

Actions for Sustainable Natural Rubber Procurement

Procurement Policy for the Sustainable Natural Rubber



What is Sustainable Natural Rubber?



NEWS

2020.December.25 > Yokohama Rubber and RAOT hold seminar event in support of natural rubber farmers in Thailand

2020.March.16 > Yokohama Rubber Signs MOU with Rubber Authority of Thailand for Support of Sustainable Natural Rubber Procurement

2018.October.15 > Yokohama Rubber Adopts "Procurement Policy for the Sustainable Natural Rubber"



Actions in Surat Thani, Southern Thailand



Actions in Indonesia



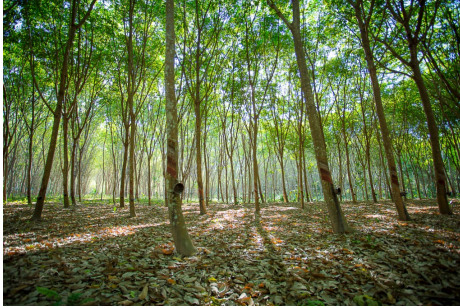
Promoting Agroforestry



Grievance Mechanism



What is Sustainable Natural Rubber?



What kind of resource is natural rubber?

When you hear the word "rubber", what kind of image do you have in your mind? Perhaps you think of something soft, stretchy, bouncy, or something that keeps things from slipping or reduces noise or vibration. It may bring to your mind many things, and all of them are valid properties of rubber.

There are two types of rubber material, that are natural rubber and synthetic rubber. Natural rubber is made from plants such as *Hevea brasiliensis* (para rubber trees), while synthetic rubber is made from petroleum and other additives. Natural rubber has only been used commercially during the last 200 years of human history. However, it is believed that natural rubber will play an increasingly important role in our increasingly circulating society.

Para rubber trees that produce natural rubber

Presently, most natural rubber used commercially is made by collecting the tree sap, or latex, from cuts made in the bark of para rubber trees (*Hevea brasiliensis*) and coagulating rubber components contained in the latex. The main natural rubber production regions of the world are located in hot and humid tropical areas in Southeast Asia, Africa and Latin America. Among these regions, Southeast Asia accounts for about 80% of the world natural rubber production.

Main uses of natural rubber

Natural rubber is used in car tires, rubber bands, hoses, conveyor belts and various mechanical components. While rubber is used for a great variety of purposes from something close to our everyday life to ones rarely seen, approximately 70% of global natural rubber production is used for making vehicle tires. Due to its high strength, natural rubber is often used in large-size vehicle tires, especially those for trucks, buses and industrial vehicles.



BluEarth-4S AW21

Tires



Hoses



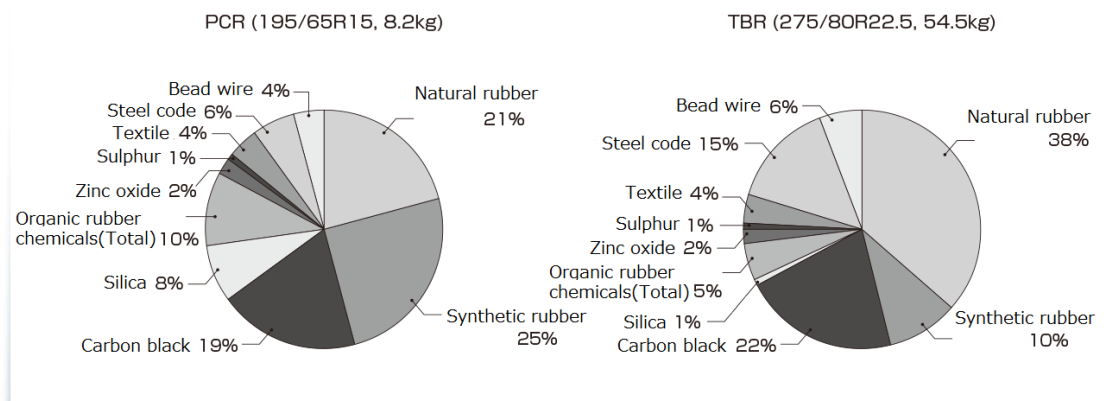
Conveyor Belts

About 20% of the raw materials purchased by Yokohama Rubber are natural rubber

Yokohama Rubber makes a variety of rubber products including car tires. You probably think of car tires as a black, round mass of rubber, but many other materials and components are required, including metal, fiber, carbon black and oil, to make car tires. Natural rubber is an important raw material that accounts for about 20% of the raw materials purchased by Yokohama Rubber.

