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## INDUSTRY OUTLOOK

# RUBBER INDUSTRY OF INDIA: GROWTH AND CHALLENGES

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## Introduction

Rubber industry has been one of the important sectors of the Indian economy. India was the sixth largest producer and the second largest consumer of natural rubber in the world [1] in the year 2021. In terms of both natural rubber and synthetic rubber put together, India is the fifth largest consumer in the world. With progressively rapid integration of the Indian economy with the global economy, the Indian rubber industry is here to stay and acquire greater strength and importance. Among the states, Kerala is the largest producer of natural rubber in India followed by Tamil Nadu, Karnataka, Tripura, Assam, Andaman and Nicobar, and Goa.

Natural rubber is a polymer of isoprene, an organic compound. Rubber is a coherent elastic solid obtained from the latex of a number of tropical trees of which *Hevea Brasiliense*'s is the most important. Rubber trees have an economic life period of 32 to 34 years in plantations. Once a tree's latex tapping life is over, the tree yields timber of very high quality after treatment.



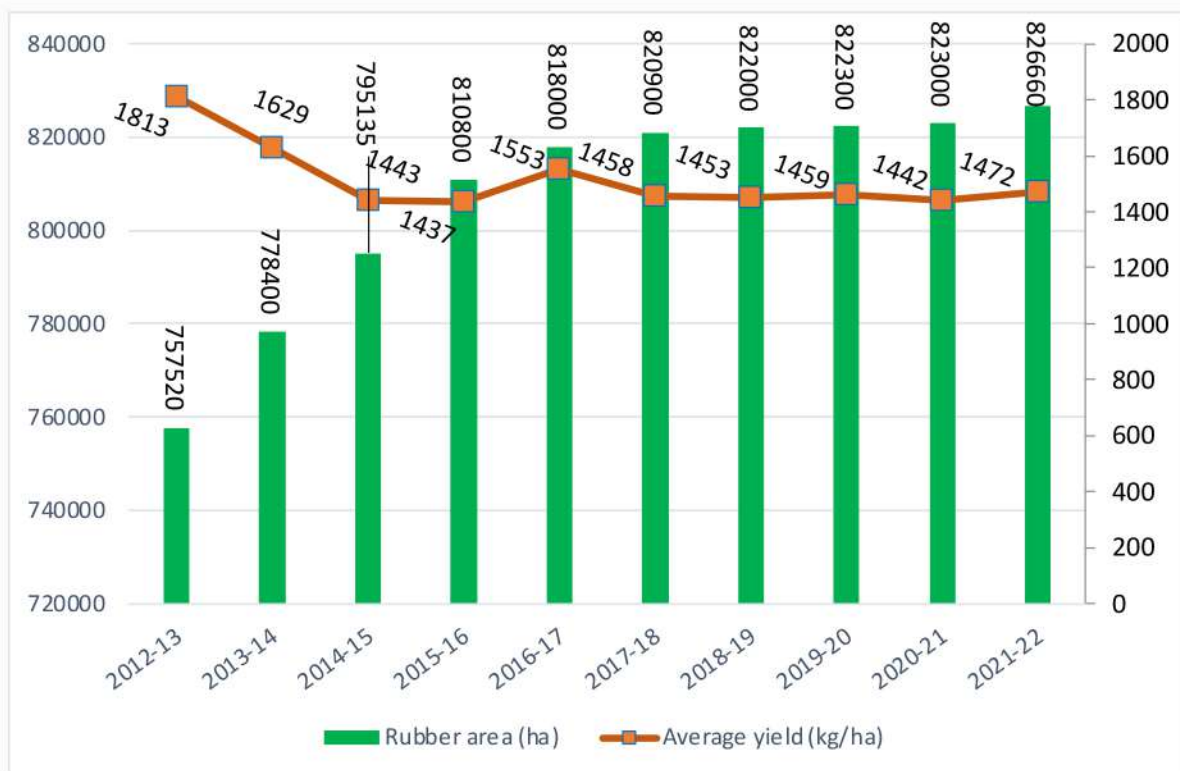
Rubber is used for diverse purposes ranging from erasing pencil marks to manufacturing tyres, tubes and a wide array of industrial products. Natural rubber is preferred over synthetic rubber due to its high tensile strength and vibration dampening properties, along with tear resistance. This makes it important for the construction and automobile industries. The demand for natural rubber received an impetus because of the growing automobile industry and the rising demand for latex products, e.g., catheters, gloves, and belts.

