EUROPEAN
COMMISSION

Brussels, 17.11.2021
SWD(2021) 326 final

PART 1/2

COMMISSION STAFF WORKING DOCUMENT

IMPACT ASSESSMENT

minimising the risk of deforestation and forest degradation associated with products placed on the EU market

Accompanying the document

Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010

{COM(2021) 706 final} - {SEC(2021) 395 final} - {SEC(2021) 396 final} - {SWD(2021) 325 final} - {SWD(2021) 327 final} - {SWD(2021) 328 final} - {SWD(2021) 329 final}

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Glossary

Term or acronym	*Meaning or definition*
AFI	Accountability Framework Initiative
CA	Competent Authority
CBD	Convention on Biologic Diversity
COC	Chain of Custody
COFO	Committee on Forestry
DD	Due Diligence
DDS	Due Diligence System
EP	European Parliament
EUTR	European Union Timber Regulation
FAO	Food and Agriculture Organization of the United Nations
FLEGT	Forest Law Enforcement Governance and Trade
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GHG	Greenhouse Gas
IA	Impact Assessment
OPC	Online Public Consultation
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IUU	Illegal, unreported and unregulated fishing
LULUCF	Land Use, Land Use Change and Forestry
MS	Member State
NFRD	Non-financial reporting Directive
NYDF	New York Declaration on Forests
RED	Renewable Energy Directive
REDD	Reducing Emissions from Deforestation and Forest Degradation

SDG	Sustainable Development Goals
SME	Small and Medium Enterprise
TFEU	Treaty on the Functioning of the European Union
VPA	Voluntary Partnership Agreements
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
WTO	World Trade Organisation

1 1 INTRODUCTION: POLITICAL AND LEGAL CONTEXT

This impact assessment (IA) accompanies the Commission proposal for a regulation to minimise the risk of deforestation and forest degradation associated with products placed on the EU market. The proposal was first announced in the 2019 Commission Communication on Stepping up EU Action to Protect and Restore the World's Forests[1](from here onwards "2019 Communication"), and then confirmed in the European Green Deal,[2] the 2030 EU Biodiversity Strategy[3] and the Farm to Fork Initiative,[4] as well as in the Inception Impact Assessment.[5]

The proposal is an integral part of and coherent with the overall objectives of the European Green Deal and all the initiatives developed thereunder. In particular it should be complementary to the other measures proposed in the 2019 Communication, in particular: 1) working in partnership with and support to producer countries, crucial to cover aspects related to root causes of deforestation, (such as governance, law enforcement and the fight against corruption), and 2) to minimise leakage (see section 6.1.4) by strengthening international cooperation, with major consumer countries, to promote the adoption of similar measures to avoid products coming from supply chains associated with deforestation and forest degradation being placed on the market.

Deforestation is a major cause of biodiversity loss.[6] Over 1 million species are threatened with extinction and the main driver of biodiversity loss on land is changes in land use, including deforestation and agricultural expansion.[7] Emissions from land-use and land-use change, mostly due to deforestation, are the second biggest cause of climate change after burning fossil fuels.[8] Agriculture, forestry and other land use accounted for an estimated 23% of total net greenhouse gas emissions from human activity 2007-2016.[9] Action in this area is therefore also important to fight climate change.

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[1] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Stepping up EU Action to Protect and Restore the World's Forests, COM/2019/352 final

[2] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal, COM/2019/640 final.

[3] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS EU Biodiversity Strategy for 2030 Bringing nature back into our lives, COM/2020/380 final

[4] COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system, COM/2020/381 final

[5] Inception Impact Assessment - Minimising the risk of deforestation and forest degradation associated with products placed on the EU market

[6] The need to reduce forest loss is underlined in IPBES. 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science- Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES Secretariat, Bonn, Germany. https://www.ipbes.net/global-assessment-report-biodiversity-ecosystem-services. Betts *et al*. 2017. Global forest loss disproportionally erodes biodiversity in intact landscapes. Nature letters 547: 441-444.

[7] IPBES 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (Eds.). IPBES Secretariat, Bonn, Germany.

[8] Smith P et al. (2014) Agriculture, Forestry and Other Land Use (AFOLU). In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer O et al (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA.

[9] IPCC, 2019: Summary for Policymakers. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.- O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M.

Forests are seriously endangered. The Food and Agriculture Organization of the United Nations (FAO) estimates[10] that 420 million hectares of forest — an area larger than the European Union — have been lost between 1990 and 2020. The global rate of deforestation has decreased over the past three decades, but there are strong regional differences.[11] In tropical moist forests, there has been a marked increase in disturbance rates (deforestation and forest degradation) in recent years (+2.1 million ha/year for the past 5 years compared with the period 2005–2014), reaching a level close to that of the early 2000s. Forest degradation is a main contributor to this recent increase, with much of it attributable to short-term disturbances. Forest degradation is caused by both natural and anthropogenic disturbances, and may subsequently lead to deforestation. Without a reduction of the present disturbance rates, undisturbed forests in tropical humid regions will disappear entirely by 2050.[12] (see sections 2.1 and 2.3 defining the problems this initiative aims to address and their drivers)

Deforestation and forest degradation are therefore among the most important environmental challenges. Stepping up action to fight deforestation and forest degradation will be an essential element in effectively grappling with the planetary crises that threaten our collective future: the climate and the biodiversity crisis.

Tackling deforestation would also have the additional benefit of removing one of the main pathways of zoonotic diseases, thereby reducing the likelihood of the next pandemic emerging through this route.[13]

The public has made it clear that it wants the EU to take action to address the global impacts of deforestation and forest degradation. The Commission's online public consultation that closed in December 2020 (see Annex II) received nearly 1.2 million contributions, including from partner countries, making it the second most popular in the history of the European Union. An overwhelming majority of respondents furthermore stated that they believed that an EU intervention could reduce global deforestation and forest degradation. This was confirmed also at specific stakeholder events, for example at the meetings of the Multi-Stakeholder Platform on Protecting and Restoring the World's Forests [14], gathering a very broad range of stakeholders from the EU and partner countries, including public authorities and representatives of industry, civil society, international organizations and research institutions.

In the "*Conclusions of the Council and of the Governments of the Member States sitting in the Council on the Communication on Stepping Up EU Action to Protect and Restore*

Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. In press.

[10] FAO. 2020. Global Forest Resources Assessment 2020: Main report. Rome.

[11] FAO 2020. Global Forest Resources Assessment 2020: Main report. Rome.

[12] Vancutsem, *et al*. (2021). Long-term (1990–2019) monitoring of forest cover changes in the humid tropics. Science Advances 7:10. Available at https://advances.sciencemag.org/content/7/10/eabe1603.full

[13] Dobson *et al*. 2020. Ecology and economics for pandemic prevention. Science 369 (6502): 379-381.

[14] Register of Commission Expert Groups - Commission Expert Group/Multi-Stakeholder Platform on Protecting and Restoring the World's Forests, including the EU Timber Regulation and the FLEGT Regulation. Available at https://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetail&groupID=3282

the World's Forests[15]" of 2019. EU Member States expressed their concern regarding the current deforestation situation and stressed the importance of the EU addressing the direct and indirect drivers of deforestation, noting that approximately 80 per cent of global deforestation is caused by agricultural expansion. They emphasised that since current policies and action at global level on conservation, restoration and sustainable management of forests do not suffice to halt deforestation and forest degradation, enhanced EU action is needed to contribute more effectively to the achievement of the UN Sustainable Development Goals (SDGs). The Council specifically supported the Commission announcement in the 2019 Communication that it would assess additional regulatory and non-regulatory measures and that it would present respective proposals. This impact assessment and the accompanying proposal follow up on that announcement.

The European Parliament adopted on 22 October 2020 a resolution[16] in accordance with Article 225 of the Treaty on the Functioning of the European Union (TFEU) calling for an "EU legal framework to halt and reverse EU-driven global deforestation". The resolution requests the Commission to submit, on the basis of Article 192 (1) TFEU, a proposal for an EU legal framework to halt and reverse EU-driven global deforestation. This impact assessment takes into account the recommendations of the European Parliament.

As described below in detail, the current legislative framework — at national, EU and international level — is not sufficient to reduce EU-driven deforestation. Therefore, in line with the announcement made in the 2019 Communication, the European Green Deal, the 2030 EU Biodiversity Strategy, the Farm to Fork Initiative, this initiative focuses on forests. While the European Parliament and NGOs advocated for an inclusion of other ecosystems, such an expansion of the scope at this stage was considered detrimental to the effectiveness and enforceability of the policy measures hereby assessed. However, at a later stage, building on lessons learned in implementation of a legislative act focusing on deforestation, it might be considered to expand the measures to cover also other ecosystems.

1.1 1.1 EU context

The existing EU legislative framework addresses deforestation only partially (see also section 4). The EU Forest Law Enforcement Governance and Trade (FLEGT) Action Plan[17] constitutes the key EU policy against illegal logging and associated trade. While it tackles illegal logging and associated trade, it does not address deforestation as such.

A key element of the FLEGT Action Plan is a voluntary scheme to ensure that only legally harvested timber is imported into the EU from countries agreeing to take part in

[15] Council conclusions on the Communication on Stepping Up EU Action to Protect and Restore the World's Forests (16 December 2019) 15151/19. Available at https://www.consilium.europa.eu/media/41860/st15151-en19.pdf

[16] European Parliament resolution of 22 October 2020 with recommendations to the Commission on an EU legal framework to halt and reverse EU-driven global deforestation (2020/2006(INL) Available at https://www.europarl.europa.eu/doceo/document/TA-9-2020-0285_EN.html

[17] Communication from the Commission to the Council and the European Parliament - Forest Law Enforcement, Governance and Trade (FLEGT) - Proposal for an EU Action Plan (COM(2003) 251 final).

this scheme. The internal EU legal framework for this scheme is the Forest Law Enforcement, Governance and Trade Regulation (FLEGT Regulation)[18], which establishes a licensing system that is the basis for FLEGT Voluntary Partnership Agreements. Another key element of the FLEGT Action Plan is the EU Timber Regulation (EUTR)[19], which prohibits the placing of illegally harvested timber and timber products on the EU market and lays down obligations for operators placing timber on the market for the first time. It requires that they should exercise Due Diligence (DD). Traders must keep a record of their suppliers and customers. The Regulation applies to both imported and domestically produced timber and timber products. Both FLEGT Regulation and EUTR have undergone a Fitness Check[20], the findings of which have provided input into this impact assessment.

Note, that the 2018 Renewable Energy Directive (RED)[21] includes sustainability criteria for bioenergy, covering both biofuels for transport and biomass and biogas for heat and power, which must be met in order to qualify for financial and regulatory support. However, the Directive does not cover the placing on the market of such commodities, nor uses of commodities other than for bioenergy.

At EU level, a number of initiatives and instruments form the policy context for this impact assessment. The 2019 Communication sets out the overall objective of protecting and improving the health of existing forests, in particular primary forests and to increase sustainable, biodiverse forest coverage worldwide. In the context of the European Green Deal, both the 2030 EU Biodiversity Strategy and the Farm to Fork Initiative identify the legislative proposal and other measures to avoid or minimise the placing of products coming from supply chains associated with deforestation or forest degradation on the EU market, as important for the achievement of their objectives.

Other main EU initiatives that are relevant for the impact assessment given their scope, either already in force, or being prepared at the time of publication of this report, include:

1. The EU Taxonomy Regulation;[22]
2. The EU Land Use, Land Use Change and Forestry (LULUCF) Regulation;[23]
3. The EU Forest Strategy;[24]
4. The legislative initiative on Sustainable Corporate Governance (SCG),[25] which aims to improve the EU regulatory framework on company law and corporate governance;

[18] Council Regulation (EC) No 2173/2005 of 20 December 2005 on the establishment of a FLEGT licensing scheme for imports of timber into the European Community

[19] Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market.

[20] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/11630-Illegal-logging-evaluation-of-EU-rules-fitness-check-_en

[21] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L328/82 of 21.12.2018

[22] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088

[23]Relevant information on the review of the LULUCF Regulation, including the inception Impact Assessment can be found in https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12657-Land-use-land-use-change-and-forestry-review-of-EU-rules

[24] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12674-Forests-new-EU-strategy_en

5. The proposal for a Corporate Sustainability Reporting Directive (CSRD); [26]
6. A legislative initiative on substantiating green claims[27] regarding the environmental performance of products & businesses;
7. The Sustainable Product Initiative (SPI). [28]

A comprehensive description of all EU initiatives and instruments relevant for this Impact Assessment is included in Annex 8.

1.2 1.2 International and national context

At international level, there are a range of fora and processes that are either directly or indirectly relevant for the fight against deforestation and forest degradation, mainly under the auspices of the United Nations. The bodies, instruments, processes and commitments relevant for this impact assessment are the following:

1. The UN Framework Convention on Climate Change (UNFCCC) of 1992 and its Paris Agreement, adopted at COP 21 in 2015;[29]
2. The Convention on Biological Diversity (CBD);[30]
3. The UN Sustainable Development Goals (SDGs);[31]
4. The UN Forum on Forests (UNFF);[32]
5. The New York Declaration on Forests (NYDF)
6. REDD+ (Reducing Emissions from Deforestation and Forest Degradation), which is a climate change mitigation solution being developed by the parties to the UNFCCC;
7. The Durban Declaration 2050 vision for forests and forestry in 2015;
8. The Committee on Forestry (COFO) of the FAO;
9. UN Decade of Ecosystem Restoration (2020-2030).[33]
10. United Nations Convention to Combat Desertification (UNCCD)

At the national and regional level, the following initiatives are relevant for this impact assessment as they aim to achieve similar objectives:

- The Ministerial Conference on the Protection of Forests in Europe;

[25] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12548-Sustainable-corporate-governance_en
[26] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12129-Corporate-Sustainability-Reporting_en
[27] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12511-Environmental-performance-of-products-&-businesses-substantiating-claims_en
[28] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12567-Sustainable-products-initiative_en
[29] In particular, Article 5.1 of the Paris Agreement recalls the commitment made by the Parties in the 1992 Convention to "*take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases […] including forests*." Article 5.2 further calls on Parties to implement and support the existing framework relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+), and alternative policy approaches.
[30] Of particular relevance to deforestation and forest degradation are Target 3, 4, 9, 14, 15 and 20
[31] Of particular relevance for deforestation and forest degradation are SDGs 12.2, 13, and 15.2.
[32] The main outcome of the work of the UNFF so far are: 1) The International Arrangements on Forests and the UN Forest Instrument, and 2) The UN Strategic Plan for Forest 2017-2030 , which provides a global framework for action at all levels to sustainably manage all types of forests and trees outside forests, and to halt deforestation and forest degradation
[33] United Nations General Assembly Resolution 73/284: United Nations Decade on Ecosystem Restoration (2021–2030) A/RES/73/284:

- The Amsterdam Declaration Partnership, an initiative supported by eight EU Member States (Belgium, Denmark, France, Germany, Italy, the Netherlands and Spain) as well as Norway and the United Kingdom;[34]
- France's 2017 due diligence law, and the French national strategy against imported deforestation;[35]
- Germany's draft Supply Chain Act
- The draft Schatz bill,[36] introduced in the US Senate to restrict access to the US market for certain commodities that originate from illegally deforested land;
- The UK's proposed law to prevent forests and other natural areas of importance from being illegally converted to agricultural land.

Apart from the above mentioned initiatives and measures that have been taken into account when developing this impact assessment, due consideration had also been given to the existing obligations under international trade rules governed in particular by the General Agreement on Tariffs and Trade (GATT) and the General Agreement on Trade in Services (GATS).

A comprehensive description international and national initiatives, instruments and commitments relevant for this Impact Assessment is included in Annex 8.

2 2 PROBLEM DEFINITION

2.1 2.1 What is/are the problems?

Forests are valuable ecosystems that sustain most terrestrial biodiversity and act as a major sink of carbon. Yet forests around the world are being rapidly cut in an unsustainable manner, burnt and degraded. This leads to biodiversity loss and greenhouse gas emissions, which in turn fuel climate change. This also increases the likelihood of new diseases spreading from animals to humans. Around 80% of deforestation is currently driven by the expansion of agricultural land[37] and the demand for commodities and products such as soy, beef, palm oil and wood. The EU is a relevant consumer of those commodities, part of which are produced unsustainably, causing deforestation, and is therefore a contributor to the global problem of deforestation and forest degradation. The EU does not have in place specific and effective rules to reduce its contribution to deforestation and forest degradation.

[34] Home - Amsterdam Declarations Partnership (ad-partnership.org)
[35] République Française - Ministère de la Transition Écologique et Solidaire. 2018. Stratégie nationale de lutte contre la déforestation importée 2018-2030: dossier de presse. Available at https://www.ecologie.gouv.fr/sites/default/files/2018.11.14_dp_sndi_mtes.pdf
[36] Environmental Investigation Agency. 2020, March 3. EIA Applauds Newly Announced U.S. Bill to Tackle Global Deforestation; Urges Biden-Harris Administration to Support. Press release. Available at https://eia-global.org/press-releases/20210303-tackling-global-deforestation-schatz-pr
[37] Council of the European Union 2019. Conclusions of the Council and of the Governments of the Member States sitting in the Council on the Communication on Stepping Up EU Action to Protect and Restore the World's Forests: Outcome of proceedings. Available at https://www.consilium.europa.eu/media/41860/st15151-en19.pdf

The world currently has a forested area of 4.06 billion hectares, which is 31% of the total land area[38]. Forests contain more than 60 000 different tree species and provide habitats for 80% of amphibian species, 75% of bird species and 68% of mammal species[39]. Forest ecosystems are also the largest terrestrial carbon sink ─ storing approximately 400 gigatons of carbon[40] that would otherwise be free in the atmosphere and contribute to ongoing changes in climate patterns. On top of that, around 1.6 billion people depend on forests for their livelihood, including around 70 million indigenous people.

Deforestation occurs when forest is cleared to make space for other activities such as agriculture, mining, urban development, or other land uses. Forest degradation is a more gradual process through which a forest's biomass declines, its species composition changes, or its soil quality declines, but the land still meets the definition of a forest regarding surface, crown cover, and tree height. Forest degradation is often a precursor to deforestation. Both deforestation and forest degradation represent significant problems, in particular as they are occurring at an alarming rate.

The FAO estimates[41] that 420 million hectares of forest — about 10% of the world's forests and an area larger than the European Union — have been lost worldwide through deforestation between 1990 and 2020. In terms of net area loss (the difference between area of forest cleared and new surface of forests planted or regenerated), the FAO estimates that the world lost around 178 million hectares of forest cover in the same period of time, which is an area triple the size of France.

According to the FAO, the global rate of deforestation has decreased over the last decades. In the most recent five-year period (2015–2020), the annual rate of deforestation was estimated at 10 million hectares per year, down from 12 million hectares per year in the period between 2010 and 2015, and 15 million hectares per year between 2000 and 2010[42].

[38]FAO. 2020. Global Forests Resources Assessment 2020: Main report. Rome. Available at http://www.fao.org/3/ca9825en/CA9825EN.pdf
[39] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at http://www.fao.org/3/ca8642en/CA8642EN.pdf
[40] Kayler, Z.; Janowiak, M.; Swanston, C. 2017. Global Carbon. (June, 2017). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center
[41] FAO. 2020. Global Forests Resources Assessment 2020: Main report. Rome. Available at http://www.fao.org/3/ca9825en/CA9825EN.pdf
[42] FAO. 2020. Global Forests Resources Assessment 2020: Main report. Rome. Available at http://www.fao.org/3/ca9825en/CA9825EN.pdf

Figure 1 Forest expansion and deforestation between 1990-2020

Source: FAO, 2020

In terms of net forest loss, there was a decrease due to a reduction of deforestation in some countries, plus increases in forest area in others through afforestation and the natural expansion of forests. The rate of net forest loss declined from 7.8 million hectares per year in the decade 1990–2000 to 5.2 million ha per year in 2000–2010 and 4.7 million ha per year in 2010–2020. It is to be noted that other sources, such as Global Forest Watch[43], point to an increase in forest cover loss in recent years, specifically in tropical countries.

As regards forest degradation, systematic data and statistics are much scarcer in comparison with deforestation. By definition, degradation is more difficult to measure and monitor. As part of the FAO's 2020 Global Forest Resources Assessment, countries were asked whether and how they monitored forest degradation, with various definitions and criteria reported.[44] Illegal or otherwise unsustainable logging is a principal agent of forest degradation.[45] Major natural causes of forest disturbance include forest fires, insects, disease and severe weather events[46]. Considering forest intactness, the FAO in recent publications concluded that 49% of the global forest area had a high level of integrity, while 10% of the global forests are severely fragmented with little or no connectivity.[47]

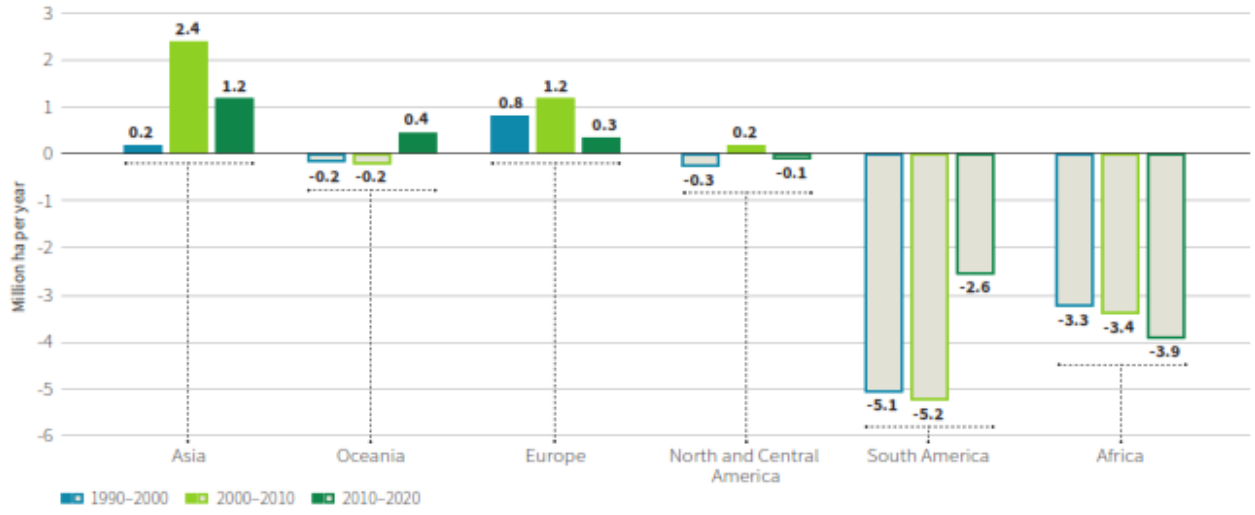
According to a recent research paper[48], 106.5 million hectares of tropical moist forests are in a degraded state, representing 10% of the around 1 billion hectares of tropical moist forest area remaining in January 2020. There has been a marked increase in

[43] World Resources Institute. 2020. We Lost a Football Pitch of Primary Rainforest Every 6 Seconds in 2019. Available at https://www.wri.org/blog/2020/06/global-tree-cover-loss-data-2019
[44] FAO. 2020. Global Forests Resources Assessment 2020: Main report. Rome. Available at http://www.fao.org/3/ca9825en/CA9825EN.pdf
[45] FAO. 2021. Sustainable Forest Management Toolbox. Technical Module: Reducing Deforestation. Rome. Available at http://www.fao.org/sustainable-forest-management/toolbox/modules/reducing-deforestation/in-more-depth/en/?type=111
[46] FAO. 2020. Global Forests Resources Assessment 2020: Main report. Rome. Available at http://www.fao.org/3/ca9825en/CA9825EN.pdf
[47] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at http://www.fao.org/3/ca8642en/CA8642EN.pdf
[48] Vancutsem *et al*., (2021). Long-term (1990–2019) monitoring of forest cover changes in the humid tropics. Science Advances 7:10. Available at https://advances.sciencemag.org/content/7/10/eabe1603

disturbance rates (deforestation and forest degradation) in recent years (+2.1 million ha/year for the past 5 years compared with the period 2005–2014). Forest degradation accounts for 33% of the observed changes in forest cover, with much of it attributable to short-term disturbances such as selective logging, natural events and fire. Note also that, as forest degradation often leads to deforestation, the paper concludes that without a reduction of the present disturbance rates, undisturbed forests in tropical humid regions will disappear entirely by 2050.

Also relevant is the fact that deforestation rates and drivers vary widely across different continents. For the period 2015-2020, in terms of gross deforestation, FAO estimates put Africa on top, with 4,4 million hectares lost per year; followed by South America (2.9 million); Asia (2.2 million); North America (436,000); Europe (69,000); and Oceania (42,000.) The figures change significantly in terms of net forest loss, as shown in the chart below, especially for Asia, a continent where some countries are undergoing drastic deforestation while others are investing in reforestation and afforestation programmes.

Figure 2 Global annual net forest area change between 1990-2020 by region



Source: FAO, 2020

The main drivers of deforestation also vary geographically. Expansion of agricultural land dedicated to palm oil plantations is a major cause of deforestation in Southeast Asia, for example, while clearing of forests for pastures for cattle and for soy plantations and land speculation (land grabbing, often associated with forced displacement of local communities) are the top drivers in South America. The expansion of cocoa plantations has had a relevant impact on deforestation in Central and West Africa, while other areas of the continent have more mixed factors in play[49].

With regard to European forests, FAO's 2020 Global Forest Resources Assessment indicates that Europe has seen a net forest expansion in each of the three decades

[49] https://www.worldwildlife.org/stories/deforestation-fronts

between 1990-2020. The State of Europe's Forests 2020 reports that forest cover across Europe continuously increased between1990-2020, although the rate of increase is slowing down.[50]

The picture is, however, a bit different in terms of annual gross deforestation, which does not take into account afforestation and reforestation efforts. Gross deforestation across the whole of Europe (including the Russian Federation), increased from 88,000 hectares in 1990-2000, to 201,000 hectares in 2010-2015, and then fell to 69,000 hectares in 2015-2020 (FAO, 2020).

