

**GS PAPER 2- INTERNATIONAL RELATIONS**

**Global South's Position on the Israel-Palestine Conflict**

The article discusses recent developments in the Israel-Palestine conflict, highlighting the role of key powers like India and China. It describes differing stances in the Global South and suggests that these divisions hinder any united approach to peace.

**What Happened Recently in Gaza?**

On October 16, 2024, Israel killed Hamas leader Yahya Sinwar in Gaza. He had taken control of Hamas after Ismail Haniyeh's assassination in July 2024. Sinwar was a key figure behind the October 7, 2023 attacks on Israel. Israel has been targeting Hamas and Hezbollah leaders, increasing civilian casualties in Gaza and Lebanon.

**What is the Global South's Position?**

- South Africa's Position:**
- South Africa, influenced by its apartheid experience, strongly opposes Israel's actions.
- In December 2023, it took Israel to the International Court of Justice (ICJ) to seek accountability for Israel's human rights actions.
- South Africa wants the ICJ to issue a warrant against Israeli Prime Minister Benjamin Netanyahu.
- China's Position**
- China backs Palestinian sovereignty from a decolonization perspective.
- In July 2024, it hosted 14 Palestinian groups, including Hamas, to encourage unity.
- Despite not condemning Hamas explicitly after the October 2023 attacks, China prioritizes its alliances with Arab nations.
- China uses forums like BRICS to expand influence in the Global South, although its relations with Israel are limited.
- India's Position**
- India balances support for Israel in counterterrorism with support for a two-state solution.
- India recognized Palestinian statehood in 1988 and aligns with anti-terrorism due to its own experiences, like the 1999 IC814 hijacking.
- India promotes counterterrorism efforts globally while supporting Palestinian rights.

**What Are the Implications for Global South Unity?**

- There is no unified stance within the Global South. Each country prioritizes its interests, which leads to fragmented approaches.
- The lack of a cohesive strategy makes it difficult to form a unified front that could effectively intervene or mediate in the conflict.
- Major global players are involved, but there is no consensus on how to proceed, which complicates efforts towards peace.

**POLITY GS PAPER-II**

**Supreme Court's decision allowing Indian states to tax industrial alcohol**

The article discusses the Supreme Court's decision allowing Indian states to tax industrial alcohol. This decision, favoring states' revenue autonomy, reverses a past ruling. It follows a similar July verdict, supporting state royalties on mining, highlighting states' financial independence.

**What are the issues with industrial alcohol taxation?**

- Historical Restrictions:** A 1990 Supreme Court ruling in *Synthetics & Chemicals Ltd vs State of Uttar Pradesh* restricted states from taxing industrial alcohol, limiting their revenue potential from this lucrative source.
- Revenue Needs Post-GST:** States argue for increased revenue sources, especially after GST centralization. Industrial alcohol, essential in sectors like biofuels, sanitizers, and the food industry, provides an untapped income stream for states.
- Constitutional Interpretation:** The case hinged on whether industrial alcohol qualifies as "intoxicating liquor" under the State List 8 in the Seventh Schedule, which allows states to tax "intoxicating liquors." This debate led to legal ambiguity over states' taxation rights.

**What is the recent judicial view on the term "intoxicating liquor"?**

- The Supreme Court recently ruled that states can tax industrial alcohol, overturning the 1990 *Synthetics & Chemicals Ltd vs State of Uttar Pradesh* decision.
- Chief Justice DY Chandrachud argued for a broad interpretation of "intoxicating liquor" in the Seventh Schedule, allowing states to include industrial alcohol in this category if it causes intoxication.
- Justice B V Nagarathna dissented, stating industrial alcohol, meant for non-consumption uses like biofuels and sanitizers, should not be included.
- The ruling strengthens state revenues, especially vital in the GST era, when states seek additional revenue sources.

**GS PAPER3- ISSUES RELATED TO DIRECT AND INDIRECT FARM SUBSIDIES AND MINIMUM SUPPORT PRICES**

**Arguments for and against reducing food subsidies**

The article argues for increasing investment in agricultural R&D to improve productivity and food security. It suggests that food subsidies are essential for vulnerable populations and that cuts should come from other areas, not food subsidies.