Historically, the first rubber plantation was done in 1895 in hilly slopes of Kerala and the commercial cultivation of rubber plants were initiated in the year 1902. The rubber industry constitutes more than 30,000 rubber processing units (of which, an overwhelming majority estimated at 85-90 per cent are in the category of MSMEs) in the country employs more than 4.5 million people. The rubber industry is a feeding industry providing major rubber products to a wide range of industries in the country from automobile industries to medical equipment industries.

## Production and Consumption of Rubber in India

The Rubber Board India has clearly brought out the urgent need to increase the area under rubber cultivation to meet the demand of 15 lakh tonne of natural rubber by 2025-26. India is largely dependent on the imports of natural rubber, which causes heavy stress on the foreign exchange. The area under rubber cultivation has increased by 69,140 hectares from 7,57,520 hectares (ha) in 2012-13 to 8,26,660 hectares in 2021-22 constitutes an increase of 9.12 per cent. However, the average yield (kg/ha) decreased by 18.8 per cent in the same period (last ten years) (See Figure 1).

**Figure 1: Area under Rubber cultivation and the Average Yield (kg/ha) in the last 10 Years**

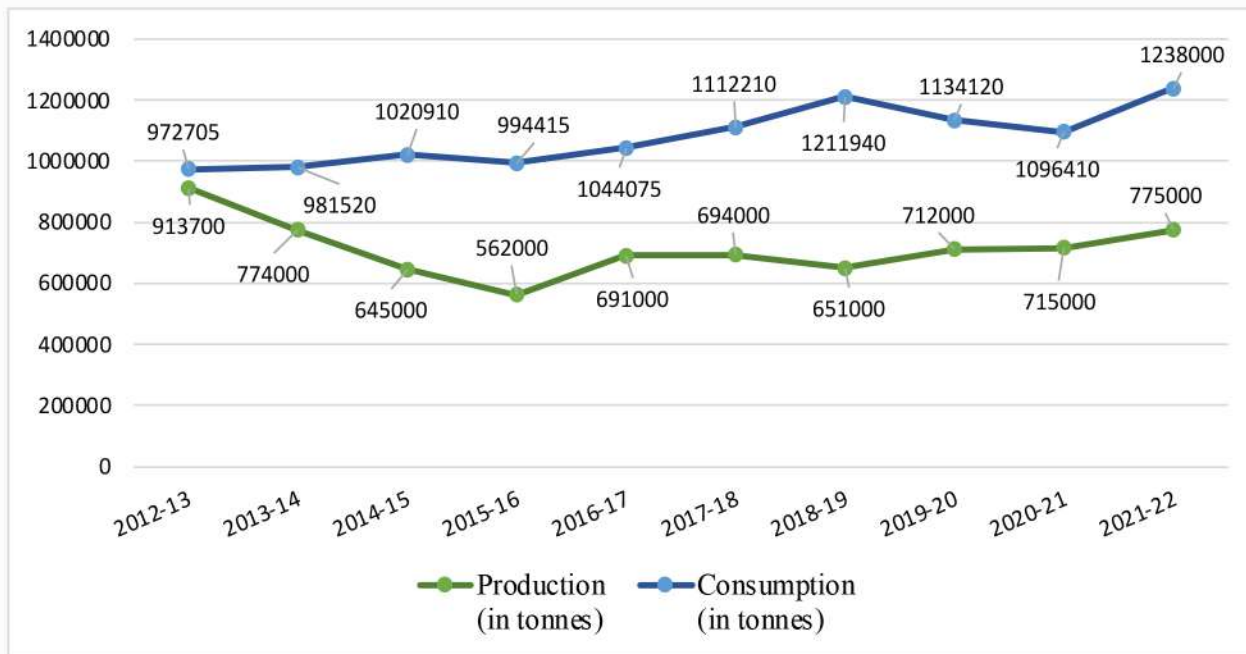


Source: Rubber Board India

## Natural Rubber

In the year 2021-22, the total production of natural rubber was 7,75,000 tonnes increased by 8.39 per cent from 7,15,000 tonnes in 2020-2021. While the consumption of natural rubber was 12,38,000 tonnes in 2021-22, which increased by 12.91 per cent from the 10,96,410 tonnes in 2020-21 (See Figure 2).

