
Today's Prelims Topics

Ivermectin

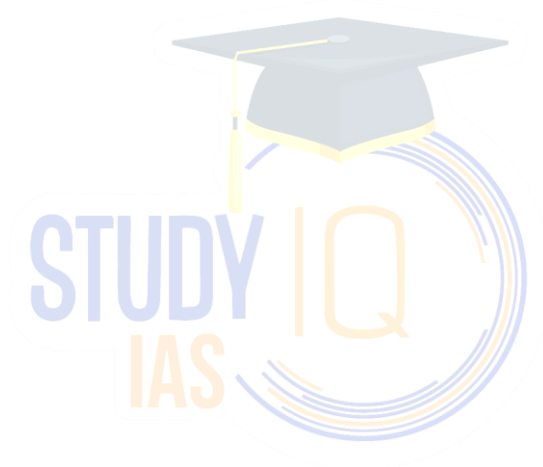
Context

Ivermectin is emerging as a promising complementary tool for malaria elimination.

About Ivermectin

- **Type:** Anti-parasitic drug.
- **Origin:** Discovered in the 1970s; first used in **veterinary medicine**.
 - Later used by human to:
 - Treat **river blindness (onchocerciasis)**.
 - Treat **lymphatic filariasis**.
 - Effective against several other parasitic infections.

Source: [The Hindu](#)



HIRE Act

Context

The United States has introduced a new legislative proposal known as the Halting International Relocation of Employment (HIRE) Act.

What is the HIRE Act (2025)?

- **Objective:** To **discourage American firms from outsourcing jobs overseas** and promote domestic job creation.
- **Key Features:**
 - **Excise Tax:** Imposes a **25% excise tax** on payments made by **U.S. businesses to foreign service providers** if the services benefit U.S. consumers.
 - **Scope of Tax:** Applies to "outsourcing payments" such as **fees, royalties, premiums, or service charges** paid abroad for services benefiting U.S. consumers.
 - If services benefit both U.S. and foreign consumers, the tax applies only to the U.S. portion.
 - **Definition of Foreign Person:** Any non-U.S. resident, excluding entities registered in U.S. territories.
 - **Reporting Requirement:** U.S. companies must **report outsourcing transactions** to the Treasury Department.
 - **Penalties:** Huge hike in penalties for non-compliance:
 - From **0.5% per month to 50% per month**, with the normal 25% penalty cap removed.
 - Excise tax paid **cannot be claimed as a deductible expense**.
 - **Fund Creation:** Revenue redirected to a **Domestic Workforce Fund** for training and reskilling U.S. workers.

Source: [The Hindu](#)

Addition of New Ramsar Sites

Context

2 new Ramsar sites (Gokul Jalashay and Udaipur Jheel) have been added from Bihar.

About the New Sites

- **Gokul Jalashay:**
 - Located in Buxar, Bihar
 - The Site is an oxbow lake on the southern edge of the Ganga (Ganges) River.
- **Udaipur Jheel:**
 - Located in west Champaran, Bihar.
 - The Site is a type of Oxbow lake, which is surrounded by the dense forest of Udaipur Wildlife Sanctuary.
 - More than 280 plant species flourished in the wetland, including *Alysicarpus roxburghianus*, a perennial herb endemic to India.
 - The wetland is an important wintering ground for around 35 migratory bird species, including the vulnerable common pochard.

Ramsar Convention

- It is an intergovernmental treaty under **UNESCO**.
- Provides the framework for the conservation and wise use of wetlands and their resources.
- It was signed in Ramsar (Iran) on **February 2, 1971. (World Wetland Day)**
- **Partners to Ramsar Convention:** Birdlife International, IUCN, Wetlands International, WWF, International Water Management Institute, Wildfowl and Wetlands Trust.
- India joined the Ramsar Convention in **1982**.

