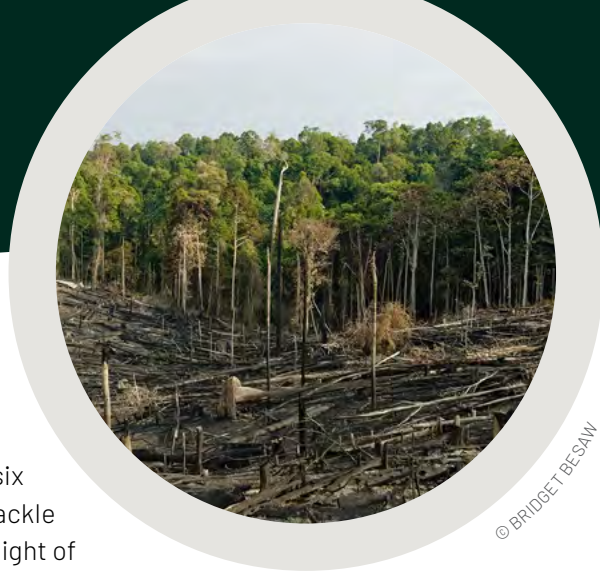


# The Resilience Dividend

REFRAMING DEFORESTATION AND CONVERSION-FREE POLICY  
AS A EUROPEAN STRATEGIC PRIORITY

# Executive summary



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Amidst recent geopolitical uncertainty and ensuing political need to prioritise security and competitiveness objectives in Europe, it is critical to stay the course on other existing priorities. Over the past six years, European countries have developed an ambitious agenda to tackle their deforestation footprint, only for this work to be scaled down in light of fresh challenges to the continent. This can be seen most recently through the second subsequent delay of the EU regulation on deforestation-free products (EUDR) in November 2025. However, these delays obfuscate the reality that preventing global deforestation is closely tied to Europe's security and competitiveness. Utilising deforestation and conversion-free (DCF) measures, European governments can equip themselves with tools needed to stabilise increasingly volatile agricultural supply chains, mitigate financial, health, and illicit risks associated with deforestation, and strengthen geopolitical partnerships with key partners. Re-emphasising Europe's commitment to reducing global deforestation shouldn't be seen as an obstacle but a key strategic interest.

## 1. Deforestation and conversion cannot be viewed in a vacuum— they have a direct impact on European food, economic, financial, and health security

Deforestation and conversion of natural ecosystems have far-reaching security implications in Europe. European countries are highly dependent on imports of high forest-risk agricultural commodities such as soy, beef, palm oil, coffee, and cacao. These five commodities alone account for more than 20% of the EU's total agricultural import value. The UK shows a similar amount of dependency with more than 40% of its food coming from overseas. Yet, domestic production of these commodities is minimal or non-existent, creating reliance on very limited sources of supply from outside of Europe. As deforestation and conversion of natural ecosystems continues to impact production of these highly exposed commodities, the volatility of supply chains intensifies, increasing the likelihood of downstream food security implications on European citizens.

Shocks to European agricultural imports are already impacting economic stability and food supply. In 2022, Europe experienced multi-level disruptions to its supply chains resulting in an unprecedented food price inflation increase to 10.6% across the EU. In addition to the outbreak of the war in Ukraine, droughts in Latin America and shortages in soy supplies also

contributed to this spike. Because Europe is so dependent on soybean imports from Latin America for livestock feed in the meat and dairy industry, major weather disruptions and decreasing yields due to land degradation expose its supply chains to future financial liability. Likewise, between 2022 and 2024, cocoa production disruptions in West Africa led to a record 400% increase in prices, impacting downstream consumers with 18% inflationary increase in prices in chocolate and resulting in job and business losses in the chocolate sector.

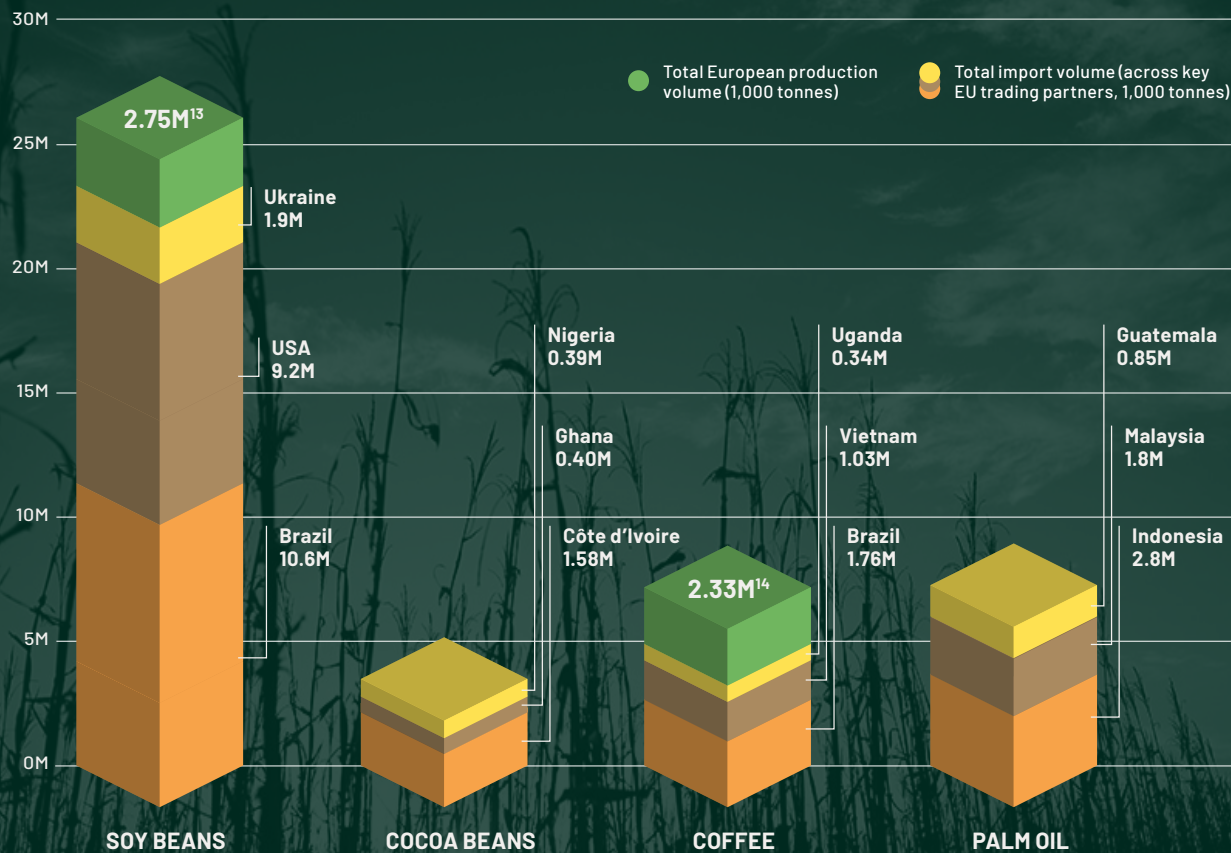
The overreliance of the European market on certain forest-risk agricultural commodity products from a very limited sourcing base presents a serious risk to its economic prosperity, but it also undermines European businesses and financial institution's competitiveness ambitions. The 2025 EU Competitiveness Compass warned that excessive dependencies and risks hamper European ambition for a competitive environment on the continent. Globally, deforestation-linked physical and transitional risks present an estimated USD 78,6 billion in potential financial liability to companies. Other estimates suggest that amongst top food and agricultural companies, lack of

adequate mitigation strategies could result in a 26% reduction of their value by 2030. Lack of deforestation commitments coupled with continued financing of deforestation practices makes European private sector particularly vulnerable to supply chain shocks. Of the food and beverage companies that do report their risks, we see a median 76% dependence on just seven forest-risk commodities. The repercussions of these financial risks do not only affect the private sector: loss of revenue, sudden shocks, and financial instability will likely have a downstream effect on jobs and consumer confidence.

Risks arising from deforestation and conversion are not only limited to food security and lack of supply chain resilience. Conversion of natural habitat also increases the probability of new global health crises; 75% of new infectious diseases come from animals

on agricultural frontiers where deforestation occurs, increasing the likelihood of another global health crisis. Deforestation is also heavily linked to environmental crime that directly impacts Europe. Destruction of the Amazon is linked to cocaine production and illegal gold mining, both of which flood European markets; while 94% of gold imports face high risk of illegality, undermining European financial systems. Illegal logging meanwhile continues to fund regional conflicts globally. Despite its best efforts, Europe continues to be a major destination of illegal timber, which ends up on the market either through lack of adequate governance or laundering. This highlights how many of European security challenges are tied back to deforestation and how addressing deforestation is at the centre of many of Europe's security concerns.

**Figure 1: Top import countries for key European agricultural commodities**









Countries shown here are the top three importing countries, based on average import levels over 2022–2024.

Source: UN Comtrade Database. Commodity codes used are: Soybeans – 1201(Soybeans, whether or not broken); Cocoa beans – 1801(Cocoa beans, whole or broken, raw or roasted); Coffee – 0901(Coffee, whether or not roasted or decaffeinated; husks and skins); Palm oil – 1511(Palm oil and its fractions, whether or not refined). Quantities are reported in kilograms and converted to tonnes (divided by 1,000). Data available from [UN Comtrade](#). Reporters and partners selection guide can be accessed [here](#). Last accessed 03/24/2026.

## 2. Application of deforestation and conversion-free measures that will mitigate these risks is crucial

Global trends are clear: by 2050 global food demand is set to double, while trade flows for forest-risk commodities are set to significantly increase, in some cases by up to 80%. Under business-as-usual scenarios, the expansion in production needed to facilitate this growth would almost certainly put vital ecosystems beyond tipping points, if it hasn't done so already. Ironically, elimination of natural biomes, and the ecosystem services that come with it, is

resulting in lower agricultural yields and productivity, with an estimated USD 4 trillion in losses in the past 30 years, with increasing scientific evidence point to deforestation as a key culprit. Global case studies suggest that changes in precipitation patterns, disruption of watersheds, soil erosion, and land degradation are having profound impact on agricultural productivity and farmer profitability.

