Natural rubber

Working together for greater sustainability

What exactly is natural rubber?

Latex, the milky substance extracted by making incisions into the bark of the rubber plant or *Hevea brasiliensis,* is the starting product for natural rubber and many of the products we use every day. Due to their environmental requirements, rubber plants can only be farmed in what is known as the Rubber Belt on either side of the equator. Over 90 percent of all natural rubber is produced in South-East Asia. By far the most significant rubber growing countries are Thailand and Indonesia, followed by Vietnam and the West African country of Côte d'Ivoire. Total rubber plant acreage has almost doubled to over 14 million hectares since the turn of the millennium; the majority of rubber farming (80 percent) is however performed by smallholding families on acreages of less than two hectares.

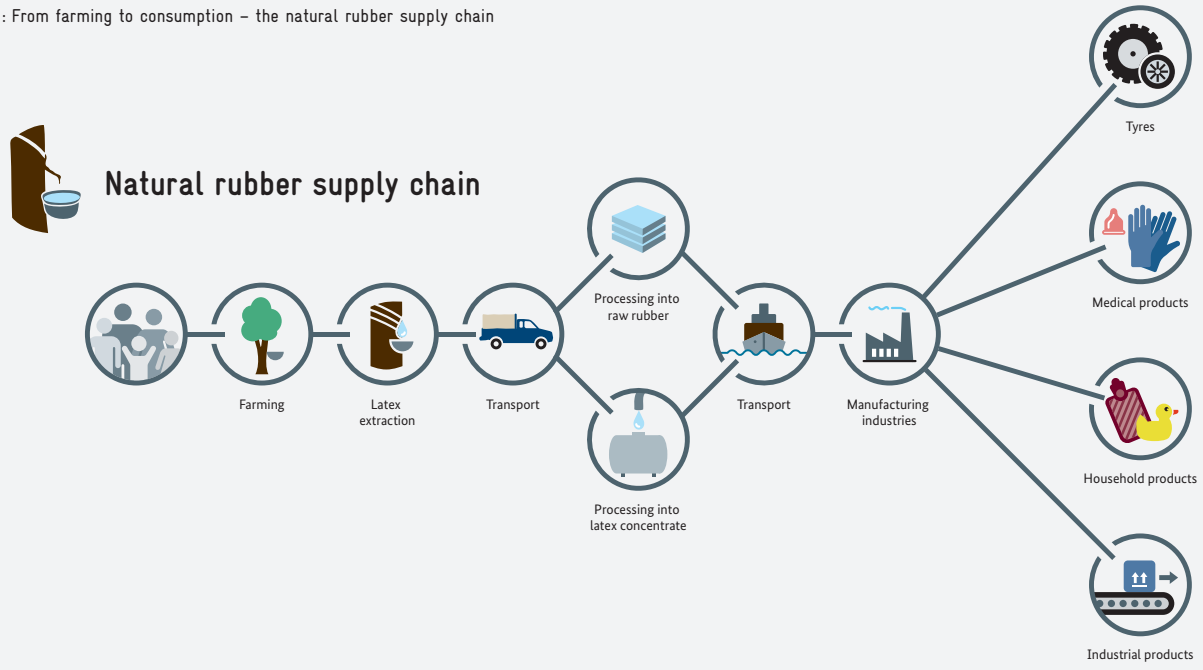
Why is rubber an important raw material?

Natural rubber is contained in over 40,000 products, many of which – such as car tyres, rubber bands, gaskets or foam mattresses – are indispensable to our everyday lives. Around 75 percent of natural rubber produced worldwide is supplied to the automotive and tyre industries, but medical products such as condoms or surgical gloves are also frequently made of natural rubber. In 2020, one million tonnes of natural rubber were used in the EU alone, with Germany being the largest consumer.

Social and ecological challenges

Rubber extraction is a major source of income for around six million smallholding households, but making a living from rubber presents numerous challenges. As an internationally traded commodity, rubber is subject to strong cyclical price

Fig. 1: From farming to consumption – the natural rubber supply chain



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fluctuations, and smallholder farmers can struggle to determine how prices are set because a multitude of intermediate trading points render the supply chain lengthy and opaque.
In addition, insufficient knowledge of efficient farming practices and the use of low-yield rubber plants frequently result in low returns. Regionally, fungal infections may also cause significant production losses.

The physically demanding, dirty work and low income make working on rubber plantations an unattractive proposition for young people, resulting in an ageing population of rubber producers and a shortage of young farmers to follow in their footsteps.
Moreover, establishing and expanding rubber plantations entails ecological risks such as fire clearing, deforestation and the loss of natural biodiversity.

No alternatives to natural rubber

Since the early 20th century, the rubber plant has been the only major source of natural rubber. It has some competition in the form of petroleum-based synthetic rubber, but the unique properties of natural rubber make it indispensable to this day; high-performance aircraft tyres, for example, are made almost exclusively from natural rubber. Rubber extraction from alternative sources such as the Kazakh dandelion or the guayule will also be unable to economically compete with traditional rubber plants for the foreseeable future.
There is currently no uniform standard defining sustainable rubber, and the proportion of certified natural rubber in global production is still very low. Only a small number of items, such as some condoms or mattresses, are currently certified; no certification system specific to natural rubber production has yet been established. In light of these facts it is important to increase market demand for sustainably produced rubber as well as transparency within the rubber value chain.

What GIZ and BMZ are doing

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), GIZ is working in multiple ways to establish greater sustainability in the rubber supply chain, for example by assisting in the development of a deforestation-free, sustainable farming region in West Kalimantan (Indonesia) where natural rubber and palm oil are to be produced with as little deforestation as possible. Smallholders are supported to use sustainable farming methods designed to improve both productivity and quality, while better management of farmlands and the associated higher household incomes are expected to reduce acreage requirements and thus the risk of additional forest clearing.

GIZ engages in dialogue with the tyre industry and smallholder farmers

GIZ is also working with the German tyre industry to establish a transparent traceability system.
As an active member of the multi-actor partnership Global Platform for Sustainable Natural Rubber (GPSNR), GIZ also advocates for better social, economic and ecological sustainability along the entire rubber supply chain. Besides the tyre industry, members of GPSNR include rubber factories, rubber traders and buyers, rubber producers and NGOs. Among the producers, smallholders are heavily represented.

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