As regards the situation of forests within the EU, the State of Europe's Forests 2020 report[51] states that, between 1990 and 2020, the area of forests in Europe has increased by 9%, carbon stored in the biomass has grown by 50% and wood supply has risen by 40%. However, less than 5% of European forests areas in the EU are considered undisturbed, or natural, according to the European Environment Agency's State of the Environment 2020 report[52].

As the EU forests are considerably less under threat of deforestation and degradation than forests elsewhere, it is expected that the proposed initiative will have less impact in the EU in terms of costs for operators sourcing relevant commodities domestically. However, where there are serious problems with deforestation and degradation, the legislation will provide a basis to tackle them.

The impact of deforestation and forest degradation on greenhouse gas emissions is also a source of concern. The Intergovernmental Panel on Climate Change (IPCC)[53] estimates that 23% of total anthropogenic greenhouse gas emissions (2007-2016) come from agriculture, forestry and other land uses. About 11% of emissions are from deforestation and conversion of natural ecosystems, while the remaining 12% are direct emissions from agricultural production such as livestock and fertilizers. It is crucial to consider forest degradation as a risk factor of deforestation and as an indicator of climate change and climate oscillations[54].

The IPCC has also argued that most paths to keeping global warming within the limits agreed in the Paris Agreement involve reducing deforestation. "*All assessed modelled pathways that limit warming to 1.5ºC or well below 2°C require land-based mitigation*

[50] FOREST EUROPE, 2020: State of Europe's Forests 2020. Available at SoEF_2020.pdf (foresteurope.org)
[51]Forest Europe - Ministerial Conference on the Protection of Forests in Europe, State of Europe's Forests 2020, https://foresteurope.org/state-europes-forests-2020/.
[52]European Environment Agency, State of the Environment 2020, https://www.eea.europa.eu/soer/publications/soer-2020.
[53] IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. Available at https://www.ipcc.ch/site/assets/uploads/sites/4/2021/02/210202-IPCCJ7230-SRCCL-Complete-BOOK-HRES.pdf
[54] Vancutsem, C., Achard, F., Pekel, J.-F., Vieilledent, G., Carboni, S., Simonetti, D., L. E. O. C. Aragão, Nasi, R. (2021). Long-term (1990–2019) monitoring of forest cover changes in the humid tropics. Science Advances 7:10. Available at https://advances.sciencemag.org/content/7/10/eabe1603

and land-use change, with most including different combinations of reforestation, afforestation, reduced deforestation, and bioenergy."[55]

Deforestation and forest degradation are among the top drivers of biodiversity loss.[56] For terrestrial and freshwater ecosystems, land-use change has had the largest relative negative impact on nature since 1970. Agricultural expansion is the most widespread form of land-use change. This expansion has come largely at the expense of forests.

The contribution of deforestation and forest degradation to biodiversity loss is therefore very worrying. More species are now threatened with extinction than ever before, according to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)[57]. Around 1 million species already face extinction unless action is taken to reduce the intensity of drivers of biodiversity loss; without, there will be a further acceleration in the global rate of species extinction.

In addition to contributing to climate change and biodiversity loss, deforestation and forest degradation threaten human health in an even more direct way. Deforestation and degradation can often lead to increased interaction between humans and animals, increasing the likelihood of zoonotic diseases spreading from animals to humans.[58] The majority of new infectious diseases affecting humans, including the SARS-CoV2 virus that caused the current COVID-19 pandemic, are zoonotic and their emergence may be linked to such interaction. Deforestation and forest fragmentation are increasing the risk of viral disease outbreaks[59].

2.2 2.2 Who is affected by the problem?

People around the world are affected by the loss of biodiversity, the effects of climate change and the emergence of new zoonotic diseases. Many of the countries experiencing serious levels of deforestation and forest degradation are among the poorest in the world. The poorest and most marginal segments of society, such as smallholder farmers, indigenous and local communities are disproportionately impacted by the effects of deforestation and forest degradation. The IPCC assessment indicates that the world needs to remain under 1.5-2 degree increase in order to avoid the worst effects of climate change, including the increased likelihood of severe, pervasive and irreversible impacts

[55] IPCC, 2019: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems [P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.-O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley, (eds.)]. Available at https://www.ipcc.ch/site/assets/uploads/sites/4/2021/02/210202-IPCCJ7230-SRCCL-Complete-BOOK-HRES.pdf

[56] On the link between biodiversity and climate change see the final report of IPBES-IPCC co-sponsored -workshop "Biodiversity and climate change", available at 20210609_workshop_report_embargo_3pm_CEST_10_june_0.pdf (ipbes.net)

[57] IPBES. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razzaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. Available at https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf

[58] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at http://www.fao.org/3/ca8642en/CA8642EN.pdf

[59] Vancutsem, C., Achard, F., Pekel, J.-F., Vieilledent, G., Carboni, S., Simonetti, D., L. E. O. C. Aragão, Nasi, R. (2021). Long-term (1990–2019) monitoring of forest cover changes in the humid tropics. Science Advances 7:10. Available at https://advances.sciencemag.org/content/7/10/eabe1603

for people and ecosystems (e.g. heatwaves, extreme precipitation, acidification of the ocean and global sea level rise are some of the most likely effects). This is also the goal of the Paris Agreement, which is jeopardised by ongoing deforestation. As described above, most scenarios to meet the Paris Agreement objectives involve reduced global deforestation.

In addition around 1.6 billion people depend on forests for their livelihoods, including 70 million indigenous people, according to FAO. The formal forestry sector globally provides more than 45 million jobs, with additional 41 million jobs in the informal sector, also according to FAO. Furthermore, 'wood and non-wood forest products' provide up to 20% of the income of rural households in developing countries.

2.3 2.3 What are the problem drivers?

While there are a number of drivers of deforestation and forest degradation, agricultural expansion continues to be the main one, together with illegal logging. [60]

An analysis[61] of data for 46 tropical and subtropical countries found that agriculture alone causes 73% of all deforestation, with commercial agriculture accounting for 40% of deforestation, followed by local or subsistence agriculture, which is related to 33% of deforestation. Infrastructure accounts for 10%, urban expansion for 10%, and mining for 7%. The same analysis lists logging as a main driver of forest degradation. Forest degradation is also often the first step of conversion from forest to other land uses.

Agricultural expansion is driven by global demand for specific products and commodities, market pressures, dietary preferences, and lack of efficiency in agricultural practices and waste[62]. As such there is a very strong link between deforestation and forest degradation and international trade.

Different studies have attempted to measure the impact of the production/harvest of particular commodities and/or the EU's consumption on global deforestation and forest degradation[63]. They show that a limited number of agricultural commodities are responsible for most deforestation and forest degradation globally, and that the EU is among the major global consumers of some of these. The product scope section (chapter 5) of this Impact Assessment identifies cattle, wood, palm oil, soy, cocoa and coffee as the most relevant commodities to be considered.

[60] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at http://www.fao.org/3/ca8642en/CA8642EN.pdf

[61] Hosonuma *et al*. 2012. An assessment of deforestation and forest degradation drivers in developing countries. Environ. Res. Lett. 7 044009. Available at https://iopscience.iop.org/article/10.1088/1748-9326/7/4/044009/pdf

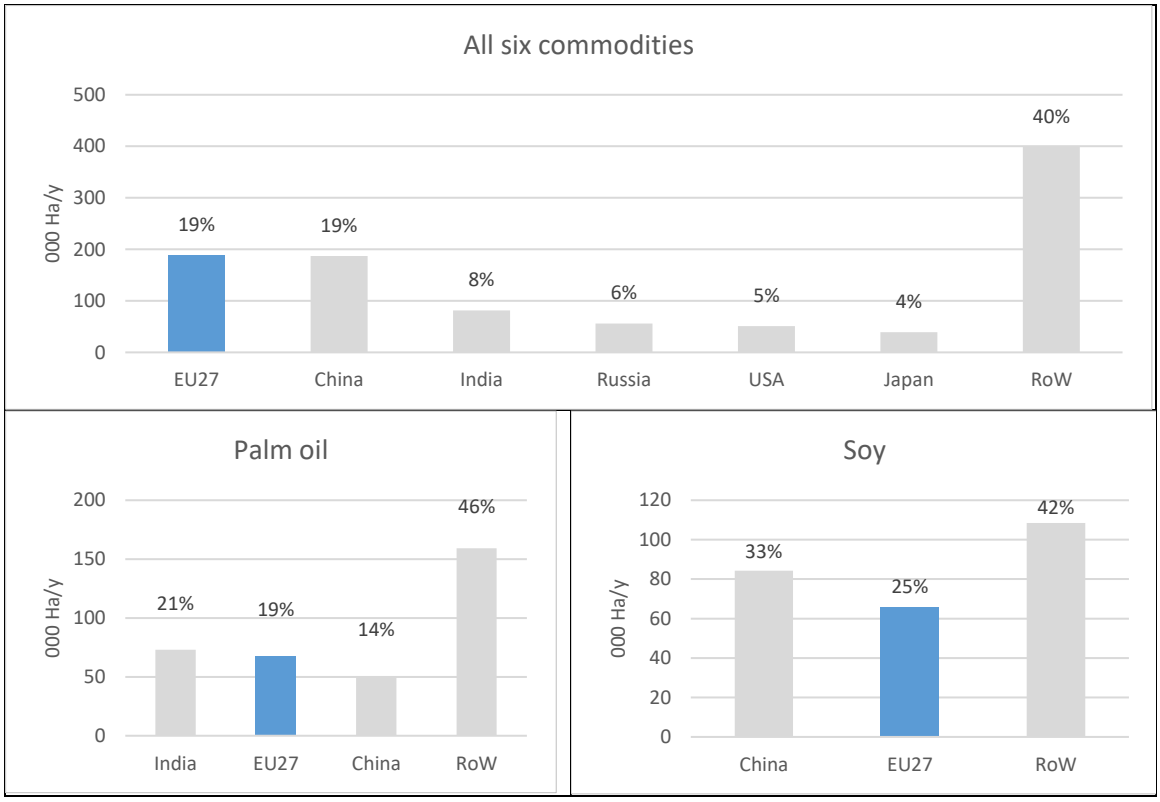
[62] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at http://www.fao.org/3/ca8642en/CA8642EN.pdf

[63] IEEEP. 2019. EU Consumption as a Driver of Global Deforestation. Available at https://ieep.eu/uploads/articles/attachments/d99f5a14-e05c-4592-b59e-63612a6ea9b2/EU%20consumption%20and%20deforestation%20factsheet%20(IEEP).pdf?v=63744063219

A 2013 study[64] used two different models to estimate the impact of EU consumption on deforestation. The first model estimated that EU imports of crops and livestock were responsible for about 9 million hectares of deforestation globally over the period 1990-2008 (i.e. 500 000 Ha/year on average). This meant almost 36% of all embodied deforestation in crop and livestock products traded internationally during that period or 7% of global embodied deforestation if non-traded products consumed domestically were included. The second model based on consumption of final products estimated EU contribution to global embodied deforestation to be 732 000 Ha/year, or 10% of the total global embodied deforestation (including domestic consumption). The different estimates resulted from methodological differences of the two models.

Based on the model and data included in a recent research paper[65], EU consumption[66] during the period 2008-2017 was responsible for 19% of the tropical deforestation embedded in the international imports of the six commodities selected in the product scope (6% if domestic consumption of producing countries is considered). The following figure presents the contribution of EU consumption to deforestation risk for each of the main commodities (palm oil, soy, cattle, cocoa, coffee and wood – see also chapter 5).

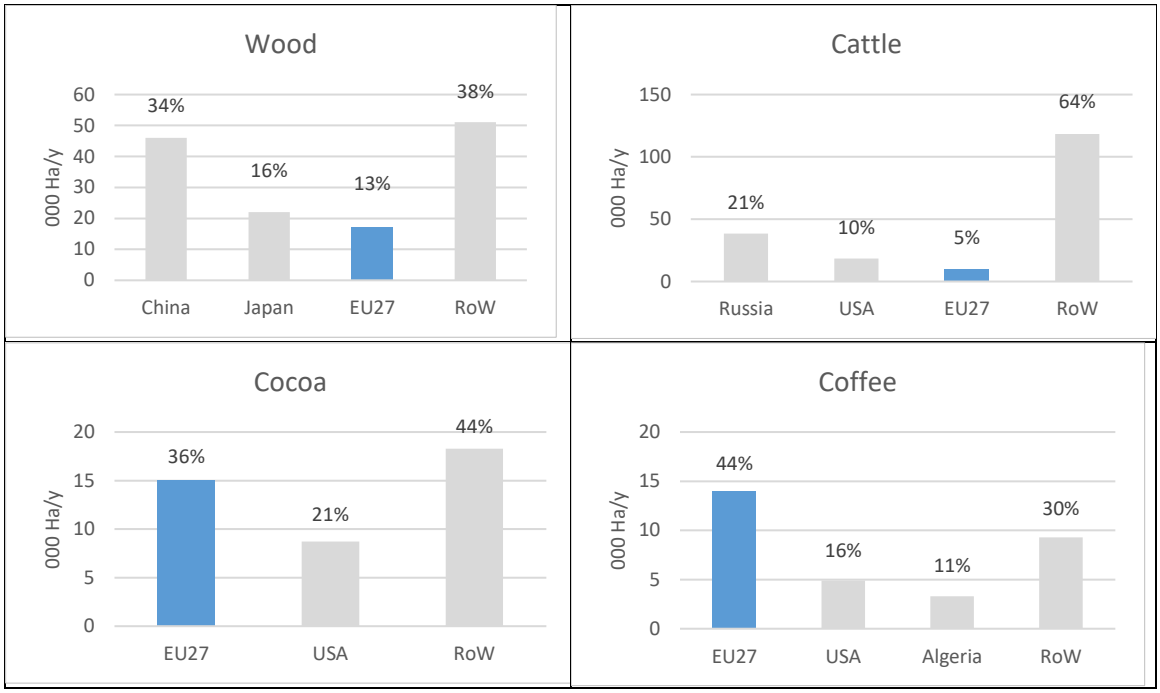
Figure 3 Contribution of imported consumption to risk of deforestation for selected commodities (average of period 2008-2017 in thousands of hectares per year; only countries larger than 10% are shown in the charts for individual commodities). Source: own elaboration based on data from Pendrill et al (2020). (RoW: rest of the world).



[64] EC. 2013. The impact of EU consumption on deforestation: Comprehensive analysis of the impact of EU consumption on deforestation. Technical Report 2013-063. Available at https://ec.europa.eu/environment/forests/pdf/1.%20Report%20analysis%20of%20impact.pdf

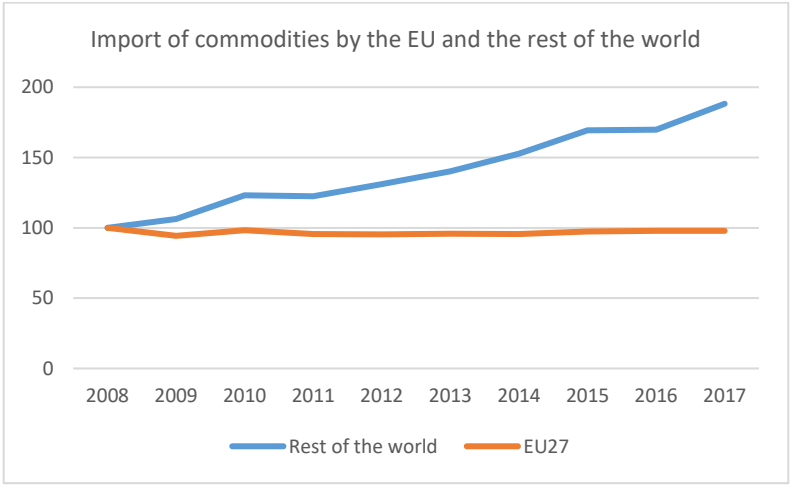
[65] Pendrill F., Persson U. M., Kastner, T. 2020. Deforestation risk embodied in production and consumption of agricultural and forestry commodities 2005-2017 (Version 1.0) [Data set]. Zenodo. Available at https://zenodo.org/record/4250532#.YGrNv0BuK1M

66 Based on imports of wood, palm oil, soy, cocoa, coffee and beef from Eurostat Comext data.



The overall lower figures in relation to those found in previous studies are consistent with the significant growth in commodity consumption by the rest of the world economies compared to the more stable consumption of the EU during the past decade, as shown in the following figure.

Figure 4 Relative growth of import of selected commodities (in tonnes) by the EU and the rest of the world in the period 2008-2017. Source FAOSTAT. Based on palm oil, soy, beef, cocoa and coffee. Imports in 2008 = 100.



2.3.1 *2.3.1 Market and regulatory failures*

At the global and regional level there are a number of general, political commitments regarding the protection and conservation of forests. However, while consumption of the abovementioned commodities drives the problem of deforestation and degradation, the markets currently fail to account for these environmental costs. They therefore do not provide sufficient incentive to change EU consumption away from these products with harmful supply-chains and equally do not encourage the consumption of deforestation-free commodities and products in the EU. This first failure is that market prices do not reflect how one activity produces costs or benefits for other activities or impacts on

environmental and social issues. Specifically, deforestation results in negative externalities, including increased release of carbon into the atmosphere associated with global climate change, biodiversity loss through loss of habitat, loss of associated ecosystem services with subsequent impacts on agricultural yields[67], and increased risks of pandemics by bringing nature and people more in contact through land clearing. These externalities are not reflected in the price of the products provoking deforestation.

Solutions to externalities include ensuring that prices reflect the externality more accurately (i.e. internalise) or by correcting the market through regulation of the particular activity.

The second failure is the lack of a level playing field for EU operators that want to source sustainable products. A recent report[68] focusing on 500 relevant corporations and financial institutions concluded that 43% of them did not have in place any deforestation commitments. This means companies aiming to clean their supply chains and prevent deforestation and forest degradation are forced to compete on the EU market with companies that do not implement sustainability considerations in their supply chains and face at the same time the increased costs of sourcing sustainably.

It is then no surprise that a majority of industry associations and businesses advocate for binding EU rules that level the playing field, establishing the same requirements for all competitors. The online public consultation of this impact assessment specifically asked respondents whether "EU-level demand-side measures would reduce unfair competition from other businesses that have not made voluntary pledges/commitments." About 51% of businesses and industry associations answered 'yes,' 34% said 'may be', and only 9% answered 'no.'

A recent position paper issued by COCERAL, FEDIOL and FEFAC argued: "*Many of our companies involved in the soy and palm oil supply chain are already voluntarily implementing a (horizontal) due diligence. Making the implementation of such tool mandatory would not only enhance the level playing field across European companies, but also increase awareness among all supply chain actors*."

The third failure is the absence of a dedicated EU legal framework and of a legally binding international instrument for the protection of forests against deforestation and degradation. At EU level, as explained in the first chapter, existing legislation addresses some drivers of deforestation (illegal logging or biofuel consumption), but not the main one, which is agricultural expansion. As explained in the text box below the FLEGT/VPA legal framework did not deliver on its objectives

[67] Leite-Filho, A.T., Soares-Filho, B.S., Davis, J.L. *et al.* Deforestation reduces rainfall and agricultural revenues in the Brazilian Amazon. *Nat Commun* **12,** 2591 (2021)
[68] https://forest500.org/sites/default/files/forest500_2021report.pdf

Box 1. FLEGT Regulation / VPAs: Key findings from the Fitness Check

The Fitness Check of the FLEGT Regulation has confirmed the achievements of FLEGT VPAs in terms of enhanced stakeholder participation and improved forest governance frameworks in partner countries and, at the same time, highlighted a number of shortcomings of the FLEGT Regulation. It also points to the fact that there is limited evidence that the VPAs overall have contributed to reducing illegal logging. While the EU system itself would be an efficient tool to lower the compliance costs for EU operators, the main instrument for its operationalization, i.e. the VPAs, has not delivered. One of the main problems as regards the FLEGT Regulation is the fact that the main EU trade partners have never shown interest to engage in VPA processes, resulting in only 3% of timber imports covered by an operational VPA system.

Progress in VPA implementation has also been slow and there is no clear evidence of their impact in terms of supporting the implementation of the FLEGT Regulation and stopping illegal timber from being placed on the EU market. Only one country of the 15 with which the EU has engaged in a VPA process, has an operating FLEGT licensing system in place, more than 15 years after the FLEGT Action Plan set the basis for these processes in 2003. Only one country from the top 10 EU timber trading partners is engaged in a VPA process.

VPAs are complex and legally binding trade treaties, covering labour, social and human rights dimension of the forest sector. This means the negotiations are detailed and complex, usually taking years to finalize and implement — far from the quick and flexible tool they were expected to become. They are a unique tool with no clear parallels outside the EU and outside the timber sector, despite the fact that many economic fields share similar environmental, social and human rights implications (infrastructure, mining, food, textile…). As VPAs are trade treaties for a single commodity and derived products, the EU lacks the leverage of its full economic weight and the advantage that it enjoys when it negotiates broad Free Trade Agreements.

The concept underlying the FLEGT Regulation, in particular the VPAs, is not fit for the expansion of the scope from legality to sustainability based on a harmonised definition of deforestation and forest degradation free. Looking at the results so far, further investment of considerable resources into VPA processes cannot be justified. Considering that timber and derived products covered by FLEGT VPAs cover only 3% of timber imports into the EU, the benefits do not justify the costs.

At international level, the existence of a legally binding international instrument has been discussed since the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, but the global community has not been able to agree on the need for, the possible structure and commitments of such an instrument. No discussions are currently ongoing that would indicate that developments will go beyond the current non-binding initiatives and fora. At national level while some Member States such as France[69] have taken or are contemplating steps to address issues related to the transparency and accountability of supply chains, action at EU level would ensure a coherent approach

[69] More information is available at https://www.deforestationimportee.fr/fr

across the EU, ensure a level playing field and leverage the impact on deforestation and forest degradation.

The fourth failure consists of an underlying lack of transparency and information asymmetries derived from the lack of common standards and reliable information available to market actors. Information asymmetries occur when, in an economic transaction, one party has more information than the other does.

2.4 2.4 How will the problem evolve?

The population of the earth is expected to grow to 10 billion by 2050, which will lead to a growth of consumption. The changing climate will in addition affect food production in many areas of the planet. We therefore have to expect both an increased demand for agricultural land and pressure on forests.

Without further action, deforestation will most likely continue at rates that are incompatible with many international objectives, including the objective of the Paris Agreement of keeping the temperature rise below 1.5-2 degrees.

A feasibility study undertaken for the Commission[70] considered that the global production and the export of globally traded agricultural products coming from supply chains associated with deforestation and forest degradation will continue to grow in the coming years. The major commodities driving this, as identified by the study, will be cattle, palm oil, soy, and timber. The study also found that EU consumption of globally traded agricultural products coming from supply chains associated with deforestation will stagnate for some (e.g. cattle, soy, pulpwood), but increase for other (e.g. palm oil, cocoa and coffee). Overall, it predicted that the amount of deforestation associated with EU consumption would increase, with the approximate range of EU embodied deforestation rate being between 300,000 and 600,000 hectares per year by 2030.

Nevertheless, the role of EU production and consumption as a driver of deforestation will decrease proportionally, the same report noted, as Asia will significantly increase its demand for commodities related to deforestation such as soy and beef. This will increase the need for dialogues with other major market players to tackle global deforestation and forest degradation and promote global clean supply chains. The baseline scenario proposed in this impact assessment foresees that, without new EU policy measures the EU's forest footprint will increase in the coming decade. For more see section 5.2 on baseline.

[70] COWI. 2018. Feasibility study on options to step up EU action against deforestation. Available at https://ec.europa.eu/environment/forests/pdf/feasibility_study_deforestation_kh0418199enn_main_report.pdf

3 3 WHY SHOULD THE EU ACT?

3.1 3.1 Legal basis

EU competence to act in the area of deforestation and forest degradation stems from the articles of the Treaty on the Functioning of the European Union (TFEU) related to the protection of the environment (Articles 21 (2.f) and 191 (2) TFEU). Article 21(2.f) requires the Union "*to help develop international measures to preserve and improve the quality of the environment and the sustainable management of global natural resources, in order to ensure sustainable development*". Article 191 (2) requires the Union policy on the environment to aim at a high level of protection.

Article 192 (1) states that "*the European Parliament and the Council, acting in accordance with the ordinary legislative procedure and after consulting the Economic and Social Committee and the Committee of the Regions, shall decide what action is to be taken by the Union in order to achieve the objectives referred to in Article 191*".

3.2 3.2 Subsidiarity: Necessity of EU action

While environment is a competence shared between the EU and the Member States, the impact of initiatives by EU Member States (such as the ones described above), which might affect the functioning of the internal market and the trade aspect of the initiative, provide a justification for common European action.

The absence of applicable rules at the European level put responsible business operators that are ready to clean up their supply chains at a competitive disadvantage and rewards unsustainable behaviour. The supply chains for the products covered by the initiative are international and very often global. It is essential to ensure a level playing field for operators at the EU level in terms of requirements to be met before placing products (commodities and derived products) on the EU market for the first time. For this reason, EU-wide measures are necessary. They should be designed to ensure a common understanding of deforestation and forest degradation-free supply chains and to increase the transparency of such supply chains.

Were the EU not to act, the problem of deforestation and forest degradation related to EU consumption would persist and further deteriorate. This could negatively affect the EU's efforts in the field of global biodiversity protection and climate change.

While there is currently no regulatory framework to reduce the impact of EU consumption on deforestation and forest degradation, two Regulations (the EUTR and FLEGT Regulation) focusing on the legality of timber placed in the EU market have been developed as part of the FLEGT Action Plan. These instruments could potentially be affected by the new initiative (see section 8.)

