

Implications of the EU-Mercosur deal for the expansion of biofuels

Demand for soy and sugar cane as feedstock

About this report

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Background

The EU-Mercosur free trade agreement between the European Union (EU) and the Southern Common Market (Mercosur) region (Brazil, Argentina, Uruguay, and Paraguay) has the main objective of increasing trade between the two regions through trade liberalisation, affecting a wide range of sectors (i.e., agriculture, mining, automobile, agrochemicals, etc.). As part of the agreement, the EU will extend supplementary preferential tariff quotas to Mercosur for items such as meat, sugar, rice, and bioethanol.¹ In this context, the agreement envisages:

- A lower tariff rate on bioethanol imports to be phased in over five years and an additional quota of 650,000 tons of ethanol for use by the chemical industry and 200,000 tons of ethanol for all other uses, such as for the fuel segment of the market.² This could lead to the further expansion of sugarcane plantations in the Mercosur region, especially in Brazil, a major bioethanol exporter whose sugarcane ethanol is expected to gain increasing market share from European producers under the lower tariff rate.³
- Reduction or elimination of duties that Mercosur currently imposes on exports of soy and soybean products to the EU.⁴ This could make soy a more attractive feedstock for biodiesel producers in Europe. However, the climate impact of soy-based biodiesel is two times that of fossil diesel, according to research by the European Commission (EC).⁵

Eliminating tariffs and adding new preferential quotas will give way to increasing exports of raw materials from Latin America to the EU, including crops used to produce first-generation biofuels.⁶ First-generation biofuels are those produced from edible energy crops such as sugar based-crops (e.g., sugarcane, sugar beet, and sorghum), starch-based crops (e.g., wheat, corn, and barley), or oil-based crops (e.g., soybean, sunflower, and canola). Biologically derived fuels, such as ethanol, propanol, and butanol, are generated through the activities of microorganisms and enzymes during the fermentation of sugars, starches, or cellulose. First-generation biofuels jeopardise biodiversity and food security. Additionally, many first-generation biofuels rely on subsidies and do not match the cost-effectiveness of established fossil fuels. At the same time, some offer only modest reductions in greenhouse gas (GHG) emissions.⁷

The EU-Mercosur deal was concluded in June 2019 after 20 years of negotiations. Still, the ratification process has been at a standstill during the last four years due to the opposition of civil society and some European countries (i.e., France and Austria).⁸ Ratifying the agreement is increasingly seen as crucial for reinforcing Western influence in Latin America and countering the economic reach of China and Russia.⁹ The recent change in the Argentinian government, coupled with Germany's renewed push for the agreement and persistent pressure from European farmers (who demand an end to free trade agreements due to unfair competition from cheap agricultural imports that do not meet EU standards¹⁰), has created a complex landscape where European officials see both challenges and renewed opportunities for accelerating the ratification of the deal.¹¹ Furthermore, the anticipated decline in France's influence over the EU's trade policy, driven by the expected change in government after the elections of July 7, adds another layer of complexity to the situation.¹² However, ratification of the deal under current conditions would put the phase-out of unsustainable first-generation biofuels in the EU at risk, thereby undermining Europe's commitments made at the COP 26 in Glasgow to deliver on the Paris Agreement, stop deforestation, and support climate adaptation and resilience efforts in developing countries.¹³

This report provides an analysis of the possible implications of the ratification of the EU-Mercosur free trade agreement for the expansion of biofuels by way of additional quotas and free tariffs on raw materials imported from Mercosur countries. Chapter 1 reviews EU-level legislation governing the use of first-generation biofuels. Chapter 2 provides an analysis of the EU consumption of the different bioethanol and biodiesel feedstocks under the new EU-Mercosur trade regime. Focusing on Argentina and Brazil, Chapter 3 describes the main environmental and social impacts linked to the production and consumption of crop-based biofuels made from sugarcane and soybean. Chapter 4 analyses the EU-Mercosur trade agreement and its implications for the expansion of biofuels. Lastly, Chapter 5 provides conclusions and policy recommendations to achieve policy coherence between trade policy and EU targets for "green" transport fuels.

1. EU legislation governing the use of first-generation biofuels

This chapter reviews relevant legislation at the EU level governing the use of first-generation biofuels. Moreover, it reviews EU legislation that should direct the way forward for the phase-out of unsustainable first-generation biofuels such as legislative instruments regulating deforestation, biodiversity loss, and GHG emissions.

In November 2018, the European Commission outlined its plan for a climate-neutral EU, examining various sectors and transition pathways. This vision aligns with the Paris Agreement's goal of limiting global temperature increase to below 2°C, with efforts to achieve 1.5°C. To achieve this, the European Council and Commission introduced the European Green Deal (EGD) on December 12, 2019, outlining strategies to combat climate change. As a part of the EGD, on March 4, 2020, the Commission proposed the European Climate Law, aiming to legally establish the 2050 climate-neutrality target.¹⁴

The EU Climate Law, effective from July 29, 2021, establishes key climate targets: achieving carbon neutrality (net zero emissions) by 2050 and striving for negative emissions thereafter, along with a minimum 55% reduction in GHG emissions by 2030 compared to 1990 levels. Notably, the 2050 target is a collective obligation for EU Member States (MSs), allowing flexibility in reaching the goal and allowing some states to reach it later if others achieve it sooner.¹⁵

1.1 EU legislation on the use of first-generation biofuels

To operationalise the objectives of the EU Climate Law and in the broader context of the EGD, two legislative initiatives stand out: The Clean Energy for All Europeans and "Fit for 55". The Clean Energy for All Europeans (also known as Clean Energy Package, or CEP) is a set of policies first introduced in 2016 that focuses on the energy sector. It comprises eight legislative acts, including the Renewable Energy Directive (2009/28/EC), the Energy Efficiency Directive (2018/2002/EU), the Energy Performance of Buildings Directive (2018/844/EU), the Regulation on the Governance of the Energy Union and Climate Action (2018/1999/EU), and other regulations concerning the electricity market design, as well as non-legislative initiatives.¹⁶

The Fit for 55 package, which was adopted by the European Commission (EC) on July 14, 2021, is a set of proposals to revise and update EU legislation and to put in place new initiatives to ensure that EU policies align with the climate goals agreed upon by the Council and the European Parliament. Compared to CEP, Fit for 55 encompasses a broader array of sectors and policies and refers to the EU's target of reducing net GHG gas emissions by at least 55% by 2030 compared to 1990 levels.¹⁷ Fit for 55 aims to achieve this target by revising, adopting, and enforcing the following proposals (their status, as of May 2024 is mentioned in the parenthesis):¹⁸

- EU Emissions Trading System (ETS) reform (adopted and in force);
- New EU Emissions Trading System for building and road transport fuels (adopted and in force);
- Social Climate Fund (adopted and in force);
- Effort Sharing Regulation (adopted and in force);
- Regulation on Land Use, Forestry and Agriculture (LULUCF) (adopted and in force);

- CO₂ emissions standards for cars and vans (adopted and in force);
- Carbon Border Adjustment Mechanism (CBAM) (adopted and in force);
- Energy Efficiency Directive (adopted and in force);
- Alternative Fuels Infrastructure Regulation (AFIR) (adopted and in force);
- FuelEU Maritime Regulation (adopted);
- Renewable Energy Directive (third iteration adopted and in force, see section 1.1.1);
- ReFuel EU Aviation Regulation (except for articles 4, 5, 6, 8, and 10 that enter into force on January 1, 2025, adopted and in force);
- Energy Taxation Directive (adopted and in force).

The following subsections delve into the proposals that form part of Fit for 55 and CEP that govern the use of first-generation biofuels in the European Union. Delegated regulations that form part of the EU's Biofuel Policy Framework are analysed too.

1.1.1 Renewable Energy Directive

Directive 2009/28/EC (also known as the first European Renewable Energy Directive, RED I) was first introduced in 2009 under the framework of the CEP package. It sets common targets for the share of renewable energy in the EU's energy consumption by 2030. These targets have been revised twice since the drafting of RED I in 2009 and have increased from 20% (to be achieved by 2020) to 45% (to be achieved by 2030) in the third iteration of the directive (RED III) in 2022.¹⁹ RED I required that EU MSs and the EC issue biannual reports on the impacts of its energy policies on soil, water, and air; the affordability and availability of food and land; respect for human and labour rights, not only inside the EU but also on people living in the Global South.²⁰

Although most biofuels consumed in the EU originate in third countries, the reporting format provided to MSs referred to those impacts in the Member State, not outside the EU. This loophole contributed to underreporting environmental and human rights impacts, causing the EC to conclude in a 2020 report that impacts were usually site-specific and a result of local agricultural practices.²¹ Moreover, this loophole is of utmost concern because most biofuels reported by MSs are imported. In fact, in 2020, first-generation biofuels accounted for 92% of bioethanol blended with gasoline, 55% of biodiesel and 7% of biomethane.²² Slightly more than half of the feedstocks used are cultivated within Europe, with a significant portion being imported. Many of these imported feedstocks, like soy from South America or palm oil from Indonesia and Malaysia, make up a substantial portion of the imports.²³

Nonetheless, for the second iteration of RED (RED II), which was part of the framework of Fit for 55, the EU acknowledged that socio-environmental sustainability issues are linked to first-generation biofuel production.¹ In this context, RED II limited the share of biofuels produced mainly from palm oil and soybean to 7% of MSs' renewable energy for transport with the goal to phase them out gradually by 2030. While that 7% was optional, the remaining 7% originating from renewable electricity, electrofuels, recycled carbon fuels, and advanced biofuels remained mandatory.²⁴

However, this cap was based on the level of first-generation biofuels used in each MS in 2020 (allowing some flexibility with an additional 1%). Moreover, the phase-out will only occur progressively from 2023 to 2030, meaning that MSs can still use significant amounts of first-generation biofuels until 2030.²⁵ Belgium, for example, continues to use part of the optional 7% that applies to first-generation biofuels even though the country has the capacity to keep it at 0%, as proven by its pledge to phase out palm and soy-based ethanol by 2023.²⁶

¹ In this context, RED II only included three mandatory environmental criteria: deforestation, greenhouse gas (GHG) emissions, and biodiversity (Article 29), and the only social criteria related to monitoring food prices and food security impacts (Article 33) and reporting on food origins (Article 30.3, obligation by operators to provide information on origin). Article 28.5 mandated the biannual revision of Annex IX part A (Feedstock for the production of biogas for transport and advanced biofuels) and part B (advanced biofuels with issues).

