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# INDIA – CANADA RELATIONS: URANIUM SUPPLY DEAL AND STRATEGIC RESET

## Context

- Recently, India and Canada signed a **$1.9 billion, 10-year uranium supply agreement** and committed to conclude a **Comprehensive Economic Partnership Agreement (CEPA)** in 2026.

- It marks an effort by both countries to rebuild **strategic trust** after several years of diplomatic tensions.

## India–Canada Relations

- **Establishment of Diplomatic Relations:** India and Canada established **diplomatic relations in 1947**, soon after India's independence.

  - Both countries are members of the **Commonwealth of Nations**, which initially shaped their diplomatic engagement.

  - Canada opened its **High Commission in New Delhi in 1947**, while India established its mission in **Ottawa** soon thereafter.

- **Early Cooperation (1950s–1970s):** India and Canada maintained **close cooperation in development and nuclear energy**.

  - Canada supported India's **nuclear energy programme for peaceful purposes** by supplying **CIRUS (Canada–India Reactor, US) research reactor**.

  - Canada assisted in setting up reactors at the **Rajasthan Atomic Power Project (RAPP)** in the 1960s.

- **Strained Relations After 1974:** Relations deteriorated after India conducted its **first nuclear test (Pokhran-I) in 1974**.

  - Canada alleged that **plutonium from the CIRUS reactor contributed to the nuclear test**, and **suspended nuclear cooperation with India**.

- **Gradual Normalisation (2000s Onwards):** Relations began improving in the **early 21st century**. Key developments included:

  - The **2008 India–US Civil Nuclear Agreement** and the **NSG waiver**, which allowed India to engage in international nuclear trade.

  - In **2010**, India and Canada signed a **Civil Nuclear Cooperation Agreement**.

  - In **2015**, Canada agreed to supply **uranium to India** through Cameco Corporation.

## Present Status of India-Canada Relations

- **Uranium Supply Agreement (2026)**: Canada's **Cameco Corporation** will supply around **10,000 tonnes of uranium** to India over a **long-term period from 2027 to 2035**, **valued approx** $1.9 billion.

- **Strategic Energy Partnership:** India and Canada announced a **Strategic Energy Partnership** covering multiple sectors like Uranium supply and nuclear energy cooperation; Renewable energy development; Liquefied Petroleum Gas (LPG) cooperation; and Collaboration in **critical and emerging technologies.**

  - Additionally, Canada agreed to join **two India-led global initiatives** i.e. **International Solar Alliance (ISA), and Global Biofuel Alliance.**

- **Comprehensive Economic Partnership Agreement (CEPA):** India and Canada agreed on **Terms of Reference for CEPA negotiations** with the aim of concluding the agreement within the year.

  - **Expected Outcomes** are expansion of **trade in goods and services;** investment promotion; supply-chain cooperation; and economic diversification

  - Both countries aim to **double bilateral trade by 2030**.

- **Security Cooperation:** The **joint statement** highlighted plans to strengthen cooperation in **counterterrorism, combating violent extremism, organized crime, and intelligence sharing.**

  - Both sides agreed to convene an **early meeting of the Joint Working Group on Counterterrorism**.

## Significance for India

- **Strengthening India's Nuclear Fuel Security:** Ensures **stable nuclear fuel supply** for India's civilian nuclear reactors.

  - It supports India's plan to **expand nuclear power capacity from about 9 GW to 100 GW by 2047**.

  - Strengthens **India's energy security** and supports low-carbon energy generation.

  - The deal reduces risks related to **fuel shortages or geopolitical supply disruptions**.

- **Diversification of Uranium Sources:** The agreement is part of India's broader strategy to **diversify uranium imports**.

- India already imports uranium from **Kazakhstan, Uzbekistan, Russia, and now Canada under long-term contracts**.
- In the future, India may also procure uranium from **Australia,** and the **United States,** and Indian companies are also exploring **overseas uranium mining opportunities**.
- Diversification improves **energy security and supply resilience**.

