

Definitions for success

How the right definitions can help the EU
meet its policy aims and improve feasibility
to implement the deforestation regulation

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Accountability
Framework

ABOUT THE AFI: The Accountability Framework initiative (AFi) is a collaborative effort to transform agricultural and forestry supply chains so that they are free from deforestation, conversion, and human rights violations. Since 2016, the AFI has worked to develop and implement consensus-based definitions, guidelines, and metrics toward reaching this goal. These guidelines are codified in the [Accountability Framework](#), which is backed by 26 diverse environmental and human rights NGOs worldwide, and which has been applied by more than 100 companies, numerous industry groups, and leading corporate reporting standards and disclosure systems to implement, monitor, and evaluate deforestation-free and responsible supply chains for forest-risk commodities. For more information about the AFI and a full list of its coalition members, please visit <https://accountability-framework.org>.

ABOUT THIS PAPER: This paper is provided by the AFI secretariat to suggest how relevant material from the Accountability Framework can inform clear and robust definitions for the EU deforestation regulation. It was written by Jeff Milder of Rainforest Alliance with input from members of the AFI coalition, AFI secretariat, and other stakeholders.

Executive summary

In November 2021, the European Commission issued its proposal for a groundbreaking new regulation to address deforestation and forest degradation worldwide by de-linking the EU's consumption of agricultural and forestry commodities from these harms. The Accountability Framework initiative (AFi) welcomes this proposal and believes that government regulation is an essential complement to existing efforts, such as those of the AFi, to address environmental and human rights impacts linked to commodity production and trade.

To build from the Commission's proposal, this paper draws upon the experience of the AFi and on existing good practice in relevant commodity sectors to suggest how the law's definitions (Article 2) could be strengthened toward two key aims:

1. To enable the law better to achieve its policy aims, which include preventing global biodiversity loss and greenhouse gas emissions caused by land-use change; and
2. To improve the law's feasibility for commodity producers, operators, and competent authorities to implement, monitor and enforce.

The ideas presented here build from the recitals in the Commission proposal and from the October 2020 report of the European Parliament, both of which recognize the importance of natural ecosystems other than forests for protecting biodiversity and terrestrial carbon stocks. These documents also emphasize the need to avoid shifting conversion pressure from forest to other natural ecosystems.

To operationalize these recommendations, this paper outlines two ways in which the definitional framework in the Commission proposal could be improved:

- 1. Fully address the conversion of natural forests to plantation forests.** The draft legislation regulates wood products only based on their means of harvest while regulating agricultural products based on post-2020 land use change (deforestation). Given that wood products are the third-largest source of EU-driven deforestation, the law should address the conversion of natural forests to plantation forests fully and without ambiguity. This may be achieved by differentiating natural forests from plantation forests in the definitions and by including the conversion from natural forests to plantation forests within the definition of deforestation. This approach is in line with how the concepts of deforestation-free and land-use change are understood and have been applied for years by leading companies, industry groups, voluntary standards, and international organizations.

2. Include the ecosystems that are most impacted by conversion associated with the EU market and ensure feasibility for implementation and enforcement in mosaic landscapes. Forest-mosaic ecosystems, natural grasslands, and tropical savannahs – such as the Cerrado – are among the most important fronts of commodity-driven ecosystem destruction linked to EU market demand. However, the applicability of the draft regulation excludes hundreds of millions of hectares of such ecosystems. Addressing commodity-driven destruction in these ecosystems is essential to fulfill the law’s purposes of “reducing the European Union’s contribution to greenhouse gas emissions and global biodiversity loss.” It is also critical for avoiding the foreseeable shift in conversion pressure (i.e., “leakage”) from forests to other valuable natural ecosystems if a forest-only approach is taken.

Additionally, because of inherent challenges with threshold-based definitions, such as the forest definition in the Commission proposal, the draft regulation may be difficult to objectively implement, monitor and enforce in biomes that are mixes of different vegetation types, where much of the conversion associated with the EU market is taking place.

To remedy these issues, the regulation's scope should include key natural ecosystems such as woodlands, savannahs, and natural grasslands. In addition to strong policy rationale for these amendments based on the law’s stated purposes, there are also workable definitions and monitoring tools available to implement these changes, as elaborated in this paper. For these reasons, it is appropriate to address the main fronts of ecosystem conversion associated with the EU market from the outset, without waiting for the law’s two-year review, as proposed in Article 32(1).

The suggestions presented here are based on the [Accountability Framework](#), which reflects good practices that are already being applied by numerous companies, industry associations, and civil society groups to address detrimental land-use change and associated harms driven by commodity expansion. As such, the feasibility of the ideas proposed here has already been tested and demonstrated. The effectiveness of the EU regulation can be enhanced by building on these already-developed approaches.

Introduction

The European Union is currently developing a legal framework to address deforestation and related harms linked to the production and consumption of selected agricultural commodities and wood products. This effort aims to support two key policy objectives: 1) curtailing global biodiversity loss; and 2) reducing greenhouse gas emissions caused by land-use change.

In its initial recommendations of October 2020, the European Parliament requested that to meet these two objectives, the EU legal framework should extend beyond forests to include other high carbon stock and biodiversity-rich ecosystems – “such as marine and coastal ecosystems, wetlands, peatlands or savannahs” – to avoid conversion pressure being shifted to these landscapes. It also recommended that the legal framework should contain protections for human rights, including both formal and customary rights of indigenous peoples and local communities. These same recommendations have been echoed by many EU stakeholders and align with approaches already being taken by numerous companies and industry initiatives focused on the EU marketplace. The importance of broad protection for different types of natural ecosystems is also recognized in the recitals of the European Commission’s regulatory proposal of November 2021, although this proposal stops short of including non-forest natural ecosystems within the scope of law.

While there is considerable support for a broad approach to natural ecosystem protection, details about how to define, codify, and monitor such an approach have not yet been fully elaborated within the legislative process. To help fill this gap, this paper outlines how such an approach may be implemented through specific adjustments to the definitional framework in the Commission’s proposal. In doing so, it draws upon the definitions of the [Accountability Framework](#) and existing good practice in the commodity sectors that are the focus of the law. These suggestions are presented in two parts:

1. Adjustments to the Commission’s proposal to fully address the conversion of natural forests to plantation forests; and
2. Adjustments to the Commission’s proposal to better address the main fronts of ecosystem conversion associated with the EU market and to improve feasibility in landscapes that are mosaics of forest and non-forest.