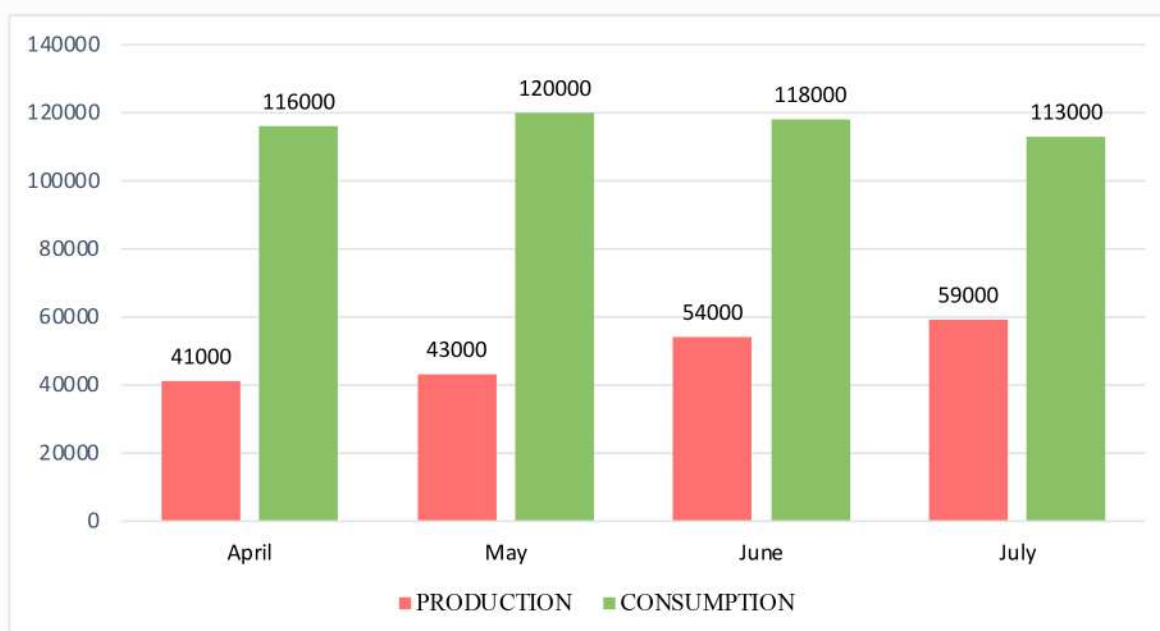
**Figure 2: Production and Consumption of Natural Rubber in the last 10 years**



Source: Statistics & Planning Department, Rubber Board, Kottayam, Kerala

In May 2022, there was a production of 43,000 tonnes of natural rubber, which increased by 16.2 per cent from 37,000 tonnes production of natural rubber in May 2020-2021 [2] (See Figure 3).

**Figure 3: Performance of Natural Rubber Industry in FY 2022-23 (in Tonnes)**



Source: Rubber Board India



## Synthetic Rubber

The synthetic rubbers such as Styrene Butadiene and Butadiene rubber are mostly produced in India. In the last ten years, the production of Styrene Butadiene Rubber has increased rapidly. In 2012-13, the production of Styrene Butadiene Rubber was 19,296 tonnes, which increased to 2,79,295 tonnes in 2021-22 (See Table 1). The production of Styrene Butadiene Rubber is increasing with a Compound Annual Growth Rate (CAGR) of 134.74 per cent from 2012-13 to 2021-22. However, the production of Butadiene Rubber has increased from 77,038 tonnes in 2012-13 to 1,33,000 tonnes in 2021-22 growing with 7.26 per cent CAGR.

