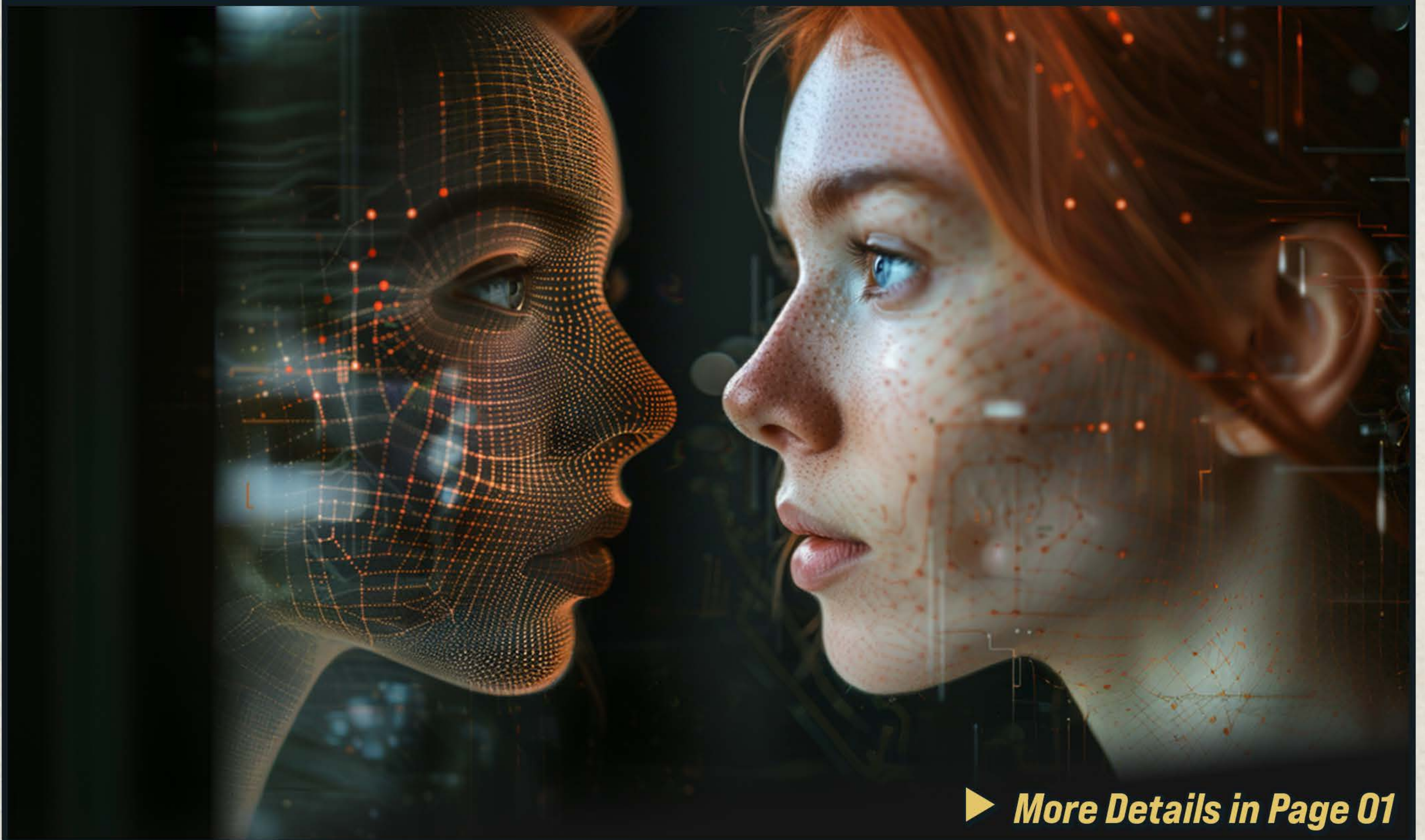


# WEEKLY NEWS

May 01-04, 2024

## Deepfakes and Their Risks



► *More Details in Page 01*

## Chloropicrin and Chemical Weapons




► *More Details in Page 23*

## HIGHLIGHTS

- Child Marriage Prevention in Rajasthan
- Ethylene Oxide in Spices

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# Deepfakes and Their Risks

## ● Why in News?

- ➔ Deepfakes have gained prominence due to their potential use in creating fake images, videos, and audio through AI and deep learning techniques, raising significant ethical, legal, and security concerns.

## ● What are Deepfakes?

- ➔ **Definition:** Deepfakes are synthetic media created by AI using **deep learning techniques**.
- ➔ **Origin:** The term is derived from "**deep learning**" (a subset of machine learning) and "**fake**."