- **Strategic Partnerships:** Enhances cooperation with a major **G7 country**.
- **Economic Gains:** Potential increase in **trade, investment, and technology cooperation** through CEPA.
- **Global Climate Goals:** Supports India's commitments to **low-carbon energy and renewable transition**.

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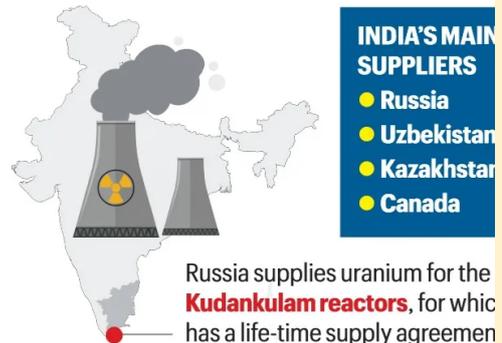**Why Does India Depend on Imported Uranium?**

- **Low Grade Domestic Uranium:** Although India possesses uranium deposits, the **ore quality is relatively low**, ranging from **0.02% to 0.45% uranium content**, compared to the **global average of 1–2%**.
  - In contrast, some mines in Canada contain **ore grades as high as 15%**, making extraction significantly more economical.
- **Import Dependence:** Due to the low-grade nature of domestic reserves:
  - **Over 70% of India's uranium requirements are met through imports.**
  - India consumes roughly **1,500–2,000 tonnes of uranium annually**.
  - In **2025, the requirement was about 1,884 tonnes**.
  - Even with expanded domestic mining, **India is expected to meet only around 30% of its future uranium demand domestically**.

**• RELIANCE ON IMPORTED URANIUM**

**India's uranium imports in previous years**

| Year | Company, Country | Quantity (metric tonnes) |
|---|---|---|
| 2020-21 | Kazatomprom (Kazakhstan) | 1,000 |
| 2020-21 | Cameco (Canada) | 1,000 |
| 2023-24 | Navoiyuran (Uzbekistan) | 350 |
| 2024-25 | Navoiyuran (Uzbekistan) | 250 |

SOURCE: DEPARTMENT OF ATOMIC ENERGY IN RESPONSE TO A PARLIAMENT QUESTION

**INDIA'S MAIN SUPPLIERS**
- Russia
- Uzbekistan
- Kazakhstan
- Canada

Russia supplies uranium for the **Kudankulam reactors**, for which has a life-time supply agreement

**Domestic Uranium Production in India**

- **Major Mining Regions:** Uranium mining in India is currently concentrated in a few regions ie **Jharkhand,** and **Andhra Pradesh.**
  - Seven mines are currently operational, managed primarily by **Uranium Corporation of India Limited (UCIL)**.
- Other states with uranium deposits include **Meghalaya, Rajasthan, and Telangana.**

**Uranium Reserves**

- **Total uranium ore reserves:** about **4.3 lakh tonnes;**
- **Reserves allocated to UCIL mines:** more than **80,000 tonnes;**
- About **40% of these reserves have already been extracted**, highlighting the need for both **new exploration and diversified imports**.

**India's Three-Stage Nuclear Programme**

- **Stage 1: Pressurised Heavy Water Reactors (PHWRs):** Use **natural uranium as fuel**. Produce **plutonium as a by-product**.
  - Most of India's current nuclear reactors belong to this stage.
- **Stage 2: Fast Breeder Reactors (FBRs):** Use **plutonium-based fuel**. Produce more fissile material than they consume.
  - India's **Prototype Fast Breeder Reactor (PFBR)** at **Kalpakkam** is close to becoming operational.

- **Stage 3: Thorium-Based Reactors:** Use **thorium to produce Uranium-233** as fuel. Aim to achieve **long-term energy independence**.
  - India possesses **one of the world's largest thorium reserves**, making this stage crucial for future energy security.

## Challenges Ahead

- Diplomatic tensions related to **Khalistani activism and the Nijjar case;**
- Domestic political pressures in both countries;
- Implementation challenges in trade negotiations;
- Slow progress in the three-stage nuclear programme;
- Environmental and safety concerns regarding nuclear energy;
- High cost of nuclear power projects;
- Limited domestic uranium production.