The Annex to this paper offers specific definitions and language changes that could be incorporated as amendments to the Commission’s proposal to implement the suggestions. While this paper focuses on definitions related to ecosystems and land use, the Accountability Framework initiative (AFi) also urges the adoption of amendments to safeguard human rights linked to the production and harvesting of relevant commodities, including the formal and customary rights of indigenous peoples and local communities.

1. Fully address the conversion of natural forests to plantation forests

Limitations of the European Commission proposal

Given that wood products are the third-largest source of EU-driven deforestation, to meet the regulation's stated aims it is essential to fully address the conversion of natural forests to plantation forests. More specifically:

- Plantation forests are typically much poorer in biodiversity than natural forests. Failing to prohibit the conversion of natural forests to establish plantation forests runs against one primary stated purpose of the legislation: to protect biodiversity.
- Conversion of natural forests to plantation forests generally creates significant net greenhouse gas emissions.¹ Failing to prohibit the conversion of natural forests to establish plantation forests runs against another primary stated purpose of the legislation: to mitigate climate change by reducing land sector greenhouse gas emissions.

The draft regulation fails to prohibit fully the deforestation (loss) of natural forests to establish plantation forests in the following way:

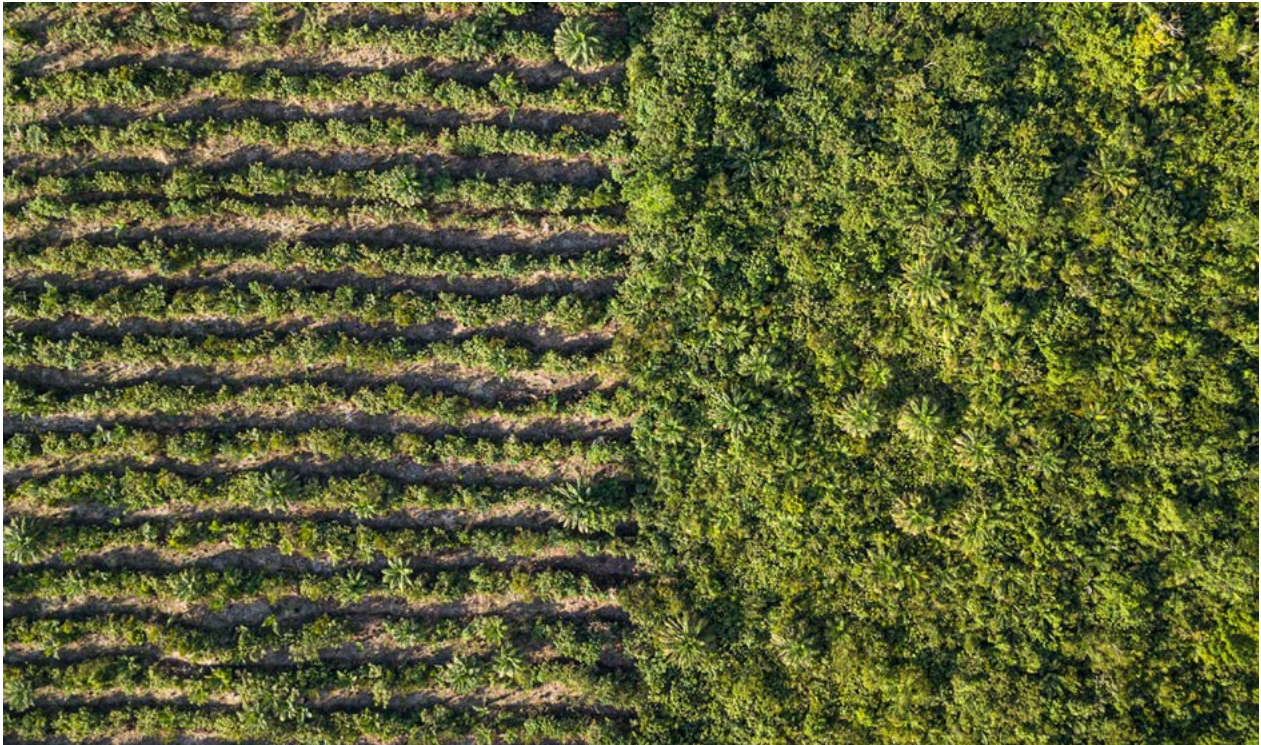
- By defining deforestation only as conversion to agricultural land use, the prohibition on deforestation does not protect natural forests against conversion to plantation forests, which are typically significantly lower in carbon and biodiversity.
- The prohibition on forest degradation prohibits harvesting operations that are “not sustainable,” which (according to the definition of 'sustainable harvesting operations') is understood to include harvesting that results in “degradation of primary forests or their conversion into plantation forests.” However, this provision is inadequate to protect natural forests for the following reasons:
 - The term 'primary forests' is not defined in the regulation. Furthermore, even if it were defined, the concept of primary forest is no longer widely accepted as an appropriate or operational concept for forest policy and monitoring.²
 - Conversion of secondary or regenerating natural forests (e.g., those that do not meet the FAO definition of primary forest) to plantation forests can be highly detrimental to forest biodiversity and carbon stocks. Such conversion should therefore be prohibited as an instance of deforestation for the same reasons that conversion from secondary natural forests to agricultural use is prohibited by the regulation.

1 Liao C., et al. 2010. [Ecosystem carbon stock influenced by plantation practice: implications for planting forests as a measure of climate change mitigation](#). PLoS ONE 5(5): e10867. doi:10.1371/journal.pone.0010867.

2 Bernier et al. 2017. [Moving beyond the concept of “primary forest” as a metric of forest environment quality](#). Ecological Applications 27:349-354.

- Since the draft regulation addresses only the means of harvest for wood products, it appears unclear whether wood harvested from a plantation forest that was established from converting natural forest after 2020 would contravene the prohibition (Article 3a) since the harvest of wood from the plantation forest would not be the act causing degradation or conversion of primary forest.

In summary, by regulating wood products only based on their means of harvest while regulating agricultural products based on post-2020 land use change, the current proposal fails to fully address conversion of natural forests to plantation forests.



Acacia plantation (left) abuts a diverse natural forest (right) near the village of Lomboto, Yangambi, Democratic Republic of Congo. The draft regulation does not fully address the conversion of natural forest to plantation forest, although this form of land use change typically diminishes values for biodiversity protection, carbon storage, and other benefits. Photo by Axel Fassio/CIFOR (cifor.org)

Suggested improvement

To address this limitation, deforestation should be defined to include the conversion of natural forest to both agricultural use and plantation forest. Additionally, the definitions (Article 2) should define natural forest as distinct from plantation forest so that the conversion from the former to the latter is clearly specified.