## ● How Deepfakes Work

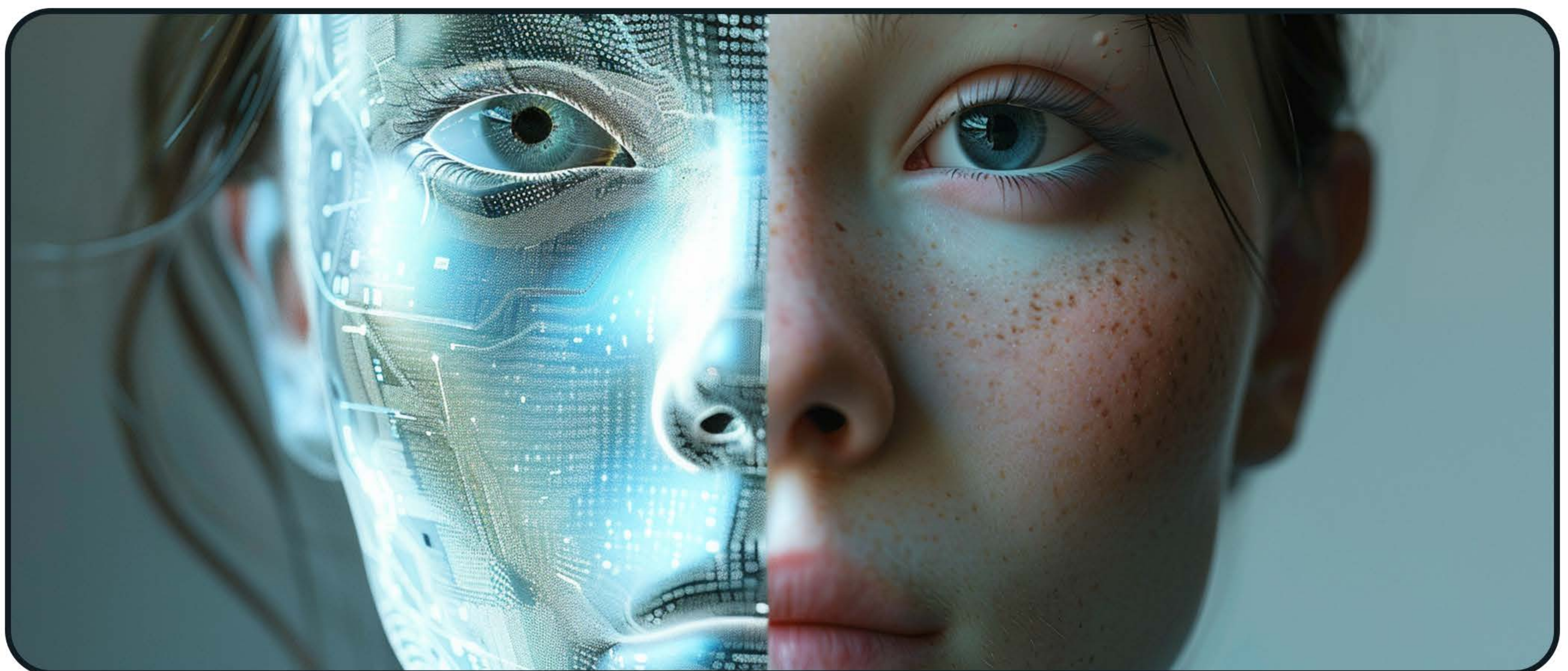
- ➔ **Generative Adversarial Networks (GANs):** Deepfakes are created using **GANs**, which consist of:

**Generator:** Produces fake content, such as images, videos, or audio.

**Discriminator:** Attempts to **distinguish the fake content from real content**.

## ● Applications of Deepfakes

- ➔ **Entertainment:** Deepfakes can be used for **natural and accurate dubbing** in movies and TV shows.
- ➔ **Training Simulations:** Helpful for medical, aviation, and other simulations to **improve skills and decision-making**.





## ● **Issues Associated with Deepfakes**

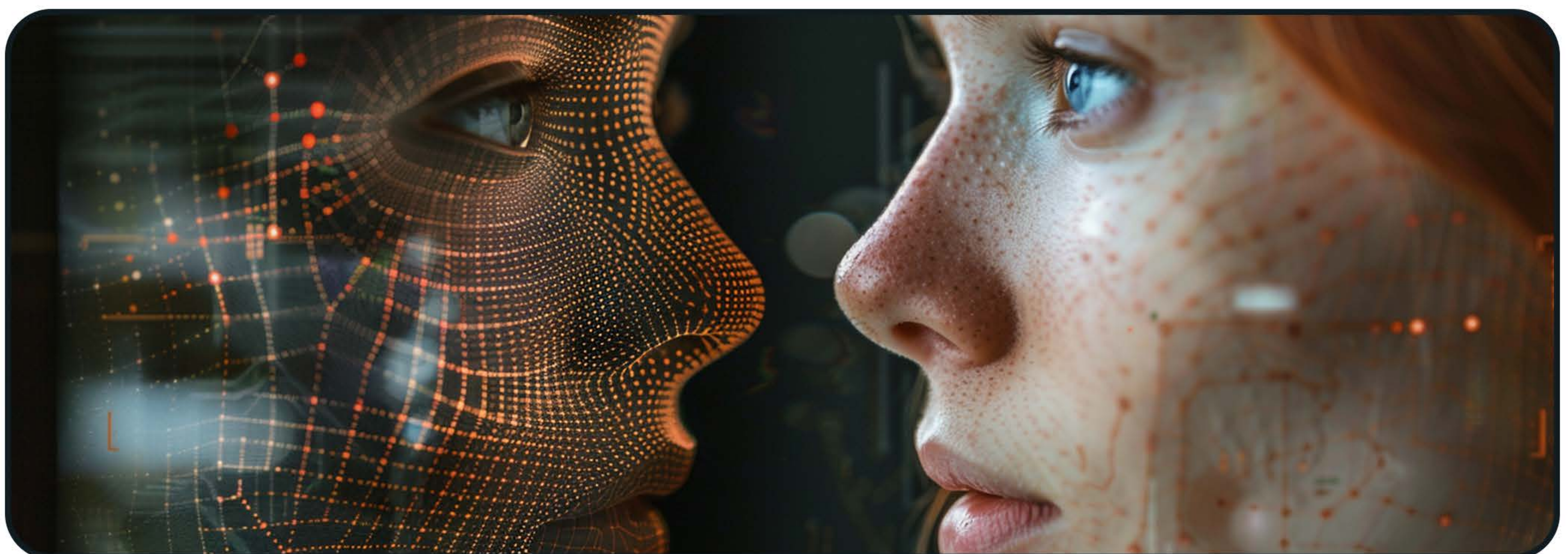
- ➔ **Political Manipulation:** Deepfakes pose a significant **risk to democratic processes** by spreading misinformation and defaming public figures.
- ➔ **Weaponization Against Women:** Misuse for **revenge pornography**, impersonation, and online harassment.
- ➔ **Security Risks:** Potential to **deceive security systems**, like facial recognition and voice authentication.
- ➔ **Legal Issues:** Complications due to fabricated evidence, **intellectual property infringement**, and **lack of consent**.
- ➔ **Ethical Issues:** Deepfakes can contribute to **manipulation, disinformation, and erosion of public trust**.