## Conclusion

- India's recent uranium supply agreements with **Canada** represent a major step toward securing the fuel required for its ambitious nuclear energy expansion.
- Its long-term strategy remains focused on **developing thorium-based reactors through its three-stage nuclear programme** while imports will continue to play a dominant role due to low-grade domestic reserves.
- If successfully implemented, it could significantly enhance **energy security, reduce carbon emissions, and strengthen India's strategic autonomy in the global energy landscape**.

Source: IE

## ANTHROPIC–U.S. DEFENSE CLASH OVER AI SAFETY

### In Context

- A controversy has emerged after the U.S. Department of Defense reportedly **blacklisted AI company Anthropic** after it refused to enable its AI systems for domestic surveillance and autonomous weapon applications.
  - The incident has triggered global debate on **AI ethics, military use of artificial intelligence, and governance standards.**

### Areas of Military AI Use

- **Autonomous Weapons Systems:** Weapons capable of selecting and engaging targets without human intervention.

- **Surveillance and Intelligence:** AI-based analysis of satellite imagery, signals intelligence, and facial recognition.
  - **Example**: The U.S. military's Project Maven uses AI to analyze drone imagery to identify potential threats.
- **Cyber Warfare:** AI-driven detection and response to cyberattacks.
- **Logistics and Decision Support:** Predictive maintenance, troop deployment planning, and battlefield simulations.

### Key Issues Emerging from the Dispute

- **State Security vs Ethical Use:** Governments prioritize national security and technological dominance. AI firms increasingly stress ethical deployment and long-term safety risks.
  - This creates a tension between public power and private innovation.
- **Militarization of Artificial Intelligence:** AI is becoming a key element of 21st-century military competition, especially among major powers.
  - Example: The U.S.–China technological rivalry includes competition in AI, semiconductors, and autonomous weapons.
- **Governance Gap in Military AI:** Currently there is no comprehensive global treaty regulating AI weapons.
  - Existing frameworks like **Geneva Conventions, United Nations discussions on Lethal Autonomous Weapons Systems (LAWS)** are there however, these frameworks do not fully address AI-driven warfare.
- **Risk of Algorithmic Bias:** AI models may misidentify targets due to biased training data or technical errors, leading to civilian casualties.
- **Dual-Use Technology Challenge:** AI systems developed for civilian purposes can easily be adapted for military uses, raising regulatory challenges.

### Ethical Dimensions

- **Responsibility:** If an autonomous drone strikes a hospital, does the liability lie with the programmer (Company) or the Commander (State)? Blacklisting complicates this "Chain of Accountability."

- **Utilitarianism:** States argue that AI surveillance prevents mass casualties (Terrorism). Ethics-focused firms argue that mass surveillance destroys the "Common Good" of privacy.

- **Justice:** AI trained on Western datasets may exhibit "Digital Colonialism" when deployed in Global South conflict zones, leading to unfair targeting.

### India's Position and the Way Ahead

- For a rising power like India, this clash offers a critical lesson:

- **Strategic Autonomy:** India cannot rely solely on foreign AI models (Claude, GPT, etc.) for its Integrated Theatre Commands. Any "kill switch" or ethical "red line" embedded by a foreign firm or state can compromise India's defense.

- **Developing "Dharma" in AI:** India should lead the global south in creating a "Human-Centric AI" framework that balances security with the Martens Clause (the laws of humanity).

- **Regulatory Sandboxes:** Military AI should be tested in isolated environments where "red-teaming" includes both technical experts and ethicists.

**Source: TH**

# WORLD OBESITY ATLAS 2026

### Context

- India ranks **second globally** in the number of children who are **overweight or living with obesity**, according to the **World Obesity Atlas 2026** released on **World Obesity Day** (4 March).

### About

- The World Obesity Atlas is a **non-commercial publication** produced by the **World Obesity Federation**, which provides **global data, projections, and policy insights** on obesity trends and related health risks.