Facts

- **Total Ramsar Sites in India:** 93
- **Highest number of Ramsar sites:** Tamil Nadu (20)
- **Largest Ramsar site in India:** Sunderbans (West Bengal)
- **Smallest Ramsar site in India:** Renuka Wetland (Himachal Pradesh)
- **Other sites added in 2025:** Menar Wetland Complex, Khichan Wetland from Rajasthan.
- **Global Standing - India:** 3rd in the world (after UK - 176, Mexico - 144)

Source: [PIB](#)

Astrosat

Context

Astrosat completed a decade of its operation.

About Astrosat

- **Launched by:** ISRO
- **Launch Date:** 28 September 2015
- **Launch Vehicle:** PSLV-C30
- **Features:**
 - India's **first dedicated astronomy satellite**.
 - Provides **simultaneous multi-wavelength observations** of celestial objects.
 - Covers **X-ray, Ultraviolet (Near and Far), and limited optical ranges**.
 - Energy coverage: **0.3 keV to 100 keV**.
- **Payloads:**
 - **UVIT (Ultra-Violet Imaging Telescope):** Far-UV, Near-UV, limited optical.
 - **LAXPC (Large Area X-ray Proportional Counter):** High time resolution X-ray studies (3–80 keV).
 - **SXT (Soft X-ray Telescope):** Imaging in 0.3–8 keV band.
 - **CZTI (Cadmium Zinc Telluride Imager):** Hard X-ray spectroscopy (10–100 keV).
 - **SSM (Scanning Sky Monitor):** Detects and monitors X-ray transients.

Source: [The Hindu](#)

National Security Act (NSA)

Context

Climate activist Sonam Wangchuk was detained under NSA.

About NSA

- Enacted in **1980**.
- A **preventive detention law** (not punitive) – allows detention of individuals to **prevent possible threats** to public order and national security.
- Successor to earlier laws like the **Preventive Detention Act, 1950** and the **Maintenance of Internal Security Act (MISA), 1971** (which was notorious during Emergency, repealed in 1978).
- **Key Provisions:**
 - **Purpose of Detention:** Prevent acts “prejudicial to the defence of India, security of India, relations with foreign powers, public order, or essential supplies/services.”
 - **Who Can Detain:** Central or State Governments,
 - District Magistrates (DMs) and Police Commissioners when authorised.
 - **Duration of Detention:** Up to **12 months** (can be revoked earlier).
 - Detainee must be informed of grounds within **5 days** (extendable to 15 days).
 - **Review Mechanism:** An Advisory Board of High Court judges reviews cases within **3 weeks**.
 - If the Board finds no sufficient cause, detainee must be released.
 - **Rights of Detainee:** Right to representation to the government.
 - But **no right to legal representation** before the Advisory Board.
 - Government may withhold facts “in public interest.”

Source: [Indian Express](#)

Species in News

Indus River Dolphin	News? Researchers found the increased ingestion of microplastics among indus river dolphins. About Indus River Dolphins ● Distribution: Found only in the lower Indus River system in Pakistan and India. ○ In India: Found only in a small section of the Beas River in Punjab. ● Features: ○ Lives in muddy rivers, functionally blind. ○ Color: Grayish-brown. ○ Body: Rounded and robust. ○ Belly: Pale white or pinkish. ○ Hump: Small triangular hump on back (more pronounced in males). ○ Size: 7 to 8.5 feet long, 150–200 pounds in weight. ○ Diet: Fish (mainly), Small invertebrates (clams and shrimp). ○ Rely on echolocation to navigate, communicate, and hunt prey. ● Conservation Status: ○ IUCN Status: Endangered (EN). ○ CITES: Appendix I. ○ CMS: Appendix II. ○ Wildlife Protection Act, 1972 (India): Schedule I. Source: The Hindu
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Places in News

Greece



News? Scientists discovered that two neighboring volcanoes, Santorini and Kolumbo in Greece, are connected by a shared magma chamber.

