



INVESTING IN SUSTAINABLE NATURAL RUBBER

When investing in any naturally occurring commodity, financial institutions need to be wary of the potential ESG risks at play. Natural rubber is no different, and yet historically it has received less attention from a risk perspective, compared to other forest-risk commodities such as timber and palm oil. However, awareness of both the risks and opportunities associated with sourcing natural rubber is beginning to grow, and it was recently included as one of the 7 'key commodities' covered by the EU Deforestation Regulation (EUDR). The introduction of this regulation will have major implications for the finance sector, so getting to grips with the commodities now is crucial. This brief will introduce the key considerations for responsible investors in the forestry sector.

WHAT IS NATURAL RUBBER?

Natural rubber is a soft commodity that is obtained by scoring or 'tapping' rubber trees (*Hevea brasiliensis* being the most common species) until they release latex. Grown predominantly in South East Asia, it is used in a wide range of consumer goods such as tyres, rubber gloves and medical equipment, due to its unique properties of durability and flexibility. Although not entirely interchangeable, some rubber products will use 'synthetic' rubber that is made from crude oil, or a mix of both natural and synthetic. As a result of the continued growth of the automobile market and a rise in oil prices reducing the viability of synthetic rubber, demand is on the rise for natural rubber, and in 2022, some 14.2 million metric tons were consumed worldwide ([Statista, 2022](#)).

PRODUCTS AND GEOGRAPHIES

Natural rubber is grown in tropical regions and emerging markets therefore dominate production. In 2022, Thailand and Indonesia accounted for approximately 58% of global natural rubber production, while Vietnam, China, Malaysia and India contributed a further 25% ([Statista, 2022](#)). There has also been growth in supply from Central and West Africa, with countries such as

the Ivory Coast becoming new frontiers for rubber production.

The automotive industry is the most significant purchaser of natural rubber, with tyre manufacturers consuming an estimated 73% of the global supply ([ETRMA, 2020](#)). This is largely due to the durability and heat resistance of natural rubber as opposed to synthetic. Natural rubber is also used in a variety of other products such as medical gloves, condoms, clothing (shoe soles) and industrial machinery.

NATURAL RUBBER VALUE CHAIN

The natural rubber value chain poses some traceability challenges for investors and supply chain actors. Production of the commodity comes predominantly from around 6 million smallholder farmers, or farmers who own plots of land typically smaller than 8 hectares.

INVESTOR WORKING GROUP FOR A DEFORESTATION-FREE AUTOMOTIVE SUPPLY CHAIN

CONVENED BY RAINFOREST FOUNDATION NORWAY (RFN), THIS GROUP OF 12 GLOBAL INVESTORS COLLABORATIVELY ENGAGE WITH TYRE MAKERS, CAR SEAT MAKERS AND OEM'S TO ADDRESS THE SUPPLY CHAIN RISKS IN THE SECTOR. ZSL ARE CURRENTLY ACTING AS KNOWLEDGE PARTNERS FOR NATURAL RUBBER, WITH RFN ADVISING ON LEATHER. THE GROUP AIMS TO LEVERAGE THEIR SIGNIFICANT FINANCING POWER TO DRIVE CHANGE IN THE INDUSTRY. TO GET INVOLVED, PLEASE CONTACT FERGUS.CAMPBELL@ZSL.ORG OR ERLEND@RAINFOREST.NO FROM RFN.





Smallholders currently make up 85% of natural rubber supply, and the majority of these farmers are independent. 'Scheme smallholders' who are contracted to supply their crop to a sole buyer are rare compared to other agricultural commodities.

There is a significant bottle neck in the rubber supply chain when it comes to processing, with estimations [of around 500 processing facilities for natural rubber globally](#). Once processed, natural rubber has a long shelf life, and can sit in processing sites for long periods of time before being shipped to manufacturing plants, making it a highly illiquid product. Manufacturing is not geographically specific and will depend on the type of end product, with the major tyre makers spread across Europe (Pirelli, Michelin, Continental), Asia (Yokohama, Toyo Tyres, Sumitomo) and North America (Goodyear, Bridgestone).