This change would enable the regulation to fully address (for all subject commodities, including wood) the loss of natural forest. This approach is in line with how the concept of deforestation-free is understood and has been applied for years by leading companies, industry groups, voluntary standards, and others (see Box 1). It also aligns with the approach used for land sector emissions reductions and accounting (by the Intergovernmental Panel on Climate Change and the Greenhouse Gas Protocol), which treat natural forest and forest plantation as different land use categories.

Building the EU legal framework on current good practice

Box 1: Existing policies addressing conversion of natural forest to plantation forest

In the context of wood products supply chains, the concept of deforestation-free has for years been understood to include a prohibition on converting natural forests to plantation forests. This understanding is based on the recognition that natural forests typically sequester carbon, sustain native biodiversity, and provide key ecosystem services at levels not matched by wood plantations. Following are examples of major organizations and initiatives with policies to avoid the conversion of natural forests to plantation forests as an integral element of responsible wood product supply chains:

- **Industry associations** have established policies and guidelines that prohibit conversion to plantation forests as a key element of deforestation-free supply chains for wood fiber and other wood products. These include the [Consumer Goods Forum Forest Positive Coalition of Action's roadmap for pulp, paper, and fiber-based packaging](#) and the [Policy Framework of the Global Platform for Sustainable Natural Rubber](#).
- **Sustainability standards** – including those of the Forest Stewardship Council (FSC), Programme for the Endorsement of Forest Certification (PEFC), and International Sustainability and Carbon Certification (ISCC) – generally prohibit conversion of natural forests to plantations. These are the world's leading wood products standards, with FSC and PEFC being applied across more than 450 million hectares worldwide, an area larger than the entire EU.
- **Implementation tools** such as the [High Carbon Stock Approach](#), which has been applied by more than 65 companies across the tropics to implement deforestation-free production practices, utilize definitions in line with those proposed here.
- **Major companies** sourcing wood and fiber products for the EU market have committed to no-deforestation, defined specifically to include a prohibition on converting natural forests to tree plantations. These companies include Unilever, Nestlé, Mars, Sodexo, McDonald's, Ikea, and Kingfisher, among many others. More broadly, CDP disclosures reveal 98 companies involved in wood supply chains having made timebound commitments to avoid conversion of natural ecosystems, in line with the proposed definitions.

By adopting the same established norm that these examples represent, the EU legal framework can help level the playing field for all companies doing business in the EU to source wood products in a manner that does not contribute to the loss of natural forests.

2. Include ecosystems that are most impacted by conversion associated with the EU market and ensure feasibility in mosaic landscapes

Limitations of the European Commission proposal

The scope of the draft regulation focuses on addressing the conversion of forest, as defined by the FAO. This definition is suitable for many temperate and tropical forests and will support critical protections for forest ecosystems. However, the current approach also presents two significant limitations: 1) it is likely to create implementation and enforcement challenges due to the ambiguities of applying a threshold-based forest definition in key contexts; and 2) it fails to address, and is likely to exacerbate, severe biodiversity loss and carbon emissions associated with the expansion of in-scope commodities into ecosystems such as woodlands, savannahs, and natural grasslands. Each of these limitations is elaborated below.

Implementation, monitoring and enforcement challenges

The current forest definition is based on the thresholds of 10% canopy cover of trees higher than 5 meters over an extent of 0.5 hectares or more. While this definition is suitable for many types of forests, it presents challenges for biomes where vegetation types and densities shift dynamically over space and time and are commonly near this threshold. This is the case for key fronts of commodity expansion linked to EU markets, including not only the Brazilian Cerrado but also other ecosystems such as the Chaco and Chiquitano.

Due to this heterogeneity and dynamism, many portions of these ecosystems could fall either above or below the forest definition thresholds, depending on the season and year in which ecosystems are monitored. This can lead to subjective judgments about whether specific plots of land are subject to the law, which creates difficulties to apply, monitor, or enforce compliance. More specifically:

- Operators handling in-scope commodities such as soy and beef could have difficulty determining compliance with the law across millions of hectares where application of the current forest definition is ambiguous due to fine-scale heterogeneity and temporally dynamic vegetation patterns. This challenge would filter upstream to supply chain intermediaries, resulting in an ambiguous market signal to these key market actors.
- Land managers would not have a clear basis for determining whether the land they manage could be converted for production of in-scope commodities destined for the EU market.
- Competent authorities would not have a clear basis for determining compliance across these same large areas based on overlay of geolocation data with forest maps or datasets. This could impede enforcement and discourage authorities from pursuing enforcement actions due to uncertainties about compliance determinations.



The Brazilian Cerrado (pictured here) and other major fronts of EU-linked commodity expansion are intricate mosaics of forest, savannah, and grassland formations. A threshold-based forest definition poses challenges for implementation and monitoring in such contexts. © David Bebbler / WWF-UK

Failure to address key drivers of biodiversity loss and carbon emissions

As the Commission has rightly noted in recital 54, “Ecosystems such as wetlands, savannahs and peatlands are highly significant to global efforts to combat climate change, as well as other sustainable development goals and their conversion or degradation require particular urgent attention.” The European Parliament (in its October 2020 report) likewise expressed strong support for including non-forest natural ecosystems in the regulation to meet the EU’s policy objectives on climate and biodiversity. For many such natural ecosystems the impacts of commodity trade on biodiversity and carbon emissions are already well known and severe.³ More specifically:

- *These key natural ecosystems are substantially excluded by the present forest definition:* Data from Mapbiomas (2020) suggests that if the law limits its scope to forests, as presently defined, then this could exclude 74% of the Cerrado, 89% of the Caatinga, 33% of the Chaco, and 74% of the Pampa. Key biodiverse natural ecosystems in other regions, including many East African savannahs and temperate natural grasslands in North America and Central Asia, would also be excluded. In mixed ecosystems such as the Cerrado, protection of the ‘forest’ portion alone may be tantamount to little protection at all. This is because forest and non-forest formations are interlinked through complex ecological processes that can quickly unravel as landscape fragmentation increases.

³ For more information and data about these ecosystems, their biodiversity and carbon storage values, and risks and impacts to their integrity due to EU commodity consumption, please see [Beyond forests: reducing the EU’s footprint on all natural ecosystems](#) (WWF, 2022).