Moreover, RED II limited the share of unsustainable crop-based biofuels while promoting biofuels stemming from materials defined in Annex IX.²⁷ Based on the materials listed in Annex IX, MSs can define the different levels of support for different types of biofuels under their national framework. However, despite the objective of RED II to include only sustainable waste, by-products, and residues for biofuel production, it still contains unsustainable feedstock, including bagasse.²⁸

In July 2021, the EC proposed revising the directive under Fit for 55. Specifically, this revision, known as RED III, proposed increasing the target to 40% as part of the package to deliver on the EGD. In May 2022, as part of the REPowerEU plan (see section 1.1.8) a further increase of this target to 45% by 2030 was proposed.²⁹ In September 2022, Members of the European Parliament (MEPs) voted to increase the share of renewable energy by 45% by 2030 and to end the use of soybean and palm oil as EU biofuel feedstocks.³⁰

Despite the progress towards out-facing first-generation biofuels, the MEPs' vote to end the use of soybean and palm oil was not only a missed chance to end the use of all food crops as biofuel feedstock, but it can also increase the pressure on those first-generation biofuels that remain as part of RED III. This means there will be no improvement in the environmental and human rights impacts of first-generation biofuels. For example, countries like Belgium have used the flexibility given by the EU in the past to maximise imports of those feedstock despite the well-documented impacts of their production on people and the environment.³¹

On 9 November 2022, the EC proposed a new amendment for a Council Regulation that came to be known as RED III. In it, a framework to accelerate the deployment of renewable energy was laid out. Under the proposal, renewable energy plants are to be considered of overriding public interest, which would allow faster new procedures for issuing permits and specific derogations from EU environmental legislation.³² The goal of RED III is to achieve a 2.2% share of advanced biofuels and biogas by 2030, along with an intermediary target of 0.5% by 2025, aligning with the REPowerEU targets (see section 1.1.8). In March 2023, the Parliament and the Council reached an informal agreement to strengthen the regulatory framework, including a combined sub-target of 5.5% for advanced biofuels and renewable fuels of non-biological origin, with a minimum requirement of 1% for renewable fuels of non-biological origin.³³ On September 12, 2023, the agreement was adopted by the Parliament and it entered into force on November 21, 2023, with an 18-month period to transpose its provisions into national legislation.³⁴

RED III features a mixture of binding and non-binding targets. It includes a binding target for at least 42.5% renewable energy in the total energy mix by 2030 and a best-efforts obligation to aim for 45%. For the transport sector, MSs can choose between two binding targets: either achieving a 29% share of renewable energy in total consumption by 2030 or reducing CO₂ intensity by 14.5% by 2030. Moreover, in calculating a MS's renewable energy use and GHG reduction targets, the share of first-generation biofuels, bioliquids, and biomass can only be up to 1% higher than their share in 2020, but not exceeding 7% of the total energy used in transport.³⁵

Despite the increasing ambition, civil society groups have criticised the Council and Commission's emphasis on quantity over quality of biofuels in Europe's future energy mix. In this context, the cap on first-generation biofuels remains at 2020 levels, and their use is optional for MSs, despite pressure from the biofuels lobby. The EP's proposal to phase out palm and soy biofuels, associated with deforestation and peatland conversion, was rejected. The EC will review soy as feedstock in its review of the delegated act on high-deforestation risk biofuels and explore accelerating the removal of palm oil from EU renewable energy targets, instead of an immediate phase-out.³⁶

1.1.2 Regulation on the Governance of the Energy Union and Climate Action

Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action is part of the CEP package. It aims to ensure coherence in the implementation of the EU's Energy Union Strategy on energy security, the internal energy market, energy efficiency, decarbonisation and research, innovation, and

competitiveness. It also aims to ensure that the Energy Union meets its 2030 targets in alignment with the Paris Agreement on climate change.³⁷

The regulation requires EU MSs to produce integrated National Energy and Climate Plans (NECPs) for each ten-year period (from 2021 to 2030). These plans needed to be updated by the end of June 2023 in a draft form and by 30 June 2024 in a final form to reflect an increased ambition.³⁸ Because REDII also obliged Member States to prepare national renewable energy action plans (NREAPs) and progress reports, reporting on the social impacts of renewable energy was streamlined and moved to Regulation 2018/1999.¹¹ However, an important loophole is that not all possible impacts are listed for reporting and that the requirements concern the impacts of biofuels produced in Europe instead of biofuels consumed in Europe (which, as shown in Chapter 3, are produced abroad in a context of environmental and human rights breaches).

Moreover, while the regulation establishes the NECP template, it only includes one demand on “just transition” but no request to assess contributions to the Sustainable Development Goals (SDGs) or to establish human rights safeguards.

1.1.3 Just Transition Mechanism

The Just Transition Mechanism (JTM) is a key tool for addressing the social and economic effects of the transition towards climate neutrality, focus on EU member states, regions, sectors, and workers. The JTM is expected to mobilise around € 55 billion in the period 2021–2027 to finance the diversification and modernisation of the local economy and mitigate the negative repercussions on employment, through three pillars:³⁹

1. **The Just Transition Fund (JTF)** will mostly provide grants for regions dependent on fossil fuels and high-emission industries. In this context, funded activities should primarily support economic diversification and measures to address the negative employment impact of energy transition in impacted sectors (e.g., fossil fuels). Still, other investments into energy efficiency and renewable energy sources are also eligible.⁴⁰ The JTF is governed as a Cohesion Policy Fund, meaning that national or regional authorities get to select the projects to be funded.
2. **A dedicated scheme under the InvestEU programme** will provide technical assistance and guaranteed loans for a plethora of investments, including energy and transportation infrastructure, circular economy investments, and digitalisation and digital connectivity.⁴¹
3. **The European Investment Bank (EIB) provides a public sector loan facility** to mobilise additional investments in the regions concerned. As a finance partner, the EIB will provide up to €10 billion in loans, while the Commission will provide up to €1.5 billion in grants.⁴²

In addition to its co-financing of the public sector facility loan, the EIB is preparing the programming of EU support for countries outside the European Union, following the publication of the Neighbourhood, Development and International Cooperation Instrument (Europe’s 2021–2027 development assistance programme) in June 2021. In this context, the EIB plans to work with multilateral development banks and other entities on developing approaches to support the just transition outside the European Union.⁴³

Contrary to its name, JTM does not consider the impacts of the energy transition on third countries. As

11 RED I stipulated reporting obligations for MSs and the Commission. In this context, MSs had to report their use of biofuels, national commodity price changes, and several environmental aspects. By contrast, the Commission had to report on the impact of biofuels on food security. Under REDII, the Commission’s reporting obligations include compliance checks with sustainability criteria, including the impact of displacement on land use in the EU and the main third countries of supply. Moreover, the Commission is required to monitor the commodity price changes associated with the use of biomass for energy and any associated positive and negative effects on food security.

such, it does not take measures to mitigate the impacts of increasing Europe's renewable energy sources, including first-generation biofuels.

1.1.5 Directive 2015/1513 (ILUC Directive)

Directive 2015/1513 (ILUC Directive) is part of the broader EU's biofuels policy framework. It addresses the issue of indirect land use change (ILUC) related to biofuels and sets rules to account for the impact of biofuel production on land-use change and associated emissions.⁴⁴ The ILUC Directive is not directly part of either the CEP package or the Fit for 55 package. However, it significantly influences EU biofuels policies by ensuring that the production and use of biofuels do not contribute to deforestation or other negative environmental impacts.

The ILUC Directive amends existing EU directives related to the quality of petrol and diesel fuels as well as the promotion of energy from renewable sources. According to the Directive:⁴⁵

- **Limitation:** First-generation biofuels are limited to contributing a maximum of 7% of the total energy in the transport sector by 2020. This limitation aims to address concerns about the environmental impact of these biofuels, particularly regarding ILUC emissions.
- **Double Counting:** The directive allows double counting of certain biofuels, including those made from used cooking oil and certain animal fats. Double counting means these biofuels are counted twice for the purpose of meeting renewable energy targets. This provision encourages the use of more sustainable feedstocks.
- **Minimum Reduction Threshold:** Biofuels produced in new installations (operational after October 5, 2015) are required to achieve a minimum GHG emission saving of at least 60%. For installations operational before this date, the GHG emission saving threshold is at least 35% until December 31, 2017, and at least 50% from January 1, 2018, onward.

Moreover, the ILUC Directive and RED II are closely related. In this context, Annex IX of RED II lists the specific feedstock categories for which biofuels and bioliquids can be considered sustainable, including feedstocks mentioned in the ILUC Directive.

In the context of both the ILUC Directive and RED II, the idea is to promote the use of biofuels derived from feedstocks that do not contribute significantly to ILUC. The ILUC Directive includes provisions to limit certain biofuels derived from feedstocks associated with high ILUC risks, and RED II aligns with these restrictions by specifying eligible feedstocks in Annex IX that meet sustainability criteria, which includes considerations related to ILUC.

An issue of concern related to the ILUC Directive was the inclusion of problematic feedstocks (such as palm oil mill effluent and bagasse, a by-product of sugarcane processing)⁴⁶ without a comprehensive impact assessment. In the final compromise of RED II, the list of approved feedstocks will be reviewed every two years to add new materials, but none can be removed until 2030. This raises sustainability concerns, as problematic feedstocks listed in Annex IX cannot be removed despite concerns about their impact.⁴⁷

1.1.6 Commission Delegated Regulation (EU) 2019/807

The Delegated Regulation (EU) 2019/807 was adopted in March 2019 in the context of RED II. This Regulation complements Directive (EU) 2018/2001 by specifying criteria for identifying high ILUC-risk feedstock with significant expansion into high carbon stock land. It also outlines certification requirements for low ILUC-risk biofuels, bioliquids, and biomass fuels. To be certified as low indirect land-use change-risk fuels, biofuels, bioliquids, and biomass fuels must adhere to the additional measures outlined in this Regulation.⁴⁸ In this context, the Regulation stipulates a threshold of 10% of the global expansion of any crop into high carbon stock (i.e., forests and peatlands) prior to 2008, a threshold civil society organisations have characterised as arbitrary.⁴⁹

As Transport & Environment points out, at the time of implementation, only palm oil exceeded the 10%

threshold. Soy, which showed an annual global expansion of over 2.4 million hectares in the last decade, is close to this threshold at 9.5%. This threshold is concerning as it allows significant deforestation linked to crop expansion, contrasting with the global pledge, signed by the EU and others at COP26, to end deforestation by 2030.⁵⁰ In a context where palm oil and soybean are to be banned by 2030 as part of RED III (see section 1.1.1), other first-generation biofuels, such as rapeseed, could become more important feedstock in the biofuel mix.⁵¹

1.1.7 Commission Delegated Regulation (EU) 2023/1640

In June 2023, the EC introduced new rules specifying the proportion of biofuels and biogas in mixed fuels, incorporating both bio-based and fossil-based materials. These rules are crucial for meeting the targets of RED for renewables in the transport sector. The detailed guidelines were outlined in Delegated Regulation (EU/2023/1640), officially published on August 18, 2023, after undergoing public feedback, consultations, and scrutiny by the EP and the Council.⁵²

The regulation allows economic operators to employ their own testing methods to determine the bio-component in fuels, tailored to their processes or companies. These methods can be based on mass or energy balances, yield methods, or radiocarbon (¹⁴C) testing. If ¹⁴C testing is not the primary method, it must still be periodically used to validate the main method's accuracy, especially for products claiming a carbon-based bio-component.⁵³ Unlike previous rules dictated by sustainability schemes like International Sustainability and Carbon Certification (ISCC), this regulation provides flexibility, ensuring compliance through various testing approaches.⁵⁴

According to sector associations, the Regulation's mandate requiring calibration of calculation methods against Carbon-14 testing results, adds extra administrative and financial challenges to biomass co-processing initiatives.⁵⁵ Co-processing is a method to create biofuels similar to fossil fuels, where bio-based materials (e.g., bioethanol) are mixed with fossil fuels during production, often in petroleum refineries but also in other installations. Co-processing ensures biofuels blend seamlessly with fossil fuels, promoting their adoption in the transport industry.⁵⁶

Hurdles for producers aside, the flexibility lent by the new mandate, if not properly enforced or monitored, could exacerbate the social and environmental risks associated with the production of biofuels. In this context, less accurate testing methods might result in the use of first-generation biofuels that are not permitted by RED III, namely soybean and palm oil (see section 1.1.1).

