled by strong global demand for animal feed protein in China, the EU, Thailand and elsewhere (Song et al., 2021), alongside Brazil's domestic poultry, pork and biodiesel industries (Bastos Lima, 2021). Linking hundreds of Brazilian municipalities and dozens of destination countries, one can, however, find a highly consolidated market dominated by a few multinational traders (see Figure 1).

Soy expansion has come at the cost of substantive land-use change, as monocultures have steadily replaced smallholder farming, pastures, and native vegetation (Rausch et al., 2019; Song et al., 2021). Most of that expansion occurs in the Cerrado, the world's most biodiverse savannah and a critical ecosystem for underground carbon storage and water cycling (Strassburg et al., 2017; see Figure 2). From a socioeconomic standpoint, unfettered soy expansion has also been accused of bringing about maldevelopment – skewed economic benefits and further exclusion – instead of sustainable outcomes in frontier regions (Russo Lopes et al., 2021). Land conflicts and resource dispossession (e.g., land and water grabbing) have been widespread, triggering an outcry for sustainable sourcing policies (Bastos Lima & Kmoch, 2021; CPT, 2021; Schilling-Vacaflor et al., 2020).

Supply chain transparency has therefore become a major banner (see Gardner et al., 2018) and underscores HREDD policies, with Brazilian soy as a key target commodity (Schilling-Vacaflor & Lenschow, 2021). These policies come after years of reliance on private certification as a (hoped-for) means of promoting sustainability, with underwhelming results. As of 2022, the world's main soy certification system – the Round Table on Responsible Soy (RTRS) – certified less than 4% of Brazil's soy cropland (RTRS, 2023). That is considerably below what is achieved for consumer-facing agricultural commodities such as cocoa and coffee, and less than other 'embedded' commodities – either in

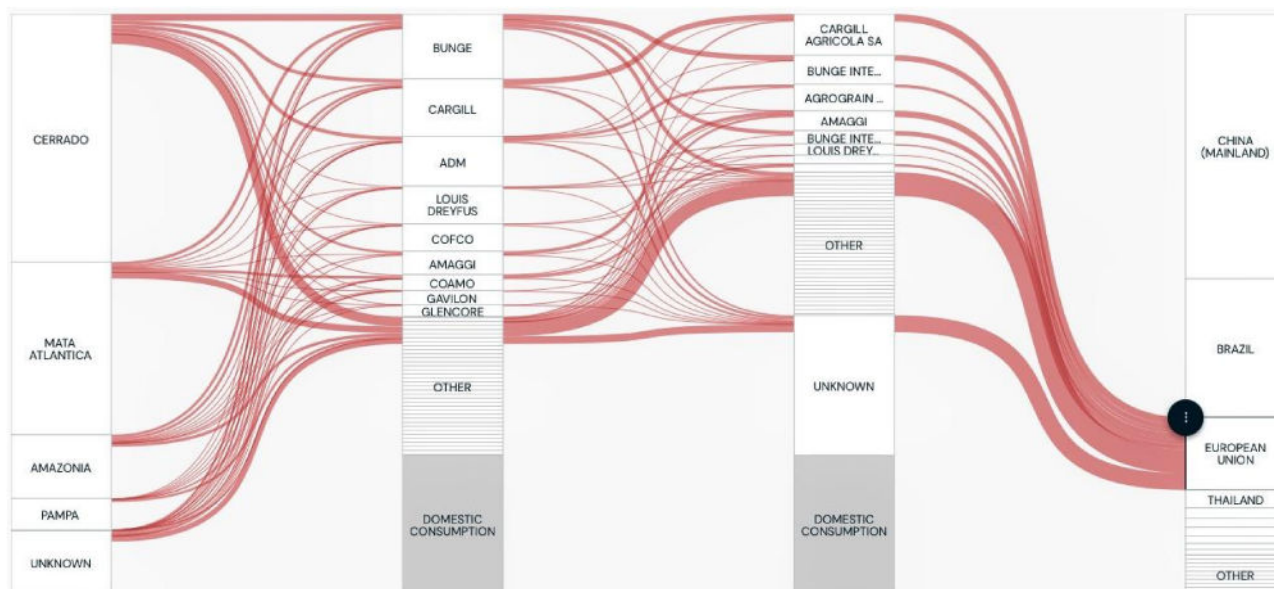


FIGURE 1 Brazil's soy supply chain with flows from different Brazilian biomes via exporting and importing companies to the EU market. Aggregated data for the years 2015–2020. (Source: <https://trase.earth>).

animal products or hidden from consumer view in processed foods – such as palm oil (Heron et al., 2018). Furthermore, soy certification has done little to avoid human rights violations and the resource dispossession of local communities (Schilling-Vacaflor et al., 2020). Still, such social issues have mostly been overshadowed by narrower policies focused on deforestation-free soy, without regard to broader development issues on the landscape (Bastos Lima & Persson, 2020).

4.1 | The state of the art of European HREDD laws

In the face of such perceived shortcomings in protecting the environment or human rights abroad, several European countries and the EU have embraced HREDD policies (see Table 1). For example, in 2015 the UK adopted its Modern Slavery Act, which includes provisions on the use of human rights due diligence, and in 2017 the Netherlands created a law to combat child labour in global supply chains. While the Dutch law had not yet entered into force by late 2023, studies on the Modern Slavery Act argue that the law so far has contributed only to minor changes in company practices (Monciardini et al., 2021; Pinheiro et al., 2019).