3.3 3.3 Subsidiarity: Added value of EU action

The main drivers of deforestation and forest degradation are linked to both the EU market and international trade. Action at EU level to address the consumption footprint

of the EU would provide the benefit of the EU experience in dealing with complex supply-chain issues (e.g. stemming from the illegal logging related legislation for example) and would address international trade issues in a coordinated and harmonised way.

As some Member States have started taking action at national level, the potential impacts on the internal market and the protection of the internal market also justify action at EU level. The EU action could complement and strengthen national efforts of Member States.

4 4 OBJECTIVES: WHAT IS TO BE ACHIEVED?

While the problem of deforestation and forest degradation is wide and touches many different areas, including social, economic and environmental issues, this initiative focuses specifically on measures to minimise the placing of products associated with deforestation or forest degradation on the EU market.

A single action by the EU (and EU alone) will however only have a limited impact in reducing global deforestation and forest degradation. Therefore, cooperation with producing and consumer countries, as well as with international organisations, is crucial to avoid leakage and to achieve the goal of halting global deforestation.

Work towards these goals is foreseen in the 2019 Communication, which in its annex[71] lists over thirty precise actions across five priorities that the European Commission commits to carry out. Hence assessment of impacts of this initiative needs to be seen also in the context of the other actions being put in place. In particular with regard to producer countries, the EU can build on years of experience in the international forestry area: the Forest Partnership currently being developed will be a useful tool to tailor outreach as well as policy dialogue and financial support for capacity building. The sustainable development chapters in trade agreements could also contribute to addressing the global problem of deforestation.

The proposed policy options will require products to have been produced in compliance with the deforestation-free definition (see section 4.4) and with the laws of the country of production. The latter means that labour, environmental and human rights laws applicable in the country of production (both national and international) will need to be taken into account when assessing the compliance of products with this initiative. This includes the rights of indigenous peoples, which is expected to contribute to protecting the rights of vulnerable local communities.

Other EU legislative initiatives, such as the one sustainable corporate governance currently being developed, will be specifically designed to address the broader social and human rights aspects. It will do so by requiring companies across all sectors to identify,

[71] https://eur-lex.europa.eu/resource.html?uri=cellar:a1d5a7da-ad30-11e9-9d01-01aa75ed71a1.0001.02/DOC_2&format=PDF

prevent, and mitigate actual and possible adverse impacts on human rights (including labour right), health and the environment (including the climate), in their own operations and value chains[72]. The present initiative will not specifically target the financial sector and investments. Existing initiatives in the area of sustainable finance, such as the implementation of the EU Taxonomy Regulation and the future Corporate Sustainability Reporting Directive (current NFRD) are better suited to address the deforestation impacts of the finance and investment sectors, thereby complementing and supporting this legislative initiative on deforestation.

4.1 4.1 General objective

The general objective of this initiative is to minimise the EU's contribution to deforestation and forest degradation worldwide thus reducing the EU contribution to GHG emissions and global biodiversity loss.

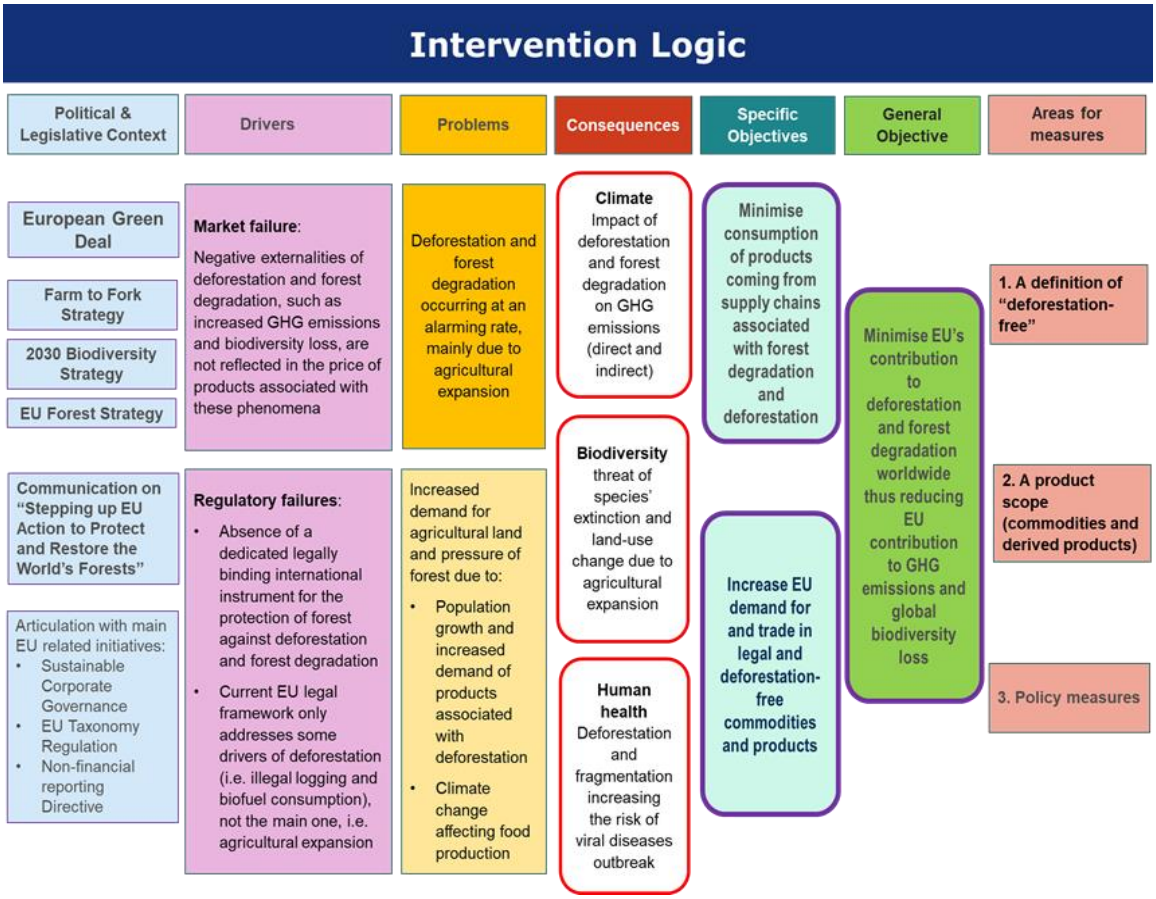
4.2 4.2 Specific objectives

Specific objectives are tailored around policy options identified and set out concretely what the policy intervention is meant to achieve:

a. Minimise consumption of products coming from supply chains associated with deforestation or forest degradation.
b. Increase EU demand for and trade in legal and 'deforestation free' commodities and products.

[72] ***A*** description of the interplay between the due diligence requirements in the Sustainable Corporate Governance (SCG) initiative and those established in the legislative initiative on deforestation is included in Box 3

4.3 4.3 Intervention logic



The above figure captures the intervention logic of the initiative, linking the problems, their drivers and the objectives. The proposed legislative initiative will cover a range of products/commodities associated with deforestation and forest degradation and will be based on a definition of deforestation-free product/commodity. Through an expanded product scope and by adding the requirement of "deforestation free" to the current system based on legality, the proposed measures will address the main driver of deforestation, i.e. agricultural expansion, thereby reducing the EU's contribution to deforestation and forest degradation. The impact assessment analyses different policy options for achieving these objectives.

4.4 4.4 Deforestation-free definition

In developing the objectives that link the analysis of the problem (and its drivers) to the options for possible demand side measures, operational definitions need to be developed against which the compliance of commodities and products under the scope of the policy tools will be measured.

As was the case under the EUTR and the FLEGT Regulation, the policy options in this impact assessment will continue to require the compliance of products with the rules of

the country of production — in other words, they will cover their legality. However, they will also go beyond that to assess whether products are deforestation and forest degradation free. To meet the ambition of the initiative, the definition of deforestation and forest degradation should rely as much as possible on internationally-backed criteria, should ensure legal clarity, and should be measurable, based on quantitative, objective data.

All available evidence and the inputs from stakeholders suggest this is the right decision to attain the desired goals of this initiative.

First, available reports confirm that a sizable part of ongoing deforestation is legal according to the laws of the country of production. Forest Trends[73] estimated in 2014 that almost half of all tropical deforestation between 2000 and 2012 was driven by the illegal conversion of forest lands for commercial agriculture. The same organization estimates that between 2013 and 2019, around 69% of deforestation destined to commercial agriculture in tropical countries was illegal. These reports tend to focus on countries with weak governance — the global share of deforestation that is illegal might be lower —, but already provide clear data signalling that leaving out deforestation that is legal in the country of production would undermine the effectiveness of the policy measures.

Second, focusing only on legality would make the intervention rely on the stringency of non-EU countries' requirements and their enforcement. This would make it dependent on the decisions taken in third countries and their potential political turns. This could also potentially encourage a race to the bottom in countries highly dependent on agricultural exports that may be tempted to lower their environmental protection with a view to facilitating the access of their products to the EU market. Exports from a country with stricter environmental controls could therefore be adversely affected when compared to those of countries with less demanding controls, regardless of whether the latter presents a higher risk in terms of deforestation. This type of requirement could therefore discourage the adoption of more effective environmental controls.

Third, establishing a deforestation definition could facilitate the implementation of the measures. Results from the Fitness Check that looked at the due diligence implemented under the EUTR suggests that due diligence obligations only relying on the laws of the country of origin are sometimes difficult to implement, as companies and public authorities in charge of enforcement need to find their way among foreign documents, certificates and laws, written in foreign languages, and sometimes produced in countries with high levels of corruption where ascertaining the reliability of documents may also be very difficult. A deforestation-free definition opens a new, more straightforward way of checking compliance, whereby an operator or a public authority could check whether a product is deforestation-free by resorting to widely-available satellite monitoring tools (provided that the exact area of production can also be ascertained).

[73] https://www.forest-trends.org/publications/illicit-harvest-complicit-goods/

Fourth, the overwhelming majority of respondents (88%) to the online public consultation (OPC) carried out for this initiative[74] (see Annex 2) indicated their preference for assessing products based on an EU definition of deforestation-free, rather than only their legality according to the laws of the country of harvest or production. In addition, the OPC showed strong support for a deforestation-free requirement or standard that products must comply with to be placed on the EU market.

For these reasons, all proposed policy options rely on a single definition of what is to be considered as deforestation-free, as well as on compliance with the laws of the country of production. This will be the basis for the obligations for EU stakeholders including companies and EU competent authorities. It will also be relevant for stakeholders in third countries that have commercial relations with the EU.

A second question is which particular definition — among the different options provided by the literature review and stakeholder consultation — is best suited to fulfil the objectives of the policy intervention. This impact assessment supports the adoption of the definition explained below, which is closely related to the definitions of forest and deforestation used by the members of the Food and Agricultural Organisation (FAO)[75].

All policy measures will rely on the following definitions:

- Forest is defined as: "*Land spanning more than 0.5 hectares with trees higher than 5 m and a canopy cover of more than 10% (land-cover criteria), or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.*" This is the definition used by the FAO[76]. Some tree plantations are explicitly recognized as forests by the FAO in the explanatory notes of the forest definition, namely rubber-wood, cork oak and Christmas tree plantations[77]. It is however suggested that all plantations are excluded from the definition of forest or otherwise converting pristine forest

[74] Note that indication of responses reported in this Impact Assessment concern unique responses to the OPC and the, campaign responses which were analysed separately as explained in Annex 2.
[75] FAO. 2018. Global Forest Resources Assessment 2020: Terms and Definitions. Forest Resources Assessment Working Paper 188. Rome. Available at http://www.fao.org/3/I8661EN/i8661en.pdf
[76] http://www.fao.org/3/I8661EN/i8661en.pdf
[77] The explanatory notes from the FAO
1. Forest is determined both by the presence of trees and the absence of other predominant land uses. The trees should be able to reach a minimum height of 5 meters in situ.
2. Includes areas with young trees that have not yet reached but which are expected to reach a canopy cover of 10 percent and tree height of 5 meters. It also includes areas that are temporarily unstocked due to clear-cutting as part of a forest management practice or natural disasters, and which are expected to be regenerated within 5 years. Local conditions may, in exceptional cases, justify that a longer time frame is used.
3. Includes forest roads, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas such as those of specific environmental, scientific, historical, cultural or spiritual interest.
4. Includes windbreaks, shelterbelts and corridors of trees with an area of more than 0.5 hectares and width of more than 20 meters.
5. Includes abandoned shifting cultivation land with a regeneration of trees that have, or are expected to reach, a canopy cover of 10 percent and tree height of 5 meters.
6. Includes areas with mangroves in tidal zones, regardless whether this area is classified as land area or not.
7. Includes rubber-wood, cork oak and Christmas tree plantations.
8. Includes areas with bamboo and palms provided that land use, height and canopy cover criteria are met.
9. Includes areas outside the legally designated forest land which meet the definition of "forest".
10. Excludes tree stands in agricultural production systems, such as fruit tree plantations, oil palm plantations, olive orchards and agroforestry systems when crops are grown under tree cover. Note: Some agroforestry systems such as the "Taungya" system where crops are grown only during the first years of the forest rotation should be classified as forest.

into some kinds of plantation would not be considered deforestation. This is the only slight deviation from the FAO approach.

- Deforestation is defined as: "*the conversion of forest to other land use, including conversion to plantations, independently whether human-induced or not.*" This is also the FAO definition, only slightly modified to cover conversion to all plantations.

- Forest degradation is defined as: *"changes within a forest which negatively affect its species composition, structure, and/or function and reduce the capacity to supply products, support biodiversity, and/or deliver services."*, While the FAO does not have a definition of forest degradation, the proposed definition is consistent with descriptions in FAO reports, which say that, "forest degradation entails a reduction or loss of the biological or economic productivity and complexity of forest ecosystems resulting in the long-term reduction of the overall supply of benefits from forest, which includes wood, biodiversity and other products or services.[78]"

- 'Deforestation-free': "*A product/commodity that has neither caused nor contributed towards deforestation or forest degradation."*

This choice of definitions has several advantages. First, they rely on internationally used definitions, meaning they have already been discussed and are used among members of the FAO. Second, the concepts of forest and deforestation rely on precise physical characteristics and thresholds that can be measured, often with remote technical tools such as satellite images. Third, these definitions are relatively simple, and can be uniformly implemented across the globe, as they don't rely on national particularities, easing implementation and enforcement.

Several other options were ruled out. The parties to the United Nations Framework Convention on Climate Change (UNFCCC), building on work of the FAO, agreed[79] on a definition of forests that involved a range of thresholds, for example tree canopy between 10% and 30%, leaving countries leeway to select their precise definition. This flexibility was considered inappropriate for this initiative as it would lead to uneven implementation (products from some countries would be subject to a different standard than products from other countries) and would have made monitoring with remote sensing tools more difficult. It is to be noted, however, that the chosen definition falls within the range agreed by the UNFCCC and that national particularities will be taken on board in the preferred policy option by requiring that products also be compliant with the laws of the country of production.

[78] http://www.fao.org/3/ca8642en/online/ca8642en.html
[79] https://unfccc.int/sites/default/files/resource/docs/tp/tp0201.pdf

Other options ruled out were based on systems like the High Carbon Stock Approach, which try to categorise different types of forests according to their environmental value, which then could be used to better assess degradation. These sophisticated systems were rejected on the grounds that they are not available worldwide, thus jeopardising equal treatment of all products regardless of their origin, and that many times they rely on on-the-ground monitoring, hampering the possibility of remote monitoring with satellite images.

4.5 4.5 Cut-off date

Another essential decision, in relation to the deforestation-free definition, is the cut-off date. This means a specific point in time from which the products issued from newly deforested or degraded land will be penalised by the policy intervention — essentially with a prohibition of placing on the EU market, which is a common measure to all proposed policy options.

The cut-off date needs to be uniform for all commodities and products covered by the instrument, in order to facilitate implementation and monitoring. The same cut-off date set in the initial intervention needs to be maintained for future revisions and updates of the product scope, again, in order to facilitate implementation; otherwise, companies might be faced with the task of dealing with similar products covered by different cut-off dates and having to adapt their supply chains to each of them.

There is consensus in the literature and among many stakeholders that the cut-off date should not lie in the future, as this could risk triggering a "deforestation rush" in countries, which may be tempted to clear forests quickly — and essentially achieving the opposite objective of what is sought with the EU intervention.

Beyond that general consensus, the positions among institutions and stakeholders varied widely.

The European Parliament, in its resolution with recommendations to the Commission on an EU legal framework to halt and reverse EU-driven global deforestation[80], proposed "no later than 2015." The Renewable Energy Directive[81] uses 2008 as the date by which risk fuels are identified according to land expansion criteria. Voluntary certification schemes for different commodities have set different cut-off dates and advocate for EU legislation to use their own. The Forest Stewardship Council initially set 1994 as the date after which plantations converted from natural forest were not qualified for FSC certification. The Rainforest Alliance sets 2014[82]. The Roundtable on Sustainable Palm Oil sets a requirement to protect natural forests with a cut-off date of 2018[83]. In addition, the same discrepancies are present in the industry. FEFAC's Soy Sourcing Guidelines

[80] https://www.europarl.europa.eu/doceo/document/A-9-2020-0179_EN.html
[81] https://ec.europa.eu/commission/presscorner/detail/en/MEMO_19_1656
[82] https://www.rainforest-alliance.org/business/wp-content/uploads/2020/06/Annex-12-Additional-Detail-On-Requirements-For-No-conversion.pdf
[83] https://www.greenpeace.org/static/planet4-malaysia-stateless/2021/03/f66b926f-destruction_certified_09_03_21.pdf

includes a cut-off date of no later than 2020[84]. The European Cocoa Association, in a letter addressed to the Commission, has defended 2018.

Another factor to be taken into account is technology. Satellite monitoring tools, which are essential for monitoring, are improving rapidly — increasing the available resolution of their images and their capabilities —, especially in recent years. For instance, Global Forest Watch data is available since 2000 but the methodology has changed and improved since 2013 due to better technology[85]. In this sense, the more recent the date, the more tools will be available to monitor the implementation of the measures.

These factors and the conflicting proposals of different stakeholders were taken into account. Several potential dates were analysed. This impact assessment considers 2020 as the preferable option for a cut-off date. The main reasons are:

1. It would align the cut-off date to the UN Sustainable Development Goals', whereby countries around the world have committed to halting deforestation by 2020[86], and the New York Declaration on Forests, aiming at cutting natural forest loss by half by 2020[87].

2. It will mitigate potentially negative social and economic impacts in partner countries, limiting the amount of smallholders that would be caught working on land whose products cannot be sold to the EU, and ensuring that nearly all current commodity production from producing countries can still make the cut.

3. It would moderate the immediate costs for operators, reducing the administrative and financial burden related to compliance, as most products currently in trade would be sourced from land put into production prior to 2020, providing time for operators to adapt.

4. It would reduce the likelihood of supply difficulties, commodity shortages or sudden price changes. For five of the six relevant commodities (beef, coffee, soy, palm oil and cocoa), the majority of EU imports are from a small number of producer countries.

5. It ensures widespread availability of modern monitoring tools.

6. It will match the main objective of this initiative, which is to halt EU-driven deforestation. Resorting to a date in the past will not bring pristine forests back to their previous state. Other initiatives, both at the EU and global level, deal with afforestation and reforestation efforts.

Several other options were considered in particular a cut-off date by 2015, as suggested by the European Parliament. This was not taken up as the main advantages linked to a cut-off date of 2020 would not be achieved, namely: a) 2015 would not be firmly anchored in the Sustainable Development Goals and the New York Declaration on

[84] https://www.greenpeace.org/static/planet4-malaysia-stateless/2021/03/f66b926f-destruction_certified_09_03_21.pdf
[85] https://www.globalforestwatch.org/blog/data-and-research/tree-cover-loss-satellite-data-trend-analysis/
[86] Goal 15.2: "15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally." https://sdgs.un.org/2030agenda
[87] https://forestdeclaration.org/

Forests; b) the available monitoring tools would be more limited than for 2020[88]; c) it would increase the potential problems for smallholders in third countries, as well as the likelihood of supply disruptions. The same reasons applied to other possible dates such as 2008, used in the Renewable Energy Directive. The negative effects would be even more pronounced, with fewer tools available to accurately and remotely monitor deforestation by 2008 and a higher risk of supply chain disruption and potential negative impacts in producing countries.

5 5 WHAT ARE THE AVAILABLE POLICY OPTIONS?

5.1 5.1 Product Scope

For the definition and the assessment of impacts of policy options, it is essential to identify the commodities and derived products falling under the scope of this initiative. The range of timber products included in the scope of the EUTR, wasthe starting point.

In line with the recommendations of a majority of stakeholders, this impact assessment endorses the view that the product scope should regularly be reviewed and amended – maintaining the same cut-off date for new commodities and products. This will allow to adapt it to changing deforestation patterns and to partly prevent leakage problems that the policy intervention may cause (see more details on leakage on section 6.1.4.)

The initial scope delineation has to answer two questions: First, which commodities – other than wood – to include; second, whether and which products derived from those commodities to cover (for example, cookies containing cocoa and palm oil, or meat from animals fed with soy).

To answer the first question, the approach aims at selecting a number of commodities where the policy intervention is justified in terms of efficiency. There is a need to understand how European production and consumption has been contributing to global deforestation and forest degradation, on which commodities that impact has concentrated, and then finally to perform a cost-benefit analysis – taking into account the consumption of each of those commodities – to select those where an EU policy intervention could bring highest benefits per unit value of trade.

A number of research papers and reports have attempted to use deforestation, agricultural production and trade data to estimate the EU's deforestation footprint, and to link that footprint to specific commodities. An extensive literature review was carried out by the study supporting this impact assessment[89] with the aim of making a first list of commodities (see also sections 2.3 on problem drivers and 5.2 on baseline). This review,

[88] One example would be the freely available high-resolution satellite imagery of tropical forests, updated monthly, put in place by Norway's Ministry of Climate and Environment and the satellite monitoring group Planet. These use satellites to capture images of the Earth on a daily basis. The best images from a given month are stitched together into a seamless, cloudless, mosaic. These monthly mosaics give users a clear picture of where deforestation is happening and how it has progressed over time. These monthly high-resolution images are available since 2020. More information here: https://www.planet.com/explorer/#/mosaic/45d01564-c099-42d8-b8f2-a0851accf3e7.planet_medres_visual_2021-02_mosaic/zoom/2.3

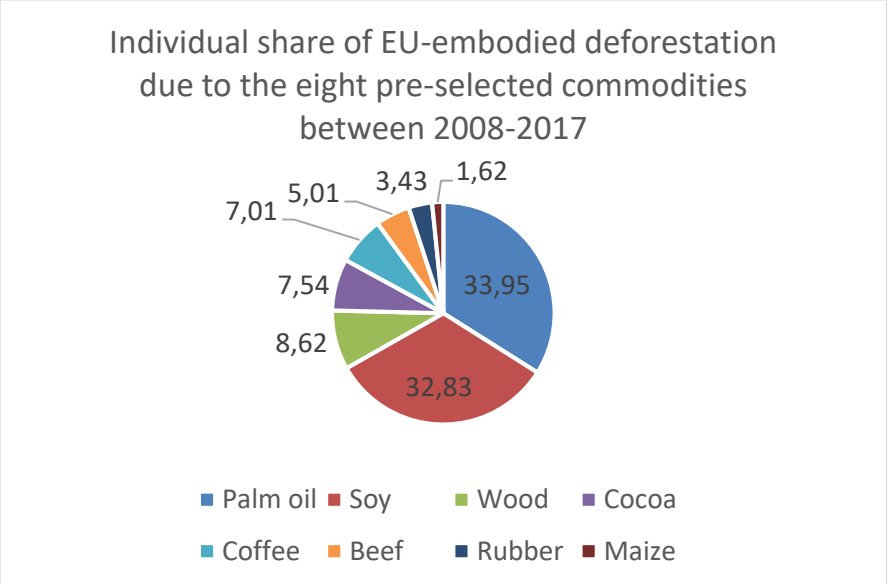
[89] Study commissioned by the European Commission, DG ENV: "*Study on EU forest policy: Impact assessment on demand side measures to address deforestation, Final Report."*

and the underlying research, is not without gaps. The statistics used by some of those reviewed reports are old[90], and the numbers have substantially changed. Some papers[91] start from a preliminary list of commodities, which makes them uncomprehensive. Others[92] focus only on tropical deforestation. A majority disregards forest degradation, which is much more difficult to measure.

In spite of these caveats, the literature review shows consensus on which commodities the EU's embodied[93] deforestation is mostly concentrated. This review delivered a first list of commodities (beef, wood, palm oil, soya, coffee, cocoa, rubber and maize) that was put to the consideration of stakeholders via the Commission Expert Group/Multi-Stakeholder Platform on Protecting and Restoring the World's Forests. There was a high level of support for including the selected commodities in the scope, with some stakeholders also indicating a need for further enlarging the list to cover sugar or meat other than beef.

The list of the commodities was then further reduced via an efficiency analysis (see table 1.) This efficiency analysis compared the hectares of deforestation linked to EU consumption, as estimated in a recent research paper[94], for each of those commodities with the average value of EU imports.

Figure 5 Individual share of EU-embodied deforestation due to the eight pre-selected commodities between 2008-2017. Source: Pendrill F., Persson U. M., Kastner, T. 2020.



Maize and rubber account for the smallest fraction of embodied deforestation among the commodities analysed, while their trade volumes are very large (around EUR 2.8 billion per year for maize and 17.6 billion for rubber). Including these two commodities in the

[90] https://ec.europa.eu/environment/forests/pdf/1.%20Report%20analysis%20of%20impact.pdf
[91] https://www.wri.org/research/estimating-role-seven-commodities-agriculture-linked-deforestation-oil-palm-soy-cattle
[92] https://iopscience.iop.org/article/10.1088/1748-9326/ab0d41/pdf
[93] Deforestation and forest degradation impacts of EU consumption.
[94] Pendrill F., Persson U. M., Kastner, T. 2020.

scope would require a very large effort and significant financial and administrative burden, with limited return in terms of curbing deforestation driven by EU consumption.