**What are the arguments for and against reducing food subsidies?**

- Arguments for Reducing Food Subsidies:**
- Redirect Funds to Agricultural R&D:** Cutting food subsidies could free resources to boost agricultural R&D, improving crop productivity and addressing climate change. This shift could ensure long-term food security and benefit both farmers and consumers.

- Alternative Subsidy Options for Farmers:** Input subsidies (for electricity, water, fertilizers) create resource inefficiencies, deplete groundwater, and harm soil. Reducing such subsidies might allow more effective funding for R&D rather than supporting inefficient practices.
- Overestimated Food Subsidy Burden:** Critics claim that expanding PDS under the National Food Security Act (NFSA) inflated the subsidy bill. However, coverage increased to 67% of the population, while grain supply per person fell from 7.9 kg to 5 kg, balancing costs.
- Arguments Against Reducing Food Subsidies:**
- Essential Support for the Poor:** Food subsidies act as income transfers for low-income families, saving about Rs. 700-800 monthly for a family of four and enabling spending on other essentials like pulses and milk.
- COVID-19 Lessons:** The pandemic underscored the importance of food subsidies in supporting food security for vulnerable populations.
- Consumer-Targeted, Not Producer-Focused:** Food subsidies primarily benefit consumers, not farmers, making them crucial for broader welfare rather than just agricultural support.

### **GS PAPER3-ISSUES OF BUFFER STOCKS AND FOOD SECURITY**

#### **REASONS AND IMPACTS OF DELAYED PADDY PROCUREMENT IN PUNJAB**

The article discusses delays in paddy procurement in Punjab due to storage issues, low milling yield from hybrid rice, and labor disputes. These issues slow harvesting, affect crop quality, disrupt wheat sowing, and risk causing farmer unrest.

#### **How does paddy procurement work?**

- The Centre, along with state governments and the Food Corporation of India (FCI), plans paddy procurement before each kharif marketing season (October to September).
- State agencies and FCI buy paddy from farmers at the Minimum Support Price (MSP) for the central pool.
- This paddy is then milled, and the rice is stored for buffer stock or used in welfare schemes under the National Food Security Act (NFSA).

#### **What is the current situation in Punjab?**

- As of October 23, Punjab has procured only 37.68 lakh tonnes of paddy, compared to 49 lakh tonnes last year.
- The target for the season is 185 lakh tonnes. The biggest issue is the slow movement of paddy from mandis.
- Only 10.55% of the paddy (8.7 lakh tonnes) has been moved out, while last year, around 50% had been cleared by this time.

#### **What are the main reasons for the delay?**

- Storage Space Shortage:** Private rice millers resist storing government paddy due to limited storage in government godowns. Punjab could move only 7 lakh tonnes of the 124 lakh tonnes stored in godowns, leaving little room for this year's crop.
- Hybrid Controversy:** Hybrid rice varieties introduced this year have a lower milling out-turn ratio (OTR), yielding only 60%-62% rice from paddy, below the FCI standard of 67%. This leads to a loss of around Rs 300 per quintal for millers.
- Labor and Arhtiyas' Demands:** Arhtiyas (middlemen) are demanding a higher commission of 2.5%, and mandi laborers are asking for higher wages. Protests from these groups have delayed the procurement process.

#### **What are the impacts of the delay?**

- Slow Harvest:** Farmers have only harvested 22% of the paddy crop, compared to 42% last year, due to lack of mandi space. Delayed harvesting can lead to crop quality decline, lower prices, and economic stress.
- Wheat Sowing Delays:** Farmers need to plant wheat in November. Delayed paddy harvest may shorten the gap between crops, increasing stubble burning, which causes air pollution in North India.
- Potential Unrest:** Extended delays can cause unrest among farmers, creating a law and order issue for Punjab.

#### **What are possible solutions?**

- Temporary Storage:** The government could use Punjab's 5,000 rice mills as temporary storage but needs to resolve millers' concerns first.
- Better Coordination:** Improved coordination between procurement, transport, and storage facilities, timely payments to arhtiyas, and meeting labor demands could help.
- Long-Term Diversification:** Punjab should diversify its crops to prevent future storage and surplus issues.

### **SCIENCE AND TECHNOLOGY, ENERGY GS PAPER-III**

#### **Ethanol Blending Program**

India's rising energy demands and dependency on imported oil have led the government to focus on sustainable alternatives like ethanol blending. This initiative, which aims to reduce fossil fuel use and carbon emissions, is a major step toward energy security.