Correlation between deforestation and conversion and agricultural yields and incomes worldwide	
	<b>BRAZIL:</b> Deforestation and conversion in the Amazon and the Cerrado decreased soy yields by 6.6% or USD 760 million lost in soybean production. Meanwhile agricultural areas up to 100 km away from the frontier experience an average 3°C further intensifying heat stress for crops.
	<b>COLOMBIA:</b> 40% of national territory shows some level of erosion due to conversion and unsustainable agricultural use. Clearance of the Colombian Amazon resulted in \$18 billion loss of natural capital.
	<b>ARGENTINA:</b> Unsustainable ranching practices in the Gran Chaco reduce productivity to 60-80 kg of meat per hectare per year compared to the 150-180 kg alternative in sustainable alternatives.
	<b>ETHIOPIA:</b> Deforestation linked to soil erosion and land degradation is estimated to lose over 1.5 billion tonnes of soil per year which could have added about 1.5 million tonnes of grains to the Ethiopian products.
	<b>INDONESIA:</b> Clearance of forests and peatlands for palm oil plantations increased the impact of seasonal floods, in the Aceh province displacing 158,000 people and destroying 11,500 hectares of agricultural land, while elsewhere decreasing the viability of palm oil production by 21% over the next 30 years.
	<b>COSTA RICA:</b> Coffee plantations located closer to native forests showed increased yields by up to 20% compared to those outside of forest range, and a 27% increase in quality.

For European policymakers the choice is clear: accept the growing risk that deforestation poses to its vulnerable supply chains and agricultural market stability, or work towards a much-needed global agricultural transition to sustainable and regenerative practices. This is a universal challenge that will require action from both consumer and producer countries. Restoring a fraction of the estimated 1.6 billion hectares globally that have been degraded due to human activities, coupled with more efficient and nature-friendly practices on existing agricultural lands, can help make this transition possible. Governments can play a significant role in making this possible by

sending crucial market signals—be it regulatory, political, or collaborative measures—to encourage the re-direction of funding away from damaging conversion practices towards sustainable agriculture.

Implementation of DCF initiatives will play a vital role in paving the way for this global transition, while also mitigating risks to European markets and citizens. Investment in DCF measures via zero-conversion rules and commitments, traceability and monitoring, and zero-conversion agricultural production equips policymakers with a set of tools that can mitigate cross-cutting security and financial risks:

- **Avoiding conversion reduces physical risks to production stabilising sources of European commodity imports in the long-term.** Sourcing from low-risk areas and maintaining native vegetation will be crucial to mitigate the physical risks of land degradation and changing weather patterns that are already having an impact on agricultural yields.
- **Shift to deforestation-free production will make agricultural supply chains more financially viable.** Mainstreaming innovative, sustainable, and regenerative agricultural practices increases the likelihood of resilience in agricultural trade and avoids costs associated with physical risks—in some cases increasing the economic value of production.
- **Moving production away from high-risk areas can diversify Europe’s commodity sourcing.**

Investment in land restoration as an alternative to traditional production methods can provide consumer markets with better, more reliable production sites, eliminating the over-reliance on high-risk areas.

- **Traceability enables better and more transparent information flow, reducing risk.** Robust traceability systems, in addition to enforcement of deforestation-free goals, can help detect emerging supply chain shocks or illicit activities early.
- **DCF measures create mitigation and compliance tools for the private sector.** Regulatory frameworks, guidelines, and market signals can create tools that will encourage the private sector to more readily disclose—thereby mitigate risks to their own financial portfolios while redirecting investment towards better production models.

### 3. Avoiding deforestation is a tangible opportunity to advance Europe’s international geopolitical and competitiveness goals

The introduction of the EUDR, despite its challenges, nevertheless acted as a landmark moment in sending a global market signal discouraging agricultural commodity trade flows from deforestation-risk areas. Europe is perhaps best positioned to continue to lead in this space: the EUDR is now the law of the land in the EU, the UK is developing its own forest-risk legislation, and European countries have a strong history of engagement with commodity producing markets. Previous regulatory efforts coming out of Europe, be it the REACH or the General Data Protection Regulation, have shown that Europe can utilise its market strength to set new standards globally, facilitating first mover advantage for the market. Establishment of DCF measures as the new international market norm can be a shift that Europe leads.

Previous and existing market signals coming out of Europe demonstrate the proof of concept behind DCF implementation. The Amazon Soy Moratorium, which for 20 years significantly reduced soy driven deforestation in the Amazon, was born out of European consumer pressure to eliminate deforestation-related goods from supermarket shelves. In addition to its impressive environmental outcomes, the agreement consistently enjoyed support from European retailers, seeing the predictability and

reputational benefits it offered. Likewise, even prior to the full application of the EUDR, the prospect of the due diligence requirements resulted in the acceleration of commodity traceability programs, seeing the first fully DCF soy shipments from Argentina to Europe, or registration of 800,000 cocoa farmers into a digital traceability programme in Ghana.

Investment in DCF programs can be an opportunity for broader strategic cooperation with key trade partners. DCF measures are versatile; their implementation doesn’t just affect environmental outcomes but covers trade, agriculture, food security, and digitalisation policies. Amidst growing pressure on agricultural food systems, producer countries seek better solutions to deal with their own production challenges. In Brazil, the government is implementing an ambitious programme to restore 40 million hectares of degraded pasture to future-proof their own commodity production. Should this programme be successful, it would effectively fulfil Europe’s own zero-conversion objectives. These shared goals open up pathways to cooperation that are mutually beneficial for both consumer and producer markets, strengthening geopolitical partnerships at a time of global uncertainty.

Projections suggest that the global sustainable products market size is set to more than double by 2035, driven in part due to European consumer demand. The global food traceability market is also set to double by 2030, and Europe holds a 32.5% share of this market. Similarly, European firms and institutions lead in satellite monitoring and traceability solutions with Airbus, Copernicus Earth Observation Programme, or NICFI's satellite data programme as world leaders in this space, with global applications of these programs.

Maintaining clear signals around implementation of DCF measures will be crucial in maintaining market confidence, thereby supporting European industry leading in the ag-tech space. This is particularly important as Europe establishes new trade agreements with key partners. The prospect of the EU-MERCOSUR agreement can create pathways for technological and information exchange around innovative agricultural solutions that are currently pursued in both consumer and producer countries.

## 4. Recommendations for European policymakers to capitalize on the security and resilience benefits of supporting DCF production

1. **Maintain and build on existing deforestation-free regulatory frameworks** to reinforce the market signal already created, provide clarity to European and non-European private sector amidst delays to the EUDR, enable transparency in European supply chains, and continue to decouple Europe from high-risk commodity sourcing areas.
2. **Develop voluntary incentive mechanisms that favours DCF commodity imports**, such as tariff reliefs or simplified fast-tracked procedures for DCF goods, to further incentives avoidance of forest-risk products.
3. **Conduct a supply chain risk prioritisation mapping exercise** to generate an evidence-based database that identifies where its import dependencies overlap with highest levels of deforestation and ecosystem conversion, enabling public institutions to strategically apply their DCF efforts.
4. **Link financial zero-conversion contributions to strategic objectives** to ensure that in times of budgetary constraints, the transition to the transition to zero-conversion agriculture remains a priority due to its importance in contributing towards European strategic objectives.
5. **Create better DCF investment tools** to redirect European financial flows towards sustainable agricultural and deforestation-free production by streamlining existing systems such as EU Taxonomy to add deforestation and conversion as a top priority.
6. **Prioritise bilateral agreements with producer countries on deforestation-free and sustainable agriculture measures**, through new agreements, Memorandum of Understandings, or joint work programmes that supports producers in meeting the preferred DCF requirements as well as sending a clear market signal of Europe's commitment to sustainable agriculture transition.
7. **Embed DCF clauses in existing and future trade agreements**, setting clear expectations with trade partners on deforestation exposure risks, providing clearer regulatory environment for European companies, and creating conditions for greater technical cooperation in this area.
8. **Establish a whole-of-government taskforce on deforestation and land conversion** to better reflect the multi-faceted nature of the challenge, given deforestation impacts on European security, financial, legal, and trade policies, and encourage relevant government departments to coordinate in a more effective manner.

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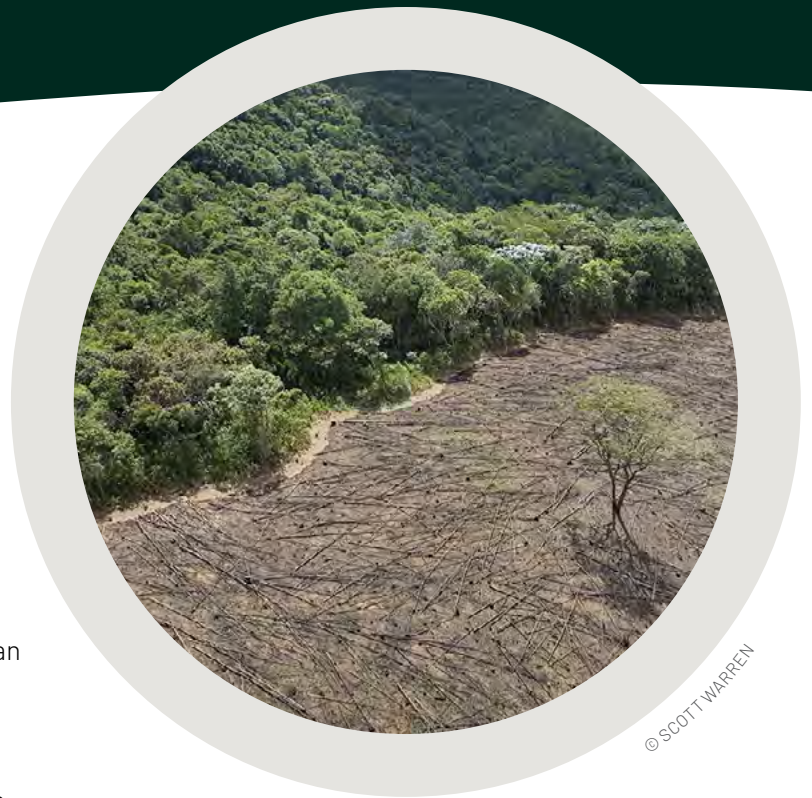
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# Introduction

In an increasingly uncertain geo-political landscape, combatting agriculture-driven conversion of forests and natural ecosystems should be seen as a strategic priority rather than simply a sustainability measure. This may seem counter-intuitive: after all, recent years have seen a recalibration of European broader sustainability objectives, including around the need to address deforestation. Whereas Europe has shown strong leadership in promoting deforestation and conversion-free (DCF) agenda in the past, external geo-political shifts, the COVID-19 pandemic, and the conflict in Ukraine has seen European policymakers shift priorities towards economic competitiveness and security policies. As a result, in the past 18 months we saw two postponements of the landmark EU regulation on deforestation-free products (EUDR), cuts to relevant Official Development Assistance (ODA) spending, and other simplification measures of European sustainability measures.

