

Ethanol expansion and the EU-Mercosur trade deal

An EU-turn on the green transition



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Credits

Author: Audrey Changoe

Research: Audrey Changoe, Sergio Schlesinger

Editor: Helen Burley

Contributions: Paul de Clerck, Laura Hieber, Martin Konecny

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Summary

European chemical companies are set to benefit from an increased trade in ethanol, thanks to the EU-Mercosur Trade Agreement.

Portrayed as a green fuel, ethanol is primarily exported to Europe from Brazil where it is made mainly from sugarcane. But the expansion of sugarcane, a water-intensive crop, grown using toxic pesticides, threatens important areas of biodiversity, particularly the unique Cerrado savanna. Rural communities and Indigenous People, already bearing the brunt of agribusiness expansion, could further lose access to their traditional lands and livelihoods.

The EU-Mercosur Deal will facilitate business as usual for European companies who are directly linked to weakening environmental protection policies as well as the protection of Indigenous rights in Brazil. The damaging impacts of this trade deal are in direct conflict and will undermine the European Green Deal and its promises to reduce pesticide use and protect global biodiversity.

Introduction

In 2019, after nearly 20 years of talks, the European Union (EU) and the South American trading bloc Mercosur (Brazil, Argentina, Paraguay and Uruguay), concluded the EU-Mercosur Free Trade Agreement. The deal was celebrated by European and Mercosur leaders, with Brazilian President Jair Bolsonaro tweeting: *"This will be one of the most important trade agreements of all time and will bring enormous benefits to our economy"*¹.

Civil society, in contrast, greeted the agreement with alarm. With fires raging in the Amazon, organisations and social movements highlighted that the deal will increase deforestation and exacerbate poverty for workers and rural populations in many parts of the Mercosur region.

If the agreement is ratified, it will reduce tariffs for more than 90% of trade in goods between the two blocs². The deal will particularly benefit agricultural products such as, beef, soy and ethanol from Mercosur countries to the EU and increase the export of dangerous agrochemicals from the EU to Mercosur countries.

Exports of ethanol, portrayed as an environmentally clean and sustainable fuel, are predicted to significantly increase thanks to new quotas, with oil and chemical corporations such as Shell, Bayer and BASF promoting ethanol to enhance their "green" credentials.

This increased demand is expected to drive the expansion of sugarcane cultivation in Brazil, which is already the largest producer of sugarcane and second largest producer and exporter of ethanol in the world.

Yet the production of this supposedly green fuel is associated with major social, labour and environmental impacts on the ground. Moreover, an increase in production is likely to result in biodiversity loss and affect the livelihoods of Indigenous and rural communities, including Afro-descendant Quilombolas,

landless and small-scale family farmers, riverine (ribeirinhos) and small scale- fishing communities.

The damaging impacts of this trade deal come at a time when the EU is promoting a green transition, promising to reduce pesticide use and protect global biodiversity, as well as urging greater recognition of the rights of Indigenous People.

Europe's growing dependence on ethanol

Ethanol exports to the EU are skyrocketing, with Brazilian exports increasing from 73 million litres in crop year 2019-2020 to 175 million in 2020-2021³. This is partly due to increasing use of ethanol blends in petrol and also rising demand from the chemicals industry⁴.

The EU's renewable energy directive (REDII) promotes the use of bioenergy and biofuels as part of a package of measures intended to reduce greenhouse gas emissions with targets set as part of the European Green New Deal⁵.

The EU-Mercosur Agreement will create a six-fold increase of sugarcane-based ethanol import to the EU to 650,000 tons (823 million litres) per year.

Of this, 200,000 tons (253 million litres) are set to be imported for all uses, particularly for fuel to meet Europe's 'green' transport fuel targets⁶.

A further 450,000 tons (570 million litres) can be imported for use by the bioplastics and biochemical industries⁷, with demand expected to grow significantly in the short to medium term⁸. The German company BASF, the largest chemical company in the world, is a leader in the development of new biochemical products.