In comparison, the French Duty of Vigilance Law of 2017 and the German Supply Chain Due Diligence Law of 2021 are much more comprehensive. Although their scope is limited to large companies, to differing extents those laws cover both environmental and human rights issues, and they both foresee concrete enforcement measures to sanction non-compliant behaviour. In Germany, the Federal Office for Economic

Affairs and Export Control (BAFA) supervises company compliance. It checks company reports, investigates complaints, and imposes penalties on non-compliant companies, which can be excluded from public procurement due to infringements.

In the legislative processes in both countries, a key bone of contention was the question of which companies are covered by these laws. In the case of France, the law applies to all companies with at least 5000 employees when the company's registered office is in France or at least 10,000 employees when the company has a subsidiary in French territory. In Germany, from 1 January 2024, the law applies to companies with at least 1000 employees that are headquartered in Germany or have a subsidiary in the country. Importantly, this means that not only French or German companies need to comply with the new rules but also many multinationals headquartered elsewhere – so long as they have a minimum presence in these countries.

While the German law only entered into force in 2023, French companies purchasing Brazilian soy already started reporting in 2018. In France, companies can be sanctioned by a court if they do not fulfil their duty of reporting about due diligence systems. Moreover, any interested party can bring alleged infringements of the law to a French court to seek justice and achieve access to remedies for victims. As of September 2023, nine lawsuits had been filed and six formal notices had been submitted requesting companies to comply with their obligations. Those legal cases involve not only French companies but also multinationals such as McDonalds and Nestlé, which are headquartered elsewhere.

Still, research on company compliance shows that companies so far have published rather short

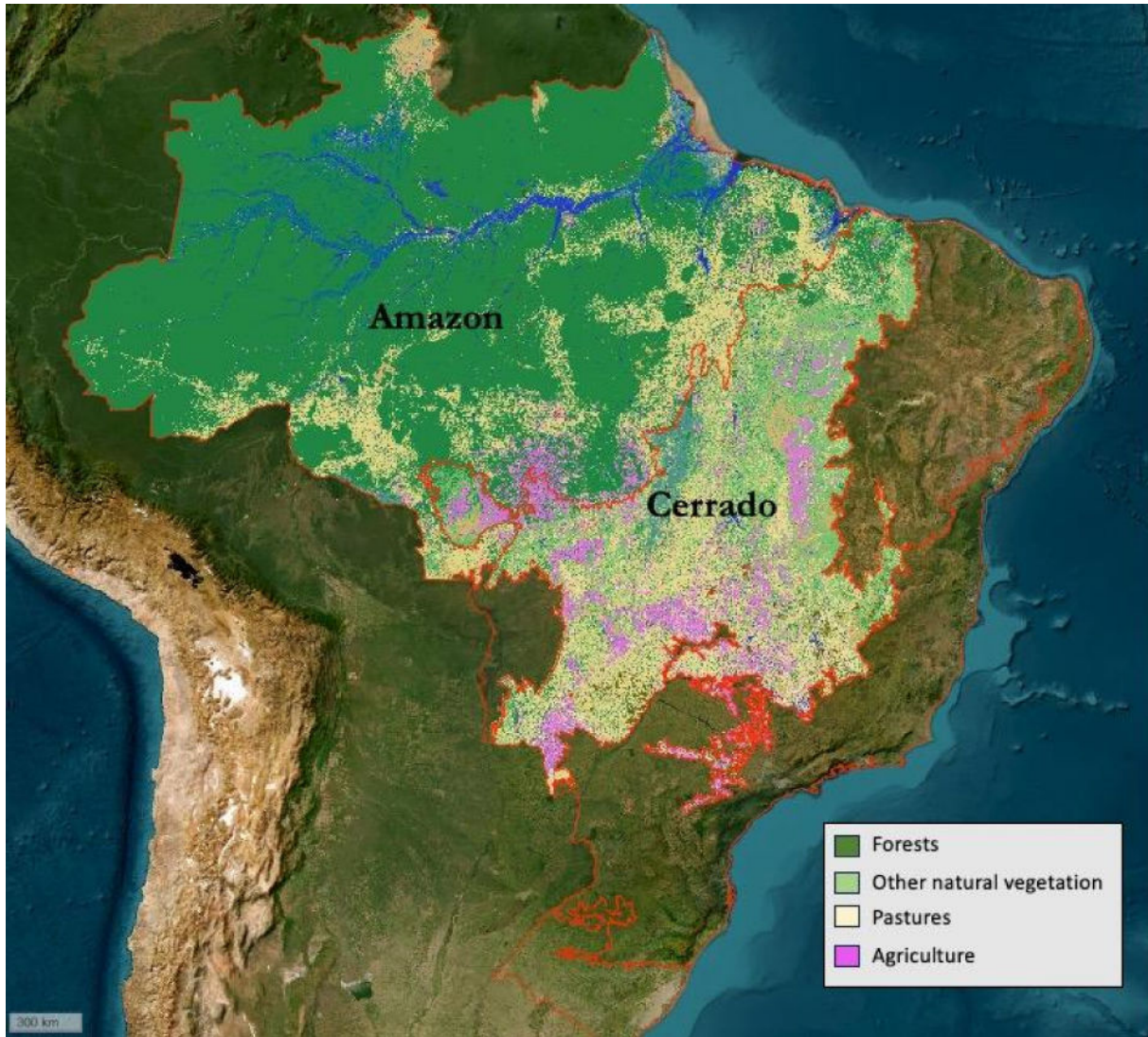


FIGURE 2 Land-cover map of Brazil in 2022 highlighting the Amazon and Cerrado biomes. Agricultural areas represent predominantly soy. (Source: <https://mapbiomas.org>).

and superficial vigilance plans (Schilling-Vacaflor & Gustafsson, 2023). French NGOs complain that companies choose what to report on and that they are not obliged to respond to civil society actors' requests for information. A French NGO representative argued, for instance, that,

Our possibilities are very limited when it comes to forcing companies to disclose information. Companies have a lot of discretion in taking decisions about what to show and what to hide. [...] It would be important to facilitate access to this kind of public interest information that is in the possession of companies.