Table 1 Cost-benefit analysis of commodities for the scope other than wood. Source: Pendrill F., Persson U. M., Kastner, T. 2020, and own elaboration.

Commodity	Embedded deforestation Ha	Volume of annual imports in EUR million[95]	Ratio mEUR of imports covered by the policy intervention/Ha
Palm oil	67,661.71	5,013	0.07
Soy	65,427.78	11,133	0.17
Beef	9,975.77	4,304	0.43
Cocoa	15,031.63	7,421	0.49
Coffee	13,967.76	8,060	0.58
Maize	3,221.37	2,834	0,88
Rubber	6,830.55	17,064	2,50

The analysis therefore identified six commodities for the scope of the legislative instrument: palm oil[96], soy[97], wood[98], beef[99] (cattle)[100], cocoa[101], and coffee[102].

The second question to address in relation to the product scope was how to cover products derived from the identified commodities.

Three scenarios have been considered:

[95] Average annual imports 2015-2019 extracted from Comext using the HS codes mentioned in the table presented later in this section. For rubber HS40 and for maize HS1005 were used.

[96] Goldman, E., M.J. Weisse, N. Harris, and M. Schneider. 2020. Estimating the Role of Seven Commodities in Agriculture-Linked Deforestation: Oil Palm, Soy, Cattle, Wood Fiber, Cocoa, Coffee, and Rubber. Technical Note. Washington, DC: World Resources Institute. Available at wri.org/publication/estimating-the-role-of-sevencommodities-in-agriculture-linked-deforestation; FAO and UNEP. 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. Available at https://doi.org/10.4060/ca8642en; Henders, S., Persson, U.M., Kastner, T. 2015. Trading forests: landuse change and carbon emissions embodied in production and exports of forest-risk commodities. Environmental Research Letters 10, no. 12, Available at doi:10.1088/1748-9326/10/12/125012; VITO. 2013. The impact of EU consumption on deforestation: Comprehensive analysis of the impact; Ordway E. M, Asner G. P., Lambin E. F. 2017. Deforestation risk due to commodity crop expansion in sub-Saharan Africa. Environmental Research Letters 12:4. Available at https://iopscience.iop.org/article/10.1088/1748-9326/aa6509; Hylander et al. (2013), Effects of coffee management on deforestation rates and forest integrity, https://pubmed.ncbi.nlm.nih.gov/23772911/; Pirker, J., Mosnier, A., Kraxner, F., Havlík, P., & Obersteiner, M. (2016). What are the limits to oil palm expansion?. Global Environmental Change, 40, 73-81. https://www.sciencedirect.com/science/article/pii/S0959378016300814; Strona G, Stringerb SD, Vieilledenta G, Szantoia Z, Garcia-Ulloa J, Wich SA. 2018. Small room for compromise between oil palm cultivation and primate conservation in Africa. Proceedings of the National Academy of Sciences of the United States of America 115(35):8811–8816 DOI 10.1073/pnas.1804775115. Estrada A, Garber PA, Chaudhary A. 2019. Expanding global commodities trade and consumption place the world's primates at risk of extinction. PeerJ 7:e7068 DOI 10.7717/peerj.7068

[97] Partiti (2020); Goldman, et al. (2020); VITO (2013); Pendrill et al. 2019; FAO and UNEP (2020); Henders et al. (2015)

[98]; Goldman, et al. (2020); Pendrill et al. 2019; FAO and UNEP (2020); Henders et al. (2015)

[99] The cost-benefit analysis (table 1) is based on HS codes that correspond to "beef." "Cattle" is however preferred across the document as it would allow for the progressive scope to be enlarged to derived products such as leather, which is a relevant factor of deforestation according to literature and feedback from stakeholders — which should be properly studied in the impact assessment foreseen to extend the product scope downstream.

[100] Earthsight. 2020. Grand theft chaco; Goldman et al. 2020; FAO and UNEP (2020); Henders, et al (2015); VITO. 2013.

[101] Goldman, et al. (2020); Hylander et al. (2013) VITO. 2013; IDH (2020) The urgency of action to tackle tropical deforestation. February 2020. Prepared for IDH by FACTS Consulting, COWI A/S and AlphaBeta Singapore. IDH: Utrecht, the Netherlands.

[102] Goldman, et al. (2020); Hylander et al. (2013); IDH (2020); CBI. 2019. What is the demand for coffee on the European market? https://www.cbi.eu/market-information/coffee/trade-statistics ; Conservation International. 2016. Coffee in the 21st Century, https://www.conservation.org/docs/default-source/publication-pdfs/ci-coffee-report.pdf

1. Targeted scope, where only the selected commodities are covered in the legislative instrument, based on the criteria enumerated above.
2. Progressive scope, where selected commodities and certain derived products are included in a list that undergoes regular reviews.
3. Expanded scope of commodities, whereby all commodities and their derived products are covered in the legislative instrument.

The overwhelming majority of NGOs called for including all products derived from the selected commodities from the outset. Some industry associations, such as COCERAL, FEDIOL and FEFAC[103], also called for including all products. This comment from industry came back on many occasions, where business representatives were referring to the difficulties that a partial scope may cause in terms of compliance and internal organization.

Such an expanded scope would increase the effectiveness of the regulation by closing any gaps which allow EU consumption of the relevant commodities in the form of derived products to continue to drive deforestation and forest degradation.

This impact assessment considers the scenario of 'progressive scope' the most suitable. The decision to limit the list of commodities and derived product stems from the desire to balance the potential benefits with the need to favour implementability and increase the efficiency of the intervention. There needs to be an analysis of derived products, based on potential costs and benefits, similar to the analysis of commodities. The analysis would need to map which products would maximise the impact of the intervention — covering more ground in terms of embodied deforestation — at the smallest potential cost. In addition, simply including all potential products in the scope without a clear map of which products these are would imply that the EU would be proposing new rules whose exact scope and impacts are blurred, which would be against the Better Regulation principles.

The progressive scope for both commodities and derived products would also favour flexibility and adaptability to changes in consumption in the EU, global deforestation patterns, as well as to new knowledge or technological developments. The list of commodities and derived products included in the legislative instruments would be regularly reviewed, based on the latest available evidence and scientific data on deforestation and forest degradation associated with those products or potential additional products, and updated to address potential leakage issues (see section 6.1.4.)

The identification of derived products to be specified in the scope requires a specific study. Some of the commodities in the scope, in particular palm oil and soya, are present in high number of derived products. Palm oil for example is widely used in food and snacks, cosmetics, biofuel, animal feed, pharmaceutical and other industrial products. The literature review and the consultation with stakeholders, in particular with industry associations, did not provide any ready-made listing or other materials. This made the

[103] http://www.coceral.com/data/162192986321ENV047%20COCERAL-FEDIOL-FEFAC_Due%20Diligence%20position_210423.pdf

mapping of derived products to be identified in the scope a daunting task that exceeded the capacity of this impact assessment.

Therefore, due to these technical difficulties, it was not possible within this impact assessment to perform the necessary analysis to map and list the products derived from the relevant commodities that should be included in the scope. An exception are wood products, where the product scope of the EU Timber Regulation already provides a base to build on.

As a consequence, the conclusion is to initially identify the main trading forms for each commodity — as they appear in trade databases, see table below —, with the exception of wood, where the EUTR scope would be used, and to postpone the detailed listing of derived products to a specific impact assessment and subsequent implementing legislation.

Table 2 HS codes of the commodities and products to be included in the initial scope of the EU intervention. Source: Own elaboration.

Wood	HS codes in EUTR scope
Beef	HS0102, 0201, 0202, 020610, 020622, 020629, 4101, 4104 and 4107
Cocoa	HS1801 to 1806
Coffee	HS0901
Palm oil	HS120710, 1511, 151321, 151329 and 230660
Soy	HS1201, 120810, 1507 and 2304

5.2 5.2 What is the baseline from which options are assessed?

The baseline quantified hereafter reflects the deforestation and forest degradation impacts of EU consumption in the context of these existing measures and settings..

The baseline builds on the qualitative and quantitative overview of the commodities placed on the EU market that present a deforestation and forest degradation risk to forests. The baseline attempts to model future consumption trends in the absence of additional policy measures, and to estimate the impact of these trends on deforestation and forest degradation and CO2 emissions. The baseline, therefore, aims to illustrate the impact of EU consumption on deforestation and forest degradation and CO2 emissions. It considers that unsustainable patterns of commodity production will remain the same in the absence of EU policy intervention. The policy options analysed below aim to enable replacing unsustainable consumption with sustainable consumption, by incentivising countries and companies to clean up their commodity production and supply chains.

To quantify a baseline one has to draw on data about the production of key selected commodities, the volumes that are placed on the EU market and key impacts associated

with their consumption within the EU such as embodied deforestation and greenhouse gas emissions.

In estimating the quantitative baseline, the evolution of imports to 2030 was estimated based on projected annual growth rates found in literature (where possible) or otherwise based on historical trends[104]. To calculate the impact of this projected growth in consumption on global deforestation and CO_2 emissions, average intensity factors (i.e. deforestation and emission ratios in ha/tonne and tCO2/tonne, respectively) were derived from literature and applied to import volumes (historical and projected). The impact of imports on deforestation and emissions is assumed to remain the same until 2030 (i.e. the same average 'intensity factors' are applied on an annual basis between 2009 and 2030).

Table 3 Baseline figures for the EU intervention. Source: Analysis based on COMEXT, DG AGRI[105], OECD-FAO[106], Jonsson et al. (2021)[107], Pendrill et al. (2020)[108], Global Forest Watch (GFW)[109], and FAOSTAT[110].

	2009-2019	**2020-2030**
Cumulated total imports placed on the EU27 market (Mtonne)	810.5	1,042.3
Cumulated total embodied deforestation ('000 ha)	2,302.6	2,516.8
Cumulated total embodied emissions ($MtCO_2$)	1,021.8	1,103.0

The analysis results in 248,000 hectares of embodied deforestation and 110 MtCO2 annual emissions by 2030 linked to the commodities in the scope. These figures will be the basis for the calculation of benefits of policy options in section 6.

The figures of cumulated embodied deforestation and emissions need to be read with caution. The simplified approach taken in the underlying study likely results in a conservative estimate of the contribution of EU consumption to global deforestation. Generally figures in the literature and previous studies are not directly comparable due to methodological differences, but are mentioned here in order to underpin the call for caution in using those results.

The 2013 study referred to in section 1 estimated that the EU imported commodities resulting in embodied deforestation between 500 000 and 732 000 Ha per year on

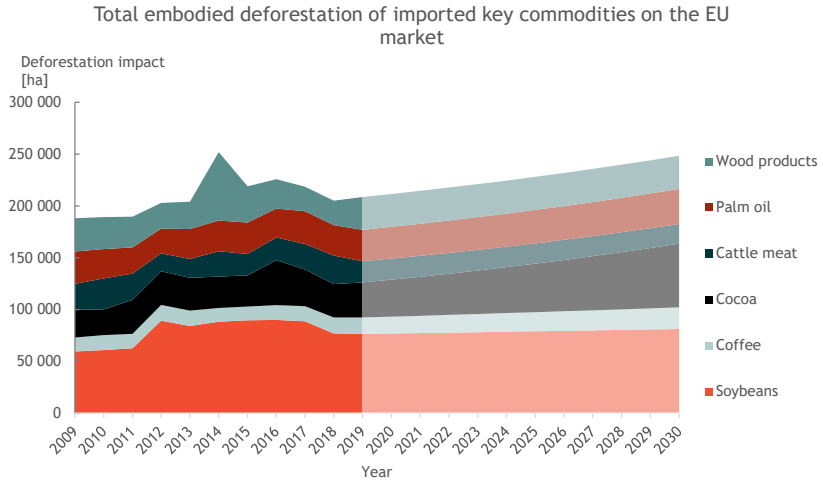
104 Study on EU forest policy. Impact assessment on demand-side measures to address deforestation.
105 European Commission, DG AGRI (2020), EU Agricultural Outlook, https://ec.europa.eu/info/sites/info/files/food-farming-fisheries/farming/documents/agricultural-outlook-2020-report_en.pdf
106 OECD-FAO (2020), Agricultural Outlook 2020-2029, https://stats.oecd.org/Index.aspx?datasetcode=HIGH_AGLINK_2019
107 Jonsson et al. (2021), Boosting the EU forest-based bioeconomy: Market, climate, and employment impacts, https://www.sciencedirect.com/science/article/pii/S0040162520313044
108 Pendrill F., Persson U. M., Kastner, T. 2020. Deforestation risk embodied in production and consumption of agricultural and forestry commodities 2005-2017 (Version 1.0) [Data set]. Zenodo. Available at https://zenodo.org/record/4250532#.YGrNv0BuK1M
109 Global Forest Watch Data available at https://www.globalforestwatch.org/dashboards/global/
110 FAOSTAT Data available at http://www.fao.org/faostat/en/#data

average during the period 1990-2008. These figures are much higher than the ones resulting from the above baseline. Apart from differences in methodological approach and time periods, the scope of the commodities assessed in the 2013 was broader, and at the time of the analysis the EU included UK, but not Croatia. These factors can all contribute to the different results.

Other more recent estimates are closer to the baseline presented in the table above, such as a study for the European Parliament[111], which estimated the impact of consumption (of maize, soy, rapeseed, other oil crops, sugar crops, and beef) to amount to at least 258 219 ha and 73.8 $MtCO_2$. Pendrill (2020) model estimates EU total embodied deforestation to be 220 000 Ha per year (when considering the complete set of commodities included in the model, which is broader than the commodities covered in the scope).

The figure below presents the contribution to the baseline of each commodity considered — taking into account only the commodities of the scope.

Figure 6 Baseline prediction of total embodied deforestation of EU27 imports of key commodities, 2009-2030, in hectares



5.3 5.3 Description of the policy options

A list of five possible policy options was elaborated to achieve the objectives of the initiative. The sources and the criteria through which the policy measures were selected are elaborated in section 5.4.

The five policy options have then been assessed following the Better Regulation Guidelines, measuring the extent to which they would achieve the objectives (effectiveness); their respective key economic, social and environmental impacts and benefit/cost ratio, cost-effectiveness (efficiency); and the coherence of each option with other EU policy objectives (coherence). The impacts have been measured against the baseline previously described in order to be able to quantify them more precisely. A summary of this assessment is shown on Table 8.

[111] EPRS. 2020. An EU legal framework to halt and reverse EU-driven global deforestation European added value assessment. Available at https://www.europarl.europa.eu/RegData/etudes/STUD/2020/654174/EPRS_STU(2020)654174_EN.pdf

All options described below include the following elements:

- A prohibition to place products on the EU market that have not been produced and/or harvested in accordance with 'deforestation-free' definition (as described above) and with the laws of the countries of origin.
- The same product scope covering a number commodities and products derived from them, subject to review and revision (as described in section 5.1 above).

Box 2: Key findings from the Fitness Check on the EUTR

The Fitness check has shown that the EUTR resulted in an improved situation in third countries, including countries that have chosen not to engage in VPA processes. Main EU trade partners (Brazil, Russia, and Ukraine, for example) have taken steps to strengthen their forest governance systems and reduce illegal logging to meet the requirements of the EUTR.

The EUTR – even if hampered by a number of design elements and enforcement weaknesses – has shown some positive results in terms of both effectiveness and efficiency. Its worldwide coverage has provided the EU with a basis to work closely together with other consumer countries to address the problem of leakage. This resulted in some main consumer countries adopting similar legislative approaches. Australia, Japan, and Korea are some of the main trade partners who followed the EUTR albeit with variations, while the US extended existing legislation to cover similar situations as the ones covered by the EUTR (Lacey Act). In the broader deforestation context, this is particularly important to bear in mind, as it shows that the EU, even with a decreasing market share, can have an impact and lead the way globally.

The Due Diligence system set up under the EUTR must however be improved to be efficient, *inter alia* through the introduction of multiple new features which are taken into consideration in this impact assessment and are described below (section 5.3.1.)

5.3.1 5.3.1 Policy option 1: Mandatory due diligence system, relying on a deforestation free definition

This option is based on the due diligence system (taking into account the experiences with the implementation of the EUTR, as explained in Box 2 above) with new features aiming to increase its effectiveness (see below), including universally applicable deforestation definition (see section 4.4.). This due diligence system is the base of policy options 1 to 4.

The system essentially consists of a requirement for operators that place relevant commodities or products for the first time on the EU market to exercise due diligence in order to ascertain that: a) Those commodities and products have not been produced on land deforested or degraded after the cut-off date set in the regulation (see section 4.4 and

4.5); b) they have been produced in accordance with the laws of the country of production.

If any one of the two requirements is not met — or if the operator cannot attain certainty or a negligible level of risk that the requirements are met —, then the operator shall not place those products on the EU market. The system, therefore, includes a prohibition to place non-compliant products on the EU market.

Operators would have to develop and apply a due diligence system to perform their duties. This obligation would apply to all operators seeking to place a relevant product on the EU market for the first time, irrespective of their legal form, size or complexity of their value chains — or where their headquarters are based.

In order to exercise due diligence, an operator would have to go through three steps. As step one, operators need to ensure access to all information necessary to determine whether the risk associated with the commodity is negligible. In step two, the operators need to use that information to analyse and evaluate the risk in the supply chain — from harvest or production to placing on the EU market. In step three, except where the risks are found to be negligible, operators need to take adequate and proportionate mitigation measures in order to effectively minimise the risk of placing incompliant products on the EU market to a negligible level.

If any of the three steps cannot be undertaken, due for instance to the lack of information available or the lack of robust mitigation tools to eliminate the risk of non-compliant products being placed on the EU market, then the operator shall not place those products on the EU market.

EU Member States, in turn, would be obliged to ensure the effective enforcement of the measure. Some of these duties will involve minimum inspections levels and a formal role for customs' authorities in case of commodities imported from third countries. These measures are described below.

The Fitness Check of the EUTR (see box 2) revealed a series of shortcomings in terms of design and implementation that had marred the effectiveness of the due diligence system under EUTR (see section 6.1.1.). These findings, the most recent literature and the feedback from stakeholders have allowed to identify new features for the due diligence system of options 1 to 4 with view to increasing the effectiveness.

The new features that are expected to increase its effectiveness in comparison with the EUTR are:

1. Deforestation-free definition. This is the cornerstone of the improved EU intervention. As explained in section 4.4, there is a high degree of consensus among stakeholders and researchers that relying on universally applicable data that can be monitored remotely can increase the effectiveness of the policy measures.

2. Stricter traceability obligations. The proposed due diligence system of options 1 to 4 will require operators to ascertain relevant information on the country and area of production of the commodities or products they intend to place on the EU market. There is broad consensus that good traceability is needed to unleash the full potential of remote monitoring. It is to be noted that some of the commodities in the scope (like beef) are already covered by some traceability obligations due to food safety rules.

3. A formal declaration of conformity with the regulation. Operators will need to present to the authorities a self-declaration before placing relevant commodities or products on the EU market. This is expected to facilitate the work of the member states authorities in identifying operators and, in cases of non-compliance, in building solid court cases.

4. Increased cooperation between Competent Authorities and customs. In the case of commodities and products imported into the EU, custom authorities will receive the self-declaration. Custom authorities will also need to share information with other relevant authorities in the Member States directly in charge of enforcing the regulation. This will address one of the shortcomings identified in the implementation of the EUTR.

5. A reinforced substantiated concerns mechanism. Like in the EUTR, natural or legal persons will be entitled to submit substantiated concerns to Competent Authorities when they deem that one or more operators are breaching the regulation. Competent Authorities will take necessary steps to detect possible breaches, including inspections or and hearing of operators, or otherwise justify their decision not to take action. This mechanism was widely demanded by NGOs in the OPC.

6. Minimum inspection levels. Member States will be expected to conduct inspections covering a relevant share of the commodities and products placed on the EU market, which was not the case under the EUTR. In option 2 (see section 5.3.2), the inspections could target companies that trade with commodities produced in countries with higher risk of deforestation.

Certification (or verification) schemes may, in some cases, contribute to achieving compliance with the due diligence requirement, however the use of certification does not automatically imply compliance with due diligence obligations. There is abundant literature on certification schemes shortcomings in terms of governance, transparency, clarity of standards, reliability of monitoring systems, etc. (see more in section 5.4).

The consensus is that these schemes on their own have not been able to provide the changes needed to prevent deforestation. This is the position defended by the European Parliament and by most NGOs, whereas businesses in general advocate for a more prominent role of certification, including a way for companies to use these systems as proof of compliance with binding EU rules.

Maintaining operators' responsibility for correctly implementing due diligence obligations when they use certification aims at ensuring that authorities remain empowered to monitor and sanction incompliant behaviour, as the reliability of those systems has repeatedly been challenged by evidence on the ground.

5.3.2 5.3.2 Policy option 2: A benchmarking system and a list of contravening operators as a basis for a tiered improved mandatory due diligence system, relying on a deforestation free definition

Policy option 2 builds on the due diligence system laid out in policy option 1. It includes a country benchmarking system that will assign a risk level to countries taking into account deforestation and forest degradation linked to relevant commodities. These assessments would be based on objective, comparable and scientific data. Thresholds based on deforestation rates as a share of the country's forest area or absolute deforestation figures will be set up to classify countries (both member states and third countries) in three categories of risk: Low, standard and high risk. The Commission would make the country risk categorisation publicly available and update the list regularly. Countries will be updated by the Commission of their classification in one or another category. The obligations for operators and member states authorities will be adapted according to the level of risk of the country of production, with simplified due diligence duties for low risk and enhanced scrutiny for high risk.

Commodities produced in low risk countries would allow operators to apply simplified due diligence that will consist of making sure that these products or commodities have been produced in the low-risk country. Risk assessment and risk mitigation obligations would not apply in this case . The enhanced scrutiny for commodities stemming from high-risk countries would include higher minimum inspection rates obligations for member states over those shipments.

In addition, there will be a list of contravening operators. The Commission would publish in the Official Journal of the European Union a list of contravening operators, conceived as a *shame list* with no legal consequences. An operator or trader would be placed on the list if a Member State administrative authority or court has imposed final administrative or criminal sanction or penalty for infringing their obligations under this regulation. Member States would inform the Commission without undue delay about any such sanctions or penalties. Upon receipt of such notification the Commission would include the operator or trader concerned on the list without delay and inform him of its inclusion. If, for a certain period after the final administrative or criminal sanction or penalty, no further reports of sanctions or administrative or criminal proceedings concerning alleged contravening activity have been reported by the respective Member State authority, the Commission would remove the operator or trader from the list.

There are several ways in which policy option 2 could contribute to increase the effectiveness — and reduce the costs — of the EU intervention as compared to the due diligence system of the EUTR and option 1:

1. Incentives for third countries. The benchmarking system is meant to create incentives for countries to protect their forests, as stronger environmental protection and governance will bring easier market access for their products to the EU. It will also mitigate the risk of leakage (see section 6.1.4), increasing the overall effectiveness of the intervention.

2. More focused enforcement resources. The benchmarking system would help member states authorities concentrate scarce enforcement resources where they are most needed — via stronger monitoring obligations for standard and high risk countries.

3. Reduced companies' compliance costs. By singling out low and high risk countries, the Commission would facilitate the risk assessment that companies need to do as part of their due diligence obligations. The availability of simplified due diligence for operators sourcing from low risk countries is also expected to reduce compliance costs.

4. Stronger dissuasive power. The list of contravening operators is meant to increase the dissuasive power of the regulation, also increasing its effectiveness.

Nonetheless, there is a risk that the list of contravening operators, where it applies to natural persons, might interfere with rights protected under Article 7 and 8 of the Charter of fundamental rights (Respect for private and family life and Protection of personal data). Limitations to these rights need to be justified under Article 52(1) of the Charter, i.g. the measure needs to be proportionate and serve an objective of general interest. In the present case, this could be debated, if other measures, which are less limitative on those rights, achieved the same deterrent effect (i.e. financial sanctions). Legal entities do not held the before mentioned rights, still the measure would need to be justified, especially if the sanction applied by the national competent authorities is already sufficiently deterrent.

5.3.3 5.3.3 Policy option 3: Mandatory public certification combined with an improved due diligence requirement, relying on a deforestation free definition

Policy option 3 also builds on the due diligence system laid out in policy option 1. In addition, the EU would, upon request from a Member State or third country, review and approve mandatory public certification systems on a country level. The approval would be contingent on the reliability of such a system in ensuring compliance with the requirements of the EU policy intervention, in particular the deforestation-free definition. This would include specific requirements in terms of transparency and reliability. Mandatory public certification would need to be mandatory in the country of origin, covering all operators. These approved mandatory public certification systems would, in turn, certify that relevant commodities and products are compliant with the EU requirements. Operators could then use the approved systems to facilitate their compliance with the EU legislation as a risk mitigation tool within the due diligence requirements, maintaining, however, operators' liability in case of non-compliance (as in option one).

Policy option 3 seeks to achieve some of the same benefits of option 2, namely creating incentives for countries to engage and protect their forests (in exchange for improved market access), as well as facilitating compliance — and reducing costs — for operators. However, in contrast with option 2, which can be applied to all countries, policy option 3 would rely on the willingness of countries to create their own mandatory public certification systems and request its recognition.

5.3.4 5.3.4 Policy option 4: Mandatory labelling combined with an improved due diligence requirement, relying on a deforestation free definition

Policy option 4 also builds on the due diligence system laid out in policy option 1. In addition, companies will be required to label relevant commodities and products signalling compliance with the EU intervention. This label would be for information purposes only, as non-compliant products would not be allowed to be placed on the EU market, in line with the general prohibition established in the underlying due diligence system. Mandatory labelling would provide consumers with the information that products placed on the EU market are not coming from supply chains associated with deforestation and/or forest degradation, potentially increasing awareness about the subject.