About Greece

- **Location:** Southeastern Europe, at the crossroads of Europe, Asia, and Africa.
- **Capital:** Athens.
- **Shares Border:**
 - Country: Albania, North Macedonia, Bulgaria, Turkey.
 - **Seas:** Aegean Sea, Ionian Sea, Mediterranean Sea
- **Key Information:**
 - **Geography:** Mainland with mountainous terrain and thousands of islands in the Aegean and Ionian Seas.
 - Part of the **Mediterranean seismic zone**.
 - **Volcanoes:** Notable volcanic arc in the **Aegean Sea** (Santorini, Kolumbo, Methana, Milos, Nisyros).
 - Santorini is historically significant for the **Minoan eruption (1600 BCE)**, one of the largest eruptions in human history.
 - Member of the **European Union (EU)** and **Eurozone**.
 - **Cultural:** Known as the **cradle of Western civilization**.
 - Birthplace of **democracy, philosophy, and the Olympic Games**.

Source: [The Hindu](#)

Mains Topics

Loneliness Among India's Working Young

Context

India, with a rapidly urbanising and migrating workforce, is now experiencing a “**loneliness epidemic**” in cities like Bengaluru, Gurugram, Pune, and Hyderabad.

- Loneliness is not merely the absence of social interaction but the absence of meaningful social bonds. It reflects a gap between desired relationships and actual social connections.
- According to the **World Health Organization (WHO, 2021)**, loneliness is now considered a public health challenge, linked to depression, anxiety, and poor physical health.
- A survey across 14 corporate organizations (2024) found:
 - **56%** of young employees admitted to feeling lonely.
 - **23%** experienced it but denied openly.
 - **Women (64%)** expressed loneliness more than men (36%).
 - **Dating app usage:** 4% women vs. 19% men.
- Globally, a **Meta-Gallup survey (2023)** reported that nearly **24% of young adults (15–29)** experience frequent loneliness.

Causes of Loneliness Among Working Youth

- **Urban Migration and Dislocation:** Young workers leave their primary social groups (family, community, hometown networks) and struggle to build new, meaningful connections.
- **Work-Centric Lifestyle:** Long working hours, gig-based employment, and competitive corporate culture reduce opportunities for nurturing personal relationships.
- **Changing Social Norms:** Increasing individualism and prioritisation of career over relationships.
- **Superficial Socialisation:** Friendships often limited to colleagues and party circles, lacking emotional depth.
- **Technology and Virtual Relationships:** Reliance on dating apps, social media, and casual encounters over long-term companionship creates instant gratification but shallow bonding.
- **Postponement of Marriage and Family:** With delayed marriage and relationships, many remain emotionally unsupported during their prime working years.

Impacts of Loneliness

On the Individual

- **Mental Health:** Anxiety, depression, stress, and “burnout syndrome”.
- **Physical Health:** Studies show loneliness raises risks of heart disease, insomnia, and weakened immunity.
- **Identity Crisis:** Loss of sense of belonging and increased alienation.

On the Family

- Weakening of joint family ties due to migration.

- Reduced intergenerational bonding as young professionals live away from parents.
- Emotional distance in marriages or partnerships due to overwork and digital distractions.

On Relationships

- Rise of transactional and short-term connections (hookup culture, casual dating).
- Decline in trust and reciprocity in human relations.
- Fragmentation of traditional community networks.

On Society

- Increasing **social atomisation** - individuals living in silos despite physical proximity.
- Risk of **declining civic engagement** and community participation.
- Rise of mental health crises in urban areas, impacting productivity and social stability.
- Potential backlash in the form of resurgence of **arranged marriages** and parental involvement in partner selection, as observed in corporate India.

Way Forward

- **Work-Life Balance Policies**
 - Corporate HR must integrate **mental health support**, flexible work hours, and stress-reduction measures.
- **Strengthening Social Capital**
 - Encouraging peer networks, cultural clubs, and community-based activities within workplaces and urban neighborhoods.
- **Technology with Responsibility**
 - Dating apps and social platforms must promote **meaningful interactions**, not just instant gratification.
- **Mental Health Infrastructure**
 - Public health systems should integrate **loneliness and social isolation** as key mental health issues.
- **Cultural Anchoring**
 - Promote **intergenerational living spaces**, urban community centers, and reconnecting youth with cultural and familial roots.
- **Sociological Intervention**
 - Drawing from Durkheim's idea of social solidarity, policies must build **collective belongingness** to prevent anomie.