Recent disruptions and geopolitical shifts globally have put the question of European security and its competitiveness capacity back in the spotlight. European policymakers now have to contend with the threat of a full-scale war just outside of its borders—and more broadly disruptions to the international trade system due to increasing uncertainty caused by trade disputes. In this environment it is tempting to reconsider policy and funding priorities, such as decreasing funding on ODA spending in favour of defence spending. However, evidence increasingly points to the contrary, namely that the two considerations are closely interlinked. European governments are slowly realizing that investments in sustainability form part of the wider defence spending agenda.<sup>1</sup> A recent national security report by the UK government identified global ecosystem degradation and biodiversity loss as a high national security threat, which will likely impact the country's prosperity.<sup>2</sup>

Considering that Europe is a considerable commodity consumer market and depends significantly on imports to maintain its economic prosperity, the question of sustainable supply chains from a security perspective has



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to be included as part of the equation. As this paper will explore, rather than sidelining efforts to curb European impact on global deforestation, it will be in Europe's strategic interest to incorporate DCF solutions to fulfil its security, competitiveness, and strategic objectives.

## COMBATTING DEFORESTATION IS NOT JUST AN ENVIRONMENTAL SUSTAINABILITY ISSUE

To date, European efforts to curb deforestation have largely been viewed as a sustainability issue, recognising the impact of its agricultural consumption on the state of world's forests.<sup>3</sup> Approximately 80% of deforestation has traditionally been driven by agricultural expansion, a pattern that has remained stubbornly consistent. In 2023, deforestation and agricultural activities together accounted for roughly 20–30% of global greenhouse gas emissions, with deforestation contributing about 12–20% and agriculture about 10–12%.<sup>4</sup> As a major consumer market, Europe commodity imports act as a significant driver for natural ecosystem conversion, historically responsible for 16% of deforestation associated with international trade.<sup>5</sup>

In 2019, the EU Commission outlined an ambitious strategy to reduce Europe's consumption footprint on the world's ecosystems through its Communication on Protecting the World's Forests. It outlined five priority actions centred around consumption of DCF products, strengthening international collaboration and forming partnerships with producer countries, redirecting sustainable finance to promote sustainable production, and making supply chains more transparent. Subsequent introduction of the EUDR and of partnership initiatives like the EU Team Europe Initiative on deforestation, alongside similar initiatives from UK and Norway, began to establish Europe as a world leader in the DCF space.

Recent reversal in implementing DCF measures in Europe is widely justified by the new geo-political realities, as well as the political push to prioritise European security and competitiveness capabilities. However, deprioritising DCF implementation not only ignores the global urgency to combat deforestation and natural ecosystems conversion; it also ignores three fundamental strategic prerogatives that will be essential in boosting Europe's security, competitiveness, and geopolitical ambitions. These three challenges will be the focus of this paper:

1. **Europe's supply chains are vulnerable as deforestation and conversion continues to increase risk.** Europe is highly reliant on certain agricultural imports, especially those which are deemed a high-deforestation risk, often sourced from limited geographical areas. These supply chains are increasingly vulnerable to supply chain shocks—be they climate or geopolitical—bringing with them direct impacts on European consumers and businesses. Deforestation also impacts European private sector by presenting long-term financial risks, impacting their ability to compete and future-proof for the future.
2. **Global food production faces significant challenges that require Europe to support the sustainable transition to protect its supply.** Global food and trade demand is rising rapidly, while production globally is more vulnerable than ever to climate and deforestation impacts. Under business-as-usual expansion models, satisfying this demand will likely push many already vulnerable ecosystems over the tipping point, while producers will continue to see their yield output decrease.

3. **Transitioning to sustainable and deforestation-free production globally is a strategic geo-political and trade opportunity.** At a time of geo-political uncertainty, engagement on sustainable trade and agricultural production brings forth a number of mutually beneficial gains that can be the foundation for deeper cooperative activities. As we are increasingly moving towards sustainable agricultural production models, first movers can reap strategic and commercial benefits.

Focus on, investment in, and cooperation with DCF measures globally presents an opportunity for Europe to address its security risks, mitigate supply chains shocks, build meaningful geopolitical partnerships with producer countries, and position European private sector for future opportunities as the world transitions towards sustainable agricultural practices. The versatility of the DCF measures allows for flexibility in their application, and with established institutional infrastructure around this topic, Europe is uniquely positioned to continue its leadership role in this space. Contrary to recent developments, DCF measures continue to offer a set of policy tools that can enhance Europe's security and boost its competitiveness prospects.



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# What are Deforestation- and Conversion-Free (DCF) measures?

Deforestation- and conversion-free (DCF) measures is an umbrella term for systems in which the production, processing, and trade of commodities do not cause deforestation or the conversion of other natural ecosystems (such as grasslands, wetlands, or savannas) into agricultural land. In trade policy, DCF supply chains refer to the flow of a commodity's chain of custody (from farm to importer) that are verified to be free from deforestation or ecosystem conversion. Companies and governments with DCF commitments introduce a clear cutoff date, after which no sourcing of a commodity from a high-deforestation risk area is allowed in a particular region.

This approach requires a comprehensive traceability system, particularly in areas of production where the risk of conversion is elevated—from the point of production to the final consumer. This enables transparency in sourcing, allowing governments and companies to assess compliance with DCF requirements through disclosure of supplier and farm-level information via digital recordkeeping. Maintaining trust in the supply chain is critical and requires continuous monitoring with tools like satellite imagery, geospatial analysis of farms, and other risk control measures. Third party auditing and verification invoke independent assurance that DCF requirements are being met, reducing conflict of interest and increasing credibility of the supply chain.

While the immediate objective of DCF supply chains is to prevent loss of natural areas, they are also critical in creating enabling conditions for broader sustainable and regenerative agricultural practices to be implemented at scale. DCF production avoids conversion of environmentally sensitive areas for agricultural expansion and aims to improve the overall agricultural land management strategy by promoting production on existing agricultural lands as an alternative to expansion to new ecological frontiers. This shift in production strategies promotes

more efficient agricultural models and restoration of degraded or under-utilised land.

Best-practice models put an emphasis on smallholder-inclusion, who often find the transition to sustainable agriculture practices more difficult due to financial and technical barriers. Where possible, the DCF production models should encourage regenerative practices that focus on carbon sequestration, biodiversity, and agroforestry to ensure long-term viability of this approach. Implementation of traceability and DCF production models strengthens land-use planning, which is critical to the protection of land and water ecosystems that local communities and smallholder farmers rely on.



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# 1. Ecosystem protection and European security: building resilience and mitigating risk in uncertain times

## KEY POINTS

- Consumption of certain agricultural products crucial to the European economy are overwhelmingly dependent on imports, often sourced from a limited geographical spread.
- Just five high deforestation exposure-risk commodities account for more than 20% of EU's agricultural imports, exposing them to volatility and supply chain shocks impacting consumers, businesses, and food availability.
- European financial and private sector is exposed to many hidden risks associated with funding or participation in deforestation practices that may have significant financial repercussions.
- Deforestation is closely linked to health risks and illicit activities that impact Europe directly. It raises exposure to zoonotic diseases and future global public health crises, facilitates coca cultivation that fuels Europe's cocaine market, launders illegal gold that flows through the European financial market, and exposes Europe to wider environmental crimes.

## Europe's dependence on agricultural imports

Europe is an agricultural powerhouse, boasting a EUR 531.9 billion agricultural output in 2023.<sup>6</sup> Yet at the same time, Europe is also the world's biggest agricultural consumer market alongside China and the United States. In 2023, EU27 imported EUR 158.6 billion worth of agricultural goods.<sup>7</sup> Despite its significant domestic production, European consumers are nevertheless heavily dependent on imports of certain agricultural commodities which are produced outside of European borders (Figure 1).

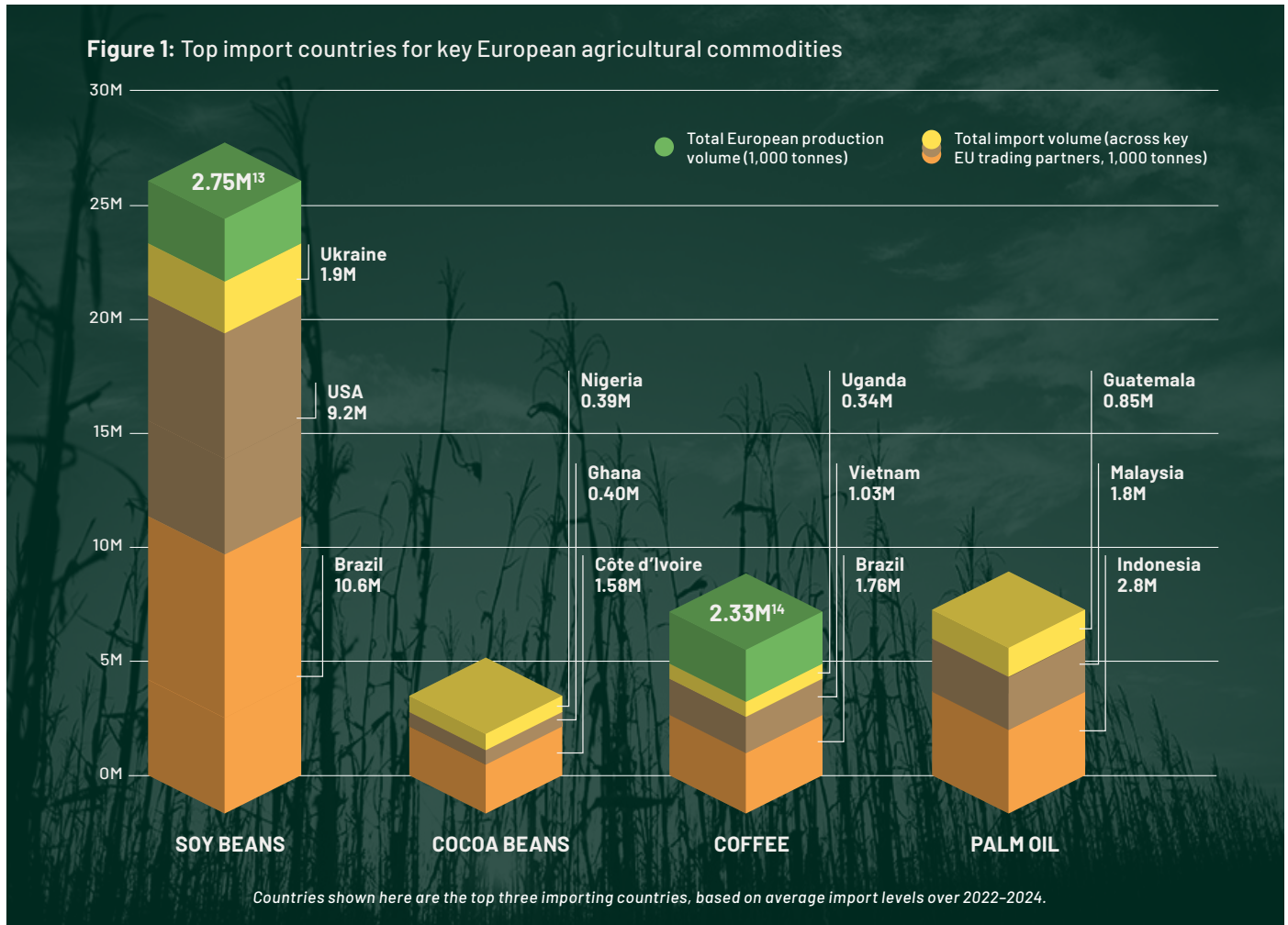
Only a fraction of soy, used primarily for European livestock feed, is produced in Europe. Roughly 10% of the EU's soy consumption comes from domestic sources; a majority is sourced from elsewhere. Europe is also the world's largest importer of cocoa: 60% of all cocoa exports end up in Europe, underpinning its world-famous chocolate industry, which was worth USD 77 billion in 2024.<sup>8</sup> Europe is also a significant palm oil importer, 46% of which is used for biodiesel amounting to EUR 2 billion

