MICHELIN NATURAL RUBBER OPERATIONS AND SUPPLY CHAIN REPORT

2023 REPORT

MICHELIN
A BETTER WAY FORWARD

CONTENTS

INTRODUCTION

This document provides a description of Michelin's natural rubber operations and engagements in sustainable natural rubber, in addition to the Group-level reporting information available in its Universal Registration Document. Michelin is primarily a buyer of natural rubber, either from independent suppliers, or from natural rubber joint ventures where Michelin has participation through minority shareholding. All natural rubber sourcing is traceable to the processing factory level, and Michelin conducts yearly on-site audits, which include environmental and labor aspects, on individual natural rubber processing factories before they are added to an approved factory list.

Michelin is committed to a sustainable natural rubber supply chain that promotes sustainable development, and more information on our commitments and approaches can be found on our Sustainable Natural Rubber Dashboard. Our Sustainable Natural Rubber Policy defines our commitments and guides our efforts to transform the supply chain. Our policy, which is aligned with the GPSNR Policy Framework, commits us to care for the environment, people, rubber farmers, natural resources and our stakeholders, and is now accompanied by our Sustainable Natural Rubber Roadmap 2020-2025 which will guide the implementation of these commitments.

OWN OPERATIONS: NATURAL RUBBER

ORGANIZATION OF MICHELIN'S NATURAL RUBBER SUPPLY CHAIN

While Michelin is primarily a buyer of natural rubber, it does own natural rubber assets in Brazil and Indonesia. In Bahia, Brazil, we have two natural rubber processing facilities and a 4,578 hectare property. A majority of the property's surface area is dedicated to the Michelin Ecological Reserve, which preserves a significant remnant of the southern Bahian Atlantic rainforest. In 2022, the Michelin Group fully acquired Royal Lestari Utama (RLU). RLU has operations in Jambi and East Kalimantan, Indonesia, and aims to demonstrate sustainable natural rubber production and processing. In this way, Michelin has reasserted its objectives and its commitment to producing sustainable natural rubber in Indonesia and to improving the living conditions of local communities.

Michelin (Group)

Owns

Participates in Joint Ventures (minority shareholding); purchases from

Purchases Natural Rubber (NR) from suppliers

Plantações Michelin da Bahia ltda

Location of operations: Brazil

Nature of operations: Natural rubber production, processing and maintenance of an ecological reserve

PT. Royal Lestari Utama

Location of operations: Indonesia

Nature of operations: Natural rubber production and processing

41.97%

Société Internationale de Plantations d'Hévéas

Location of operations: Côte d'Ivoire, Ghana, Nigeria, Liberia

Nature of operations: Natural rubber production and processing

45%

Nteq Polymer Company Limited

Location of operations: Thailand

Nature of operations: Natural rubber processing

Integrated NR groups

Wholesaler or trader

Independent NR Processing Factory

NR Processing Factory

NR Processing Factory

NR Processing Factory

Individual NR Processing Factories are audited by Michelin

Tier 1 suppliers

Tier 1 suppliers

Data as of end-2022
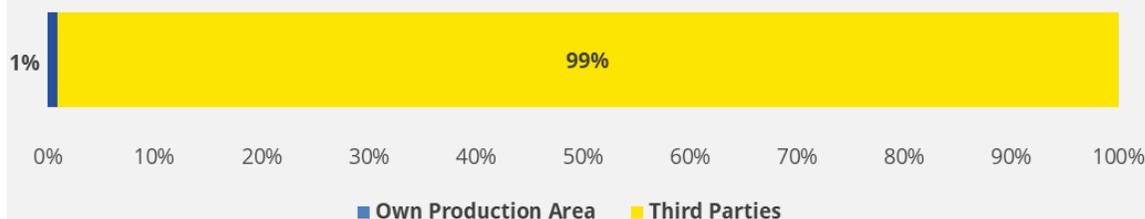
NATURAL RUBBER PROCESSING FACILITIES

Michelin's two natural rubber processing facilities in Brazil are the Bahia site and the Sooretama site. Both factories source raw natural rubber primarily from third party suppliers, with the Bahia site taking on limited amounts of raw material from Michelin's own production area (residual research and development area).

In Indonesia, RLU operates one natural rubber processing facility in East Kalimantan, under its PT. Multi Kusama Cemerlang subsidiary (the "MKC Factory"). The factory sources raw natural rubber from both its own plantation as well as third party suppliers.

Continuous improvement of all Michelin facilities is tracked with the industrial - Michelin Environmental Performance indicator (i-MEP), which replaces the Michelin Environmental Footprint indicator from 2021. It tracks energy use, CO_2 emissions, organic solvent use, water withdrawals and water stress, and amount of waste generated. In addition, both facilities in Brazil, and the Bahia production area, are also certified ISO 14001[1].

Volume (%) Sourced by Owned Processing Facilities from:

1%	99%

0%   10%   20%   30%   40%   50%   60%   70%   80%   90%   100%

■ Own Production Area   ■ Third Parties

[1] ISO 14001 Certificates of Plantações E. Michelin Ltda (Bahia), Plantações E. Michelin Ltda (Sooretama), and Plantações Michelin da Bahia Ltda

NATURAL RUBBER PROCESSING FACILITIES

WATER QUALITY

Michelin commits that all wastewater generated from natural rubber production is properly treated in full compliance with national and local regulations[2]. It therefore ensures effluent parameters are compliant in its natural rubber operations in Bahia, Sooretama, and MKC.

Both plants in Brazil have efficient effluent treatment systems with anaerobic and aerated lagoons of appropriate capacity, as well as water recycling systems. This is assured by the maintenance of ISO 14001 certifications at both sites. In report year 2023, the Bahia site maintained BOD levels in effluent that were within specified legal limits in Brazil (defined as a maximum of 120 mg/l or a minimum 60% reduction efficiency)[3]. The Sooretama site, however, saw elevated BOD levels in August due to faulty aerators resulting in a lack of aeration in the lagoons. This was swiftly rectified through replacing the aerators, and BOD levels reverted to being within specified legal limits from September onward at the Sooretama site. A corrective action plan was also established in the form of increased frequency of checks and maintenance of the aerators to ensure that such incidents would not repeat in the future.

The MKC site in Indonesia has a wastewater treatment plant which uses an activated sludge system in accordance with the Indonesia Rubber Association's Standards (GAPKINDO[4]). A robust preventive maintenance schedule ensures its efficient performance and it undergoes regular inspection by local government authorities. The plant also has an efficient water recycling system. As of end 2022, it is able to recycle 60% of water used in the factory with an aim to reach 75% by 2024. In reporting year 2023, the BOD and COD levels in effluent were maintained within specified legal limits in Indonesia (defined as <60 mg/l for BOD levels and <200 mg/l for COD levels [5]).

[2] See Michelin Sustainable Natural Rubber Policy pg. 19
[3] *Resolução CONAMA* Nº 430 DE 13/05/2011
[4] GAPKINDO
[5] PERATURAN MENTERI LINGKUNGAN HIDUP REPUBLIK INDONESIA, Nomor 5 Tahun 2014, Tentang Baku Mutu Air Limbah, page 21

NATURAL RUBBER PROCESSING FACILITIES

ODOR MITIGATION

Odor management and mitigation are a concern for Michelin's manufacturing activities, including its natural rubber processing sites. Both the Bahia and Sooretama sites are equipped with an air scrubber and filter respectively that reduce and control odor that can be generated from natural rubber processing.

The MKC Factory has implemented steps throughout the processing line to reduce odors from natural rubber processing. Raw materials are sprayed with anti-odor eco-enzymes during storage and the site is equipped with both an air scrubber system and biofilter to reduce and control odor. Vegetation is also being planted around the MKC facility to neutralize any remaining odor around the site.

REACHING NET ZERO EMISSIONS IN MANUFACTURING OPERATIONS BY 2050

To help mitigate climate change, the Group aims to achieve, by 2050, net-zero carbon emissions from its entire production base (Scopes 1 and 2). For 2030, the Group has an intermediate target to reduce emissions from its production plants by 50% between 2010 and 2030 (in absolute figures)[6]. This ambition includes natural rubber processing operations. To achieve this goal, Michelin has begun calculating emissions from its own operations (Scope 1), which amounted to 86,692 Tons of CO_2 in 2022 (the most recent year of calculations).

[6] See Michelin Universal Registration Document 2023 pg. 210

Bahia Site

Location:
-13.7754, -39.1541

Sourcing from (2023):
Third parties: Yes
Own production area: Yes

ISO 14001 certified: Yes

Sooretama site

Location:
-19.1811, -40.1343

Sourcing from (2023):
Third parties: Yes
Own production area: No

ISO 14001 certified: Yes

MKC Factory

Location:
-0.546, 117.162

Sourcing from (2023):
Third parties: Yes
Own production area: Yes

Data year 2022

NATURAL RUBBER PROCESSING FACILITIES

HEALTH AND SAFETY AT THE WORKPLACE

Assessing and preventing workplace safety and security risks is an important concern for the Group. Health, safety and quality of work-life policies are implemented through the Environment and Prevention Management System, which is based on the international ISO 14001 and 45001 standards[7].

Health and safety risk assessments are regularly carried out and updated, and in recent years, a comprehensive prioritized risk map has been created, based on standardized risk assessments conducted for every workstation; training courses and programs are also allocated when needed. The Environmental and Prevention Management System is also applied for natural rubber operations. Each role in the production and processing of natural rubber has been assessed for specific risks, which informs the specific allocation of personal protective equipment and training required for each employee according to their role.

[7] See Michelin Universal Registration Document 2023 pg. 260

NATURAL RUBBER PROCESSING FACILITIES

DECENT LIVING WAGES

In both our processing and production operations, Michelin strives to provide its employees a decent wage (or a decent living wage). The Group has an objective to have 100% of employees receive a decent wage in each host country by 2025[8]. In 2021, Michelin pursued its review of employee compensation across the Group with the support of independent expert Fair Wage Network (FWN) in a commitment to ensuring that all employees are paid a decent wage[8]. The FWN Benchmarks are available for access through their Living Wage Database and the FWN methodology is recognized by IDH as a 'IDH Recognized Living Wage Benchmark Methodology'. In 2023, a review of Group compensation (conducted for 100% of the Group's consolidated workforce) found that all employees are paid at least the equivalent of the living wage benchmarks defined by the Fair Wage Network.

[8] See Michelin Universal Registration Document 2023 pg. 174, 234

NATURAL RUBBER PROCESSING FACILITIES

LOCAL PROCUREMENT

Michelin's natural rubber purchases in Brazil and Indonesia are coordinated by a natural rubber procurement team. Our procurement teams in our Brazil and Indonesia operations are working closely with both direct and indirect suppliers to determine their compliance with the national laws (such as the Brazilian Forest Code) and our Sustainable Natural Rubber Policy. Not unlike the global natural rubber supply chain, smallholder farmer supply chains in these countries are complex due to the sheer number of actors and the presence of multiple layers of intermediaries. To help tackle this and map risks, we are deploying RubberWay in the smallholder supply sheds in both countries. Michelin also plans to work more closely with cooperatives, dealers and directly with smallholders to tackle more complex issues such as documentation in light of both the Brazilian Forest Code requirements and EU Deforestation Regulation. As of November 2024, 100% of natural rubber procured for our own processing operations from industrial and medium plantations was traceable to the plantation, and 100% of rubber procured from smallholders was traceable to the jurisdictional level[9].