Source: [Indian Express](#)

India Needs Strategic Partnerships for Food and Fuel

Context

India must build strategic international partnerships to secure long-term supplies of key fertiliser inputs such as phosphate, while diversifying fuel sources like natural gas, in order to safeguard food security and economic stability in an uncertain global environment.

Current Status of India's Food and Fuel Dependence

● Fertiliser Dependence

- India is the **2nd largest consumer of fertilisers** in the world.
- **90% of urea** production depends on **imported natural gas**.
- **Phosphatic fertilisers** (DAP, SSP, TSP) require imported phosphate rock or phosphoric acid.
- **Potash (K)** is **100% imported**.
- Morocco controls **~70% of the world's phosphate reserves**, making it a critical partner.

● Fuel Dependence

- India imports **~85% of its crude oil** and **50% of its natural gas needs**.
- Rising global tensions (Russia-Ukraine war, West Asia conflicts) have made fuel markets volatile.

- **Population Pressures:** Current population: **1.45 billion**, projected **1.66 billion by 2050** → rising demand for food and fertilisers.

Why Strategic Partnerships Are Needed

- **Geopolitical Risks:** Uncertain US policies (tariffs, H-1B visa fees, targeting Indian exports) and West Asian volatility affect supply lines.
- **Geographic Concentration:** Fertiliser raw materials (phosphate, potash) are controlled by a few countries, raising risks of price shocks.
- **Domestic Constraints:** India's own reserves of phosphate and potash are negligible; self-sufficiency is not feasible.
- **Price Volatility:** Sudden spikes in global fertiliser and fuel prices directly affect farmers and food inflation in India.

Case Study: India–Morocco Partnership

- Morocco's **OCP Group** is the world's largest phosphate player.
- India already imports phosphate and phosphoric acid from Morocco; OCP has stakes in **Paradeep Phosphates**.
- The success of **Tata Advanced Systems' defence factory in Morocco** shows that joint ventures in critical sectors can be mutually beneficial.
- **Opportunity:** set up **joint mining and fertiliser plants** in Morocco to ensure long-term supplies of DAP, SSP, and TSP for Indian agriculture.

Geopolitical Risks with Other Suppliers

- **Saudi Arabia Example**
 - India recently signed a deal for **3 million tonnes of phosphate imports annually** from Saudi Arabia.
 - However, Saudi Arabia simultaneously entered into a **strategic defence partnership with Pakistan**, creating uncertainties for India.
- **Russia-Ukraine War Impact**
 - Energy markets remain volatile; US has criticised India for continued crude purchases from Russia.
 - Tariff and visa sanctions by the US further add to India's external stress.

Way Forward

- **Strengthen International Joint Ventures:** Deepen partnerships with Morocco for phosphate and explore JVs in Africa, Russia, and Latin America for potash.
- **Diversify Energy Imports:** Secure long-term LNG contracts with reliable partners like Qatar, Australia, Mozambique, and the US.
- **Reform Domestic Fertiliser Policy:**
 - Rationalise subsidies to encourage balanced fertiliser use (more P & K, less urea).
 - Promote use of **TSP (46% P₂O₅)** alongside urea instead of over-reliance on DAP.
- **Promote Atmanirbharta with Pragmatism:** Focus on domestic fertiliser production, but acknowledge raw material limitations.
 - Invest in **alternative fertilisers** (bio-fertilisers, nano-fertilisers).
- **Diplomatic Balancing**
 - Use agriculture and energy diplomacy as central pillars of India's foreign policy.
 - Build partnerships not only for imports but also for **global fertiliser supply chain integration**.

Source: [Indian Express](#)