- *Non-forested natural ecosystems are primary fronts of commodity expansion:* When considering sourcing patterns for the EU market, the impact of these exclusions is even more stark: according to [analysis](#) by Trase (2022), 80% of recent (2015-2020) conversion for agricultural expansion in the EU's sourcing areas in the Cerrado was from non-forest formations that would be presumed not to be covered by the draft regulation.
- *Leakage from forests to other natural ecosystems is likely:* Taking a biome-by-biome approach to addressing the environmental impacts of agricultural expansion can cause a shifting of expansion pressures (i.e., leakage), sometimes with severe negative consequences. For instance, enactment of the Amazon Soy Moratorium in 2006 was followed by a spike in ecosystem destruction in the Brazilian Cerrado. Study of this example indicates that leakage effects are likely to be greater when regulated lands are in proximity to non-regulated lands, as is the case in mosaic biomes.⁴ In contrast, by taking a more holistic approach to addressing all major at-risk natural ecosystems, regulators can avoid unintended consequences that undermine their policy aims while establishing stronger incentives for increasing the efficiency of agricultural production on existing farmland or expanding production to degraded land, which exists in abundance.
- *No-conversion of natural ecosystems already has considerable industry acceptance:* There is already broad acceptance of the need to avoid destruction of non-forest natural ecosystems due to their critical values for biodiversity, carbon storage, and ecosystem services; see Box 2. The EU regulation can have the greatest positive impact if it works to consolidate these existing market signals in a way that levels the playing field for all companies engaged in bringing in-scope commodities to the EU market.

Suggested improvement

The draft regulation (in Article 32[1]) calls for a two-year review process to evaluate the need and feasibility to extend the scope of the law beyond forests. However, the evidence outlined above demonstrates that the need for doing so is already abundantly clear. This need is justified not only to address present impacts to non-forest natural ecosystems but also to avoid the foreseeable harms that would likely be caused by leakage due to a forest-only scope.

In addition to a clear rationale to address other natural ecosystems from the outset, it is also feasible for the law to do so in terms of: 1) availability of suitable definitions to specify the expanded scope; 2) fit-for-purpose data resources and monitoring tools to facilitate implementation and enforcement; and 3) feasibility to structure supply chains and meet EU market needs in a way that avoids negative impacts to critical ecosystems.

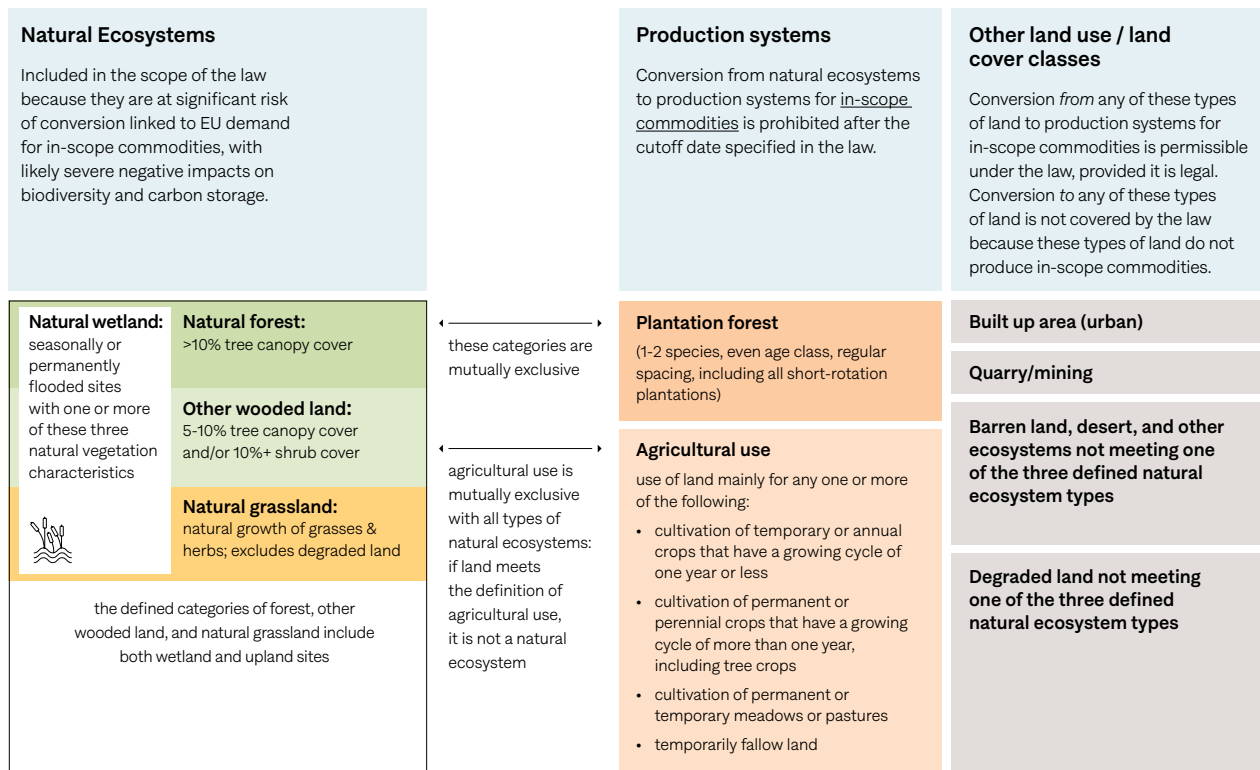
The suggestions outlined here are grounded in the Accountability Framework's definition of natural ecosystem and the concepts of no-deforestation and no-conversion, which together address key high biodiversity and high carbon stock ecosystems that are facing significant threat from commodity expansion.

⁴ Moffette and Gibbs, 2021. Agricultural displacement and deforestation leakage in the Brazilian Legal Amazon. *Land Economics* 97:155-179.

The exact definitional language suggested in this paper differs in some ways from corresponding language of the Accountability Framework to adapt it to the present context of the EU’s proposed regulation (see the Annex for further explanation). However, the policy effect is similar, and would align closely with the work of companies and other organizations that are already applying the Accountability Framework’s definitions and no-conversion approach (see Box 2).

Specifically, the EU could expand the law’s scope to address critical at-risk natural ecosystems by supplementing the current forest scope to also include other wooded lands as well as natural grasslands, as defined below. Because these definitions are based on vegetation characteristics, they also encompass key wetland ecosystems, as recommended by the European Parliament and acknowledged in recitals 54 and 58 of the European Commission proposal.⁵ These include forested peat swamps, mangroves, and natural grassy wetlands such as the Pantanal. A graphical overview of this approach is presented in Figure 1, while further details are elaborated below and in the Annex.

Figure 1: Graphical overview of the suggested definitional framework, including the three categories of natural ecosystems to be included.