5.3.5 5.3.5 Policy option 5: Deforestation-free requirement for placing on the EU market supported by benchmarking and country card systems

This option is the only one not based on a due diligence system. It would be based, with the necessary adaptations, on the current EU rules to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU). [112]

The system would consist of several features to implement and enforce the deforestation-free definition and the requirement for the relevant commodities and products to be produced according in respect of the laws of the country of production: a) Public certification systems in producing countries intending to place their commodities and products on the EU market; b) a benchmarking system to support the implementation and enforcement of the measure; c) a country carding system; d) penalties for EU operators not adhering to the laws and a list of contravening operators.

Producing countries would issue and validate certificates for the placing of commodities/products on the EU market, including basic information about the consignment, as well as specifying that the commodities and products were harvested/grown/produced in compliance with national and international legislation as well as in compliance with the 'deforestation-free' definition defined at EU level.

Member states would be in charge of receiving, inspecting and monitoring the commodities and products, as well as their certificates. An EU entity would be in charge of monitoring the certification systems of the countries. It would also be in charge of the benchmarking system. Countries (EU and non-EU) identified as experiencing serious rates of deforestation and forest degradation and as having inadequate measures in place to prevent and deter activities associated with deforestation and/or forest degradation may be issued with a formal warning (yellow card). Yellow cards would trigger a dialogue process between the country in question and the Commission, which over time, and in the absence of corrective measures, may lead to a red card, which would be the basis for a ban for their products on the EU market.

[112] This option is inspired in the experience of the EU Regulation 1005/2008 to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU).

5.4 5.4 Options discarded after the initial viability screening

A total of 17 policy measures (see Figure 7.2) were considered in the initial viability screening of this Impact Assessment. The list of potential measures covered a wide range of possible interventions which were alternative to one another, included regulatory and non-regulatory instruments, and went from soft to hard interventions.

The information sources used to select and assess those policy measures were the following:

a) An initial list put forward in the Inception Impact Assessment based on:
    a. Previous EU policy choices, such as the EUTR and the FLEGT Regulation, the EU regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU), the Renewable Energy Directive, the Conflict Minerals Regulation or the rules governing the EU Organic Logo.
    b. The political commitments laid out in the 2019 Communication, the European Green Deal, the EU Biodiversity Strategy and the Farm to Fork Strategy.
    c. Inputs received ahead of the launch of the legislative initiative from stakeholders, EU member states, third countries, etc. These were gathered for example in bilateral meetings with Commission services and position papers.
b) The public feedback received on the Inception Impact Assessment (a total of 99 contributions).[113]
c) The European Parliament resolution of 22 October 2020 with recommendations to the Commission on an EU legal framework to halt and reverse EU-driven global deforestation.
d) The positions expressed by the Council of the EU, in particular the Council conclusions on the 2019 Communication.
e) The stakeholder consultation of this impact assessment, including the online public consultation[114] with nearly 1.2 million contributions and the targeted consultation where 49 organisations and 92 individuals were consulted via specific interviews and focus groups. The outcome of the online public consultation showed a high level of support for binding measures (e.g. deforestation-free requirement, IUU-like approach, mandatory due diligence, mandatory public certification, etc.) whereas voluntary measures (e.g. voluntary due diligence, private certification schemes, voluntary labelling) received the lowest rates of support (see detailed results on annex 2.) In general, targeted interviews and position papers showed that businesses and NGOs agree on the need for binding EU rules. Both groups showed a high level of support for

[113] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12137-Deforestation-and-forest-degradation-reducing-the-impact-of-products-placed-on-the-EU-market_en

[114] The questionnaire of the online public consultation contained a multiple choice question where respondents could assess the suitability of 14 policy measures.

mandatory due diligence. Businesses argue that homogeneous, mandatory EU rules can level the playing field and advocate, in general, for more lax due diligence rules. NGOs argue that putting responsibility on companies via due diligence obligations is the right way to go and advocate in general for stricter due diligence rules.

f) Further stakeholder, EU member states and third countries' consultation, in particular via individual meetings with Commission services, seminars and public events organized by third parties.
g) The meetings of the Commission Expert Group/Multi-Stakeholder Platform on Protecting and Restoring the World's Forests, including the EUTR and the FLEGT Regulation. Since the launch of the roadmap for this legislative initiative in February 2020, the group has met nine times in different configurations — and included four specific workshops to gather inputs on policy options studied in the impact assessment (see more detailed information on annex 2).
h) Inter-service meetings among relevant Commission departments. Until May 2021, five meetings took place, some of them including specific discussions on policy options. The inter-service group, for example, endorsed the list of 14 policy measures included in the questionnaire of the open public consultation.
i) The Fitness Check of the EUTR and the FLEGT Regulation. In particular, this report was instrumental to assess the strengths and weaknesses of mandatory due diligence and that of bilateral trade agreements with producing countries, in line with the Voluntary Partnership Agreements (VPAs) of the timber sector.
j) The Study on Certification and Verification Schemes in the Forest Sector and for Wood-based Products, which provided fundamental insights on certification systems and their strengths and weaknesses.
k) The study "Impact assessment on demand side measures to address deforestation", which provided part of the underlying analysis and data for this Impact Assessment.
l) Existing evidence from literature. Particular attention was paid to evaluations and reports on previous EU laws that were used as a model to different policy measures.

The criteria used in the viability screening to assess those policy measures and select the five final policy options whose potential impacts were studied in detail were, among others:

a) Legal, technical and political feasibility and proportionality;
b) Potential effectiveness;
c) Potential efficiency and costs;
d) Potential challenges for implementation;
e) Feedback from stakeholders, EU member states and third countries.

The screening of the viability of policy options, based on the criteria and information sources described above, led to discarding a number of policy options at an early stage. Five of them (deforestation-free standard, mandatory due diligence, country

benchmarking, mandatory public certification and mandatory labelling) made the cut into the combinations listed in the five final policy options selected.

The options ruled out were voluntary labelling, voluntary due diligence, voluntary private certification, broad trade agreements, voluntary partnership agreements, mandatory information disclosure, information campaigns, green diplomacy, and approaches based on an expansion of the EUTR maintaining only legality as the criteria of compliance, the Financial Action Task Force (FATF) and The Kimberley Process aiming at curbing trade on conflict diamonds.

More details on the initial viability screening for all 17 considered policy options are provided in annex 6. Table 4 (see below) offers a summary on all policy options and the main criteria used for the initial viability screening, cross-matching each policy measure with the criteria used – and grading its performance with a positive (green), neutral (orange) or negative (red) mark. The last column of the table states whether the option has made the cut into the five final policy options.

Many soft measures — such as voluntary labelling, voluntary due diligence and voluntary certification — were ruled out on grounds that these measures and related commitments have already been implemented for years by some companies, with little success in terms of preventing deforestation and fostering deforestation-free supply chains. In addition, the feedback from stakeholders, the general public and the European Parliament all pointed to the need of binding measures.

It is worth explaining here in detail the considerations around two of the policy measures — the Voluntary Partnership Agreements and the private certification systems — that have been ruled out as stand-alone measures, in spite of support from a significant number of stakeholders. These present additional complexity that deserves further clarification.

The first is the approach based on the model of the FLEGT Voluntary Partnership Agreement (VPA), the bilateral trade treaties for timber and timber products between the EU and a wood producing country (see box 1 and 2 for more background on their functioning and the shortcomings detected in the Fitness Check.)

Table 4 Summary of the initial viability screening of policy measures. Source: Own elaboration

	Measure	Feasibility	Effectiveness	Costs	Challenges	Feedback	Taken in the five final policy options
1	Deforestation-free standard						Yes
2	Voluntary labelling						No
3	Mandatory labelling						Yes
4	IUU Fishing						Yes
5	Voluntary due diligence						No
6	Mandatory due diligence						Yes
7	Mandatory public certification						Yes
8	Voluntary private certification						No
9	Country benchmarking						Yes
10	Broad trade agreements						No
11	Voluntary partnership agreements						No
12	Mandatory information disclosure						No
13	Information campaigns						No
14	Green diplomacy						No
15	EUTR Plus (based on legality)						No
16	FATF						No
17	Kimberley Process						No

The VPA approach, which is based on legality and limits itself to assessing whether the laws and regulations of the country of production have been complied with, is not compatible with the approach based on a definition of "deforestation-free". That definition is not up for negotiation. In addition, the shortcomings detected in the implementation of FLEGT VPAs would persist and become more pronounced under the new initiative. This includes in particular even larger resource challenges for producer countries as well as the EU, and continued lack of willingness of major producing countries to engage in a process where their negotiation space would be much more limited than under FLEGT VPAs. [115].

Private certification may, in some cases, facilitate compliance with the due diligence requirement. There are however a number of concerns. The main concern is that they have often varying levels of transparency, different rules and procedures as well as different quality assurance systems. Over the past years, concerns have also been raised over the efficiency and integrity of chain of custody (CoC) systems. Some see these systems as open to fraud given that certified companies may easily mislead their auditors although the audit is conducted with the greatest care and according to all procedures. A company may be selling products containing a volume of "certified" timber material that exceeds the volume of certified raw material that they are buying. The current CoC systems seem to only work for companies not committing deliberate fraud. Concerns about the integrity of CoC systems are mounting, and therefore discussions over this gap in the CoC systems have grown in strength in recent years.

In addition, the lack of independent audits, considered to be key in ensuring the robustness of the certification, was highlighted as a key weakness of the private certification schemes[116,117.] A specific study commanded by the Commission[118] confirms these findings, including a lack of transparency issues and a propensity to contain partial or even misleading information.

Interactions with public certification scheme can also be challenging. In particular when covering the same scope and criteria, private certification schemes can lead to undermining the efficiency of public systems, as they can see the public systems as

[115] Reference to para 8

[116] WWF. 2015. Profitability and Sustainability in Responsible Forestry Economic impacts of FSC certification on forest operators. Available at https://wwfmy.awsassets.panda.org/downloads/profitability_and_sustainability_in_responsible_forestry_main_report_final.pdf

[117] Lang, C. IKEA's illegal timber problem that FSC didn't notice. FSC-Watch. 2020. Available at https://fsc-watch.com/2020/07/02/ikeas-ukrainian-illegal-timber-problem-that-fsc-didnt-notice/ ; Lang, C. 2018. New Documentary Slams FSC: "The Eco-Label Could Not Slow Down the Forest Industry". FSC-Watch. Available at https://fsc-watch.com/2018/10/18/new-documentary-slams-fsc-the-eco-label-could-not-slow-down-the-forest-industry/ ; Conniff, R. 2018. Greenwashed Timber: How Sustainable Forest Certification Has Failed. Yale Environment 360. Available at https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed

[118] Study on Certification and Verification Schemes in the Forest Sector and for Wood-based Products; Preferred by Nature; 2021. Available at: https://op.europa.eu/en/publication-detail/-/publication/afa5e0df-fb19-11eb-b520-01aa75ed71a1/language-en]

competition. Also, the European Parliament report[119] calls to not consider voluntary (private) certification measure as these are seen as being insufficient. Thus private certification schemes often fail to provide the full picture.

As an example one can say that even if most farms in an area are certified, land tenure can still be weak, poverty increasing, and legal and illegal deforestation still take place. The need to monitor and audit the use of private certification and the wide-ranging products/commodities that the private certification would have to cover could make cost-benefit balance problematic – the costs may outweigh the benefits. Private certification can also be a complicated and costly process and resources spent to certify operations and to support the various schemes' managerial structures could be used for other ends. The available evidence also indicates that the costs borne by producer Small and Medium Enterprises (SMEs) for certification can be perceived as significant that it becomes difficult for SMEs to make good use of such schemes. Economies of scale have SMEs at a disadvantage in achieving certification in comparison to larger operators and traders.

6 6 WHAT ARE THE IMPACTS OF THE POLICY OPTIONS?

This section presents a summary of the assessment of the impacts of the policy options, focusing on environmental, social and economic impacts. It provides an analysis of impacts expected to be common to all policy options 1-5 to a varying degree, followed by specific impact assessment of Options 1, 2, 3, 4 and 5 compared to Option 0, the baseline scenario.

6.1 6.1 Impacts relevant for Policy Options 1-5

The policy options have been selected and designed to achieve the objective of the EU intervention, that is, to curb and halt EU-driven deforestation and forest degradation and to contribute to reducing GHG emissions and biodiversity loss. As regards its wider impact on global deforestation and forest degradation trends, the EU intervention will also depend on other measures identified in the 2019 Communication, in particular: 1) working in partnership with producer countries, accompanied by adequate support, which is crucial to address the root causes of deforestation, such as market failures, weak governance, corruption and problems with law enforcement; and 2) strengthening international cooperation, especially with major consumer countries, to ensure adoption of similar measures to avoid products coming from supply chains associated with deforestation and forest degradation being placed on the market, in order to minimise leakage. An overview of different potential leakage problems and mitigation measures is presented in section 6.1.4.

[119] https://www.europarl.europa.eu/doceo/document/TA-9-2020-0285_EN.html

6.1.1 6.1.1 Environmental impacts

The analysis focused on the areas where deforestation and forest degradation is expected to have the most significant negative impact: greenhouse gas emissions and biodiversity loss. Without further intervention, it is likely that deforestation and forest degradation will accelerate and worsen negative trends in these areas over time. EU measures explained under policy options 1-5, if fully implemented, are expected to reduce the EU contribution to deforestation and forest degradation and, in turn, reduce GHG emissions and biodiversity loss.

The impact magnitude of the various policy options will depend on multiple factors such as the regions in which deforestation and/or forest degradation is reduced, the amount of the reduction, and the affected forest type. The determination of the environmental benefits of the policy options is directly linked to the effectiveness of the measures included in the policy options. A trade analysis conducted for the Fitness Check[120] estimated the effectiveness of the EU Timber Regulation — measured in the share of illegally harvested timber prevented from entering the EU market — in between 12% and 29%[121].

For policy options 1-4, which — like the EUTR — are based on due diligence obligations, we assume a significantly higher effectiveness than for the EUTR, and take the upper end of the mentioned research (29%) as a minimum. This assumption is justified by the numerous improvements introduced in policy options 1 to 4 as compared to the EUTR (a detailed list of those improvements is contained in sections 5.3.1 and 5.3.2.) These new features of the "improved due diligence," as foreseen in policy options 1 to 4, aim at correcting the design and implementation problems that have marred the effectiveness of EUTR. Beyond that minimum, the analysis of effectiveness is done qualitatively.

It is assumed that it will take time for operators and enforcement authorities to get accustomed to the regulation and to achieve full implementation both by operators and competent authorities of EU Member States. 2030 has been chosen as the year for the comparison with the baseline. The baseline (section 5.2) is that — without a new policy intervention — the EU will provoke 248,000 hectares of deforestation and 110 million metric tons of carbon dioxide (MtCO2) emissions per year by 2030 via the consumption and production of the six commodities included in the product scope.

In order to quantify the benefits in terms of avoided emissions of GHG, a carbon cost of 100 EUR per tonne of CO2 is used. This carbon price is measured in euros from 2016

[120] The full analysis can be consulted in Annex C (difference-in-difference analysis) of the 'Support study for a Fitness Check of the EUTR and FLEGT Regulation'

[121] The analysis uses trade data to estimate the impacts of the EUTR on imports of illegally harvested timber to the EU. It builds on import statistics comparing products from 'low' and 'high' risk countries, and changes before and after the entry into force of the EUTR. Two different control groups are used to compare actual trends: A group of comparable countries who do not have in place a legality control system, and the products that are not covered by the EUTR but belong to the same HS groups of the EUTR scope. The analysis provided a range of estimated effectiveness between 12% and 29%. Analysis of the levels of illegal timber entering the EU is complex and problematic. There are several caveats and limitations in the research. The results, therefore, should be considered an estimation subject to a degree of uncertainty.

and taken from the Handbook on the External Costs of Transport[122], which analysed diverse carbon price scenarios in the medium and long term. 100 EUR is the central scenario up to 2030. It is also in line with rising carbon prices as reflected in the EU Emissions Trading System[123], where the price per tonne of CO2 equivalent surpassed 50 EUR in May 2021.

Taking into account these factors, it is expected that options 1 to 4 should be able to prevent a minimum of 29% of deforestation driven by consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[124]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the relevant commodities, which could be translated into economic savings of at least 3.2 billion EUR annually.

Beyond that minimum level, a qualitative analysis is made below concluding that option 2 could provide the highest effectiveness due to the enhanced features of the benchmarking system. The effectiveness of option 3 is expected to be significantly below option 2, but above options 1 and 4. It is estimated that the latter two will deliver similar effectiveness — still significantly above the minimum — resulting from the fact that the mandatory labelling of option 4 is merely for information purposes.

For policy option 5, the conducted analysis is only qualitative due to the lack of precise information on the effectiveness of the EU rules to combat illegal, unreported and unregulated fishing (IUU), on which the system is based.

The impact on biodiversity is more difficult to quantify. Over one million species are threatened with extinction globally. Land use change, including deforestation, is the main driver of biodiversity loss on land[125]. A 2016 analysis[126], based on the Nature Red List of Threatened Species by the International Union for Conservation of Nature (IUCN), estimated that around 11,738 species were threatened by logging, crop farming, livestock farming and timber plantations. It is to be expected that the EU intervention will reduce this kind of forest damage and will therefore have a positive impact on biodiversity. This analysis is done qualitatively due to the challenges of precise quantification.

6.1.2 6.1.2 Economic impacts

While the amount and type of impacts will vary depending on the specific policy option, the following main impacts are expected to apply to all options.

[122] European Commission (2019). Handbook on the external costs of transport. https://op.europa.eu/en/publication-detail/-/publication/9781f65f-8448-11ea-bf12-01aa75ed71a1
[123] https://ember-climate.org/data/carbon-price-viewer/
[124] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.
[125] IPBES 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (Eds.). IPBES Secretariat, Bonn, Germany.
[126] https://www.nature.com/articles/536143a.pdf

Impact on EU operators

For operators placing products and commodities on the EU market for the first time, Options 1 to 4 are likely to cause compliance costs linked to the establishment and operation of the due diligence system. They may incur costs where they may need to support their current supplier base in demonstrating or transitioning to deforestation-free sourcing. Costs related to risk mitigation in the event of identified deforestation risk will also likely be incurred. Where these risks cannot be adequately mitigated or deforestation-free sourcing cannot be achieved through the above processes, operators may incur costs through the need to switch to deforestation-free supply chains. Option 5 will not involve direct costs to EU operators.

Any costs incurred by the EU operators would either have to be absorbed by a reduced profit by operators along the value chain and/or eventually passed through to the final consumer. At that stage it may have an impact on the price of some commodities. Operators are, however, expected to benefit from the level playing field created, namely the absence of competition from products from supply chains associated with deforestation or forest degradation.

Costs to operators in carrying out due diligence will likely vary by commodity, as will the possibility of switching to lower-risk supply chains. Where production is concentrated in a small number of countries which are associated with commodity-driven deforestation (e.g. palm oil: Indonesia and Malaysia, cocoa: Côte d'Ivoire and Ghana[127]), there may be limited options to meet EU demand by switching to lower-risk countries (beef, soy and the majority of timber have more widespread production).

In some sectors and for some producer countries, EU operators may already have a good knowledge of their supply chains and have at least some information relevant to due diligence, for example, where:

- there are existing national traceability systems;
- a high proportion of trade is covered by certification schemes (e,g. in 2019, 86% of European palm imports are certified sustainable[128], although this does not always guarantee traceability to farm or forest of origin);
- operators have adopted voluntary sustainability standards (most common in the palm oil and timber sectors, less common for soy and beef[129]).
- multinationals have smallholder engagement programs (e.g. for cocoa in Côte d'Ivoire and Ghana, and palm oil in Indonesia and Malaysia[130]) or have invested in supply chain mapping[131]

[127] World Resources Institute 2021. Global Forest Review. Indicator – Deforestation linked to agriculture. Available at: https://research.wri.org/gfr/forest-extent-indicators/deforestation-agriculture.
[128] Data covers EU28 countries and Switzerland. See EPOA and IDH. 2020. *Sustainable Palm Oil for Europe in 2019*.
[129] Thomson, E. 2020. Time for change: delivering deforestation-free supply chains. Global Canopy, Oxford, UK.
[130] Bakhtary, H., Matson, E., Mikulcak, F., Streck, C. and Thomson, A. 2020. Company progress in engaging smallholders to implement zero- deforestation commitments in cocoa and palm oil.
[131] E.g. Unilever publishes the list of all palm oil mills declared by its direct suppliers: https://www.unilever.com/planet-and-society/protect-and-regenerate-nature/sustainable-palm-oil/

- operators source directly from producers, with well-established links (e.g. in the speciality/artisanal cocoa sector[132])
- other EU regulations require information on product origin and/or traceability (e.g. timber covered under EUTR or FLEGT, and meat/meat products require veterinary certification, which includes some level of traceability through the supply chain[133])
- there are sector-relevant resources to assist operators (e.g. WRI's Universal Mill List [134] for palm oil mills, FEFACs Soy Sourcing Guidelines[135], which includes no-deforestation as desirable criterion since 2021).

For longer and more complex supply chains, there are likely to be additional costs when systems to trace to farm/forest/plantation-level are lacking. However an independent survey among palm oil importers, companies responded that 99% of the products they are placing on the market were already traceable to the mill, with "slightly lower" traceability to plantation[136].

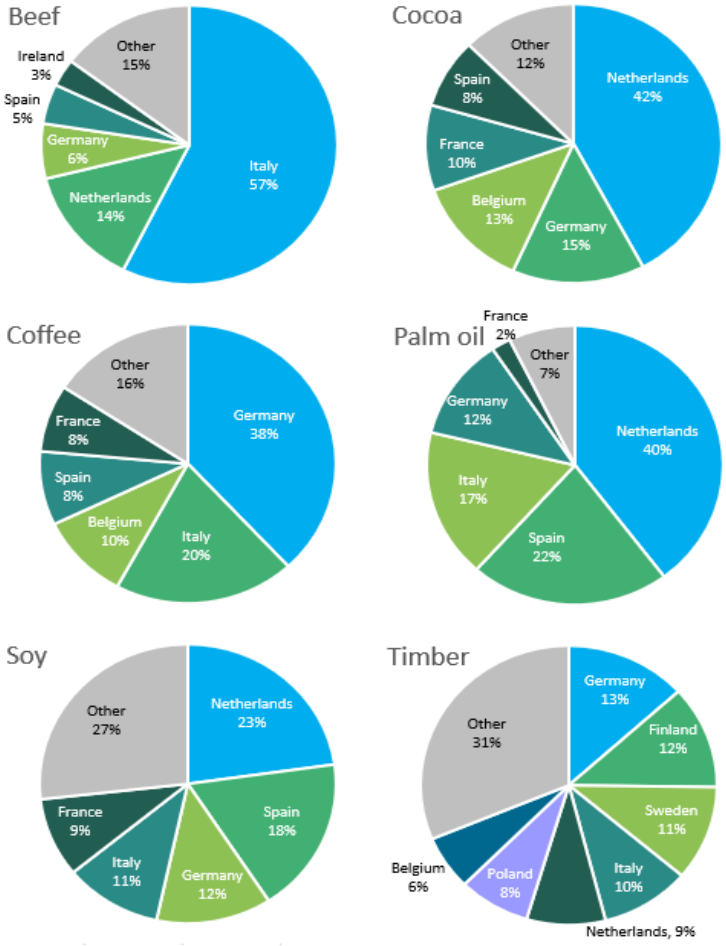
Palm oil sourced from intermediaries and third-party owned mills or warehouses is however sometimes difficult to map and monitor, and in practice a 'deforestation-free' supply is very difficult to guarantee. In Brazil, none of the three dominant meatpackers currently monitor their indirect suppliers (the bulk of their supply chain)[137]. It is also difficult to trace cocoa back to the many small-scale farms in West Africa, as currently no cocoa traceability system exists in Côte d'Ivoire and the national system in Ghana does not provide full traceability back to the forest of origin[138]. A 2020 cut-off date and EU support to partner countries and operators (including in-country assistance and industry guidance/awareness raising, drawing on the EUTR experience), will be important to minimise the short term impact on EU operators with long complex supply chains. [139]

In terms of trade flows, larger companies in relevant NACE activity codes accounted for a higher proportion of the value of imports (import granularity not to commodity level). Furthermore, a number of EU Member States (Belgium, Germany, Italy, Netherlands, Spain, Sweden), which are also main seats of relevant large (multinational) operators[140,141,142,143] are key import routes of the focal commodities into the EU (see

[132] Cadby, J., Araki, T. and Villacis, A.H. 2021. Breaking the mold: Craft chocolate makers prioritize quality, ethical and direct sourcing, and environmental welfare. Journal of Agriculture and Food Research, 4.
[133] DG Health & Food Safety, undated. https://ec.europa.eu/food/sites/food/files/safety/docs/ia_trade_import-cond-meat_en.pdf
[134]World Resources Institute. 2021. Universal Mill List. See https://data.globalforestwatch.org/datasets/gfw::universal-mill-list-1/about
[135] FEFAC Soy Sourcing Guidelines 2021. Available at: https://fefac.eu/wp-content/uploads/2021/02/FEFAC-Soy-Sourcing-Guidelines-2021-1.pdf
[136] Palm Oil Transparency Coalition and 3keel. 2020. *First Importer Suvey: 2019 Palm Oil Industry Standard*. Available at: https://www.palmoiltransparency.org/wp-content/uploads/2020/01/2019-POTC-Scorecard-Report_public.pdf . The same survey indicated that over half of importers already have traceability to the mill commitments in place, while only 33% have traceability to plantation commitments in place
[137] Kuepper, B., Steinweg, T. and Piotrowski, M. 2020. Brazilian beef supply chain under pressure amid worsening ESG impacts. Chain Reaction Research.
[138] Brack, D. 2019. Towards sustainable cocoa supply chains: Regulatory options for the EU. FERN, Tropenbos International and Fair Trade Advocacy Office. 52 pp.
[139] Case studies
[140] TRASE 2021. https://trase.earth/explore

Figure). The EU market for coffee, cocoa, and palm oil is dominated by a relatively small number of large companies[144,145,146], but there are a growing number of small speciality coffee roasters, for example, who source directly from origin [147]. When looking at overall number of businesses based on the NACE activity codes that are more likely trading the commodities in scope indicate that more than 90% of the operators are SMEs, which however doesn't indicate that the majority of the transactions are conducted by SMEs.