1.1.8 REPowerEU

The European Commission's REPowerEU Plan, initiated in May 2022 in response to the challenges arising from Russia's invasion of Ukraine, aims to help the EU by promoting energy savings, generating clean energy, and diversifying energy supplies. REPowerEU raises the targets proposed in RED III in the context of Fit for 55 (see 1.1.1). In this context, the EU aims at increasing its investment in renewables to ensure Europe's energy independence and secure its energy supply.⁵⁷

REPowerEU has been lauded by actors across the board for its ambition to lower oil and natural gas demand in the near term. However, civil society groups have warned caution about the possible expansion of first-generation biofuels if legislation is not passed that bans these sources of renewable energy.⁵⁸ This warning is all the more pressing given that the biodiesel industry and other key actors (such as the International Energy Agency) have stressed that raising biofuel use in order for the EU to achieve REPowerEU's of 32% renewable share for transport by 2030.⁵⁹

1.2 Other relevant EU legislation

1.2.1 EU Regulation on Deforestation-Free Products

The EU Regulation on Deforestation-free products (also known as the EU Deforestation Regulation) embodies the EU's commitments to combat deforestation and forest degradation as outlined in the 2019 Commission Communication on Protecting and Restoring the World's Forests and subsequent EU policies, including the EGD, the EU Biodiversity Strategy for 2030, and the Farm to Fork Strategy. The Deforestation Regulation, which entered into force on June 23, 2023, places responsibility on traders of deforestation-risky commodities (such as soy, beef, palm oil, wood, cocoa, coffee, rubber, and their derived products) to prove that the products they place on the EU market do not originate from recently deforested land or have contributed to forest degradation.⁶⁰

The single most important loophole of the Deforestation Regulation (in the context of advocates' efforts for increased scrutiny of first-generation biofuels) is that it currently does not include sugarcane ethanol. The EP has agreed that within two years of the regulation entering into force, the need to include further commodities and products, specifically sugarcane ethanol and mining products, will be assessed.⁶¹

Moreover, the current minimum level of mandatory controls required of national authorities remains rather low, as do provisions on penalties, including an obligation for traders to compensate for the harm that the exercise of due diligence would have prevented.⁶² Likewise, the Deforestation Regulation does not include the financial sector, which means that this sector will still be allowed to finance companies linked to deforestation. This omission is of concern, especially because the current sustainable financing initiatives (e.g., EU Taxonomy Regulation, the Corporate Sustainable Reporting Directive, and the Corporate Sustainability Due Diligence Directive) are still ineffectively addressing the financing of forest risk commodities.⁶³

Lastly, the Deforestation Regulation's definition of deforestation is problematic. As proposed by the Commission, "deforestation" includes the conversion of forest to "agricultural use" but not "forestry", thereby implying that timber plantations are included in the definition of forests.⁶⁴ By many accounts, the elements of what constitutes "forest degradation" are so vague that it will be challenging to enforce in practice. In this context, it is possible that the classification of lands where "deforestation" occurs could also determine whether conversion is deemed legal or not under EU standards.⁶⁵ By the same token, concerns have been raised about the ecosystems not covered in the Deforestation Regulation such as savannahs, grasslands, and floodplains, which could become targets for agricultural expansion.⁶⁶

1.2.2 Revision of the Trade and Sustainable Development Policy

EU Trade policies are required to promote sustainable development. Therefore, EU trade agreements include Trade and Sustainable Development (TSD) chapters, which require the EU and its trade partners to:⁶⁷

- Follow international labour and environment standards and agreements.
- Effectively enforce their environmental and labour laws.
- Not deviate from environmental or labour laws to encourage trade or investment, and thereby preventing a 'race to the bottom'.
- Sustainably trade natural resources, such as timber and fish.
- Combat illegal trade in threatened and endangered species of fauna and flora.
- Encourage trade that supports tackling climate change.
- Promote practices such as corporate social responsibility.

In 2018, the Commission published a non-paper with 15 action points to make implementing TSD chapters more effective and improve their enforcement. These points include actions on engagement with civil society, responsible business conduct, ratification of international agreements, including International Labour Organization (ILO) conventions, and climate action.⁶⁸

In February 2021, the Commission reviewed the 15-point action plan on implementing and enforcing TSD chapters in EU trade agreements. This review intended to inform the Commission to formulate new directions in the EU Trade and Sustainable Development policy.⁶⁹ On June 22, 2022, the EC launched the new approach to free trade agreements (FTAs). The new TSD approach involves tailored objectives and timelines for effective engagement with partner countries. It aims to foster compliance with international labour and environmental standards through technical and financial assistance. Civil society participation and complaints mechanisms will be enhanced, ensuring transparency and support for Domestic Advisory Groups (DAGs). The focus lies on implementation and enforcement, extending dispute settlement to TSD chapters, and allowing sanctions for significant breaches of the Paris Agreement and fundamental labour rights.⁷⁰

Despite the move to embed FTAs on TSD, the environmental protection targets are not uniform throughout all agreements.⁷¹ Moreover, the sanctions for not complying with those targets are a coercive international law tool where pressure imposed through economic, financial, or trade costs. They can incentivise third countries to introduce Environmental Social and Governance (ESG) improvements on export-oriented products, rather than on products for the domestic market, which would fulfil the sustainable development objectives of the EU FTA policy.

1.3 The EU-Mercosur trade agreement

In 2019, the EU negotiated a trade agreement with the four founding member countries of Mercosur – Argentina, Brazil, Paraguay, and Uruguay. Mercosur is a big market for EU exports and had been, until the reach of an agreement, the only major trading partner in Latin America with which the EU did not have a preferential trade agreement.

The EU-Mercosur Agreement outlines objectives as envisioned by the EC, aiming to:⁷²

- remove trade barriers and make it easier for EU firms to sell goods and services to Mercosur and to invest;
- help the EU and Mercosur shape global trade rules in line with EU values;
- send a powerful signal to the world in favour of rules-based trade and that two of its biggest economic blocks reject protectionism;
- further integrate value chains between the two regions, thereby helping industries on both sides stay competitive in the global market; and
- project EU values via detailed obligations on trade and sustainable development, including climate change and labour.^{III}

Against this background, the agreement will remove import duties on over 90% of EU goods exported to Mercosur. Duties for some products are expected to be liberalised over longer staging periods. This is done to allow companies in Mercosur countries sufficient time to adapt.⁷³ With regards to biofuels or biofuel feedstocks, the agreement proposes:

- A lower tariff rate on bioethanol imports to be phased in over five years and an additional quota of 650,000 tons of ethanol for use by the chemical industry and 200,000 tons of ethanol for all other uses, such as for the fuel segment of the market.⁷⁴ This could lead to the further expansion of sugarcane plantations in the Mercosur region, especially in Brazil, a major bioethanol exporter whose sugarcane ethanol is expected to gain increasing market share from European producers under the lower tariff rate.⁷⁵

III While the aims of the EU-Mercosur agreement, as explained in the text above are the top-line official goals, many civil society organisations have denounced the real intentions of the agreement: (1) to boost the competitiveness of EU manufacturing products (most notably, cars) and petrochemical industry at the expense of US, Mexican, and Canadian industry; (2) to export the political system of regionalism (i.e., the EU model) to other parts of the world; and (3) (related to 1 and 2) establish EU's (economic) superpower position in a multipolar world.

- Reduction or elimination of duties that Mercosur currently imposes on exports of soy and soybean products to the EU.⁷⁶ This change might increase the appeal of soy as a raw material for biodiesel manufacturers in Europe. Nonetheless, research conducted by the EC indicates that soy-based biodiesel has a climate impact twice as high as that of fossil diesel.⁷⁷

The agreement reached in 2019 was met with concerns from actors across the board, both in the EU and South America, regarding its potential climate and deforestation impacts. To address this situation, the EC sought pre-ratification commitments from Mercosur countries on climate and deforestation in 2021. The idea behind this was to get enough support to move the deal forward and avoid opening the text to further negotiation.⁷⁸

In July 2023, the presidents of Latin America and the Caribbean met with prime ministers from Europe in the context of the EU-CELAC summit in Brussels.⁷⁹ There was hope to tout significant progress on the agreement, as European leaders expected that the agreement could be signed during the summit.⁸⁰ However, the EU has halted the signing process until Mercosur commits to specific environmental obligations. French President Emmanuel Macron strongly emphasised this, stating he would not endorse any FTA without 'mirror clauses' that set the same environmental and health standards for both blocs.⁸¹ In this context, one worry is the potential resurgence of leaders like Brazil's former president, Jair Bolsonaro, who permitted logging in the Amazon.⁸²

EU-Mercosur Chapter on Trade and Sustainable Development

The EU-Mercosur FTA includes an 18-article long chapter on Trade and Sustainable Development (TSD), emphasising that increased trade should promote sustainable development without compromising environmental or labour standards. The TSD chapter covers topics such as multilateral agreements on labour and environmental standards, trade and climate change, biodiversity, sustainable forest management, and fisheries. However, the commitments, such as adherence to the Paris Agreement, are not legally binding, and there are no enforceable mechanisms. Disputes arising from this chapter cannot be settled through dispute resolution mechanisms, and a "Sub-Committee on Trade and Sustainable Development" is established to monitor its implementation.

Some EU MSs, with all having to unanimously agree on the deal after the Commission completes negotiations, have expressed worries about the FTA's potential to destabilise EU's agricultural sector.⁸³ Some South American diplomats have accused the EU of hypocrisy, referencing FTAs with Asian nations such as Vietnam or Japan that lack these sustainability provisions. In response, EU diplomats argue that there has been a shift since the revision of the Trade and Sustainable Development Policy in 2022 (see section 1.2.2).⁸⁴ Indeed, the TSD approach has been embedded in the FTAs the EU has entered into, notably, an EU-New Zealand FTA signed in June 2022.⁸⁵ However, Mercosur members remain adamant about the idea as they see it as a violation of their sovereignty and some even characterise it as neo-colonialism.⁸⁶

In response to widespread opposition and concerns about the current EU-Mercosur trade deal, the Commission has been holding plans to negotiate further commitments with Mercosur. A leaked document titled 'EU-Mercosur Joint Instrument' outlines agreed interpretations of provisions in the TSD Chapter and the Political Dialogue and Cooperation pillar of the agreement. The document, dated February 2023, was deemed by several analysts a draft meant to serve as a basis for future negotiations between the EU and Mercosur. In this context, the draft statement reaffirmed commitment to the non-binding provisions of the outdated EU-Mercosur TSD chapter. However, according to analysts, this falls short of the EU's proclaimed strategy to align trade policy with sustainable development, including the possibility of trade sanctions for Paris Agreement violations. Against this background, the EU's practical approach to FTAs contrasts with its stated commitments.⁸⁷

In the run-up to the July 2023 summit, Germany, a strong supporter of the EU-Mercosur FTA, advised the Commission to be more flexible in their approach, even as they attempted to persuade France about

the benefits of the trade deal. Macron's worries extend beyond sustainability to include concerns about unjust competition and the impact on the European market.⁸⁸ However, hopes waned further by the end of 2023, when the survival of the Mercosur bloc was put into question. During his presidential campaign, Javier Milei threatened to leave Mercosur but recognised its importance for economic recovery after his election in October 2023.⁸⁹ Strained Argentina-Brazil relations, marked by partisan divisions,⁹⁰ have further complicated Mercosur cooperation. Additionally, Brazil, under Lula's presidency, has shown inconsistent foreign policy, dampening EU enthusiasm despite progress in reducing Amazon deforestation.⁹¹

Despite the uncertainty surrounding its ratification, the Commission made it clear that it intended to prioritise the ratification of the trade agreement after the European Parliament elections in June 2024.⁹² In this context, Chancellor Scholz has reiterated Germany's support for 'EU-only competence' FTAs that bypass the lengthy ratification process by national and regional parliaments,⁹³ a strategy previously employed in the EU's trade deal with Chile.⁹⁴ This method allows the EU Council and the European Parliament to fast-track trade agreements, while other components, such as investment protection, undergo separate ratification.⁹⁵ While the EU has not made official announcements regarding the next steps, Argentinian news outlets have reported on a video conference between the two blocks scheduled for July 15, 2024, and an in-person summit in August 2024.⁹⁶ Amid a policy framework on biofuel governance that still lacks sufficient safeguards on their use, it is undeniable that if ratified, the EU-Mercosur Trade Agreement will have implications for the expansion of first-generation biofuels. These implications are explored in Chapter 4.