(Interview, April 2022)

Meanwhile, to harmonise legal frameworks, in May 2023 the EU adopted a regulation (the EUDR) to combat

deforestation in its supply chains of key forest-risk commodities: cattle, cocoa, coffee, palm oil, rubber, soy, and wood. The EUDR stipulates that to enter the Union market, those commodities must not have been produced on land deforested or degraded after 31 December 2020, and such production must comply with the legislation of the producing country.

Since 2022, the EU is also in the process of adopting a cross-sectoral Corporate Sustainability Due Diligence Directive (CSDDD). The CSDDD is an example of the EU's frequent choice for 'minimum harmonisation', setting goals while the Member States can decide on how best to implement them (see Bradford, 2020, p. 10). This Directive is to cover EU and non-EU companies above specific thresholds in terms of number of employees and turnover. Companies subject to the law will need to apply HREDD to their own operations as well as to the supply chains of their subsidiaries. The European Commission presented its law proposal

TABLE 1 Summary of selected relevant provisions in HREDD laws in European states and at the EU level.

LAW	Scope	Procedure & Enforcement
UK 'Modern Slavery Act', especially part 6 on 'Transparency in Supply Chains' [2015]	<ul style="list-style-type: none"> The Act targets commercial organisations who supply goods or services and have a minimum total turnover of £36 million per year. Covers UK- and non-UK companies. Only covers the issue of modern slavery. 	<ul style="list-style-type: none"> Companies must prepare a slavery and human trafficking statement for each financial year. The company's statement may include information about due diligence processes. The law establishes an independent anti-slavery commissioner. The Secretary of State can bring civil proceedings in the High Court for injunctions.
Dutch 'Child Labour Due Diligence Law' [2017]	<ul style="list-style-type: none"> Every enterprise established in the Netherlands and foreign enterprises which sell or supply goods or services to Dutch end-users. Only covers the issue of child labour. 	<ul style="list-style-type: none"> The enterprise must declare that it has acted with due diligence; it must investigate whether products or services have been produced with child labour; and it must draw up and implement action plans. A supervisory authority will be established and any person whose interests are affected by the actions of an enterprise can lodge a complaint. Administrative fines and criminal sanctions are possible.
French 'Duty of Vigilance Law' [2017]	<ul style="list-style-type: none"> At least 5000 employees in France when the company's registered office is in France, or at least 10,000 employees worldwide when the registered office of a subsidiary is in France. Covers serious violations of human rights and fundamental freedoms, the health and safety of individuals, and environmental harms. 	<ul style="list-style-type: none"> Companies need to implement due diligence systems and report upon them in annual vigilance plans included in the company's financial reports. Courts can impose penalties on non-compliant companies. Possibility to file lawsuits in French courts; a court can oblige a company to remediate the damage that appropriate duty of care would have prevented.
German 'Supply Chain Due Diligence Law' [2021]	<ul style="list-style-type: none"> Companies headquartered in or with subsidiaries in Germany (in 2023 the ones with more than 3000 employees, and from 2024 all those with more than 1000 employees). Covers a broad range of human rights violations and environment-related human rights impacts (e.g., labour rights; right to non-discrimination; right to a healthy environment, land and livelihoods; right to life and physical integrity). 	<ul style="list-style-type: none"> Companies need to implement due diligence systems and report upon them. Due diligence obligations for direct suppliers, and companies need to act in the case of evidence about adverse impacts further down the supply chain. The Federal Office of Economics and Export Control (BAFA) is responsible for supervising compliance with the law. Law specifies fines and penalties for non-compliant companies. No legal liability, but special litigation status for trade unions and NGOs.
Norwegian 'Transparency Act' [2021]	<ul style="list-style-type: none"> Covers companies that meet at least two of the following three conditions: (1) sales revenues over NOK 70 million; (2) balance sheet over NOK 35 million; (3) 50 full-time employees. The law applies to Norwegian and foreign enterprises that offer goods and services in Norway. The law covers environmental, social and economic rights, civil and political rights, and rights established by ILO core conventions. 	<ul style="list-style-type: none"> Companies shall carry out due diligence in accordance with the OECD Guidelines for Multinational Enterprises. The enterprises shall publish an account of due diligence, which may form part of the account of social responsibility. Upon written request, any person has the right to information from an enterprise regarding how the it addresses adverse impacts. Companies shall provide information within less than three weeks or, in the case of burdensome requests, within two months after the request is received; companies must justify any denial of information. A Consumer Authority is established as a supervisory and guidance body that can impose enforcement penalties and infringement penalties.
EU 'Regulation on Deforestation-free Products' [2023; Regulation (EU) 2023/1115]	<ul style="list-style-type: none"> Covers products that contain, have been fed with or made from cattle, cocoa, coffee, palm oil, rubber, soy, or wood. Requires that products be deforestation-free and produced in compliance with the laws of the producing country. Small and medium enterprises (SMEs) have less rigorous due diligence obligations. Covers deforestation, i.e., the conversion of forest to agricultural use, using the Food and Agriculture Organisation of the United Nations (FAO)'s definition of forests, based on tree height and canopy cover. 	<ul style="list-style-type: none"> Products may be placed on the Union market only if they were produced on land that has not been subject to deforestation, or in the case of wood on land with no deforestation or forest degradation, after 31 December 2020. Products may be placed on the Union market only if they have been produced in accordance with the relevant legislation of the country of production. Products must be covered by a due diligence statement. Due diligence shall include the collection of information (including geo-localisation coordinates), risk assessment, and risk mitigation measures. SMEs only need to collect and store information. Member States shall designate competent authorities and lay down rules on penalties applicable to infringements. By April 30 each year, Member States shall make available to the public and to the European Commission information on the application of this Regulation during the previous calendar year. Member States can withdraw noncompliant products and should ensure that infringements are subject to effective, proportionate, and dissuasive penalties (fines, confiscation, exclusion from public procurement, etc.) This Regulation establishes a three-tier system for the assessment of countries or parts thereof. For that purpose, Member States and third countries, or parts thereof, shall be classified into one of the following risk categories: High-risk, low-risk, or standard-risk. The EUDR shall be complemented by partnerships and cooperation with producing countries, which shall allow for the full participation of all stakeholders, including civil society, indigenous peoples, local communities, women, the private sector, including microenterprises and other SMEs, as well as smallholders; support inclusive and participatory dialogue towards national legal and governance reform processes; and promote the development of integrated land-use planning processes. Establishment of an EU Observatory on deforestation and forest degradation.

