



Preserve nature

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Proportion of tobacco purchased at no risk of net deforestation of managed natural forest and no conversion of natural ecosystems

KPI description

PMI's [Zero Deforestation Manifesto](#) reinforces its commitments to measure the impact on forests linked to PMI's supply chain. Having achieved zero gross deforestation of primary and protected forests in our tobacco supply chain in 2020, PMI has furthered its commitment by targeting zero net deforestation of managed natural forest and no conversion of natural ecosystems by 2025 for all its tobacco suppliers.

PMI takes a risk-based approach to monitoring deforestation in the tobacco supply chain. As the risk of deforestation related to the curing of Virginia flue-cured tobacco is considered material, a detailed monitoring process has been established to ascertain the sustainability and traceability of 100 percent of the wood fuel used to cure tobacco by contracted farmers.

Additionally, on an ongoing basis, the risk of deforestation of all tobacco-growing areas (TGAs) is monitored using externally available geophysical input data to assess the changes in forest coverage and natural ecosystems inside the TGAs. This combination of detailed monitoring of potentially high-risk activities and ongoing monitoring of all TGAs forms the basis of PMI's risk-based approach to monitoring deforestation risk in our tobacco supply chain.

Definitions

Zero Deforestation Manifesto 2.0 (ZDM 2.0) Published in 2021, the ZDM 2.0 outlines PMI's commitments to zero gross and zero net deforestation—covering all our relevant tobacco leaf-sourcing areas (TGAs) and defines expectations against zero gross deforestation of primary and protected forests and zero net deforestation for natural managed forests in our supply chain.

Zero gross deforestation Aggregate deforestation for a given natural forest area (e.g., a forest reserve or natural park within the tobacco or pulp and paper supply chain), without deduction for reforestation or other compensation activities.

Zero net deforestation The difference in forest area between two points in time, taking into account both losses from deforestation and gains from forest regeneration and restoration. Net deforestation is measured with reference to a given geographic area (e.g., a district, state, nation, or globe) and a given timeframe.

Cut-off date As defined by the Accountability Framework initiative (AFi), the cut-off date is “the date after which deforestation or conversion renders a given area or production unit non-compliant with no-deforestation or no-conversion commitments.” The set cut-off date for PMI applies to all current and future suppliers. Therefore, any new supplier has to demonstrate its adherence to PMI's commitment of no deforestation as of January 1, 2019, regardless of the year in which their engagement with PMI commenced.

Deforestation Loss of natural forest area as a result of: (i) conversion to agriculture or other non-forest land use; (ii) conversion to a tree plantation; or (iii) severe and sustained degradation (AFi, 2024).

Tobacco-growing areas (TGAs) Geographical spaces that include a farm area where tobacco cultivation takes place and the potential area of impact on nature that tobacco-related activities could generate.

Tree plantation A forest predominantly composed of trees established through planting and/or deliberate seeding that lacks key elements of a natural forest native to the area, such as species composition and structural diversity. Tree plantations generally have one or a few tree species and tend to include one or more of the following characteristics:

- Planted on cleared land
- Intensive use of chemical inputs (fertilizers, pesticides)
- Harvested regularly
- Trees of even ages
- Products from the plantation managed and processed for commercial production

Natural ecosystem An ecosystem that substantially resembles—in terms of species composition, structure, and ecological function—one that is, or would be, found in a given area in the absence of major human impacts. This includes human-managed ecosystems where much of the natural species composition, structure, and ecological function are present (AFi, 2024). For the scope of this document, the relevant ecosystems are peatland, wetland, savannah, grassland, and semi-forest formations.

Natural forest Forests that possess many or most of the characteristics of a forest native to the given site, including species composition, structure, and ecological function.



Primary and protected forest Forests that have not been subject to major human impacts in recent history and possess many or most of the characteristics of a forest native to the given site, including species composition, structure, and ecological function. More specifically, PMI's definition of primary and protected forest are those located inside PMI TGAs (see definition of TGAs on pg. 35) that are mapped using publicly available sources.

Wood fuel All types of biofuels derived directly and indirectly from trees and shrubs grown on forest and non-forest lands, from silvicultural activities, harvesting, and logging, as well as industrial by-products, timber-based fuels such as firewood, pellets, woodchips, and briquettes.

Sustainable wood fuel Includes wood fuels derived from:

- Legal plantations that are sustainably managed, including on-farm planting
- A sustainably managed secondary forest or degraded forest with no measurable deforestation by spatial analysis tools
- Identified invasive exotic species that have not been planted and require removal according to a thorough ecological assessment

Sustainable wood fuel excludes wood fuels derived from:

- Unsustainable managed natural forests where deforestation is measurable by spatial analysis tools or on-site inspection visits
- Plantations resulting from conversion of natural forests after the set cut-off date

Scope

Included Any forest type and forest management that can be directly or indirectly (e.g., biomass for energy in tobacco curing) linked to PMI's tobacco supply chain. Natural ecosystems that may not be entirely forested, like peatland or savannah, or unique ecosystems such as the Cerrado in Brazil or the Miombo forest in Mozambique, are also in scope. All TGAs covered by PMI's Integrated Production System (IPS) and monitored by field technicians or contracted service providers for adherence to GAP and ALP.