2. Analysis of EU consumption of first-generation biofuels under the EU-Mercosur trade regime

First-generation biofuels are still dominating the EU's biofuel consumption. Among the Mercosur countries, Brazil and Argentina are important suppliers of biofuels and biofuel feedstock in the form of soy, soy-based biodiesel, and sugarcane-based bioethanol. The market liberalisation under the Mercosur agreement may lead to an expansion of crop production areas in these countries.

As outlined in the principle agreement for the Mercosur deal, “[t]he EU will liberalise 82% of agricultural imports, with the remaining imports subject to partial liberalisation commitments including tariff-rate quotas for more sensitive products with a very small number of products excluded altogether.”⁹⁷

This liberalisation is expected to also affect the trade in biofuel and biofuel feedstocks, for which some Mercosur countries are significant producers and suppliers. Importantly, Brazil is a major producer and exporter of sugarcane-derived ethanol and soy, and Argentina for soy-derived biodiesel.

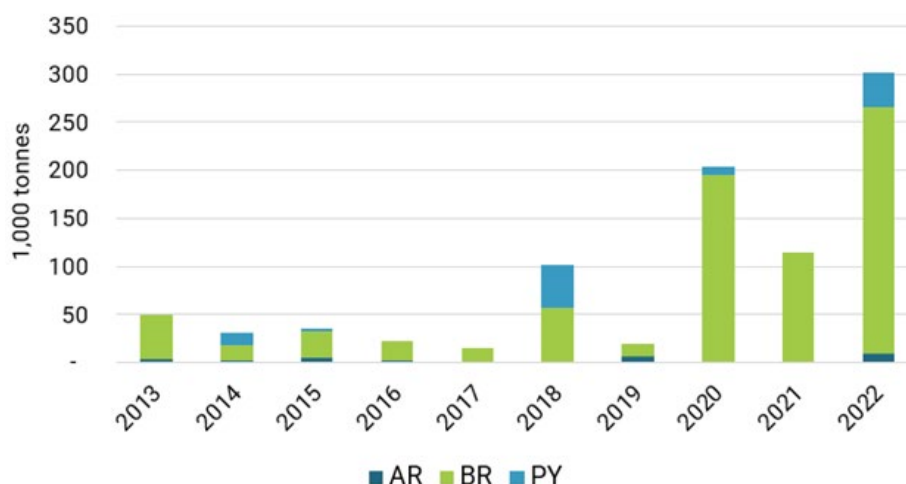
2.1 Sugarcane-based ethanol

Ethanol imports (both undenatured and denatured) to the EU originate from various geographies. The United States is the largest supplier, accounting for 22% or 373,000 tonnes of imports in 2022. On the second place follows Brazil with a 15% share or 256,000 tonnes.⁹⁸ The volumes sourced from other Mercosur countries are much smaller, with Paraguay accounting for 2% and Argentina for 1%.⁹⁹

Feedstocks differ between countries. The US predominantly uses maize as feedstock. With more than 95%, Brazilian ethanol is mostly produced from sugarcane, with maize accounting for the remainder.¹⁰⁰ Paraguay uses around 55% maize and 45% sugarcane as feedstock,¹⁰¹ while the distribution between maize and sugarcane in Argentina is around half-half. Information on the intended use of exports is scarce, however, research by the USDA suggests that the comparatively small Argentinian exports are not used for fuel purposes.¹⁰²

EU bioethanol imports from Brazil as the largest Mercosur supplier are fluctuating but have shown an overall increasing trend during recent years (Figure 1). Volatility is caused by various factors, including weather conditions and sugar prices. The latter influences the production ratio between sugar and ethanol. In the first quarter of 2023, rising imports from Brazil led to a further 40% elevation of ethanol entering the EU market compared to the same period in 2022. This recent surge is linked to a high Brazilian sugarcane output and a weak Brazilian currency.¹⁰³

According to estimates by the ifeu Institute, sugarcane-based ethanol accounted for around 6.6% of the energy in EU and UK bioethanol consumption in 2020.¹⁰⁴ With the recent increase in imports from Brazil, this share may have increased since then.

Figure 1 EU imports of bioethanol from Mercosur countries (2013 to 2022)

Source: Eurostat (2023), "EU trade since 1988 by HS2-4-6 and CN8".
 Note: Imports for all uses, including denatured and undenatured supplies.

Ethanol currently faces a 21% tariff when entering the EU. The Mercosur trade agreement foresees a duty-free volume of 450,000 tonnes for chemical uses (see section 1.3). The EU chemical industry uses ethanol among others in the production of biochemicals and bioplastics, for which a significant production increase is expected in years to come.¹⁰⁵ Moreover, a volume of 200,000 tonnes of ethanol is foreseen for all uses, notably fuel, with an in-quota rate of 1/3 of MFN duty.^{iv}

Under the agreement, this volume would be phased in in six equal annual stages. The quota distribution will be negotiated among the Mercosur members. Brazil as the world's largest sugarcane producer is expected to take the largest part, with smaller shares supplied by Argentina and Paraguay.¹⁰⁶ Brazil is seen as having the potential to figure as a substantial supplier of biofuels that are not considered to be contributing to deforestation and for its producers to leverage the EU-Mercosur trade rate quotas.¹⁰⁷ However, there are various concerns around the environmental and social sustainability of sugarcane bioethanol originating from the country (see section 3.1).

2.2 Soy as a biofuel feedstock

According to Transport & Environment, the consumption of soy-based biofuels in the EU increased five-fold between 2015 and 2022. Even though soy is considered as one of the key drivers of deforestation in the EU Deforestation Regulation, soy-based biofuels are considered as a sustainable alternative to fossil-based fuels in the EU RED.¹⁰⁸

Soy-based biodiesel consumed in the EU is partially directly imported. Argentina is an important factor in this trade, accounting as the largest supplier for 37% of overall biodiesel imports to the EU in 2022. Direct biodiesel imports from the other Mercosur countries have been negligible.¹⁰⁹

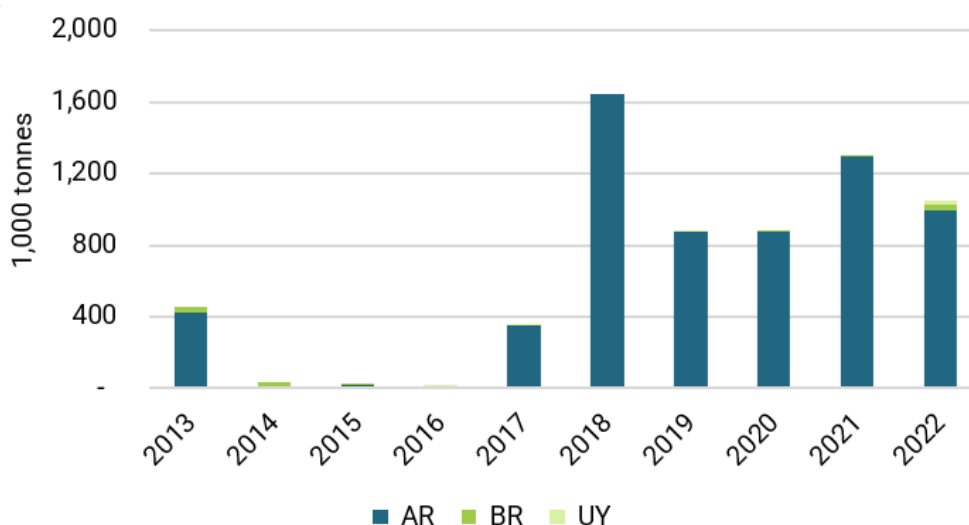
Argentinian biodiesel supplies saw large fluctuations in the last decade. It temporarily lost its access to the EU market in 2013, when anti-dumping measures were imposed by the Commission in response to Argentinian export duties on soybeans. The EU had to remove this measure in 2018 though, after Argentina won cases at the World Trade Organization and the European Court of Justice.¹¹⁰ Argentinian biodiesel exports to the EU subsequently surged, peaking in 2018 at more than 1.6 million tonnes (Figure 2).

iv MFN tariff rates are those applied by a country to imports from trading partners that are members of the WTO unless the country has a preferential trade agreement with specific countries that foresees lower import duties.

However, in response to what was assessed as unfair subsidies for Argentinian biodiesel producers, the European Commission imposed countervailing duties on imports from the South American country in 2019, ranging between 25% to 33.4%. Argentina was nonetheless able to defend its place as the largest supplier of biodiesel as several of its producers obtained approval to export to the EU without paying the duties under the condition that they sell at a minimum price.¹¹¹

In recent years, Argentina’s market share in overall biodiesel imports came under pressure though as imports from China increased, mostly consisting of double-counting biodiesel from used cooking oil (UCO).¹¹²

Figure 2 EU imports of biodiesel from Mercosur countries (2013 to 2022)



Note: The generic chemical term for biodiesel derived from renewable sources like vegetable oils is fatty acid methyl ester (FAME). Trade in FAME is reported at three levels: 96.5 to 100% by volume; greater than 30% but lower than 96.5%; up to 30%. However, as the two lower levels are only reported at negligible levels in imports from Mercosur countries during the last years, these have not been split out.

Source: Eurostat (2023), “EU trade since 1988 by HS2-4-6 and CN⁸”.

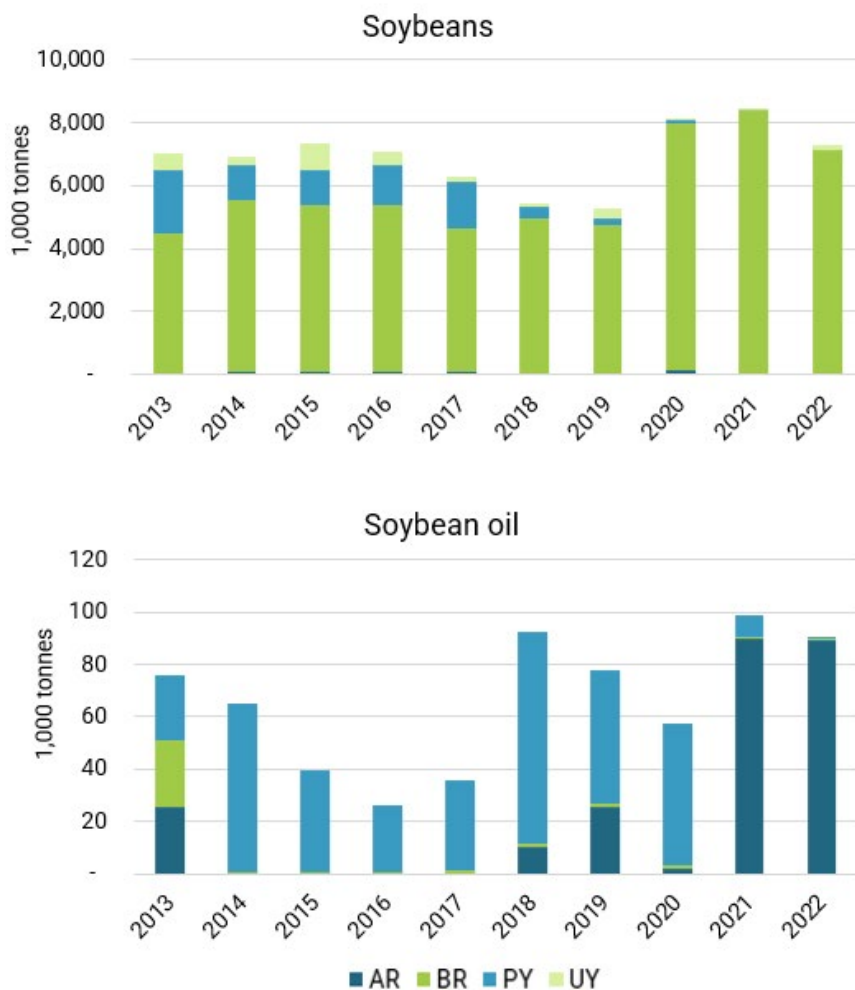
Next to soy-based biodiesel from Argentina, the Mercosur region is an important supplier of soy to the EU market. Both soybean and soybean oil imports are of relevance for the domestic production of biofuels in Europe. Most of the EU soybean supply – both from imports and own production – is crushed into two main products: soybean meal for animal feed and soybean oil for use in food, chemical applications, and biodiesel.