(Continues)

TABLE 1 (Continued)

LAW	Scope	Procedure & Enforcement
EU 'Directive on Corporate Sustainability Due Diligence' (under debate), proposal presented by the European Commission in Feb. 2022	<ul style="list-style-type: none"> This Directive lays out rules (a) on obligations for companies regarding actual and potential adverse human rights or environmental impacts with respect to their own operations, those of their subsidiaries, or the value chain operations carried out by entities with whom the company has an established business relationship, and (b) on liability for violations of the obligations mentioned above. EU companies: more than 500 employees and net worldwide turnover above €150 million, or over 250 employees and net worldwide turnover above €40 million, provided that at least 50% of this was generated in the textile, agriculture, food & beverage, or extractive sectors. Non-EU companies: Net turnover above €150 million in the Union; or Net turnover above €40 million in the Union, provided that at least 50% of it was generated in the textile, agriculture, food & beverage, or extractive sectors. The Directive also covers financial undertakings. Companies should adopt a plan to ensure that their business model and strategy are compatible with the transition to a sustainable economy and the limiting of global warming to 1.5°C in line with the Paris Agreement. In case climate is or should have been identified as a principal risk for or a principal impact of the company's operations, the company should include emissions reduction objectives in its plan. 	<ul style="list-style-type: none"> Companies covered by this Directive should: integrate due diligence into corporate policies; identify, prevent, and mitigate as well as bring to an end or minimise the extent of potential and actual adverse human rights and environmental impacts; establish and maintain a complaints procedure; monitor the effectiveness of the measures taken in accordance with the requirements that are set up in this Directive; and communicate publicly on their due diligence. Companies also need to put in place an overall due diligence policy and update it annually. In order to ensure effective enforcement of national measures to implement this Directive, Member States should create dissuasive, proportionate and effective sanctions for infringements of those measures. In order for such a sanction regime to be effective, administrative sanctions to be imposed by the national supervisory authorities should include pecuniary sanctions. In order to ensure effective compensation for victims of adverse impacts, Member States should be required to lay out rules governing the civil liability of companies for damages arising due to their failure to comply with the due diligence process. Each Member State shall designate one or more supervisory authorities to monitor compliance. The contractual assurances or the contract shall be accompanied by appropriate measures to verify compliance. For such purposes of verifying compliance, the company may refer to suitable industry initiatives or independent third-party verification. Any person can submit substantiated concerns to the competent authority, which has to inform the person about the result of the assessment of their substantiated concern and provide the reasoning for it.

in February 2022, and as of October 2023, the details were still being negotiated – in the so-called triologue phase – with the European Council and the European Parliament. The Council has advocated for a narrower and less stringent law, covering only large companies and leaving to individual Member States the decision of whether to include the financial sector or not. Its proposal also contains weaker liability rules and excludes climate change from HREDD duties (see European Council, 2022). The EU Parliament, in turn, aims for a more comprehensive and stringent directive in terms of scope, procedure, and enforcement (see European Parliament, 2023).

Both the European Parliament and the Commission say that their goal is to lead a worldwide transition away from agriculture-driven deforestation and human rights violations (European Parliament, 2020; European Commission, 2021). The Parliament's report with recommendations to the Commission on corporate accountability states that '[t]his Directive, by setting a European due diligence standard, could help foster the emergence of a global standard for responsible business conduct' (European Parliament, 2020, p. 11). Likewise, the EUDR states that 'to have the greatest impact, Union policy should aim at influencing the global market, not only supply chains to the Union', and that the European Union 'shall engage in dialogue and

cooperation with other major consuming countries, to promote the adoption of ambitious requirements to minimise such countries' contribution to deforestation and forest degradation, as well as a global level playing field (European Union, 2023, pp. 209, 238).

Taken together, this is the budding of what may come to be a Brussels Effect on agricultural supply chain sustainability. At least three of its enabling conditions are present: the EU's regulatory capacity, its preference for rather stringent standards, and the regulation of an inelastic target. However, it remains to be seen if the other pre-conditions are met: the non-divisibility of production and Europe's relative importance as a consumer market.

4.2 | The challenge of supply chain divergence: A reality check

A critical issue for HREDD policies and an eventual Brussels Effect is what we call supply chain divergence: tactical rearrangements that can limit the additionality – and thus the effectiveness – of these regulations. In other words, there is a risk that deforestation-free soy may flow to importing countries with higher sustainability standards while production from high-risk areas seamlessly goes to consumers with lower

requirements. Europe's market would become 'clean' due to reshuffling, but possibly without accruing any reduction in deforestation on the ground.