## ● **Measures to Counter Deepfakes**

- ➔ **In India:**
- ➔ **Section 66D of the IT Act, 2000:** Punishment for cheating by impersonation using communication devices.
- ➔ **IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:** Mandates social media platforms to prevent hosting obscene or misleading content.
- ➔ **At the Global Level:**
- ➔ **Bletchley Declaration:** Calls for international collaboration to address AI risks, emphasizing scientific cooperation.

## ● **Way Forward**

- ➔ **Stronger Regulations:** Implement **laws** to address the misuse of deepfakes.
- ➔ **Public Awareness:** **Educate the public** about deepfakes and how to detect them.
- ➔ **Technology Solutions:** Develop **advanced tools** to detect and combat deepfakes.
- ➔ **Collaboration:** Encourage **cooperation among technology companies**, governments, and stakeholders to address deepfake-related challenges.





# Service Bonds in Healthcare: Challenges and Solutions

## ● Why in News?

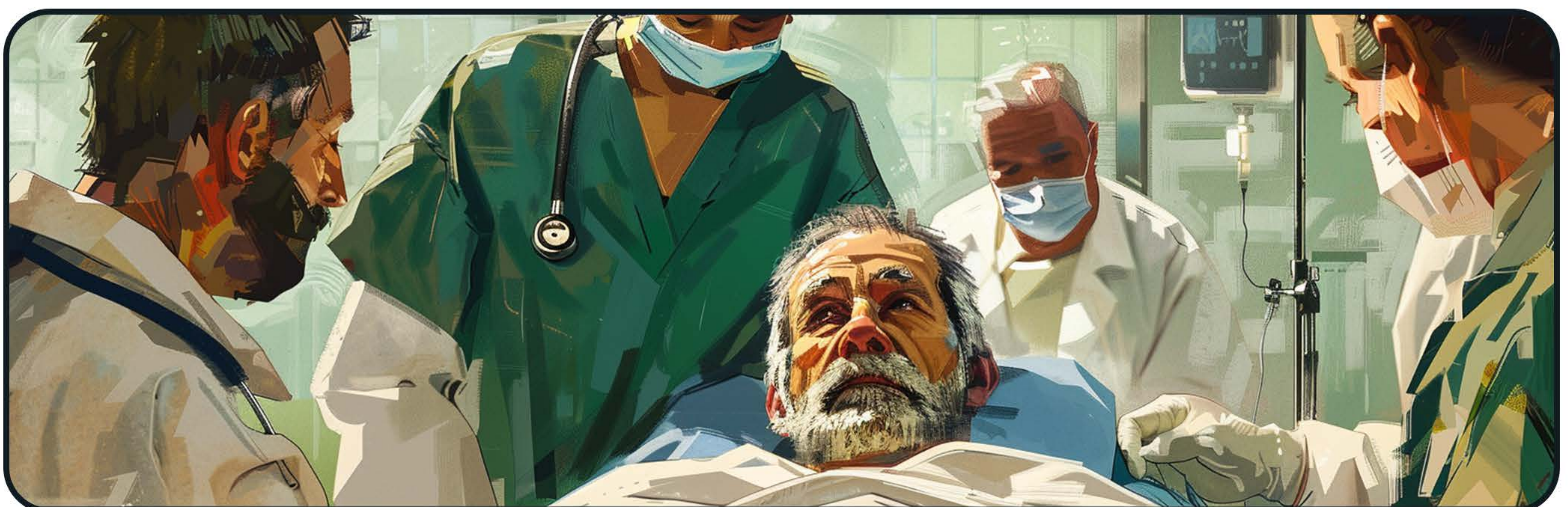
- ➔ The High Court was hearing petitions filed by doctors requesting to waive the service bond period. A service bond requires medical professionals to work in specific areas or public healthcare facilities for a defined period as part of an agreement with the government.

## ● Purpose of Service Bonds

- ➔ **Addressing Healthcare Imbalances:** Service bonds can help **correct the uneven distribution** of medical professionals, particularly in underserved or rural areas.
- ➔ **Ensuring Reciprocity:** Bonds require medical graduates, whose education was subsidized by taxpayers, to **give back by serving in public healthcare.**

## ● Ethical Concerns with Service Bonds

- ➔ **Violation of Fundamental Rights:** Compulsory service bonds **may infringe on Article 19(1)(g)**, which grants the right to practice any profession or occupation.
- ➔ **Quality of Care:** Obligatory service can **impact doctors' morale**, potentially affecting the quality of patient care.
- ➔ **Brain Drain:** Stringent service bonds could lead to **skilled medical professionals leaving the field or migrating abroad.**
- ➔ **Discrimination:** The cost of breaking a service bond can disproportionately **affect those from disadvantaged backgrounds.**





## ● Way Forward

- ➔ **Voluntary Participation:** Consider a system where doctors **opt in for service in exchange for incentives** such as educational subsidies.
- ➔ **Adequate Compensation:** Enhance service bonds with **competitive salaries, housing allowances, and other benefits.**
- ➔ **Targeted Recruitment:** Focus on recruiting and training healthcare professionals from **under-served regions.**
- ➔ **Flexible Models:** Offer **shorter service periods**, rotational assignments, or **mixed urban-rural postings** to attract more participation.
- ➔ **Review Service Bond Policies:** Governments should **ensure bond policies do not violate fundamental rights** or disproportionately affect certain groups.
- ➔ **Incentive-Based Approaches:** Provide **incentives for service in under-served areas** instead of enforcing compulsory bonds.
- ➔ **Strengthening Public Healthcare:** Improve public healthcare facilities to **attract professionals without the need for compulsory bonds.**

These measures aim to ensure that while addressing healthcare workforce distribution, the quality of care and fundamental rights of medical professionals are not compromised.