In 2022, Brazil was with 51% or 7.1 million tonnes the top supplier of soybeans to the EU, followed by the US with 35%. Brazil has in fact been a very important supplier of soybeans to the EU market during the last 10 years (Figure 3). Paraguay follows in a distance but lost significantly in importance in direct imports since 2018. This may be caused by growing exports to Argentina, which increasingly processed imported soybeans in recent years in reaction to plummeting domestic harvests.¹¹³ Therefore, part of the Argentinian exports may indeed be derived from soy imported from Paraguay, Brazil, Uruguay, or Bolivia.¹¹⁴

In comparison to soybeans, total EU imports of soybean oil are small at around half a million tonnes in 2022, of which Argentina supplied 18%.^v Among the Mercosur countries, Argentina took over the leading role in 2021. Previously, Paraguay was the main supplier for several years during the analysed 10-year period.¹¹⁵ However, recently the country’s exports of soybean meal and oil suffered from disappointing harvests, the increasing Argentinian demand for soybeans, and a change in domestic tax laws that made domestic soybean processing less attractive.¹¹⁶

v This lower relevance becomes clear when comparing imports of less than 100,000 tonnes of soybean oil from Mercosur countries with an average crushing result of almost 1.5 million tonnes of soybean oil from the soybean volumes imported by the EU from Mercosur countries in recent years.

Figure 3 EU imports of soybeans and soybean oil from Mercosur countries (2013 to 2022)



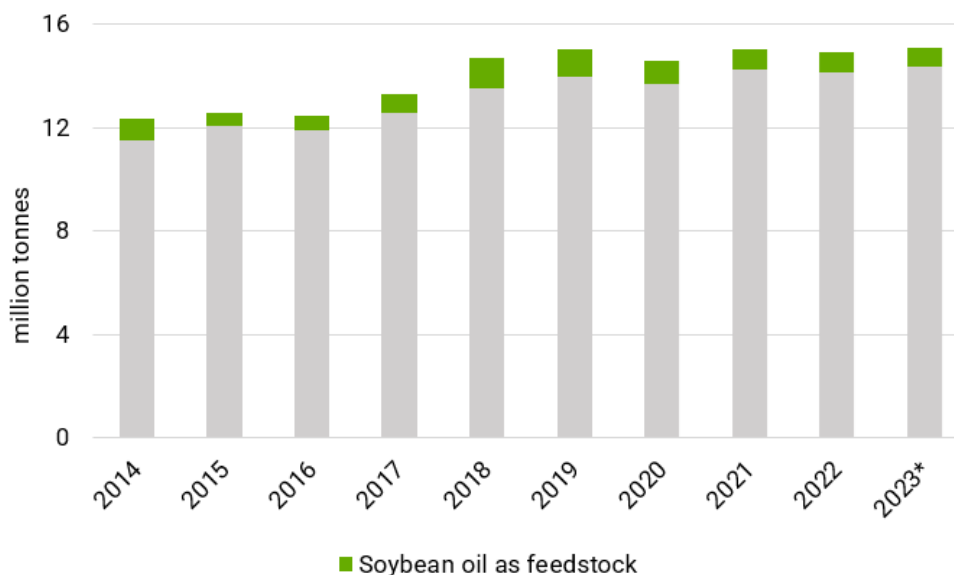
Source: Eurostat (2023), "EU trade since 1988 by HS2-4-6 and CN⁸⁹".

The lack of consistent disclosure across all EU markets makes it challenging to clearly map the volume of soybean oil used as biodiesel feedstock during recent years.¹¹⁷ According to the US Foreign Agriculture Service, in the period from 2014 to 2023, soybean oil accounted on average for 6% of feedstock use in biodiesel by volume (Figure 4).¹¹⁸ The ifeu Institute calculated the share of different crops based on energy consumption (petajoule (PJ)/year), concluding that in 2020, around 11% of the energy consumed in biodiesel in the EU plus UK originated from Latin American soy as feedstock.¹¹⁹

Starting in 2021, the REDII Directive foresees that the share of biofuels produced from food and feed crops shall not exceed a maximum of 7% of final energy consumption in the transport sectors in a Member State (see section 1.1.1).¹²⁰ In a controversial decision, soy was initially assessed as not being in breach of the threshold for high indirect land use change (ILUC) under the current REDII and therefore does not fall under the same phase-out regime until 2030 at the latest.¹²¹

However, in September 2022, the European Parliament voted to reduce the threshold for ILUC from 10% to 7.9%, and with that also putting soy with its 8% ILUC score on the list for feedstocks to be phased out. Moreover, the parliamentarians voted to shift the phase-out date for palm oil and soy from 2030 to as soon as the revised directive REDIII enters into force. In March 2023, environmental campaigners voiced concerns that the European Commission tried to repeal the Parliament’s decision over fears of legal challenges for unfair trade practices under the WTO regulations. NGOs alleged that the Commission may also be concerned that such a restriction could impair the ongoing negotiations around the Mercosur trade agreement.¹²²

Figure 4 EU use of soybean oil as biodiesel feedstock (by volume, 2014 to 2023)



Note: *2023 data based on forecasts.

Source: USDA Foreign Agricultural Service (2023, August), *Biofuels Annual - European Union*, pp. 24-25.

Soybeans currently do not face duties when entering the EU market, while soybean oil is still subject to an import tariff. Moreover, Argentina charges export duties on soy and vegetable oils. However, the country is expected to reduce these in steps under the Mercosur trade agreement, meaning that imports from the country may increase once the deal comes into force.¹²³ Depending on the decision around the role of soy in ILUC and consequently the use of soy as biodiesel feedstock, imports from Mercosur countries may further increase under the trade agreement. Similar to sugarcane, soy production is linked to serious sustainability concerns as discussed in Chapter 3.

3. Main sustainability impacts of first-generation biofuels

This chapter addresses the question: What are the main environmental and social impacts linked to the production and consumption of first-generation biofuels? The analysis is focused on soybeans and sugarcane, two of the most relevant crops for the production of biofuels, and Argentina and Brazil, the two key producing countries in this context.

3.1 Brazil

Brazil is the largest producer of both sugarcane and soybeans in the world, accounting for 41% and 34% of global production, respectively, in 2020.¹²⁴ For the production of bioethanol, Brazil mainly uses sugarcane, while soybeans are primarily used for the production of biodiesel.¹²⁵ Section 3.1.1 and 3.1.2 summarise the main sustainability issues related to sugarcane and soybean production for biofuels, respectively.

3.1.1 Sustainability impacts of sugarcane production for biofuels

Since 2009, environmental zoning (decree 6,961/2009) restrains the expansion of sugarcane into the Amazon and Pantanal biomes, Indigenous territories and environmental protection areas but permits expansion onto degraded land and cattle pasture covering six times the area currently planted with sugarcane.^{VI,126} However, the risk of indirect deforestation linked to expanding sugarcane cultivation by pushing other land uses into undeveloped areas remains.¹²⁷

This section provides an overview of the main environmental and social impacts of sugarcane production for biofuels in Brazil.

Environmental impacts

One of the main environmental impacts of sugarcane ethanol production in Brazil is the release of the by-products vinasse, which is an acidic suspension with high COD values, unpleasant odour and a dark colour, produced up until 20 times the volume of ethanol.¹²⁸ In Brazil, vinasse is primarily used for fertirrigation: it is added into irrigation water providing nutrients to the crops. However, it also causes degradation, especially when it is excessively used: pollution by vinasse can add up to a hundred times the pollution by domestic sewage. But even when not used excessively, environmental impacts from continuous land disposal of vinasse include soil salinization and organic overloading, as well as metal toxicity.¹²⁹

Various cases of excess release of vinasse into the environment have been reported, including: Atvos' Usina Santa Luzia plant was sued by the Public Prosecution Office in Mato Grosso do Sul state in 2018, for contributing to the proliferation of stable flies that harm livestock farmers and their animals, while Biosev's Unidade Santa Elisa, a mill in São Paulo, is linked to proven environmental pollution cases including leaks of vinasse, residual water, cleaning water and chemical products into water streams.¹³⁰

VI In 2019, then-president Bolsonaro revoked the zoning (decree 10,084/2019) with the aim to boost ethanol production. Researchers and civil society voiced concerns that the crop would become yet another driver of deforestation in these regions, through direct conversion of forest, rising land values, the move of livestock to new forested areas, and the risk of fires and related carbon emissions from burning sugarcane fields, which also likely breaches the rights of indigenous communities. However, the lifting of the zoning was halted by an injunction by the Federal Court in 2019 over a lack of technical or political reasons for the repeal of the previous rule.

Other environmental impact cases of sugarcane production relate to pollution of mangroves (Usina Trapiche, a mill in Pernambuco), damage to permanent conservation areas (Bunge's Unidade Frutale), and unauthorised field fires reaching native vegetation (Atvos' Usina Santa Luzia plant) and permanent conservation areas (Bunge's Unidade Uoreste).¹³¹

Human rights impacts

Sugarcane production in Brazil is associated with numerous violations of the rights of indigenous communities. Among the most salient violations related to sugarcane production is land grabbing. In this way, the indigenous communities belonging to the Guarani tribe have been forced off their lands; they now live in small areas in the south of Brazil, while in the past they occupied the land from Espirito Santo to Rio Grande do Sul.¹³² This has had detrimental impacts on the community who has a deep connection to its land, and is suffering from severe malnutrition, suicide and violence as a consequence. Attempts to return to their ancestral lands have been met with severe violence; 56 Guarani were reported to have been assassinated in 2010 alone.¹³³

One of the leading companies that has been involved in land grabbing for sugarcane plantations is Raízen, a joint venture between Shell and Cosan. Although the company announced in 2012 to stop buying sugarcane from indigenous lands after public pressure, the majority of Guarani land remains to be occupied by sugarcane plantations.¹³⁴

Likewise, Bunge has been regularly associated with social conflicts, including land grabbing and human rights abuses, in relation to its cane sugar production in Brazil. For example, in 2013, Bunge was found to be purchasing from sugarcane plantations located on grabbed Indigenous land.¹³⁵ In relation to this case, leader of the expropriated Jata Yvary tribe stated:

*"They've destroyed almost all our forest. They've destroyed our medicinal plants. And they've destroyed almost all our fruits and resources [...] They spray pesticides from planes. The children get headaches and start vomiting. All these illnesses are caused by the chemicals."*¹³⁶

In a response, Bunge stated that once the lands are designated as indigenous, they will stop purchasing immediately. At the same, the company also committed to not renew the contracts when they expired in 2014. Coca Cola, who is buying sugar from Bunge, responded with a zero-tolerance commitment to land grabbing, but it is still sourcing from BP Bunge.¹³⁷ No information was found evidencing whether Bunge is still buying from suppliers illegally operating on Indigenous lands.

