Q3(b)

Examine the environmental and biocultural factors influencing the health of tribals of India

UPSC Civil Services Mains 2025 · Anthropology GS 2 · 15 marks · Demographic profile of India

2. Demographic profile of India-Ethnic and linguistic elements in the Indian population and their distribution. Indian population-factors influencing its structure and growth.

Core demand of the question

- Name environmental factors that shape tribal health in India
- **Name biocultural factors:** work, diet, kinship, gender, medical pluralism
- Show how the two interact with examples
- Bring in present schemes, committees and rights without turning the answer into a ministry list

Revision summary

Environmental loads include malaria, mining dust, indoor smoke, iodine and water, plus displacement from dams and parks.

Biocultural loads include shrinking forest diets, migration-TB, gender and fertility, medical pluralism and sickle-cell without counselling.

Xaxa and the tribal health expert group asked for local cadres and disease-specific work, not a single plains protocol.

PM-JANMAN, sickle-cell mission, Nikshay, POSHAN and Jal Jeevan matter only if hamlets are reached in their language.

Forest rights are nutrition rights.

Introduction

Tribal health in India is not a single disease. It is the meeting of **forest, water, mine and altitude** with **work, food, marriage and the clinic**. Environmental and biocultural factors act together, which is why anaemia, malaria, tuberculosis, addiction and undernutrition cluster in Scheduled Tribe districts.

Body

Environmental factors

- **Many ST habitats are** hilly, forested or mining belts**:** malaria and other vector diseases in Bastar, Mayurbhanj, the Terai and the North-East; fluorosis or laterite anaemia in pockets; iodine deficiency in some Himalayan and North-Eastern hills; respiratory load from **indoor smoke** and from **coal and silica dust** in Jharkhand and Chhattisgarh. Displacement to dam and park edges cuts access to forest foods and clean water. Climate stress - irregular rain, failed mahua and tendu years - shows up as lean-season hunger.

Wildlife sanctuaries and tiger reserves can criminalise movement to clinics and to shifting plots. The **Forest Rights Act, 2006** and the Supreme Court's later FRA-related orders sit in this health story: mobility and grove rights are also nutrition rights.

Biocultural factors

Jhum and forest diets (millet, tuber, leafy greens, hunted or river protein) can be balanced when the forest is intact and lean when it is not. Cash-crop and PDS rice substitution has reduced dietary width. Early marriage, repeated pregnancy and low birth weight among some groups, documented in **NFHS ST tables**, are kinship and gender facts, not "tribal nature".

- **Work: migrant brick-kiln and construction labour** from western Odisha and southern Rajasthan spreads TB and breaks treatment. Alcohol and, in some North-Eastern and central belts, **injecting drug use**, add HIV and hepatitis risk. Medical pluralism - gunia, herbalist, church prayer, ANM - shapes when a child reaches a PHC.

Stigma and language at the PHC delay care. **Sickle-cell** in Gond, Pawra and other central Indian groups is a genetic fact that becomes a health disaster only when screening and counselling are absent.

Interaction and public action

The **Bhore Committee** already said environment and poverty make disease. The **Xaxa Committee** (2014) and the **Expert Committee on Tribal Health** (Ministry of Health and MoTA, 2018, chaired in the public telling by experts including tribal physicians) asked for **local cadres, respectful delivery, sickle-cell and malaria specials**, and warned against a single national menu.

- **Schemes that matter on the ground: National Sickle Cell Anaemia Elimination Mission**, **Nikshay** for TB, **POSHAN Abhiyaan** and **PM POSHAN**, **Jal Jeevan** for water, **PM-JANMAN** for PVTG habitations (housing, piped water, health outreach), **Ayushman Bharat** cards that still fail when Aadhaar and hamlet addresses do not match. **PESA Gram Sabha** can site anganwadis; it cannot by itself staff a doctor.
- **A biocultural reading says:** restore forest foods and FRA, staff the last mile in the local language, screen sickle-cell, and stop treating undernutrition as a character flaw of the tribe.

Flow diagram

Forest mine water vector -> Health

Diet work gender clinic -> Health

Health -> FRA PM-JANMAN sickle-cell TB

Conclusion

Environment supplies vectors, dust, altitude and broken forests. Culture supplies diet, work, gender and the path to the clinic. Tribal health improves when FRA, PESA, sickle-cell missions and PVTG outreach treat both together.

Facts & figures

Xaxa Committee 2014

Documented gaps in tribal health, education and land, and criticised one-size development that ignores habitat and custom.

Sickle Cell Elimination Mission

National screening and awareness drive aimed at tribal and other high-prevalence belts in central and western India.

PM-JANMAN

Union programme for Particularly Vulnerable Tribal Group habitations covering housing, water, education and health outreach.