Supply for Own Processing Operations:
Traceability to Industrial and Medium Plantations[9]
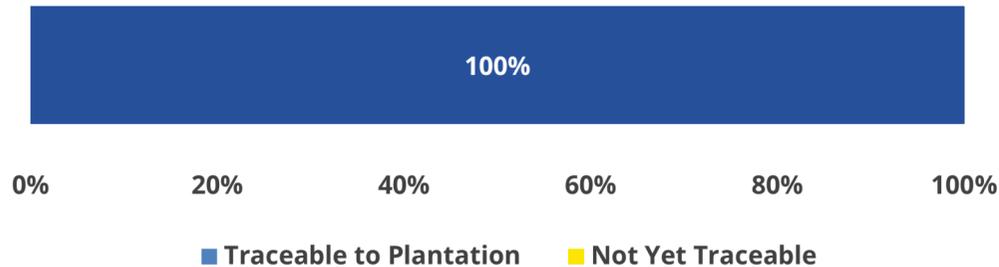
100%	

0%   20%   40%   60%   80%   100%

■ Traceable to Plantation   ■ Not Yet Traceable

Supply for Own Processing Operations:
Traceability to Smallholders (Jurisdictional Level)[9]

100%	

0%   20%   40%   60%   80%   100%

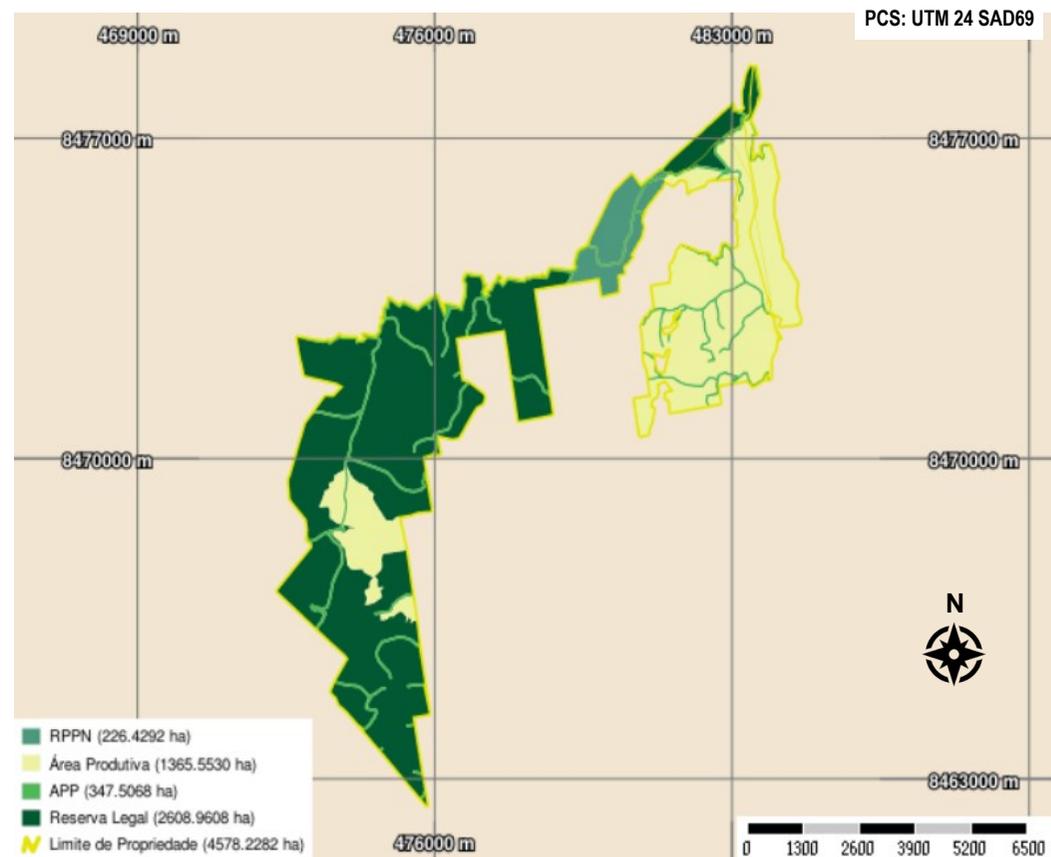■ Traceable to Jurisdiction   ■ Not Yet Traceable

[9] Industrial plantations: >500ha. Medium plantations: <500 and >50ha. Traceability refers to knowledge of farm or plantation location (geolocation through central GPS location or address) or boundary information (polygon). Traceability to smallholders at jurisdictional level currently defined as minimum 'province level or equivalent' (sub-national level; state in Brazil), but in Brazil is in practice typically municipality level.

LAND MANAGEMENT

Michelin manages a total of 93,223 hectares of land located in both Brazil and Indonesia (affiliated with natural rubber production).

PMB - Plantações Michelin da Bahia Ltda, manages 4,578 hectares of land in Bahia, Brazil, along the southern Bahia coast (13º50´S, 39º10´W). Of this, 3,182 hectares are officially designated as protected areas, and most of this area is managed as part of the Michelin Ecological Reserve.

Of the 1,366 hectares currently designated as Productive Area (*Areas Productivas*), much of the area is managed under the purview of the Michelin Ecological Reserve; production activities in these rubber groves have stopped with the aim to restore a natural forest matrix and increase connectivity for the adjacent reserve areas—the reserve comprises 3,900 hectares as of 2021. This makes the Pachanga River valley the only one in the region with no economic or agricultural activity. In the rest of the Productive Area, only 170 Ha remains active in 2023, all of which has been dedicated to research and development of varieties resistant to pest and disease.

PCS: UTM 24 SAD69

- RPPN (226.4292 ha)
- Área Produtiva (1365.5530 ha)
- APP (347.5068 ha)
- Reserva Legal (2608.9608 ha)
- Limite de Propriedade (4578.2282 ha)

Key Figures: Michelin PMB Property, Data Year 2022	
Total Area	4,578 Ha (Area on peat: 0 Ha)
Productive area (*Areas Productivas*)	1,366 Ha • R&D (Active area): 170 Ha • Retired area: 1,152 Ha • Unplanted area: 0 Ha • Other (e.g. infrastructure): 44 Ha
Set-aside Area	3,182 Ha officially designated set-aside area which includes: • Legal Reserve (*Reserva Legal*): Conservation for native vegetation and biodiversity • Permanent protected areas (APP – *Área de Preservação Permanente*): Protection for essential ecosystem functions (riverbank buffers) • Private Reserve of Natural Patrimony (RPPN – *Reserva Particular do Patrimônio Natural*)

LAND MANAGEMENT

Royal Lestari Utama (RLU) manages a concession area of 88,645 hectares in Indonesia (70,600 hectares in Jambi and 18,045 hectares in East Kalimantan). Of this area, a total of 47,732 hectares have been designated as set-aside areas (36,094 hectares in Jambi and 11,638 hectares in East Kalimantan), comprising primarily of HCV-HCS forests, HCV non-forest areas, and Social Forestry Zones. Based on the HCV-HCS integrated assessments, no peat has been identified within the concession areas.

The total planned production area in RLU is 25,000 ha. In 2023, a total of 23,000 ha have been used for either rubber plantation or nurseries. In addition, 2,000 ha are reserved land area for planting (unplanted area). All plantings follow results of the HCV-HCS Integrated Assessment. There also exist 16,500 ha of conservation and protected area, forests and social forestry zones. Other remaining areas, which amount to 47,145 ha, include those for infrastructure, lowlands and streams, and non-accessible areas (e.g., land claims). The non-accessible areas also includes land that have been identified to have HCV values such as riparian zones and areas within the elephants home range.

Maps of RLU's concession areas can be found in the HCV-HCS integrated assessment reports:

Site	Geo-referenced maps
Multi Kusuma Cemerlang (MKC)	Embedded in HCV/S Report (ref. pg. 19)
Lestari Asri Jaya (LAJ)	Embedded in HCV/S Report (ref. pg. 16)
Wanamukti Wisesa (WMW)	Embedded in HCV/S Report (ref. pg. 18)

Key Figures: RLU, Data Year 2023

Total Area	88,645 Ha (Area on peat: 0 Ha)
Non HCV-HCS/ Plantable Area	25,000 Ha • Planted area: 23,000 Ha • Reserved land area for planting: 2,000 Ha
Set-aside and other areas	63,645 Ha • Conservation and protected area, forests, social forestry zones: 16,500 Ha • Others (Includes infrastructure, riparian zones, non-accessible areas): 47,145 Ha

LAND MANAGEMENT

MANAGEMENT AND BIODIVERSITY IDENTIFICATION

Plantações Michelin da Bahia Ltda (PMB)

As PMB lies in the Bahia Center of Endemism, it harbors one of the most diverse and unique forests on the planet, with many of the plants and animals found nowhere else, not even in other parts of the Atlantic Forest. The global value of these forests is extraordinary, and the forests in Bahia can support >400 tree species/Ha. Recognizing the importance of this area, Michelin organized the Michelin Ecological Reserve in 2006 for protection and restoration of this critical habitat.

Since the property was acquired in the 1980's, all forest areas have been retained and there has been no new development of area within property boundaries. In order to guarantee it's zero deforestation commitment and natural ecosystem protection commitments Michelin will systematically carry out HCS-V and SEIA studies should it embark on any new development (within its current or future countries of operation). It also requires all suppliers to conduct social or environmental impact assessments required in their jurisdictions. In line with supporting certification as part of a toolbox of solutions for sustainability that includes risk-based approaches, the group aims to regularly increase the certification of natural rubber (FSC, PEFC or other equivalent certification schemes). Due to the limited extent of our production area (which is indicated only for research and development), this may include supporting certification schemes or through procurement.

LAND MANAGEMENT

Since the reserve was organized, retired rubber groves have also been incorporated into the reserve area to increase the contiguous area and connect forest fragments. A restoration program has been organized and has planted 112,000 trees spanning 348 species over 314 hectares of forest.

A specific management plan is available for the RPPN Ouro Verde, but also guides the management of the property and Michelin Ecological Reserve in general. The plantation operation, as with the two processing operations, are certified for ISO 14001 Environmental Management for assurance for compliance with prevailing environmental regulation.

A list identifying species of concern present or discovered in the Michelin Ecological Reserve and property boundaries has been compiled. The original list compiled in initial biodiversity assessments is continually updated based on findings new discoveries from the Ecological Research Program; 30 species new to science are also included in the list. These species do not yet have IUCN threat categories but are assumed to be endangered or critically endangered as they have only been found in the reserve, and in some cases, in a few other forests in the region.

- Rare, Threated and Endangered Species List

Monitoring information on the implementation of management plan (performance against objectives)

Management objectives	Related indicators	Indicator metrics
1. Protect the integrity of biodiversity, and waterways	Maintain a forest ranger team for forest protection	In 2023: 5 rangers conducted 741 patrols, hunting pressure reduced 91% compared to 2011
2. Maintain facilities for the community and students participating in environmental education programs	Infrastructure is provided and maintained	In 2023: Sanitary facilities, benches, and trails continue to be maintained
3. Enable accessibility for scientific research while maintaining environmental integrity and compliance with laws related to scientific research	Supporting scientists with reserve access and facilities Publications as a result of research conducted or sponsored in the Michelin Ecological Reserve	An average of 100 scientists a year Cumulative till 2023: 163 scientific papers published
4. Restore retired plantation area by planting native species	Hectares restored; species planted	Cumulative till 2023: 314 hectares planted with 112,000 trees of 348 species Active planting in 2023: 2 Ha, and restored areas continue to be protected and natural regeneration is allowed to take place.
5. Integrate the RPPN with the rest of the reserve so that the entire reserve is managed as one unit	nil	Management of the Michelin Ecological Reserve continues to be centralized with unified objectives under the Centre for Biodiversity

LAND MANAGEMENT

Royal Lestari Utama (RLU)

In the second half of 2022, Michelin fully acquired Royal Lestari Utama (RLU), an Indonesian producer and processer of natural rubber. RLU has always worked towards promoting environmental and conservation values as well as the social inclusivity aspects of natural rubber production in Indonesia. Through its three subsidiaries, PT. Lestari Asri Jaya and PT. Wanamukti Wisesa in Jambi, and PT. Multi Kusuma Cemerlang in East Kalimantan, the company practices sustainable natural rubber cultivation within its plantations while also supporting the local rubber smallholders in the region.

RLU has developed an Integrated Conservation and Land Use Plan (ICLUP), following the recommendations of their integrated HCV-HCS assessments. This land management plan applies to all their concession areas and dictates their land use plans [10].

As a way of ensuring its zero deforestation commitments as well as its commitment towards sustainable land management, Integrated HCV-HCS Assessments have been conducted for all three subsidiaries. Management and monitoring recommendations have since been incorporated into RLU's land management plans, with all future planting planned outside of the identified HCV-HCS areas.

A full species list for all three subsidiaries has also been identified from the HCV-HCS assessments. All the species are classified under both the IUCN red list categories as well as the CITES species list (if applicable).

A list of priority flora and fauna species within the RLU concession areas can be found in each individual site's integrated HCV-HCS Integrated Assessment Reports[11,12,13].

RLU has conducted an Environmental & Social Impact Assessment for their Jambi concessions, and an executive summary report can be found here. This assessment not only helps RLU to evaluate the relevance of their current management plan for indigenous peoples and local communities, but is also compliant with the International Finance Corporation's (IFC) Performance Standard 7 on Indigenous Peoples. The assessment for their concession in East Kalimantan was completed in 2024.