Figure 7 Main EU Member States importers by commodity (based on average annual imported quantity of the six commodities over the period 2015-2019). Importers are displayed if the quantity of imports is over 5% of the total. Source: Eurostat ComExt[148,] importer-reported data.



[141] CBI 2020. What is the demand for cocoa on the European market? 11 November 2020. Available at: https://www.cbi.eu/market-information/cocoa/trade-statistics.
[142] For palm, AAK AB (Sweden), Unilever (Netherlands), Nestlé (Switzerland), and BASF are among the largest palm oil buyers. See WWF. 2019. *Palm Oil Buyers Scorecard.* Available at: https://palmoilscorecard.panda.org/check-the-scores/all
[143] For soy, United Nations Department of Economic and Social Affairs (2019) UN Comtrade: International Trade Statistics Database. Retrieved from https://comtrade.un.org/data
[144] Centre for the Promotion of Imports from developing countries (CBI), Ministry of Foreign Affairs (NL), https://www.cbi.eu/market-information/coffee/trade-statistics#:~:text=Europe%20accounted%20for%2034%25%20of,a%20market%20share%20of%2019%25
[145] Global Market Report: Palm Oil (iisd.org)
[146] Centre for the Promotion of Imports from developing countries (CBI), Ministry of Foreign Affairs (NL), https://www.cbi.eu/market-information/cocoa-cocoa-products/netherlands/market-potential
[147] Centre for the Promotion of Imports from developing countries (CBI), Ministry of Foreign Affairs (NL), https://www.cbi.eu/market-information/coffee/trade-statistics#:~:text=Europe%20accounted%20for%2034%25%20of,a%20market%20share%20of%2019%25
[148] Eurostat, 2021. https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/focus-on-comext. Downloaded on 12/02/2021.

Given the different roles that Member States economies play in the import, processing and sale of commodities in different sectors, it is possible that changes brought about by the new initiative may impact some Member States more than others. For example, the Netherlands is the world's largest importer of cocoa beans, it has the world's largest cocoa grinding industry and is Europe's largest exporter of cocoa beans[149]; Germany and Belgium are also large hubs of import, processing and export. The Nordic countries, however, currently import most cocoa beans from elsewhere in the EU[150]. A trend towards shortening supply chains could lead to Member States increasing their direct sourcing of cocoa beans from producing countries rather than via other EU importers (accentuating a trend already observed in Nordic and Eastern European countries towards increased direct sourcing[151]). The majority of palm oil also enters the EU via Rotterdam, where key refineries and processors are located[152]. For soy, primarily used in the EU for manufacturing animal feed[153], Member States with large livestock populations and exports might be affected by increased feed prices. Although the EU feed manufacturers federation (FEFAC) does not require deforestation-free or conversion-free soy, it has recently updated its soy sourcing guidelines to signal this might become an essential criterion in the future[154], also providing a useful benchmarking tool for conversion-free standards[155].

While some evidence exists that setting up and operating a due diligence system is more challenging for SMEs, the experience from the EUTR indicates that the main driver of costs of due diligence obligations is not so much the size of the company or the trade volume but the number and complexity of supply chains and the risks associated with the sourcing country.

In some sectors, SMEs already have considerable knowledge of their supply chains and product origin. This is the case in the EU's growing artisanal/speciality chocolate market, where small and medium sized chocolate makers ensure the high quality and consistency of their products through establishing direct trade relationships with producers of speciality cocoa beans (primarily sourced from South and Central America)[156]. This speciality market is generally associated with more ethical and sustainable sourcing[157],

[149] CBI 2020. What is the demand for cocoa on the European market? 11 November 2020. Available at: https://www.cbi.eu/market-information/cocoa/trade-statistics
[150] CBI 2020. What is the demand for cocoa on the European market? 11 November 2020. Available at: https://www.cbi.eu/market-information/cocoa/trade-statistics.
[151] CBI 2020. What is the demand for cocoa on the European market? 11 November 2020. Available at: https://www.cbi.eu/market-information/cocoa/trade-statistics.
[152] Europe Economics 2014. The economic impact of palm oil imports in the EU. London, UK. Available from: http://seap.ipni.net/ipniweb/region/seap.nsf/e0f085ed5f091b1b852579000057902e/a08b2cb6a7910fa648257da900587c6f/$FILE/Europe%20Economics%20-%20Economic%20Impact%20of%20Palm%20Oil%20Imports.pdf
[153] IDH and IUCN NL (2019) European Soy Monitor. Available at: https://www.idhsustainabletrade.com/uploaded/2019/04/European-Soy-Monitor.pdf
[154] FEFAC Soy Sourcing Guidelines 2021. Available at: https://fefac.eu/wp-content/uploads/2021/02/FEFAC-Soy-Sourcing-Guidelines-2021-1.pdf
[155] https://standardsmap.org/fefac
[156] CBI 2020. *Which trends offer opportunities or pose threats on the European cocoa market? 17 November 2020*. Available at: https://www.cbi.eu/market-information/cocoa/trends.
[157] Cadby, J., Araki, T. and Villacis, A.H. 2021. Breaking the mold: Craft chocolate makers prioritize quality, ethical and direct sourcing, and environmental welfare. *Journal of Agriculture and Food Research*, 4.

hence there may be low additional costs anticipated to comply with new legislative requirements. In comparison, EU imports of cocoa beans for the bulk market is dominated by large multinationals[158]. Whilst many have their own buyers and processing facilities in cocoa producing countries and use certification[159], tracing product origins may be challenging due to the wide supply base and sheer number of smallholder producers. Nevertheless, many importers, cocoa processors, chocolate makers and retailers already have sustainability commitments, including the majority of multinationals[160,161]. Similarly, multinationals importing other commodities appear willing to work through their supply chains, as many have already published deforestation free sourcing commitments[162,163,164]; this initiative will help harmonize these approaches, also for consumers and third country suppliers. More information is provided under the assessment of impacts of option 1.

Responses to the EUTR and FLEGT Fitness Check Online Public Consultation indicate that many businesses support the establishment of a mandatory framework to ensure a level playing field.[165] While such a level playing field has been found to be essential when implementing the EUTR, it is even more relevant and essential for the much larger and even more competitive trade in the commodities that this initiative proposes to cover.

Trade implications

All policy options are expected to have intended consequences, which could translate into the following trade impacts (unintended trade impacts are discussed further below):

a. Sourcing of commodities and derived products shifts to products that come from deforestation-free supply chains.
b. Consumption and production patterns within the EU change to minimise or eliminate the use of commodities and derived products that come from supply chains associated with deforestation or forest degradation.

The intervention will impact third countries to the extent that they export to the EU and their production practices for the relevant commodities and products do not comply with the deforestation-free definition. There is a degree of uncertainty as regards the measurement of impacts (costs and benefits) of the EU intervention on third countries. These will also depend, for instance, on concrete commitments aiming at reducing deforestation as part of the new global biodiversity framework and in revised nationally

[158] CBI 2020. *What is the demand for cocoa on the European market? 11 November 2020*. Available at: https://www.cbi.eu/market-information/cocoa/trade-statistics.
[159] CBI 2020. *Which trends offer opportunities or pose threats on the European cocoa market? 17 November 2020*. Available at: https://www.cbi.eu/market-information/cocoa/trends.
[160] CBI 2020. *Which trends offer opportunities or pose threats on the European cocoa market? 17 November 2020*. Available at: https://www.cbi.eu/market-information/cocoa/trends.
[161] World Cocoa Foundation 2021. Cocoa & Forests Initiative. Available at: https://www.worldcocoafoundation.org/initiative/cocoa-forests-initiative/.
[162] https://www.unilever.com/planet-and-society/protect-and-regenerate-nature/zero-deforestation/
[163] https://www.nestle.com/ask-nestle/environment/answers/nestle-deforestation
[164] https://www.reuters.com/article/us-mars-palmoil-forests-idUSKBN26T1U3
[165] Cocoa Forests initiative, European Cocoa Association, International Cocoa Organisation, FEDIOL and COCERAL, GIZ, Nestle and the Round Table on Responsible Soy

determined contributions (NDCs) under the Paris Agreement. In addition, the countries have already committed to halting deforestation by 2020 under SDG 15.2. Political leaders of 88 countries, as well as the EU, committed in the United Nations Summit on Biodiversity in 2020 to reversing biodiversity loss by 2030, and promised to redouble efforts on fighting deforestation. In this context, it is extremely challenging to determine the degree to which trade, environmental, economic and social impacts related to deforestation and forest degradation could be a consequence of the EU intervention or rather the individual initiative of those countries to live up to commitments already made.

Countries exporting commodities within the scope of the initiative would need to take action to ensure that the production of such commodities is deforestation-free and traceable to meet the requirements of the EU. Additional costs borne by actors in producing countries to ensure compliance with the regulation would be any costs of switching to production practices compliant with the deforestation-free definition. These costs are likely to differ significantly depending on product, region, complexity of supply chains and current production processes, including local market context and legislative framework. It is unclear however whether these costs would be permanently higher. The suggested cut-off date of 2020 is expected to significantly reduce compliance costs for third countries and their stakeholders (see section 4.5.)

Eventual costs linked to compliance with applicable legislation in the country of production should not be attributed to the EU requirements, as cost of legal compliance for producers should be part of the normal operating costs.

As a snapshot of potential impacts on particular third countries, Côte d'Ivoire supplies 44% of the EU's cocoa and cocoa is central to its economy, contributing to close to 6% of its GDP (see annex 6). Cocoa is almost exclusively produced by smallholders, who depend on the crop for their income and livelihood[166]. The country will likely be impacted by the EU initiative, as cocoa production has been a major driver of deforestation, drawing on the soil fertility of newly deforested land[167,168]. Cocoa farming is characterised by low productivity, pests and disease, with smallholders facing many barriers to investing in sustainable agriculture[169]. Côte d'Ivoire does not have a traceability system[170], and whilst some large corporate players have implemented smallholder engagement programs[171], EU operators are likely to face difficulties in ensuring compliance with the new initiative, whilst the country adapts its production practices. Ghana and Cote d'Ivoire, however, are currently working with the aim of

166 Kroeger, A., Koenig, S., Thomson, A. and Streck, C. 2017. *Forest- and Climate-Smart Cocoa in Côte d'Ivoire and Ghana, aligning stakeholders to support smallholders in deforestation-free cocoa*. Washington.
167 Schulte, I., Landholm, D.M., Bakhtary, H., Czaplicki Cabezas, S. Siantidis, S., Manirajah, S.M. and Streck, C. 2020. *Supporting smallholder farmers for a sustainable cocoa sector: exploring the motivations and role of farmers in the effective implementation of supply chain sustainability in Ghana and Côte d'Ivoire*. Washington (DC)
168 Ongolo, S., Kouassi, S.K., Chérif, S. and Giessen, L. 2018. The tragedy of forestland sustainability in postcolonial Africa: Land development, cocoa, and politics in Côte d'Ivoire. *Sustainability (Switzerland)*, 10(12): 1–17.
169 Kroeger, A., Koenig, S., Thomson, A. and Streck, C. 2017. *Forest- and Climate-Smart Cocoa in Côte d'Ivoire and Ghana, aligning stakeholders to support smallholders in deforestation-free cocoa*. Washington.
170 Brack, D. 2019. *Towards sustainable cocoa supply chains: Regulatory options for the EU*. 52 pp.
171 Bakhtary, H., Matson, E., Mikulcak, F., Streck, C. and Thomson, A. 2020. *Company progress in engaging smallholders to implement zero- deforestation commitments in cocoa and palm oil*.

improving their national traceability capabilities[172] and have undertaken commitments to curb deforestation. The Commission in 2020 launched the EU multi-stakeholder dialogue for sustainable cocoa[173] to support both countries towards eliminating child labour, deforestation, and to ensure a living income for cocoa farmers.

In the case of soy, the commodity is particularly important for the economies of Argentina, Brazil and Paraguay[174]. Deforestation linked to the relevant commodities of the scope has been documented in those countries[175], and Argentina and Brazil are relevant as origins of soy used in the EU. A shift in preference to low-risk origins could favour imports from the USA, the largest global producer, and already major supplier to the EU. To a lesser degree, it may incentivize an increase in domestic production. France and Italy are the largest producers in the EU and domestic EU production is already increasing not least due to growing demand for GM-free soy and higher prices[176].

For palm oil, recent studies on the impact of changes in trade with the EU suggest that there would only be small impacts on major economic variables in Indonesia[177]. However, the shift towards sourcing deforestation-free commodities will likely place a burden of cost on operators and stakeholders in producing countries such as Indonesia and Malaysia (palm oil represents the countries' second and fifth highest value export respectively)[178]. Traceability beyond mill-level — that is, to plantation level — has not been implemented widely. Mixing of palm oil sources may occur at multiple stages in the supply chain, making traceability harder to achieve due to its complex social system[179]. Establishing a palm oil traceability/transparency system to ensure deforestation-free sourcing will likely be a transition that takes time, investment, support and engagement. A more detailed description of the potential impacts on third countries is outlined in case studies available in Annex 6.

As explained above, the regulation is the key deliverable under priority 1 of the 2019 Communication. However, it should be seen in conjunction with the actions under other priorities in this Communication, notably priority 2 that aims at supporting third countries in adopting sustainable production practices that halt deforestation and forest degradation. In this context, the tools to be developed under the current programming process for the Neighbourhood, Development and International Cooperation Instrument (NDICI) for the period 2021-2027 will constitute important flanking measures and tools

[172] https://www.idhsustainabletrade.com/uploaded/2021/04/Cocoa-Traceability-Study_Highres.pdf
[173] https://ec.europa.eu/international-partnerships/events/eu-multi-stakeholder-dialogue-sustainable-cocoa-launch-event_en
[174] IDH and IUCN NL (2019) European Soy Monitor. Available at: https://www.idhsustainabletrade.com/uploaded/2019/04/European-Soy-Monitor.pdf
[175] Pendrill et al. (2020)
[176] USDA (2021) European Union: Oilseeds and Products Annual. Available at: https://www.fas.usda.gov/data/european-union-oilseeds-and-products-annual-1
[177] Jafari, Y., Othman, J., Witzke, P., and Jusoh, S. 2017. *Risks and opportunities from key importers pushing for sustainability: the case of Indonesian Palm Oil.* Available at: https://agrifoodecon.springeropen.com/articles/10.1186/s40100-017-0083-z. See also Rifin, A., Feryanto, Herawati and Harianto. 2020. *Assessing the impact of limiting Indonesian palm oil exports to the European Union.* Available at: https://journalofeconomicstructures.springeropen.com/articles/10.1186/s40008-020-00202-8
[178] Data from Comtrade (2019).
[179] Lyons-White, J., and Knight, A. 2018. *Palm oil supply chain complexity impedes implementation of corporate no-deforestation commitments.* Available at https://www.sciencedirect.com/science/article/pii/S0959378017310117

to ensure the legislative instrument achieves its objectives without unduly impacting vulnerable sectors in third countries that rely on their trade with the EU.

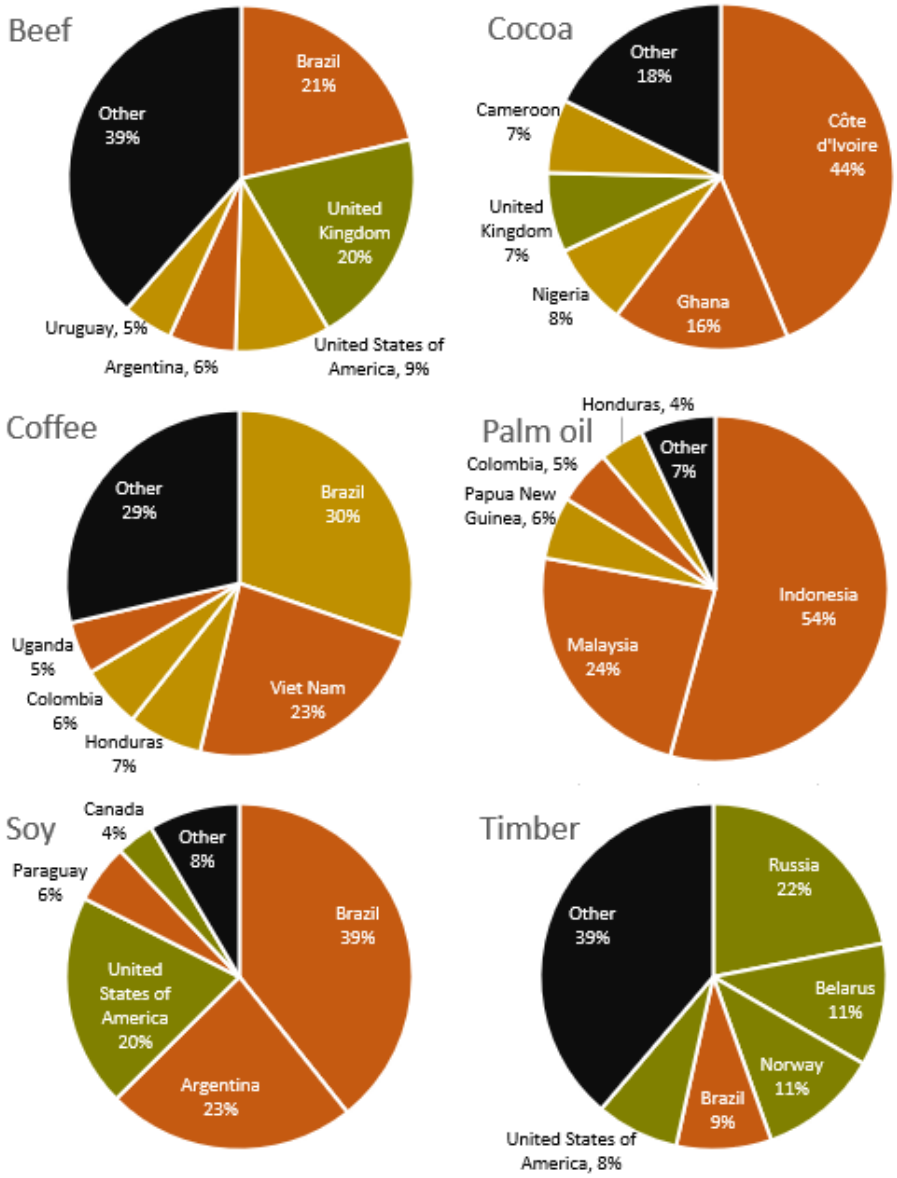
The impact of the intervention on each third country depends on many factors such as the quantity and value of the export to the EU of each commodity/product, the degree of deforestation associated with the current production, the characteristics and structure of production for the relevant commodities, etc. Given these variables that would differ between countries it will not be possible to analyse in detail the potential impacts on each trading partner. However, the quantities and value of exports to the EU by a specific producer country can provide an indication of the potential impact of the intervention. The value of exports as a percentage of the Gross Domestic Product (GDP) can also help identify countries which potentially could be more impacted.

Annex 6 shows the main trading partners and the share of the commodities the EU imports from them, both in terms of quantity and value. It also shows countries where the commodities play a key role as a proportion of overall imports by the EU from them and those countries with highest value of exports to the EU as percentage of the GDP.

It is however important to point out that the change of forest cover given in the tables is the national rate. A loss in forest cover (negative number) may vary considerably sub-nationally and loss may be related to other drivers than the production of the relevant commodities under consideration.

The following figure illustrates the main trading partners for each commodity (average annual quantity 2015-2019), including associated deforestation risks. Some of the imports are concentrated on a few countries with high risk of deforestation associated to the production of those commodities. These are the countries that will be more likely impacted by the initiative.

Figure 8 Main trading partners of the EU-27 by commodity (based on average annual imported quantity of the six commodities over the period 2015-2019).



The deforestation risk level associated with the partner countries is indicated by colour: Orange = ≥ 5000 ha/yr embodied deforestation, ≥5% deforestation of natural forest, ≥ 5% net natural forest loss, deforestation was linked to the focal commodity in the country, and/or >13% (beef) or >10% (other focal commodities) of forest was converted to the commodity in at least one 10 km² area of the country; Yellow = 1000-5000 ha/yr embodied deforestation, 1-4.99% deforestation of natural forest, 1-4.99% net natural forest loss and/or 1.1-13% (beef) or 0.6-10% (other focal commodities)of forest was converted to the commodity in at least one 10 km² area of the country; Green = <1000 ha/yr embodied deforestation and/or no 10km² area of the country had >1% (beef) or >0.5% (other focal commodities) forest converted to the commodity; Black = N/A (as all remaining countries were grouped in the 'Other' category). See methods for full details of deforestation risk datasets. Where risk levels differed between datasets, the highest risk level was shown. Note that deforestation risk is not necessarily comparable between commodities because datasets and data coverage may differ. Source: Eurostat ComExt[180], importer-reported data.

Impacts in third countries may vary depending on operator size and stage in the supply chain. The supply chains of proposed commodities are generally hourglass shaped, with a

[180] Eurostat, 2021. https://ec.europa.eu/eurostat/web/international-trade-in-goods/data/focus-on-comext. Downloaded on 12/02/2021. The trade data included in Eurostat ComExt are based on trade between two trading partners and do *not* provide details on whether the exporting country is also the country of origin for either the commodity or raw product. The third countries should therefore not be assumed to be the sole country of origin for the reported trade.

small number of multinational processors and traders dominating the international trading stage, and production involving a wide range of suppliers from companies to smallholders[181,182]. For example, cocoa production relies on 5-6 million smallholders worldwide, with a few large multinational companies dominating processing and trade[183], and around two-thirds of Brazilian beef exports are handled by three main meatpackers, whilst cattle are produced and reared by 2.5 million farmers[184] ranging from small-scale ranchers to large company-run farms[185].

Operators in third countries, including smallholders, could face costs to develop or implement systems to allow EU operators to comply with the new requirements, where they do not already have systems in place. These costs could be passed through the prices of products. However, a level playing field will be established as regards the exports to the EU, providing an incentive for all operators to switch to deforestation-free supply chains and a competitive advantage for those that are or would become compliant. In the medium to long term, this is the only way to avoid the race to the bottom.

It is important to highlight once again that the proposed cut-off date of 2020 can mitigate the impact of the proposal in third countries by focussing on the effective development of systems for current/future supply, rather than diverting resources to retrospective compliance (see section 4.5).

All options might also have unintended trade impacts, which can be separated into three main categories: i) risk of leakage, ii) hindered access to commodities for which EU supply is concentrated in a small number of producing countries and iii) unavailability of alternatives that would be compliant with the requirements.

The risk of leakage is addressed in section 6.1.4.

In cases of commodities with a limited supply base the implementation of measures could theoretically reduce supply of certain products and higher potentially lead to higher market prices, especially where supply to the EU is concentrated in a small number of producing countries such as for cocoa or palm oil. However, the proposed cut-off date of 2020 would significantly reduce these risks, as most products currently in trade would be sourced from land put into production prior to 2020, providing time for operators to adapt.

[181] Pacheco P, Gnych S, Dermawan A, Komarudin H and Okarda B. 2017. *The palm oil global value chain: Implications for economic growth and social and environmental sustainability*. Working Paper 220. Bogor, Indonesia: CIFOR.
[182] Santucci, F.M. and Tiagni Wouakoue, C. 2019. Long-term and recent trends in the cocoa and chocolate international market. *International Journal of Social Sciences and Management Review*, 2(5): 139–152.
[183] Santucci, F.M. and Tiagni Wouakoue, C. 2019. Long-term and recent trends in the cocoa and chocolate international market. *International Journal of Social Sciences and Management Review*, 2(5): 139–152.
[184] Ermgassen, E.K.H.J. zu, K.H.J., Ayre, B., Godar, J., Bastos Lima, M.G., Bauch, S., Garrett, R., Green, J., Lathuilli re, M.J., Löfgren, P. *et al.* 2020. Using supply chain data to monitor zero deforestation commitments: an assessment of progress in the Brazilian soy sector. *Environmental Research Letters*, 15(3).
[185] Kuepper, B., Steinweg, T. and Piotrowski, M. 2020. *Brazilian beef supply chain under pressure amid worsening ESG impacts*.

6.1.3 6.1.3 Social impacts

At a local level, forests provide subsistence and income to about 25% of the world's population, including indigenous people.[186] The FAO estimates that one-third of humanity could be described as being 'closely dependent' on forests. Furthermore, 'wood and non-wood forest products' provide up to 20% of the income of rural households in developing countries. The expansion of land for subsistence agriculture is one of the drivers of deforestation, at the same time, an unsustainable use of forest natural resources jeopardises the livelihood of the local population.[187]

Due to the EU's large-scale consumption of commodities and products coming from supply chains associated with deforestation and forest degradation, all options could have the potential for significant positive social impacts in producing countries. The analysis indicates positive impacts of Options 1-5 in multiple areas of social policy, notably: land tenure; governance and capacity building in administration; participation of local communities and civil society; preservation of cultural heritage of indigenous peoples; income distribution, social protection and social inclusion; and workers health and safety.

While this initiative focuses specifically on measures to minimise the placing of products associated with deforestation or forest degradation on the EU market, it will also address the issue of rights of indigenous and local communities. The proposed policy options will require products to be compliant with both deforestation-free criteria and the laws of the country of production, thereby allowing to assess whether the rights of vulnerable communities such as indigenous people and local communities have been respected and upheld in the country of production.

In terms of employment, the policy options are expected to positively affect the competitiveness of relevant sectors and specific operators within these sectors which will result in the creation of new jobs in operators applying compliant production processes, and a loss of jobs for operators applying non-compliant production processes. New jobs will likely be created related to compliance with the new requirements for operators placing products on the EU market.

