Geography · GS - I

Describing the distribution of rubber-producing countries, indicate the major environmental issues faced by them.

EXAM YEAR	PAPER	SUBJECT
2022	GS - I	Geography

MARKS	WORD LIMIT
15	~250 words

Answer Hint

Natural conditions such as high temperature, heavy rainfall and humid climates concentrate rubber production in tropical regions. However, rubber cultivation faces environmental challenges including deforestation, biodiversity loss, soil degradation, agrochemical pollution and climate-change-induced stress.

Model Answer

Introduction

Natural rubber is obtained from *Hevea brasiliensis*, a tropical tree requiring high temperatures, abundant rainfall and humidity. Its production is concentrated in Southeast Asia, with additional production in Africa and South America.

Body

Distribution of Rubber-Producing Countries

Thailand, Indonesia, Vietnam and Malaysia are major producers in Southeast Asia. India, particularly Kerala and parts of the northeastern states, also produces substantial quantities. Côte d’Ivoire, Liberia and Nigeria are important African producers, while Brazil represents the crop’s South American origin.

Major Environmental Issues

1. Deforestation: Expansion of rubber plantations into natural forests destroys habitats and fragments ecosystems, particularly in Southeast Asia.

2. Biodiversity Loss: Monoculture plantations replace diverse tropical forests, reducing species richness and ecological resilience.

3. Soil Degradation: Intensive cultivation, erosion and inappropriate plantation management can reduce soil fertility and increase runoff.

4. Chemical Pollution: Fertilisers, herbicides and pesticides may contaminate soil and water bodies, affecting aquatic organisms and human health.

5. Climate Change: Changing rainfall patterns, rising temperatures, droughts and extreme weather events threaten productivity and increase disease risks.

6. Carbon Emissions: Forest clearance releases stored carbon, undermining the climate benefits of plantation-based production.

Conclusion

Rubber-producing countries must promote sustainable plantation management, agroforestry, forest conservation and responsible chemical use. Increasing productivity on existing plantations can reduce pressure on natural ecosystems while supporting rural livelihoods.

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