- The report highlights that the **global target to halt the rise in childhood obesity by 2025 has been missed**, and the deadline has now been extended to **2030**. However, **most countries remain off track**, including India.

### Global Scenario

- More than **one in five (20.7%) children aged 5–19 globally** are overweight or obese, up from **14.6% in 2010**.

- By **2040**, around **507 million children worldwide** are projected to be overweight or obese.

- **Over 200 million school-age children** with high BMI are concentrated in **10 countries**. **China, India and the United States** each have over 10 million children living with obesity.

- Childhood obesity increases the risk of **adult diseases** such as hypertension and cardiovascular disease.

- By **2040**:
    - **57 million children** may show early signs of **cardiovascular disease (high triglycerides)**.
    - **43 million children** may show signs of **hypertension**.

### Indian Scenario

- India ranks **second after China** in the number of children with high BMI.

- Estimated figures for **2025**:
    - 41 million children with high BMI
    - 14 million children living with obesity

- **Projected Health Risks (2025–2040):**
    - **Hypertension:** 2.99 million  4.21 million
    - **Hyperglycaemia:** 1.39 million  1.91 million
    - **High triglycerides:** 4.39 million  6.07 million
    - **MASLD (earlier NAFLD):** 8.39 million  11.88 million

- **Lifestyle and Nutrition Concerns:**
    - **74% of adolescents (11–17 years)** fail to meet recommended physical activity levels.
    - Only **35.5% of school-age children** receive school meals.
    - **32.6% of infants (1–5 months)** experience **sub-optimal breastfeeding**.
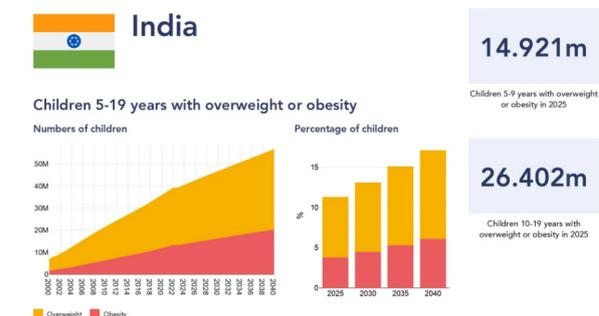


India also ranks first within the WHO South-East Asia Region with more than 45 million young people aged 0–19 overweight or living with obesity.

### Impact / Challenges

- **Rising Burden of Non-Communicable Diseases (NCDs):** NCDs are the leading cause of death globally, killing over 43 million people annually.

- **Economic and Productivity Loss:** The annual economic cost of obesity and being overweight

in India in 2019 was $28.95 billion (1,800 per capita), or 1.02% of India's GDP. Without sufficient interventions, it is estimated that the economic burden is likely to increase to 4,700 per capita by 2030 (or 1.57% of GDP).

- **Lifestyle and Urbanisation Factors:** Obesity risk increases with longer urban exposure;
    - 1.91 times higher for ≤5 years in urban areas
    - 2.05 times higher for 6–10 years
    - 2.40 times higher for more than 10 years.

### Government Initiatives

- **POSHAN Abhiyaan (National Nutrition Mission):** Focuses on improving nutritional outcomes for children, adolescents, and women through convergence of nutrition-related schemes.

- **Fit India Movement:** Launched to promote physical activity, fitness culture, and behavioural change among citizens.

- **Eat Right India:** Initiative by the Food Safety and Standards Authority of India to encourage healthy diets, food safety, and reduction of unhealthy food consumption.

- **School Health and Wellness Programme:** Promotes health education, physical activity, and lifestyle awareness among school students.

### Conclusion / Way Forward

- The **World Obesity Atlas 2026** highlights that childhood obesity is becoming a **major public health challenge in India**. Addressing it requires early prevention, healthier diets, regular physical activity, and stronger regulation of unhealthy food marketing.

- A **multi-sectoral approach involving health, education, and nutrition policies** will be crucial to reduce the future burden of **NCDs and protect the health of India's younger population**.