Whilst the long term impacts on third countries are expected to be positive, initial short term impacts caused by EU operators shortening/simplifying supply chains, reducing their number of suppliers and/or switching to lower-risk supply chains may particularly impact smallholders. For example, smallholders produce over 90% of the cocoa in West Africa. For palm oil, smallholders are reported to control 46% of Indonesia's planted land and 28% of land in Malaysia[188]. Fluctuations to the income of smallholders may have social as well as economic impacts, where families are reliant on the income for food, health, education etc. and where limited options exist for alternative income. Whilst multinational companies are engaging with smallholders to achieve zero-

[186] https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52019DC0352&from=EN
[187] FAO and UNEP, 2020. The State of the World's Forests 2020. Forests, biodiversity and people. Rome. in EPRS, 2020.
[188] Bakhtary, H., Matson, E., Mikulcak, F., Streck, C. and Thomson, A. 2020. *Company progress in engaging smallholders to implement zero- deforestation commitments in cocoa and palm oil*.

deforestation commitments, complex supply chains for cocoa and palm oil create challenges with tracing back to the farm/plantation of production[189.] Reduction in mills or supply base has been implemented as a strategy by companies to make it easier to monitor suppliers[190].

Again, the suggested cut-off date of 2020 would significantly mitigate potentially negative social impacts by limiting the number of smallholders that would be caught working on land whose products cannot be sold to the EU — and ensuring that nearly all current commodity production from exporting countries can still make the cut (see more on section 4.5.).

Whilst smallholder producers and rural communities will ultimately benefit from the policy options (through benefits of healthy ecosystems, nature underpinning wellbeing and growth, and others), mitigation measures such as enhanced EU support to partner countries and operator support within their supply chains will be important from the outset, to ensure support the transition to sustainable production by smallholders in EU commodity supply chains. To maximise positive impacts and mitigate against any potential challenges, within the EU and third countries and for all types of actor, the identified options must be accompanied with other measures identified in the 2019 Communication.

Box 3. Interplay between the due diligence requirements in the Sustainable Corporate Governance (SCG) initiative and those established in the legislative initiative on deforestation

The SCG initiative is a company law initiative fostering behavioural change aiming at embedding sustainability firmly in the Member States corporate governance systems. It foresees a general due diligence obligation applying to EU limited liability companies (with a lighter regime for SMEs), while non-EU companies would only be covered above a certain turnover in the EU. The due diligence process under the SCG initiative would not include the risk of illegal production and harvest.

The legislative initiative on deforestation has a very specific objective related to the European Green Deal and its requirements will go beyond the general duties under the SCG initiative. It will establish a more targeted regime for relevant products and commodities that may be associated with deforestation and will set specific conditions for their placing on the EU market. Critically, it will also include a prohibition, which will apply to all operators placing the relevant products on the market, including EU and non-EU companies, irrespective of their legal form and size.

The due diligence system set by the legislative initiative on deforestation will apply to operators that are the first to place relevant commodities/products on the EU market in relation to the risk that those commodities may pose as regards deforestation and forest degradation and illegal production and harvest. Conversely, the SCG due diligence duty would apply to all other products of that company and in relation to all other adverse impacts

Like other EU product-specific legal instruments containing a due diligence duty, the deforestation due diligence regime will act as *lex specialis*. This will entail that the SCG due diligence could apply **in so far as there are no specific provisions with the same objective, nature and effect** in the framework established by the legislative initiative on deforestation. However, the mere existence of specific deforestation rules should not exclude the application of the SCG. Where SCG provides for more specific provisions or adds requirements to the provisions laid down in the deforestation regulation, the two initiatives should be applied in conjunction.

6.1.4 6.1.4 Coherence with other EU policy objectives

The policy options proposed are coherent with the overall objectives of the European Green Deal and all the initiatives developed thereunder. Both the EU Biodiversity Strategy for 2030 and the Farm to Fork Initiative identify the legislative proposal and other measures to avoid or minimise the placing of products coming from supply chains associated with deforestation or forest degradation on the EU market as important for the achievement of their objectives.

The initiative is also part of the actions foreseen in the 2019 Communication on Deforestation, which sets out the overall objective of protecting and improving the health of existing forests, in particular primary forests and to increase sustainable, biodiverse forest coverage worldwide. Other relevant related initiatives foreseen in the Communication that are complementary with the proposed initiative are: 1) Work in partnership with producer countries, to address root causes of deforestation, and to promote sustainable forest management; 2) international cooperation with major consumer countries, to minimise leakage and to promote the adoption of similar measures to avoid products coming from supply chains associated with deforestation and forest degradation being placed on the market.

The proposed policy options are also coherent with the international instruments backed by the EU, specifically the Paris Agreement and the UN's 2030 Agenda.

All policy options include measures that also may impact trade, which could have an impact on EU foreign policy and also on the EU's development cooperation. The goal of all proposed policy options is to provide an incentive for 3rd countries to take action to achieve the sustainability milestones to which they also have committed. This is to be achieved by favouring sustainable supply chains and the consumption of deforestation-free commodities and products in the EU, thereby curbing the EU's negative impact on those countries' environment. In addition, some common features of the policy measures — namely the deforestation-free definition and the cut-off date — have been designed with the aim of minimising any sudden impact on 3rd countries.

Precisely in view of the potential impacts on 3rd countries, policy options 1 to 4, which are based on due diligence, are considered to be coherent with EU policy objectives. Policy options 2 and 3, which allow better performing countries to enjoy improved market access to their commodities and products, are considered more coherent than policy options 1 and 4. In contrast, policy option 5, which could result in extreme cases in an import ban against the commodities or products from 3rd countries, , is considered to be less coherent, as this could have a stronger economic impact on 3rd countries. These differences can be observed in table 8.

6.1.5 6.1.5 Leakage problems

The main objective of the initiative is the elimination of the EU contribution to global deforestation, with the reduction of overall global deforestation as an additional effect. That additional effect could of course be reduced by the leakage or spill-over effects.

This means that deforestation or degradation embedded in EU consumption may be reduced or eliminated, but at the same time unsustainable production activities would either be transferred to other commodities not in scope of the regulation or by switching to less discerning markets191, potentially reducing the overall impact of the EU intervention.

Various stakeholders indicated that they expect that the EU intervention will entail leakage risks. Nevertheless, many also agree that this is an acceptable risk if additional measures – as described and identified in the 2019 Communication - are taken to mitigate this risk as much as possible. Based on the insights and additional inputs from consulted stakeholders, some precautionary measures can be identified to mitigate these risks. The preferred policy option contains many of these mitigating measures. The results are shown in table 7.3 below.

Figure 13: Examples of risks of leakages and mitigation measures

Unintended effect	Mechanism	Potential mitigation measures
Shift to other commodities or products not under the scope of the measures.	Substitution of commodities or products that are included in the scope with commodities or products that are not covered by the scope of the measures. This could happen, for instance, if palm oil in products is substituted by other vegetable oils that are not covered by the scope of the measures, triggering deforestation that is outside the reach of the EU intervention.	The progressive scope (section 5.1) advocated for in this impact assessment aims at being able to deal with changing trends in commodities and products involved in deforestation. There was strong support among stakeholders, as well as the European Parliament, for having the scope revised regularly as a mitigation measure. The so-called Brussels effect could also play a positive role to extend the reach of the EU intervention beyond its scope. "Environmental regulation is often non-divisible. After an investment in compliance with the EU's stringent environmental rules is made, the company typically extends those same sustainability practices across its global conduct or production," argues Anu Bradford in The Brussels Effect[192]. Also relevant is the fact that companies working with products outside the scope of this EU intervention may be obliged to conduct horizontal due diligence duties due to the initiative on Sustainable Corporate Governance (see EU context on section 1.1)
Shift of non-deforestation-free exports to other markets outside the EU with laxer regulation, to avoid the burden of the measures.	Rather than fully shifting to sustainable agriculture and halt deforestation, producers may be tempted to separate their supply chains, selling deforestation-free products to the EU, while they continue to sell non-deforestation-free products to other markets. This could significantly reduce the overall impact of the EU intervention.	The benchmarking system of the preferred policy option is one potential mitigation tool that tries to address this risk (see section 5.3.2.) The system is meant to assess countries in terms of deforestation linked to the production of the commodities covered in the scope. As such, it could create incentives for countries to curb deforestation regardless of the final destiny of their production (internal, EU or other extra-EU markets.) This type of risk is higher in those commodities where EU market share is lower (see trade impacts on section 6.1.2.) For instance, for cocoa and coffee, the EU is such a substantial global

[191] Ingram, V., J. Behagel, A. Mammadova and X. Verschuur. (2020). The outcomes of deforestation-free commodity value chain approaches. Background report. Wageningen University and Research, Wageningen, The Netherlands

[192] 'The Brussels Effect: How the European Union Rules the World', Anu Bradford, 2020.

Unintended effect	Mechanism	Potential mitigation measures
		buyer that the effect of potential leakage is less likely to meaningfully undermine the overall impact of the EU intervention. The additional measures identified in the 2019 Communication should also help tackle this kind of leakage, in particular by working in partnership with producer countries offering adequate packages of support, and by strengthening international cooperation with other major consumer countries to ensure adoption of similar measures to curb deforestation and forest degradation. Also relevant to address this type of risk is a potential Brussels effect, as mentioned above.
Shift to other ecosystems not covered under the 'deforestation-free' definition	Expansion of agricultural production into natural non-forest ecosystem with high nature values, like natural savannah, grassland or wetland ecosystems, which are not under the scope of the EU intervention. Stricter rules aiming to protect Amazon forest has already been shown to accelerate conversion of Cerrado savannah and Pantanal wetlands for agricultural production.	The EU intervention contemplated in this impact assessment focuses on the protection of forests. Enlarging the coverage to other ecosystems would jeopardise implementability by making monitoring of deforestation and forest degradation criteria more difficult. Also, the policy options are based on an assessment of the relevance of forest from the perspective of climate change and biodiversity loss. A different assessment of different ecosystems would entail a different policy intervention proposal. Companies may be obliged to conduct horizontal due diligence duties due to the initiative on Sustainable Corporate Governance (see EU context on section 1.1), meaning impacts on ecosystems other than forests are expected to be covered by that proposal.
Indirect land use change	When commodities covered in the scope replace other crops on existing agricultural land, this may lead to producers engaging on deforestation or forest degradation to maintain production of crops and commodities not covered by the EU intervention. This problem is abundantly documented in the field of biofuels[193].	Potential mitigation tools to this risk have already been explained above: a) The progressive product scope that is regularly updated; b) working in partnership with producing countries; c) the benchmarking system; d) the potential Brussels effect; e) the broader coverage of the initiative on Sustainable Corporate Governance.

6.2 6.2 Policy Option 1 – Mandatory due diligence system, relying on a deforestation free definition

Benefits

Due to the similarities and improvements with regards to the EUTR, option 1 is expected to provide benefits at the middle-low end above the minimum described in section 6.1.1, that is at least 29% of deforestation driven by consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[194]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the

[193] https://www.sciencedirect.com/topics/engineering/indirect-land-use-change

[194] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.

relevant commodities, which could be translated into economic savings of at least 3.2 billion EUR annually.

Option 1 would also contribute to preserving biodiversity by reducing activities that are proven to threaten the survival of numerous species.

Option 1 is also expected to contribute to achieving the specific objectives of the EU intervention, namely minimising the consumption of products coming from supply chains associated with deforestation or forest degradation, and increasing EU demand for and trade in legal and 'deforestation-free' commodities and products. It would also contribute to creating a level playing field for companies operating in the EU market and benefit 'lower-risk' third countries, who are likely to experience increased EU demand for their commodities.

Costs

Apart from the cost addressed under Section 6.1, option 1 will lead to costs for operators related to establishing and maintaining appropriate due diligence systems and conducting risk mitigation. The proposed improved due diligence systems would require operators to take action to ensure traceability and transparency. In addition, there are likely to be administrative costs associated with the need to identify and analyse the possibility that commodities or products in the supply chain could be associated with deforestation and forest degradation.

As is the case with the EUTR, operators that place imported products on the EU market will be the most impacted by compliance costs. Operators that place relevant commodities produced in the EU on the market are already under the obligation to apply national and EU laws, which comprehensively cover a wide range of legal and sustainability aspects (e.g. existing nature legislation as well as planned legislation under the Biodiversity Strategy), and therefore the additional burden that the new initiative would place on them is expected to be limited.

EU operators are expected to incur both one-off costs to set up the due diligence system and recurrent costs to maintain and operate the system.

One-off costs may include components such as developing and instituting a due diligence policy, procuring and installing necessary IT systems, informing and training staff and supply chain partners. Recurring costs include the costs of employees dedicated for the task, maintenance of systems, and costs related to the collation, aggregation and analysis of the data, including in some cases professional services for 3rd party audit costs and surveys.

The approach to estimate the costs for operators of establishing and maintaining due diligence systems is based on cost estimates for the compliance with the EUTR. Although there are other sources for the cost of due diligence in the literature and from policy developments in other areas, the EUTR provides the closest example of due diligence of a forest-related supply change for the purpose of this initiative.

The cost of a due diligence system varies across operators. The following key factors influence operator-specific costs:

- The number of products
- The number of suppliers
- The size of the operator
- The length of each supply chain (value chain complexity)
- The country of production
- The availability of existing supplier information systems

The higher the number of products and suppliers that an operator deals in and with, the higher the costs of the due diligence system. The size of the company could be correlated with the number of products and suppliers, but it is the latter that is the main cost driver, i.e. the number of products and suppliers are more decisive for the due diligence costs than the size of the company in question. Generally, more complex supply chains could lead to higher costs, but this is dependent on many factors including the extent to which the operator is able to push some of the effort to trace the full supply chain back onto its immediate supplier.

An important element that could influence the costs of setting up a due diligence system is whether importers have already equipped themselves on a voluntary basis with policies and systems to measure and mitigate sustainability risks in their supply chains. Importers may, for example, be monitoring their supply chains for other certification purposes. This can be in the form of forest or chain of custody certification of their products, or as part of internal corporate social responsibility commitments. In such cases, these efforts contribute to the due diligence system and may thus result in lower costs in comparison to companies that have no such policies or systems in place. According to a recent report[195], 93% of the companies have taken at least one industry-accepted measure to safeguard forests in their operations and supply chains.

The due diligence system foreseen in the legislative initiative on Sustainable Corporate Governance referred to in section 1.1 may also entail significant costs. It is expected that a large proportion of companies that would be considered operators under the deforestation legislation will also be in scope of the due diligence obligation under the Sustainable Corporate Governance initiative. While the scope and definition of the due diligence obligations may differ (for example the deforestation due diligence obligation is not expected to include disclosure obligations), some of the processes and systems established to comply with the obligations under the Sustainable Corporate Governance initiative would also be useful to fulfil the obligations under the deforestation legislation (more information in box 3.)

[195] CDP (2021). The collective effort to end deforestation. A pathway for companies to raise their ambition. https://www.cdp.net/en/research/global-reports/global-forests-report-2020

There are very few studies providing information on one-off costs of setting up the EUTR due diligence system. One of them[196] provides a range between EUR 5 000 and 90 000 per operator, which is comparable with the values given for other due diligence processes[197]. This range provides a reasonable estimate of the costs that companies could incur to set up the due diligence system. The level of costs for a particular company will depend on the specific factors mentioned above.

As regards recurrent costs of the due diligence system, the overall costs for importers of EUTR products is estimated as a range between 0.29 and 4.3% of the value of the imports (see SWD Fitness Check EUTR/FLEGT Regulation)[198]. This same percentages were applied to the value of imports for the relevant commodities to derive an estimate of due diligence costs for those importers of those commodities:

Table 5 Estimate of annual costs of due diligence based on EUTR and value of imports. Import values extracted from Comext, average of 5 years (2015-2019)

Commodity	**Value of imports (EUR million)**	**Costs of DD lower estimate (EUR million)**	**Costs of DD higher estimate (EUR million)**	**Comments (HS codes included in the value of imports)**
Wood	24,525	71 (0.29% of imports)	1,071 (4.3% of imports)	Comext data for all HS codes in scope of EUTR. The percentages derived for lower and higher estimates are used for the other commodities
Beef	4,304	12.5	185.1	HS0102, 0201, 0202, 020610, 020622, 020629, 4101, 4104 and 4107
Cocoa	7,421	21.5	319.1	HS1801 to 1806
Coffee	8,061	23.4	346.6	HS0901
Palm oil	5,013	14.5	215.6	HS120710, 1511, 151321, 151329 and 230660
Soy	11,133	32.3	478.7	HS1201, 120810,1507 and 2304

[196] Indufor (2016). Review of the EUTR. Avaliable at https://ec.europa.eu/environment/forests/eutr_report.htm

[197] The OECD study 'Quantifying the Costs, Benefits and Risks of Due Diligence for Responsible Business: Conduct, Framework and Assessment Tool for Companies'(2016) estimates the one-off costs between EUR 3 150 and 205 000 for staff time, consultant fees and training and between EUR 36 000 and 90 000 for IT systems. The draft Impact Assessment for the legislative initiative on Sustainable Corporate Governance estimates up to EUR 31 500 of direct one-off costs per company to set up the due diligence system.

[198] For the sake of comparison, the draft Impact Assessment for the legislative initiative on Sustainable Corporate Governance estimates in EUR 7.6 billion the recurrent direct costs of due diligence for 223 000 high impact SMEs and large companies. Comparing this value with the estimate of the imports for such subset companies (calculated with Eurostat 2017 data by proportionally reducing on the basis of the number of companies the total imports of all EU companies in the relevant NACE codes) provides a value of 1.7% of total recurrent costs of due diligence expressed as a percentage of the value of imports, which is within the range of the estimates for the EUTR.

Totals (excluding wood)	35,932	104.2	1.545	
Totals (including wood)	60,457	175	2,616	

The approach taken to estimate the costs of due diligence for operators presents a number of uncertainties and limitations:

- It is based on EUTR due diligence which includes only due diligence obligations related to the laws of the country of origin. The deforestation-free definition is expected to add a new layer of costs to due diligence systems. This new layer, as argued in section 4.4, is expected to be simpler and therefore less costly.
- The same EUTR ratio is applied across the board to all commodities on the basis of import value but it is likely that exercising due diligence for some commodities would be either easier or more complex than for wood. There will also be significant differences depending on the levels of risk of deforestation in sourcing countries;

Although these elements introduce uncertainty in the calculations, they are considered the best estimate. This results in recurrent costs of between €175 million and €2,616 million per year. Other attempts to estimate the costs of due diligence based on the number of operators for each commodity showed a very high variability due to the lack of reliable data, and were therefore discarded[199].

The above costs represent the direct costs of setting up and operating a due diligence system. In addition to those, operators may incur additional costs as a consequence of the results of the due diligence for specific supply chains, i.e. by implementing mitigation measures where necessary. These may entail for example changing suppliers, if risks of specific supply chains cannot be mitigated in a different way. Given that the need for such mitigation measures and the type of action taken are very context specific, it is not possible to quantify such costs.

In addition, option 1 will entail costs of implementation and enforcement for Member States authorities, who, as in the case of EUTR, would be tasked with inspecting and ensuring that the operators have appropriate due diligence systems in place. The costs for authorities of EUTR was estimated on the basis of the data reported by Member States.

The recent analysis on EUTR implementation published in 2019 using information from Biennial Reports published by Member States in the period 2017-2019 compares the human resources available for the implementation of the EUTR. Implementation resources are uneven across member states. In the EUTR Fitness Check, interviewees

[199] See section 8.2.3 of the study supporting this impact assessment: Study on EU forest policy. Impact assessment on demand-side measures to address deforestation.

confirmed that the member states' costs for the EUTR implementation depends much on the number of operators and traders within a specific country.

Estimated overall costs of EUTR for CAs are shown in the table below. This shows the total number of FTEs (full time equivalent staff) across the EU is 182 and based on an average wage across Member States in the EU of €40,000 per year, the total costs of EUTR compliance for Member States CAs is approximately €7.3 million per year. This cost is slightly higher than the total cost of EUTR compliance reported by Member States CAs in the 2016 evaluation of the EUTR, which provided a range of €20,000 - 466,000 per year, depending on the Member State[200], which corresponded to total annual costs for all EU Member States of €6.8 million.

It is assumed that the resources required from Member States to enforce and monitor the implementation of the proposed new Regulation covering an expanded scope of commodities are proportional to the total value of imports of each commodity. Extrapolating from the EUTR-induced costs and accounting for the total value of wood imports regulated by the EUTR, the expansion of the scope will lead to the need for around 267 FTEs of additional human resources for Member States as seen in the table below (449 in total when including wood.) When calculating the cost for expanding the scope of the regulation to other commodities, an average annual wage of €40,000 per FTE has been used (based on the findings of the Fitness Check on the EUTR). This results in a total cost of approximately €18 million for all Member States and commodities per year.

Table 6 Estimated total resources needed (FTE) and costs (Euro) incurred by Member States under Policy Option 1

Commodity	Total import value (€ billion)	Enforcement resources needed (FTEs)	Enforcement costs (€ million)
Wood	24.53	182	7.28
Beef	4.3	32	1.28
Cocoa	7.42	55	2.20
Coffee	8.06	60	2.39
Palm Oil	5.01	37	1.49
Soy	11.13	83	3.30
Total (excluding wood)	35.92	267	10.66

[200] European Commission. (2016). Evaluation of Regulation EU/995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market (the EU Timber Regulation)

Total (including wood)	60.45	449	17.94

It is to be noted, however, that the figure of about €18 million per year for all EU Member States should be considered as a minimum, as is based on the estimated cost of enforcement of the EUTR as currently done by the EU Member States, which has been sometimes not fully adequate to the task. Those enforcement efforts have been plagued by shortcomings, including insufficient checks and uneven enforcement across member states, as highlighted by the Fitness Check of the EUTR and FLEGT Regulation. It is expected that a satisfactory level of enforcement by EU Member States would require even more resources and imply higher costs. In addition, a number of measures involving new enforcement obligations for Member States — including a minimum volume share of products and commodities checked per year or the obligation to respond to substantiated concerns raised by civil society — are also expected to increase the costs.

Regarding costs to third countries, all options have a deforestation-free requirement, so producers will need to make the necessary changes to their production practices to ensure that commodities exported to the EU meet legal and deforestation-free requirements. Whilst costs should be minimal in countries and products where commodity production rarely involves newly deforested or degraded land, as well as those with effective national institutions controlling the legality of local production, there may be particular countries and supply chains where this would require additional time and resources

As noted above, some EU operators could switch to lower risk countries and supply chains where possible. Higher risk countries could therefore experience a lower demand for their products from the EU (although the extent of such switching of suppliers is not known, and the experience from the EUTR indicates that operators continue to source timber from higher risk countries).

Figure 12 (section 6.1.2) illustrates the top EU trading partners per commodity and their level of deforestation risk, with further details on countries most likely to be impacted by the regulation provided in Annex 6.

6.3 6.3 Policy Option 2 – A benchmarking system and a list of contravening operators combined with tiered improved mandatory due diligence system, relying on a deforestation free definition

It is expected that this option will have a higher effectiveness and efficiency than option 1, as the DDS requirements will be accompanied by a benchmarking system creating incentives for countries to curb deforestation and facilitating due diligence by operators, among other benefits (see section 5.3.2 for more information).

Benefits

Option 2 falls within the same range of expected benefits as option 1. Therefore, option 2 is forecast to provide benefits at the high end above the minimum described in section 6.1.1, that is at least 29% of deforestation driven by its consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[201]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the relevant commodities, which could be translated into economic savings of at least 3.2 billion EUR annually. Yet, while not quantified due to the limitations the assessment faces, it is expected that the enhanced features described in section 5.3.2 will bring higher effectiveness than option 1.

Option 2 would also contribute more decisively to preserving biodiversity by reducing activities that are proven to threat the survival of numerous species.

Option 2 is also expected to contribute to achieving the specific objectives of the EU intervention, namely minimising the consumption of products coming from supply chains associated with deforestation or forest degradation, and increasing EU demand for and trade in legal and 'deforestation-free' commodities and products. It would also contribute to creating a level playing field for companies operating in the EU market and streamline enforcement activities and associated costs across the EU through the transparent identification of contravening operators.

In addition, operators sourcing commodities and products from 'low-risk' countries would benefit from higher demand for commodities and products from countries assessed to be 'low-risk'. They are also likely to see increased competitiveness compared to operators sourcing from 'high-risk' countries due to a reduced administrative burden to meet due diligence requirements. Benchmarking will also facilitate the amount of information available to consumers. This might result in a further increase in demand for products from 'low-risk' countries. Public access to benchmarking might also provide valuable information to NGOs, academia and policy makers and would facilitate decision-making, innovation and research relating to deforestation, forest degradation and trade.

Option 2 will also create benefits for third countries. As mentioned above, the benchmarking information on third countries could act as an incentive for producer countries to improve their environmental protection and its enforcement thus making their supply chains more sustainable. This will be essential for the EU market but also increase their access to other sensitive markets. This is likely to be most effective if coupled with technical and financial assistance, including measures identified in the 2019

[201] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.

Communication, to work in partnership with producer countries to reduce pressures on forests.

Countries specifically identified as 'low-risk' may benefit from higher EU demand than in Option 1, potentially increasing their exports to the EU. The categorisation of 'low-risk' could also act as a positive signal to other sensitive markets, encouraging sourcing from such countries. Option 2 would have lower administrative costs to 'low risk' countries than Option 1, due to the simplified due diligence obligations of EU operators. These benefits to 'low-risk' countries would vary by commodity, with greater possibility of sourcing commodities like beef, soy and wood from 'low-risk' countries.