The violations of rights of indigenous communities have reportedly gone from bad to worse under the Bolsonaro government, with increased violence, attacks, and discrimination.¹³⁸ But after years of rampant violence against Indigenous people under Bolsonaro's presidency, Lula's is now slowly turning the tide. One of Lula's first actions was the reinstatement of FUNAI, Brazil's National Foundation of Indigenous Peoples in charge of safeguarding Indigenous people's rights, including land rights.¹³⁹ More recently, President Lula officially recognised six Indigenous lands after years of stalling by the two former presidents, resuming the demarcation process.¹⁴⁰

Gendered impacts

Men and women are impacted in different ways as a result of the landgrabs for sugarcane cultivation. While families could grow their own crops on their land before the land expropriations, men are now generally forced to work as contract workers on plantations away from home to earn money. Women are then left to take care of the children. Mothers who are alone are disproportionately affected:

*"The sugar company needs to resolve the land problem so that we can start planting crops," said Keila Snard, a 46-year-old widow and mother of four. Keila's family relies on food from government distribution at a nearby health post each month.*¹⁴¹

In 2020, workers from Usina Trapiche (in Pernambuco state) were allegedly involved in a case of gender violence by local police against fisher woman and activist Maria Nasareth. Nasareth is an advocate for the rights of traditional communities.¹⁴² A 2022 investigation found that Usina Trapiche had been one of Raízen suppliers from 2018 to 2021.¹⁴³

Labour rights impacts

Labour rights abuses are common in the Brazilian sugarcane industry. In 2022, it was reported that Bunge's Moema Mill in Sao Paulo state was being sued for an accumulation of labour breaches: safety failures due to negligence, with incidence of accidents, including fatal ones; non-payment of commuting hours; and coercion of workers to report fewer hours than they had actually worked.¹⁴⁴

Additionally, Raízen has been directly or indirectly, via plantations from which the company sources, involved in numerous labour rights breaches: not paying workers for commuting hours in company-provided transport, laying-off workers without any negotiation or consultation with workers and unions, excessive working hours, hiring informal workers without a contract, poor living conditions and insufficient meals for workers, severe health issues due to exhaustion.¹⁴⁵ Furthermore, the company was reported to have several lawsuits and administrative procedures related to overtime, granting of intra-day breaks, irregular outsourcing, moral and material damages, accidents, and compliance with safety standards, among others.¹⁴⁶

Likewise, it is reported that Atvos' Conquista do Pontal unit in Sao Paulo state operated between 2018-2021 in breach of labour rights, including not paying workers for commuting hours in company-provided transport, omission of employment contracts, illegal outsourcing, poor working and sanitary conditions, and remuneration below the statutory minimum.¹⁴⁷

3.1.2 Sustainability impacts of soy production for biofuels

In March 2023, Brazil's National Council for Energy Policy announced the raise of the biodiesel mandate from 10% to 12%, with further stepwise increases to 15% in 2026. This is expected to spur the already growing demand for biodiesel, and consequently soybean oil, which amounts to around 60-70% of biodiesel in Brazil.¹⁴⁸ In combination with the government's support for export-led production of soybeans, this would require a growth in the production of soybeans.¹⁴⁹ In line with this, the government plans the construction of the EF-170 Ferrogrão railway, which aims to reduce transport costs between the states of Mato Grossa and Pará, where soybeans are among the main commodities produced. Although the railway was suspended by the Supreme Federal Court in March 2021, the government resumed work on the railway beginning of 2023.¹⁵⁰

This section provides an overview of the main environmental and social impacts of soy production for biofuels in Brazil.

Environmental impacts

The disastrous environmental impacts of soy production in Brazil are well-documented and include deforestation, intensive cultivation and monoculture, negative impacts on soil, air and water, and water consumption. Yet soy-based biodiesel gives a relatively low energy balance and carbon saving compared to other biofuels, exacerbating the environmental impacts.¹⁵¹

According to an environmental impact assessment of biodiesel production from soy in Rio Grande do Sul, the largest impact from the agricultural stage of soy cultivation results from input use, especially phosphorus-rich fertilizers and herbicides for weed control. The first contributes to the depletion of fossil fuels, emissions of GHG gases, acidification of soils and water and respiratory in organics causing health issues, while the latter contributes to the emission of carcinogens and radiation, depletes mineral resources and leads to eco-toxicity: the impact of toxic substances emitted to the environment on freshwater organisms.

The main impact of the extraction and refining phase of soybean oil constitutes the emissions to air, land, and water due to the use of diesel in the production process. Furthermore, the release of phosphoric acid negatively impacts soil quality. In the transesterification (last) phase, methanol constitutes a large polluter of the environment, also leading to human health issues: emissions of carcinogens and radiation, eco-toxicity, acidification of soils and water and soil quality.¹⁵²

In Brazil, some of the largest soy processors for biodiesel are ADM, Bunge and Cargill, which committed to not supply soy from recent deforested areas.¹⁵³ However, these companies have all been associated with deforestation. In 2018, five companies, including Cargill and Bunge, were fined by the Brazilian authorities for activities relating to illegal deforestation in the Cerrado.¹⁵⁴ A report by Mighty Earth revealed in 2022 that Bunge, Cargill, COFCO, LDC and ALZ Grãos continued to source soy from suppliers engaged in deforestation since August 2020. These traders deforested at least 27,000 hectares in the Cerrado.¹⁵⁵ Furthermore, Agrícola Xingu, a major soybean supplier to multinational trading companies such as Bunge, is allegedly responsible for deforestation and degradation of a permanent protection area during 2016. In a response to the allegations in 2021, the company did not comment on the environmental infractions but stated it makes efforts to preserve the environment.¹⁵⁶

Lastly, the construction of the Ferrogrão railway, which resumed beginning of 2023, will also have considerable environmental impacts. The Climate Policy Initiative conducted an ex-ante environmental evaluation of the railway and found that the improved market access will incentivise farmers to expand area under production. This will likely lead to increased deforestation of 2,043 km² and carbon emissions of 75 million tons in the state of Mato Grosso.¹⁵⁷

Human rights impacts

Soy production for biofuels has been associated with various breaches of the rights of Indigenous communities.

A report by Global Witness published in November 2021, describes how the expanding soy production in the Bahia region has led to land conflicts and breaches of the rights of Indigenous communities. Particularly, the Capão do Modesto community from the Correntina municipality in the Cerrado region has been the victim of “green land grabbing”: land grabbing in order to adhere to the 2012 Forest Code, requiring companies to maintain “legal reserves” of native vegetation land to be conserved as an offset to the agricultural productivity elsewhere in the Cerrado.¹⁵⁸ Even though the Capão do Modesto community is recognized by the state government as traditional people, large agricultural companies claim to be the owners of the land the community lives and depends on. Since 2017, they have been attempting to evict the community through a lawsuit calling them “invaders” and destroyers of the environment”. Apart from the land grabbing, community members reported to have been intimidated, threatened, physically attacked and litigated, while their properties were destroyed. After a short victory where the higher court ruled in favour of the community arguing their rights were at risk, in 2019 it overturned the decision and accepted the producers’ claims that the community was causing environmental damage. According to the report, clear links can be drawn with international traders like ADM, Bunge and Cargill, who source from Correntina and have, in this way, contributed to the breaches of human rights of the Capão do Modesto community.¹⁵⁹ Also *Réporter Brasil* reports links between Agrícola Xingu, owning several farms in the region, via ALZ Grãos to Cargill, COFCO and Bunge, including for the production of biodiesel.¹⁶⁰

Another recent case of land grabbing involves Cargill and Bunge as well, linking the companies to a contested farm in Mato Grosso do Sul that is breaching human rights of the traditional community of Guarani Kaiowá and has been associated with the murder of Guarani Kaiowá leader Marcos Veron. The Brazilian government has recognized the community’s land as indigenous land but despite this victory, the court ruling has not been conclusive yet.¹⁶¹

In addition, the cultivation of soy and production of biodiesel in Brazil create severe health effects, through the emissions of carcinogens, radiation, GHG gases and respiratory inorganics.¹⁶² In this way, the expansion of soy monoculture in Brazil has led to people being forced to leave or sell their land because of the pesticide use on neighbouring soy plantations. The pesticides contaminate the water in the rivers, soil and air around the city of Santarém, where Cargill arrived 20 years ago.¹⁶³

Strikingly, under Bolsonaro's presidency, media reports that the rate of food insecurity has skyrocketed in Brazil. This is because large farms have received all sorts of government support, while they produce for export (including soy), not food, and subsistence farming is perceived as unimportant. This has reportedly exacerbated issues of illegal land grabbing and deforesting to appropriate land.¹⁶⁴

Lastly, it is reported that Brazil is one of the most dangerous places in the world for land and environmental defenders: according to Global Witness, 300 were killed between 2012 and 2020, of which many indigenous persons.¹⁶⁵

Gendered impacts

Women are affected disproportionately as a result of land grabbing, because women are generally responsible for taking care of the family, including food security, with a leading role in subsistence farming. So, when they are convicted from their lands, an important food source is lost. Also, it is suggested that child prostitution increases in regions where many vehicles drive on and off from other regions, such as in the area around Santarém, where soy production started 20 years ago.¹⁶⁶

Labour rights impacts

According to research in the Sertão municipality in southern Brazil, plantation labourers that are exposed to thyroid-disrupting pesticides during their working time run the risk of detrimental health issues.¹⁶⁷

3.2 Argentina

Argentina's largest commodity export is soy, primarily in the form of soymeal. Over 25% of Argentina's soy exports enter the EU market through the Netherlands.¹⁶⁸ The agroindustrial production model of Argentina has been consistently linked to environmental and human rights violations. These are described in the following subsections.

3.2.1 Sustainability impacts of sugarcane production for biofuels

Environmental impacts

Although 98% of the sugarcane in Tucumán is harvested green,^{VII} in the year 2016, there was a new increase in the burned area, reaching 19% of the province's sugarcane area, about 52,300 hectares. This increasing trend continued in the years 2017 and 2018, with sugarcane areas affected by fires covering 68,540 hectares and 86,500 hectares, respectively, representing a 25% and 32% increase in each case. In 2020, the burnt sugarcane surface increased to 40%.¹⁶⁹ Information from news sources and testimonies from locals have indicated that families' homes are impacted by fires, leading to the destruction of their fields. These incidents can stretch for several kilometres, creating a nightmarish situation for entire towns.¹⁷⁰

VII "Harvesting green" in the context of sugarcane production refers to the practice of cutting and harvesting sugarcane plants before they reach full maturity. In this method, the sugarcane is harvested when it is still relatively young and green, rather than allowing it to fully ripen. Harvesting sugarcane green is a common practice in many regions because it often leads to higher sugar content in the harvested cane.