[10] More information on RLU's land management practices can be found in RLU's Sustainability report pg. 89. Monitoring on the indicators can be found on pages 167-178
[11] See MKC HCV-HCS integrated assessment report pages 66-68
[12] See LAJ HCV-HCS integrated assessment report page 57
[13] See WMW HCV-HCS integrated assessment report pages 117-122

LAND MANAGEMENT

FOREST AND BIODIVERSITY PROTECTION

PMB

Deforestation monitoring and biodiversity protection is conducted primarily through physical monitoring by a dedicated team of five rangers hired from the local community. Illegal access and use of the property and forest, including hunting, is mitigated by regular forest patrols, access control with security facilities at the main entrances of the property, and environmental education of surrounding communities. Forest rangers conduct a total of 9,680 patrol hours/year, with 741 patrols conducted in 2023. Hunting pressure has generally been the most prevalent risk historically, and the area experienced high hunting pressure until the ranger team was established[14]. Since 2011, regular patrols and continued environmental education of the surrounding communities have resulted in hunting pressure falling 91%.

Due to comprehensive patrol efforts and engagement with communities, deforestation has not been a noted issue in recent years, and there were no incidents of deforestation in 2023. While physical patrols continue to be the primary means of monitoring and deterrent against deforestation and other illegal activities, the property's boundaries are also included and monitored in the Global Forest Watch Pro tool as part of Michelin's global deforestation analysis framework as of 2021. Together, the monitoring efforts encompass the entire extent of the boundary—4,578 hectares are monitored, with deforestation monitoring focusing specifically on 3,900 hectares (set-aside areas and additional area managed under the purview of the Michelin Ecological reserve).

Year	Deforestation recorded
Since 2015[15]	0 Ha
2022	0 Ha
2023	0 Ha

[14] See (Flesher 2013) Protecting Wildlife in a Heavily Hunted Biodiversity Hotspot: A Case Study from the Atlantic Forest of Bahia, Brazil.
[15] Michelin published its first set of commitments for natural rubber in 2015. It has since aligned its Sustainable Natural Rubber Policy with the GPSNR Policy Framework, which includes a specific cut-off date.
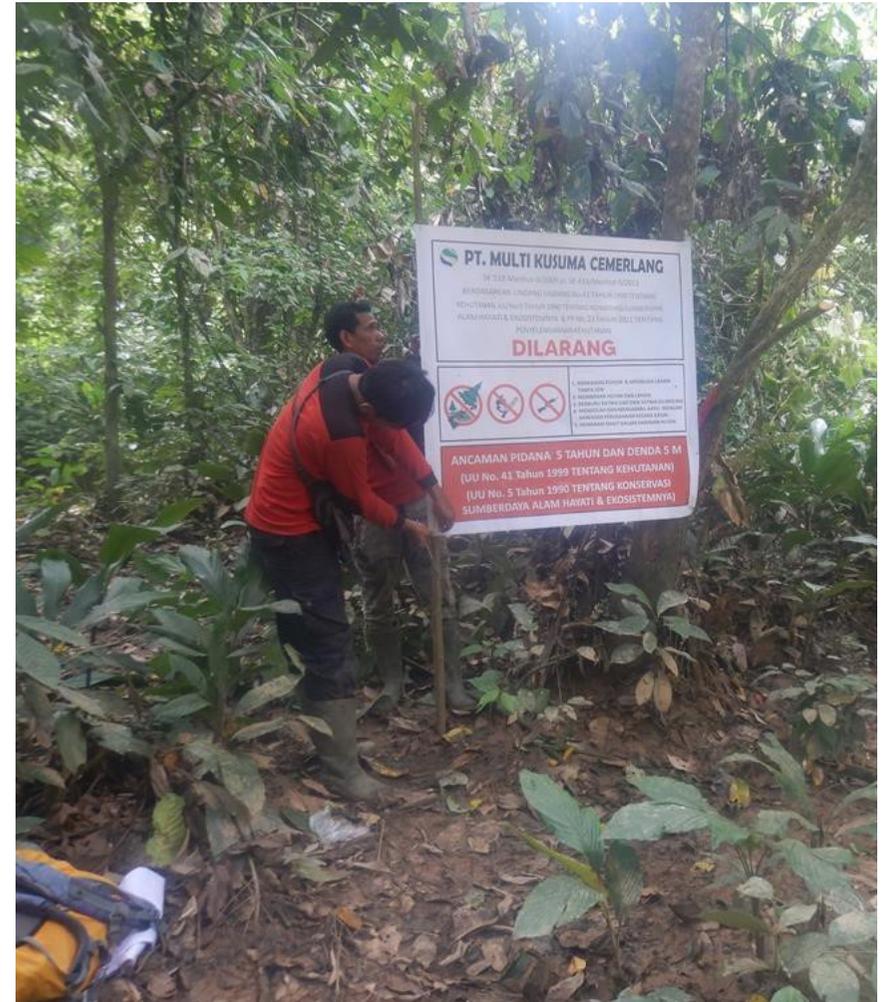
LAND MANAGEMENT

FOREST AND BIODIVERSITY PROTECTION

RLU

A combination of satellite monitoring tools and on-the-ground patrols are used for deforestation monitoring and biodiversity protection. Since 2021, RLU has been working with Satelligence, a satellite monitoring service provider, to monitor deforestation within their set-aside areas[16]. To supplement the information from Satelligence, RLU uses SiPongi$^+$ - a forest and fire monitoring system hosted primarily by the Indonesian Ministry of Environment and Forestry, for real-time updates. SiPongi$^+$, together with Satelligence, are used to monitor all of RLU's concession areas which totals to 88,645 hectares across Jambi and East Kalimantan (inclusive of set-aside and plantable areas).

Deforestation alerts received via satellite data are verified through on-the-ground verification by rangers. In the event where the alerts are verified to be true, these activities are reported to local authorities, with follow-up actions carried out together jointly with government representatives and RLU's rangers.

In 2024, RLU confirmed a long-term restoration plan for their concession areas. While restoration efforts have always been ongoing since 2017, RLU has set a commitment to restore up to 3000 hectares of land area in their concession areas by 2044. This will be achieved through the planting of native trees and vegetation which they obtain from existing native forests in the concession areas. More information on RLU's restoration efforts can be found in their Sustainability Report 2022/23, pages 46, 52, and 54.

[16] See RLU's Sustainability Report 2022/23, page 46

LAND MANAGEMENT
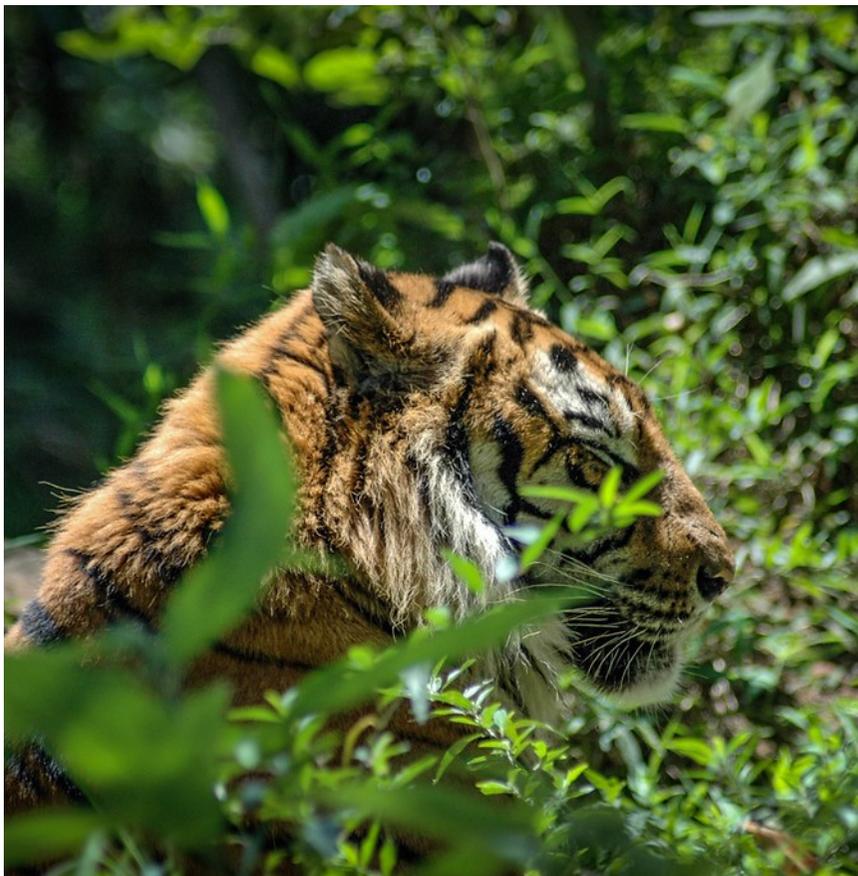
FOREST AND BIODIVERSITY PROTECTION

RLU (CONT.)

As part of RLU's commitment towards protecting biodiversity and wildlife, set-aside areas have been demarcated in both Jambi and East Kalimantan (including a wildlife conservation area in Jambi). Consistent monitoring and management of the set-aside areas are helping to support populations of critically endangered animals. Most notably, these efforts support populations of Sumatran Elephants and Sumatran Tigers in the PT. LAJ concession area as well as Bornean Orangutans in the PT. MKC concession area[17a]. The wildlife conservation area in PT. LAJ also serves as an important buffer zone for the neighbouring Bukit Tigapuluh National Park[17b].

Routine patrols, sometimes conducted jointly with government representatives, are the primary method used to protect forest areas from illegal activities. As of 2022, RLU has 18 rangers on their Jambi concession area and 10 rangers in the East Kalimantan concession area. In Jambi, where part of the set-aside area functions as a buffer zone for the neighbouring Bukit Tigapuluh National Park, patrols are sometimes conducted together with the national park rangers. Sites with illegal hunting and logging activities are identified during the patrols and any hunting traps are removed. More information on RLU patrols, including the total number of hours and total area covered in 2023, can be found in RLU's Sustainability Report 2022/23, pages 44-46.

[17a] See RLU's Sustainability Report 2022/23, page 47
[17b] See RLU's Sustainability Report 2022/23 pages 46-57, for more elaboration on how RLU is contributing to forest conservation and landscape approach initiative (pages 61-62) by serving as an important buffer zone for the Bukit Tigapuluh National Park.

LAND MANAGEMENT

FIRE MONITORING AND MANAGEMENT

PMB

All forest patrol guards are trained to monitor and respond to fire incidents. Monitoring is primarily carried out by physical patrols that cover the full extent of the property. They are required to undergo a course conducted by the Ilhéus Fire Department on procedures for water and forest rescue, firefighting, as well as first aid courses every two years. Due to the prevalence of agricultural and forestry models that do not incorporate fire as part of the agricultural cycle and a wet climate in the immediate landscape, uncontrolled fire is generally not a major threat to the property. On-going management activities include preventing illegal access and environmental education of the surrounding communities. No fire incidents were recorded in either the production area (productive area) or the set-aside areas in 2023.

Year	Fire Incidents in Production/ Productive and Set-aside Areas PMB + RLU[18]
2022	**7 Incidents**
2023	**74 Incidents**

[18] Fire incidents that occurred in both RLU concession areas and PMB sites. In both 2022 and 2023, no fires were recorded in PMB.

LAND MANAGEMENT

FIRE MONITORING AND MANAGEMENT

RLU

A combination of routine field checks and satellite monitoring is used for early warning and detection of fires in RLU's concession areas. Hotspot updates are reviewed every three hours through the SiPongi+ satellite monitoring platform with a "Fire Hazard Level" assessment conducted daily. Both Jambi and East Kalimantan have an Emergency Response Team, which is a forest and land fire control taskforce, to respond immediately to any hotspot alerts. All facilities and infrastructure are also equipped for forest and land fire control in accordance with applicable regulations. More details on RLU's fire prevention and suppression procedure can be found in their sustainability report, pages 78.

While these efforts continue to be streamlined over the years, There was an increase in number of fire occurrences within RLU's concession areas .from 2022 to 2023. A total of 74 occurrences of fire were identified in the Jambi and East Kalimantan concession area which affected 155.09 ha of land.

This increase in fire incidents was largely due to 2023 being an El Nino year, which triggered an extreme hot season, and because of improved detection and reporting systems. Despite this increase, the total land area affected has decreased significantly in comparison.