# Public Investment and Its Impact on Economic Growth

## ● Why in News?

- ➔ Public investment, often referring to government expenditure on infrastructure and other fixed assets, has garnered attention for its role in stimulating economic growth and attracting private investment.

## ● What is Public Investment?

- ➔ **Definition:** Public investment generally involves **gross fixed capital formation** by the government, including central and local governments, as well as publicly owned industries or corporations.
- ➔ **Scope:** It includes tangible assets like **transport, telecommunications, and buildings**, and can also encompass intangible assets such as **education, skills, and knowledge**.

## ● Impact of Public Investment on Economic Growth

- ➔ **Stimulates Demand:** Public investment can **boost economic activity through short-term effects** on aggregate demand.
- ➔ **Increases Productivity:** **Infrastructure improvements and investments in human capital** lead to higher productivity in the economy.
- ➔ **Attracts Private Investment:** **Public investment can encourage private investment** to leverage the enhanced productivity, further driving economic growth.
- ➔ **Crowding Out Risk:** A potential drawback is when public capital crowds out private investment. This occurs **when government spending leads to increased borrowing, resulting in higher taxes and interest rates**, which can dampen private sector activity.





## ● **Key Initiatives by India for Enhancing Public Investment**

- ➔ **Foreign Direct Investment (FDI):** Most sectors in India are open to 100% FDI under the automatic route.
- ➔ **PM Gati Shakti National Master Plan (NMP):** Aimed at providing **multimodal connectivity** infrastructure to various economic zones.
- ➔ **National Monetisation Pipeline:** This initiative aims to **tap into private sector investment** for the creation of new infrastructure.
- ➔ **Reducing Compliance Burden:** Efforts to **streamline regulations** to foster business and economic activities.
- ➔ These measures are designed to boost public investment, thereby fostering a conducive environment for economic growth and private sector participation, while also addressing the potential risks of crowding out.





# International Labour Day

## ● 01st May

⇒ Celebrating the Hands that build our world.

## ● History of Labour Day in India

⇒ India's first Labour Day was observed on May 1, 1923, in Chennai, orchestrated by the Labour Kisan Party of Hindustan.

## ● New Labour Codes

⇒ **Social Security Code:** Combines social security laws to include provident funds, insurance, and maternity benefits. Extends coverage to gig and informal workers.

⇒ **Code on Occupational Safety, Health & Working Conditions:** Sets workplace safety and health standards, bringing together laws on working conditions and safety requirements across industries.

⇒ **Industrial Relations Code:** Covers trade unions, strikes, lockouts, and industrial disputes. Aims to maintain harmony between employers and workers.

⇒ **Code on Wages:** Unifies wage-related laws, establishing rules for minimum wages, payment timelines, and equal pay. Targets wage fairness and consistency.

## ● Schemes for Unorganized Workers

⇒ **E-Shram Portal:** A government database for unorganized workers, providing a unique ID for access to social security benefits.

⇒ **PM Shram Yogi Maandhan Yojana:** A pension scheme for unorganized sector workers with a guaranteed monthly pension after age 60.





● **Social Security Welfare Schemes:**

- ➡ **National Pension Scheme:** A retirement savings scheme with market-linked returns.
- ➡ **PM Jeevan Jyoti Yojana:** A government-backed life insurance scheme.
- ➡ **PM Suraksha Bima Yojana:** An accidental death and disability insurance scheme.
- ➡ **Atal Pension Yojana:** A pension scheme with a fixed monthly payout after retirement.

● **Employment Schemes:**

- ➡ **MGNREGA:** Guarantees 100 days of paid work to rural households.
- ➡ **Deen Dayal Upadhyay Gramin Kaushalya Yojana:** Focuses on rural youth skill development.
- ➡ **Garib Kalyan Rozgar Yojana:** A scheme to provide employment and infrastructure in rural
- ➡ **Deen Dayal Upadhyaya Antyodaya Yojana:** Aims to improve skills and employment opportunities for the poor.
- ➡ **PM SVANidhi:** Offers micro-loans to street vendors for economic recovery.
- ➡ **PM Employment Generation Programme:** Supports entrepreneurs with subsidies for starting micro-enterprises.

● **Schemes for Organized Labour**

- ➡ **National Career Service Portal:** A platform connecting job seekers with employers, offering career-related services and information.
- ➡ **Atmanirbhar Bharat Rojgar Yojana:** An initiative to incentivize job creation by providing financial support for new employees in organized sectors.
- ➡ **PM Rojgar Protsahan Yojana:** A scheme to promote employment by subsidizing employers' contributions to social security schemes for new hires.
- ➡ **Universal Account Number EPFO:** A unique identification number for Employees' Provident Fund (EPF) members, allowing centralized access to their EPF accounts.





# India-Indonesia Relations

## ● Why in News?

- ➔ The strong diplomatic ties between India and Indonesia date back to the 1950s, with a Treaty of Friendship signed in 1951, laying the foundation for a comprehensive relationship.