5 Specifically, the proposed definitions include vegetated wetlands with tree, shrub, and/or grassy vegetation that meets the definition of natural forest, other wooded land, or natural grassland. This is a subset of all wetlands, which [Ramsar defines](#) to include both natural and artificial sites that are characterized by the presence of static or flowing water.

Expand deforestation-free to include other wooded lands

To strengthen protection for forest-mosaic ecosystems and tropical woodlands and savannahs that are among the most active fronts of commodity expansion driven by EU demand, the deforestation definition could be extended to include other wooded land, as defined by FAO. Doing so would extend the thresholds for in-scope ecosystems to include land with 5-10% tree cover as well as land with 10% or more combined cover of shrubs, bushes and trees.

This change would better address impacts on the Cerrado and other mixed biomes that are highly threatened by commodity expansion linked to EU consumption. It would also make the law more congruent with existing market expectations of many European buyers. Such a change has already been recommended as an amendment to the European Commission proposal in the March 2022 report of the European Parliament Committee on the Environment, Public Health and Food Safety.



Extending the law's scope beyond forests is important for protecting carbon-rich natural ecosystems such as this peat swamp in Central Kalimantan, Indonesia, which presents a mosaic of forest and other vegetation types. The definitions proposed in this paper include both upland and wetland sites with different combinations of tree, shrub, and grassy vegetation. Photo by Nanang Sujana/CIFOR ([cifor.org](https://www.cifor.org))

Incorporate a conversion-free requirement addressing natural grasslands

Together with forests and other wooded lands, adding natural grasslands to the scope of the regulation would serve to extend its applicability to key natural ecosystems with the most important biodiversity and carbon storage values that are significantly at risk from commodity expansion linked to EU demand. Similarly, the concept of conversion-free may be used to extend the regulation's prohibition (Article 3) to include the conversion of natural grasslands to production areas for in-scope commodities after the specified cutoff date.

A specific yet nuanced definition of natural grassland, in line with key international references such as the FAO and the IUCN Global Ecosystem Typology, can serve to include those sites that generally provide the highest values for biodiversity and carbon storage while excluding grasslands that are intensively managed or significantly degraded. This approach helps to ensure that there remains plenty of land outside of the regulation's scope on which commodity production may continue to expand, to the extent necessary to meet food demand. It also avoids placing restrictions on land managers who wish to restore, plant, or intensify production on degraded land, or those who manage their land as multi-use sites (e.g., integrated crop, livestock, and grassland systems) or using multi-year rotations that include grassland fallows. To codify this approach, the following definition could be used:

'natural grassland' means land covered predominantly with native grasses and herbaceous vegetation that: 1) is subject to periodic drought, fire and/or grazing by large herbivores; 2) is not under agricultural or urban land use; and 3) is not derived from forest or other ecosystems due to prior human use

This definition would have the following effects:

- The scope of the law would be extended to include natural grasslands that have been present as natural formations for decades or longer (i.e., similar to the concept of 'old-growth grasslands'⁶). Such sites typically have the greatest value for biodiversity and – thanks to complex root and soil structures that have developed over time – the greatest value for carbon storage. This includes sites where humans have grazed livestock in ways that have not caused lasting and severe degradation or desertification.
- Natural grasslands exclude all forms of planted pastures, which are considered an agricultural use and are usually characterized by the cultivation of non-native grasses with high forage value and/or by agricultural management practices such as irrigation or fertilization to boost forage production.
- Natural grasslands exclude sites that have been significantly degraded due to prior management practices (e.g., persistent overgrazing) or other causes. However, sites that were natural grasslands as of the cutoff date but were subsequently degraded and then converted to agricultural use would be subject to the prohibition.

6 Veldman et al. 2015. [Toward an old-growth concept for grasslands, savannas, and woodlands](#). *Frontiers in Ecology and Environment* 13:154-162.

- Natural grasslands exclude 'old fields' and other grassy sites that were previously forest.
- The above exclusions provided by the definition would serve to exclude tropical pastures that were recently (e.g., within the past several decades) forest as well as nearly all grassy sites within Europe, which typically fail to meet at least one of the criteria in the definition, namely: 1) not predominantly covered with indigenous grasses and herbaceous vegetation; 2) not subject to periodic drought, fire and/or grazing by large herbivores; 3) were derived from forest as a prior land cover; and/or 4) are managed for agricultural use, including in integrated crop / livestock / natural vegetation mosaics or rotations. These exclusions afford ample areas for the expansion of in-scope commodities, if needed.



Natural grasslands can provide high value for biodiversity conservation and carbon storage, often containing large belowground carbon stocks. They do not include cultivated pastures, which are considered an agricultural use.

Photo by Tim Cronin/CIFOR (cifor.org)

Monitoring considerations

A major advantage of this proposal is that it eliminates monitoring challenges associated with thresholds contained within the definitions of forest.⁷ That is because sites with any combination of trees, shrubs, and grasses in natural assemblages and without agricultural land use would generally be considered in-scope. This will facilitate monitoring in biomes such as the Cerrado, where different vegetation formations are tightly interspersed. In such contexts, operators, their suppliers, and competent authorities could make use of robust monitoring tools such as Mapbiomas, which are well suited to detect transitions from native vegetation to agriculture but less well suited to monitoring in relation to definitions that present an artificial distinction between forest, savannah, and grasslands formations. Eliminating the need for threshold-based compliance determinations can greatly increase regulatory certainty for supply chain actors and feasibility of monitoring and enforcement for competent authorities.

Supplementing existing forest monitoring resources, monitoring related to natural grasslands is an area of recent and rapid development. Monitoring infrastructure to implement the proposed natural grassland definition is already partially in place and can be strengthened based on existing technology and in-progress initiatives to provide fit-for-purpose monitoring resources in time for the effective date of the law's prohibition (Article 3). Such monitoring resources are expected also to provide retrospective information (e.g., with regard to a 2020 cutoff date) based on new analyses (using machine learning and other techniques) of remote sensing imagery collected in the past. For instance:

- The European Space Agency's [ESA WorldCover](#) dataset differentiates grassland from cropland as of 2020, based on high-resolution (10 meter) imagery. This dataset is expected to be updated annually. Regional monitoring tools, notably [Mapbiomas](#) in South America, also offer ready-to-use resources to detect changes from natural vegetation (whether forest, other wooded land, or natural grassland) to agricultural use for key biomes that are subject to expansion of in-scope commodities.
- An initiative of the [Land and Carbon Lab](#) and other partners is working to develop maps of the extent, and change in extent, of grasslands and other grazing lands. The foreseen land cover typology for these maps will closely match the elements of the natural grassland definition proposed here, enabling natural sites to be differentiated from planted pastures and enabling degraded sites (which are out of scope based on the proposed definition) to be differentiated from sites with little or no degradation. Combined with other mapping products, such as annual maps of the extent and change in cropland, this resource should be highly useful for enabling objective monitoring and enforcement of a conversion-free requirement.