Much as ethanol is promoted as a green fuel, bioplastics and biochemicals are perceived by many consumers as being "natural", biodegradable and non-toxic. Yet half of the bioplastics produced are not biodegradable, while "biodegradable" plastic remains intact for centuries if not sent to a proper recycling plant⁹. Studies also reveal that bioplastics carry just as much toxic content as regular plastic¹⁰.

Brazil is the world's second largest producer of ethanol, after the US. In 2020, it produced 30.4 billion litres of ethanol from sugarcane and 2.4 billion litres from corn¹¹. Of the four countries that make up Mercosur, only Brazil and Paraguay produce ethanol for export. Brazilian production corresponds to 95% of the block's total¹².

Sugarcane is used for over 90% of the ethanol produced in Brazil¹³ and for 19% of ethanol in Paraguay, with the remaining 81% produced from corn¹⁴.

Two major European multinationals are involved in ethanol production in Brazil, operating through subsidiaries and joint ventures. The Anglo-Dutch oil giant Shell formed Raízen, a joint venture with Cosan, which is Brazil's leading manufacturer of sugarcane ethanol and the largest world exporter of cane sugar

¹⁵. Cosan was established by the Ometto family, and is chaired by Rubens Ometto

Silveira Mello, who was the world's first ethanol billionaire. But Cosan's success has also been linked to human rights violations of Indigenous peoples in Mato Grosso ¹⁶.

Another major player in Brazil is the French company Tereos, whose Brazilian subsidiary is the second largest sugar producer in the world and one of the largest exporters of ethanol produced in Brazil ¹⁷.

The rise of the sugar ethanol industry

Brazil's ethanol industry developed in the 1970s as the government sought to reduce the country's dependency on imported oil in response to the global oil crisis. The ProAlcool programme was designed to produce an alternative to petrol, using sugarcane as the raw material.

Sugarcane was a well-established crop in Brazil, dating back to colonial times when sugar became the most important export commodity, with the profits fueling European colonial expansion ^{18 19 20}.

This trade relied heavily on slavery, with the mass enslavement of African and indigenous people as labour. European colonial powers pillaged indigenous territories and repressed local communities ²¹.

This period has left deep traces in Brazil's social structure, including the concentration of land in the hands of wealthy landowners, social inequalities, structural racism and the patriarchal character of Brazil's society ²². These social conditions combined with cheap labour and poor working conditions, provided the foundations for Brazil's emergence as a large-scale sugarcane ethanol producer.

More recently, the sugarcane and ethanol industry have seen a further boost with the development of flex-fuel cars, which run on a mixture of gasoline and ethanol. The ethanol industry is now using more than half of the sugarcane produced in the country.

Ecological impacts of the sugarcane boom

Brazil is recognized as one of the most biodiverse countries in the world and contains about 15% to 20% of the world's biological diversity ²³. Habitat loss and degradation are the main causes of reductions in species richness and abundance. Brazil has been identified as one of the top 10 of countries with a high projected mammal decline by 2050 ²⁴.

The increased land-use for ethanol bioenergy is adding to the already severe state of biodiversity ²⁵. This has led to international calls for a reduction in global demand for ethanol and other biofuels ²⁶.

The Brazilian sugar ethanol agribusiness has promoted a green growth narrative around ethanol and has effectively managed to prevent the related social and environmental issues from being addressed²⁷. But ethanol production requires large amounts of land and water, and sugarcane plantations are linked to unsustainable water use and water pollution, soil degradation due to monoculture practices, land-rights violations and widespread pesticide contamination²⁸.

Sugarcane expansion currently results in land-use changes mainly in the Cerrado and Atlantic Forest biomes, two severely threatened biodiversity hotspots.²⁹ Research shows that growing domestic and international demand for ethanol has triggered direct and indirect change of land use³⁰ and resulted in biodiversity loss³¹ and deforestation³².