Excluded Loss of forest area resulting from natural disturbances that are part of the natural life cycle of forests and characteristic of ecosystem formation and evolution are not considered in scope of our deforestation commitments. Artificial plantations.

Calculation methodology

Monitoring and verification framework To ensure adherence and measure progress toward PMI's zero deforestation commitments, PMI provides third-party leaf suppliers, PMI leaf operations, and contracted farmers with guidelines to deploy a monitoring and verification system ([here](#)), including measurement criteria. The monitoring and verification framework for deforestation in PMI's tobacco supply chain can be broken down into three main activities.

The first activity is defining and mapping forest types in TGAs. GPS coordinates of the TGAs, collected by third-party leaf suppliers and PMI leaf operations, are mapped against publicly available sources of forest cover to define the forest types contained within the TGAs. Forest types include primary and protected forests, managed natural forests, or natural ecosystems.

Second, the monitoring of deforestation risk is carried out. This is typically done at two levels:

1. Supply chain inputs: A monitoring framework for sustainable curing fuels is applied to all TGAs in which Virginia flue-cured tobacco is cultivated due to the associated material risk for gross and net deforestation. Accordingly, all suppliers of Virginia flue-cured tobacco must record and verify the sources of the wood fuel used to cure tobacco. A third-party auditor assesses conformity with the monitoring framework to ascertain sustainability and traceability of 100 percent of the fuel used to cure tobacco by contracted farmers.

Data verification The KPI, as published in [PMI's Value Report 2025](#), has been assured by PwC (limited assurance).

[See the independent practitioner's limited assurance report](#)

2. Landscape analysis is applied to all TGAs, which combines the GPS data of the TGAs with forest cover maps from Global Forest Watch or equivalent platforms to assess the change in forest cover and conversion of natural ecosystems over a defined period. PMI conducts this analysis on an annual basis and the results provide an indication of the intrinsic risk towards gross and net deforestation and/or conversion of natural ecosystems.

3. The identified deforestation risk is to be verified. For each Virginia flue-cured market, the verification is conducted by the third-party auditor. The outcome is an opinion of compliance against the monitoring framework on tobacco-curing fuel. Additionally, when the annual landscape analysis indicates an intrinsic risk of a deforestation event in the TGA, such an event needs to be further confirmed through ground-truthing (i.e., on-site validation) or, when ground-truthing is not applicable, through verification of the declaration of farmer/supplier or validation of supporting documents.



If zero net deforestation is detected by the monitoring framework indicating unsustainable volumes of firewood from managed natural forests, the number of hectares impacted will be compensated to showing that activities to reach the zero net balance are developed at the end of 2025. Compensation activities must follow the guidelines from the mitigation hierarchy (avoid, minimize, restore, transform) and will have to be proven, by a dedicated impact assessment to validate the intervention, to have contributed to generate or restore a natural ecosystem. Regular suppliers, TGAs, and markets will be recognized as having achieved zero gross deforestation or zero net deforestation and no conversion of natural ecosystems when the results of the external audit will show full compliance with the principles and indicators of the monitoring framework. New suppliers, TGAs, and markets will be recognized as having achieved zero gross deforestation when landscape risk analysis is performed, and when the external audit shows full compliance with the zero gross compliance requirement defined in our monitoring framework. Zero net deforestation will be recognized as achieved by new suppliers/markets if traceability and sustainability requirements, as described in our monitoring framework, are achieved, and when the external audit shows full compliance with the zero net compliance requirement defined in our monitoring framework.

Proportion of tobacco purchased at no risk of net deforestation of managed natural forest and no conversion of natural ecosystems.

$$= \left(\frac{\text{Tobacco at risk of deforestation purchased at no evident risk of net deforestation}}{\text{Total tobacco purchased at risk of deforestation}} \right) \times 100\%$$

In cases wherein there will be a tobacco volume purchased from a new market, the percentage of tree cover loss is to be discounted from the zero net calculation.

Estimates and assumptions Total tobacco purchased by PMI is based on a full calendar year (January through December), considering the January through September actual purchased volumes, combined with the forecasted volume for the period October through December.

Data management

Supply chain inputs are managed via third-party leaf suppliers' data collection processes and reported in PMI's proprietary curing fuel data monitoring system twice a year. For the mapping of forest types contained within each TGA, PMI recommends third-party leaf suppliers and PMI leaf operations use the Hansen global forest maps available at Global Forest Watch (GFW). This mapping is maintained in PMI's geospatial analysis tools, with the landscape risk analysis updated on an annual basis following the GFW update in Q4.

Following the verification process, on an annual basis, the results of the tobacco supply chain inputs and landscape risk analysis are consolidated centrally to report the global figure of the proportion of tobacco purchased at no risk of net deforestation of managed natural forest and no conversion of natural ecosystems in PMI's tobacco supply chain.

Data verification In addition to verification of the supply chain inputs and any deforestation events as identified by the landscape analysis, prior to external reporting, the program auditor verifies PMI's assertion of compliance on the global consolidated tobacco purchased figure at no risk of net deforestation of managed natural forest and no conversion of natural ecosystems.

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