Costs

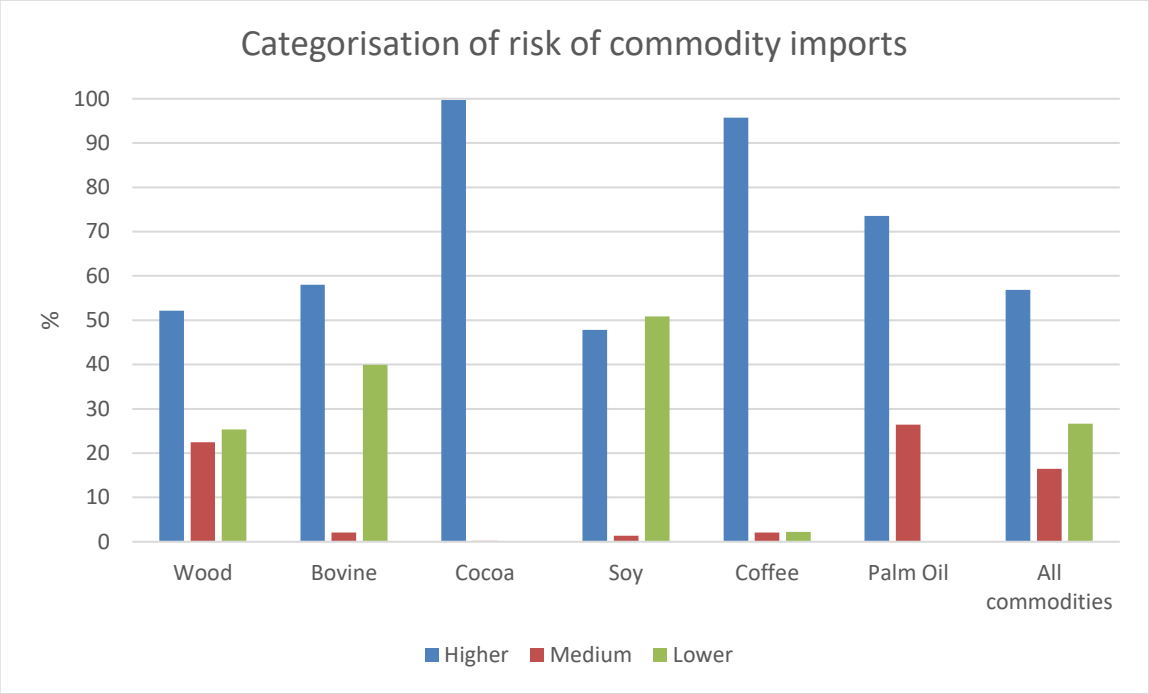
Benchmarking is expected to lower the operational costs for EU businesses as compared to option 1. The simplified due diligence obligations for low risk countries are expected to lower the costs of conducting due diligence per se. The list of low risk countries could help guide operators to deforestation-free supply chains, therefore reducing the costs of finding those reliable and safe suppliers. Option 2 is also expected to create an incentive for operators placing products on the EU market to shift their sourcing from 'high-risk' countries to 'low-risk' countries.

The costs for the DD under this option were established on the following basis: the 'standard' due diligence is expected to produce the same costs for operators as under option 1; the 'simplified' ('low-risk') due diligence will arguably lead to lower costs for the operators. This approach would be particularly beneficial for SME operators and traders as they would benefit from lower costs of the simplified DDS by placing products derived from low-risk supply chains (commodity/country of origin) on the market.

The analysis calculated the simplified DDS costs as a 50% reduction compared to DDS under option 1. This is based on expert judgment derived from the implementation of EUTR, where risk assessment and mitigation is more costly and difficult for high risk areas. It is estimated that 20% of the operators will be placing products on the market under 'simplified' due diligence and therefore would be incurring 50% of the costs as compared to Option 1. This results in an estimated cost of due diligence under option 2 ranging from €158 million to 2,354 million per year. This is based on a conservative estimate of 20% imports coming from lower risk countries. Currently 26% of the imports for the 6 commodities come from countries with lower risk according to ILAT score[202]. Given that this score is based on legality only a conservative round up to 20% has been used.

[202] Forest Trends (2021). Global Illegal Logging and Associated Trade Risk Assessment Tool (ILAT Risk). https://www.forest-trends.org/fptf-ilat-home/

Figure 9 Risk categorization of imported commodities based on the ILAT score 2020 of the country of origin. Based on quantities imported 2015-2019.



As regards costs for public authorities, significantly lower costs than under Option 1 are expected. The European Commission will be covering costs associated with setting up the benchmarking system and the processing of the information received. The system will need to be kept up to date to reflect the developments in producer countries. Costs for the establishment of the benchmarking system are estimated for year 1 to amount to €337,000 and thereafter €168,000 per year for its maintenance. This is based on the assumption that the benchmarking could include up to 134 countries based on a further analysis of trade flows, which would indicate the need to assess specific countries. Its set up would entail a one-off cost of 20 working days per country and then 10 working days per country per year to keep updated the benchmarking results (hourly salary of 15.71€/hour was used based on Eurostat average labour costs for the public sector in EU).

Given the anticipated greater effectiveness of option 2 at ensuring EU sourcing is from deforestation-free supply chains, it is important to consider economic impacts on third countries from the benchmarking system, in addition to the impacts described under Option 1. By categorising producer countries as low, standard and high risk, this may increase the costs and/or benefits to those countries. In particular, the explicit labelling as 'high risk' of producer countries could lead to economic effects which are greater or take effect sooner, through EU operators switching suppliers and source countries (where available), or by requesting further information and verification from high risk producers. The benchmarking system may also act as a stronger signal to other sensitive markets, further reducing demand for products from 'high-risk' countries. Countries likely to be most affected will be those with a high proportion of exports to the EU (and other sensitive markets), high deforestation risk and where the shift to deforestation-free

production and supply chain traceability may be lengthy and complex (see Annex 6 case studies including cocoa from West Africa and palm oil from Asia, both of which rely on smallholders in their production). As indicated in Figure 7 above, for commodities such as cocoa and coffee, ILAT scores indicate that the majority of producer countries might be 'high-risk'.

Whilst a desired outcome of EU measures is the shift in public and private sector investment towards low risk supply chains, strengthening the benefits of the policy option in EU partner countries will require targeted financial and technical assistance to support high risk countries and producers in the transition towards deforestation-free production practices. This measures were identified in the 2019 Communication and are being developed by Commission services. This will also to help to mitigate against supply shortages of deforestation-free products to the EU. For example, some multinational companies have smallholder engagement programs (e.g. for cocoa in Côte d'Ivoire and Ghana, and palm oil in Indonesia and Malaysia[203]) to improve sustainability in their supply base. The 2020 cut-off date (see section 4.5) will also be important in minimising immediate impacts and providing time for 'high-risk' countries to improve their production systems.

6.4 6.4 Policy Option 3 – Mandatory public certification combined with an improved due diligence requirement, relying on a deforestation free definition

Benefits

Option 3 falls within the same range of expected benefits of option 1. Therefore, option 3 is forecast to provide benefits at the middle end above the minimum described in section 6.1.1, that is at least 29% of deforestation driven by consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[204]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the relevant commodities, which could be translated into economic savings of at least 3.2 billion EUR annually. Yet, albeit not quantified due to the methodological challenges, it is expected that the enhanced features described in section 5.3.3 will bring slightly high effectiveness.

Option 3 would also contribute to preserving biodiversity by reducing activities that are proven to threat the survival of numerous species.

Option 3 is also expected to contribute to achieving the specific objectives of the EU intervention, namely minimising the consumption of products coming from supply

[203] Bakhtary, H., Matson, E., Mikulcak, F., Streck, C. and Thomson, A. 2020. Company progress in engaging smallholders to implement zero- deforestation commitments in cocoa and palm oil.

[204] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.

chains associated with deforestation or forest degradation, and increasing EU demand for and trade in legal and 'deforestation-free' commodities and products. It would also contribute to creating a level playing field for companies operating in the EU market.

In addition to environmental benefits mentioned under section 6.1, mandatory public certification could act as an incentive for those producer countries who opt to use it, to improve their environmental protection and make their supply chains more sustainable. Certification could lead to competitive advantages in other markets as well.

Costs

In terms of economic impacts, the costs and impacts relating to a tiered DDS as described under option 2 are also relevant here. Operators sourcing from countries which have a mandatory public certification system recognised by the EU would face lower compliance costs to meet their due diligence obligation. It is however expected that the share of operations benefiting from lower compliance costs be lower than in option 2.

The cost linked to the tiered due diligence system would be based on the same assumptions as for option 2, however the split between those operators assumed to be in the simplified due diligence category would be different than in option 2. This difference is based on the relatively low expected uptake and even lower expected recognition of the public mandatory certification schemes. To build on lessons learned from previous experiences (to avoid demand-led processes that might fail to cover the main EU trade partners, while still investing considerable resources), this option would be open for countries to apply under the following criteria: 1) the country exports a significant volume of commodities or products covered by the regulation; and 2) the EU consumes a significant volume of these commodities or products.

As in option 2, a reduced due diligence cost for sourcing from countries that choose to establish and obtain approval for a mandatory certification system is estimated as 50% reduction compared to option 1. The EU recognition process is expected to provide operators additional assurance on the sustainability of the products, so that it would reduce the extent of their due diligence obligations. However, the FLEGT experience shows that it is likely that only a limited number of countries would be able to or interested in developing a mandatory public certification system and seek its recognition by the EU.

Although difficult to predict, for the purpose of the impact assessment it is estimated that 10% of the commodities in scope of the regulation would be sourced from recognised mandatory public certification systems and therefore the operators would be under 'simplified' due diligence obligations, incurring in 50% of the costs as compared to option 1. This results in an estimated total costs of due diligence under option 3 ranging between €166 and 2,485 million per year.

The costs of enforcement of the scheme are likely to vary depending whether new enforcement infrastructure would be needed. In addition, annual costs of reporting to EU

institutions are expected and estimated to be between 100,000 - 1,000,000 EUR per country.

For EU institutions, the main costs are associated with setting up and operating the process of reviewing, assessing and recognising the existing public mandatory certification schemes. It is expected that there will be some costs associated to setting up the process, but the main costs would be the annual operating costs, which would strongly depend on the number of countries seeking recognition for mandatory public certification systems for specific commodities. The main cost for any country choosing to set up such a mandatory certification system would be borne at national level , and is estimated to amount to a minimum of €1.2 million per country and commodity per year. The cost of setting up such a scheme will depend on the potential risk of commodities and products from a given country being associated with deforestation and forest degradation, the size and the complexity of the production structures in the country for that particular commodity, and administrative and socioeconomic characteristics. Costs for producing countries to implement the system would also be strongly dependent on the specific situation and context. The following table provides some situation specific examples of costs reported in the literature linked to certification of palm oil in different countries. It should be noted however that this table is for the illustration of costs that are associated with some existing systems; a system that would adequately meet the criteria under Option 3 described above may generate different and additional costs.

Table 7 Examples of costs of setting up public certification systems.

Examples	Cost borne by	Elements included	Costs
Malaysian Sustainable Palm Oil standard (MSPO) – mandatory public[205]	Producer	Support for smallholders farmers in gaining certification	US$13 million has been allocated to Malaysia's smallholders
Indonesian Sustainable Palm Oil (ISPO) scheme – mandatory public[206]	Producer	Other costs identified include: Initial costs of certification IDR Corrective costs (in Year 2) Maintenance and monitoring costs	35,000/ha (EUR 2/ha) IDR 400,000/ha (EUR 23.5/ha) IDR 130,000/ha (EUR 7.65/ha)

Producer countries most likely to develop a public certification system could include those where EU trade is particularly important to the economy, and where the nature of supply chains and conditions within the country are conducive to setting up such a scheme. For example, the palm oil industry is important for Indonesia and a high proportion of trade is already covered by certification schemes, including the Indonesian Sustainable Palm Oil standard (Annex 6). Indonesia's experience in developing a FLEGT

[205] https://www.foodingredientsfirst.com/news/malaysia-all-palm-oil-producers-must-be-certified-by-2020.html
[206] Ernah, 2015, Cost-Benefit Analysis of the Introduction of the Indonesian Sustainable Palm Oil Standards: A Case Study in Jambi Province, Indonesia

licensing scheme could also facilitate the setting up of a mandatory public certification for palm oil.

Costs to producer countries would also include the costs to individual producers in reaching and maintaining certification.

Producer countries choosing to develop mandatory public certification schemes would also be taking an economic risk, with considerable outlay in developing a scheme which may not attain recognition from the EU.

6.5 6.5 Policy option 4 – Mandatory labelling combined with an improved due diligence requirement, relying on a deforestation free definition

Benefits

Option 4 falls within the same range of expected benefits of option 1 and it is expected to bring the same effectiveness. Therefore, option 4 is forecast to provide benefits at low-middle end above the minimum described in section 6.1.1 that is at least 29% of deforestation driven by consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[207]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the relevant commodities, which could be translated into economic savings of at least 3.2 billion EUR annually.

The label is expected to increase awareness about deforestation and might contribute to shift consumer preferences for deforestation-free products, but it is expected that its impact in terms of increasing the baseline effectiveness of the due diligence system be limited compared to other options.

Option 4 would also contribute to preserving biodiversity by reducing activities that are proven to threat the survival of numerous species.

Option 4 is also expected to contribute to achieving the specific objectives of the EU intervention, namely minimising the consumption of products coming from supply chains associated with deforestation or forest degradation, and increasing EU demand for and trade in legal and 'deforestation-free' commodities and products. It would also contribute to creating a level playing field for companies operating in the EU market.

Costs

[207] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.

A key additional cost component under this option, besides costs identified under Option 1, will be the costs of labelling. Administrative costs related to labelling obligations can include costs to assimilate/obtain relevant information to comply with labelling regulations, translations for labelling in different languages, redesign of the label and packaging, production of the printing plate, printing of the label, auditing, submitting information to the regulator, etc. Based on examples from food labelling legislation, it is estimated that that operators and traders will face a minimum of €10.6 and a maximum of €831.5 in labelling costs on average. It can be assumed that SMEs will face lower labelling costs in comparison to large companies due to the lower number of products that would need to be labelled. Across all sizes, an average cost of €421 per business can be expected, with total labelling costs for EU business potentially amounting to €35.3 million. The costs for SMEs were calculated as €14.2 million for intra-EU traders.

The European Commission would bear the costs of developing the content of the label and the requirements for its use (i.e. scope of commodities to be covered, label definitions, as well as issue EU-wide guidance on the use of the label to support implementation at Member State level, possibly issuing harmonised pictograms to be used throughout Member States (e.g. size and design). Based on experience with EU Ecolabel, these costs are unlikely to significantly exceed an average annual management cost of 1.1 million EUR. Member States would bear costs for implementing and enforcing the legislation, and ensuring that products are correctly labelled. In addition to DDS costs, EU institutions and Member State authorities would need to ensure compliance with labelling. Based on existing labelling schemes in the energy sector, these costs are estimated to be between 148,148 and 296,296 EUR per Member State, annually.

There are not anticipated to be additional costs to third countries from labelling, as these costs will be borne by the EU and are unrelated to the choice of country from which commodities are sourced. However, economic impacts slightly higher than already laid out under option 1 already may arise through reduced consumer demand of goods failing to meet deforestation-free criteria.

6.6 6.6 Policy option 5 - Deforestation-free requirement for placing on the EU market supported by benchmarking and country card systems

The challenges of estimating the benefits for this policy option were greater due to the lack of precise quantitative information on the effectiveness of the EU regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU Regulation), from which the system is adapted. Therefore, the range of impacts used below, and the uncertainty of the conclusions, is larger than for policy options 1 to 4.

The experience of IUU implementation suggests that country carding systems were successful in driving positive reforms in countries and that, on the back of yellow and red cards, most of the countries showed commitment to improve their management and

control systems and a willingness to cooperate closely with the EU.[208] Yet, there is a lack of precise quantification on the effectiveness of this policy measure.

Benefits

The challenges of quantifying impacts for this option means that it is necessary to assess its impacts qualitatively and work within the full range of possible benefits as described in figure 11.

Option 5 is expected to contribute to curb EU-driven deforestation, and in turn greenhouse gas emissions and to preserve biodiversity by reducing activities that are proven to threat the survival of numerous species

Option 5 is also expected to contribute to achieving the specific objectives of the EU intervention, namely minimising the consumption of products coming from supply chains associated with deforestation or forest degradation and increasing EU demand for and trade in legal and 'deforestation-free' commodities and products. It would also contribute to creating a level playing field for companies operating in the EU market.

As Option 5 is the only option not to include a due diligence obligation, EU operators and traders would benefit from this option compared to Options 1-4, as they would not need to set up and maintain due diligence systems for each of their supply chains.

A benefit of Option 5 to third countries, in comparison to Options 1-4, could be the adaptation of their own public certification systems to the local context. Countries where private certification schemes already cover a high proportion of their exports and where certification has long been used to improve forest management and improve sustainability of supply chains may favour this option, as the transition to public certification would build on existing national efforts and enable more national control in ensuring their products meet the EU requirements.

Costs

The administrative burden of this policy option depends on the different components of the policy option, i.e. the benchmarking system, the country carding system, and the certification requirement. The costs of the benchmarking system and the carding system would be borne by the European Commission. For the 136 countries of relevance, which export significant quantities of any of the commodities during the past 5 years, the costs of benchmarking is estimated to be €1,025,712 in year 1, and €598,264 annually afterwards. The costs of the carding system, associated mainly with the necessary country site visits are expected to amount to €75,600 per year. At Member State level, it is expected that more resources would be needed to control the certifications of commodities and products. An annual costs of €22,539,794 for Member States overall is estimated.

[208] IUU Watch, 2015 EU Regulation to combat illegal fishing Third country carding process yellow and red-carding process is encouraging fisheries reforms and must be maintained

Under this option there are no direct costs for EU businesses. However, EU businesses may incur in costs when changing source country as a consequence of a 'red card' decision by the EU. Given that such 'red card' would imply a ban to place certain products on the EU market, the businesses sourcing from such a country would need to find alternative supply chains in other markets.

The economic impact on third countries is likely to be greatest for option 5, where any producer country wanting to place commodities and products on the EU market would need to develop a public certification system, or adapt a pre-existing one. As discussed under option 3, the costs to public authorities and ease of developing such systems would depend on *inter alia* the length and complexity of supply chains, size of the country and area under production, volumes of commodities concerned and the risk of deforestation in the supply chains. The transition to public certification less costly for countries where a high proportion of the commodities exported are already covered by private certification schemes.

As all options 1-5 would require producers to make the necessary improvements to their production practices to meet the legality and deforestation-free requirements, additional costs to producers countries under option 5 would relate to gaining public certification.

Country carding will not only signal which countries have high rates of deforestation/degradation and inadequate measures in place (yellow card), but the red card option will be the basis for an EU ban on trade, with the sharpest economic impact on countries concerned. This could have a strong economic impact on high risk countries unable to efficiently remove deforestation risk from their supply chains, especially where exports to the EU contribute a sizeable proportion of their GDP.

As detailed in section 6.1, supply chains in some high risk countries and for some commodities rely on large numbers of smallholders (e.g. cocoa in Côte d'Ivoire and Ghana, palm oil in Indonesia and Malaysia), and additional EU support and funding focused on such countries would be needed to assist in the transition to deforestation-free production, to minimise the economic and social impacts on vulnerable communities (as foreseen under Priority 2 of the 2019 Communication).

7 7 HOW DO THE OPTIONS COMPARE?

The table below give an overview of the analysis of the impacts as discussed in Section 6. It summarises the conclusions on the environmental, economic and social impacts and provides simple overview how the options compare against baseline situation in terms of effectiveness and efficiency[209]. A more comprehensive comparison is contained in annex 8.

Table 8 Option comparison against baseline in terms of effectiveness and efficiency

Options			**Efficiency**	**Coherence**
	Curb EU-driven deforestation	Minimise placing of unsustainable products		
Option 1: Mandatory due diligence system, relying on a deforestation free definition	++	++	++	++
Option 2: A benchmarking system and a list of contravening operators as a basis for a tiered improved mandatory due diligence	++++		++++	+++
Option 3: Mandatory public certification combined with an improved due diligence requirement, relying on a deforestation free	+++	++	+++	+++
Option 4: Mandatory labelling combined with an improved due diligence requirement, relying on a deforestation free definition	++	++	+	++
Option 5: Deforestation-free requirement for placing on the EU market supported by benchmarking and country card systems	+	+	+	+

[209] Effectiveness: The extent to which different options would achieve the objectives; Efficiency: the benefits versus the costs;

8 8 PREFERRED OPTION

The most viable option appears to be Option 2, a benchmarking system and a list of contravening operators combined with a tiered improved mandatory due diligence system, relying on a deforestation-free definition.

Option 2 is forecast to provide benefits well above the minimum described in section 6.1.1, that is, to prevent at least 29% of deforestation driven by EU consumption and production of the six commodities included in the scope by 2030, and therefore a minimum of 71,920 hectares of forest less affected by EU-driven deforestation and forest degradation starting in 2030[210]. This would also mean a minimum of 31.9 million metric tons of carbon fewer emitted to the atmosphere every year due to EU consumption and production of the relevant commodities, which could be translated into economic savings of at least EUR 3.2 billion annually.

This option would ensure that the EU puts in place a regulatory framework that is both very ambitious and implementable, while incentivising the sustainability transition in all countries, within or beyond the EU, making us a credible global standard-setter.

The proposed instrument is a 'Regulation' because it is necessary to ensure the highest level of harmonization to avoid the coexistence of different standards between Member States, which would undermine the fundamental principle of free movement of goods. A Regulation will set direct requirements for all operators, thus providing the necessary legal certainty and enforcement possibility of a fully integrated market across the EU. A Regulation also ensures that the obligations are implemented at the same time and in the same way in all 27 Member States.

To strengthen its impact, the preferred option must be accompanied with other measures identified in the Communication on Stepping up EU Action to Protect and Restore the World's Forests, in particular: 1) Working in partnership with producer countries, accompanied by adequate packages of support, which is crucial to address the root causes of deforestation, such as weak governance, corruption and problems with law enforcement; and 2) strengthening international cooperation, especially with other major consumer countries, to ensure adoption of similar measures to avoid products coming from supply chains associated with deforestation and forest degradation being placed on the market, in order to minimise leakage. An overview of different potential leakage problems and mitigation measures is included in section 6.1.4.

[210] Under the assumption that the regulation enters into effect three years after a proposal is agreed upon, i.e. in 2025. Several years will be required to reach the maximum effectiveness of the regulation as operators and Competent Authorities adjust their approaches to be able to more effectively perform their duties in the context of the new requirements, thus the full effects of the regulation are expected to start in 2030.

The option proposed includes a number of pertinent elements which draw inspiration from the EU regulation to prevent, deter and eliminate illegal, unreported and unregulated fishing (IUU Regulation) in combination with due diligence.

The preferred option would lead to the EU Timber Regulation being repealed when the new Regulation against deforestation enters into force – as the new law will essentially integrate and improve the existing system to control timber legality. As regards the FLEGT Regulation, which lays out the foundation for negotiating and implementing the Voluntary Partnership Agreements (VPAs), it is suggested that it be maintained as a legacy tool.

This would entail that VPAs that have been signed with EU partners and reached the last stage of the implementation – the FLEGT licensing stage – by a certain date will be preserved, so that they can be integrated in the new Regulation as proof of compliance with the laws of the country of origin. Operators, in contrast, will still be required to conduct due diligence to ascertain that the commodities and products coming from those countries are deforestation-free.

Under this scenario, there would be a limited amount of years for VPA partner countries to reach FLEGT licensing. After a certain date without having attained that goal, implementation will be discontinued. Specific cooperation programs under the Forest Partnerships (or similar cooperation tools) will replace the VPAs that have not reached the licensing stage by the agreed date. There will be no new VPAs, neither for timber nor for other commodities. The Commission will not engage in VPA negotiations with new countries.

9 9 HOW WILL ACTUAL IMPACTS BE MONITORED AND EVALUATED?

The Commission will ensure that arrangements are in place to monitor and evaluate the EU intervention, and evaluate it against the main policy objectives (see figure below.) Given the role of Member States authorities in the enforcement of all proposed policy options, a reporting mechanism, similar to that in place for the EUTR, will need to be established.

The system should be reviewed after five years of full operation to identify any issues and potential improvements. In addition, the Commission will also review after the first year after the entry into force of the regulation its product scope (see section 5.1), with view to extending it further down the value chain.

As regards the main objective of this EU intervention, EU-driven deforestation and forest degradation has been captured in different research undertakings in the past. The product scope, the baseline and the analysis of impacts of this Impact Assessment build on this

previous work. The monitoring of the impacts of the EU intervention will rely on similar tools.

Deforestation and, to a lesser extent, forest degradation, can be monitored via satellite imagery. Widely available agricultural production and trade data by country allow to link deforestation to EU consumption and production. An overview of free-access satellite imagery tools and datasets is available in Annex 6.

It is therefore expected that the actual impact of the EU intervention could be relatively straightforward to monitor, and separate it from other potential factors that may influence market trends.

Table 9 Objectives, progress indicators and data sources/measurement tools

Objectives	Indicators	Measurement tools/data sources
Reduce EU-driven deforestation and forest degradation	– Hectares of deforestation and forest degradation provoked by EU consumption and production	– Deforestation and forest degradation statistics – Agricultural production statistics – Trade statistics
Minimise consumption of products coming from supply chains associated with deforestation or forest degradation	– EU consumption trends of commodities and products under the scope of the EU intervention (compared to products outside the scope and to other regions lacking a similar policy intervention)	– Trade statistics – Agricultural production statistics – Sector statistics – Consumer price statistics – Consumer surveys
Increase EU demand for and trade in legal and 'deforestation free' commodities and products	– EU consumption trends of commodities and products under the scope of the EU intervention (compared to products outside the scope and to other regions lacking a similar policy intervention)	– Trade statistics – Agricultural production statistics – Sector statistics – Consumer price statistics – Consumer surveys