This is due to the robust fire detection, monitoring and response systems put in place. All fire incidents were put out once they were detected by RLU's fire monitoring system and RLU Emergency Response Team (TPKD) has actively worked to control forest and land fires throughout the year. They continue to strive to improve early warning and detection by routinely monitoring field conditions through ground patrols and using fire monitoring towers managed by the ERTs. In addition, monitoring is also carried out through satellite imagery via the national fire detection system (Sipongi+).

BEST AGRICULTURAL PRACTICES

The Bahia plantation has long been a center of excellence in the region and has contributed to rubber production in the greater region by promulgating best tapping and agricultural practices and investing heavily in research and development of rubber tree varieties.

In recent years, production areas have been progressively retired and are planned to be incorporated into the Michelin Ecological Reserve. From 2021 onwards, only research and development activities continue in the production areas.

Since the RLU project began in 2015, it has always embraced the ambitious and long-term vision of developing sustainable rubber tree plantations in Jambi and East Kalimantan province in Indonesia.

To achieve this goal, RLU utilizes the best-in-class agricultural practices with the support and technical expertise from Michelin's agronomy team. These include established best tapping practices, plantation management practices, soil management practices, and the use of pesticides and chemicals.

BEST AGRICULTURAL PRACTICES

BEST TAPPING PRACTICES

RLU

Understanding the importance good tapping practices can have on harvest yield and worker productivity, RLU has implemented training programs for both their own tappers and smallholder farmers that operate within their concession areas. To ensure that their tappers use the best tapping practices to ensure that the rubber crop is sustainable and valuable in the long term, a tapping school has been set up. The school provides 2 programs – a training program for new tappers and a refresher program for tappers who have experienced a decline in tapping quality. The performance of tappers is monitored monthly[20].

Trainings on best tapping practices are also an integral part of RLU's Community Partnership Program (CPP). This program trains smallholder farmers living within RLU's concession area on proper rubber cultivation and tapping techniques[21]. Other programs under the CPP will be further elaborated in the "Engaging and Empowering communities" section below on page 30.

[20] See RLU's Sustainability Report 2021/22, page 94
[21] See RLU's Sustainability Report 2022/23, pages 79-80, for more information on RLU's Community Partnership Program and page 82 for testimonials on how the program has benefited smallholder farmers

BEST AGRICULTURAL PRACTICES

PMB

To ensure tappers use sustainable and best tapping practices, particularly in the highly standardized research plots, all new rubber tapping staff undergo an intensive 4-week training course. This includes tapping techniques (depth and angle of cut, consumption of bark according to established templates) as well as training on health and safety and outfitting with appropriate personal protective equipment for their tasks. More widely, Michelin in collaboration with CIRAD (a French agricultural research institute), and through its involvement in the Institut *Français du Caoutchouc* (IFC – French Rubber Institute), participates in research contributing to sustainable natural production through good latex harvesting practices[22].

Beyond our operations

Michelin commits to use best tapping practices in its operations, and requires the same of its suppliers. To achieve progress in our supply chain, best tapping practices are a key feature in our smallholder farmer training programs and projects more widely; trainings are focused on proper tapping techniques and lower-frequency tapping that is more labor efficient.

[22] See, among other publications hosted on Agritrop, (Gohet et al. 2013) Sustainable rubber production through good latex harvesting practices: An update on mature rubber fertilization effects on latex cell biochemistry and rubber yield potential.

BEST AGRICULTURAL PRACTICES

MINIMIZING CHEMICALS AND PESTICIDES

As part of Michelin's commitment to continuously strive to reduce and minimize its global use of chemicals and pesticides, it has taken two additional commitments for its own and joint-venture plantation operations: (1) A reduction of pesticides (herbicides and fungicides) by 50% in 2025 (as compared to a 2019 baseline) (2) to ban all pesticides classified under the FSC 'Prohibited and Highly Restricted' list (including Paraquat), which is in place as of 2021.

To work toward this commitment, Michelin implements and encourages practices including: Integrated Pest Management approaches; mechanical weeding and optimization of use of fertilizer. Michelin also contributes to research on these topics within the framework of the IFC[23]. Within the Bahia plantation, the implementation of nitrogen fixing cover crops in the plantation area (*Desmodium ovalifolium*) is one of the specific approaches that has been used; they remain in use in some research plots.

Between 2022 and 2023, there was an overall increase in the pesticide and chemical fertilizer use in the Bahia and RLU plantations combined[24]. This was largely driven by an increase in RLU plantations. For RLU, 2022 was a transition year where the ownership was being handed to Michelin, resulting in decreased plantation activity, which returned to business as usual in 2023. However, there was an overall decrease in pesticide and chemical fertilizer use between 2021 and 2023 in the Bahia and RLU plantations combined[24]. In addition to reducing pesticide use, the Bahia plantation will be trailing the use of a biological fungicide in replacement of chemical ones starting in 2024. While Michelin remains committed to optimizing pesticide and fertilizer use, the transition of all remaining production area in the Bahia plantation to purely research and development activities means that going forward, impact will be best achieved in promulgating these best practices with RLU and also its partners and suppliers.

[23] See (Vrignon-Brenas et al. 2019) Nutrient management of immature rubber plantations: A review.

[24] Base hectarage corresponds to active plots, this includes the planted area of RLU (21,250 ha) and remaining R&D areas in PMB (170 ha). Chemical fertilizer use excludes organic fertilizer and dolomitic lime, a soil conditioner allowed in some organic farming frameworks.

	2021	2022	2023
Pesticide use PMB + RLU (kg active ingredient/Ha[24])	4.06	0.78	2.61
Chemical fertilizer use PMB + RLU (kg/Ha[24])	22.4	4.99	11.6

BEST AGRICULTURAL PRACTICES

SOIL AND WATERWAY MANAGEMENT

The same principles of reducing and minimizing chemical and pesticide use apply to good soil management in plantation areas. Mechanical weeding is preferred over the application of herbicide use where appropriate, which helps avoid unnecessary nutrient depletion of the soil; this is bolstered by the use of cover crops in some areas. Through the IFC, Michelin is also contributing to research in this area. As part of the FERTIM project, also funded by the IFC, recent findings[25] have contributed to a better understanding of how soil health can be quickly restored at the end of a rubber plantation planting cycle through biomass retention and the use of legume cover crops.

Waterway and riparian zones in RLU's concession area were identified and set-aside for regeneration through the HCV-HCS assessments first in 2015 and updated in 2019-2021[26]. Riparian buffer zones were then identified and implemented in both concession areas. For instance, in the Jambi concession area, the 11 rivers identified have been designated with 200-meter riparian buffer zones on either side of the river[27]. Patrols, which take place quarterly at both the Jambi and East Kalimantan sites, are conducted to monitor the state of the riparian areas which now serve as a wildlife corridor for elephants and other forms of wildlife. Restoration and regeneration efforts are also ongoing on damaged riparian zone sites.

In the Bahia plantation, waterway buffers are maintained via designated Permanent Protection Areas (APP – Área de Preservação Permanente) which are required by law; their maintenance falls under the scope of the ISO 14001 certification maintained by PMB. These areas are not used for the production of rubber but are left with native vegetation. Enrichment plantings have been carried out in some APPs that experienced degradation before the property was acquired, more than 100 species have been planted to increase biodiversity of these areas. In total, 347.5 hectares of APP are maintained[28].

[25] See (CIRAD, 2021) Rubber production: How can soil health be restored after clear-cutting of a 40-year-old plantation? Latest publication in 2022: Logging residues promote rapid restoration of soil health after clear-cutting of rubber plantations at two sites with contrasting soils in Africa.
[26] Hydrology maps of all 3 subsidiaries can be found in their respective HCV-HCS Integrated Assessment reports: PT. LAJ (Page 16, Figure 3); PT. WMW (Page 22, Figure 4); PT. MKC (Page 22, Figure 4)
[27] The regulations mandated by Indonesia Regulations only require a buffer zone of 50 meters
[28] See page 11 for map of Área de Preservação Permanente (APP) within property boundaries

ENGAGING AND EMPOWERING COMMUNITIES

MICHELIN ECOLOGICAL RESERVE PROGRAM

MICHELIN GREEN GOLD BAHIA PROGRAM (MOVB—PROJECTO OURO VERDE BAHÍA, MICHELIN)

Michelin's community engagement and development in the Igrapiúna, Bahia region has deep roots. In 2005, to facilitate a process of socially responsible restructuring of its operations in the region, Michelin established its landmark Michelin Green Gold Bahia Program (MOVB). This project would see a significant portion of plantation area reconstituted as independent medium-sized rubber farms that would operate agroforestry models in an effort to retain agricultural jobs in the area. To support workers and their families on these newly independent farms, Michelin set up several public-private partnerships to develop infrastructure and services in the region. This included two schools (including transport infrastructure), a health clinic, subsidized housing for low-income families and the upgrading of electricity, water and telecom infrastructure[29]. Through the project, Michelin covered much of the upfront costs of the infrastructure and has since transferred maintenance and operation to the local municipality. While Michelin no longer bears any costs for these projects, the outcomes are a testament to a successful public-private partnership in local community development.

As part of the MOVB, Michelin also developed the 'Family Agriculture Program' to empower smallholder farmers on best rubber farming practices and agroforestry models, to improve their livelihood and food security. The program, developed in partnership with the federal government comprised of donations or at-cost provision of rubber tree varieties resistant to the *Microcyclus ulei* disease to farmers, coupled with an agroforestry model with cocoa and banana crops to promote diversification.

[29] See (Sucher & Winterberg, 2016) Michelin: Socially Responsible Industrial Restructuring. Research Report, Harvard Business School.

ENGAGING AND EMPOWERING COMMUNITIES

Technical assistance was also provided by Michelin on best agricultural practices. The program has since concluded with 1,307 beneficiary families becoming self-sufficient. Michelin continues to collaborate with regional agricultural authorities in pest and disease prevention, including through involvement in the Bahia Phytosanitary Defense Commission. It also continues to facilitate knowledge transfer to smallholders in the region through these partnerships, and in 2020, distributed informative flyers on the low-frequency tapping model to farmers in the region.

Today, the MOVB continues to contribute to the environmental and social vitality of the region through the Michelin Ecological Reserve Program. A six-prong approach has been taken to manage the reserve – protection, restoration, research, ecotourism, environmental education, and women's leadership programs. The Michelin Ecological Reserve supports the conservation of rare habitat and continues to offer technical and logistical support from visiting scientists from all over the world. The reserve also manages the RPPN Ouro Verde (Private Reserve of Natural Patrimony Ouro Verde), which hosts the Pancada Grande waterfall, a site of cultural importance and a place of leisure for the region. The waterfall area and designated forest trails are open to the public and are also used to host environmental education activities. These activities are managed in line with regulation while minimizing impact on the site, and facilities (including sanitary infrastructure) are maintained for the public at no cost to the community. The production areas on the property continues to contribute to research and development of adaptive and disease-resistant rubber varieties, collaborating with agricultural bodies regionally and globally to ensure the long-term resilience of rubber farming. It also aspires to be a case study of how economic, social, and environmental needs of communities in rubber producing areas can be reconciled.

ENGAGING AND EMPOWERING COMMUNITIES

COUNTRY HOUSE PROJECT (*CASA FAMILIAR RURAL*)

To support the agricultural sector in the region, and to empower the next generation of farmers to develop sustainable farms, Michelin donated land and has partnered with other stakeholders to create the _Casa Familiar Rural - Igrapiúna_ (Country House Project). This agricultural technical school is catered to youth 14-18 years old, who are the children of farmers and smallholders in the region of Igrapiúna, Bahia. The school provides a professional education that covers techniques for the cultivation of rubber and other diversified crops, along with agricultural business strategies and management, giving them the skills and knowledge to develop sustainable small agricultural businesses. The training on technical and soft skills aims to foster food and livelihood security, and to develop community leaders that multiply this impact in their local communities. Environmental and social responsibility are also core parts of the curriculum. The project, set up in 2007 and still running today, has seen 337 graduates and 427 productive education projects.