It is worth looking at already existing patterns of divergence. In 2021, Brazil exported 86.63 million tons (Mt) of raw soybeans plus 18.88 Mt of processed soybean meal for animal feed protein, mainly to China (60 Mt), Thailand (6.6 Mt), the Netherlands (5.0 Mt), Spain (3.5 Mt), France (1.9 Mt), and Germany (1.3 Mt) (ANEC, 2022).² As a bloc, the EU is the largest importer after China, but there are striking differences in sourcing patterns. Even within Europe, some countries are much choosier than others. Table 2 exposes some differences between European countries while also showing how Asian markets nearly totally forgo sustainability certification for soy. For instance, Spain and the Netherlands import comparable amounts of soy from Brazil, yet Dutch importers are far more discerning about sustainability (RTRS, 2023). The same comparison can be made between France and Germany, with the former being the larger importer but representing a much smaller share of global purchases of RTRS-certified soy.

An interviewed manager of a major soy trading company in Brazil was straightforward in this regard: '*If my market demand is not for RTRS, why will I do it? Why would I bother with it if that's not being demanded?*' (Interview, July 2022). The manager of another soy trader argued in the same direction,

Certification isn't yet something big for us. We don't feel that demand. We don't ship anything at all to Norway or Scandinavia. Our markets are essentially in Asia, and there we don't really get this demand for certification. We first want to consolidate ourselves in the production of conventional soy before moving into certification. China never asked for more than what we already do.

(Interview, July 2022)

TABLE 2 Countries' shares of worldwide RTRS-certified soy purchases.

	2019	2020	2021	2022
The Netherlands	30.10%	23.94%	20.31%	21.45%
Denmark ^a	[14.17%]	[13.04%]	10.79%	14.93%
Germany	3.73%	7.94%	18.62%	14.27%
France	3.60%	3.57%	1.54%	1.75%
Spain	0.75%	1.70%	0.42%	0.13%
Thailand	0.00%	0.11%	0.21%	0.38%
China	0.03%	0.00%	0.02%	0.02%

^aRTRS did not disaggregate its data for the Scandinavian market in its 2019 and 2020 reports. We provide the regional data for Scandinavia for those years.

Source: RTRS, 2020, 2021, 2022, 2023.

More poignantly, the Trase platform reveals how consumer countries are exposed to different levels of deforestation. Trase provides indicators based on the amounts of soy imported from Brazilian municipalities and the soy-driven deforestation those places have experienced, i.e., areas of native vegetation that became soy cropland within five years (see Trase, 2020). For every 100 kilotons (kt) of soy purchased from Brazil in 2020 (the latest available data), Spain may have incurred as much as 334 ha of ecosystem conversion compared to 117 ha for the Netherlands and 79 ha for Denmark. Table 3 lists a few selected buyers and their relative exposure to soy deforestation. These data suggest that – for years – Brazil's soy sector already practises supply chain divergence. Certified soy or 'less risky' production has flowed neatly to more concerned buyers (notably northern European countries). Meanwhile, less-discerning importers like Spain or Asian countries have absorbed the rest alongside Brazil's domestic market.

Such segregation is achieved because commodity traders can tactically divide their activities between consolidated agricultural areas and the frontier regions where most sustainability issues occur (see Russo Lopes et al., 2021; Schilling-Vacaflor & Lenschow, 2021). Deep diving into a particular case can help understand how that happens. The most illustrative example probably is ALZ Grãos, a joint venture between the Brazilian company Amaggi, the multinational Louis Dreyfus Commodities, and the Japanese enterprise Zen-Noh. Amaggi, settled primarily in the consolidated agricultural areas of Mato Grosso State, is a vertically integrated company with significant control over its production and engagement with 'responsible sourcing' initiatives such as RTRS. It controls a subsidiary importer named Denofa in Norway, specialising in non-GM soy and the more demanding Nordic markets. According to Trase data, each 100 kt of soy

TABLE 3 Deforestation exposure of different consumers of Brazilian soy in 2020.

Consumers	Purchases of Brazilian soy in 2020	Deforestation exposure
China	53,156 kt	445 ha/100 kt
Brazil (Domestic consumption)	23,870 kt	395 ha/100 kt
Spain	2622 kt	334 ha/100 kt
Japan	1079 kt	317 ha/100 kt
France	1993 kt	258 ha/100 kt
Thailand	4116 kt	253 ha/100 kt
Germany	1492 kt	201 ha/100 kt
The Netherlands	3964 kt	117 ha/100 kt
Norway	247 kt	108 ha/100 kt
Denmark	249 kt	79 ha/100 kt

Source: <https://trase.earth>.

Amaggi exports from Brazil may have incurred 24 ha of deforestation. Louis Dreyfus, sourcing mainly from long-established soy farms in southern Brazil, is exposed to as little as 0.54 ha of deforestation per 100 kt of soy exported.

Meanwhile, their joint venture created to operate in the Cerrado's Matopiba frontier has a whopping deforestation exposure of 392 ha per 100 kt of soy – all of which goes to Asia. While both Amaggi and Louis Dreyfus extol their environmental virtues, joining multistakeholder initiatives and making time-bound zero-deforestation commitments (Amaggi, 2021; LDC, 2022), their 'bad cop' ALZ Grãos offers only a loosely worded pledge about being 'committed to collaborating' towards sustainability (ALZ Grãos, n.d.; see also Zu Ermgassen et al., 2020). Evidently, Brazil's soy market adjusted to different levels of consumer stringency already before the recent flurry of European policies, creating a pre-existing setting of supply chain divergence that needs to be considered.