per year based on 2017 data.<sup>9</sup> Additionally four out of the seven commodities included in the scope of EUDR (cocoa, coffee, soy, palm oil), rank significantly high on International Trade Centre's trade vulnerability methodology.<sup>10</sup> Similarly, the UK also displays high levels of dependency on agricultural imports with 40% of its food coming from overseas, and like the EU, relies heavily on specific commodities underpinning its industry: soy from South America makes up 18% of produced animal feed, while close to 50% of its packaged products contain imported palm oil.<sup>11</sup>

The lack of alternative domestic sources of production is to be expected given the specific agroclimatic conditions required for production, but it does highlight a degree of vulnerability and dependence on other sources of production. A further risk to this is the fact that majority of these key agricultural commodities are heavily concentrated within specific geographical regions. In total, of the commodities accounting for Europe's highest

deforestation exposure risk globally, they represent EUR 33 billion, or more than 20% of its total agricultural imports. As a consequence, any political, environmental, or trade instability can have significant effect on European industry and consumers, potentially leading to

further inflationary, socio-economic pressures. For European constituents who overwhelmingly cite inflation and high prices as their primary concern, any unexpected shock to the system would be devastating.<sup>12</sup>



Source: UN Comtrade Database. Commodity codes used are: Soybeans – 1201(Soybeans, whether or not broken); Cocoa beans – 1801(Cocoa beans, whole or broken, raw or roasted); Coffee – 0901(Coffee, whether or not roasted or decaffeinated; husks and skins); Palm oil – 1511(Palm oil and its fractions, whether or not refined). Quantities are reported in kilograms and converted to tonnes (divided by 1,000). Data available from [UN Comtrade](#). Reporters and partners selection guide can be accessed [here](#). Last accessed 03/24/2026.

## Supply chain shocks

Given Europe’s high quantitative reliance on certain agricultural commodities, and the limited geographical sourcing options, any unexpected production disruptions, be they geopolitical or environmental related, will likely have a significant impact on European economies. In 2022, a multi-level disruption to European supply chains, mostly due to external factors, resulted in an

unprecedented rise in food price inflation in the EU, reaching 10.6%, with certain European countries reaching levels of 20%.<sup>15</sup> The Russian invasion of Ukraine was a major contributing factor, tripling the price of wheat globally, as well as impacting sunflower oil and fertiliser imports to the EU.<sup>16</sup> Meanwhile extreme weather events on the other side of the globe also raised global

commodity prices: extreme droughts in Southern Brazil, Paraguay, and Argentina, responsible for more than 50% of global soybean supply, resulted in a nine year high in soybean pricing.<sup>17</sup>

Europe's high dependence on soybean imports, particularly from the Brazilian Cerrado biome exposes the European market to future financial liability. Previous analyses hypothesising soybean trade disruptions to the EU market found high likelihood of price increases, loss of competitiveness for meat and dairy in the EU and a decrease in meat and milk production.<sup>18</sup> Deforestation-induced droughts and changing weather patterns are already having an effect. Should there have been no further conversion in the Cerrado since 2008, the region would've produced an additional USD 9.4 billion worth of soy.<sup>19</sup> The risk extends beyond clearing of native vegetation: 54% of EU's soy and beef imports from Brazil came from river basins with high or critical water scarcity, further exposing its supply chains to additional physical risks.<sup>20</sup>

Similarly, between 2022 and 2024, a combination of erratic weather patterns and crop diseases in West Africa led to a significant shortage in the cocoa yields, resulting in a significant spike in prices. Price records hit an all-time high, with USD 13,000 per ton in December 2024—a 400% increase compared to the 2014 to 2023 average.<sup>21</sup> Given Europe's reliance on the region for cocoa imports, this had significant repercussions in Europe. Consumer prices for chocolate rose, peaking at an 18.5% inflation rate in 2023.<sup>22</sup> Meanwhile Barry Callebaut, the largest chocolate producer globally, laid off almost 20% of its work force, a third of which are based in the EU, while dozens of family-owned chocolate businesses across Europe had to close down.<sup>23</sup>

These patterns are observable across all of Europe's high demand agricultural imports. Rice production, responsible for 22% of global caloric intake, is projected to fall by 9% by 2050. The shortages associated with lower global yields are already having an impact in Europe, with 49% and 35% supply gaps being recorded in

## Deforestation is bad business

European financial and corporate sectors also remain significantly exposed to risks that come with deforestation and land conversion. In its 2025 competitiveness

the UK and Germany, respectively.<sup>24</sup> These case studies show how sudden climate shocks can directly impact not only European consumer and job markets but also create inflationary conditions that have a widespread impact on the economy and could have further political repercussions as well.

This increased prospect of supply chain shocks driven by impacts on agricultural production arrive at a time when agricultural supply chains are already under significant political pressure. In 2025 a series of trade wars and disputes led to unprecedented market disruptions, and although these disputes were not prolonged, they highlight the volatility of today's markets. At one point during a trade dispute between the US and the EU, the commission proposed a 25% retaliatory tariff on US soy. Should the measure have been introduced, there was a significant risk of impact on the European livestock industry, hurting local dairy and meat producers, increasing prices, and making the sector as a whole less competitive globally.<sup>25</sup>

Resilient, sustainable, and diversified supply chains should therefore increasingly be seen as a critical security prerogative that can handle sudden shocks, protecting European citizens from its worst effects. As trade flows and food consumption demand increases in the coming decades, the pressure on natural ecosystems is likely to increase, putting further strains on European supply chains. Decreasing yields and extreme weather patterns risk increasing the cost of Europe's 2050 cocoa imports to USD 84 billion—nine times the 2025 cost.<sup>26</sup> As evidence increasingly points to correlation between conversion and decreases in agricultural production, the long-term economic impacts are far more costly than preventative DCF investments. Even 10% of avoided conversion in the Brazilian Cerrado, for example, could generate an additional USD 1 billion in soybean production.<sup>27</sup> Investment in DCF measures is critical to establish more reliable sourcing of agricultural commodities, helping protect the ecosystems that agricultural production so heavily relies on.

compass, the EU analysed factors and conditions that would enable greater competitiveness opportunities for the single market. The report noted that reducing

excessive dependencies and building effective trade partnerships that minimise risks will be essential in enabling a strong competitive environment in Europe.<sup>28</sup> However, given the high levels of geographical and goods dependency in European supply chains, coupled with increased prospect of environmentally driven supply chain distractions, this limits the prospects for the European private sector to secure long-term competitiveness prospects. Likewise, evidence suggests that continued financing of unsustainable agricultural practices is going to be more costly in the future.

Forests hold enormous economic value globally, providing crucial ecosystem services, commercial outputs, carbon storage potential, and livelihoods for millions of people. It is estimated that the total value of the world's forests is as much as USD 150 trillion—nearly double the value of global stock markets.<sup>29</sup> Their continued destruction and degradation come at an enormous cost: a World Bank analysis concluded that the collapse of select ecosystem services could result in USD 2.7 trillion in economic losses annually by 2030.<sup>30</sup> These costs will not spare the interests and priorities of European corporates and financial institutions, many of which continue to engage in or finance these damaging practices.

Deforestation and conversion increasingly come with many hidden costs for companies and their portfolios which accumulate to significant financial expenditure. The types of risks vary: physical risks that result directly from the consequences of environmental degradation on the operation, or supply chain shocks that result from lower-than-expected yields or catastrophic weather events. Meanwhile, transitional risks include the financial sanctions in response to non-compliance with local, national, and international laws and regulations, reputational damage when the brand is damaged by association with harmful practices, or technological opportunity costs as innovative practices make previous investments in technology stranded.

All in all, the risks are high and if left unaddressed could result in substantial impact on the financial sector. In its 2023 report, CDP identified USD 78.6 billion in potential financial impact to companies linked to deforestation-related risks, although the figure is likely underreported.<sup>31</sup> This doesn't even begin to consider related impacts of conversion that go beyond environmental degradation, such as impacts on Indigenous and local communities on the frontlines of deforestation. Amongst the top 40 largest and most influential food and agriculture companies collectively worth USD 2.2 trillion, lack of mitigation of transitional risks could threaten up to 26% of their value by 2030, due to the negative impacts these risks will have across the value chain.<sup>32</sup>

The corporate and the finance sectors have unfortunately been slow to respond. According to the latest Forest 500 report, of the companies assessed producing, processing, and procuring commodities driving deforestation, only 27% have published commitments for all the commodities they are assessed on, whilst 34% had no public commitments at all.<sup>33</sup> Meanwhile, since the signing of the Paris Agreement, it is estimated that the European financial sector financed approximately EUR 256 billion to activities related to deforestation and conversion.<sup>34</sup> During the same time, European banks made more than USD 3.5 billion in profits by financing companies found to engage in deforestation practices.<sup>35</sup> The lack of meaningful commitments and continued financing of conversion practices reveals a blind spot in the sector that elevates financial risk.