Key Figures

Beneficiaries of the Program
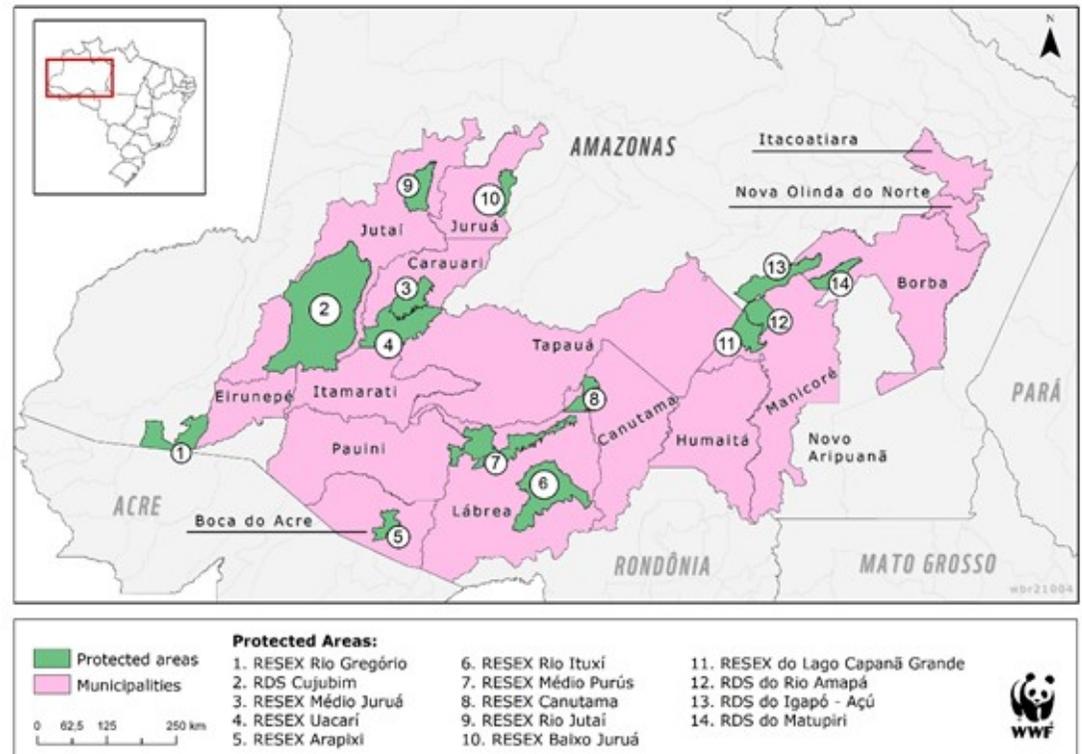
337 Graduates from 2007-2023

Productive Education Projects

427 Since 2007

ENGAGING AND EMPOWERING COMMUNITIES

STRENGTHENING THE NATURAL RUBBER VALUE CHAIN IN THE BRAZILIAN AMAZON

Latex extraction is an important part of the local economy for communities in the Amazon. Here, local communities, especially indigenous people groups, collect latex from naturally occurring rubber trees scattered in the Amazonian rainforest. The practice, when done sustainably, has minimal impacts on the forest, and provides an important income source for communities in the area. Understanding the difficulties faced in recent years by the Covid pandemic and the gradual exodus from the practice, the Michelin Foundation partnered with WWF Brazil to empower the communities in the area. In the short run, the project aims to preserve the existing ecosystem by improving the way natural rubber is extracted and commercialized by traditional communities. Better organizing the process and making it more viable will sustain employment for local people, mitigate the negative impacts of the health crisis, help promote forest conservation and reduce deforestation and the carbon emissions that go with it. As of 2023, 565 families of rubber tappers have been reached through the project and collectively manage 145,000 hectares of forest area for rubber extraction to date. This includes 11 farmer associations across 6 municipalities. The project also indirectly protects more than 1.3 million hectares of forest which comprise the 4 conservation units and 5 municipalities where the project's activities are being conducted in.

Protected Areas:

Protected areas	Municipalities

1. RESEX Rio Gregório
2. RDS Cujubim
3. RESEX Médio Juruá
4. RESEX Uacarí
5. RESEX Arapixi
6. RESEX Rio Ituxí
7. RESEX Médio Purús
8. RESEX Canutama
9. RESEX Rio Jutaí
10. RESEX Baixo Juruá
11. RESEX do Lago Capanã Grande
12. RDS do Rio Amapá
13. RDS do Igapó - Açú
14. RDS do Matupiri

ENGAGING AND EMPOWERING COMMUNITIES

RLU COMMUNITY PARTNERSHIP PROGRAM

Developed in 2021, RLU's Community Partnership Program (CPP) focuses on empowering smallholder farmers that operate within the company's concession area in both Jambi and East Kalimantan. The program aims to provide aid to smallholders through training (e.g., rubber cultivation and tapping techniques) as well as providing the community with opportunities of alternative livelihoods and economic improvements.

The CPP helps to strengthen the social and economic stability of smallholders through the social forestry scheme. Through this program, farmers engage in activities such as training on productive rubber cultivation, integrated farming programs, and/ or absorption of community rubber products. Another aspect of the program is helping to resolve land claims and conflicts and ensure compliance with applicable regulations. The CPP also provides production facilities, agroforestry training, institutional training, rubber capacity building training, and promotes agroforestry products for farmers' food security. In addition, specific support schemes have been set up for women in the communities, engaging them to be more involved in managing their land and plantations[30]. As of 2023, a total of 383 smallholder farmers are part of the CPP in Jambi. Some testimonials from farmer participants on how the program has positively impacted their livelihoods can be found in page 82 of RLU's Sustainability Report 2022/23. More information on the CPP can also be found in RLU's Sustainability Report 2022/23, pages 79-80.

[30] See page 68 for more information on the inclusion of women in the CPP and natural rubber supply chain

ENGAGING AND EMPOWERING COMMUNITIES

GENDER EQUITY IN THE NATURAL RUBBER SUPPLY CHAIN

Empowering women and gender equity is a key consideration in our natural rubber supply chain and community empowerment initiatives. In the CASCADE smallholder capacity building project in Indonesia, women are an important target group, and the project has a specific KPI for 25% of smallholder participants to be women; Michelin aims to implement similar KPIs in other planned projects. They will be trained in best agricultural techniques for rubber and other diversified crops, as well as in soft skills.

SUPPORTING THE INCLUSION OF WOMEN IN NATURAL RUBBER OPERATIONS

In our operations, diversity is a key concern of the group, and Michelin has developed a Diversity Policy and tracks a Diversities and Inclusion Management Index, of which gender balance "Achieve parity among Group managers and, by 2030, set the gender balance benchmark in our industry", is a key component[31].

PMB

As part of the Michelin Ecological Reserve Program, which is an extension of its production and restoration operations in Brazil, it organizes programs focused on empowering women. This includes the 'Women Leadership Program' which took its pilot batch of women from the region in 2021. The course is held by Michelin on its Bahia site and is divided into six modules over six months, focusing on scientific management of natural areas, work in the corporate world, and feminism with an emphasis on women's rights in the workplace. Livelihood improvement is also a key part of the program, where training on entrepreneurship activities like running a small business are provided through workshops. A total of 199 women have benefitted from the program since 2021, with 72 women participating in the program in 2023 alone.

[31] See Michelin Universal Registration Document 2023 pg. 86

ENGAGING AND EMPOWERING COMMUNITIES

SUPPORTING THE INCLUSION OF WOMEN IN NATURAL RUBBER OPERATIONS (CONT.)

RLU

Women empowerment is also an important pillar under RLU's CPP. The program encourages and equips women with the relevant skills to play a role in supporting their families in managing farms and rubber plantations. As of 2021, four Women Farmers Groups (*Kelompok Wanita Tani*) have been formed, with a total of 47 members. Members are involved in various coaching activities, ranging from rubber tapping techniques, producing organic fertilizer, developing agroforestry patterns with short-lived crops such as vegetables and ginger, and fisheries. Women are also trained to be more active in the marketing process and developing agricultural products. Testimonials of how the program has helped individuals can be found on page 80 of RLU's Sustainability Report 2022/23.

ENGAGING AND EMPOWERING COMMUNITIES

SUPPORTING LOCAL COMMUNITIES WITH FACILITIES AND SERVICES

Michelin is committed to engaging and supporting local communities. Through its Ouro Verde project, it continues to maintain facilities in the Ouro Verde RPPN for use by local communities and visitors, including utility infrastructure and trails, for the purpose of recreation and environmental education. Michelin remains an institutional supporter of the Casa Familiar Rural facility, which is used to train youth to be future farmer-leaders from the surrounding communities[32].

RLU also continues to play an important role in supporting local communities based on their needs. Support includes programs to aid and empower Indigenous communities, improve food security, and integrate independent smallholders in RLU's supply chain.

In 2021, RLU launched the Orang Rimba Program in partnership with the Tebo District Government and Bukit Tigapuluh National Park Agency. Three meeting centers were constructed for Orang Rimba communities (1 in 2020 and 2 in 2021). RLU also provides literary services and regularly facilitates the provision of medical treatment on a routine basis—the provision of these services continued from 2021-2023. Other facilities provided and maintained include an agroforestry nursery center, as well as an Orang Rimba Services Center commissioned in 2021. More information on RLU's Orang Rimba project can be found in RLU's Sustainability Report 2022/23 (pages 84-86).

Starting from 2021, RLU has also been working with and integrating neighboring Micro, Small and Medium Enterprises (MSMEs) as well as Rubber Processing and Marketing Units into the Company's supply chain. As of 2023, RLU is working with 17 BUMDEs and village cooperatives from 13 villages.

[32] More information on the Casa Familiar Rural project can be found on their website, where Michelin is listed as an Institutional Partner to the project.\
[33] RLU sustainability Report 22/23 page 80

ENGAGING AND EMPOWERING COMMUNITIES

STAKEHOLDER ENGAGEMENT AND CONFLICT RESOLUTION

In addition to local community engagement in its manufacturing operations and production operations in Brazil, Michelin recognizes the challenging operating environment of the RLU project and ensures that Michelin's policies are followed in its operations. Stakeholder engagement and conflict resolution (including those related to land claims), follow an approach designed to meet local law and regulations, Michelin's policy commitments, and the IFC performance standards. More information can be found in the RLU Sustainability Report 2022/23 (see pages 86-87).

To foster positive relations with farmers in their supply shed and resolve grievances with the local community, one of Michelin's Joint Ventures holds annual rubber outgrower forums for their smallholder supply shed. More information can be found in the Michelin Sustainable Natural Rubber Roadmap 2020-2025 (2023 Result) (see page 12, project 9).

NATURAL RUBBER SUPPLY CHAIN

As the world leader in tires and one of the world's biggest purchasers of natural rubber, Michelin aims to lead the way in sustainable management of the natural rubber supply chain. Michelin's natural rubber supply chain is primarily supplied by smallholders. In 2023, 89% of global sourcing originated from smallholders, while 11% originated from industrial and medium plantations[33].
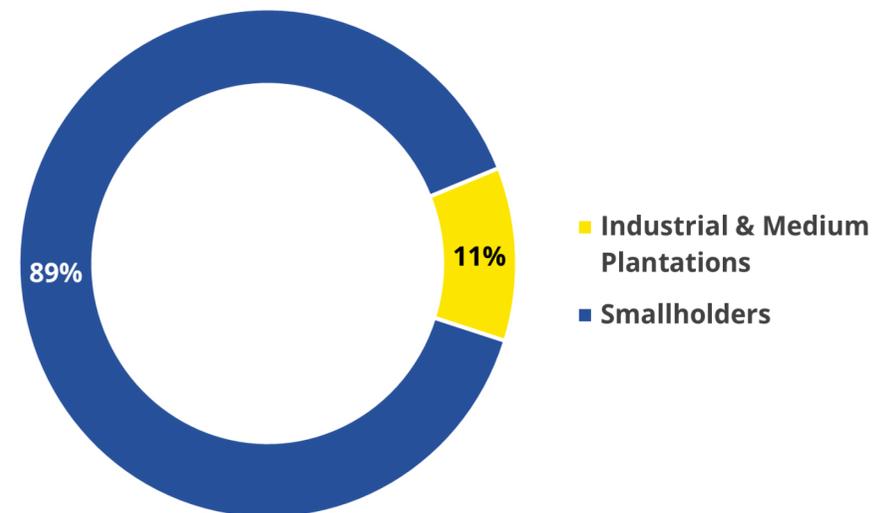
ENGAGING SMALLHOLDER FARMERS

With a vast majority of Michelin's and the world's production of natural rubber originating from smallholder farmers, Michelin firmly believes that empowering smallholders to be resilient and responsible is a key part of the solution for a sustainable natural rubber value chain. Michelin is working through a risk-based approach, where tools are first used to highlight priority risk themes and geographies, followed by targeted action to engage smallholder suppliers so that their practices are in line with our policies and expectations.