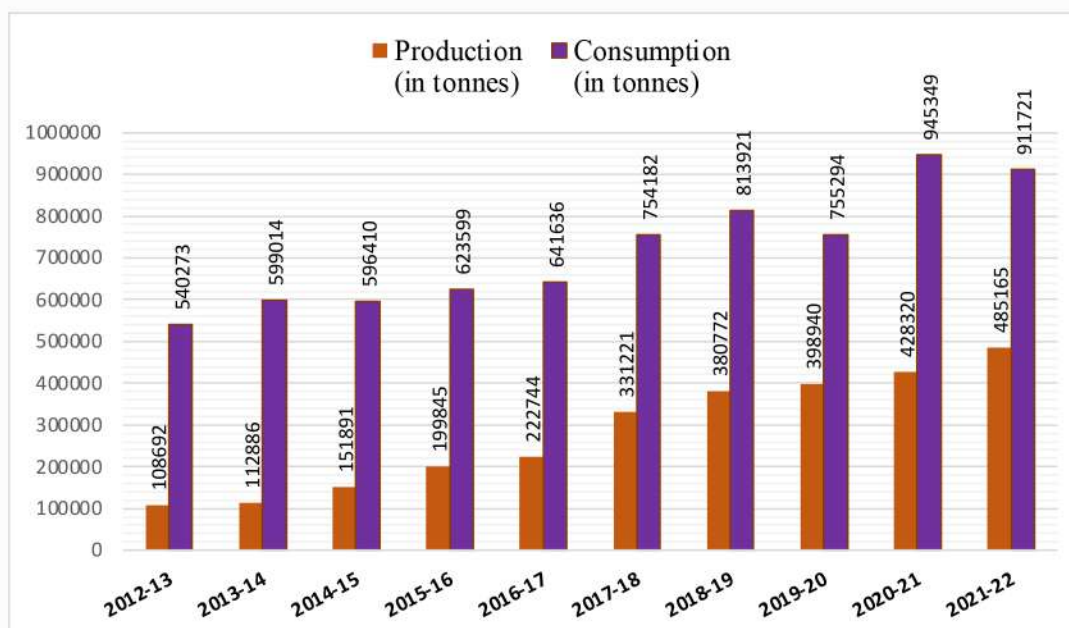
**Table 1: Production of Synthetic Rubber in the last 10 years**

Year	Production (Synthetic Rubber)		
	Styrene Butadiene Rubber (in Tonnes)	Butadiene Rubber (in Tonnes)	Other Synthetic Rubber (in Tonnes)
2012-13	19296	77038	12358
2013-14	22105	80685	10096
2014-15	35738	105925	10228
2015-16	76999	111807	11039
2016-17	96637	116557	9550
2017-18	209938	113666	7617
2018-19	253859	122081	4832
2019-20	250172	129920	18848
2020-21	236479	128564	63277
2021-22	279295	133000	72870

Source: CMIE

The overall production of synthetic rubber in India at 4,85,165 tonnes in 2021-22 increased over four-folds from 1,08,692 tonnes in 2012-13. The production of synthetic rubber is growing at 34.63 per cent CAGR in the last 10 years. The consumption of synthetic rubber rose from 5,40,273 tonnes in 2012-13 to 9,11,721 tonnes in 2021-22 (See Figure 4). The consumption of synthetic rubber is growing at 6.8 per cent CAGR in the last ten years.