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Just like European countries are highly reliant on forest risk commodity imports, so is the private sector. Analysis on UK's financial sector suggested that more than half of its bank and insurer financial assets are dependent on ecosystem services, while GBP 3.8 trillion in assets are highly dependent on overseas supply chains.<sup>36</sup> On average, food and beverage companies report a median 76% revenue dependence on just seven forest risk commodities, while manufacturing reports between 45-55%, showcasing how essential these commodities are to ongoing operations across various sectors.<sup>37</sup> Consequently, should a supply chain shock manifest itself, it will impact businesses bottom line. The aforementioned cocoa supply chain disruptions to Europe between 2022-2024 resulted in financial companies linked to chocolate manufacturing experiencing portfolio volatility and credit deterioration. Similarly, following the rise in chocolate prices, the Hershey Company credit rating was deemed negative citing expected earnings weakness.<sup>38</sup>

Financial losses to European companies could have downstream effects on jobs and investment, achieving the opposite of the robust competitiveness goals at the forefront of current policy priorities. At a time when European governments are prioritising competitiveness, the long-term financial risk that corporates are facing will likely reverberate across the European market. Slow corporate progress may also exacerbate the risk of supply chain shocks, resulting in financial instability, bailouts, or the need for public funding to combat the

problem. Furthermore, continued corporate inaction undermines European climate objectives and leadership: the EU Green Deal depends in part on private sector to deliver on-the-ground outcomes. Likewise, if European companies continue to fund deforestation practices world-wide, it weakens Europe's geopolitical leverage and credibility in establishing robust partnership relationships with major agricultural commodity producer countries.

While private sector actors have a responsibility to address their direct and indirect facilitation of deforestation practices, government action is crucial not just to support better corporate practices, but to secure its own policy priorities. Introduction of DCF measures sends a vital market signal, creating conditions for better environmental practices. It is no accident that when European governments introduced the EUDR or UK's Forest Risk Commodities legislations, some corporate response was cautiously optimistic. So much so that amidst political backlash against the implementation of the EUDR in 2025, more than 60 major companies publicly came out in support of the legislation.<sup>39</sup> The latest decision to postpone the EUDR for the second year in a row creates a market uncertainty, at a time when European businesses cite uncertainty as the key factor in their pessimistic economic outlook.<sup>40</sup> Conversely, clarity around implementation of DCF measures would help significantly with creating a roadmap towards more resilient supply chains—and could serve as an opportunity to redirect private finance away from damaging practices that invoke physical and reputational risks.

## Health, drugs, money laundering: forest protection as a mitigating factor

Beyond the impact of deforestation on the viability of Europe's commodity supply, food security, and financial stability, deforestation and land conversion create a wide array of more indirect but tangible consequences for Europe. The COVID-19 pandemic demonstrated the devastating potential of a world-wide health crisis impacting every aspect of our lives, and unfortunately, evidence suggests that deforestation and land clearance make similar crises in the future more likely. A study analysing the increase of zoonotic diseases outbreaks between 1990 and 2016 found a strong correlation with increased rates of deforestation.<sup>41</sup> The same study also

identified a correlation between expansion of palm-oil production with an increase in vector-borne diseases, which according to the World Health Organization account for 608,000 deaths per year.<sup>42</sup> As human activity, mostly through agricultural expansion, exposes livestock and, subsequently, humans to contact with wildlife, it enables the transfer of zoonotic pathogens and parasites from vertebrates to humans.<sup>43</sup> This presents a serious public health threat: three out of four new infectious diseases now come from animals.<sup>44</sup>

Illicit activities also have a strong correlation with deforestation. Cocaine, which is seeing an unprecedented

rise in consumption in Europe leading to serious public health consequences, originates from the forests of South America.<sup>45</sup> Coca cultivation occurs under the cover of Amazon canopy across Colombia, Peru, and Bolivia, and is also a major driver of deforestation. In the Peruvian Amazon between 2016 and 2020, coca cultivation expanded by 40%, from 43,900 to 61,800 hectares, while annual deforestation exceeded 250,000 hectares, often overlapping with protected areas and native communities.<sup>46</sup> Once coca cultivation is over, the area is often transformed into cattle ranching, a common practice of money and environmental asset laundering to presuppose previous illicit activities—assets that were previously acquired illegally gain credibility by transferring to legitimate activities such as ranching.<sup>47</sup>

Laundering of illegal activities linked to deforestation have consequences far beyond its sources of origin and often end up in Europe. Illegal gold mining in the Amazon is another major contributor to deforestation, and is increasingly on the rise in the region. The clearing for mining is particularly aggressive, removing native vegetation to a point where natural recovery becomes very difficult, while the widespread use of mercury pollutes local rivers, impacting local communities and biodiversity.<sup>48</sup> Europe is a major destination market for gold, yet 94% of the EU gold imports are exposed to high risks of illegality, particularly in Germany and Italy.<sup>49</sup> Following illegal extraction on deforested areas, the gold eventually makes its way into legitimate markets due to poor governance and oversight measures. In practice this means that European gold and financial markets are circulating high levels of laundered finances, weakening its financial integrity. Without strong law enforcement, this risks inadvertent contribution to international crime organisations, undermining EU laws and raising reputational risks for European companies and financial institutions.

Illegal logging is also a major environmental crime activity closely tied to deforestation in tropical regions, with major implications for European markets. Illegal logging is tied to 15–30% of global timber production with an annual economic value estimated at USD 50–150 billion annually—the third largest transnational crime after counterfeiting and drug trafficking.<sup>50</sup> In addition to

widespread ecological damage done by these practices, INTERPOL links illegal logging to a number of international law enforcement challenges—be it corruption, tax evasion, money laundering, or funding of international conflicts.<sup>51</sup> In the Democratic Republic of Congo for example, demand for charcoal as a result of illegal logging is estimated to be valued at USD 35 million, acting as a primary source of funding for armed groups in the area.<sup>52</sup> Much like with gold and coca, the profitability of illegal logging rests on its ability to enter legitimate supply chains. Unfortunately, despite previous regulatory efforts, such as the EU Timber Regulation, Europe continues to be a major destination for illegal timber, as lack of enforcement and oversight makes it easier to falsify relevant certification documents.<sup>53</sup> These risks heightened European exposure to environmental crime, conflicts associated with it, and ultimately the circulation of illicit revenues through European financial markets.

Forest protection, conservation, and DCF measures will not provide a silver-bullet solution to address these often complex, multi-faceted problems; however, they are valuable tools that mitigate the risks associated with health and environmental crimes. Traceability, international commitments, and due diligence requirements can make the movement of commodities more transparent, making it more difficult for crime organisations to launder their assets. Similarly, pilot programs in Colombia, with the support of German Development Ministry (BMZ), have shown that through agroforestry, bioeconomy, and payments for ecosystem services (PES), it is possible to offer local communities legitimate and competitive alternative sources of income to illicit activities such as drug production.<sup>54</sup> Naturally, these measures have to be paired up with a wider institutional framework, as implementation of DCF measures require robust rule of law and governance, conditions that are not uniformly present around the local regions where environmental crime occurs. Nevertheless, the interlinkages between deforestation-related illicit activities and the downstream effects this has in Europe security outcomes serve as a stark reminder that none of this happens in a vacuum—what happens in remote tropical forest regions on the other side of the world can have significant repercussions on our health, finance, and security priorities at home.

## 2. The persistent global challenge: the role of DCF measures in mitigating risk and promoting stability in value chains

### KEY POINTS

- Global food demand is set to double by 2050, putting enormous strains on already exposed natural ecosystems pushing them past the breaking point. These very same forests and other natural biomes that are being converted provide crucial ecosystem services to agriculture.
- Increasing evidence points to a strong correlation between deforestation, conversion, and land degradation as a major cause of failure of agricultural yields and output due to disruptions in local weather patterns, damaged soil fertility, or reduced water availability.
- To facilitate the growing food and trade demand without damaging natural ecosystems that agriculture depends on, consumer countries in Europe must support a transition to sustainable and agricultural practices. Although challenging, existing pathways show the viability of this approach.
- DCF measures act as effective tools that will be essential in enabling this transition, whilst more immediately addressing Europe's security vulnerabilities by avoiding further conversion in high-risk areas, diversifying its sourcing, or increasing transparency in its supply chains.

### Rising global food demand and impact of climate and deforestation on agricultural yields

The urgency of establishing DCF supply chains globally is underpinned by the need to remove deforestation and conversion practices from our food systems. This will be challenging as global food production will see an unprecedented growth, putting even more pressure on natural ecosystems. Global crop demand is projected to increase by 40% to 50% from 2020 to 2050.<sup>55</sup> The strain on producer countries will be noticeable: in 2019, the World Resources Institute (WRI) estimated that production in Latin America would have to grow by 90% from 2010 to 2050 to accommodate the projected beef demand growth. Given the fact that cattle production is already mostly responsible for natural ecosystem clearance in Latin America, meeting this demand would almost certainly push vulnerable biomes like the Amazon over the tipping point.

These trends are largely driven by changing climate, of which deforestation and conversion are a significant cause of, and have been felt even more strongly in recent years.<sup>56</sup> In the last 30 years, nearly USD 4 trillion worth of crops and livestock production have been lost due to disaster events, equivalent of 5% of annual global agricultural GDP,<sup>57</sup> a tendency that is likely going to worsen in the coming decades. Likewise, global agricultural output has seen a steep decline in productivity, with estimates suggesting approximate 20% reduction in the past 60 years, with effects felt more strongly in the Global South.<sup>58</sup> In West Africa, for example, continued climate change impacts may result in a loss of 50% of its current cocoa-producing regions by 2050. Future agricultural production will have to implement and adopt resilient and regenerative models to keep the sector viable to produce at the scale needed to fit demand.

Trade amplifies the challenge. Agricultural commodities driving deforestation—soy, cocoa, coffee, and palm oil—are predominantly produced for international markets. Almost half of soy production is destined for international markets, while in the case of palm oil, coffee, and cocoa, that number goes beyond 70%. These commodities will also need to accommodate growing demand projected in the future (Table 1). Rising demand and ongoing ecosystem pressures mean that without

DCF measures, natural ecosystems face further degradation and, since many of the natural biomes on the frontier are already facing their tipping point, this is simply unsustainable. Traded agricultural commodities are highly susceptible to the volatility of climate-related events but also have to deal with other evermore common shocks, such as increased geopolitical uncertainty or tariffs.

**Table 1: Major traded commodities contributing to deforestation, current production, trade shares, and projected growth by 2050**

Commodity	2023 Production (Mt)	Share Traded	Main Exporters <sup>59</sup>	Main Importers <sup>60</sup>	Growth by 2050
Soybeans	396.36 <sup>61</sup>	42-44% <sup>62</sup>	Brazil, U.S., Argentina	China, Europe	+46% <sup>63</sup>
Cattle (Beef)	69-70 <sup>64</sup>	17-22% <sup>65</sup>	Brazil, U.S., Australia	China, U.S., Europe	+43-73% <sup>66</sup>
Cocoa Beans	4.4-5.6 <sup>67</sup>	>70% <sup>68</sup>	Côte d'Ivoire, Ghana, Indonesia	Europe, U.S., Malaysia	N/A
Coffee	10.1-10.7 <sup>69</sup>	75% <sup>70</sup>	Brazil, Vietnam, Colombia	Europe, U.S., Japan	+76-81% <sup>71</sup>
Palm Oil	76.09 <sup>72</sup>	58-60% <sup>73</sup>	Indonesia, Malaysia	India, China, EU	> +80% <sup>74</sup>

Deforestation and ecosystem conversion is a major driver of land degradation which has increasingly led to loss of agricultural productivity globally. A global study revealed that the annual cost of land degradation could be as high as USD 300 billion, three quarters of which come from land-use and land-cover change.<sup>75</sup> If the Cerrado had not been converted since 2008, Brazil would have produced an additional USD 9.4 billion worth of soy, more than the total value of EU's annual supply.<sup>76</sup> Deforestation and

conversion of non-forest ecosystems are major drivers of this due to the effect it has on soil quality loss, disruption of water cycles, climate instability, and biodiversity loss. Evidence is mounting that tropical deforestation and land conversion are having a detrimental effect on nearby agricultural productivity: ironically, the very expansion that aims to increase the quantity of production has a negative effect on its quality over time.