This process begins with the RubberWay®, a risk mapping tool that maps environmental and social risks throughout the natural rubber supply chain. The tool was developed to overcome the complex nature of the natural rubber supply chain, in that farmers often sell their raw material through layers of intermediaries, making it hard for processing factories to engage farmers or understand the risks in their upstream supply chains. RubberWay allows Michelin and its suppliers to rapidly identify risks and identify mitigating actions.

The identification of priority risks and geographies allows for targeted engagement with smallholder suppliers towards improved practices aligned with the sustainability commitments of Michelin and its suppliers. Working with RubberWay, Michelin identifies improvement areas based on the results of our suppliers' RubberWay risk mapping results, and mitigation actions or improvement plans are discussed for implementation by suppliers. As of end-2023, we are currently deploying the tool with suppliers representing 83% of our volumes and have reached 239,583 smallholder farmers in ten countries.

[34] Global sourcing includes own operations and third party processing factories. Data includes information from supplier declarations and supply chain studies, and sourcing mix from each individual processing factory is assigned proportionally based on Michelin purchased volumed per factory. Industrial plantations: >500ha. Medium plantations: <500 and >50ha. Medium plantations are typically owned by individual landowners and exist in limited number primarily in West Africa and South America; they are sometimes difficult to differentiate from smallholder farms. Michelin working with its suppliers to refine the delineation between small and medium farms, as well as to consider specific approaches for non-industrial medium farms.

Industrial & Medium Plantations vs. Smallholders [30]

- Industrial & Medium Plantations
- Smallholders

NATURAL RUBBER SUPPLY CHAIN

Engaging Priority Jurisdictions Through Capacity Building Projects

In priority jurisdictions, Michelin has also elected to engage smallholder farmers with direct intervention projects. At the end of 2020, it launched a targeted capacity building project for smallholder farmers to address livelihood, environmental and social risks identified through RubberWay, which will target three jurisdictions in Sumatra, Indonesia. Project CASCADE (Committed Actions for Smallholder CAapacity DEevelopment), in Sumatra Indonesia, aims to foster the livelihoods of 1,000 smallholders and their families while improving environmental and social practices.

The four-year project was developed from the ground up based on results from RubberWay. It couples in-person training and a digital training tool to enhance accessibility and measure impact. Agricultural training enables farmers to increase their rubber yields, and to pursue income diversification to improve their economic resiliency. Social and environmental training is a core part of the project, including human and labor rights training, and the promotion of environmentally friendly farms: reduction of agrochemicals, intercropping and agroforestry, and environmental education for deforestation-free farms. It is the first natural rubber project that encompasses the entirety of the supply chain: smallholder farmers and partners, a natural rubber processor, tire maker, and car maker.

Using CASCADE as a model, similar holistic capacity building projects are also being deployed in East Kalimantan (MAHAKAM Project) and Sri Lanka (RIVER Project). These two projects are expected to be completed by 2025 and, together with CASCADE, will engage 9000 smallholder farmers.

As of year-end 2023, a total of 2617 smallholder farmers or producers (under the Amazonas project which is supported by the Michelin Foundation) received training through these projects.

NATURAL RUBBER SUPPLY CHAIN

Leveraging Technical Training as an Engagement Platform

In our own operations, as well as in collaboration with our rubber-industry joint ventures in the region of West Africa, we are supporting smallholder farmers through technical assistance, extension services and capacity building events, while disseminating technical training material and high-yielding agricultural inputs. These trainings also serve as a platform to engage farmers on identified risks and towards sustainable practices. In 2023, inclusive of the trainings conducted by its joint venture partners, Michelin and its natural rubber network conducted 507,000 field trainings for over 90,000 farmers[35].

Engaging Smallholders in a Multi-Stakeholder Approach

Michelin also continues to seek opportunities to collaborate in a multi-stakeholder approach to address risks in the natural rubber supply chain. In 2021, it pledged funding for a smallholder capacity building project under the Global Platform for Sustainable Natural Rubber. This three-year project deployed in South Thailand will empower smallholder farmers to enhance their livelihoods and diversify their income through agroforestry systems, while creating positive environmental outcomes. The first training sessions under the project were launched in 2023.

SUPPLY FROM AGROFORESTRY

Michelin hopes that agroforestry can be a lever to achieve natural rubber farming that is climate-smart. On top of funding a GPSNR capacity building project on agroforestry in Thailand, Michelin hopes to work on identifying volumes originating from agroforestry and other high biodiversity systems of rubber farming, and explore the implementation of agroforestry models in its smallholder capacity building projects. In 2023, 0.69% of Michelin's natural rubber supply by volume originated from farms operating agroforestry models[36].

[35] Includes farmers engaged through Michelin's own initiatives or as part of our partnerships with our rubber-industry joint ventures (where Michelin offers its agricultural expertise).
[36] Accounted as supply originating from farms operating the *Sistema Agro Florestal* model in Brazil.

NATURAL RUBBER SUPPLY CHAIN

INTEGRATED RISK-BASED APPROACH

Michelin utilizes an integrated risk-based approach to assess, analyze and mitigate risk in its natural rubber supply chain. This involves:

- **Commitments:** The Michelin Sustainable Natural Rubber Policy governs our actions and is fully aligned to the GPSNR Policy Framework. These commitments are made actionable through the Sustainable Natural Rubber Roadmap 2020-2025, which contains more than 40 indicators which align with the pillars of the policy.

- **Data Collection and Sustainability Performance:** Every natural rubber supplier (processing factory and producer-processor group) needs to complete an approval process before it is added to an approved supplier list. The process includes sustainability and governance due diligence checks with an on-site audit (assessing quality, environmental and social aspects). Suppliers in high risk geographies or those that have sourcing structures including large plantation estates are subject to additional checks. A Large Plantation Compliance Checklist was developed in 2021-2022 and will be deployed in 2023.

- **Risk Assessment and Analysis:** To tackle the complexity of a smallholder-dominated supply shed, Michelin uses two tools, the (1) RubberWay Risk Mapping Tool for environmental and social risks throughout the supply chain, and (2) a Deforestation Risk Analysis Tool to identify priority suppliers and jurisdictions based on deforestation risk. A jurisdictional summary of the RubberWay risk map results can be found on our Natural Rubber Transparency Dashboard.

- **Risk Mitigation:** Based on the results of performance assessments and risk analysis, supplier corrective actions and action plans are developed and monitored. Michelin can choose to directly intervene in priority jurisdictions, and pursued this approach with the deployment of holistic capacity building projects in Sumatra, East Kalimantan, and Sri Lanka, based on findings of RubberWay deployment in the area.

- **Monitoring and Evaluation:** Stakeholders are kept updated on our actions and performance through our reporting and transparency channels, such as our Responsible Resilient Natural Rubber Transparency Dashboard. Suppliers are evaluated systematically on their sustainability performance on an annual basis, which has direct repercussions on sourcing decisions. It maintains stakeholder dialogs and grievance channels for feedback.

Main Pillars of the Integrated Risk-based Approach

Commitments	Data Collection and Sustainability Performance	Risk Assessment and Analysis	Risk Mitigation	Monitoring and Evaluation
• Sustainable Natural Rubber Policy • Roadmap 2020-2025	• Supplier Sustainabilty Questionnaire • On-site audits (Factory) • Plantation Compliance Checklist (Large Plantations)	• RubberWay Risk Mapping (Factory, Large Plantation, Intemediaries, Smallholders) • Deforestation Risk Analysis Tool (Smallholders) • Remote Sensing Tools (Large Plantations)	• Supplier Corrective Action Plans • RubberWay Risk Report and Action Plans • Supplier Initiated Projects • Direct Intervention Projects	• Reporting and Transparency • Roadmap 2020-2025 Annual Results • Annual Supplier Sustainability Ranking • Grievance Mechanism

NATURAL RUBBER SUPPLY CHAIN

A Jurisdictional Approach to Risk Assessment and Mapping

To deal with complex and dynamic supply sheds in smallholder supply sheds, Michelin is using innovative approaches to analyze collected data. Through its RubberWay tool, Michelin has collected vast amounts of smallholder environmental and social data from approximately 239,583 smallholder respondents as of end-2023. As the amount of data has increased, this has enabled aggregated analysis of the data at a jurisdictional level (province or district), providing insights into social and environmental risks so that mitigation is specific to geography and risk.

This same jurisdictional approach is used in the Deforestation Risk Analysis tool. In 2021, a preliminary analysis was conducted, covering all major sourcing countries. Initially, the tool analyzes the environmentally sensitive areas around each natural rubber processing plant, based on a uniform radius. The selected factories are then prioritized, based on the risk found, for a detailed mapping of the supply chain. Further analysis is then performed which identifies specific higher risk supply areas where risk mitigation needs to be performed; this was piloted in 8 of our supplier factories' supply sheds in 2022. Combined, data from both tools can be integrated to quickly identify priority jurisdictions.

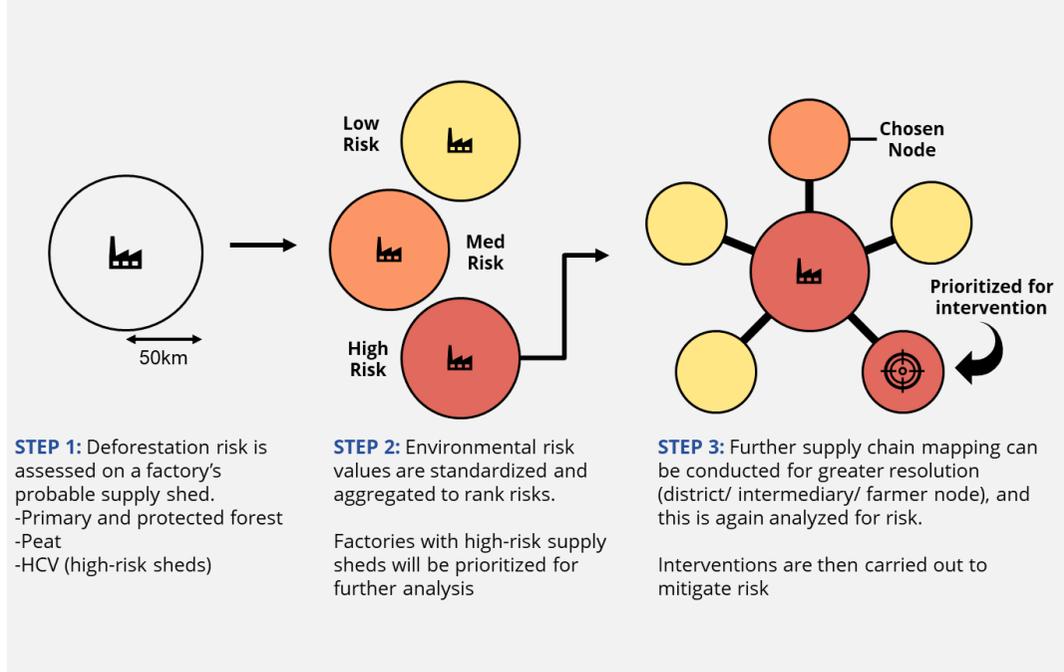**Illustration: Approach of the Deforestation Risk Analysis Tool**

STEP 1: Deforestation risk is assessed on a factory's probable supply shed.
-Primary and protected forest
-Peat
-HCV (high-risk sheds)

STEP 2: Environmental risk values are standardized and aggregated to rank risks.

Factories with high-risk supply sheds will be prioritized for further analysis

STEP 3: Further supply chain mapping can be conducted for greater resolution (district/ intermediary/ farmer node), and this is again analyzed for risk.

Interventions are then carried out to mitigate risk

Illustration: Integrated Jurisdictional Risk Analysis (RubberWay + Deforestation Risk, Simulated Data)

NATURAL RUBBER SUPPLY CHAIN

SOURCING FROM THIRD-PARTY PROCESSING FACTORIES

Michelin sources natural rubber primarily from independent suppliers. These suppliers can be independent natural rubber processing factories, a group with multiple factories or traders (natural rubber wholesalers). In every case, Michelin conducts on-site audits, which include environmental and labor aspects, on individual natural rubber processing factories before they are added to an approved factory list. All suppliers, including groups and traders, have to abide by this list, and 100% of supply is traceable to the factory level. Michelin occasionally purchases rubber through traders instead of directly from the factories (sourcing remains limited to the approved factory list with 100% traceability); this accounted for 9% of volume by spend in 2023[37]. In 2023, Michelin sourced natural rubber from 135 processing factories. This includes joint venture partners, where Michelin maintains a minority shareholding; they are part of Michelin's global natural rubber network.