#### **About Ethanol Blending Program:**

- Origin: Launched in 2003 as a pilot project, ethanol blending was formalized through the Ethanol Blended Petrol (EBP) program to support energy needs and environmental goals.
- Aim: Reduce reliance on imported oil, improve energy security, lower carbon emissions, and boost rural income by supporting sugarcane farmers.
- Target: Achieve 20% ethanol blending in petrol by 2025, advancing the original target of 2030 in response to increased capacity and demand.

- Ministry: Led by the Ministry of Petroleum and Natural Gas, with support from the Department of Food and Public Distribution and Ministry of Environment, Forest, and Climate Change for sustainable biofuel production and integration into the energy landscape.

**Key achievements:**

- Ethanol blending growth: Ethanol blending has surged from 1.53% in 2014 to 15% in 2024. The government is targeting 20% blending by 2025.
- Increased ethanol production capacity: Ethanol production capacity has more than doubled in four years, reaching 1,623 crore litres in 2024.
- Foreign exchange savings: The program has saved ₹1,06,072 crore in foreign exchange and reduced CO<sub>2</sub> emissions by 544 lakh metric tons.
- Economic impact: Oil Marketing Companies (OMCs) have paid ₹1,45,930 crore to ethanol distillers and ₹87,558 crore to farmers, promoting rural prosperity.

**Challenges:**

- Feedstock availability: Limited feedstock options, such as sugarcane, restrict the scale of ethanol production.
- Infrastructure gaps: Insufficient infrastructure for ethanol storage, transportation, and blending poses logistical challenges.
- Technological constraints: Need for technology advancements in ethanol production to ensure efficient use of diverse feedstocks, including lignocellulosic biomass.
- Regulatory and inter-state barriers: Variations in state regulations and taxation can hinder smooth ethanol trade across state borders.

**Key measures:**

- Pradhan Mantri JI-VAN Yojana (Modified): Expanding the scope to include advanced biofuels and extending the timeline till 2028-29.
- Roadmap for blending: A comprehensive plan for achieving 20% ethanol blending by 2025, ensuring efficient implementation.
- Tax reductions: GST on ethanol reduced to 5%, making it financially attractive for producers and consumers.
- Interest subvention: Subsidies provided to enhance ethanol production capacity.
- Free movement of ethanol: Changes in regulations to facilitate smooth inter-state movement of ethanol.

**Conclusion:**

India's commitment to ethanol blending represents a transformative approach to energy security, environmental sustainability, and economic development. With a significant increase in ethanol production capacity and blending percentages, the government is making substantial strides towards its ambitious target of 20% blending by 2025.

**INTERNATIONAL RELATIONS PAPER-II****India-China Patrolling Arrangement**

India and China recently announced an agreement on "patrolling arrangements" along the Line of Actual Control (LAC), aimed at resolving lingering border disputes.

**Key Points on the India-China Patrolling Agreement:**

- Restoration of patrolling rights: Indian and Chinese troops will regain patrolling rights in areas of longstanding contention, such as the Depsang Plains and Demchok, restoring pre-2020 conditions.
- Three-phase process: The agreement outlines a phased approach — Disengagement, De-escalation, and De-induction of troops — aimed at reducing troop presence along the Line of Actual Control (LAC) over time.
- Resumption of grazing rights: Traditional grazing activities will resume in certain areas, reflecting an effort to return to a status quo that predates recent border tensions.
- Monitoring and verification: Both countries agree on close monitoring to prevent the reoccurrence of confrontations, such as the Galwan Valley clash in 2020.
- Limited areas of engagement: Current disengagement covers the Depsang and Demchok regions, with previous stand-off points, including Pangong Tso and Galwan, remaining unchanged.

**Challenges in the de-escalation process:**

- Trust deficit: India remains cautious due to past incidents where China did not uphold previous border agreements fully, emphasizing the need for a "trust, but verify" approach.
- Diverging interpretations: Differences in Indian and Chinese statements indicate varying perspectives, with China emphasizing general progress, while India highlights specific de-escalation steps.
- Sequence of de-escalation: India's focus is on disengagement first, while China's position on the sequence is less clear, possibly complicating the pace and sequence of military withdrawal.
- Political sensitivities: India's stance links border peace with broader bilateral relations, whereas China views the border issue as separate from overall ties, adding diplomatic tension.