**Figure 4: Production and Consumption of Synthetic Rubber in India in the last 10 years**



Source: CMIE

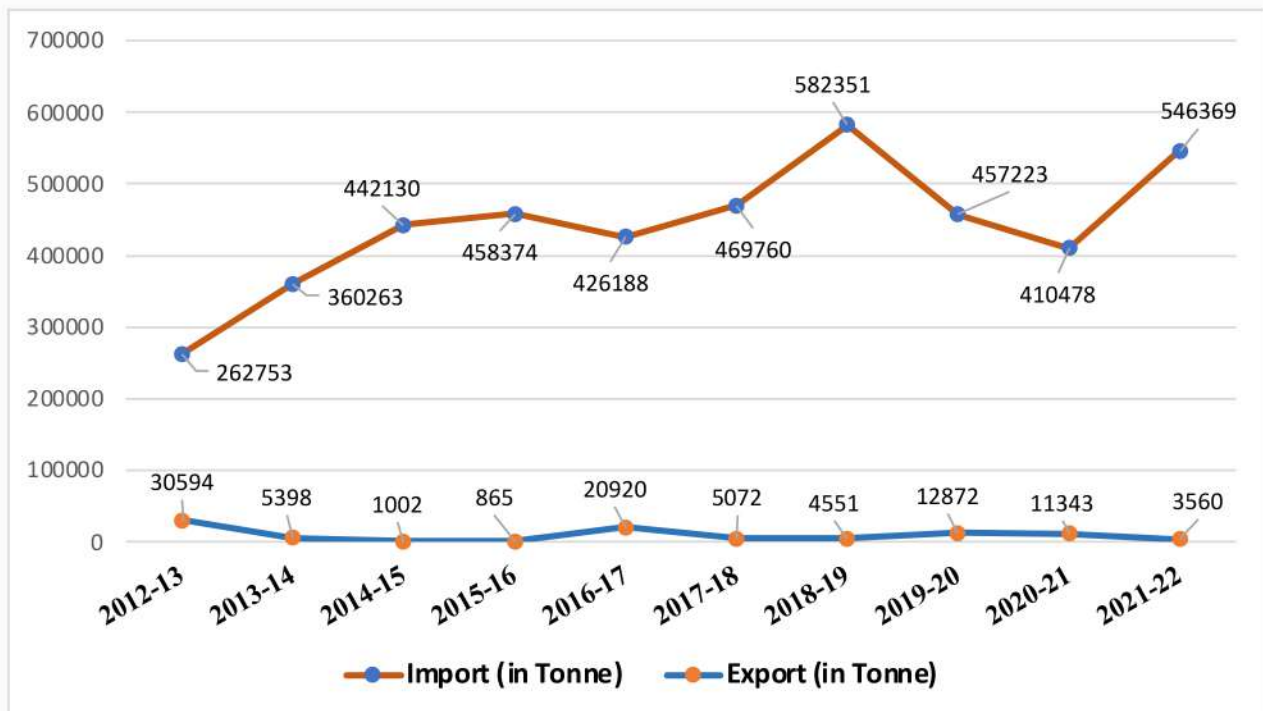
As per the Rubber Board of India, the total quantity of synthetic rubber consumed during April and May 2022 was 1,30,480 tonnes. The consumption increased by 15.4 per cent from 113,100 tonnes consumed during the same period a year ago.

There is a huge gap in production level and consumption level of rubber in India because of grossly insufficient production. The higher demand is met by the imports, which involves a huge amount of foreign exchange spending.

## Import and Export status of Rubber Industry of India

During the FY 2021-22, India imported 5,46,369 tonnes of natural rubber while 4,10,478 tonnes and 4,57,223 tonnes of natural rubber were imported during FY 2020-21 and FY 2019-20. However, the import of natural rubber was lower than the pre-pandemic period when the restrictions on mobility and economic activities were imposed to mitigate the risk of COVI-19 outbreak. Now, the economic activities are resuming their natural pace and the sector is recovering well from the ravages of the Covid-19 pandemic. During the FY 2021-22, India exported 3,560 tonnes of natural rubber while in FY 2020-21, the export of natural rubber surged to 11,343 tonnes (See Figure 5).