## CASE STUDIES OF CORRELATION BETWEEN DEFORESTATION AND CONVERSION AND AGRICULTURAL YIELDS AND INCOMES WORLDWIDE

### Correlation between deforestation and conversion and agricultural yields and incomes worldwide



In **Brazil**, evidence suggests that the continued forest degradation and deforestation in the Amazon and the Cerrado biomes have altered rainfall patterns to such an extent that it has actively contributed to decreasing soy yields by 6.6%,<sup>77</sup> resulting in USD 760 million of lost soybean production between 2006 and 2019.<sup>78</sup> Deforestation in the Amazon has also been shown to influence air temperatures up to 100 km away from the temperature observation point, and to increase maximum temperatures by as much as 3°C, increasing the risk of yield reductions by intensifying heat stress for crops and reducing soil moisture content and water availability.<sup>79</sup>



In **Colombia**, according to the Agustín Codazzi Geographic Institute (IGAC), nearly 40% of the national territory shows some level of erosion, ranging from mild to severe, in large part due to unsustainable land-use, deforestation, and agricultural expansion.<sup>80</sup> Clearance of the Amazon basin also resulted in an estimated annual loss of USD 18.1 billion, equivalent of 6.7% of Colombia's GDP in 2020.<sup>81</sup>



In **Argentina's** Gran Chaco, extensive low-investment cattle ranching in degraded landscapes results in livestock productivity of only 60–80 kg of meat per hectare per year, compared to 150–180 kg per hectare per year in regions with wider adoption of improved pasture management, animal health services, and farm planning.<sup>82</sup>



Deforestation in the **Ethiopian** highlands has led to soil erosion and land degradation, leading to a loss of approximately 1.5 billion tonnes of soil per year, missing out on potential 1.5 billion tonnes of grains that could have been added to Ethiopian production. The annual cost of land degradation in Ethiopia is estimated at USD 4.3 billion.<sup>83</sup>



In **Indonesian** Aceh province, disruption of watersheds due to forest clearance for palm oil production between 2011 and 2018 severely impacted downstream agricultural communities, displacing 158,000 people and destroying 11,500 hectares of agricultural land.<sup>84</sup> In the Sumantra province, clearance of peatlands for palm oil farming has severely increased the likelihood of flooding in the area—which will result in an estimated 21% loss of palm oil production and 17% of palm oil plantations being deemed unfit for further cultivation over the next 30 years.<sup>85</sup>



Researchers in **Costa Rica** found that pollination services provided by standing forests can increase yields and quality of local coffee production. Forest-based production helped increase coffee yields by 20% within 1km of the forest compared to those outside of forest coverage and reduced the frequency of misshapen seeds by 27%.<sup>86</sup>

In short, global food production is experiencing a twofold crisis: rising global food demand puts additional pressure on producers to increase levels of production whilst simultaneously the climate crisis and continued deforestation practices are making effective production more difficult. The consequences of this ongoing cycle are dire, risking food price volatility and inflationary measures, rising geopolitical tensions and conflict, as

well as displacement and social inequality challenges. In contrast, evidence demonstrates that standing forests and retention of ecosystems directly underpin agricultural performance, having positive influence on temperature, rainfall patterns, water availability, soil fertility, pollination, and pest management across multiple scales.<sup>87</sup>

## No time for complacency: the role of DCF measures in stabilising global food systems

This challenge, however, is not insurmountable. We are increasingly seeing the emergence of sustainable agricultural production models globally that provide alternatives which not only stop expansion of agriculture into natural ecosystems but also improve the quality of production—be it through more efficient use of existing land or redirecting expansion over already degraded pasturelands. An estimated 1.6 billion hectares globally are degraded due to human activities, with more than 60% of this degradation affecting agricultural lands, including croplands and pastures.<sup>88</sup> This is why in countries like Brazil, policymakers are exploring efforts to restore available degraded land for crop production, with the Brazilian government aiming to restore 40 million hectares over the next decade.<sup>89</sup>

A key challenge is that economic models still favour traditional agricultural expansion methods, making the transition to sustainable food systems costly. For example, the Brazilian programme is estimated to cost USD 120 billion over the next decade. Many producer countries face significant debt burdens and fiscal policy constraints which make these much-needed investments very difficult to implement. Investment in environmental protection and sustainable agricultural production is forced to unfavourably compete with existing debt servicing commitments.

The short-term costs, however, are ultimately outweighed by the increasing crisis we are witnessing in our food systems. A recent FAO report highlighted that around 1.7 billion people worldwide live in areas where crop yields are 10% lower due to human-driven land degradation. Even a reversal of 10% of degradation could produce enough to feed 154 million people per year.<sup>90</sup> Analysis on the business case behind transition to sustainable

agriculture suggests that while there is a 3-5 year transition period, adoption of more favourable practices can result in a 15-25% return on investment.<sup>91</sup>

DCF measures will play a critical role in enabling the acceleration of this transition. The pathway to future-proofing global food systems will come when economic models are reversed to favour sustainable and regenerative agricultural practices, which will require input from public and private institutions. With rising global demand for food, and accompanying trade movements that will mirror this trend, establishing DCF supply chains with verifiable traceability and due-diligence requirements can amend current market positioning and mainstream DCF commodity flows. Similarly, investment in DCF agricultural practices,



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like land restoration, will provide meaningful incentives for producers to shift towards innovative and more sustainable practices. There is an urgent need to redirect financial flows from those that support deforestation and conversion to more sustainable models. Innovative financial solutions like debt-for-nature swaps or blended finance will be crucial in enabling the implementation of DCF measures at the scale needed to tackle the food production challenge and can be structured in a way that doesn't negatively affect producer countries' sovereign debt.

Ultimately, governments will play an indispensable role in ensuring that the challenges listed above will not expedite the global food security risk. Because of the interconnected nature of global agricultural supply chains and the downstream effect of production challenges in consumer markets, a collaborative approach is needed more than ever. While a collective effort is required on the part of all relevant stakeholders, governments' investment into and political and technical support of DCF practices create a market signal, de-risk the market to allow for greater flows of private capital needed to enable an agricultural transition globally.

## How deforestation-free measures help build resilience and mitigate risk

- 1. Avoided conversion reduces physical risks to production and sources.** Successful implementation of DCF measures lowers the probability and severity of agricultural production shocks that could impact the entire value chain. As noted earlier, evidence is increasingly pointing towards a strong correlation between deforestation and conversion and the impact it has on agricultural yields—be it through increased temperatures, changing rainfall patterns, or the impact on soil and the lack of biodiversity-driven ecosystem services for agriculture. Changing climate will only exacerbate these conditions. Sourcing from low-risk areas and maintaining existing vegetation lowers the risk of continued environmental degradation and the negative impact it has on agricultural production. On the other hand, securing long-term climate-friendly sources of production can strengthen the reliability of the source even more significantly. For countries like Germany, whose sourcing in the Cerrado is relatively high, every million tonnes of shifted DCF soy production could preserve USD 43 million in regional productivity, decreasing the likelihood of supply chain volatility down the line.<sup>92</sup>
- 2. Driving innovative and sustainable production to secure financial viability of supply chains.** DCF measures enable and encourage sustainable practices such as agricultural expansion over degraded lands rather than fragile ecosystems, reducing exposure to climate-sensitive frontiers like the Amazon. Innovation in improved soil management, biodiversity restoration,

and regenerative practices strengthen producers' capacity to withstand droughts, pests, and other severe weather patterns resulting in less frequent supply disruptions, while yields become more reliable. In Argentina, studies have shown that the adoption of regenerative agricultural practices, like silvo-pastoral grazing amongst cattle ranchers in the Gran Chaco, can increase farm profits twofold over a five-year period.<sup>93</sup> European financial and technical support for these innovative practices should be seen as an investment that will ultimately be cheaper than the costs associated with likely future supply chain shocks caused by environmental degradation. Recent analysis on cocoa production in the Congo basin has found that EU importers could benefit from USD 1.8 to USD 6 in avoided costs for every dollar invested in forest conservation, when compared to projected economic losses due to reductions in local productivity.<sup>94</sup>

- 3. Diversification of supply sources.** Europe is overly reliant on only a handful of high-risk production sources, most of them susceptible to negative climate impacts and deforestation exposure risk.<sup>95</sup> Investment towards better land-use management and redirection of production towards degraded lands achieves several goals. It incentivises and rewards producers who adopt sustainable and regenerative practices, making sources of production more resilient to adverse effects that deforestation and climate change has on agricultural yields. Restoration of degraded pastures makes underutilised land economically viable

again, potentially creating alternative commodity production sites moving agriculture away from high-risk conversion frontiers with better legal enforcement and more advanced monitoring. This future-proofs stability of the supply chains, setting up reliable and nature-friendly production sites, sourcing commodities from regions that do not cause environmental damage. This reduces Europe's over-dependence on a high-risk sources and spreads sourcing across new regions.

4. **Increasing transparency and information flow.** Digital traceability systems, such as geolocation data and open monitoring platforms, are often the fundamental requirement in any DCF framework, making supply chains verifiable from the point of production to its final destination. While this is essential to enforce regulatory provisions and help companies enforce their DCF commitments, it also enables governments and supply chain actors to detect risks early, equipping

them with better response capacity to sudden supply chain shocks or illegal and non-compliant behaviour along the supply chain. This approach requires more than just technical capacity but fundamental improvements in land registries and enforcement capacity at a local level.

5. **Creating risk mitigation and compliance tools for the private sector.** Private entities are aware of their deforestation exposure risks, and public-led DCF models—be it regulatory or investment-driven—can incentivise them to accelerate their own risk mitigation efforts. Alignment of DCF measures with European fiscal and regulatory policy can help redirect private investment into sustainable activities, helping strengthen over all resilience of supply chains, and incentivising private sector to adapt stronger deforestation-free commitments, alongside more noticeable disclosure patterns. Implementation of public-driven DCF initiatives can encourage greater disclosure by companies, which would help address the financial risks associated with unsustainable financing trends, thus reducing investors' uncertainty.