There are various kinds of tires such as ones for passenger cars, trucks and buses, for vehicles carrying heavy loads or ones that are used in harsh conditions, and ones for agricultural vehicles. Large tires that require higher durability contains a greater percentage of natural rubber in their material.

It is essential for Yokohama Rubber to ensure a sustainable and reliable supply of natural rubber in order to continue the stable supply of products to our customers.



PCR: Passenger Tires, TBR: Truck & Bus Tires

Natural rubber is an excellent resource in many aspects

Para rubber trees absorb carbon dioxide in the air and make natural rubber that is used as a raw material for industrial products. In addition, para rubber trees are carbon-positive (having CO₂ absorption and fixation effects) plants because they store carbon in their body. Natural rubber production also brings employment and income to the producing regions, forming a robust industry that supports local economies.

Trees that can no longer produce latex are cut down and used for making furniture.

In order to stably produce natural rubber of the same quality, para rubber trees grown in natural rubber farms are normally genetic clones having the same genes. Saplings are usually made by planting and growing cuttings taken from the trees of the same family. After the saplings are planted, it takes five to six years for their trunks to grow thick enough to produce natural rubber. Para rubber trees keep actively produce latex for about 20 to 25 years after being planted and then their production gradually declines, making regular replanting necessary. Aged para rubber trees are cut down and are widely used for producing furniture and wooden floors. There is nothing to be wasted in rubber trees.

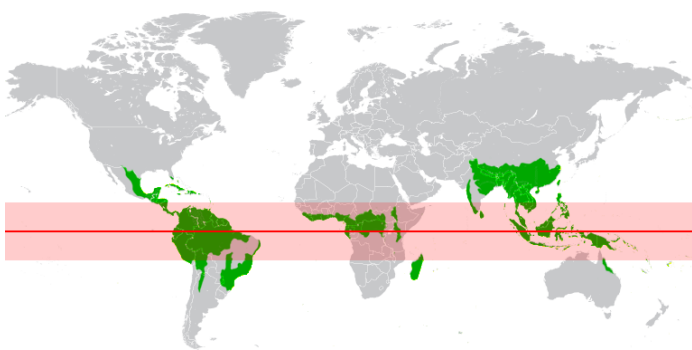
Social risks related to natural rubber production

The global demand for natural rubber has nearly tripled over the last 40 years. This is due largely to the global population growth and to the rapid spread of motorization. Parallel to such growing demand and production of natural rubber, there are concerns about problems such as illegal deforestation, land deprivation and human rights violations, as well as negative impacts on biodiversity caused by deforestation and illegal logging in an effort to provide more land to plant natural rubber trees.

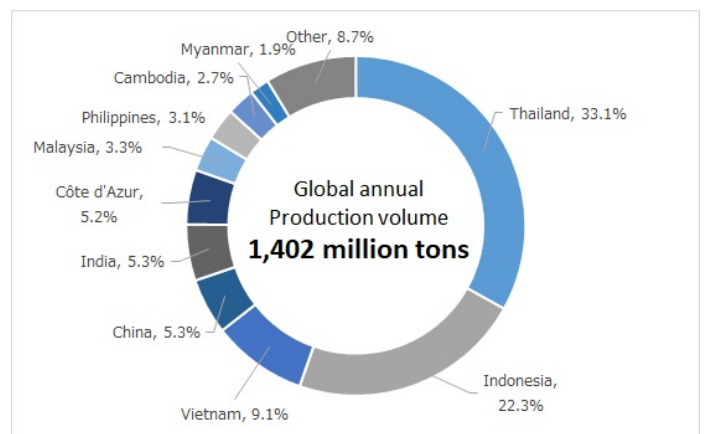
Natural rubber farms increasing in tropical rainy areas

Among the regions that produce natural rubber, Southeast Asia accounts for about 80% of the world's supply. It is also a region that contains vast spreads of tropical rain forests. Tropical rain forests are abundant in biodiversity and are home to many rare living creatures. The expansion of natural rubber and other plantations in such area can affect the lives of those precious creatures. In some regions, illegal plantation development in natural parks and other protected areas are suspected or threatened.