4.3 | Changes and continuities in the face of HREDD laws

It is early to appraise the impact of European HREDD laws, yet reactions and perspectives already warn about the risks and may help conjecture ways forward. Our interviews with and statements from the Brazilian soy sector indicate that it rejects the new HREDD laws as an inappropriate and unfair imposition of European rules, which create additional exigencies without any support or compensation.

A Brazilian soy farmer who participated in the EU's public consultation on its regulation against deforestation expressed the widely shared view within important segments of Brazil's government and agribusiness sector that the EU should '*[r]espect the autonomy of countries and their national legislation*', and that '*the EU should not create barriers but establish payments for environmental preservation*'.³ This echoes major agricultural exporting countries' long-standing quarrels against European attempts to create trade barriers based on unilateral sustainability rules (see Bastos Lima & Gupta, 2014). Meanwhile, others that already accommodate niche-market demands are nonchalant about it. A senior manager of a major commodity trader selling Brazilian soy to Europe quipped that,

It is all about what the market wants and will pay for. If they want sustainable soy and will pay for it, we will give them sustainable soy. If they want just any soy, we will give it to them [...] If they want blue soy, we will give them blue soy.

(Interview, November 2018)

Another soy industry representative was blunter about European policy efforts,

Europeans want everything but do not want to pay for anything. Europe lost a lot of bargaining power. Domestic soy consumption for the poultry industry has been on the rise, as well as the Asian markets. Europe isn't any longer relevant in the world.

(Interview, July 2022)

The first analyses of European companies' compliance with HREDD laws indeed point to the risk of merely managerial understandings of the requirements, wherein companies try to find easy solutions to demonstrate compliance without carrying out costlier changes in their organisational structures or sourcing practices (Monciardini et al., 2021; Interviews with French civil society organisations, August 2019 and April 2022). For instance, instead of developing robust due diligence systems, French companies that are subject to the Duty of Vigilance Law and are involved in Brazil's soy supply chain have so far demonstrated HREDD compliance by simply referring to a range of voluntary measures they already use in their operations (e.g., self-assessments of suppliers, audits, multi-stakeholder initiatives) (Schilling-Vacaflor & Gustafsson, 2023).

Following this logic, it is likely that European companies will simply shift to less risky places and exclude problematic suppliers instead of engaging in high-risk regions and using their influence to leverage improvements. For example, large companies such as Carrefour and Danone – subject to France's Duty of Vigilance Law – have already reported in their vigilance plans that they aim to reduce soy imports from Brazil to minimise adverse impacts (Danone, 2022). Concerning the risk of further supply chain divergence as a result of HREDD laws, the sustainability manager of a large French agri-food company assessed the following:

I think one of the concerns for [...] the UK or the EU who attempt to ban the import of deforestation-related commodities will be whether such rules steer people away from high-risk countries, and that will just create the leakage of commodity flows to countries where they don't have laws. I wouldn't say that in those places they don't care, they just don't have laws in place, so that could happen. The deforestation continues, human rights abuses continue, we just have protected our reputation a bit in the EU and UK.

(Interview, February 2022)

Brazilian stakeholders struck the same chord in their own ways,

It's useless to pose requirements without also giving the educational subsidy for it. It's useless to proceed this way, unless there is a high incentive for it, and only if they want to have only large suppliers [who can comply]. Do they want to just clean up their supply chain or do they want to transform it?

(Interview with soy industry representative in Brazil, July 2022)

Europe's concern isn't with transformation. If Indians, poor people and so on will continue dying here, it doesn't matter [to them]. They themselves do not want to change their systems, they don't question their intensive livestock farming systems dependent on soy feed, they just want us here to change our production systems.

(Interview with Brazilian NGO, July 2022)

Taken together, the tendency for European companies to simply relocate and the ability of Brazil's soy sector to arrange exports according to different demands pose critical challenges to the emerging HREDD policy landscape. However, the Brussels Effect may still rely on the relatively small number of large commodity traders (e.g., ADM, Bunge, Cargill, COFCO, Louis Dreyfus) that dominate the global market and have delivered segmented flows according to varying consumer preferences. If they are directly targeted by policy or face significant reputational damages due to civil society campaigns exposing their double standards, they can potentially improve their practices across the board (see Bradford, 2020, p. 63). That requires robust public traceability systems, reliable knowledge linking these companies to adverse impacts, and political will to possibly push further for a Brussels Effect even if it does not materialise at first.

The fact that HREDD laws such as the French and German ones, as well as the CSDDD, target not only products entering the Union but also the subsidiaries of large companies may offer some leverage. For instance, the French companies Casino Group and Carrefour control important Brazilian supermarkets, and a civil society alliance between Brazilian and French NGOs has already filed a lawsuit in a French court addressing not products entering the French market but the fact that meat allegedly produced on illegally deforested land was sold in a Brazilian subsidiary of Casino Group (Center for Climate Crime Analysis, 2022). The claimants argued that the mother company was responsible for preventing such malpractices from happening. Relatedly, Brazilian civil society organisations outlined that they are referring to the HREDD obligations of multinational companies in Brazil to challenge the existence of double standards between mother companies

and Brazilian subsidiaries when advocating for change (Interviews, July 2022).

5 | DISCUSSION: THE PROSPECTS FOR A BRUSSELS EFFECT ON AGRICULTURE-DRIVEN DEFORESTATION

Although the externalisation of European rules has been a frequent phenomenon, our analysis shows that various factors limit its success in addressing human rights and environmental issues linked to agriculture. We show that some basic preconditions for the Brussels Effect to take hold – notably non-divisibility of production and (relative) market size – appear flimsy in the case of Brazilian soy. In this regard, a key theoretical consideration for the Brussels Effect literature is that divisibility need not necessarily take place at the company level – individual producers may indeed find it too hard or costly to comply with distinct requirements, yet the sector may easily accommodate such differences and include producers specialised in distinct markets. Our analysis indeed demonstrates that supply chain divergence is an established practice and that, despite the homogenous nature of commodities, the soy sector has been able to customise its production and sell to each buyer according to their preferences. Deforestation-free and certified soy has flowed to more demanding consumers, while the rest is either shipped to less-discerning ones or used domestically.