**Figure 5: Export and Import of Natural Rubber in the last 10 years**

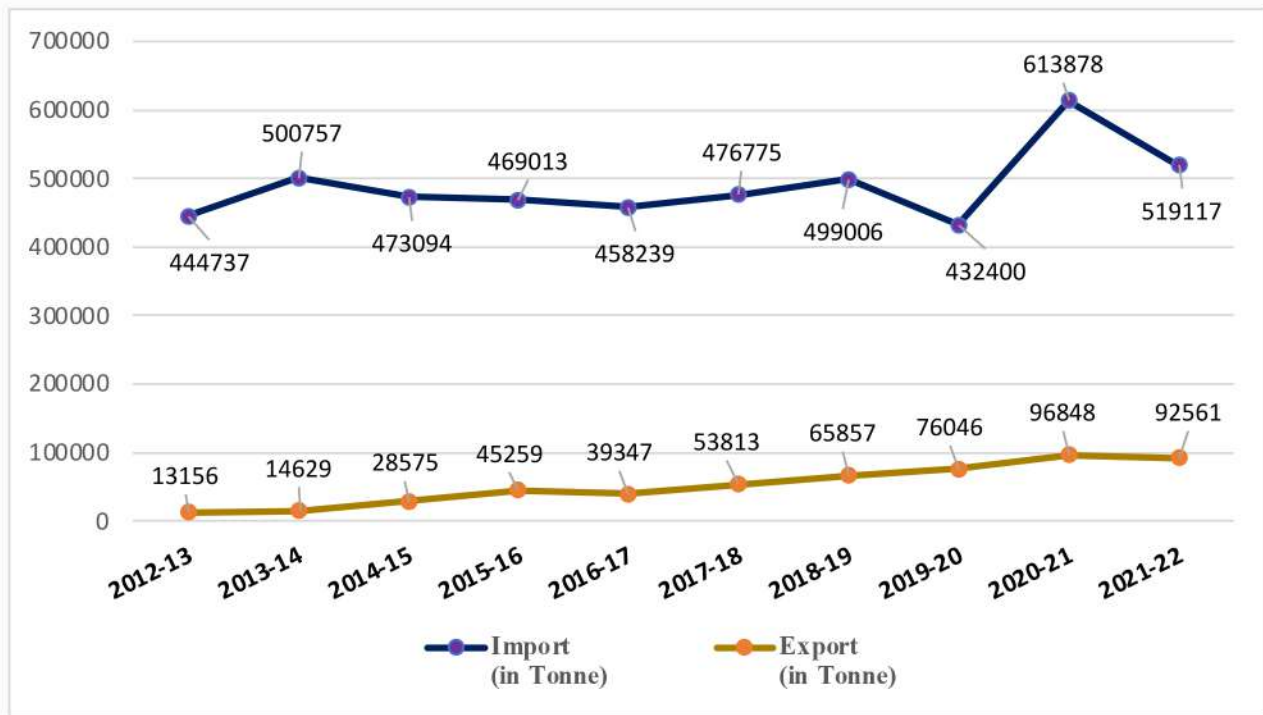


Source: Rubber Board India

India imported 49,374 tonnes of natural rubber during May 2022 making the total volume imported during the first two months of the current fiscal at 85,777 tonnes. The imports increased by 13.5 per cent from the same period a year ago. India exported only 126 tonnes of natural rubber during May 2022 compared to 581 tonnes during May 2021. The total volume exported during April and May 2022 was 442 tonnes compared to 1317 tonnes exported in the corresponding period of the previous year.[3] With the above trends in production, consumption, import and export, the closing stock for May 2022 was estimated at 3,57,000 tonnes.

India imported 5,19,117 tonne of synthetic rubber in FY 2021-22 which was 613878 tonne in FY 2020-21, an all-time high in terms of synthetic rubber import. The export of synthetic rubber is consistently rising in the last ten years. But in FY 2021-22, import of synthetic rubber decreased by 4,287 tonne (See Figure 6).

**Figure 6: Import and Export of Synthetic Rubber by India in the last 10 years**



Source: CMIE

## Institutional Initiatives

The institutional support for the rubber sector is provided by the Ministry of Commerce, the Rubber Board, All India Rubber Industries Association, Automotive Tyre Manufacturers Association, Rubber Skill Development Council and the Indian Rubber Institute. Recently, the Union Ministry of Commerce and Industry proposed to repeal the Rubber Act, 1947 and replace it with the Rubber (Promotion and Development) Bill, 2022. The major objective of the proposed Bill is to remove the 'archaic provisions' of the old law and empower with new provisions to create an environment for 'easy conduct of business' and to reorient the functions of the Rubber Board. [4]

The Union Budget 2022-23 has allocated ₹268.76 crore for the FY 2022-23 declined from the previous allocation of ₹263.95 crore (revised allocation) for the FY 2021-22. The United Planters Association of Southern India's (UPASI) has raised the concern of declining allocations for the ailing rubber industry.[5]

In a welcome move to meet the rising demand and reduce the dependency on imports, the Rubber Board is taking initiatives to increase the area under rubber cultivation in north-eastern states. The Rubber Board has managed to gain financial support from the tyre corporates, and it has implemented the NE Mitra scheme in 2021 that envisages the cultivation of rubber in two lakh hectares in the NE states in five years, at an investment of ₹1,000 crore. The scheme commenced in June 2021 and last year 3,862 hectares were completed. The target for 2022 is 26,000 hectares. To address the issue of shortage of skilled workforce in the rubber industry, the Rubber Skill Council is offering skill development programmes under the National Apprenticeship Promotion Scheme. This program started in Tamil Nadu.