Instead of just increasing the area of farmland to meet the increasing demand for natural rubber, we must do more to increase the sustainability of natural rubber production, for example by increasing the volume of rubber harvested per area or extending the harvest season so as to increase the production without diminishing the area of tropical rain forests, and also to reduce the amount of natural rubber used in tire production by making the tires lighter and smaller.



Natural rubber can be grown in geographical areas across 15 degrees to the north and south of the equator, which overlap the areas of tropical rain forests (green).



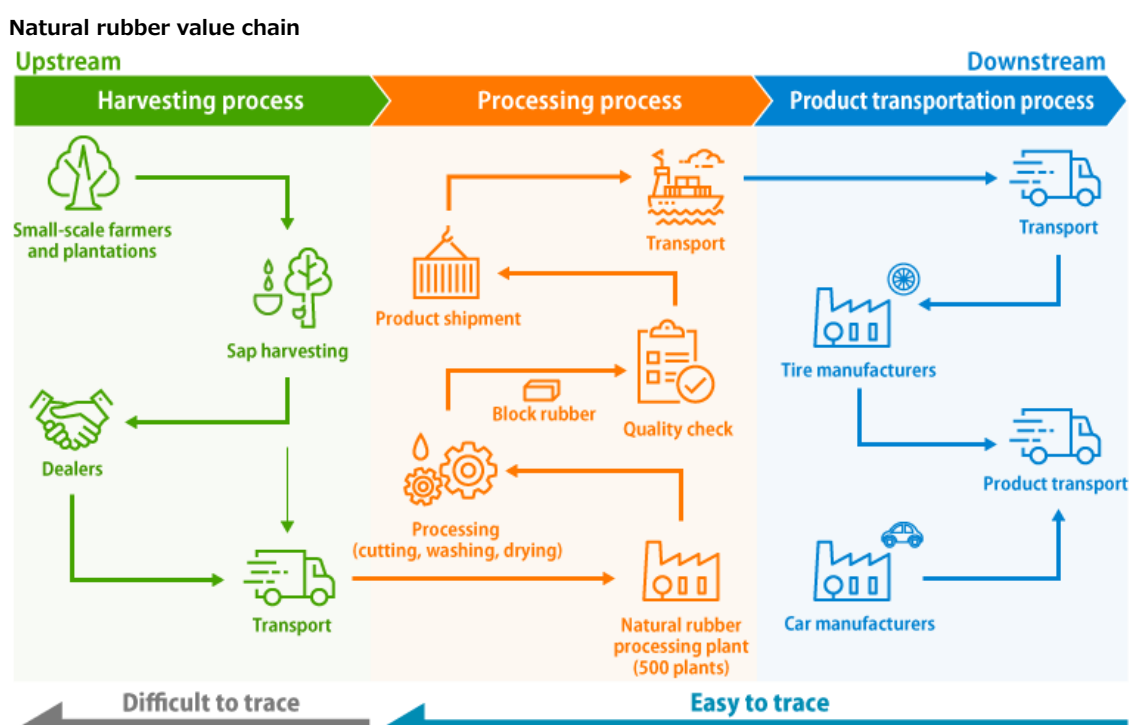
Major natural rubber-producing countries

Social issues related to human rights violation and poverty

Most natural rubber is not produced by large scale plantations. Natural rubber trees are mainly grown by small farms called "small holdings". It is estimated that there are six million such "small holders" that grow natural rubber trees on small scales in various areas around Southeast Asia. These are concerns about various problems connected to natural rubber production on such small farms, such as poverty, lack of productivity due to insufficient knowledge, know-how and experience in rubber farming and harvesting, and greater detrimental impact on nature due to lack of environmental consideration.