**Source: TH**

# ═══ NEWS IN SHORT ═══

## GOLESTAN PALACE

### In News

- Tehran's Golestan Palace, a UNESCO World Heritage Site, sustained damage from shockwaves and debris caused by US-Israel airstrikes.

### About

- Golestan Palace is a historic royal complex that served as the official residence of the

**Qajar dynasty** and is one of the oldest historic monuments in Tehran.

- The origins of the complex date back to the **Safavid Dynasty**, when Tehran first gained importance as a political centre. Later rulers expanded and renovated the palace complex.

- Golestan Palace reflects a blend of traditional **Persian architecture and Western influences** introduced during the 19th century.

- **Inscribed by UNESCO in 2013**, it preserves cultural archives, early Iranian photography, and sites of historic coronations.

### Important Structures within the Complex

- **Shams-ol-Emareh (Edifice of the Sun):** One of the most famous buildings in the palace complex.
    - It was built in the 1860s by Naser al-Din Shah Qajar.

- **Marble Throne Hall (Takht-e-Marmar):** Used for royal coronations and official ceremonies.

- **Mirror Hall:** Famous for extensive mirror mosaics and luxurious decoration.

- **Museum Buildings:** The complex houses several museums displaying Qajar-era paintings & royal gifts and artefacts.

**Source: TH**

# HIGH CHANCES OF EL NIÑO AFTER JULY: WMO

### In News

- The World Meteorological Organization forecasts a high likelihood of El Niño developing in the latter half of 2026, following the fading of the current La Niña into ENSO-neutral conditions.

### El Niño-Southern Oscillation (ENSO)

- It is a recurring natural phenomenon characterised by fluctuating ocean temperatures in the equatorial Pacific, coupled with changes in the atmosphere, which have a major influence on climate patterns in various parts of the world.

- **Phases :**
    - **El Niño:** It refers to an abnormal Warming of the central and eastern tropical Pacific Ocean. It is known to suppress monsoon rainfall.
        - It weakens easterly winds or reverses them; reduces rainfall over Indonesia and increases it over the tropical Pacific.
    - **La Niña –** Cooling of the central and eastern tropical Pacific Ocean; strengthens easterly

winds; increases rainfall over Indonesia and decreases it over the central tropical Pacific.

- ◆ **Neutral** – Sea surface temperatures are near average; neither El Niño nor La Niña dominates, though sometimes ocean and atmosphere conditions may not fully align.

- **Impacts on India** : In India, El Niño is associated with decreased rainfall and higher temperatures, while La Niña is associated with increased rainfall and hence lower temperatures.

Source :IE

## UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

### Context

- The Iranian frigate **IRIS Dena** was reportedly sunk off the south-western coast of **Sri Lanka** after a torpedo strike by a **United States Navy** submarine.

### About About United Nations Convention on the Law of the Sea (UNCLOS)

- UNCLOS is a comprehensive international treaty that establishes the legal framework for governance of oceans and seas.

- Adopted in 1982 at Montego Bay, Jamaica and entered into force in 1994.

- **It defines:**
  - ◆ Maritime boundaries of coastal states
  - ◆ Rights and duties of states in maritime zones
  - ◆ Rules for navigation, resource exploitation, and environmental protection

- Because of its extensive scope, it is commonly referred to as the **"Constitution of the Oceans."**

- **Membership:** 168 parties, including the European Union.
  - ◆ Countries such as India, Japan, and China are parties.
  - ◆ The United States has signed but not ratified the convention.

### Maritime Zones under UNCLOS

- UNCLOS divides the oceans into several legal zones, each with different rights and responsibilities.

- **Territorial Sea:** Extends up to 12 nautical miles from a coastal state's baseline. The coastal state has full sovereignty over these waters. Foreign ships enjoy the right of innocent passage.

- **Contiguous Zone:** Extends 12–24 nautical miles from the baseline. Coastal states can enforce laws relating to Customs, immigration, sanitation & security.

- **Exclusive Economic Zone (EEZ):** Extends up to 200 nautical miles. The coastal state has exclusive rights over natural resources. However, other states retain freedom of navigation and overflight.