## ● Key Aspects of Relationships

### ➔ Political

- ➔ **Historic Connections:** Both countries were part of the Bandung Conference in 1955, which eventually led to the establishment of the Non-Aligned Movement in 1961.
- ➔ **Strategic Partnerships:** India and Indonesia established a Strategic Partnership in 2005, which was later elevated to a Comprehensive Strategic Partnership.
- ➔ **Multilateral Cooperation:** They collaborate in various international forums like G20, Indian Ocean Rim Association (IORA), East Asia Summit, and the United Nations.
- ➔ **Act East Policy:** Indonesia is a significant part of India's Act East Policy since 2014.

### ➔ Trade

- ➔ **Trade Relations:** Indonesia has emerged as India's largest trade partner in the ASEAN region.
- ➔ **Key Commodities:** India is the second-largest buyer of crude palm oil from Indonesia.

### ➔ Maritime Cooperation in the Indo-Pacific

- ➔ **Strategic Location:** Indonesia's location between the Indian and Pacific Oceans makes it crucial for India's maritime strategy.
- ➔ **Security and Growth for All in the Region (SAGAR):** Under this initiative, India is aiding the development of port infrastructure in Indonesia, like the Sabang port.
- ➔ **Joint Military Exercises:** Includes Samudra Shakti and India-Indonesia Coordinated Patrol (IND-INDO CORPAT).



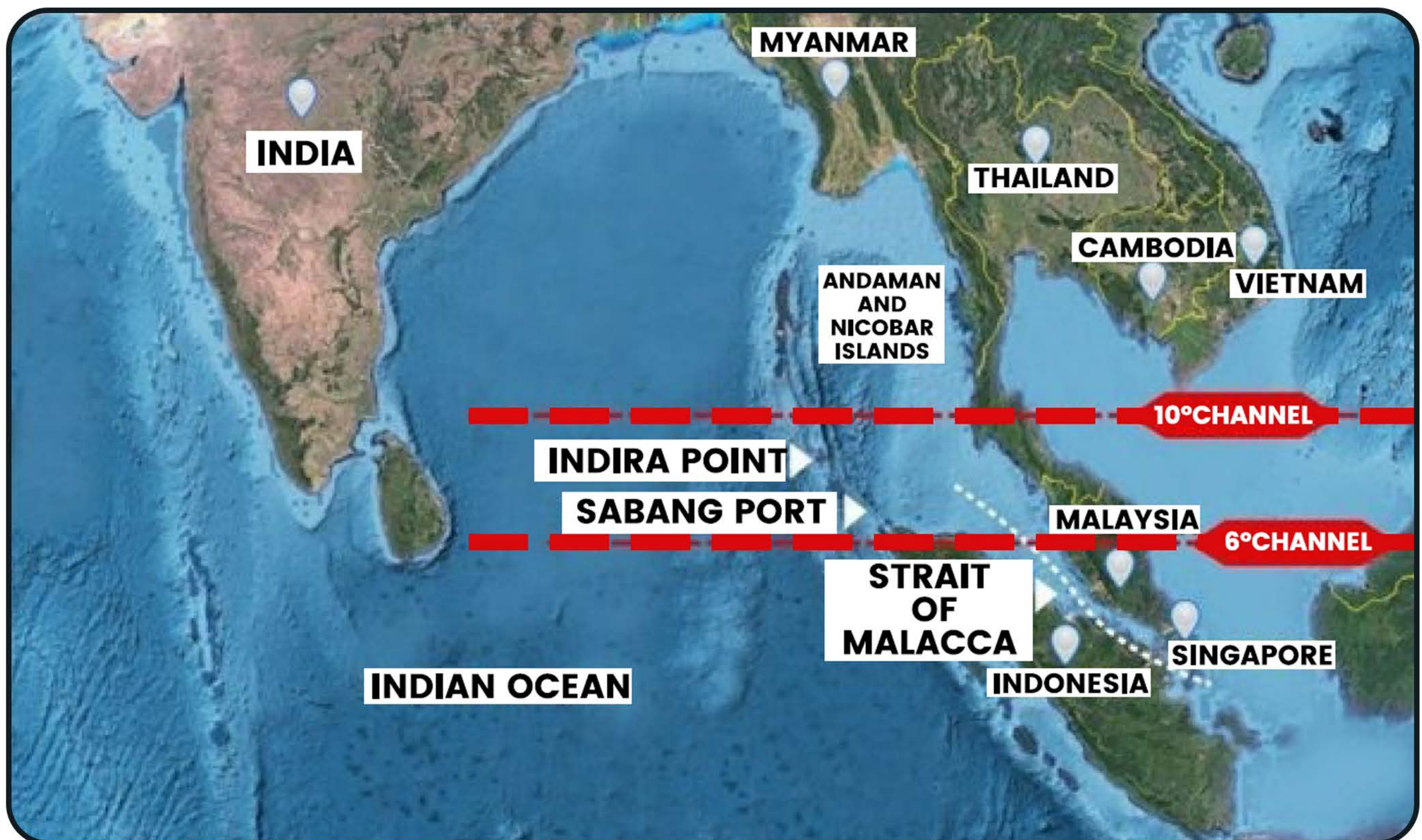


● **Key Aspects of Relationships**

➡ Cultural

➡ **Cultural Links:** Hinduism and Buddhism have a significant influence on Indonesian culture, serving as a form of soft power in the relationship between the two countries.

These aspects showcase the multi-faceted relationship between India and Indonesia, encompassing political, trade, maritime, and cultural dimensions.





# Court Directives to Prevent Child Marriages in Rajasthan

## ● Why in News?

- ➔ Directives were issued by the Rajasthan High Court ahead of the Akshay Tritiya festival, which traditionally sees a significant number of child marriages in the state. The court emphasized that village heads and panchayat members will be held accountable if child marriages are solemnized.