**Way ahead:**

- Close monitoring: Maintain stringent checks on patrolling activities to ensure compliance and avoid provocations.

- Strategic engagement: Continue dialogues at various diplomatic levels to address boundary issues transparently.
- Strengthened surveillance: Enhance infrastructure and surveillance along the LAC to swiftly detect and address potential violations.
- Promote confidence-building measures: Initiate regular communication channels and confidence-building measures to rebuild trust.

**Conclusion:**

- The recent agreement represents a cautious yet hopeful step in India-China relations. Sustained efforts toward disengagement and de-escalation, guided by mutual respect and trust, are essential for restoring long-term stability along the LAC. As India emphasizes, maintaining peaceful borders is key to resuming “business as usual” with China.

**PRELIM FACTS**

**1. Dhamra river and Bhitarkanika National Park**

The severe cyclonic storm, packing wind speeds of up to 120 km per hour, was expected to make landfall close to **Bhitarkanika National Park** and **Dhamra port in Odisha** on 25th October.

- **Heavy Rainfall and Winds:** Coastal Odisha faced heavy rain and squally winds due to the approaching Cyclone Dana.
- **Expected Path:** Likely to **cross Odisha and West Bengal coasts between Puri and Sagar Island**, near Bhitarkanika and Dhamra, from midnight on October 24 to morning on October 25
- **Rainfall Records:**
  - Paradip recorded the highest rainfall of 62 mm
  - Rajnagar in Kendrapara district received 24 mm rainfall in the last four hours

**About Bhitarkanika National Park**

- **Location:** Kendrapara district, Odisha
- **Delta Formation:** Situated in a rich delta formed by the Brahmani, Baitarani, and Dhamara rivers.
- **Mangrove Ranking:** India’s second-largest mangrove ecosystem after the Sundarbans
- **Soil Enrichment:** Proximity to the Bay of Bengal enriches the soil with salts
- **Ramsar Designation:** Odisha’s second Ramsar site, after Chilika Lake.
  - It obtained the status of a Ramsar site in 2002
- **Fauna:** Saltwater Crocodile, Olive Ridley Sea Turtles, Asian Dowitcher, Black Ibis, Lesser Flamingo, etc.
  - It has all the **3 species of crocodiles** i.e. **Gharial (critically endangered), Muggar crocodile (vulnerable) and Saltwater crocodile.**
- **Flora:** Mangrove forests

**About Dhamra river**

- **Joint Stream:** Formed by the confluence of the Brahmani and Baitarani rivers south of Chandabali town
- **Outflow:** It empties into the Bay of Bengal
- **Dhamra Port:** Located north of the river’s mouth
- **Gahirmatha Sanctuary:** Situated near the mouth of the river
- **Wheeler Island:** A DRDO missile launch center located off the river mouth in the Bay of Bengal

**2. Escherichia coli (E. coli)**

Recently there was an E.Coli Infection outbreak in the US.

- **Spread Through Fast Food:** McDonald’s has stopped serving **Quarter Pounder patties** and **slivered onions** in several US states due to the outbreak.
  - Although the exact source of the infection remains unknown.

**About E.coli**

- Escherichia coli (E. coli) is a **rod-shaped bacterium** of the **Enterobacteriaceae family**, commonly found in the **intestines of humans and animals.**
- While **most strains are harmless or even beneficial**, some can cause severe infections and illnesses.
- It is the **most commonly isolated bacteria** from patient samples, **present in 23.19% of samples** from tertiary care hospitals.
- **Symptoms of E. coli Infection:** **Urinary tract infections, respiratory illnesses, and pneumonia**
  - In rare cases, it can cause **acute kidney injury.**
- **Transmission:** Through contaminated food, water, or contact with fecal matter from infected individuals or animals.
- **Treatment:** Most E. coli infections are **self-limiting and resolve without treatment.**

**How Does E. coli Cause Illness?**

- Certain strains, known as **Shiga toxin-producing E. coli (STEC)**, produce a toxin called Shiga. This toxin damages the small intestine lining, causing diarrhoea, including bloody diarrhoea.