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# 3. How forest protection can build strategic alliances and enhance long-term competitiveness

## KEY POINTS

- While implementing deforestation and conversion-free initiatives is necessary to mitigate risks posed to Europe's security priorities and enable the global transition to sustainable agriculture, they also offer a range of additional strategic benefits at a time of international uncertainty.
- Europe is already advantageously positioned to benefit from leadership on deforestation-free measures given its existing institutional architecture. With growing momentum internationally, European countries can lead the standardisation of these practices.
- The proof-of-concept has already been demonstrated. European past market pressure, regulatory requirements, and development assistance invested generated tangible DCF solutions in producer countries, contributing to global momentum in this space.
- Given the scale of the global challenge of agricultural transition, investment in DCF measures is also an opportunity to form meaningful cooperation agreements with trade partners as versatility of these tools allows for collaboration across a variety of fields and areas.
- Rapid growth in demand for ag-tech and traceability solutions aligns well with Europe's existing market leadership in this area. Continued promotion of global agricultural transition will open up commercial opportunities for Europe and producer countries seeking to invest in alternative agricultural models.

## The strength of market signals and standardisation

The strength of European policies aimed at establishing deforestation-free supply chains and encouraging more sustainable land-use and production methods rests in their ability to send strong market signals globally. Alone, the European market is not a big enough of a demand destination to singlehandedly revolutionise agricultural supply chains globally. However, the DCF regulatory efforts currently emerging out of the EU and UK are benchmarks upon which Europe can strengthen its ability to shape global agricultural trade norms in line with its long-term strategic and sustainability interests. New regulatory provisions, green finance initiatives, or country-level engagements send important signals to governments and the private sector, accelerating the

global transition towards sustainable agriculture practices, while creating a first-mover advantage for European businesses.

Despite the recent setbacks in implementing deforestation-free due-diligence requirements, existing work to establish a broader DCF framework in Europe can still act as an international standardisation tool should European governments choose to prioritise this pathway. Commonly referred to as the "Brussels Effect," the EU is in a position to leverage its position as the world's biggest single market to set standards that others later comply with.<sup>96</sup> It has done so already: notable examples including the REACH regulation requiring chemical companies to prove adequate safety of their products or the General

Data Protection Regulation (GDPR) introducing online privacy standards, both of which have been widely adapted by governments and companies alike.<sup>97,98</sup> Not only does this standardisation incentivise other countries to adopt similar models in their own regulatory regimes but encourages relevant companies in the sector to reevaluate their own practices to meet the European market demand.

There is no reason that the same cannot happen with DCF standards. Europe is already advantageously positioned to set the pace for establishing a global DCF standardisation: the regulatory frameworks coming out of the UK and the EU have seen producers adapting to the

new requirements even prior to full application of the EUDR. For some producers, the prospect of premium market access is enough to invest in compliance, and with increasing recognition of the need to transform agricultural production models globally, the timing is right. Other mechanisms can act as soft standardisation tools as well—be it through DCF investment, guidance, and setting common expectations. However, the prospect of establishing sustainable and long-standing DCF supply chains requires a partnership-based approach, with meaningful cooperation and support measures that encourage mutually beneficial outcomes for both European and producer markets.

## Europe's leadership and leverage in driving global momentum towards DCF production

Europe's ability to influence the global transition to sustainable agricultural production via its demand and cooperation measures have already been demonstrated. In 2006, after years of intense deforestation in the Brazilian Amazon, European civil society and retailer groups began exerting pressure on major soy traders who supplied the European market. Soon after, traders including Cargill, Bunge, and ADM agreed not to purchase soy grown on deforested land in the Amazon giving birth to a sectorial agreement known as the Amazon Soy Moratorium (ASM), the world's first large-scale deforestation-free supply chain initiative.

Although the moratorium agreement has recently come to an end, for 20 years the initiative proved to be remarkably effective in combating soy-driven deforestation. Studies show that while soy cultivation continued to expand in Brazil, less than 2% of new Amazon soy expansion after 2008 came at the expense of deforestation.<sup>99</sup> This is a sharp contrast to pre-2006 trends, when soy accounted for a substantial share of Amazon forest clearing (26% between 2001 and 2006).<sup>100</sup> The ASM also demonstrated that DCF commitments could reshape land-use patterns without halting agricultural growth, since expansion increasingly shifted toward degraded pastures instead of forests. The area dedicated to soybean cultivation grew by 427% in the Amazon without further deforestation.<sup>101</sup> However, since the agreement focused on the Amazon, evidence suggests that there was a "spillage" effect where soy production

shifted to the neighbouring Cerrado savanna, highlighting the need for a comprehensive coverage across multiple biomes and ecosystems.<sup>102</sup> Nevertheless, despite some limitations and the recent political pressures, many European companies saw the benefits of supporting such a structural agreement when the agreement came under pressure from local industry groups in 2025, many large food retailers, including Tesco, Sainsbury, Lidl, and Aldi, publicly came out in defence of the agreement.<sup>103</sup>

Similarly, following the introduction of the EUDR and prior to its full application, the EU managed to generate noticeable momentum in generating DCF outcomes globally. This is due to two factors: firstly, the incoming market access requirements incentivised producers to accelerate their adoption of DCF practices. Secondly, the EU's Team Europe Initiative on deforestation helped spur projects that would assist producers in reaching EUDR compliance. Climate & Company compiled a list of more than 20 pilot initiatives that shows the response of producer countries to incoming requirements, ranging from the smallholder inclusion programs to national policy tools.<sup>104</sup>

Notable examples of these efforts include Argentina's VISEC Soy Monitoring Platform, demonstrating capacity for large-scale traceability exporting more than 100,000 tonnes of soy from Argentina to Europe in anticipation of the regulation. In Ghana, the Cocoa Management System (CMS) created the digital infrastructure supporting

smallholder inclusion in the cocoa sector with 800,000 farmers already registered, offering a scalable model for traceability linked to cocoa plots. Meanwhile, also in anticipation of the EUDR enforcement, Indonesia introduced a new forest monitoring platform called Ground Truthed (GTID), which aims to create palm oil traceability standards at its source of origin.<sup>105</sup>

For Europe, the ability to drive global momentum towards DCF production reveals several key takeaways:

1. **Europe's leadership matters.** European cooperation initiatives in supporting producer countries can have tangible effects on the ground, positioning European countries as worthwhile partners in broader agricultural transition.
2. **Market leverage works.** While the success of the ASM came about through a multi-stakeholder and multinational effort, it is widely accepted that

European consumer and retailer demand was central to triggering the ASM, demonstrating its potential in creating change.

3. **DCF solutions globally are good for European business.** In addition to the impressive environmental outcomes the ASM delivered, the initiative helped mitigate many of the risks discussed in this briefing. It helped maintain market access, enhanced reputational value to European companies, avoided trade disruptions, and reduced compliance costs.<sup>106</sup>
4. **Demonstrating proof of concept.** EU's market requirements coupled with support measures and cooperation initiatives resulted in real tangible progress in implementing DCF measures across various geographies, demonstrating the technical and economical viability of these efforts.

## Protecting forests is an opportunity for meaningful long-term strategic partnerships

European engagement efforts on protecting the world's forests are almost always seen exclusively through a sustainability lens, despite the fact they also offer a strategic cooperation potential, which is crucial at a time of general geo-political uncertainty. The versatility of DCF measures makes them an attractive tool to utilise in engagement with partners across a variety of strategic fields—be it agriculture, digitalisation, security, or governance. Deforestation governance and transparency initiatives can, as a by-product, help reduce violence and conflict in the region, while digitalisation aimed at providing traceability can generate important economic data for producers and governments alike.<sup>107,108</sup> At a time when producer countries demonstrate similar increased interest in achieving sustainable agriculture outcomes, DCF cooperation can serve as a bridge between sustainability and broader strategic, often geopolitical interests.

Previous engagements demonstrated the viability of this approach. A study on the EU-Indonesia Forest, Law Enforcement, Governance, and Trade Voluntary Partnership Agreement (FLEGT-VPA) examining private sector, government, and civil society feedback on cooperation in this area showed a high level of

stakeholder satisfaction across a variety of cooperation activities including sustainable forest management, new market opportunities, timber legality, and law enforcement outcomes.<sup>109</sup>

The focus on DCF measures can therefore be more heavily emphasised in existing European global strategic initiatives. The EU's flagship strategic programme, the Global Gateway, articulates an ambitious EU interest-driven and development agenda based on economic diplomacy, sustainability criteria, and security considerations in line with EU's open strategic autonomy agenda.<sup>110</sup> Because of their versatility, DCF measures can form the foundation for Global Gateway's operationalisation, tapping into each of the initiative's strategic principles.

Europe has a strong institutional framework and a good legacy of engagement with producer countries on DCF measures through initiatives like the EU's TEI on Deforestation-Free Value Chains, Norway's NICFI, or the UK's AIM4Forests. Scaled up, this framework can serve a solid foundation for cooperation activities with a variety of partners, which is crucial at a time of increasing geopolitical uncertainty.

## Enabling competitiveness and innovation opportunities

Recent decisions to slow down the implementation of the broad sustainability agenda across European countries has in-part been justified by the need to prioritise European competitiveness prospects in the face of fast-changing international landscapes. While DCF measures do prioritise environmental outcomes at its core, they also present opportunities for Europe to enhance its competitiveness prospects and take a leadership position in innovation of crucial elements of global agricultural transition, despite the calls to the contrary.