⁷ Extending the law to include other wooded land reduces the amount of land where such threshold issues may arise but it does not eliminate them altogether.

Building the EU legal framework on current good practice

Box 2: Existing policies for conversion-free commodities

A growing set of major organizations and initiatives have adopted policies for conversion-free supply chains. These policies prohibit the destruction of natural ecosystems – including forests and woodlands, savannahs, natural grasslands, and wetlands – for the expansion of soft commodity production. Examples span leading companies, industry and sector initiatives, voluntary standards, and public policy, including the following:

- **Industry initiatives** with heavy involvement of EU companies have converged around the expectation of conversion-free supply chains for major commodity origins. These initiatives include the [Cerrado Manifesto Statement of Support](#) (signed by more than 160 commodity buyers and investors doing business in EU markets), Consumer Goods Forum Forest Positive Coalition of Action's [Soy Roadmap](#), and principles of the Retail Soy Group. These sector initiatives are complemented by no-conversion policies of large commodity-buying companies such as Carrefour, Colgate, Sainsbury's, and Louis Dreyfus Company.
- **The [Glasgow Leaders' Declaration on Forests and Land Use](#)** at COP26 reaffirmed 141 countries' commitment to the conservation, protection, sustainable management and restoration of forests and other terrestrial ecosystems.
- **Producing country laws**, notably Brazil's Forest Code, address environmental impacts of agricultural expansion and restrict land use based on the broad concept of native vegetation, which includes savannahs and grasslands in addition to forests.
- **The EU Renewable Energy Directive (RED)** sustainability criteria (Article 29) broadly prohibit the conversion of natural ecosystems – including forest and most other wooded land, as well as natural or highly biodiverse grassland – for the production of bioenergy feedstocks. These provisions recognize the risk of biodiversity loss and net greenhouse gas emissions due to conversion of non-forest natural ecosystems to meet EU demand for planted feedstocks. Including a similarly broad set of natural ecosystems in the present regulatory proposal would improve policy coherence with the RED to address the same set of risks in the analogous context of food and wood product demand.
- **Voluntary standards** for in-scope commodities have been implementing a no-conversion approach for years. These include the Proterra and RTRS systems for soy and Rainforest Alliance for multiple commodities, among many others.

Action by the EU to broadly address the conversion of natural ecosystems, as proposed in this paper, can build upon these leading efforts while taking a proactive approach to avoiding harms to non-forest natural ecosystems due to the foreseeable leakage that could result from a forest-only approach.

Annex: Amendment language to implement the suggested approach

This annex proposes specific amendments to the language of the European Commission proposal to implement the suggestions presented in this paper. Proposed definitions are grounded in the Accountability Framework, as was suggested in the European Parliament’s October 2020 report. While having similar effect, the specific language suggestions outlined here differ semantically in some ways from the Accountability Framework definitions for the following reasons:

- Recognizing that the EU may prefer to use definitions from intergovernmental organizations where they exist and are suitable, the suggestions here make use of such language where appropriate.
- For succinctness in legislative language, some of the scientific detail in certain Accountability Framework definitions (e.g., natural ecosystem) has been distilled for the context of the EU regulation.
- In view of the importance of monitorability and enforceability using regional or global data and mapping resources, the formulation of the natural grassland definition has been adjusted to best reflect land cover classes contained in key datasets and global typologies that have emerged since the publication of the Accountability Framework in 2019.

To reiterate, the proposal detailed here aligns closely with the Accountability Framework and therefore with the policies and initiatives of companies, industry groups, and other organizations that are already applying the Accountability Framework’s principles and definitions (see Boxes 1 and 2 in the main text).

Text proposed by the Commission	Proposed amendment	Justification
Language to differentiate natural forest from plantation forest for the purpose of fully addressing the conversion of natural forest to plantations		
Article 2: ‘forest’ means land spanning more than 0,5 hectares with trees higher than 5 meters and a canopy cover of more than 10%, or trees able to reach those thresholds in situ, excluding agricultural plantations and land that is predominantly under agricultural or urban land use	no change	<ul style="list-style-type: none"> • Use of this definition is consistent with the proposal outlined here, as long as natural forest and plantation forest are differentiated and regulated accordingly.

Text proposed by the Commission	Proposed amendment	Justification
Article 2: new	'natural forest' means a forest composed predominantly of indigenous trees and not classified as a plantation forest	<ul style="list-style-type: none"> • This definition serves to differentiate natural forest from plantation forest. The natural forest definition is integral to the amended deforestation definition. • This definition is derived from the IPCC (2006) as per the glossary of this report. • The March 24 report of the European Parliament ENVI Committee (Rapporteur: Christophe Hansen) proposed a definition for naturally generating forest in lieu of this proposal for natural forest. These concepts are not the same and use of the concept of naturally generating forest is not recommended.⁸
Article 2: 'plantation forest' means a planted forest that is intensively managed and meets, at planting and stand maturity, all the following criteria: one or two species, even age class, and regular spacing. It includes short rotation plantations for wood, fibre and energy, and excludes forests planted for protection or ecosystem restoration, as well as forests established through planting or seeding which at stand maturity resemble or will resemble naturally regenerating forests;	'plantation forest' means a planted forest that is intensively managed and meets, at planting and stand maturity, all the following criteria: one or two species, even age class, and regular spacing. It <u>specifically</u> includes <u>all</u> short rotation plantations for wood, fibre and energy, <u>and it specifically</u> excludes forests planted for protection or ecosystem restoration, as well as forests established through planting or seeding which at stand maturity resemble or will resemble naturally regenerating forests;	<ul style="list-style-type: none"> • Minor wording changes (indicated as <u>additions</u> and <u>removals</u>) are proposed to clearly capture the intention of the explanatory notes in the FAO definition of this term. • Without these changes, the implication is that short-rotation plantations could be examples of plantation forests but not that all such plantations are specifically included in the plantation definition. This affirmative inclusion is important to avoid loopholes for forest stands that are plantations but might not literally meet all three stated criteria (e.g., if there are three or more species on the site overall, even if the preponderance of the site is a monoculture).