This assessment of Brazilian soy reveals some key challenges for the effectiveness of European policies to end global deforestation or for a Brussels Effect to take hold, but these results should not be automatically extrapolated. Each production context and forest-risk commodity is likely to respond differently, with more or less leeway. For example, the dynamics are likely to be different for sectors where Europe is a dominant consumer market, such as coffee and cocoa (see Parra-Paitan et al., 2023; Renier et al., 2023). These arguably are low-hanging fruits for European policy-making. However, elsewhere, the divisibility of agricultural production according to different sustainability or human rights standards poses a significant challenge for the Brussels Effect. Some other key forest-risk commodities appear to exhibit similar supply chain divergence dynamics, such as palm oil from Indonesia, where certified products chiefly flow to the more demanding European market while non-certified palm oil goes to Asian countries such as China, India, and Pakistan (Pacheco et al., 2020). Or Brazilian cattle products (beef and leather), with supplies already divided between more sustainable production from Mato Grosso State going to Europe and more problematic cattle from the Amazonian state of Pará mainly going to domestic markets. In the words of a Brazilian public prosecutor,

This meat from Pará mainly satisfies the national market. Why? Because this allows the large slaughterhouses and producers from Mato Grosso, from the South and South-East [Regions] to export. In these areas, they have more sanitary control, better traceability and they have fewer problems with deforestation.

(Interview, April 2022)

In such cases that are critical for deforestation or human rights violations but where Europe captures an ever-smaller share of the market, there is a need to consider how concerned actors could trigger effects across the board – at scale.

We can think of three possible avenues to address these issues that we regard as scale shortcomings, and we could call them the unlikely, the wilful, and the transformative. The unlikely pathway is that Europe successfully diffuses its standards to other major consumer markets, notably to Asian countries. That would amount to creating a *de jure* Brussels Effect. The EU's embracing of HREDD legislation already represents the scaling up of France's pioneer Duty of Vigilance law to bring supply chain policy laggards (e.g., Spain) under its fold. However, that has counted on the EU's regulatory disposition and an established institutional framework that are unmatched globally. The feasibility of sustainability norm diffusion to countries such as China and Thailand – with their varied cultures, politics, and sets of economic or food security interests – has long been challenged and remains a critical research frontier.

In fact, some interviewed stakeholders in Brazil seemed confident such diffusion is unlikely to take hold: “China has a great food security deficit; they cannot afford to ask too much from Brazil.” (Interview with a soy industry representative, Nov 2018). “China currently depends 100% on Brazil. Its food security depends on it. They cannot toy too much with stringent demands.” (Interview with a Brazilian NGO, July 2022). Indeed, in an increasingly fragmented geopolitical context, it is far from clear that other importers such as China or India will take European policy as the ‘gold standard’ and follow suit. Perceptions of the EU as a pretentious norm-setter that tends to ‘talk at’ instead of ‘talking with’ developing-country partners are widespread, in relations also tensed by fears of neocolonialism (Chaban et al., 2017). While HREDD diffusion may still happen in the longer run, it appears unlikely in the near future – in time to avert deforestation.

The second pathway is what we call the wilful, whereby Europe would double down on its policy objectives by targeting European-owned or financed companies. In this regard, the CSDDD – as well as the French and German due diligence laws – go beyond the EUDR as they require HREDD from companies even when not selling directly to the European market. This

is critical because, despite their shrinking relative role as global consumers, European countries and private actors still have sizable control over the behaviour of multinational corporations (e.g., major commodity traders), besides playing a disproportionate role in financing agriculture-driven deforestation (Crona et al., 2021; Folke et al., 2019). Unlike the EUDR, the CSDDD can therefore address the economic or even the legal invisibility of forest-risk commodity production and, thus, pave the way for a *de facto* Brussels Effect.

Action on this front could scale up solutions beyond individual supply chains that flow to Europe and clean suppliers instead of supplies. However, for that, CSDDD's scope will need to be wide (and crucially include the finance sector), while greater transparency as well as robust accountability systems would need to be in place to avoid merely managerial compliance – shortcomings that have marked the implementation of the French due diligence law so far. Ensuring the accuracy of information would be key, in partnership with local stakeholders, as a civil society organisation representative in Brazil argues,

What the Europeans should require is the reliability of the information. There's plenty of illegal timber being sold to them as legal, for instance. Legislation alone won't help; they must also capacitate the contradictory, that is, help enhance the capacity of others who can check the veracity of what companies are claiming.

(Interview, July 2022)

Further research would be needed in this regard to trace how different institutional design features of HREDD laws (e.g., distinct requirements in terms of scope, procedures, and enforcement measures) unfold on the ground in different supply chains and sites of production. Still, there remains the risk that European companies may simply pull out of risky producer countries due to the increasing costs of being implicated in problems they cannot fully resolve.

The third pathway – the transformative avenue – would account for the limitations above but require thinking outside the HREDD box. It would demand not scaling up policy uptake or impacts but the level at which interventions are conceived. Concerned actors would need to zoom out of individual supply chains and address other actors in the contexts they wish to impact positively. A transformative approach would require a broader strategic take beyond sectoral solutions to engage with producer-country policymakers, businesses and civil society actors involved in alternative land uses that could hedge against deforestation drivers at the landscape level. Concerned consumers and financiers would thus become strategic catalysts for structural change led by local actors competing against commodity-driven deforestation, such as Indigenous

peoples and smallholder farmers who grow other crops (see Bastos Lima & Persson, 2020; Macdonald, 2020).