Difficulty and importance of traceability








The price of natural rubber fluctuates in the international market. Dealers who purchase raw rubber from natural rubber farmers check the market price every day to decide whom they sell the rubber to or whether they sell it immediately or store it in the warehouse for later sales. While raw latex freshly collected from para rubber trees is extremely perishable, it can be coagulated into cup lumps or USS (unsmoked sheets), that can be stored for much longer. These coagulated forms of rubber are often traded between dealers or across multiple countries and regions. For this reason, it can be very difficult to identify by what commercial channel a given supply of natural rubber has reached the final rubber processing factory from the producer to establish traceability. At the same time, we are under greater social pressure to prove that any batch of natural rubber we purchase has not come from a source that engages in deforestation or human rights violation.



Initiatives to make natural rubber a sustainable resource

As a socially responsible tire manufacturer operating on global scale, Yokohama Rubber has various ongoing initiatives to make natural rubber a truly sustainable resource. Through these initiatives, we aim at exactly identifying in what farm each of our purchased natural rubber batches was produced (establishment of traceability), and building a framework that will enable sustainable production of natural rubber in the future by addressing the problems faced by the farms and the people living in the regions, with the aim of establishing true sustainability of natural rubber production in those regions. We also intend to actively contribute to the SDG goals through these activities.

Contributions to the SDG goals through our natural rubber sustainability initiatives

SDGs Goal	Goals and Targets
	1.End poverty in all its forms everywhere.
	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.
	10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.
	12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
	12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.
	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.
	16.2 End abuse, exploitation, trafficking and all forms of violence against and torture of children.
	17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

Signing and participating in international initiatives

In 2017, Yokohama Rubber announced its support and participation to the Sustainable Natural Rubber Initiative (SNR-i), a framework advocated by the International Rubber Study Group (IRSG). Yokohama Rubber is also a founding member of the Global Platform for Sustainable Natural Rubber (GPSNR), a program sponsored by the Tire Industry Project (TIP) of the World Business Council for Sustainable Development (WBCSD).

Revision of our sustainable natural rubber procurement policy

Yokohama Rubber revised its Sustainable Natural Rubber Procurement Policy, originally formulated in October 2018, in September 2021. The 2021 revision was intended to align our procurement policy with the new framework adopted by GPSNR at its second general assembly held in September 2020. The revision also serves as a statement of Yokohama Rubber's mission to pursue a greater level of natural rubber sustainability.

Overview of the Procurement Policy for Sustainable Natural Rubber

- Enhancing traceability
- Respect for human rights and prohibit any form of harassment
- Fair and equitable treatment
- Prohibition of child labor and forced labor
- Compliance
- Initiatives for zero deforestation
- Consideration for biodiversity
- Abiding by the principle of free, prior and informed consent (FPIC) in regard to land rights
- Creation of innovative technologies
- Communication with suppliers

 [Procurement Policy for Sustainable Natural Rubber \(34.4MB\)](#)

Networking with our natural rubber suppliers

Yokohama Rubber has held a series of networking events (Suppliers' Day) with its natural rubber suppliers since 2016. At the networking event in April 2018, which was held by inviting to Japan a total of 42 representatives from 25 companies across five countries, we urged the suppliers to have a shared understanding and support for our effort to make natural rubber a sustainable resource in accordance with Yokohama Rubber's CSR policy.

While we were unable to hold the event in 2020 due to the COVID-19 pandemic, we had an online networking event jointly hosted with our group company based in Singapore, Yokohama Rubber Singapore Pte. Ltd. in May 2022.

At this event, we explained the environmental aspects of our ESG mid-term plan and our human rights policy formulated in April 2022, and asked for cooperation in our efforts based on our sustainable natural rubber procurement policy for closer partnership and shared understanding with our suppliers. In the event, our president appreciated the suppliers for providing us with natural rubber of consistently good quality, and presented trophies to suppliers who had made outstanding contributions to our business. We also received a video message from Mr. Stefano Savi, Director of GPSNR, congratulating us on the success of the event.

Actions in Surat Thani, Southern Thailand



Why do we work in Surat Thani?

Southern Thailand is now one of the centers of natural rubber production, accounting for 60% of the natural rubber produced in Thailand. Another reason why Surat Thani is important to us is that we have Y.T. Rubber Co., Ltd. (hereinafter referred to as YTRC), a Yokohama Rubber subsidiary that processes natural rubber, located in the Surat Thani province. In recent years, leaf blight disease has been found to spread among para rubber trees in the area, requiring countermeasures to be taken. This situation prompted Yokohama Rubber to start an initiative to improve sustainability of natural rubber production in Surat Thani.