With rising economic and infrastructure growth in the rubber industry, the industry needs more skilled workforce to enhance production, exports, and employment. The National Apprenticeship Promotion Scheme is working in the right direction in meeting the enhanced demand for the skilled workforce and minimising the rate of attrition in the rubber industry.

## Successful Replication of the Tripura Experience

Tripura's rubber industry manifests the harmonious blending of the apparently conflicting objectives of economic and ecological development. The Rubber Mission, constituted by the then CM Manik Sarkar in 2004, was initially expected to cover 85,000 hectares but the rubber production in the State has gone well beyond this area and the State now stands second only to Kerala. In fact, Tripura is now justifiably considered the "Second Rubber Capital of India" by the Rubber Board. This Mission had important effects both in terms of quantitative and qualitative parameters. With over 1,50,000 families depending on rubber in Tripura to eke out a living and an annual family income of ₹ 1,50,000 to ₹2,00,000 from the sale of rubber, this Mission has made an important headway in generating wealth and resources. What is equally important is the beneficial impact on conserving the remaining forests and climate change mitigation due to carbon sequestration. Hence, the Tripura experiment needs to be successfully replicated on the national level with similar agro-climatic features, resource endowment and political will to improve lives and rural livelihoods on a large scale.

## Risks and Challenges

The rubber planters have protested to the government because of the low prices of natural rubber, which crashed to a six-month low in the Indian market. The poor demand of rubbers globally and European energy crisis coupled with rising inflation has severely impacted the prices of natural rubber. China alone consumes about 40 per cent of the global supply of natural rubber, but the COVID-19-led restriction has seriously dented the demand for natural rubber.[6]

At present, the lack of liquidity and higher raw material prices are some of the rubber industry's biggest concerns. The COVID-19 pandemic has adversely impacted the growth of rubber industry in the country. This is hardly surprising because of the large number of MSME players in the industry. Recently, the All-India Rubber Industries Association also approached the Central Government for financial assistance to tide over the crisis.

Mostly, the Micro, Small and Medium Enterprises (MSMEs) are engaged in rubber production segment. Currently, the MSMEs are facing the heat of rising cost of credit because of inter-alia, the RBI's monetary policy tightening to check the inflationary spiral. Also, the falling prices of natural rubber adversely affect the financial health of SMEs.

The Natural Rubber prices have been at a relatively low level during the past few years in the domestic and the international markets. The average price of RSS-4 grade rubber (₹/100kg) at Kottayam was ₹20,805 in FY 2011-12; in FY 2021-22, it was ₹17,101. Even in the last 11 years, there was no significant rise in the prices of natural rubber. [7]

Rising imports has been a concern for the rubber planters as they are impacting the prices of domestic natural rubber. The United Planters' Association of Southern India (UPASI) has raised the issue of consistent rise in the import of natural rubber, which has severely eroded the earning of planters. According to UPASI, the import of compound rubber rose by 0.19 lakh tonnes in FY 22 from the previous financial year. Also, the import of natural rubber crossed the psychological mark of 5 lakh tonne. The import of natural rubber stood at 5.82 lakh tonne in FY 19 and 5.46 lakh tonne in FY 22.



However, the import of natural rubber in FY 20 and FY 21 reduced because of COVID-19-led restrictions on production, economic activities, and mobility. The UPASI has raised this concern with government also. The government has imposed 25 per cent duty on the import of natural rubber and 10 per cent on the import of compound rubber. But the major concern of the natural rubber planters is that the compound rubber contained 90 per cent natural rubber. This aspect dampened the demand of domestically produced natural and hence affected the price of natural rubber in the market.

Kerala is the largest producer of natural rubber in the country. There has been a paradigm in the state from cultivation of staple food crops to cash crops and expansion of rubber cultivation. This has caused acute labour shortage for performing traditional farm operations in the state, despite high wage rates (Viswanathan, 2016). [8]

Recently, some of the media houses have highlighted the higher demand for skilled workforce in the rubber industry in India. In Tamil Nadu, the demand for skilled workforce has shot up in rubber and plastic industry and about 4,500 vacancies have been generated for apprenticeship. [9]

## The Road Ahead

The government should incorporate such provisions in the proposed Rubber (Promotion and Development) Bill, 2022 so that the benefits of the interventions must reach both the industry and the rubber planters. The autonomy of the Rubber Board to take care of both - planters and industries-through ensuring fair prices must not be diluted post the adoption of the proposed bill.