**3. Doli Deaths**

Andhra Pradesh Home Minister stated that the government would take measures to eliminate the issue of “doli deaths” in the Agency by enhancing road connectivity to the remote villages of Alluri Sitharama Raju (ASR) district.



**About Doli Yatra Protest:**

- **Objective of the yatra:** The tribal community organized the 'doli yatra' to demand proper road connectivity to hilltop villages, including Pedagaruvu, Pithrigedda, and Jajulabandha.
- **Reason for protest:** Due to the lack of roads, around 300 Kondh tribe members face difficulties accessing healthcare, often carrying sick or pregnant individuals in makeshift dolies over long distances.
- **Community initiative:** In 2020, the villagers built a road using pooled resources, but it was destroyed by rains, worsening their transportation challenges.
- **Health risks:** The lack of connectivity has resulted in numerous deaths as patients fail to reach hospitals in time.

**About Kondh Tribe:**

- **Cultural division:** Kondhs are divided into two main groups – hill-dwelling and plain-dwelling – and are further classified into various clans.
- **Traditional lifestyle:** Historically, the Kondh tribe were hunter-gatherers, relying on forest resources for their livelihood.
- **Language:** They primarily speak Kui, a Dravidian language, and use the Odia script for writing.
- **Scheduled tribe status:** The Kondh tribe has been recognized as a Scheduled Tribe (ST) in eight Indian states: Andhra Pradesh, Odisha, Jharkhand, Chhattisgarh, Bihar, Madhya Pradesh, Maharashtra, and West Bengal.
- **Social structure:** Kondhs follow a clan-based system, with strong community ties and traditional village governance structures.
- **Religion:** They practice animism, with a deep connection to nature and forest deities, though many have also embraced Hindu rituals over time.

**4. National Pharmaceutical Pricing Authority**

The NPPA recently increased the ceiling prices of eight essential drugs by 50%, citing “extraordinary circumstances” to ensure these medications remain accessible.

**Rules and Laws for price revision:**

- **Para 19 of DPCO 2013:** Allows the government to revise drug prices during extraordinary circumstances.
- **Essential Commodities Act:** Empowers price regulation to ensure availability and affordability.
- **Annual Price Revision:** Ceiling prices are typically revised based on the previous year's Wholesale Price Index (WPI).
- **Extraordinary Circumstances:** Invoked when market conditions make price regulation necessary to maintain drug availability.

**About National Pharmaceutical Pricing Authority:**

- **Origin:** NPPA was established on **August 29, 1997**, to regulate the prices of pharmaceutical drugs and medical devices, implementing the provisions of the **Drugs (Prices Control) Order (DPCO)**.
- **Ministry:** It operates under the **Department of Pharmaceuticals**, Ministry of **Chemicals and Fertilizers**.
- **Governing law:** NPPA's authority comes from the **DPCO, 2013** and the **Essential Commodities Act**, ensuring availability and fair pricing of essential drugs.
- **Functions:**
  - **Price regulation:** Control and regulate the prices of essential drugs and medical devices to ensure they remain affordable.
  - **Enforcement:** Implement and enforce the provisions of the **DPCO** regarding the pricing of pharmaceutical products.
  - **Monitoring availability:** Ensure that essential medicines are available and address shortages when necessary.
  - **Data collection:** Gather information on drug production, imports, exports, and market shares of pharmaceutical companies.
  - **Advisory role:** Provide the government with recommendations on drug price revisions and policy changes related to pharmaceuticals.
  - **Legal matters:** Handle legal cases and disputes arising from pricing and availability issues.

**5. Venture Capital Fund**

The Union Cabinet has approved the establishment of a Rs. 1,000 crore Venture Capital Fund specifically for the space sector. This initiative will be managed under the aegis of the Indian National Space Promotion and Authorization Center (IN-SPACe).

**About the Venture Capital Fund**

1. IN-SPACe was established as part of India's 2020 space sector reforms to promote private sector participation in space activities.
2. The proposed Rs. 1,000 crore Venture Capital Fund aims to support the growth of India's space economy, currently valued at \$8.4 billion, with a target to reach \$44 billion by 2033.