The Cerrado is the richest and most biodiverse savanna in the world, with more than 10 thousand species of plants, of which 4,400 are exclusive to this area³³. Researchers recently calculated that Brazil's Cerrado biome could see its biodiversity plummet significantly if global demand for ethanol consumption grows as predicted. In addition, researchers found that, as well as the overall risk, specific areas of the Cerrado are likely to see significant losses in the number of mammal species, with a drop of between 50% and 100% in species richness³⁴.

The expansion of sugarcane in the Pantanal has reached the source areas of the Paraguay and Parana River basins, part of the so-called Paraguay-Paraná System of Wetlands. Also threatened by fires³⁵, these Wetlands encompasses Brazil, Argentina, Bolivia, Paraguay, and Uruguay and provide fundamental ecological services for fauna, flora, and the well-being and health of local populations, as well as mitigating climate change, as it is a large carbon reservoir.³⁶

Sugarcane is the crop with the largest irrigated area in Brazil. In the state of São Paulo, the most important sugar cane producing region, 37% of consumptive water is allocated for sugarcane crops³⁷.

The demand for water for irrigation has raised concerns that Brazil will face more severe droughts by 2030³⁸. Water scarcity is already a problem in several regions. The Paraná River, which winds through Brazil, Paraguay and Argentina, has dropped to its lowest levels in 77 years following a severe drought that began in late 2019³⁹.

The Cerrado is the source of some of South America's great rivers and acts as Brazil's 'water tank'. The Cerrado biome is essential for supplying the Center- South, North-East regions, Pantanal, and parts of the Amazon with water⁴⁰. Over the past few years, vast tracts of the Cerrado have been cleared to plant crops⁴¹. The conversion of native vegetation to cropland is putting pressure on water resources and making the Cerrado hotter and drier, with desertification becoming a real threat^{42 43}. As less water feeds the rivers, this could exacerbate the stress afflicting the Amazon rainforest, already threatened with possible ecosystem collapse⁴⁴.

Toxic pesticides used in sugarcane plantations

Water sources are also under threat from the intensive use of agrochemicals and pesticides on sugarcane plantations, as well as the use of vinasse, a waste product from ethanol production which is used as a fertilizer⁴⁵. Other residues from the ethanol and sugar production process, such as filter cake, contaminate river and underground water sources, threatening the life of fish and other aquatic species, as well as access to clean water for local communities⁴⁶. Pesticide contamination in drinking water supplies has been particularly high in São Paulo and linked to high use of herbicides in sugarcane production⁴⁷.

Brazil has one of the highest pesticide use worldwide, including many that are banned in the EU. Chemicals used on sugarcane crops which are considered highly hazardous in the EU such as Fipronil and Imidacloprid are highly toxic to bees and linked to the mass deaths of more than a million bees in Brazil⁴⁸. Bees are crucial to the balance of ecosystems thanks to their pollination.

44 percent of substances registered in Brazil are not approved in the EU because they pose a great threat to human health, animals and the environment⁴⁹. There are also major differences in the permissible limits for pesticide residues. For instance, the level of glyphosate residues permitted on sugarcane in Brazil is 10 times higher than in the EU⁵⁰.

Pesticides are a great threat to biodiversity. In its 2019 flagship report on the state of nature worldwide, global biodiversity organisation IPBES listed environmental pollution through toxic and harmful substances as the fourth out of five main factors responsible for the destruction of natural ecosystems and for placing one million animal and plant species (one in eight) under acute threat of extinction⁵¹.

Many rural communities have denounced the contamination of plants and water sources as well as serious health effects caused by pesticides that are sprayed on the sugarcane fields by planes^{52 53 54}. But people in exposed communities also fear reprisals from wealthy and politically powerful large landowners if they denounce pesticide contamination⁵⁵.

Pesticide spraying has also been used as a chemical weapon to evict communities from their lands. Landless peasants have reported repeated efforts by local businesses to force their eviction by spraying of pesticides over their homes. Indigenous, Afro-Brazilian and other communities regularly allege powerful agribusinesses intentionally using aerial spraying of pesticides on them as “chemical weapons” to drive them from their lands, which farmers and ranchers wish to use⁵⁶.

