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Production of Natural Rubber in India

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Abstract: Rubber is a coherent elastic solid obtained from latex of a number of tropical trees of which Hevea brasiliensis is the most important. Rubber is used for a variety of purposes from erasing pencil marks to manufacturing of tyres, tubes and a large number of industrial products. The first rubber plantations in India were set up in 1895 on the hill slopes of Kerala. However, rubber cultivation on a commercial scale was introduced in 1902.

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Introduction:

The total production of Natural Rubber (NR) during 2018-19 is provisionally estimated at 648000 tonnes. The production of NR during April-May 2019 is provisionally estimated at 74000 tonnes. The Natural Rubber prices have been at relatively low levels during the past few years in domestic and international markets. However, the rubber prices started increasing during the recent weeks and the average price for the RSS4 grade in June, 2019 was 150.29 per kg. The Natural Rubber prices are determined by market forces and a range of factors which inter-alia include trends in economic growth in major consuming countries, Oil/synthetic rubber prices, weather conditions and developments in future markets.

The domestic NR market generally follows the trend in world market with occasional divergences due to region specific and seasonal factors. No quantitative restrictions can be imposed on the import of NR under WTO commitments. The domestic NR price is sensitive to import of NR. Therefore, to regulate the import of NR, the Government has increased the duty on import of dry rubber from "20% or Rs. 30 per kg whichever is lower" to "25% or Rs. 30 per kg whichever is lower" from 30.4.2015. The Government has also reduced the period of utilization of imported dry rubber in January 2015 under advance licensing scheme from 18 months to 6 months. The Director General of Foreign Trade (DGFT) has imposed port restriction on the import of Natural Rubber by restricting the port of entry to Chennai and NhavaSheva (Jawaharlal Nehru Port) since 20th January, 2016.

Conditions of Growth:

Rubber tree (Hevea brasiliensis) is a quick growing tall tree acquiring 20-30 metre height. It begins to yield latex in 5-7 years after planting. It requires hot and humid climate with temperature of 25°-35°C and annual rainfall of over 200 cm. The rainfall should be well distributed throughout the year.

Dry spell and low temperatures are harmful. Daily rainfall followed by strong sun is very useful. Deep well drained loamy soils on the hill slopes at elevation ranging from 300 to 450 metres above sea level provide best conditions for its growth. The yields decline at higher elevations and no rubber plantations are found above 700 m elevation.

Why in News?

According to the **All India Rubber Industries Association (AIRIA)**, the USD 2-billion non-tyre rubber sector is aiming to double its exports by 2025.

- The global market for rubber products, which is estimated at around $212 billion is expected to grow by 2025.
- The government should take steps to ensure that the terms of the **Free Trade Agreements (FTAs)** benefit the **MSMEs** to increase rubber exports.
- As MSMEs are so important to India's economy and commerce, India's should include FTAs provisions to address the special concerns, demands and barriers that MSMEs may face while doing business in foreign markets.

What is AIRIA (All India Rubber Industries Association)?

- The All-India Rubber Industries Association (AIRIA) is a not for profit making body serving the rubber industry and trade with the objectives of safeguarding and promoting interests of the industry.

What are Key Features of Rubber?

- **About:**
  - 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 brasiliensis** is the most important.
  - Rubber trees have an economic life period of around 32 years in plantations.
- **Sources:**
  - Natural rubber comes from various sources, the most common being the Pará rubber tree (**Hevea brasiliensis**). It grows well under cultivation and **yields latex** for several years.
  - The vines in the **genus Landolphia** yield the Congo rubber. These vines cannot be grown in cultivation and this led to large-scale exploitation of the wild plants in Congo.
  - Latex is also present in dandelion milk which can be used to produce rubber.
- **Cultivation of Rubber Trees:**
  - **Soil:**
    - The trees demand well-drained and well-weathered soils.
    - **Lateritic type, alluvial, sedimentary types, and non lateritic red soils** are best for the growth of these trees.
  - **Precipitation and Temperature:**
    - An evenly distributed rainfall with at least 100 rainy days a year **and a temperature range of about** 20 to 34°C are optimum conditions for the growth of the Hevea rubber tree.
    - A humidity of around 80%, 2000 hours of sunshine, and absence of strong winds are also necessary for the best results.
- **Uses:**
  - Rubber is used for a variety of purposes from erasing pencil marks to manufacturing tyres, tubes and a large number 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 growth of the automobile market across countries is anticipated to increase the demand for natural rubber production.
  - The rise in demand for latex products, such as catheters, gloves, and belts, is also a factor that is likely to aid in the growth of the rubber market.
- **Production and Distribution:**
  - According to FAOStat (Food and Agricultural Organisation Corporate Statistical Database) of 2019, Thailand is the largest Producer of Rubber in the World followed by Indonesia, Malaysia, India, China etc.