## ● About Child Marriages

- ➔ **Definition:** Child marriage refers to any formal marriage or informal union between a child under 18 and an adult or another child (UNICEF).
- ➔ **Impact on Girls:** Girls are disproportionately affected by child marriage practices.
- ➔ **Legal Framework in India:**
  - ➔ **Prohibition of Child Marriage Act (PCMA), 2006**, sets the minimum age for marriage at **18 years for women and 21 years for men**.
  - ➔ **Section 16 of PCMA** empowers the State Government to appoint Child Marriage Prohibition Officers (CMPOs) to create awareness about the negative effects of child marriage.

## ● Key Directives

- ➔ **Role of Village Heads and Panchayats:** Under Rajasthan Panchayati Raj Rules 1996, sarpanch and other panchayat members are duty-bound to restrict child marriages.
- ➔ **Accountability:** Village heads and panchayat members will be held responsible if child marriages occur within their jurisdiction.





● **Reasons for Child Marriages**

- ➡ Gender inequality and social norms that prioritize early marriage.
- ➡ Economic factors like poverty and lack of educational opportunities.
- ➡ Cultural and religious practices.
- ➡ Control over the sexuality of women.

● **Current Status of Child Marriages in India**

- ➡ According to the **National Family Health Survey (NFHS)**, the percentage of women aged 20–24 years married before 18 **reduced** from 47.4% in 2005-06 to **23.3% in 2019-21**.

<b>Initiatives</b>	<b>Description</b>	<b>Key Focus</b>
<b>Beti Bachao Beti Padhao (BBBP) Scheme</b>	<i>Aims to ensure the education of girls and reduce school dropouts, which can delay their marriage.</i>	<i>Education and Gender Equality</i>
<b>Sukanya Samridhi Yojana Scheme</b>	<i>Allows partial withdrawal from the account only when the girl child turns 18, thus potentially deterring child marriage.</i>	<i>Financial Incentive to Delay Marriage</i>
<b>CHILDLINE (1098)</b>	<i>A 24x7 telephone emergency outreach for immediate assistance, including interventions to prevent child marriages.</i>	<i>Emergency Response and Child Protection</i>
<b>Prohibition of Child Marriage (Amendment) Bill, 2021</b>	<i>Proposes to increase the minimum age of marriage for females to 21 years.</i>	<i>Legal Framework and Minimum Age for Marriage</i>

● **Way Forward**

- ➡ **Awareness Campaigns:** CMPOs should intensify efforts to raise awareness about the consequences of child marriages.
- ➡ **Enforcement:** Strict enforcement of laws and penalties for those involved in facilitating child marriages.
- ➡ **Community Involvement:** Engage local leaders and community members to change harmful social norms and practices.
- ➡ **Educational Opportunities:** Provide educational and economic support to reduce the risk factors associated with child marriage.
- ➡ These coordinated efforts by the government, judiciary, and society can contribute to reducing child marriages and ensuring better prospects for young girls and boys in Rajasthan and across India.



# Survey of Women Entrepreneurs in Tier 2 and Tier 3 Cities

## ● Why in News?

- ➔ A survey exploring the socio-economic dynamics of women entrepreneurship in Tier 2 and Tier 3 cities, referred to as "Middle India," examines the challenges faced by women entrepreneurs and their roles in transforming these regions.

## ● Key Survey Findings

- ➔ **Entrepreneurial Path:** Women entrepreneurs face **extended timelines to success** due to various obstacles.
- ➔ **Caregiving Responsibilities:** About **35% of women** reported pausing their entrepreneurial efforts due to **caregiving roles**.
- ➔ **Decision-Making:** **90.2%** of surveyed women are the primary decision-makers in their ventures, indicating **autonomy and leadership**.

## ● Challenges for Women Entrepreneurs

- ➔ **Capital Gap:** Only 3% of women entrepreneurs accessed **external funding**.
- ➔ **Network Gap:** **87% of women** experienced social network disruption due to **marriage, affecting career progression**.
- ➔ **Care Gap:** Caregiving responsibilities, including **maternity leave**, hinder entrepreneurial advancement.
- ➔ **Data Gap:** **Lack of gender-specific data** complicates effective policy interventions.
- ➔ **Visibility Gap:** **Societal undervaluation** limits recognition and visibility for women entrepreneurs.





● **Policy Recommendations**

- ➡ Use **gender-disaggregated data** to design targeted policy interventions.
- ➡ Facilitate **access to capital** with state-sponsored grants, female-focused incubators, and robust women’s support networks.
- ➡ Introduce **fiscal incentives** for **childcare leave** and associated expenses.
- ➡ Create **safe public and digital spaces**, focusing on enhanced physical mobility for women.

● **Key Roles of Women Entrepreneurs in Middle India**

<i>Parameters</i>	<i>Description</i>
<b>Developing Local Markets</b>	<i>Contribute to the growth of local economies by establishing businesses and creating jobs.</i>
<b>Earning Foreign Exchange</b>	<i>Engage in export activities, generating foreign exchange through international trade.</i>
<b>Setting Up Supply Chains</b>	<i>Establish and maintain supply chains within local industries, facilitating production and distribution.</i>
<b>Fostering Supportive Local Networks</b>	<i>Build and strengthen local business networks, promoting social cohesion and business collaboration.</i>

These insights underscore the significance of women entrepreneurs in Middle India and highlight the need for focused support and policies to address the unique challenges they face.





# India – Oman Bilateral Relationship

## ● Why in News?

➔ India and Oman are set to sign a trade agreement in the coming months as New Delhi aims to strengthen its relations in the Middle East.

## ● India-Oman Bilateral Relationship

➔ The Sultanate of Oman is a strategic partner of India and serves as a significant interlocutor in the Gulf Cooperation Council (GCC), Arab League, and Indian Ocean Rim Association (IORA).