3. This fund addresses the need for risk capital in a high-tech sector, as traditional lenders often hesitate to finance startups. The fund is expected to support approximately 40 startups.
4. The government-backed fund will boost investor confidence and signal a commitment to advancing space reforms, operating as an Alternative Investment Fund under SEBI regulations to provide early-stage equity to startups.
5. The fund will be deployed over five years from the commencement of operations. The average annual investment is expected to range from Rs. 150 to 250 crore, depending on available opportunities.

**6. Expected Benefits**

- i) **Multiplier Effect:** Attracting additional funding from private investors for later-stage development.
- ii) **Company Retention:** Reducing the trend of Indian companies moving abroad.
- iii) **Space Economy Expansion:** Aiming for a five-fold increase in the Indian space economy over the next decade.
- iv) **Advancements in Technology:** Strengthening India's leadership through private sector engagement.
- v) **Enhanced Global Competitiveness:** Positioning India favorably in the global space market.
- vi) **Support for Atmanirbhar Bharat:** Contributing to national self-reliance goals.

**7. Employment Generation Potential**

- i) The fund is expected to create jobs across the entire space supply chain—upstream, midstream, and downstream.
- ii) Investments may lead to hundreds of direct jobs in fields like engineering, software development, data analysis, and manufacturing.
- iii) Indirect job creation could extend to thousands in supply chains, logistics, and professional services.
- iv) A strong startup ecosystem will not only create jobs but also develop a skilled workforce, driving innovation in the space sector.

**6. SINGAPORE INDIA MARITIME BILATERAL EXERCISE (SIMBEX) 2024**

The 31st edition of the Singapore India Maritime Bilateral Exercise (SIMBEX) will be held from 23 to 29 Oct 2024.

**About Singapore India Maritime Bilateral Exercise (SIMBEX) 2024**

1. This is the 31st edition of the Singapore India Maritime Bilateral Exercise (SIMBEX). SIMBEX began as 'Exercise Lion King' in 1994.

2. It is scheduled from October 23 to 29, 2024 at Eastern Naval Command at Visakhapatnam, India.

**3. Participating Forces:** Indian Navy and the Republic of Singapore Navy (RSN)

**4. Significance:** It has evolved into a crucial bilateral maritime collaboration between the Indian Navy and the Republic of Singapore Navy (RSN).

**5. Structure of the Exercise:**

**Harbour Phase (October 23-25)** includes activities such as subject Matter Expert Exchanges (SMEEs), Cross-deck visits, Sports fixtures and Pre-sail briefings for personnel from both navies.

**Sea Phase (October 28-29)** includes activities such as advanced naval drills, live weapon firings, anti-submarine warfare (ASW) training, anti-surface and anti-air operations, seamanship evolutions and tactical manoeuvres.

**7. Objectives**

- i) **Strengthening Partnerships:** Aims to enhance the strategic partnership between India and Singapore.
- ii) **Enhancing Interoperability:** Focus on improving operational coordination between the two navies.
- iii) **Maritime Domain Awareness:** Foster cooperation to address common maritime challenges.

**ANSWER WRITING**

**Q. Discuss the relationship between poverty, sanitation, and the prevalence of neglected tropical diseases in India. What targeted interventions can effectively address these underlying issues?**

Neglected Tropical Diseases (NTDs) remain a major public health issue in India, with poverty and inadequate sanitation as primary drivers. Affecting over **400 million people** globally, these diseases often persist in marginalised communities with limited access to healthcare and basic infrastructure. India, bearing a high NTD burden, requires **targeted interventions** addressing poverty and sanitation to control these diseases, improving the quality of life for vulnerable populations.

**Relationship Between Poverty and the Prevalence of Neglected Tropical Diseases in India**

- **Limited Access to Healthcare:** Poor communities often lack access to healthcare, preventing timely diagnosis and treatment of NTDs, leading to prolonged suffering and higher infection rates.  
**For example:** Kala-azar is prevalent in Bihar's impoverished regions, where access to medical facilities remains limited, affecting thousands annually.
- **Malnutrition Weakening Immunity:** Poverty-driven malnutrition reduces immunity, making individuals more susceptible to NTDs like hookworm and leprosy, which thrive in undernourished populations.  
**For example:** Regions in Jharkhand report high rates of **hookworm infection** among undernourished populations, hindering disease management.
- **Poor Living Conditions:** Overcrowded, unsanitary living conditions increase transmission rates of vector-borne diseases like dengue and chikungunya, which are common in urban slums.  
**For example:** Slum areas face recurrent **dengue outbreaks**, with limited preventive infrastructure.
- **Lack of Educational Awareness:** Poverty often correlates with low literacy, limiting awareness about disease prevention and hygiene practices, allowing NTDs to spread unchecked.