Starting a survey of natural rubber farms in Surat Thani

Yokohama Rubber began surveying natural rubber farms in the Surat Thani province of Thailand in June 2019. By the end of December 2022, we have visited and interviewed a total of 437 natural rubber farms in the province, the majority of which are YTRC suppliers. We further continued the survey, and at the end of February 2023 have completed surveying 500 farms in the province as originally planned. Not only the information we have gained through the survey, the communication and partnership we have developed with the local farmers through the survey activities has proved to be highly valuable. We are planning to continue these survey activities on an ongoing basis. As part of the survey, we identify the location of each farm and mark it on our map to confirm that none of the farms are located inside a natural park or other protected areas. We also check the number of years each farm has grown natural rubber trees and verify that they are validly registered to the Rubber Authority of Thailand (RAOT) to confirm that these farms have not been developed illegally or through deforestation. Regarding farm workforce management, we survey their work schedule, including the number of working hours per day and the number of workdays per period, whether they are subject to work quotas, whether they are free to quit their job when they want to, whether they receive health insurance, whether there are any children under 18 years old working on the farm, and how many people are working there, to confirm that these farms do not practice forced labor or child labor. To date, no illegal activity or practice has been found in the survey. We also ask farmers what are the difficulties they have in the management of their natural rubber production. Though the survey, we now have a better understanding of the issues that our natural rubber farms have and what actions should be taken to help solve them.

Yokohama Rubber will gather more survey data to further analyze the issues faced by our natural rubber farms to help them toward more sustainable farm management and to improve traceability of their product.



Farm survey in Southern Thailand



Seminar event jointly hosted with the Rubber Authority of Thailand (RAOT) to support local natural rubber farms and to accelerate quality improvement

In an effort to improve the transparency and soundness of our supply chain based on our Procurement Policy for Sustainable Natural Rubber, Yokohama Rubber signed a Memorandum of Understanding (MOU) with RAOT in January 2020 to collaboratively support the management of natural rubber farms and improve traceability of their product. Based on the MOU, Yokohama Rubber and the Surat Thani office of RAOT have jointly held seminar events in June and December 2022 to help natural rubber farms in Thailand improve the quality and productivity of their natural rubber production. A total of five seminar events have been held to date, to which 250 farmers from the Surat Thani province attended. The attendees received a total of 75 tons of special fertilizer developed by leveraging RAOT's specialist knowledge, a gift which was greatly appreciated among the attendees.



Natural rubber farmers and Yokohama Rubber group staff at the seminar event



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Actions in Indonesia



Why do we work in Indonesia?

Indonesia boasts the second largest natural rubber production in the world in FY2021, next to Thailand. Yokohama Rubber purchases a lot of natural rubber from Indonesia. However, the productivity of natural rubber per area in Indonesia is lower than that of Thailand or Vietnam, and leaf blight disease has been found to spread among rubber trees in the country. In addition to that, there are many brokers existing at multiple stages between farms and processing factories, which pose a problem of making commercial distribution complicated and hard to grasp.

For this reason, Yokohama Rubber decided to launch a project focusing on sustainability, hoping that natural rubber production in Indonesia will become sustainable.

Launching collaboration with PT Kirana Megatara Tbk

PT Kirana Megatara Tbk (hereinafter referred to as KM company) is one of the important suppliers for Yokohama Rubber, which has been making efforts to establish sustainable natural rubber production for a long time. For example, KM company builds a group of natural rubber farmers in an area where KM company's natural processing company is located, and by having such company deliver rubber directly to the natural rubber processing plant, KM company improves transparency in natural rubber procurement. The group of farmers can benefit from this arrangement in many ways such as they can earn more income by directly selling natural rubber to KM company than carrying out a trading in an ordinary way, they can trade deals with KM company with stability, and they can conduct study meetings within the group to improve farming techniques each other. KM company raises awareness of natural rubber coagulants, provide guidance about tapping technique, and also plays a role in the diffusion of agricultural knowledge such as by encouraging the introduction of Good Agricultural Practices (GAP)

In December 2022, KM company and Yokohama Rubber signed a Memorandum of Understanding (MOU) to launch their collaboration to realize sustainable natural rubber production.