➔ Diplomatic relations between India and Oman were established in 1955.

➔ The relationship between the two countries was upgraded to a Strategic Partnership in 2008.

## ● Indian Community in Oman

➔ As of 2023, approximately 900,000 Indians reside in Oman.

➔ The Basic Law of Oman upholds the right to various forms of worship.





● **Economic & Commercial Relations**

➡ Bilateral trade between India and Oman reached USD 9.9 billion for the year 2021-2022.

<i>Major Exports from India to Oman</i>	<i>Major Imports from Oman to India</i>
<i>Minerals fuels and Distillation</i>	<i>Urea</i>
<i>Textiles</i>	<i>LNG (Liquified Natural Gas)</i>
<i>Machinery and electrical items</i>	<i>Polypropylene</i>
<i>Chemicals</i>	<i>Lubricating Oil</i>
<i>Iron and Steel</i>	<i>Dates</i>
<i>Tea, Coffee, Spices</i>	<i>Chromite Ore</i>
<i>Rice, Meat Products, and Seafood</i>	

● **Oman-India Joint Investment Fund**

➡ A 50-50 Joint Venture between the State Bank of India and the former State General Reserve Fund (SGRF) of Oman.

● **India-Oman Trade Deal**

**Oman's Agreement:**

➡ Oman has agreed to remove duties on Indian exports worth an annual \$3 billion, including agricultural products, gems and jewellery, leather, automobiles, medical devices, engineering products, and textiles.

**India's Agreement:**

➡ India has agreed to reduce duties on certain petrochemicals, aluminium, and copper from Oman.

➡ India will also place a cap on imports of these goods from Oman.





# Article 39(b) of the Constitution

## ● Why in News?

- ➔ Wealth distribution is a key topic in Indian news.
- ➔ A nine-judge bench of the Supreme Court has started interpreting Article 39(b) of the Indian Constitution.

## ● Article 39(b) of the Constitution

- ➔ Part IV of the Indian Constitution is known as the "Directive Principles of State Policy" (DPSP).
- ➔ Article 39(b) mandates that the state formulate policies ensuring the distribution and control of material resources in a way that serves the common good.

## ● Need of a 9-Judge Bench Interpretation?

- ➔ In the 1977 Ranganatha Reddy case, the Supreme Court's majority ruled that the term "material resources of the community" does not include private property.
- ➔ A five-judge bench in the 1983 Sanjeev Coke case based its decision on Justice Iyer's interpretation, which was a minority view.
- ➔ In 1997, the Supreme Court in the Mafatlal Industries case suggested that Article 39(b) required interpretation by a nine-judge bench.





# Article 244(A) of the Constitution

## ● Why in News?

➡ In Assam's tribal-majority Diphu Lok Sabha constituency, candidates from all political parties have pledged to implement Article 244(A) of the Indian Constitution.

## ● Article 244(A) of the Constitution 22nd Amendment Act of 1969

➡ Article 244(A) was introduced by the Constitution (Twenty-second Amendment) Act of 1969.

➡ It permits Parliament to establish an **autonomous region within the state of Assam**.

## ● Key Highlights

➡ The autonomous region under Article 244(A) can have its **own governing body**, such as a Legislature or a Council of Ministers, or both.

➡ This provision offers **more autonomy compared to the existing framework** under the Sixth Schedule for these areas.

## ● Distinction from the Sixth Schedule of the Constitution

➡ The Sixth Schedule **establishes councils with elected representatives for decentralized governance** in tribal areas.

➡ These councils have **limited powers**; they **lack control over law enforcement** and have **restricted financial authority**.

➡ Article 244(A) provides **more extensive autonomous powers to tribal areas**.

➡ A key advantage under Article 244(A) is the **authority to control law and order**.





# Ethylene Oxide in Spices

## ● Why in News?

- ⇒ India is taking measures to address the suspension of sales of certain spice blends by Singapore and Hong Kong due to elevated levels of **Ethylene Oxide (ETO)**, a chemical compound regulated for its carcinogenic properties.

## ● About Ethylene Oxide (ETO)

- ⇒ ETO is a **flammable, colorless gas** used as a **disinfectant and fumigant**.
- ⇒ Its use in food products is controlled due to its **potential to cause cancer**.

## ● Spices Industry of India

- ⇒ India is the **world's largest producer, consumer, and exporter of spices**.
- ⇒ In 2022-23, India exported spices worth US\$ 3.73 billion, with major export destinations including China, USA, and Bangladesh.
- ⇒ India produces **75 of the 109 varieties** of spices listed by the **International Organization for Standardization (ISO)**.
- ⇒ Major spices include **chili, cumin, turmeric, ginger, and coriander**, constituting 76% of total production.
- ⇒ Leading spice-producing states are **Madhya Pradesh, Rajasthan, Gujarat, Andhra Pradesh, Telangana, and Karnataka**.

## ● Challenges in the Spices Industry

- ⇒ **Low productivity and poor product quality**.
- ⇒ **Disappearance of indigenous varieties**.
- ⇒ **Rejection of exports due to pesticide residues** exceeding acceptable limits.





● **Initiatives to Promote Exports**

- ➡ **Guidelines to Prevent ETO Contamination:** Issued by Spices Board India to prevent contamination in spices exports.
- ➡ **Export Development and Promotion of Spices:** Programs to boost the spice export market.
- ➡ **Spices Parks:** Infrastructure for common processing, enhancing quality control and export readiness.



**About Spices Board India**

- **Genesis:** Established in 1987 under the Spices Board Act, 1986.
- **Headquarters:** Cochin, Kerala.
- **Role:** Autonomous body responsible for export promotion of 52 scheduled spices and development of cardamom.
- **Ministry:** Ministry of Commerce and Industry.
- **Codex Committee on Spices and Culinary Herbs (CCSCH):** India hosts and chairs this committee, with Spices Board India serving as its secretariat.