Additionally, Michelin has also begun to calculate the GHG emissions from land use change in it supplier's operations (Scope 3). These emissions amounted to 546,795 tons of CO_2 in 2022 (The most recent year of calculations). The calculations for both Michelin's scope 1 and scope 3 emissions are validated by the SBTi Framework.

[37] 100% traceability to factory maintained. Some factories sell on the international market using traders. Also includes purchasing based on short term demand. Factories that sell through affiliate marketing offices or wholesalers are considered factory direct.
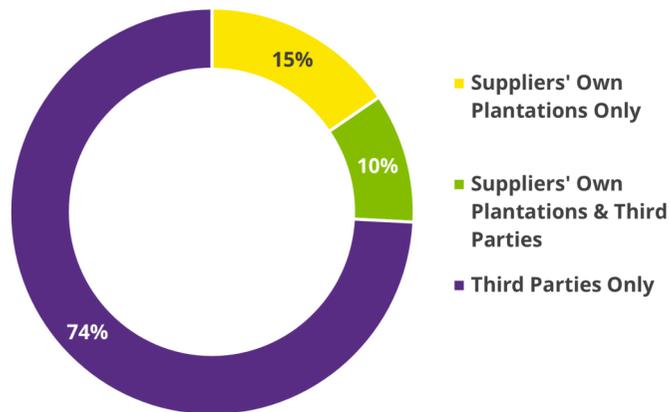
NATURAL RUBBER SUPPLY CHAIN

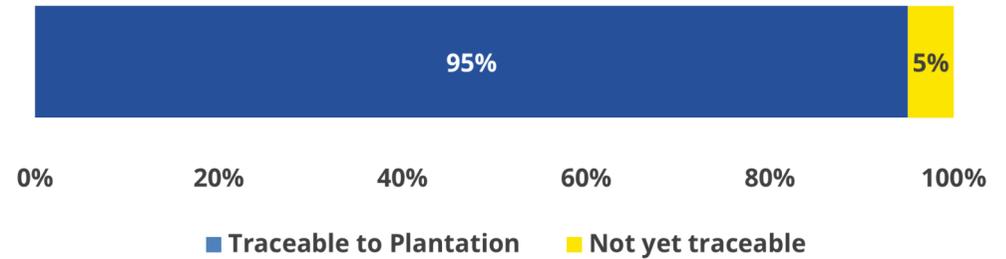## SOURCING FROM THIRD-PARTY PROCESSING FACTORIES: DATA YEAR 2023

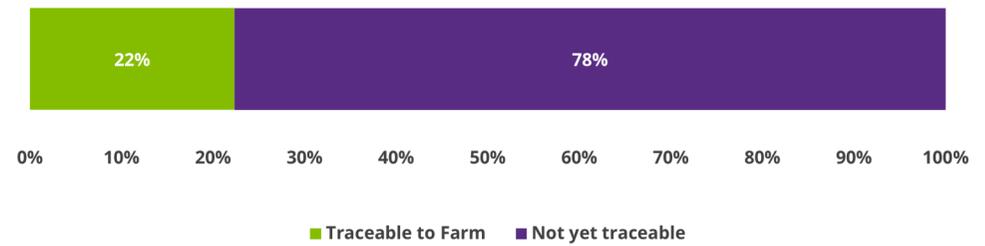### Volumes (%) Sourced from Third Party Procesing Factories[38] from:

- 93%
- 7%
- ■ Suppliers' Own Operations
- ■ Third Parties
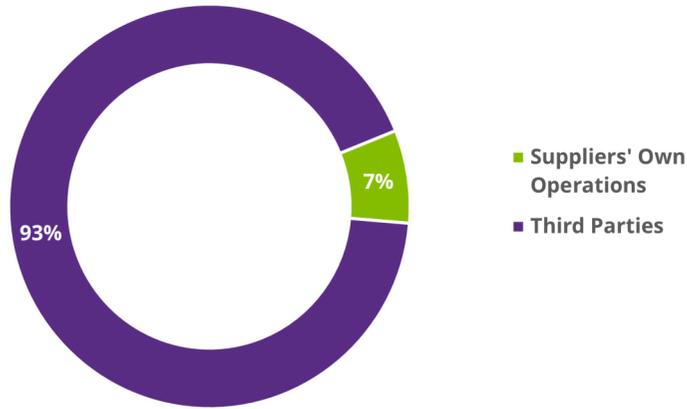
Third Party Processing Factories Sourcing[38] from:

- 15%
- 10%
- 74%
- ■ Suppliers' Own Plantations Only
- ■ Suppliers' Own Plantations & Third Parties
- ■ Third Parties Only

Traceability to Industrial and Medium Plantations[39]

- 95% / 5%
- ■ Traceable to Plantation   ■ Not yet traceable

Traceability to Smallholders (Farm Level)

- 22% / 78%
- ■ Traceable to Farm   ■ Not yet traceable

Traceability to Smallholders (Jurisdictional Level)

- 88% / 12%
- ■ Traceable to Jurisdiction   ■ Not yet traceable
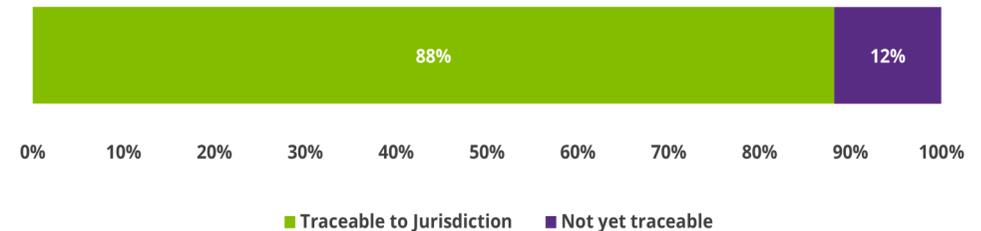
[38] Number of factories expressed as a percentage of total number of third party factories. Includes data based on supplier declaration.

[39] Data includes information from supplier declarations and supply chain studies, and sourcing mix from each individual processing factory is assigned proportionally based on Michelin purchased volumed per factory. (e.g. if Michelin sources 10% from a factory, and the factory sources 10% from suppliers' own plantation and 90% from 3rd parties, this is accounted for as 1% from suppliers' own plantations and 9% from 3rd parties in Michelin's sourcing; same methodology applies to traceability calculations). Industrial plantations: >500ha. Medium plantations: <500 and >50ha. Traceability refers to knowledge of farm or plantation location (geolocation through central GPS location or address) or boundary information (polygon). Traceability to smallholders at jurisdictional level currently defined as minimum 'province level or equivalent' (sub-national level).

NATURAL RUBBER SUPPLY CHAIN

MONITORING RISKS IN SUPPLIER OPERATIONS

Understanding the specific risks of deforestation, Michelin has developed a global deforestation risk analysis tool for its suppliers' supply sheds, conducted at the natural rubber processing factory level, which started end-2020. In 2021, a preliminary analysis was completed, covering all major sourcing countries. Based on the results from the preliminary analysis, priority jurisdictions were identified. In 2022, a second analysis phase was piloted on the actual jurisdictional supply sheds of eight factories and action plans were identified based on the results.

Michelin is also exploring deforestation monitoring approaches with a number of tools. One of its joint venture partners has been implementing satellite monitoring approaches with Satelligence to monitor encroachment. One of these projects is exploring the use of satellite monitoring in the context of the landscape approach, with coverage in its smallholder sourcing areas in addition to its own operations. With industrial plantations, Michelin is progressively incorporating supplier plantation boundaries into monitoring tools such as Global Forest Watch Pro, which will allow it to monitor and track deforestation and hotspot alerts.

Starting in 2023, Michelin has also began working with its natural rubber network and suppliers to geolocalize its supply chain at the farm level. These farms were then assessed to confirm their compliance with both Michelin commitments and deforestation legislation. Since 2023, to ensure compliance with the European Union Deforestation Regulation, Michelin further expanded its deforestation monitoring efforts to its suppliers' operations, tapping into and using the geolocalized data. Here, the timeframe of interest follows the cut-off date stipulated in the EUDR, which is 31 December 2020. As such, the geolocalized plots are monitored for deforestation by overlaying the plots onto open source maps that utilize satellite data to detect deforestation from 1 January 2021 onwards.

NATURAL RUBBER SUPPLY CHAIN

MONITORING RISKS IN SUPPLIER OPERATIONS (CONT.)

Since the GPSNR cut-off date of 1 April 2019, no instances of deforestation from new development was reported by suppliers operating industrial plantations. In 2023, Michelin recorded a number of fire incidents reported by its major suppliers [41] operating industrial estates, it maintains engagement with suppliers on their fire prevention activities.

Fire Incidents[40] Reported by Major Suppliers[41] Operating Industrial Plantations in 2023

Country	# Suppliers Reporting	Fire incidents	Area affected
Côte d'Ivoire	2	16	8.78 Ha
Ghana	1	6	2.63 Ha
Nigeria	2	23	17.43 Ha
Liberia	1	28	42.29 Ha

[40] Causes of fires: Causes were due either to accidental fires and/or the use of fire by local communities.
Response to fires: With each supplier, it has been understood that appropriate mitigation activities such as additional patrols and monitoring of high risk areas during high risk seasons have been implemented. Michelin will continue to monitor reported instances and track progress year on year.

[41] Major suppliers operating industrial plantations (>500 Ha). Reporting is not currently standardized between fire incidents/area affected but Michelin is working to streamline reporting amongst its suppliers.

NATURAL RUBBER SUPPLY CHAIN

PARTNERSHIPS: MULTISTAKEHOLDER AND LANDSCAPE APPROACHES

Michelin believes that landscape and/or jurisdictional approaches to tackle the complexities of sustainable supply chains. This is particularly the case for natural rubber, where production is smallholder-dominated and where single processing factories can be dynamically supplied with thousands if not tens of thousands of individual actors. Multi-stakeholder efforts, which bring cooperation and shared action across the value chain are also vital.

On top of its on-going involvement in the Global Platform for Sustainable Natural Rubber, which brings together many stakeholders across the supply chain, Michelin is also involved in on-the-ground initiatives that leverage landscape or jurisdictional approaches.

Through RLU, which operates adjacent to the Bukit Tigapuluh National Park in Sumatra, Indonesia, the Group is involved in the Bukit Tigapuluh Protection Forum, a landscape approach initiative involving various civil society organizations and private actors operating in the area[42].

The CASCADE Project adopts a mix of jurisdictional-scale and landscape principles, it is seated within administrative boundaries, considering geography-specific contexts, but is primarily supported by private actors from all stages of the natural rubber value chain. The project deeply considers the interactivity between prevailing economic conditions and networks where participants are located.

More information on our involvement in multi-stakeholder and landscape approaches can be found in our CDP Forests 2024 response.