Despite the manifest danger of aerial pesticide spraying, ethanol multinationals Raízen and Tereos have been using drones as a cheap way to apply agrochemicals on sugarcane⁵⁷.

The role of European chemical giants

Bayer and BASF

Since 2019 the Bolsonaro government approved 474 new pesticide products, some of them highly hazardous ⁵⁸. Europe's biggest agrochemical companies Bayer and BASF are benefiting from a weak regulatory framework on pesticides in Brazil and are allowed to sell dangerous pesticides that are banned in the EU.

Bayer and BASF point out that they comply with the respective national pesticide laws. However, they don't mention that both companies themselves have influence on how these laws are drafted. Both companies are members of the agrochemical interest groups ANDEF (Associação Nacional de Defesa Vegetal—now merged into CropLife Brazil) and SINDIVEG (Sindicato Nacional da Indústria de Produtos para Defesa Vegetal), which openly support a bill known in Brazil as the “poison package”. This bill is intended to further simplify the approval of pesticides in Brazil—including those that are carcinogenic, or that may damage genetic material or cause reproductive problems ⁵⁹.

In 2017 a UN report on the right to food already denounced the enormous power of agrochemical corporations like Bayer. The report mentions that their efforts to influence policymakers and regulators have obstructed reforms and paralysed pesticide restrictions globally ⁶⁰.

Meanwhile, multinational corporations, such as Bayer and BASF, will profit from the EU-Mercosur deal as it will significantly boost their sales of agrochemicals in Mercosur countries by reducing or eliminating tariffs on pesticides and other chemicals. Not surprisingly, the European chemicals industry has also celebrated the trade deal for including the duty-free access for 450 000 tonnes of ethanol for chemical use. On its website, the European Chemical Industry Council (ECIC) states that Mercosur is an important trade partner with annual exports of chemicals worth €6,3bn, believing that reduced tariffs will allow steady growth in chemical exports to Mercosur countries ⁶¹. Thus, European chemical companies would benefit from the deal both as importers and exporters.

Social impacts - access to land

Land ownership patterns in Brazil can be traced back to colonial period and remains an issue of economic and political power. Brazil has one of the highest levels of land inequality in the world with roughly 1% of landowners controlling almost half of the total rural area ⁶². In the last 20 years, the agricultural sector has seen its income increase by around 134%, at an average annual growth rate of 6.7% ⁶³. The logic of land concentration means the agrarian elite hold a significant portion of agricultural wealth.

In recent decades the agrofuel boom has sparked more interest in land, exacerbating existing inequalities with large land owners benefitting from incentives for ethanol production ⁶⁴. As ethanol demand increased, so did demand for land to grow sugarcane, resulting in rising land prices and higher prices for food

⁶⁵. Increased land prices have also undermined Brazil's redistributive land policy and land reform process, benefitting export-oriented agroindustry over landless peasants and aggravating land conflicts with the landless movements ⁶⁶.

Indigenous peoples have been severely affected by the expansion of sugarcane cultivation. The rise in land prices makes the demarcation of indigenous lands less likely. Some large landowners have used legal tactics to delay or reverse the demarcation of indigenous land and some have used violence to evict Indigenous People from lands that they claim as their ancestral territories. Under the current government, land demarcation has stopped and the number of land conflicts is at the highest since 1985 ⁶⁷.

The Guarani-Kaio-wá, in the state of Mato Grosso do Sul, have seen sugarcane and other plantations increasingly encroach on their traditional territories ⁶⁸. More than 40,000 Guarani-Kaiowá today live in an area that covers less than 1% of their original territory ⁶⁹. Raízen, the joint venture between Shell and Cosan, grows sugarcane on land that is officially recognised as belonging to the Guarani-Kaio-wá in Mato Grosso do Sul ⁷⁰.