Sugar mills covertly accept burned sugarcane, a practice prohibited by law, primarily at night. This low-yield raw material, unfit for sugar production, is instead utilised for more profitable alcohol manufacturing. The sugar industry is caught in an 8-year cycle of overproduction due to increased production costs and plummeting prices. The fires become difficult to control due to the low temperatures and the drought affecting Tucumán in the past years.¹⁷¹

Human rights impacts

In 2016, Tucumán had a total of 7,018 sugarcane producers, with 76% of the land owned by 461 producers having 100 hectares or more. These large-scale producers include sugar mills, which lease 20% of the cultivated area under disadvantageous terms for smaller farmers. Small sugarcane farmers, covering 8% of the land, lack credit access, live in precarious conditions, and have lower yields (50 tons/ha) compared to larger companies (80 tons/ha). This situation highlights a land concentration process, leaving small farmers at a significant disadvantage in negotiations with sugar mills.¹⁷²

Labour rights impacts

In Argentina, 99.5% of sugarcane cultivation is concentrated in the provinces of Tucumán, Jujuy, and Salta. While large mills have shifted from manual to mechanised harvesting over the past three decades, many small producer families and sugarcane labourers still involve their children in the work. This situation is contributing to the highest child labour rates in the country, with 20.1% of children engaged in productive activities in rural areas, and even more adolescents likely involved. These numbers could be even worse than reported, given that the latest data predates the pandemic and was collected in the Survey of Children and Adolescent Activities conducted by the National Institute of Statistics and Census (INDEC) and the Secretariat of Labour and Employment in 2018. The prevalence of child labour results from the region's poverty levels coupled with the demand for temporary labourers needed for harvesting citrus fruits, strawberries, cotton, chia, and sugarcane. It is important to highlight that seasonal workers, especially those employed for the harvest, have historically faced extremely harsh working conditions. The majority of these jobs lack proper registration, are temporary and informal, offer no accident insurance, health benefits, or retirement plans. Additionally, the monetary compensation for these positions is significantly lower than what permanent workers receive. Workers in these roles endure gruelling 12-hour workdays, face the risk of machete injuries, endure extreme heat, and are exposed to toxic pesticides, leading to respiratory problems, eye discomfort, and even chronic kidney diseases.¹⁷³

Governance impacts

Moreover, Law 6,253 for the defense, conservation, and environmental improvement, which prohibits the burning of sugarcane and pastures, stipulates monthly air monitoring, control of GHG emissions, and their impact on public health. However, neither the Provincial Government nor the Provincial Health System have conducted any official studies or clear statistics on the situation. There are also no official figures on the emissions of microparticles from the sugar mills. Despite the government's claim that the mills have wet filters in their chimneys, protests in the town of Monteros contradict this statement. Likewise, according to local activists, the burning of sugarcane fields in Tucumán and its effects on the environment and human health have been minimised by Argentina's press and scientists alike. In this context, the highly profitable economic mechanisms resulting from sugarcane burning are downplayed or not mentioned at all. This exposes the true intentions of the government, scientific institutions, and media outlets, which aim to protect the profits of large sugarcane growers and mills.¹⁷⁴

3.2.2 Sustainability impacts of soy production for biofuels

Environmental impacts

Soy production has been directly linked to the deforestation of vast areas of the Grand Chaco. In Argentina's Chaco, 40,000 – 60,000 hectares are deforested every year to give room for the cultivation of genetically modified soy. Argentina's Forest Law categorises areas into protected zones, sustainable use areas, and zones where land use change is allowed. However, this regulation is insufficient to ensure the protection of forests. Powerful forces from companies and agricultural producers are pushing to convert more land for farming, driven by a continuous global demand for raw materials, particularly soy and meat. These companies consistently lobby the government to adopt more flexible territorial planning measures.¹⁷⁵

Human rights impacts

Argentina's agroindustrial model has been linked to multiple human rights violations. In January 2019, UN Special Rapporteur on the Right to Food, Hilal Elver, pointed out that Argentina's intensive soy agribusiness was a significant factor contributing to the country's year-long economic crisis. In this context, the crisis negatively impacted the availability of healthy food. Elver's report to the Human Rights Council's fortieth session emphasised that the current industrial agriculture model in Argentina, prioritising soy production for export over a diversified agricultural sector, has jeopardised the country's food security. In her report, Elver emphasised that landless peasants, agricultural workers, migrants, and indigenous people are the most affected by this problem.¹⁷⁶

Likewise, Argentina's agroindustrial model poses human health risks. In 2018, EU exports of pesticides to Argentina reached a value of € 78 million. Aside from the fact that the EU banned the use of this substance in 2019, the permissible residue level of the fungicide chlorothalonil for soybeans in Argentina is twenty times greater than the EU's approved limit. By the same token, the maximum permissible residue level in Argentina for the insecticide carbaryl, which was prohibited in the EU in 2007, is 200 times higher than in the EU. Against this background, it is not surprising that in 2019 there were 171 cases of pesticide poisoning in Argentina.¹⁷⁷

Further, soy cultivation in Argentina's Chaco has been pushing smallholder farmers out of their lands. In this context, in the past 30 years, there has been a 9% decrease in smallholder farms. This decrease is due to the growing unavailability of resources these farmers need for their subsistence such as firewood, timber, grazing lands, medicinal plants, and wild meat, the latter being an important part of these farmers' diets. Smallholder farmers have been forced to migrate the drier lands in Argentina.¹⁷⁸ By the same token, the threat hanging over the forests of Chaco also affects the few Wichí Indigenous communities residing in those territories. Typically, before deforestation takes place, these families have their rights violated, are deceived, and are compelled to leave their homes.¹⁷⁹

Labour rights impacts

In February 2021, a federal court in Northern Argentina ordered a raid on a 13,000-hectare farm cultivating soybeans, corn, and sorghum. Seventeen workers, including 8 minors, were rescued. The raid revealed extensive labour violations, including excessive working hours, below-standard salaries, poor hygiene, and unsafe conditions. Workers were owed weeks of payment, receiving less than half of the minimum wage for clearing work from sunrise to sunset. They cooked outdoors, slept in pest-infested makeshift tents, and lacked access to clean water, having to obtain it 3 km away. The underage workers were exploited and had abandoned school.¹⁸⁰

Overall, Argentina's export-oriented production of soy has impacted the quality of employment for populations in the Humid Pampas (one of the major areas where soybeans are grown). In this context, rural

workers must string together various types of jobs or self-employment, not always guaranteed throughout the year, to survive. In the case of Pampean agriculture, this implies a higher level of job insecurity. This is because Argentine workers are more severely deprived of important material goods or the training to ensure their independent subsistence during agricultural unemployment cycles.¹⁸¹

Governance impacts

Soy production in Argentina has also been linked to illegal activities. In this context, in April 2023, over 50 tons of soy were confiscated in Chaco Province because they were being transported without authorisation.¹⁸² In October 2023, 117 tons were confiscated again. Transporting goods without proper authorisation in Argentina is a violation of the country's fiscal and customs regulations. This can result in significant penalties and fines imposed by the authorities. Moreover, the illegal transportation of goods can facilitate illegal activities such as smuggling and tax evasion, which have a negative impact on the country's economy. It can also lead to unfair business practices, harming companies that comply with regulations and contribute appropriately to taxes and tariffs.¹⁸³

4. Implications of the EU-Mercosur deal for the expansion of first-generation biofuels

This chapter analyses the shortcomings of the EU-Mercosur deal and discusses the social and environmental implications of the possible expansion of first-generation biofuels.

As it stood in 2019, the agreement foresaw a reduction in tariffs that would favour agricultural production in the Mercosur countries, particularly three commodities that drive deforestation, damage to the environment and acceleration of climate change: sugarcane, soy, and meat.¹⁸⁴ Moreover, the Agreement would:

- Increase the flow of dangerous pesticides from the EU to Mercosur countries, thereby increasing the risk of pesticide-linked human rights abuses.
- Pressure regulators to speed up approvals of genetically modified, pesticide-dependent crops and expand their cultivation.
- Risk economic harm to the organic and agroecological farming sector in Mercosur countries, while undermining next-generation food, environmental and public health policy in both the EU and Mercosur.¹⁸⁵

The EU and Mercosur had already reached an agreement in 2019 that allowed the export of ethanol up to 450,000 tonnes of ethanol for chemical use and 200,000 tonnes of ethanol for all uses at an in-quota duty of one-third the most-favoured-nation (MFN) rate.¹⁸⁶ It is not clear whether these tariffs and quotas will be further expanded under the new agreement.

What is known, however, based on the EU-Mercosur joint instrument document leaked in February 2023 (see 1.3), is that there is still a gap between Europe's stated commitments under the Paris Agreement and the actions it takes to operationalise those commitments, especially in the context of its FTAs. This mismatch between theory and practice is analysed in the next section and the social and environmental implications of the EU-Mercosur agreement are discussed in the subsequent sections of this chapter.

4.1 Limitations of EU legislation to prevent biofuel expansion under EU-Mercosur Agreement

Researchers point out that the EU-Mercosur FTA lacks specific and enforceable measures to curb deforestation and human rights violations. While forests and human rights are mentioned in the TSD chapter, this chapter falls outside the Agreement's dispute settlement provisions. In this context, forest provisions address illegal logging but overlook major drivers like soy, beef, or sugar grown on illegally deforested land, which contribute significantly to deforestation.¹⁸⁷

The leaked joint instrument, revealing these issues, lacks robust enforcement measures, excludes consultation with local communities and indigenous peoples, and lacks specific priorities. Additionally, the development of a roadmap to fulfil commitments is postponed until after ratification, reducing potential leverage.¹⁸⁸

Moreover, the leaked joint instrument offers vague environmental and climate commitments. In this context, the joint instrument requires governments to adhere to their previously established Nationally Determined Contributions (NDCs) set in June 2019. Paradoxically, the agreement promotes activities like agriculture, a significant contributor to deforestation and greenhouse gas emissions in Brazil, without implementing measures to address these issues. Although the instrument sets an interim target to reduce deforestation by at least 50% by 2025, it violates Brazil's stricter laws. According to FERN, this target would practically permit a 47% increase in Brazil's 2020 deforestation target.¹⁸⁹ Further, EU imports from Mercosur, including products like soy, sugarcane, and poultry linked to deforestation, are increasing (see Chapter 2). The agreement is expected to further boost these exports, undermining the efforts to curb deforestation.¹⁹⁰

Likewise, the leaked document lacks any commitment from the EU to halt exports of pesticides banned within the EU due to their health or environmental risks. Moreover, the leaked joint statement does not acknowledge the potential breaches of Indigenous rights that will likely result from the expansion of the agricultural frontier. Additionally, there are no provisions to link tariff preferences with adherence to sustainability standards, especially for environmentally sensitive goods. The agreement fails to address this issue, potentially allowing the entry of goods produced using practices prohibited in the EU.¹⁹¹

By the same token, the joint instrument asserts the involvement of civil society and Indigenous communities in the negotiation process and emphasises democratic participation. However, these groups, along with small-scale farmers, have been excluded from decision-making since the beginning of negotiations and were never part of any significant processes. Moreover, the agreement weakens Indigenous rights, and the joint instrument was negotiated secretly and revealed through a leak. Simultaneously, corporate lobbyists from polluting automotive and agribusiness industries, known for human rights violations and environmental push backs, were given a voice in the negotiations by the EU.¹⁹²

But even when these issues were resolved and an agreement on 'mirror clauses' was reached that would set the same standards for both blocs based on EU legislation, the lack of coherence remains of EU's legislative instruments to halt deforestation and champion Europe's Paris and Glasgow commitments and to safeguard human rights.

In this context, while Fit for 55's provisions to mitigate the environmental impacts of the policy framework are far-reaching and legally binding, its social elements still have limited scope and purpose. This leaves the EU without the instruments necessary to deal with the negative impacts of its energy transition on people and the environment. Moreover, the proposed Council Recommendation on ensuring a fair transition towards climate neutrality does not have a binding legal effect.¹⁹³

Moreover, with the entering into force of the third iteration of RED (or RED III/IV), MSs must increase their national contributions outlined in their energy and climate plans to collectively achieve a target of 40% of energy from renewable energy sources in the overall energy mix by 2023. To reach this goal, ambitious sector-specific targets and measures were established to integrate renewables in slower sectors. For transport, member states can choose between a 14,5% GHG intensity reduction target or ensuring at least 29% renewable energy consumption in the sector by 2030 (see section 1.1.1). Binding sub-targets for advanced biofuels and renewable fuels of non-biological origin were set, and energy consumption in the maritime sector was capped for specific transport targets.¹⁹⁴

The regulation emphasises its application in conjunction with the Renewable Energy Directive concerning certain commodities used for biofuels, such as soy and palm oil derivatives. This alignment ensures policy consistency across EU legislation, as both regulations share common objectives of combating climate change and biodiversity loss.