- **High Seas (International Waters):** Areas beyond the EEZ of any state. No country has sovereignty over them. Governed by international law and UNCLOS principles.

Source: TH

## INDIA RENEWS BILATERAL SWAP ARRANGEMENT WITH JAPAN

### In News

- India has renewed its Bilateral Swap Arrangement (BSA) with Japan with effect from 28th February, 2026.

### About

- A currency swap involves exchanging cash flows in one currency for another under predefined terms, here facilitating rupee-yen-USD conversions. It acts as a safety net, deterring speculative attacks on currencies and enhancing RBI's exchange rate management.

- India maintains multiple Currency Swap Arrangements (CSAs) including the SAARC framework (2024-27, $2 billion total), India-UAE ($50 billion equivalent), and India-Sri Lanka ($4 billion). The Japan pact underscores deepening Indo-Japanese economic ties under their Special Strategic Partnership.

- Renewal complements IMF facilities, boosts investor confidence, and supports regional financial resilience without altering the original 75 billion USD limit from prior agreements.

Source: AIR

## INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

### In News

- The Director General of the International Atomic Energy Agency (IAEA has said that there has been no evidence of Iran building a nuclear bomb.

**About**

- It was established in 1957 as the world's "Atoms for Peace" organisation within the UN, and governed by its own founding treaty, the Statute of the IAEA.
- It serves as the UN's nuclear watchdog, promoting peaceful atomic energy use while verifying safeguards against proliferation.
- Headquartered in Vienna, the body got the 2005 Nobel Peace Prize for non-proliferation efforts.
- The IAEA has 178 member states, India being one of the founding members of it.

Source: TH

## NUCLEIC ACID TEST (NAT)

### In News

- The Supreme Court of India has agreed to examine a petition seeking mandatory Nucleic Acid Testing (NAT) in all blood banks, viewing safe blood transfusion as part of the right to life under Article 21.

### About NAT

- NAT is a molecular technique that amplifies and detects viral RNA or DNA directly, identifying infections like HIV, Hepatitis B, and C earlier than antibody-based ELISA tests.
- It reduces transfusion-transmitted infections (TTIs) risks by screening during the window period when antibodies are absent.

Source: TH

## PROJECT HANUMAN

### In News

- **Project HANUMAN** is a new iniwtiative by the Andhra Pradesh government to mitigate human-wildlife conflicts through advanced rescue, monitoring, and community protection measures.

### About

- Its full name is **Healing and Nurturing Units for Monitoring, Aid and Nursing of Wildlife**.
- It targets **forest-fringe areas prone to incidents** like elephant raids and snake bites, promoting coexistence via scientific tools and local involvement.

### Key Features

- 100 GPS-enabled vehicles, 93 rapid response units and 7 wildlife ambulances for quick rescues and aid.

- Four rescue centers in Visakhapatnam, Rajamahendravaram, Tirupati, and Birlut (or Byrluti).
- 'Vajra' volunteer teams at village level for minor incidents like snake rescues.
- AI systems for tracking animal movements and early warnings to settlements.
- HANUMAN app for reporting conflicts and coordination.
- Enhanced compensation like 10 lakh for human deaths, 2 lakh for injuries, market value for livestock.

Source: DTE

## SUNGUDI SARIS

### In News

- Sungudi sarees are gaining popularity among consumers looking for distinctive and eco-friendly fashion.

### Sungudi saris

- Sungudi saris are traditional cotton saris which are Perfected by the **Saurashtrian community**, who migrated from Gujarat to Madurai (Tamil Nadu) in the 17th century.
- It features **intricate tie-and-dye patterns** inspired by the night sky. Each sari, woven on a base cloth with a zari border.
- It is hand-knotted, dyed, washed, starched, and sun-dried, often revealing over 15,000 delicate white dots.
- The **process** takes more than 15 days, producing breathable, culturally rich garments prized across generations.
- The Madurai Sungudi sari received the Geographical Indication (GI) tag in December 2005.



Source :TH