[42] See (Partnerships for Forests 2023) Landscape Approaches, pg. 61-62. In 2022 Michelin became directly involved in the forum with its acquisition of RLU.
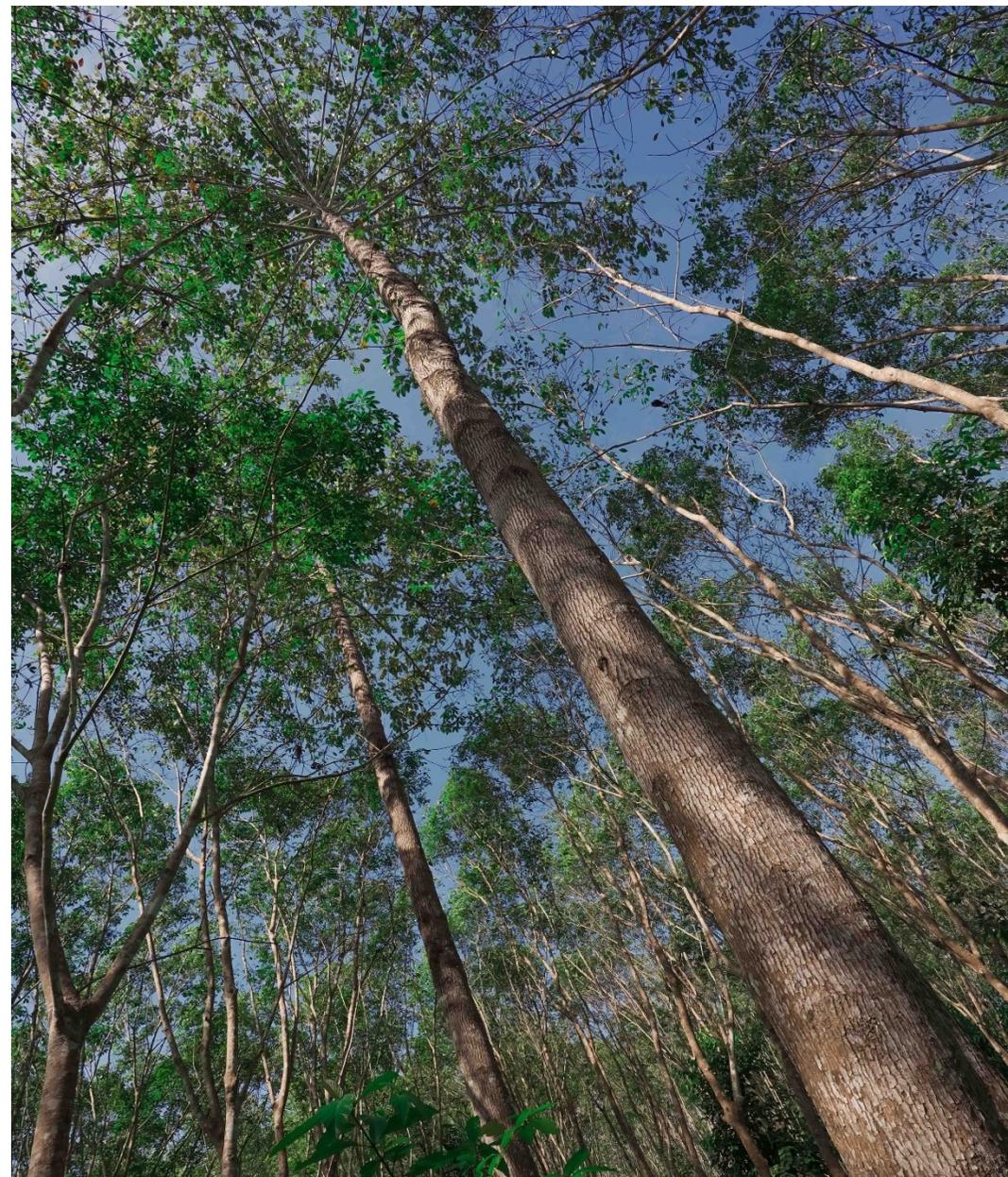
NATURAL RUBBER SUPPLY CHAIN

List of Third-Party Processing Factories (Natural Rubber Network): Data year 2023

Supplier	Name	Location (Coordinates)
Côte d'Ivoire		
Société Internationale de Plantations d'Hévéas	SAPH Bettie	6.084, -3.392
	SAPH Bongo	5.498, -3.515
	SAPH Loeth	5.817, -6.603
	SAPH Rapides Grah	5.104, -6.638
	SAPH Toupah	5.311, -4.562
	SAPH Yacoli	5.967, -6.514
Ghana		
Société Internationale de Plantations d'Hévéas	GREL	4.921, -1.980
	GREL TSIBU	4.883, -2.089
Indonesia		
PT. Multi Kusuma Cemerlang	Multi Kusuma Cemerlang	-0.546, 117.162
Nigeria		
Société Internationale de Plantations d'Hévéas	RENL Araromi	6.646, 4.441
Thailand		
NTEQ Polymer Co. Ltd.	NTEQ Polymer	16.740, 104.675

NATURAL RUBBER SUPPLY CHAIN

List of Third-Party Estates / Management Units (Natural Rubber Network): Data year 2023

Supplier	Name	Georeferenced Maps
Nigeria		
Rubber Estates Nigeria Limited (RENL) — Société Internationale de Plantations d'Hévéas	Araromi	Div 1, Div 2, Div 3
	Adeola	Div 4
	Osse River	Div 5, Div 6, Div 7, Div 8
	Utagba Uno	Div 8
	Urhonigbe	Div 9
Ghana		
Ghana Rubber Estates Limited (GREL) — Société Internationale de Plantations d'Hévéas	GREL Estate	Link
	GREL Outgrower Farms	Link
Indonesia		
Royal Lestari Utama (RLU)	Multi Kusuma Cemerlang	Embedded in HCV/S Report (ref. pg. 19)
	Lestari Asri Jaya	Embedded in HCV/S Report (ref. pg. 16)
	Wanamukti Wisesa	Embedded in HCV/S Report (ref. pg. 18)
Côte d'Ivoire (Ivory Coast)		
Societe Africaine de Plantations d'Heveas (SAPH)—Société Internationale de Plantations d'Hévéas	Bettie	Link
	Bongo	Link
	Digahio	Link
	Rapides Grah	Link
	Toupah	Link

NATURAL RUBBER SUPPLY CHAIN

List of Jurisdictions that covers all supplier smallholders within Supply Chain: Data year 2023, as gathered from RubberWay and EUDR deployment

Country	Jurisdiction Level	Jurisdictions
Brazil	Municipality	Álvares Florence, Aracruz, Aspásia, Autazes, Barão de Monte Alto, Boa Esperança, Boca do Acre, Carauari, Cardoso, Catanduva, Cosmorama, Elisiário, Eunápolis, Fernandópolis, Gameleira, Goianésia, Guaraçaá, Guarapari, Ibirá, Igrapiúna, Irapuã, Itabuna, Itacoatiara, Itajobi, Ituberá, Jales, Linhares, Macedônia, Manicoré, Maués, Meridiano, Mira Estrela, Mirassol, Morrinhos, Mucuri, Nova Canaã Paulista, Nova Glória, Nova Granada, Nova Venécia, Novo Horizonte, Palmeira do Oeste, Palmeirante, Pauini, Piracicaba, Porto Seguro, Potirendaba, Recife, Rio de Janeiro, Rubinéia, Sales, Santa Albertina, Santa Fé do Sul, Santa Rita do Oeste, Santana da Ponte Pensa, São José do Rio Preto, São Mateus, Silves, Sirinhaém, Sooretama, Sud Mennucci, Tabapuã, Tanabi, Três Fronteiras, Uchoa, Urânia, Urupês, Valentim Gentil, Vila Velha, Votuporanga
Côte d'Ivoire	Department	Abengourou, Abidjan, Aboisso, Adiake, Adzope, Agboville, Agnibilekrou, Akoupe, Alepe, Arrah, Bangolo, Bettie, Biankouman, Blolequin, Bocanda, Bondoukou, Bongouanou, Bouafle, Dabou, Daloa, Danane, Daoukro, Didievi, Dimbokro., Divo, Duekoue, Facobly, Fresco, Gagnoa, Grand-Bassam, Grand-Lahou, Gueyo, Guiglo, Guitry, Issia, Jacqueville, Kouibly, Koun Fao, Lakota, Man, M'Bahiakro, MBatto, Meagui, Oume, Prikro, San Pedro, Sassandra, Sikensi, Sinfra, Soubre, Tabou, Tai, Tiapoum, Tiassale, Tiebissou, Toulepleu, Toumodi, Vavoua, Yakasse-
Ghana	District	Abura-Asebu-Kwamankese, Accra, Agona, Ahanta West, Ajumako-Enyan-Esiam, Asante Akim South, Assin North, Assin South, Awutu Efutu Senya, Cape Coast, Dangbe East, Ejura Sekyedumase, Gomoa, Jomoro, Lower Denkyira, Mfantsiman, Mpohor Wassa East, Nzema East, Obuasi Municipal, Pru, Sefwi Wiawso, Shama Ahanta East, Upper Denkyira, Wasa Amenfi East, Wasa Amenfi West, Wassa West
Guinea	Prefectures	Yomou

NATURAL RUBBER SUPPLY CHAIN

List of Jurisdictions that covers all supplier smallholders within Supply Chain: Data year 2023, as gathered from RubberWay and EUDR deployment

Country	Jurisdiction Level	Jurisdictions
Indonesia		Aceh Tamiang, Aceh Tenggara, Aceh Timur, Aceh Utara, Asahan, Balangan, Balikpapan, Bandar Lampung, Bangka Barat, Banjar, Banjar Baru, Banjarmasin, Banyuasin, Barito Kuala, Barito Selatan, Barito Timur, Barito Utara, Batang Hari, Belitung Timur, Bengkalis, Bengkayang, Bengkulu, Bengkulu Selatan, Bengkulu Utara, Berau, Bogor, Bontang, Bulungan, Bulukumba, Bungo, Deli Serdang, Gunung Mas, Hulu Sungai Tengah, Indragiri Hulu, Jakarta Barat, Jakarta Pusat, Jambi, Kampar, Kapuas, Kapuas Hulu, Katingan, Kayong Utara, Kepulauan Riau, Ketapang, Kota Balikpapan, Kota Baru, Kota Bontang, Kota, Pontianak, Kota Samarinda, Kotawaringin Timur, Kuantan Singingi, Kubu Raya, Kutai Barat, Kutai Kartanegara, Kutai Timur, Labuhan Batu, Lahat, Lampung Barat, Lampung Selatan, Lampung Tengah, Lampung Timur, Langkat, Langsa, Lhokseumawe, Lubuk Linggau, Malinau, Mandailing Natal, Mahakam Hulu, Merangin, Morowali Utara, Muara Enim, Muaro Jambi, Murung Raya, Musi Banyu Asin, Musi Rawas, Nias, Nunukan, Ogan Komering Ilir, Ogan Komering Ulu, Padang, Padang Sidempuan, Palangka Raya, Palembang, Pasaman, Paser, Pekan Baru, Pelalawan, Penajam Paser Utara, Prabumulih, Pulang Pisau, Rejang Lebong, Rokan Hilir, Rokan Hulu, Samarinda, Sarolangun, Sawahlunto, Semarang, Siak, Simalungun, Sinjai, Solok, Tabalong,Tanah Bumbu, Tanah Laut, Tanjung Jabung Barat, Tanjung Jabung Timur, Tapanuli Selatan, Tapanuli Tengah, Tapin, Tebing Tinggi, Tebo, Tulang Bawang, Way Kanan
Liberia	District	Neekreen, District #3, District #4
Malaysia	District	Batang Padang, Bentong, Bera, Jerantut, Kinta, Kota bharu, Kuala Kangsar, Kuala Krai, Kuantan, Larut & Matang, Lipis, Maran, Pasir Mas, Raub, Seberang Perai Tengah, Seremban, Tanah Merah, Temerloh
Nigeria	Local Government Area	Okitipupa, Ogun Waterside, Odigbo, Ilaje, Ijebu East

NATURAL RUBBER SUPPLY CHAIN

List of Jurisdictions that covers all supplier smallholders within Supply Chain: Data year 2023, as gathered from RubberWay and EUDR deployment

Country	Jurisdiction Level	Jurisdictions
Thailand	Province	Amnat Charoen, Bangkok, Bueng Kan, Buri Ram, Chachoengsao, Chaiyaphum, Chanthaburi, Chiang Mai, Chiang Rai, Chon Buri, Chumphon, Kalasin, Kanchanaburi, Khon Kaen, Krabi, Lampang, Lamphun, Loei, Maha Sarakham, Mukdahan, Nakhon Phanom, Nakhon Ratchasima, Nakhon Si Thammarat, Nan, Narathiwat, Nong Bua Lam Phu, Nong Khai, Pattani, Phangnga, Phatthalung, Phayao, Phetchabun, Phitsanulok, Phrae, Phuket, Prachuap Khiri Khan, Ranong, Rayong, Roi Et, Sa Kaeo, Sakon Nakhon, Satun, Si Sa Ket, Songkhla, Sukhothai, Surat Thani, Surin, Tak, Trang, Trat, Ubon Ratchathani, Udon Thani, Yala, Yasothon
Vietnam	Province	Binh Duong, Binh Phuoc

Appendix: Version Control

Version number	Published	Change Log
V1.0	06 December 2024	nil
V1.1	22 January 2025	• Links for RLU Sustainability Report changed • Updated ISO14001 certificate links for Brazil on page 5 • Added RLU and MKC reports on page 15 • Added RLU restoration plan on page 17 • Added paragraph on outgrower forums held annually on page 34 • Added paragraph on spatial monitoring of geolocalised plots on page 42 • Shifted fire monitoring onto page 43 • Changed sub-header for pages 47-49 to "List of Jurisdictions that covers all supplier smallholders within Supply Chain: Data year 2023, as gathered from RubberWay and EUDR deployment"