INVESTING IN RUBBER

Due to the fact that there are currently no publicly listed rubber plantations, investment in the industry is largely focused on the large manufacturing companies (e.g. tyre makers) and original equipment manufacturers (e.g. car makers).

Innovative financing structures such as sustainability linked loans and green bonds have been attempted in the rubber industry, with varying results. In 2020, Deutsche Bank provided rubber producer and processor Corrie MacColl, a subsidiary of Halcyon Agri, with a [\\$25 million loan](#) across a three-year tenor, structured to incentivise environmentally sustainable activities. If set up with clear KPI's, baselines and transparent reporting, sustainability-linked loans could be a constructive way for investors to drive change in the rubber sector. In 2018, Michelin used green bonds to finance the rubber plantations of its Indonesian partner Royal Lestari Utama (RLU). The bond has been the subject of [significant media controversy](#), with reports that investors in the \$95 million bond were misled and unaware that RLU had deforested thousands of hectares of tropical rainforest and priority wildlife habitats just prior to the launch of the sustainability project.

PROFIT DRIVERS

Supply chain disruptions, such as weather events in

producer countries, political instability and changes to importer or exporter country regulations, have the potential to directly impact natural rubber profits and are likely to increase in frequency as a result of climate change. For example, the natural rubber price index increased 43.6% between November 2016 and February 2017, partly because of [widespread flooding in southern Thailand](#) which resulted in damage to infrastructure that significantly hampered rubber production. Other natural hazards can also pose issues, with a [fungal disease recently threatening to decimate Indonesia's rubber supply](#).

Natural rubber profits are directly correlated to oil prices, as petroleum is the primary ingredient for making synthetic rubber, and manufacturers are likely to shift to use more natural rubber in their products if it provides a cheaper alternative.

Ultimately, profits of natural rubber will depend on the relative success of key sourcing industries, with the automotive sector being a good indicator of rubber demand. Due to innovations in electric vehicles (EV), the automotive sector has seen growth in recent years which does not show any indications of slowing. This has directly contributed to recent estimations of a rubber market growth rate of 6%, with predictions of the market value reaching \$73.42 billion by 2029 (according to [Maximise Market Research](#)).

RISKS

There are numerous ESG risks related to rubber that it is important for investors to consider when engaging with companies in the industry. As with other soft commodities, natural rubber is associated with large-scale deforestation and forest degradation as land is cleared for plantations. In a recent study, the Royal Botanic Gardens of Edinburgh estimated [that 4.1 million ha of forest in Southeast Asia have been cleared for rubber between 1993 and 2016](#). Analysis by Global Witness in 2022 estimated that industrial rubber plantations contributed to almost [520km² of deforestation in West and Central Africa since 2000](#) – an area 16 times the size of Brussels. This destruction results in a significant loss of ecosystem services and biodiversity, and the study also found that 1 million ha of rubber plantations in 2021 were situated in [Key Biodiversity Areas](#). The clearance of natural forest for



rubber production can also exacerbate physical risks such as increasing the severity of extreme weather events, worsening air quality and lowering precipitation levels.

Rubber plantations can also have damaging impacts on Indigenous Peoples and local communities, with land grabbing a continuous issue in the sector. Additionally, processing natural rubber requires significant water consumption and can lead to the over-extraction of water sources, water pollution from discharged effluent and odour pollution from foul-smelling compounds released during processing.

Rubber production has also been associated with issues of forced labour and child labour, with the dominance of smallholder supply resulting in a lack of production-setting oversight and inadequate training on labour standards. Forced labour has also been found in manufacturing plants, and in 2021, it was reported that rubber glove maker TopGlove were conducting forced labour in their manufacturing factories in Malaysia, and confiscating passports of migrant workers. This resulted in the company being [banned from exporting the US market](#) during a period of high demand due to the COVID-19 pandemic.