8 The reasons why the naturally generating forest definition is not recommended are: 1) this concept is defined based on how a forest is established, which is not necessarily a good indicator of the forest's values for biodiversity and carbon storage; 2) the naturally regenerating forest definition could omit large areas of forest where regeneration was assisted through planting or seeding after harvest, but where the forest now in place is a secondary natural forest with characteristically natural species composition, structure, and function; 3) it may be difficult or impossible to determine the means of stand establishment in a consistent and efficient manner via desk-based analysis (e.g., using remote sensing). In contrast, the proposed natural forest definition is easier to delineate and monitor in relation to the defined plantation forest category, and it is sufficiently comprehensive to include both primary and secondary forests, in line with how the concept of deforestation-free is widely construed.

Text proposed by the Commission	Proposed amendment	Justification
Language to adjust the meanings of deforestation and deforestation-free to prohibit the conversion of natural forest to plantations and to encompass other wooded lands		
Article 2: 'deforestation' means the conversion of forest to agricultural use, whether human-induced or not	'deforestation' means the conversion of natural forest or other wooded land to agricultural use or plantation forest	<ul style="list-style-type: none"> • Include the conversion of natural forest to plantation forest as an instance of deforestation for the reasons outlined in this paper. • Extend the prohibition in Article 3 to cover commodities established by converting other wooded land to agricultural use after 2020. This has the effect of extending much fuller protection to forest-mosaic ecosystems and tropical woodlands and savannahs, consistent with the regulation's stated policy intent.
Article 2: new	'other wooded land' means land not classified as forest, spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds in situ; or with a combined cover of shrubs, bushes and trees above 10 percent, excluding land that is predominantly under agricultural or urban land use	<ul style="list-style-type: none"> • As explained above, this definition is helpful for clarifying the applicability of the law to forest-mosaic ecosystems and tropical woodlands and savannahs, where much of the native vegetation of high biodiversity value and high carbon stock may not meet the thresholds stated in the forest definition • Other wooded land is a definition of the FAO.
Article 2: new	'agricultural use' means the use of land mainly for any one or more of the following: cultivation of temporary or annual crops that have a growing cycle of one year or less; cultivation of permanent or perennial crops that have a growing cycle of more than one year, including tree crops; cultivation of permanent or temporary meadows or pastures; and temporarily fallow land.	<ul style="list-style-type: none"> • The definition of deforestation refers to the concept of agricultural use, but this key term is not defined in the Commission's draft regulation. • A clear definition of agricultural use is critical for defining which scenarios are considered as deforestation. Since the definitions of forest and other wooded land exclude land under agricultural use, the concept of agricultural use also serves to identify certain areas that would be excluded from these definitions. • The definition proposed here follows the FAO definition of agricultural land (as specified in the World Programme of the Census of Agriculture 2020), which includes land used for both temporary and permanent crops as well as cultivated meadows and pastures.

Text proposed by the Commission	Proposed amendment	Justification
<p>Article 2: 'deforestation-free' means</p> <p>(a) that the relevant commodities and products, including those used for or contained in relevant products, were produced on land that has not been subject to deforestation after December 31, 2020, and</p> <p>(b) that the wood has been harvested from the forest without inducing forest degradation after December 31, 2020;</p>	<p>No changes to (a) are proposed. Please see section 3 of this paper for commentary pertaining to section (b) of this definition.</p>	<ul style="list-style-type: none"> With the changes to the definition of deforestation recommended above, no changes to part (a) of this the deforestation-free definition are needed to implement the recommended improvements. Element (b) of this definition, addressing the manner of harvest for wood products, would complement the recommended prohibition on converting natural forests to plantation forests, which would be covered by element (a) based on the proposed revisions to the definition of deforestation.
<p>Language to define natural grassland and extend the law's prohibition to include the conversion of natural grassland after the cutoff date</p>		
<p>Article 2: new</p>	<p>'conversion' means change of a natural grassland to agricultural use</p>	<ul style="list-style-type: none"> This definition is integral to extending the prohibition in Article 3 to address the loss of natural grasslands that (as defined) are typically important for biodiversity protection and carbon storage.
<p>Article 2: new</p>	<p>'conversion-free' means that the relevant commodities and products, including those used for or contained in relevant products, were produced on land that has not been subject to conversion after December 31, 2020</p>	<ul style="list-style-type: none"> This definition is integral to extending the prohibition in Article 3 to address the loss of natural grasslands that (as defined) are typically important for biodiversity protection and carbon storage. It is recommended to use the same cutoff date for conversion-free as for deforestation-free to enable coherent implementation and monitoring in biomes where natural grasslands, forests, and other wooded lands are intermingled.

Text proposed by the Commission	Proposed amendment	Justification
Article 2: new	‘natural grassland’ means land covered predominantly with native grasses and herbaceous vegetation that: 1) is subject to periodic drought, fire and/or grazing by large herbivores; 2) is not under agricultural or urban land use; and 3) is not derived from forest or other ecosystems due to prior human use	<ul style="list-style-type: none"> • This definition is formulated to include natural grassland sites that generally provide the highest values for biodiversity and carbon storage. To avoid being overly broad, it excludes various types of anthropogenic sites and degraded lands for which conversion to agriculture generally poses lower tradeoffs with biodiversity and climate change mitigation aims. • The core definition is based on upon the FAO definition of “natural grassland” (on p. 11 of this source), which is a subcategory of the FAO “other land” category. Also according to the FAO typology, natural grassland is defined to exclude land under agricultural use. • This core definition is further qualified based on other key international references to avoid an overly broad formulation. Specifically: <ul style="list-style-type: none"> ◦ Natural grasslands are defined as including at least one of three features (periodic drought, fire and/or herbivory) that are recognized by the Convention on Biological Diversity and by the IUCN Global Ecosystem Typology as being characteristic of natural grasslands. ◦ Natural grasslands exclude anthropogenic formations that are derived from other types of ecosystems due to significant past and/or current human modifications such as cultivation or mining. This exclusion is specified in accordance with the derived semi-natural pastures and old fields category of the IUCN Global Ecosystem Typology (category T7.5). As this category falls within the intensive land-use biome functional group of the IUCN typology, it is appropriate to exclude it from the definition of natural grassland.