4.2 Implications of the EU-Mercosur deal for the expansion of first-generation biofuels

4.2.1 Environmental implications

There is wide consensus about the adverse environmental effects of trade liberalisation.¹⁹⁵ In assessing the coherence of Europe's trade policy and its targets for "green" transport fuels under the objectives of the Paris Agreement and the Glasgow Pact, the connection between deforestation, and climate change is crucial. Forests and soils store carbon dioxide, helping mitigate global warming. It is estimated that increased ethanol trade could lead to a 4% rise in CO₂ emissions. In this context, two-thirds of the new emissions will occur on farms due to higher fertilizer use (and manure usage in the case of animal farming to increase poultry and beef trade), while approximately 30% will stem from changes in land use, including deforestation.¹⁹⁶

The EU-Mercosur agreement could potentially hinder or even contravene the objectives outlined in the Paris Agreement and the Glasgow Pact. The FTA will provide new incentives for exports and lead to significant changes in land use, particularly in ecologically sensitive and high carbon stock areas like the Amazon, Brazilian Cerrado, and Gran Chaco (spanning Argentina, Paraguay, Bolivia, and Brazil). The Brazilian Cerrado is a tropical savanna while Gran Chaco is a mosaic of grasslands, savannas, swamps, and scrublands and the second largest forested ecosystem in the world after the Amazon.¹⁹⁷ None of these ecosystems are currently covered by the EU Deforestation Regulation (section 1.2.1), which, however, is said to be embedded in the EU-Mercosur agreement.¹⁹⁸ Research conducted by Brazilian scientists indicates that the EU's yearly deforestation impact is expected to rise due to the EU-Mercosur agreement.¹⁹⁹ Another study predicts a 5% annual increase in deforestation in Mercosur nations for the initial six years post-ratification, with some civil society organisations suggesting this increase could reach 25%.²⁰⁰ Additionally, academics have observed a significant surge in deforestation following the implementation of FTAs, notably correlating with expanded agricultural land conversion.²⁰¹

Next to deforestation via the expansion of the agricultural frontier, the increasing demand for agricultural commodities, together with domestic demand, will increase the use of pesticides, which are required to cultivate large tracks of land with monocultures. The elimination of tariffs on EU pesticide exports to Mercosur is likely to exacerbate severe environmental and human health impacts such as soil and water pollution. By the same token, The EU-Mercosur deal's primary aim is to boost trade between the blocs, which will unavoidably result in a surge in cargo ships travelling between South America and Europe. Transportation and deforestation are major sources of pollution. Both ships and planes contribute to the burning of fossil fuels, escalating GHG emissions, particularly CO₂. The heightened trade between Mercosur and the EU will undeniably demand increased maritime transport.

4.2.2 Human rights implications

One of the main weaknesses of the EU-Mercosur Agreement arises from its failure to account for the economic and social disparities between the blocs, leading to negative consequences for specific industrial sectors. These consequences include increased competition from EU products with a 0% tariff, leading to the loss of the Mercosur bloc's internal market to European counterparts. Particularly, industrially manufactured goods would be affected. The negotiated regulations concerning trade, services, and other aspects could adversely impact the interests of Mercosur countries and significantly affect workers, potentially increasing unemployment, precarious work conditions, and poverty among the population.²⁰²

Moreover, the agreement will increase opportunities for agribusiness products without providing assistance to small-scale farmers or promoting local food production. In fact, the expanded export markets in Latin America are anticipated to intensify challenges for Indigenous and peasant communities, forcing them off their lands. Additionally, this could lead to heightened conflicts over water resources due to the increased need for irrigation and cattle farming, further contributing to deforestation and biodiversity loss.²⁰³ Likewise, the increasing demand for ethanol and soy is likely to exacerbate the widespread use of forced labour in Brazil and Argentina.²⁰⁴

Lastly, the increasing use of pesticides to likely result from the EU-Mercosur Agreement (see previous point) is expected to affect children particularly. Pesticide residue levels in food and drinking water of Mercosur have been found to be double or triple the limits in the EU. In this context, the health of Indigenous children is expected to be disproportionately affected by the increased use of pesticides. This is all the more concerning because the EU sells pesticides banned in the European Union to countries like Brazil and Argentina. Not only are these countries utilising pesticides of extremely high toxicity, such as glyphosate, but they are used in much higher quantities too. For instance, the acceptable level of glyphosate residue in coffee and sugarcane in Brazil is tenfold higher than the limit set in the EU.²⁰⁵

4.2.3 Implications for state regulatory capacities

The EU-Mercosur Agreement is widely acknowledged as an asymmetric deal. This disparity stems from the distinct specialisation of the blocs in exporting products with varying levels of added value. Mercosur primarily exports raw materials to the EU, while EU countries export high-value goods like medicines, vaccines, aeroplanes, engines, auto parts, and finished automobiles to Mercosur. This asymmetry raises concerns about the perpetuation of historical patterns of unequal power relations in the international distribution of labour. Despite this, the agreement does not encourage export diversification, echoing similar patterns seen in other agreements between the Global South and the Global North.

However, the EU-Mercosur Agreement goes beyond trade-related matters, incorporating regulatory chapters known as “behind-the-border issues,” similar to other FTAs. These chapters limit states’ control over economic activities such as services, financial services, telecommunications, e-commerce, public procurement, intellectual property rights, and foreign investments. These provisions significantly impact states’ regulatory capacity once the agreement is active. States commit to not restricting capital movement, imposing performance requirements on investors, like technology transfer, or favouring domestic companies within these chapters.²⁰⁶

While safeguards to prevent deforestation due to the expansion of, for example, biofuels (and altogether the agricultural frontier due to increasing demand for agricultural commodities) cannot be enforced because they are not legally binding,^{viii} the Agreement’s proponents point to the potential leverage of the Deforestation Regulation. In this context, the Deforestation Regulation creates due diligence obligations, but leaving the enforcement of sustainability criteria solely to this regulation ignores the interplay between trade agreements and unilateral measures (such as EU Directives and Regulations). The EU considers sanctions a last resort and instead emphasises cooperation and linking trade agreements with unilateral measures in its 2022 Communication “The power of trade partnerships: together for green and just economic growth”. This approach is relevant to the EU-Mercosur Agreement, where the Deforestation Regulation has raised concerns among members of the southern bloc. Specifically, Mercosur countries must enforce EU’s laws to combat deforestation, leading to significant investments in certification and logistics for future exports to the EU. Moreover, unilateral requirements pose challenges, especially for small and medium-sized enterprises (SMEs) and farmers, potentially reducing the incentive for trade agreement participation, particularly regarding sustainability obligations.²⁰⁷

VIII The dispute settlement mechanism in the trade chapter of the EU-Mercosur FTA strictly addresses violations of trade obligations within the Agreement. Other chapters, such as the Sustainable Development chapter, establish a separate dispute resolution system. This makes it incompatible to legally challenge any Agreement member state for non-trade obligations, in this case, environmental issues, through commercial means.

5. Conclusions and policy recommendations

Based on the analysis provided in the previous chapters, this chapter provides conclusions and recommendations

5.1 Conclusions

The proposed EU-Mercosur deal has faced criticism from various governments, parliaments, farmers, trade unions, and civil society groups on both sides of the Atlantic. Opponents view the deal as harmful to local agriculture, nature, workers, industries, human and animal rights, biodiversity, and the climate. In this context, the relaxation of export quotas for agricultural products in Mercosur countries, particularly Brazil, will likely lead to an increase in exports to the European bloc.

The EU's expected rise in ethanol imports through the FTA is intended to champion Europe's climate goals as well as its energy independence. At the same time, the increased EU imports of cost-effective soy products might serve as appealing feedstock for the biodiesel industry in Europe. This is anticipated to intensify the agricultural biotechnological model, expanding agricultural and livestock activities. This expansion may contribute to deforestation in the Amazon and other forested regions and exacerbate other risks related to deforestation, such as land grabbing and violations of Indigenous rights. Moreover, the expansion of the agricultural biotechnological model will lead to an increase in the use of pesticides and chemical fertilizers in crops, thereby not only contributing to GHG emissions but also negatively affecting the health of humans, animals, and ecosystems.

The EU Commission has defended the FTA, claiming it would be beneficial and aid in implementing international environmental law and champion the UN Sustainable Development Goals. In this context, the EU has argued that concerns raised by civil society can be addressed through the EU's Deforestation Regulation. However, this regulation, aside from establishing due diligence obligations for downstream companies based in Europe, excludes Mercosur core commodities such as sugarcane and ethanol, among other. As such, the EU Deforestation Regulation will not be enough to avoid the likely environmental and social impacts of the EU-Mercosur FTA.

5.2 Policy recommendations

- First and foremost, the EU must aim to significantly reduce transport's carbon footprint by substantially decreasing the energy demand of transport; reducing transport needs and focusing on renewable alternatives that are truly sustainable (designing policies that prioritise the affordability and efficient use of public mass transportation, promote active mobility, etc.) Rather than relying on biofuels, which have shown to have negative impacts on the environment, climate, and human rights. In reducing the emissions linked to freight transport, EU and MS governments should design policies that prioritise the lowest emitting transport modes, shorten supply chains, and encourage local production and consumption.
- After 20 years of negotiation, it is unlikely that the EU-Mercosur FTA will be renegotiated again. Given the asymmetrical nature of the deal between blocs, and the expected impacts on deforestation, land grabbing, human, animal, and ecosystem health, among other social and environmental impacts, the EU-Mercosur FTA must be rejected. This assertion is further supported by the fact that the additional

instrument that was negotiated by the EC to safeguard human rights and the environment is non-binding and has been characterised as inefficient.

- With regards to the EU's legislation governing the use of biofuels, the EU must stop counting the contribution of all first-generation biofuels, including sugarcane and soybean feedstocks, towards the EU's Renewable Energy Directive targets by 2025 at the latest. Moreover, the EU must enable the adoption of additional sustainability criteria at MS level in the context of the transposition of RED III and improve and enforce the monitoring mechanism as required by this Directive. This result can be achieved by including more frequent independent audits and include impacts in third countries in the reporting obligations of MSs. As part of human rights due diligence procedures, require gender-sensitive auditing and monitoring that include stakeholder consultation.
- Likewise, the EU must include an accountability and remedy mechanism as part of the Just Transition Mechanism to compensate for the damaging impacts of past projects outside Europe and include all first-generation biofuel feedstock, including sugarcane, in the risk sectors that fall within the scope of the EU Deforestation Regulation.
- Further, advanced biofuels (i.e., biofuels produced from non-food feedstocks such as agricultural residues, woody crops, algae, and other non-food crops) in transport should only be considered as counting towards renewable energy targets if a robust impact assessment supports these claims.
- Overall, the EU must formulate comprehensive and legally binding social and environmental sustainability criteria for first-generation biofuels, advanced biofuels, and fossil fuels, especially when produced in third countries; to cover land and water grabbing; land, water and air pollution and degradation; impacts on ecosystem services; impacts on governance; respect human rights through the entire value chain, including food security and food sovereignty, health, decent work, child labour, women's rights, and Indigenous people's rights.

Abbreviations

CEP	Clean Energy for All Europeans
EC	European Commission
EGD	European Green Deal
EIB	European Investment Bank
EP	European Parliament
EU	European Union
FTA	Free Trade Agreement
GHG	Greenhouse gas
ILUC	Indirect land use change
JTM	Just Transition Mechanism
Mercosur	Mercado Común del Sur (Southern Common Market)
MEPs	Members of the European Parliament
MS	Member State
MFN	Most-favoured-nation
RED	Renewable Energy Directive
TDS	Trade and Sustainable Development

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