Rural women have also struggled to maintain their livelihoods on and access to the land. Women own as little as 11% of land in Brazil ⁷¹. Landless women known as "coconut breakers" or "quebradeiras de coco babaçu" operating in some of the poorest regions between Brazil's Cerrado savanna and Amazon are finding their traditional way of life threatened as sugarcane and other crops expand into the areas where they work and live. In addition, these women often face intimidation and threat of physical and sexual violence from farmers and other male agribusiness workers ⁷².

Working conditions and slave labour

Workers on Brazilian sugarcane plantations can find themselves working in conditions similar to slave labour. Between 1995 and 2019, some 54,000 people were rescued from conditions analogous to slave labour of which 25% working in the sugarcane sector ⁷³. In 2018, three sugarcane supply companies contracted by Raízen were caught with 80 workers in slave-like conditions ⁷⁴. There are concerns that the impoverishment linked to the COVID-19 pandemic may have exacerbated such cases of exploitation ⁷⁵.

European legislation under the Renewable Energy Directive has already been found lacking in terms of protecting against potential social and environmental impacts. The European Court of Auditors, in its 2016 investigation, found that sustainability assessments in the EU's system for the certification of sustainable biofuel did not adequately include socioeconomic impacts, such as land tenure conflicts and displacement, forced labour and child labour, poor working conditions for farmers, or dangers to health and safety ⁷⁶. The Court recommended that these criteria be made mandatory, but the new Renewable Energy Directive has not taken these recommendations on board ⁷⁷.

Agribusiness lobbying for weakening environmental and social protection

European companies operating on the ground in Brazil – particularly where they are involved in joint ventures, as in the case of Shell, have been involved in lobbying to influence the Brazilian legislative agenda.

Agribusiness interests are important within Brazilian politics, with a powerful “ruralist” caucus represented in the Congress. Known as the bancada ruralista, this influential caucus represents the wealthy agribusiness and extractive industries which has been notorious for its efforts to undermine environmental protection, indigenous and labour rights, while pushing to legitimize large-scale land grabbing and the use of dangerous agrochemicals.

The current Bolsonaro government identifies closely with the ruralist agenda. Brazil's lower house of Congress has approved a controversial bill that could help legalise claims by land grabbers occupying public forests and Indigenous territories awaiting demarcation⁷⁸. This legislation is just one of a slew of state and federal bills threatening Indigenous rights, which has been accompanied by a wider pattern of attacks and violence on Indigenous lands throughout the country.

There have also been recent measures that will further attack the already severely weakened environmental legislation and that undermine environmental protection agencies⁷⁹. This will further risk increased rates of deforestation and forest fires.

The ruralist caucus receives substantial funding from large agribusiness associations which represent Brazilian companies and European multinationals, including ethanol giants such as Raizen and Tereos, pesticides and chemical giants such as Bayer and BASF, and seed producers such as Syngenta, as well as Bunge, Cargill, Dupont and Nestlé. Banks include European banks Santander and Rabobank.⁸⁰

Shell's joint venture with Cosan also links the company to Brazilian politics as Ometto was the largest individual donor in the 2018 elections, donating US\$1.18million to a total of 57 candidates from Brazil's ruralist caucus⁸¹.

By funding the ruralist caucus, these European investors are directly linked to the political efforts to weaken environmental and social protection measures as well as the protection of indigenous rights in Brazil.

Contradictory EU policies

The EU Mercosur agreement was concluded in the same year that the UN body on Biodiversity and Ecosystem Services – IPBES – published a landmark report which declared an unprecedented decline in nature and an accelerating rate of species extinction⁸².

The European Green Deal echoed these concerns, declaring that nature was in a state of crisis, with urgent action needed to protect and restore ecosystems. The [EU Biodiversity Strategy for 2030: Bringing nature back into our lives](#) declared the EU's intention to lead the world by addressing the drivers of biodiversity loss and it set high ambitions to ensure that by 2050 all of the world's ecosystems are restored⁸³.