Due to its high proportion of smallholder supply, long shelf life, and high likelihood of being mixed with multiple sources in processing plants, natural rubber can be very hard to trace back to source. These traceability issues cause concerns for investors in manufacturing companies, who may not know where the rubber in their products is coming from and therefore will be unaware of potential ESG risks.

All of these issues result in the potential for reputational and regulatory risks for FI's investing in rubber companies, with the potential for share losses or stranded assets due to non-compliance with emerging regulations. Sovereign debt yields in emerging markets could also suffer due to the physical risks associated with rubber expansion (such as forest loss and air quality reduction) with asset owners investing in government bonds affected. Investors need to push for transparency, as risks are likely to increase when they are kept in the dark by rubber companies.

20.8% OF COMPANIES (5/23) ASSESSED ON SPOT HAVE A TIME-BOUND COMMITMENT TO ACHIEVE 100% TRACEABILITY TO INDUSTRIAL PLANTATION LEVEL. THIS MEANS TRACEABILITY TO SMALLHOLDER FARM LEVEL

20.8%



REGULATION

Due to rising awareness of the ESG risks associated with its production, natural rubber has been under increased scrutiny of late, culminating in its eventual inclusion in the upcoming [EU Deforestation Regulation \(EUDR\)](#). Under this regulation, importers and traders of forest-risk commodities such as natural rubber will have to conduct mandatory due diligence into their supply chains and achieve traceability to plot level before putting products on the market. This poses significant challenges for EU tyre manufacturers, but is an important step in ramping up investment in traceability solutions in the industry. In 2025, the EUDR will be reviewed with the potential for its mandatory due diligence requirements to be extended to financial institutions who are financing forest-risk commodity companies.

The [US FOREST Act of 2023](#) proposes similar due diligence requirements as the EUDR relating to the import of illegally deforested commodities, with rubber included in the initial commodity list, but this has yet to be voted on in Congress. The UK is expected to follow suit with amendments to [Schedule 17 of the Environment Act](#), although the exact list of commodities that will be covered has also not yet been decided.



CERTIFICATION

Investors cannot rely solely on certification for their due diligence efforts for any forest-risk commodity and this is especially true with natural rubber, where unlike the palm oil industry (RSPO) and the timber/pulp industry (FSC/PEFC), there is no ubiquitous certification scheme. FSC and PEFC have both introduced certification for natural rubber, although the proportion of global supply covered is quite limited, with only around 4% of global rubber plantation area currently FSC certified. One reason for this is that the cut-off date for deforestation under FSC is 1994, and a large proportion of rubber plantations would have been created after that cut-off as it is a rapidly growing industry. However, due to concerns that the 1994 cut off disproportionately effects emerging markets, a new conversion cut-off date of 31 December 2020 is set to be established, which may lead to an increase in FSC certified rubber. This cut-off date will also be combined with requirements for social and environmental remedy for any harms caused before 2020. Under both FSC and PEFC, smallholders can be certified as a group, which helps reduce costs and allows for the sharing of roles and responsibilities to achieve the common goal of sustainability certification. In late 2023, Bridgestone became the first company to achieve ISCC Plus certification (the International Sustainability and Carbon Certification) for a natural rubber plantation. The certificate was awarded to their Firestone Liberia operations, including both farms and processing facilities, in recognition for its efforts in reducing environmental impact, efficiently utilising resources and mitigating climate change impacts ([Bridgestone, 2024](#)).

To demonstrate their social intentions and commitment towards benefitting smallholders, natural rubber processors and manufacturers could also look to source fair-trade natural rubber from [Fair Rubber](#) approved suppliers. In doing so, they will pay a premium that ensures that even in times of extremely low prices small farmers do not only cover their production costs, they also have some spare income that allows them to send their children to school, buy new tools and seek other livelihood improvements.

Although it does not provide certification, the [Global Platform for Sustainable Natural Rubber \(GPSNR\)](#) is the most significant multi-stakeholder initiative in the industry. Bringing together natural rubber producers, processors, manufacturers and end users with smallholder representatives, and civil society. GPSNR plays an important role in the industry by driving mass capacity building for smallholder farmers, creating a 'shared investment' mechanism to fund sustainability activities and setting common requirements for sustainability policy commitments and corporate reporting. They will also be launching an assurance mechanism in 2024, which will see requirements for 3rd party verification of companies' due diligence.