On the demand side, we are seeing a clear trend towards sustainable production. The global sustainable products market size, currently estimated at USD 382.6 billion is set to more than double in size to USD 802.6 billion by 2035.<sup>111</sup> This trend is in part driven by European consumer behaviour, who consistently have shown preference for sustainable products. In a variety of market research surveys and polling, European consumers consistently indicate that destruction and degradation of the world's forest is one of their primary concerns. Consequently, polls suggest high numbers of European consumers in favour of DCF-products: in a 2022 poll, 82% of respondents indicated preference for retailers and businesses not to sell products associated with deforestation, and an equal amount expressed frustration about the lack of information of where a product is sourced from.<sup>112</sup> A poll conducted in 2024 suggested that 84% of respondents desired implementation of regulations restricting agricultural goods linked with deforestation, with 74% of them extending this concern to other natural ecosystems.<sup>113</sup> Meanwhile, in a 2023 survey, more than half of respondents suggested they would be willing to pay premium for climate-friendly goods.<sup>114</sup>

As consumer demand and broader need for implementation of DCF solutions grows, so does the global market in this space. The global food traceability market has shown clear indication of growth and is projected to expand significantly in the coming years. The market, which was valued at USD 16.9 billion, is now on track to USD 30.5 billion<sup>115</sup>, with some estimates going as high as USD 44.2 billion.<sup>116</sup> This represents a steady annual growth rate of 9.17% in technology-driven farming practices adaptation.<sup>117</sup> The global growth in demand for agri-tech

presents an opportunity for European companies to benefit from these trends. Europe is already dominating the food traceability market, holding 32.5% of the share in 2024.<sup>118</sup>

European firms are also world leaders in satellite monitoring and traceability solutions, with companies like SGS or Airbus developing new verification systems to be deployed in tropical commodity producing regions.<sup>119</sup> Meanwhile the Copernicus Earth Observation programme is generating open-access satellite data that is being widely applied in global deforestation hotspots, while NICFI's satellite data programme has integrated its results with Google's Earth Engine Platform, attracting more than 37,000 registered users globally.<sup>120,121</sup> We are also experiencing a boom in European agri-tech startup investment, attracting more than EUR 1.5 billion in 2024.<sup>122</sup> Continued investment and prioritisation in this area could spur more innovative solutions and place European companies as world leaders in the ag-tech space.

Europe's market leadership in this area, and advancements in innovative agricultural practices, open up the potential for deeper engagement with partners globally, assisting in the global transition towards sustainable agriculture, whilst creating opportunities for Europe's and producer countries' agricultural sectors. The EU's Common Agriculture Policy (CAP) is increasingly promoting sustainable agriculture solutions such as soil cover or crop rotation.<sup>123</sup> In fact, EU-funded initiatives like Pasture+, focused on restoring degraded lands in Spain, show remarkable similarity to efforts simultaneously under way in many commodity producer countries.<sup>124</sup> Brazil's Green Way initiative to restore degraded pasture to avoid conversion also has strong emphasis on degraded land restoration and improvement in soil management.<sup>125</sup> With the prospect of the ratification of the EU-MERCOSUR free-trade agreement, the opportunity for collaboration between governments and the private sector is significant. Initiatives between Europe and producer countries around technical capacity, information sharing, and scaling up can benefit both towards mainstreaming such practices, protecting environment, boosting resilient supply chains, and advancing efforts towards global food security.

# 4. Turning theory into practice: recommendations for European policy makers

For Europe, continued implementation of DCF measures is as much of a necessity as it is an opportunity. Increased likelihood of climate impacts coupled with the ongoing environmental degradation of our ecosystems means that Europe will need to implement mitigation strategies to safeguard its agricultural supply chains from shocks that could directly impact European consumers and businesses at home. Likewise, the exacerbated geopolitical uncertainty calls for more sustainable and resilient supply chains, alongside diversification of global partnerships, boosting European global leadership ambitions. DCF measures enable Europe to be an active participant in a global agricultural transition, providing it tools to fulfil its long-term environmental, security, competitiveness, and partnership objectives.

## Recommendations for policy makers

### 1. Maintain and build on existing DCF regulatory frameworks.

The decision to delay the EUDR for the second year in a row has unfortunately created prolonged uncertainty and costs for companies, investors, and third-country partners, signalling inconsistency at a time when supply chain predictability and resilience are at a core of EU priorities. This is a set-back, not only for the environment but also for security, cooperation, and competitiveness prospects discussed in this paper—and a blow to the EU's standing as a reliable regulator. Despite this, the DCF framework created, now scheduled for application in December 2026, is still one of the critical strategic management tools at the EU's disposal, and its potential to strengthen European supply chain resilience remains steady. It is imperative for EU decision makers to make a clear public commitment to the future of this law as soon as possible and provide clarity to the market and its third-country partners, reiterating its strategic vision. Likewise, adoption of similar measures by the UK and Norway would send a strong message, contributing to the momentum already created by the EUDR.

### 2. Develop a voluntary incentive mechanism favouring DCF commodity imports.

While regulatory frameworks around DCF supply chains face a degree of uncertainty in both the EU and UK, there is no reason why the momentum around deforestation-free supply chains should lose its pace. In anticipation of the EUDR, many producers went to great lengths to be operationally ready to meet the due diligence requirements and continue to do so. Should operators meet the requirements, European countries could introduce a mechanism that treats DCF commodity imports with preference, and could consider measures such as tariff relief, tax breaks, or simplified and fast-tracked procedural arrangements. Because Europe is considered a premium market, the prospect of favourable access would act as a powerful incentive for producers—and to a certain degree maintain the momentum we've seen so far. The mechanism could go beyond just the coverage of forests and include other vulnerable ecosystems such as savannas, peatlands, or wetlands, which under the most recent EUDR revision would not be considered for regulatory coverage till at least 2030.

### 3. Conduct a supply chain risk prioritisation mapping exercise.

Increasingly, European climate and sustainability action has to be viewed through a security lens, given the prospective impacts unsustainable supply chains can have on European stability and competitiveness outlooks. To achieve this, European governments will need an evidence-based database that identifies where its import dependencies overlap with the highest levels of deforestation, ecosystem conversion, and governance fragility. European public institutions should consider a supply chain risk prioritisation mapping, integrating information about agricultural commodity import trends, deforestation and conversion exposure, climate risk indicators, and local governance metrics. The assessment would also be a good opportunity to examine corporate transparency frameworks and disclosure patterns. This would enable a more strategic application of DCF measures, that would fulfil both sustainability and other strategic objectives such as security and trade and act as a guideline for application of its resources—be it financial, technical, or diplomatic. It could also provide European companies with a roadmap for which supply chains are most vulnerable and require the greatest amount of traceability investment and supplier engagement. This exercise could be incorporated into existing European security and foreign engagement frameworks—be it the 2023 European Economic Security Strategy or Global Gateway.

### 4. Increase financial contributions for global DCF measures.

Traditionally, European spending on global DCF measures has been associated with aid and official development assistance (ODA) packages. Yet with security, partnerships, and competitiveness implications, financing DCF measures should be seen as a long-term investment to achieve a broad array of the continent's goals. Transition to sustainable food systems globally will require significant, multi-stakeholder investment in traceability, land-use, smallholder support, and regenerative agriculture. Europe has a crucial role to play in accelerating this transition, and as we have seen with the EUDR pilot programs, even modest investment can make a substantial difference on-the-ground. To fulfil the potential that DCF measures offer, Europe should increase its financial contributions—be it through



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dedicated programs, grants, or blended-finance models. At a time when ODA spending in Europe is facing budgetary constraints, European governments should consider greater coordination between respective public funding agencies to maximise the effectiveness of investment efforts. In this respect, investment in DCF measures offers a good value for taxpayer money that can be applied at the scale needed to achieve European strategic interests. Catalytic funding models, for example, crucial to de-risking investment prospects into DCF production, offer a 1:4 investment leverage, where every Euro spent can mobilise an additional four from commercial sources.<sup>126</sup> Applied strategically, this investment can lower risks of supply chain disruptions for European companies, increase resilience of critical commodity systems, and strengthen partnerships with key agricultural commodity producers.

### 5. Create better tools to redirect European private sector investment into global DCF and regenerative agriculture priorities.

While public institutions have a central role in setting the rules and providing strategic direction, the transition to global DCF supply chains also depends on mobilising private capital at scale. To achieve this, European governments must strengthen their sustainable finance toolbox, with the most glaring example resting in a clearer and more targeted EU Taxonomy rules that explicitly classify DCF production,

regenerative agriculture, verified traceability of agricultural goods, and restoration of degraded lands as sustainable economic activities. This would give investors the confidence that land-use investments are aligned with EU strategic priorities, lower screening and compliance costs, and enable the creation of new financial products that reward verified DCF performance. Similarly, the EU should utilise existing directives such as Corporate Sustainability Due Diligence Directive (CSDDD) to encourage greater transparency and disclosure of major companies to help them identify risks to their portfolios and help financial institutions prioritise action.

#### **6. Create bilateral agreements with key producer countries around DCF and sustainable agriculture measures.**

Efforts to establish DCF supply chains cannot be unilateral; in fact to get the most out of the global agricultural transition, partnerships between consumer and producer markets will be essential. Many producer countries are already prioritising policies that focus more on implementing sustainable food systems, and as such European strategic support in this space would be welcome. European governments should prioritise establishing new DCF-specific bilateral agreements with key third-country partners, building upon existing initiatives such as the Germany-Brazil Agricultural Policy Dialogue or DG INTPA's Forest Partnership Memorandum of Understandings (MoUs). The focus on such agreements can provide space for joint standard-setting, aligned roadmaps, and shared finance and technical mechanisms that support producers in meeting DCF expectations. In 2025, The Nature Conservancy published a policy brief on cooperation opportunities between Europe and Brazil on DCF measures, showcasing how collaboration across land-use, traceability, and governance policies can create mutually beneficial outcomes around strategic goals while safeguarding environmental objectives.<sup>127</sup> This model can be replicated across a wide array of commodities and geographical locations.

Importantly, political engagement in this space sends an important signal to local producers and industry that European market is fully onboard with the agricultural transition, further de-risking prospects of domestic agricultural transition and investment. Joint

work programmes can also create platforms for mutual information sharing and strengthen prospective commercial opportunities in this space. For European governments, these bilateral arrangements strengthen geopolitical ties, stabilise access to essential commodities, and reinforce Europe's position as a credible and collaborative global partner.

#### **7. Embed DCF clauses in current and new trade agreements.**

Trade agreements remain one of the EU's most influential levers for shaping global production standards. Integrating strong, operational DCF clauses into both ongoing and future negotiations would amplify Europe's ability to reduce deforestation risk across critical supply chains. While European trade agreements include sustainability provisions, embedding DCF provisions would create clearer expectations for partner countries and provide European companies with more predictable regulatory and sourcing environments. It would also help the EU manage strategic dependencies by anchoring DCF implementation within long-term trade relationships rather than relying solely on unilateral measures. They strengthen diplomatic engagement, create structured platforms for technical cooperation, and give partner countries more certainty about EU market expectations—reducing compliance friction and supporting local agricultural transitions.

#### **8. Facilitate a whole-of-government coordination taskforce on deforestation and land conversion.**

As we have demonstrated in this paper, deforestation is much more than just an environmental issue. Yet, most European governments view the issue almost exclusively through a sustainability lens. Combatting deforestation has serious implications on European health, financial, legal, geopolitical, trade, and agriculture outcomes, and as such, stronger institutional frameworks are necessary to combat this challenge holistically. European governments and the EU Commission should consider establishing better coordination mechanisms between relevant agencies, for example by establishing an internal taskforce, to address the challenges associated with deforestation more effectively, as well as capturing the strategic benefits that come with establishing DCF measures globally.

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