The rubber industry, which is mostly dependent on the imports, needs to improve acreage production to meet the higher demand of natural rubber.

In view of the ample rainfall in rubber cultivation regions this year as projected by the Rubber Board, the rubber production is likely to reach 8,50,000 tonne in FY 23. Several welcome measures, such as, development of genetically modified rubber plants, whole genome sequencing and commissioning of Rubber Products Incubation Centre, REACH Compliance Laboratory and Molecular Plant Pathology Lab, delineation of landslide susceptibility of rubber plantations in Kerala with assistance of digital university of Kerala and the launch of the landslide zonation maps with good agricultural practices have been initiated for salubrious development of this sector. But the rubber industry of India continues to grapple with the low production of rubber domestically as compared to the rising demand for rubber. In five years to FY22, the production increased 12 per cent to 7,75,000 tonne while the consumption rose at a much higher rate of 18.5 per cent to 12,38,000 tonne. This is why to meet the rising demand, imports surged by 28 per cent to 5,46,369 tonne. [10]

Production Linked Incentive Scheme (PLI) is one of the ambitious schemes of the Central Government that should be integrated into the rubber industry to meet the natural rubber (NR) requirement of 15 lakh tonne by 2025-26. Concerted efforts have also to be made to increase the area under rubber cultivation. The significance of such focused measures stem from the fact that most of the units are in the category of micro, small and medium enterprises (MSMEs). Towards this end, the Rubber Board has identified a vast stretch of land in the northeast region and West Bengal for rubber cultivation. Tripura, which is the second largest NR producing state in the country after Kerala, is currently cultivating NR on 89,264 hectare of land and producing 93,371 tonne of rubber annually. "NE-MITRA" (North East Mission of Tyre Industry for Rubber Augmentation) is a project conceived by the Board to develop rubber plantations in those areas with financial support from consuming industries. While increasing NR production in India by expanding rubber cultivation to non-traditional areas, including the northeast region and traditional regions, attempts must be made to generate incremental income generating activities, viz., beekeeping, intercropping, etc.



The global market for rubber products has been growing steadily. The government should, therefore, take steps to ensure that the terms of the Free Trade Agreements (FTAs) benefit the MSMEs for internalisation with mainstreaming of trade facilitation to increase rubber exports. India should include FTAs provisions to address the peculiar concerns, demands and barriers faced by the MSMEs in accessing foreign markets.

With rising use of both natural and synthetic rubber and improved business climate because of incentives and reforms and the government's policy of self-sufficiency, there is a significant potential of robust growth in the entire rubber value chain. But the realisation of this potential requires addressing some of the long-standing concerns of the rubber industry in India with a sense of urgency. Some of the important concerns relate to sufficient credit, liquidity and cheaper raw materials and logistic support. Hence these planks of the development strategy must be effectively addressed to build a robust and vibrant rubber industry in India.

Going forward, the success mantras involve cost competitiveness, assured quality, greater use of technical knowledge and technology and thorough market research. Dissemination of information and knowledge on export procedures, documentation requirements, and the nitty-gritty of export guidelines, sharing export market intelligence and specialist meets would also boost the industry. This is a tall order and requires inter-alia, proximity to rubber plantations to optimise time and money in transport and other logistics, effective measures to ward off the problems arising from low rubber production in the rainy season and sectoral research drawing on the lessons of the past experience and replicating the success stories in other countries. Given the compelling need to move to a higher and more sustainable growth orbit, co-ordinated and concerted measures by all stakeholders, viz., rubber growers - large and small, - rubber processors, tyre and non-tyre rubber product manufacturers, government and non-government promotional bodies, trade organisations, research and skill development institutions and the media are urgently called for to consolidate and strengthen the rubber industry in India.

## ENDNOTES

1. Statista, <https://www.statista.com/statistics/275392/top-10-consumers-of-natural-rubber/#:~:text=China%20consumed%20the%20most%20natural,at%205.7%20million%20metric%20tons>.
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