**For example:** Low awareness of personal hygiene and disease prevention contributes to **leprosy** prevalence.

- **Employment in High-Risk Sectors:** People in poverty are often employed in jobs like mining or waste management, exposing them to higher risks of NTDs like lymphatic filariasis due to environmental factors.

**For example:** Quarry workers are at high risk for **lymphatic filariasis** due to unsanitary working conditions.

#### **Relationship Between Sanitation and the Prevalence of Neglected Tropical Diseases in India**

- **Open Defecation and Soil-Transmitted Infections:** Lack of sanitation facilities leads to open defecation, increasing soil-transmitted infections like hookworm and roundworm, especially in rural areas.

**For example:** States with high open defecation rates, report a significant prevalence of **soil-transmitted infections** among children.

- **Contaminated Water Sources:** Poor sanitation practices often lead to water contamination, making waterborne NTDs like **schistosomiasis** and **cholera** common in communities relying on untreated water sources.

**For example:** Parts of Uttar Pradesh face **cholera outbreaks** due to reliance on contaminated water sources in slum areas.

- **Inadequate Waste Management:** Insufficient waste management fosters breeding grounds for disease vectors, increasing the risk of mosquito-borne diseases like dengue and chikungunya.

**For example:** Dengue cases spike in urban areas of **Delhi** each year, largely due to stagnant water near waste collection sites.

- **Lack of Hygiene Infrastructure in Schools:** Absence of clean sanitation facilities in schools increases transmission of NTDs, especially among children, who are more vulnerable to infection.

**For example:** Government schools without proper toilets have high rates of **intestinal worm infections** among students.

- **Poor Drainage Systems:** Inadequate drainage systems lead to waterlogging, creating habitats for disease vectors and increasing risks for diseases like Japanese encephalitis and malaria.

**For example:** The endemicity of **Japanese encephalitis** is linked to poor drainage in rural areas, leading to water stagnation.

#### **Targeted Interventions to Address Poverty and Sanitation Issues**

- **Expanding Access to Healthcare in Remote Areas:** Establishing health centres in underserved regions can provide timely treatment for NTDs, reducing transmission rates and alleviating disease burden in poor communities.

**For example:** The **Ayushman Bharat Yojana** aims to expand healthcare access, benefitting NTD-affected regions.

- **Promoting Nutrition Programs in Vulnerable Areas:** Government-supported nutrition programs for impoverished regions can improve immunity, reducing NTD susceptibility.

**For example:** The **Integrated Child Development Services (ICDS)** provides nutritional support in high-burden states, helping tackle malnutrition-related NTDs.

- **Improving Sanitation Infrastructure:** Investments in sanitation facilities, particularly in rural areas, can curb open defecation and reduce soil-transmitted infections.

**For example:** **Swachh Bharat Mission** has improved sanitation access in numerous villages, decreasing open defecation rates and related infections.

- **Enhancing Waste Management in Urban Slums:** Effective waste management initiatives in slums can reduce vector breeding sites, helping control mosquito-borne NTDs.

**For example:** Delhi's municipal initiatives to reduce waste pile-ups have contributed to lower **dengue cases** in densely populated areas.

- **Public Health Education Campaigns:** Awareness campaigns focusing on hygiene practices and disease prevention can empower communities to adopt preventive measures, reducing the spread of NTDs.

**For example:** The **National Deworming Day** campaign in India raises awareness about parasitic infections, improving children's health in rural areas.

Addressing the relationship between poverty, sanitation, and NTD prevalence requires an integrated approach that includes healthcare expansion, sanitation improvements, and targeted public awareness. By implementing comprehensive policies and interventions, India can reduce the spread of NTDs, improving the health and economic stability of its vulnerable populations. Enhanced cooperation between government, private sectors, and communities will be essential for sustainable progress in managing these diseases.