MOU signed between KM company and Yokohama Rubber

Fertilizer and natural rubber coagulants supplied at a seminar event held in the island of Sumatra

In December 2022, KM company and Yokohama Rubber held an event to support natural rubber farmers in Jambi in central Sumatra, Indonesia. At the event, groups of farmers introduced various initiatives they had been working on, and researchers gave lectures about the impact of rubber trees' diseases and how to prevent them. The participants also enjoyed a tapping contest to compete with each other over their skills to extract sap from rubber trees as well as a quiz on agricultural technique. The farmers attending the event received a complementary supply of fertilizer and natural rubber coagulants (formic acid).

In Indonesia, due to the stagnation of natural rubber prices, natural rubber farmers use cheap and easily available acid, such as battery waste liquid containing sulfuric acid, to coagulate natural rubber. The use of acid unsuitable for coagulating natural rubber causes its quality deterioration and yield reduction. Such practice also raises the problem of decrease in natural rubber yields resulting from extracting tree sap not fully containing natural rubber. The reality is that it is difficult for farmers to properly produce rubber due to a lack of such accurate technical knowledge, which further worsens their economic difficulties. For this reason, we provided programs aiming for them to acquire accurate farming knowledge at the event.

On the day before the event, we held an exchange meeting with the group of farmers. We asked them about the problems they were facing and had them introduce the initiatives they had been working on.



Interaction with farmers' group



Defoliated rubber tree due to leaf blight (disease outbreak)



Scene at the farmer support event



Competing agricultural skills through a tapping competition



Quiz competition on agricultural knowledge

Future challenges and initiatives

Indonesia has archived significant economic development, which has also led to the advancement of deforestation at an alarming rate in its region. We believe that success in realizing sustainable natural rubber production in this situation depends on increasing natural rubber production volume without increasing the agricultural land area to stabilize farm management. We will make continuous efforts to provide guidance on proper agricultural technique, supply materials, take initiatives for the enhancement of their business management such as an agroforestry program, and provide supports needed by local farmers.

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Promoting Agroforestry



What is agroforestry?

Agroforestry is a coined term from the words agriculture and forestry, referring to grazing livestock and cultivating crops between planted trees. Yokohama Rubber is promoting agroforestry in natural rubber farms.

What it means to address agroforestry on natural rubber farms

Harvesting multiple types of crops such as fruits, herbs and wood in a natural rubber forest has many advantages, including a stable income and increased biodiversity in farms. In particular, natural rubber is only produced for about 20 to 25 years after planting trees, after which the production progressively declines. This makes replanting necessary to ensure efficient production. However, para rubber trees do not produce natural rubber for five to six years after they are planted. Due to the loss of income during this period, rubber farmers may delay replanting or abandon their natural rubber business.

Agroforestry is also an effective means for them to produce natural rubber in a sustainable manner.

Expected benefits of agroforestry

In addition to providing a supplemental income when para rubber tree saplings are too young to produce latex, agroforestry provides the following benefits. Natural rubber prices fluctuate greatly with the market. Even after natural rubber is ready to be harvested, various crops planted in the farm will help to stabilize the income of natural rubber farmers. Rubber trees experience a period called "wintering" every year, when the leaves of all rubber trees fall off at the same time before new leaves start to grow. Since rubber trees drop few leaves at other times of the year, so once the leaves that fell off during the wintering period have been decomposed by insects and microorganisms, etc., there is nothing left to cover the soil surface, as the result of which the soil can become gradually drier. However, if a variety of different plants are planted together, the ground surface will always be covered with fallen leaves, which prevents the soil from getting dry. Decomposition fallen leaves also serve as fertilizer for the rubber trees, contributing to the reduction of production costs.

One of the diseases affecting rubber trees is called "white root disease (WRD)," the risk from which is considered to be highest in Southeast Asia. Once a rubber tree becomes infected with WRD, the disease can spread to other nearby trees very rapidly, and in the land where this happened, rubber trees cannot be planted for at least five years. Since natural rubber farms practicing agroforestry are growing a wide variety of different plant species, the range of microorganisms in the soil is much more complex, which is believed to contribute to fostering a WRD-resistant environment.