INDUSTRY TRENDS

Technology Solutions - due to the difficulties surrounding traceability, distributed ledger technologies (DLT's) that use blockchain technology to help map supply chains have become increasingly popular. [PROJECT TREE](#), an industry initiative set up by ITOCHU, is an example of using blockchain technology to track rubber transactions, with aims of creating the first fully traceable car tyres. Developed by rubber industry stakeholders, [Rubberway](#) and [Agridence](#) are online risk mapping and trading platforms, that help give downstream companies better oversight on production settings and working conditions up the supply chain.

Capacity building - as a result of incoming regulation and growing sustainability expectations from external stakeholders, buyers are beginning to collaborate across the whole supply chain to improve agricultural practices. There are many examples of capacity building schemes among smallholders, and to find out more about how you can help support some GPSNR led initiatives, visit <https://sustainablenaturalrubber.org/capacity-building/>.

THE FUTURE OF TYRES?

THERE IS A POSSIBLE FUTURE FOR MORE WIDESPREAD RUBBER CERTIFICATION. IN 2021, PIRELLI INTRODUCED AN FSC-CERTIFIED TYRE.





INVESTING IN SUSTAINABLE NATURAL RUBBER

INVESTOR BRIEF



Agroforestry - [described by Mighty Earth](#) is a “system of mixed farming involving the production of tree crops alongside other horticultural or agricultural crops, sometimes with livestock”. Agroforestry methods will be a crucial way for smallholders to build the climate resilience of their farms, as well as improving livelihoods through diversifying income, and benefitting biodiversity. Natural rubber smallholders may also fell rubber trees to sell as timber products, as a way of supplementing dwindling incomes during periods of low rubber prices. This [feasibility study from WWF](#) explores this topic of smallholder rubberwood sales in Indonesia.

KEY ASKS FOR FINANCIAL INSTITUTIONS TO ASK COMPANIES IN THE NATURAL RUBBER SUPPLY CHAIN

High Priority (short-term asks that are most relevant to EUDR compliance)

Traceability

- What proportion of your natural rubber supply is currently traceable to farm level, or smallholder jurisdictional level?
- Do you have a time-bound commitment to achieving 100% traceability to farm or jurisdictional level?
- Do you publish a list of your largest natural rubber suppliers? And if not, why not?

Mapping information

- If you own natural rubber plantations, do you report on your landbank size and locations, including which areas within your landbank are planted, which

are unplanted and which, if any, are set aside for conservation?

- Have you mapped and disclosed the locations of your processing facilities?

Zero-deforestation commitments

- Do you have a commitment to zero-deforestation or zero conversion of natural ecosystems?
- Does your zero-deforestation commitment apply to all your supply base?
- Can you provide evidence of monitoring for deforestation in your own operations, as well as those of your supplier?
- Do you have a commitment to restore noncompliant deforested areas in your own and supplier operations?

Smallholder support

- Do you have a programme to support smallholder farmers? If so, what does this programme involve?
- What is the number or percentage of your smallholder supply base that is involved in this programme?

Free, Prior and Informed Consent (FPIC)

- Are you committed to achieving FPIC before any land developments or expansion? Does this commitment extend to your suppliers?
- What is your current process for addressing land conflicts, do you have a transparent grievance system open to both internal and external stakeholders?

ZSL PROVIDES SUPPORT FOR INVESTORS ON HOW TO ENGAGE WITH INVESTEE COMPANIES IN THE NATURAL RUBBER SECTOR. PLEASE GET IN TOUCH AT SBF@ZSL.ORG FOR MORE INFORMATION.



Developed by the Zoological Society of London (ZSL), SPOTT is a free online platform supporting sustainable commodity production and trade. By tracking transparency, SPOTT incentivises the implementation of corporate best practice. For more information, visit spott.org



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