#### **MCQ**

1. Consider the following statements regarding the distinction between the State List and Union List in the regulation of alcohol:
  1. The Union List grants the Centre exclusive control over all forms of alcohol, including industrial alcohol.
  2. The State List includes provisions for the regulation of "intoxicating liquor," including industrial alcohol.
  3. Industrial alcohol is regulated by the Union government due to its role in sectors such as fuel production and pharmaceuticals.

Which of the above statements is/are correct?

- a) 1 only                      **b) 2 only**  
c) 1 and 3 only                d) 2 and 3 only
2. The Korowai tribe, known for its unique lifestyle, is primarily associated with which of the following countries?  
a) Papua New Guinea    b) Australia  
**c) Indonesia**                d) Malaysia
3. Consider the following statements regarding coli infections:  
1. All strains of E. coli produce Shiga toxins that damage the intestinal lining.  
2. E. coli primarily spreads through airborne particles.  
3. E. coli infections always require antibiotic treatment for resolution.  
4. The symptoms of E. coli infection include respiratory problems and headaches.  
Which of the above statements is/are correct?  
a) 1 and 2 only                b) 2 and 3 only  
c) 1, 3, and 4 only            d) **None of the above**
4. Which of the following best distinguishes denatured alcohol from absolute alcohol?  
a) Absolute alcohol is tax-exempt, whereas denatured alcohol is taxed due to its potential for human consumption.  
b) Absolute alcohol is used for industrial purposes, while denatured alcohol is used for medical purposes.  
**c) Denatured alcohol contains additives that make it poisonous and unfit for human consumption, unlike absolute alcohol.**  
d) Denatured alcohol is ethanol without any additives, while absolute alcohol contains toxic substances.
5. Consider the following statements regarding the social structure and lifestyle of the Korowai tribe:  
1. The Korowai tribe follows a strict hierarchical structure with designated leaders.  
2. The tribe has historically depended on the forest for food through hunting and gathering.  
3. Cannibalism continues to be widely practiced among the Korowai tribe for religious purposes.  
How many of the above statements is/are correct?  
**a) Only one**                      b) Only two  
c) All three                      d) None
6. Which of the following themes was adopted for the 16th BRICS Summit 2024?  
a) "Inclusive Growth for All"  
**b) "Strengthening Multilateralism for Just Global Development and Security"**  
c) "Multilateralism for a Secure World"  
d) "Strengthening Global Alliances for Development"
7. Consider the following statements with respect to the Chief Justice of India (CJI):  
1. The CJI is appointed by the President of India.  
2. The CJI can be removed only through impeachment.  
3. The CJI only participates in Constitution Benches on rotation.  
4. The CJI has equal judicial power to other judges but superior administrative authority.  
Which of the statements given above are correct?  
a) 1, 2 and 3 only              b) 1 and 3 only  
c) 1 and 4 only                d) **1, 2 and 4 only**
8. Consider the following statements:  
1. The National Pharmaceutical Pricing Authority (NPPA) role is to ensure that essential drugs are available at affordable prices.  
2. The NPPA can set maximum prices for drugs under the Medicine Price Regulation Framework (MPRF).  
3. The NPPA adjusts drug prices based on the Wholesale Price Index (WPI).  
Which of the statements given above are correct?  
a) 1 and 2 only                b) 2 and 3 only  
**c) 1 and 3 only**                d) 1, 2 and 3
9. With reference to 'Dhamra river', consider the following statements:  
1. It is a joint stream formed by the confluence of Brahmani and Baitarani rivers.  
2. Dhamra Port is located to the south of its mouth.  
3. Wheeler Island, a DRDO missile launch centre is located off the mouth of the Dhamra in the Arabian sea.  
How many of the statements given above are correct?  
**a) Only one**                      b) Only two  
c) All three                      d) None
10. Consider the following statements regarding 'Sardar Patel':  
1. The Advisory Committee on Fundamental Rights, Minorities, and Tribal and Excluded Areas was chaired by Sardar Vallabhbhai Patel.  
2. He is remembered as the 'Patron Saint of India's Civil Servants'.  
3. In 1918, he led the "No Tax Campaign" that urged the farmers not to pay taxes after the British insisted on tax after the floods in Kaira.  
How many of the statements given above are correct?  
a) Only one                      b) Only two  
**c) All three**                      d) None