A transformative approach would, therefore, require moving beyond mere 'do no harm' policies to consider more strategic 'do good' interventions. This evidently requires further research on policy mixes for positive telecoupling with distant landscapes (see Chen et al., 2023). In principle, it could combine HREDD policies with stimulus for alternative land uses (e.g., through foreign development aid, targeted climate funding, or new trade relations) that can face off local drivers of deforestation at the landscape level (see Bastos Lima & Persson, 2020; Ford Foundation, 2023). Critically, that could target actors such as smallholders and local communities in the Amazon or Cerrado that currently fail to make a living from the land and, thus, end up being bought out or forcibly evicted to make way for soy expansion (Russo Lopes et al., 2021). Such a more place-conscious approach to demand-side action (Bartley, 2018, p. 258) could, in turn, broaden our very understanding of the Brussels Effect – from the simple exporting of a ready-made, unilateral regulatory agenda to being about the impact Europe has in catalysing change elsewhere in collaboration with local actors.

6 | CONCLUSION

This article has analysed the logic of an increasingly dominant HREDD policy paradigm vis-à-vis Brazil's soy sector. Our analysis shows that the EU laws helpfully scale up previous efforts by individual countries, encompassing Member States that have been relatively unconcerned importers, such as Spain. However, it also reveals important limitations that muffle – and possibly compromise – the additionality of such efforts. We have shown that supply chain divergence in response to different sustainability requirements is not just a risk but an established practice. In Brazil's case, the soy sector's ability to sell deforestation-free commodities to Europe while diverting the rest to the domestic market or elsewhere could build on a tried and tested tactic of selling 'to each according to their will'.

Europe's strategy for addressing agriculture-driven deforestation rests on achieving a Brussels Effect on the sustainability of forest-risk commodities, and there may be prospects for that in contexts where Europe is a dominant importer (such as in the case of West African cocoa, though dedicated research is needed on that). However, on Brazilian soy – and possibly also in other key forest-risk commodities targeted by HREDD policies such as beef and palm oil – Europe's diminishing market share sits badly with its newly found regulatory ambition. Relative market size as well as non-divisibility of production reveal unmet requirements for a Brussels Effect in this case, challenging European policymakers to pursue further action. From a theoretical standpoint,

we demonstrate that divisibility need not occur within a given company or producer but can instead occur on a higher level, in a sector where producers strategically organise themselves to cater to different markets.

More research is needed on issues of norm diffusion, translation, and contestation as well as on forms of international collaboration in this field, but the likelihood of having emerging Asian markets adopt similarly stringent standards – *de jure* Brussels Effect – appears slim. Another pathway would be for Europe to heighten the costs of supply chain divergence to impel a *de facto* Brussels Effect. That could be achieved by doubling down on elements of the CSDDD as well as of the French and German HREDD laws, namely by ensuring the responsabilization of companies abroad (even when their sales are not directed to the EU market) and of the financial sector. Europe would thereby enhance the economic and legal non-divisibility of agricultural production, building on the large presence of European capital in such commodity markets. Lastly, Europe could harmonise and build coherence around a suite of 'do good' policies (e.g., through development cooperation or new trade relations) alongside its 'do no harm' HREDD laws to strategically support alternative land uses that would check deforestation at the landscape level (e.g., smallholders in the Cerrado or the Amazon engaging in more sustainable land uses and that could hedge against soy expansion, but who frequently fail to make a living from the land because they are neglected).

Whether Europe will be content with just cleaning up its supply chains or will indeed embark on a 'quest to save the world's forests' will depend on the terms of its scruples – to borrow Bentham (1793) terminology. This time, however, if European policymakers 'do not trouble' themselves about land-use sustainability beyond what Europe itself trades, their claims will prove overblown, and HREDD policies may not make more than a dent in tropical deforestation. Bentham (1793) wrote of emancipation in terms of 'letting go' and advocated responsibility for oneself only, but global interdependencies make that no longer a viable option in the 21st century.

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CONFLICT OF INTEREST STATEMENT

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on Trase, at <https://trase.earth>.

ORCID

Mairon G. Bastos Lima  <https://orcid.org/0000-0003-4235-8847>

Almut Schilling-Vacaflor  <https://orcid.org/0000-0002-0549-8034>

ENDNOTES

¹ Transparency for Sustainable Economies, <https://trase.earth>.

² These totals have been calculated using those countries' imports of unprocessed soybeans plus their purchases of soy meal using a standard conversion factor, whereby 47.5 kg of soy meal equals 60 kg of soybeans (USSEC, 2015).

³ Retrieved from: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12137-Minimising-the-risk-of-deforestation-and-forest-degradation-associated-with-products-placed-on-the-EU-market/public-consultation_de.

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AUTHOR BIOGRAPHIES

Mairon G. Bastos Lima is a Senior Research Fellow at the Stockholm Environment Institute (SEI), Sweden. He holds a PhD in environmental studies from VU University Amsterdam (2014) and has worked extensively on the policy, governance and political dimensions of agri-food systems and commodity supply chains.

Almut Schilling-Vacaflor is a sociologist and anthropologist with a PhD from the University of Vienna (2009). She currently is Professor of International Business, Society and Sustainability at the Friedrich-Alexander-University Erlangen-Nuremberg, Germany, and is an associate researcher at the German Institute for Global and Area Studies (GIGA).

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