While the EU portrays itself as a global leader in reversing the destruction of nature and combatting the climate crisis, these "green" rhetorical commitments do not seem to apply to free trade deals such as the EU Mercosur agreement, where the interests of polluting corporations appear to be prioritised over fundamental human rights and environmental protection.

The EU's condemnation of the forest fires in the Amazon in the summer of 2019⁸⁴, while simultaneously negotiating a trade agreement that increases the purchase of agricultural products that are major drivers of deforestation, destructive land-use change and biodiversity loss, shows how the EU's economic agenda is in conflict with its flagship climate policies.

The EU claims it is driving a 'green' transition under the Green Deal, yet the consequences of the EU Mercosur trade agreement seem to contradict this. For example, it has set a target to reduce the use of pesticides by 50%, yet it is encouraging the export of pesticides and agrochemicals, and the pollution they cause.

Likewise, the deal will also boost the export of motor cars from the EU to Mercosur countries, providing support for car manufacturers that have not yet taken adequate action to address their climate impacts⁸⁵.

In addition, the deal will further increase intensive agriculture which the IPCC has defined as a clear driver of biodiversity loss and climate change. The IPCC recommends less use of monocultures, more diversified agroecological farming practices, and less intensive and more-localised production systems to combat climate change⁸⁶. The EU-Mercosur trade deal will instead undermine the livelihoods of small-scale family farmers, damage diverse production systems and threaten local and regional production.

The EU's biodiversity strategy also claims to promote the inclusion and respect for the rights and the full participation of Indigenous peoples and local communities. Yet the deal will severely affect the self-determination and collective rights of indigenous and traditional communities. Potentially affected peoples in Mercosur countries, communities and Indigenous peoples were not consulted on the deal and the European Commission has made no effort to ensure that these communities were consulted on the agreements' actual content⁸⁷.

Another clear indication that the Commission is prioritizing economic interests over the environmental and social interests is the fact that it concluded the trade deal before the Sustainability Impact Assessment had been completed⁸⁸.

Thus, in spite of all the talk about democratic values, green transition, sustainability and climate and biodiversity emergency, the EU seems intent on continuing with

business as usual which does not take account of the impacts on nature, people and biodiversity.

Conclusion

The EU is currently working hard on additional environmental commitments with Mercosur countries, hoping this will pave the way for the ratification of the agreement. However, these will not address the fundamental problems related to the EU Mercosur Deal.

The unsustainability of the agreement lies in its very essence, since it is precisely the expansion of the intensive agribusiness model that drives environmental crimes and the destruction of nature.

In the case of ethanol, increased production of sugarcane for export means increased pollution from pesticides and fertilizers, water scarcity, unacceptable and often slave-like working conditions and stealing land from local and Indigenous communities. Increasing land-use for ethanol will also further drive deforestation and exacerbates the existing biodiversity crisis, sacrificing hugely important ecosystems.

Big businesses with a track record of unsustainable global supply chains will be further empowered by the Mercosur trade deal, as it will facilitate corporate expansion regardless of the social, environmental and political consequences.

Moreover, the deal risks reinforcing historical colonial processes given the risk of land expropriation, land conflicts and violence against rural populations. As a result, traditional communities are likely to be displaced, perpetuating rural poverty and social inequalities.

Bilateral trade agreements signed between the EU and other Latin American countries, such as the EU's Trade Agreement with Peru and Colombia have made those countries more dependent on the export of raw materials and agricultural products⁸⁹. The EU-Mercosur deal would further lock Latin America in this resource-extractive neo-colonial model. If the EU wants to comply with its promises on respecting human rights, its commitments on climate change and protecting biodiversity and the environment, it must withdraw the EU-Mercosur trade agreement.

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Rue d'Edimbourg 26 | 1050 Brussels |
Belgium EU Transparency Register no.
9825553393-31 Tel. +32 2 893 10 00 |
info@foeeurope.org
www.friendsoftheearth.eu