Text proposed by the Commission	Proposed amendment	Justification
<p>Article 2: ‘non-compliant products’ means relevant commodities and products that were not produced in a ‘deforestation-free’ manner, or were not produced in accordance with the relevant legislation of the country of production, or both;</p>	<p>‘non-compliant products’ means relevant commodities and products that were not produced in a ‘deforestation-free’ and <u>‘conversion-free’</u> manner, or were not produced in accordance with the relevant legislation of the country of production, or both;</p>	<ul style="list-style-type: none"> • Add underlined text to reflect the inclusion of the conversion-free requirement to place products on the EU market.
<p>Article 1: This Regulation lays down rules regarding the placing and making available on the Union market, [...], with a view to (a) minimizing the Union’s contribution to deforestation and forest degradation worldwide (b) reducing the European Union’s contribution to greenhouse gas emissions and global biodiversity loss.</p>	<p>This Regulation lays down rules regarding the placing and making available on the Union market, [...], with a view to (a) minimizing the Union’s contribution to deforestation, <u>conversion</u>, and forest degradation worldwide (b) reducing the European Union’s contribution to greenhouse gas emissions and global biodiversity loss.</p>	<ul style="list-style-type: none"> • Add the underlined text to reflect the aim of the law in view of the other suggested amendments.
<p>Article 3: Relevant commodities and products may be placed or made available on the Union market, or exported from the Union market only if all the following conditions are fulfilled:</p> <p>(a) they are deforestation-free;</p> <p>(b) they have been produced in accordance with the relevant legislation of the country of production; and</p> <p>(c) they are covered by a due diligence statement as laid down in Article 4(2).</p>	<p>Relevant commodities and products may be placed or made available on the Union market, or exported from the Union market only if all the following conditions are fulfilled:</p> <p>(a) they are deforestation-free <u>and conversion-free</u>;</p> <p>(b) they have been produced in accordance with the relevant legislation of the country of production; and</p> <p>(c) they are covered by a due diligence statement as laid down in Article 4(2).</p>	<ul style="list-style-type: none"> • Add underlined text to extend the prohibition to address the loss of natural grasslands that (as defined) are typically important for biodiversity protection and carbon storage.
<p>Article 9(1)(g): adequate and verifiable information that the relevant commodities and products are deforestation-free;</p>	<p>adequate and verifiable information that the relevant commodities and products are deforestation-free <u>and conversion-free</u>;</p>	<ul style="list-style-type: none"> • Add underlined text to extend information requirements to include evidence of conversion-free in addition to deforestation-free.
<p>Article 15(1)(g): any technical and scientific means adequate to determine whether the relevant commodity or product are deforestation-free, including Earth observation data such as from Copernicus programme and tools,</p>	<p>any technical and scientific means adequate to determine whether the relevant commodity or product are deforestation-free <u>and conversion-free</u>, including Earth observation data such as from Copernicus programme and tools,</p>	<ul style="list-style-type: none"> • Add underlined text to include monitoring of conversion-free status (in addition to deforestation-free status), where appropriate, as part of checks on operators.

Text proposed by the Commission	Proposed amendment	Justification
<p>Article 32(1): No later than two years after the entry into force, the Commission shall carry out a first review of this Regulation, and shall present a report to the European Parliament and the Council accompanied, if appropriate, by a legislative proposal. The report shall focus in particular on an evaluation of the need and the feasibility of extending the scope of this Regulation to other ecosystems, including land with high carbon stocks and land with a high biodiversity value such as grasslands, peatlands and wetlands and further commodities.</p>	<p>No later than two years after the entry into force, the Commission shall carry out a first review of this Regulation, and shall present a report to the European Parliament and the Council accompanied, if appropriate, by a legislative proposal.</p>	<ul style="list-style-type: none"> • Remove reference to evaluating the need and feasibility of extending the scope to other ecosystems since, with the amendments proposed here, the law would include broad coverage of natural ecosystems from its initial entry into force. This includes natural wetlands such as forested peat swamps, mangroves, and grassy marshes, the large majority of which are subsumed within the three defined ecosystem categories that this proposal includes: forest, other wooded land, and natural grassland. • A provision on reviewing the list of in-scope commodities is already included in Article 32(3).

Text proposed by the Commission	Proposed amendment	Justification
<p>Recital 54: While this Regulation addresses deforestation and forest degradation, as envisaged in the 2019 Communication 'Stepping up EU Action to Protect and Restore the World's Forests, protecting forests should not lead to the conversion or degradation of other natural ecosystems. Ecosystems such as wetlands, savannahs and peatlands are highly significant to global efforts to combat climate change, as well as other sustainable development goals and their conversion or degradation require particular urgent attention. To address this, the Commission should assess the need and feasibility of extending the scope to other ecosystems and to further commodities two years after the entry into force. At the same time, the Commission should also undertake a review of the relevant products as listed in Annex I of this Regulation by way of a delegated act.</p>	<p>As envisaged in the 2019 Communication 'Stepping up EU Action to Protect and Restore the World's Forests' and reiterated by the 2020 European Parliament resolution 2020/2006(INL), protecting forests should not lead to the conversion or degradation of other natural ecosystems. Ecosystems such as wetlands, savannahs, natural grasslands, and peatlands are highly significant to global efforts to combat climate change and biodiversity loss, as well as other sustainable development goals and their conversion or degradation require particular urgent attention. To address this, the Regulation should address conversion of all types of natural ecosystems that are important for biodiversity conservation and climate change mitigation and where there is significant pressure for commodity expansion linked to the EU market. To further address this, the Commission should assess the need and feasibility of extending the scope to further commodities two years after the entry into force by undertaking a review of the relevant products as listed in Annex I of this Regulation by way of a delegated act.</p>	<ul style="list-style-type: none"> • Clarify the basis in science and in prior EU policy statements for addressing critical natural ecosystems within the regulation. • Note: additional recitals (e.g., 1-17) could also be revised to better incorporate information on the importance of non-forest natural ecosystems for protecting biodiversity and mitigating climate change, as well as information on the significant degree to which these ecosystems have been recently converted and are under threat of further conversion for the expansion of in-scope commodities.

Text proposed by the Commission	Proposed amendment	Justification
<p>Recital 58: While this Regulation addresses deforestation and forest degradation, as envisaged in the 2019 Communication 'Stepping up EU Action to Protect and Restore the World's Forests, protecting forests should not lead to the conversion or degradation of other natural ecosystems. Ecosystems such as wetlands, savannahs and peatlands are highly significant to global efforts to combat climate change, as well as other sustainable development goals and their conversion or degradation require particular urgent attention. An evaluation of the need and the feasibility of extending the scope of this Regulation to other ecosystems than forests should therefore be undertaken within 2 years of the entry into force of this Regulation.</p>	<p>Delete this recital.</p>	<ul style="list-style-type: none"> Remove reference to evaluating the need and feasibility of extending the scope to other ecosystems since, with the amendments proposed here, the law would include broad coverage of natural ecosystems from its initial entry into force. This includes natural wetlands such as forested peatlands, mangroves, and grassy marshes, the large majority of which are subsumed within the three defined ecosystem categories that this proposal includes: forest, other wooded land, and natural grassland.



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