Another benefit of having multiple types of plants in a rubber plantation instead of practicing monoculture to plant only para rubber trees is that this increases the number of insects and birds that use such plants, which also results in enriched biodiversity.



Natural rubber farm practicing monoculture



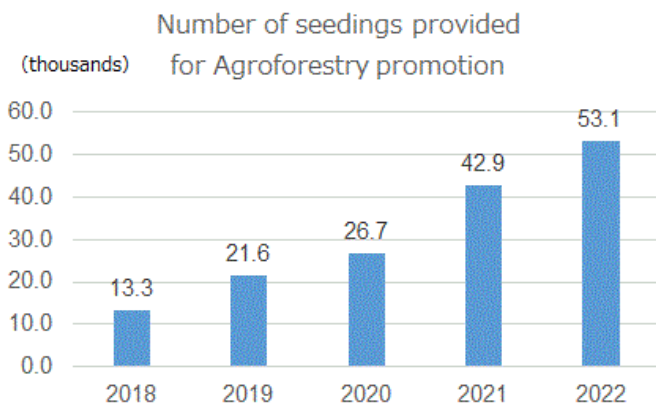
Natural rubber farm practicing agroforestry

Encounter with Professor Sara

Y.T. Rubber Co., Ltd. (YTRC), in collaboration with Professor Sara of the Prince of Songkla University, an expert in agroforestry, has provided training courses on agroforestry to natural rubber farmers in Surat Thani district, while acting as liaison bridge between Professor Sara and farmers, and providing training venues. A study by Professor Sara shows that agroforestry farms enjoyed both increased yield and income compared to those of ordinary natural rubber farms. Nevertheless, as the number of cases was still limited, YTRC is encouraging many farmers to adopt this method. When YTRC started this initiative in 2016, only 10 farms participated in the initiative with a total farm area being about 12 hectares; however, by the end of 2022, the number of participating farms had increased to as many as 57 with a total farm area about 170 hectares. We are planning to expand a total area of agroforestry farms to around 200 hectares by the end of 2030.



Professor Sara



Saplings donated in 2022 totaled 10,220, for a cumulative total of 53.1 thousand saplings.



Agroforestry seminar

Voice of a farmer

Mr. Prajub Nuphet, running a natural rubber plantation

It is now eight years since I first started to apply the agroforestry approach in one corner of my natural rubber farm. When I first heard about agroforestry, I thought it was a really great agricultural technique. A few years after starting this method, I stopped using chemical fertilizer. I am growing plants that produce fruits and ones whose products are used to make spices, and tress for making furniture, etc. In addition to bringing in stable income, this makes me feel I'm doing something good for society, so I'm proud of taking this approach.

Over the past few years, rapid development in Surat Thani district has led to a decline in the number of wild animals. However, since I started implementing agroforestry, I find there has been a remarkable increase in the number of butterflies and other insects, wild birds, etc. on the farm. In addition, although we have very limited rainfall in Surat Thani district during the dry season, fallen leaves help to retain moisture, preventing the soil from drying out. I am very grateful to YTRC for providing saplings. Since there are many things that I don't know about farming methods and market conditions of crops other than natural rubber, so it would be great if I could access this kind of information. In the future, I would like to grow a wider variety of crops, including coffee, vegetables, etc., and I hope to be an agroforestry expert and transform my farm into a learning center.



Future challenges and initiatives

We have just begun our efforts to make natural rubber a sustainable resource. There are a wide range of challenges ahead of us that need to be addressed, such as the formulation of international standards for natural rubber, the establishment of traceability, and the enhancement of dialogue and cooperation with natural rubber farmers.

Yokohama Rubber will continue to work toward achieving the SDGs by diligently addressing each of these challenges.

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Yokohama Rubber Group Grievance Mechanism

The Yokohama Rubber is pleased to announce that we have established a grievance procedure in accordance with "Procurement Policy for the Sustainable Natural Rubber".

Scope of the Grievance Mechanisms

- People who are involved in the natural rubber supply chain
- Stakeholders of GPSNR

Contact for Grievances

External Site

[> The Contact Desk of Japan Center for Engagement and Remedy on Business and Human Rights \(JaCER\)](#)
(Go to the external site)