What is the Status of Rubber Production in India?

Kerala is the largest producer of natural rubber producing 595 thousand tonnes or 92 per cent of total rubber production of India in 2002-03. Kottayam, Kollam, Ernakulam, Kozhikode districts produce practically all the rubber of this state. Tamil Nadu is the second largest producer of rubber but lags far behind Kerala producing only 22 thousand or 3.39 per cent of the total Indian production in 2002-03.

Nilgiri, Madurai, Kanniyakumari, Coimbatore and Salem are the chief rubber producing districts of Tamil Nadu. Karnataka produced 14 thousand tonnes or 1.85 per cent of total Indian production in 2002-03. Chikmagalur and Kodagu are the main producing districts. Tripura and Andaman & Nicobar Islands also produced small quantities of rubber respectively in 2002-03.

Kerala – Rubber Production

Kerala produces around 74% of India's total rubber production. During 2017-20, there has been a decline in the production of natural rubber in Kerala. In 2017-18, the natural rubber produced in Kerala was 5.40 lakh tonnes, and by 2019-20, the production of natural rubber reduced to 5.33 lakh tonnes. During the same period, the production of natural rubber increased in the states of Nagaland, Assam, and Tripura.The total contribution of Kerala to the production of natural rubber in India was 77.8% in 2017-18. By 2019-20 the contribution of Kerala in the total production of natural rubber came down to 74.9%.Apart from rubber production, some other interesting facts related to Kerala – the leading producer of rubber, are given below:

- The literacy rate of Kerala is 96.2%.
- As per the RBI report of 2013, Kerala was the second-least impoverished state in India.
- Kerala has the highest sex ratio in India. There are 1,084 women per 1,000 men.
- Kerala is the second-most urbanised state in India.
- Kerala is ranked the highest on the Human Development Index (HDI).
- Kerala is one of the most important tourist destinations in India due to its tropical greenery, Ayurvedic tourism, hill stations, backwaters, and coconut-lined sandy beaches.

Visit the given link for more information related to the state of Kerala.

Northeast States – Increase in Rubber Production

Tripura, which is located in Northeast India, is the second-largest producer of rubber in India. From 2017-18 to 2019-20, there has been a remarkable increase in rubber production from Northeast states.

- From 2017-18 to 2019-20, Tripura's share in rubber production in India increased from 7.27% to 8.70%.
- In 2017-18, Assam produced 23,300 tonnes. Assam's rubber production increased to 30,350 tonnes in 2019-20. In 2019-20, Assam produced 4.26% of India's total rubber.
- In Nagaland, rubber production increased from 4,820 tonnes in 2018-19 to 6,070 tonnes in 2019-20.
- In Meghalaya, rubber production increased from 9,050 tonnes in 2017-18 to 9,350 tonnes in 2019-20.
- Industry body Automotive Tyre Manufacturers Association (ATMA) had decided to invest Rs 1,100 crore to undertake rubber plantation in additional 2,00,000 hectares of land in Northeast India in a span of 5 years.

Increase in Rubber Production – South Indian States

- In South India, apart from Kerala, Karnataka and Tamil Nadu are other major producers of rubber.
- In Karnataka, the production of natural rubber increased from 38,300 tonnes in 2017-18 to 41,550 tonnes in 2019-20.
- In Tamil Nadu, the production of natural rubber increased from 21,110 tonnes in 2017-18 to 21,600 tonnes in 2019-20.

▪ According to FAOStat 2019, India is the fourth largest producer and consumer of Rubber in the World.

Consumption:

- Most of the rubber consumption came from the transportation sector, followed by the footwear industry.

Exports:

- The quantity of natural rubber which was exported from India accounted for over 12 thousand metric tons during fiscal year 2020.
- The leading countries importing natural rubber from India were **Germany, Brazil, the United States and Italy.**
- Export products included **automotive tires and tubes, footwear, pharmaceutical goods and hoses, coats and aprons.**

▪ **Distribution:**

- The first rubber plantations in India were set up in 1895 on the hill slopes of Kerala.
- However, rubber cultivation on a commercial scale was introduced in 1902.
- **Kerala** is the **largest producer** of natural rubber in India.
  - **Major areas**: Kottayam, Kollam, Ernakulam, Kozhikode districts produce practically all the rubber of this state.
- **Tamil Nadu:**
  - Nilgiri, Madurai, Kanniyakumari, Coimbatore and Salem are the chief rubber producing districts of Tamil Nadu.
- **Karnataka:**
  - Chikmagalur and Kodagu are the main producing districts.
- **Tripura, Assam, Andaman and Nicobar, Goa** etc are some other rubber producing States.

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