● **Way Forward**

- ➡ **Strengthening quality control measures** to reduce contamination risks.
- ➡ **Supporting farmers to improve productivity** and ensure compliance with international standards.
- ➡ **Encouraging innovation** to reintroduce indigenous varieties.
- ➡ **Enhancing the efficiency of Spices Parks** and promoting technological upgrades.





# Indian Logistics Sector Overview

## ● Why in News?

- ➔ Invest India reported that India's logistics sector is projected to grow from USD 250 billion in 2021 to USD 380 billion by 2025, with an aim to reduce logistics costs from 13%-14% of GDP to 8%-10% by 2030.

## ● What is Logistics?

- ➔ Logistics refers to the **transportation and handling of goods from production to consumption**, including **storage, value addition, and other related services**.
- ➔ Infrastructure supporting logistics comprises ports, **Multimodal Logistics Parks (MMLPs)**, warehouses, etc.

## ● Advantages of an Efficient Logistics Sector

- ➔ **Supply Chain Efficiency: Reduces delays and minimizes lead times**, benefiting business operations.
- ➔ **Economic Integration: Enhances connectivity** between regions and markets.
- ➔ **Business Competitiveness: Lowers transportation, storage, and distribution costs**.
- ➔ **Employment Generation: Creates jobs in transportation, warehousing, and distribution**.

## ● Challenges Facing Indian Logistics Sector

- ➔ **Fragmented Supply Chain: Multiple small and independent players complicate coordination**.
- ➔ **Complex Regulatory Framework: Bureaucratic hurdles** impact business operations.
- ➔ **Skill Gaps: Shortage of qualified personnel** in supply chain management.
- ➔ **Inter-State Coordination Issues: Leads to delays and increased costs**.





● **Way Forward**

- ➔ **Streamline Regulatory Framework:** Simplify bureaucratic procedures to support business operations.
- ➔ **Skill Development:** Enhance training programs for logistics professionals.
- ➔ **Inter-State Coordination:** Improve collaboration to reduce delays and costs.
- ➔ **Encourage Private Investment:** Promote public-private partnerships to build logistics infrastructure.

By addressing these challenges and continuing to improve infrastructure, India can achieve its logistics goals and drive sustainable economic growth.



**Government Initiatives to Promote the Logistics Sector**

- **National Logistics Policy 2022:** Aims to improve the flow of goods across the country and enhance the competitiveness of Indian goods in domestic and global markets.
- **Multimodal Logistics Parks (MMLPs):** Facilitate efficient inter-modal freight movement, reducing overall freight costs and time.
- **Logistics Efficiency Enhancement Programme (LEEP):** Seeks to improve freight transport efficiency.
- **PM GatiShakti:** Aims to boost logistics efficiency through integrated infrastructure planning.





# Chloropicrin and Chemical Weapons: Global Regulation and Concerns

## ● Why in News?

- ➔ Chloropicrin, a chemical with a wide range of uses, has gained attention due to its history as a chemical weapon and its current role as a fumigant in agriculture. Its potential use as a warfare agent raises significant safety and ethical concerns.

## ● What is Chloropicrin?

- ➔ **Description:** A broad-spectrum fumigant chemical used as an antimicrobial, fungicide, herbicide, insecticide, and nematicide.
- ➔ **History:** First used as a poison gas during World War I by both Allied and Central Powers.
- ➔ **Characteristics:** Colorless to yellow oily liquid, highly volatile, and a gas at room temperature.
- ➔ **Effects on Humans:** Causes severe irritation to eyes, skin, and respiratory tract, and can induce vomiting.

## ● International Regulations on Chemical Weapons

- ➔ **Chemical Weapons Convention (CWC):** Entered into force in 1997 under the Organization for the Prohibition of Chemical Weapons (OPCW).
- ➔ **Provisions:** Prohibits the development, production, stockpiling, and use of chemical weapons.
- ➔ **Objective:** Achieve a chemical weapons-free world.
- ➔ **India's Role:** Signatory and party to the CWC, implementing the Chemical Weapons Convention Act, 2000.
- ➔ **Geneva Protocol (1925):** Bans the use of chemical and biological weapons in conflicts.





● **Concerns Regarding Chemical Weapons**

- ➡ **Indiscriminate Impact:** Chemical weapons can cause widespread harm without differentiation.
- ➡ **Long-term Damage:** Can cause lifelong injuries and chronic health issues.
- ➡ **Recent Usage:** Used in recent conflicts, such as in Syria.
- ➡ **Safety Risks:** High volatility and potential for accidental exposure.



**Organization for the Prohibition of Chemical Weapons (OPCW)**

- **Headquarters:** Hague, Netherlands.
- **Function:** Implements the Chemical Weapons Convention.
- **Mission:** Achieve a vision of a world free of chemical weapons.
- **Membership:** 193 countries, including India.
- **Recognition:** Received the Nobel Prize for Peace in 2013 for its efforts to eliminate chemical weapons.

● **Way Forward**

- ➡ **Global Compliance:** Countries must ensure compliance with international treaties to prevent the use of chemical weapons.
- ➡ **Enhanced Monitoring:** Strengthen monitoring and verification mechanisms to ensure compliance with the CWC.
- ➡ **Public Awareness:** Educate the public about the dangers of chemical weapons and promote disarmament.
- ➡ **Addressing Ethical Concerns:** Ensure that chemical usage, even for non-warfare purposes, adheres to strict safety standards.

These efforts aim to mitigate the risks associated with chemical weapons and ensure a safer, more secure world.








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