

NEWS TODAY

Lancet's 'Global Burden of Disease' Study Finds Total Fertility Rate (TFR) Decline Across the World Since 1950

Key Findings

- ⊕ **Global TFR** more than halved, from 4.84 (1950) to 2.23 (2021).
- ⊕ **Expected** global TFR is 1.83 in 2050 and **1.59 in 2100**.
- ⊕ In 47 countries fertility was **below replacement rate** from 1950 to 2021.
- ⊕ **India's TFR** was 6.8 in 1950, 1.91 in 2021, and is projected to fall to 1.29 and 1.04 in 2050 and 2100, respectively

➤ **Reasons:** Improving access to **modern contraceptives and female education** are two primary drivers of declining fertility.

Impact of Low Levels of Fertility

- ⊕ **Changes in age structure**, caused by a **growing elderly population**, and shrinking working-age population, and a **labor force**.
- ⊕ May increase **burden on health care and social systems**.
- ⊕ Smaller future population could **alleviate strain on global food systems, environments, and other finite resources**.
- ⊕ Low TFR **improves women's decision-making power** in the household.

Policy suggestions

- ⊕ **Implement pro-natal policies**, such as child-related cash transfers and tax incentives, etc.
- ⊕ Access to **modern contraceptives** and rapidly expanding **access to female education**.
- ⊕ Investment in **social security programmes**, and health-care infrastructure.

- Replacement rate is **minimum rate necessary for generational replacement of population** assuming no migration.
- The replacement level is generally accepted to be a **Total fertility rate (TFR)** of at least 2.1.
- **TFR** represents average number of children a woman would have in her childbearing years (usually considered 15-49).

Fourth Global E-waste Monitor (GEM) 2024 Report Released

- Report is prepared in partnership with the **UNITAR's Sustainable Cycles (SCYCLE) Programme**, ITU (International Telecommunication Union) and Fondation Carmignac.
- ⊕ **UNITAR (United Nations Institute for Training and Research)** provides innovative learning solutions to individuals, organizations and institutions to enhance **global decision-making** and **support country-level action for shaping a better future**.

Key Findings:

- ⊕ **Record E-Waste Generation:** 62 million tonnes of e-waste produced in 2022, up 82% from 2010.
- ⊕ Expected to rise by 32% to 82 million tonnes by 2030.
- ⊕ **Recycling Gap:** Only 1% of rare earth element demand is met by e-waste recycling.
 - ◆ E-waste generation is increasing five times faster than documented e-waste recycling.
- ⊕ **India Status:** It is one of the world's largest generators of e-waste i.e 4137 million kg.

➤ **E-waste** refers to all items of **electrical and electronic equipment (EEE)** and its parts that have been discarded by its owner as waste without the intent of re-use. E.g. Discarded mobiles, T.V etc.

- ⊕ **E-waste** contains toxic materials or can produce toxic chemicals such as **lead, mercury** etc. which can cause adverse neonatal outcomes, reduced lung and respiratory function etc.
- ⊕ **Issues in management:** Limited repair options, shorter product life cycles, inadequate e-waste management infrastructure etc.

Initiatives for E-Waste Management in India

- **E-Waste (Management) Rules, 2022** notified by **Ministry of Environment, Forest and Climate Change**.
 - ⊕ 2022 rules replaced the E-waste (Management) Rules, 2016.
 - ⊕ These rules are managed by **Central Pollution Control Board**.
 - ⊕ **Extended Producer Responsibility (EPR)** for e-waste management was introduced in E-Waste Rules, 2011.
 - ⊕ Rules are notified under **Environment (Protection) Act of 1986**.
- Promotion of **Circular Economy**

International Labour Organization (ILO) releases the report “Profits and Poverty: The Economics of forced labour”

- As per ILO’s **Forced Labour Convention, 1930**, forced labour defined as “All work or service which is exacted from any person under the menace of any penalty and for which the said person has not offered himself voluntarily”.
- **Key highlights**
 - ⊖ **27.6 million** people engaged in forced labour in **2021**.
 - ⊖ Total amount of illegal profits from forced labour has **risen by 37% since 2014**.
 - ⊖ In India **brick kilns industry**, carpet weaving industry are sectors having bonded labour.
- **Factors behind forced labour**

Supply Side	Demand Side
<ul style="list-style-type: none"> ➤ Due to poverty. ➤ Identity and Discrimination due to race or gender, etc. ➤ Limited labour Protection for unorganized workers. 	<ul style="list-style-type: none"> ➤ Outsourcing- which fragments responsibility for labour standards and makes oversight and accountability very difficult. ➤ Corporate dominance reduces worker wages by concentrating power and value

- **Initiatives to stop forced labour**
 - ⊖ ILO **Protocol of 2014** to Forced Labour Convention, 1930 and Forced Labour (Supplementary Measures) Recommendation, 2014.
 - ⊖ **India:**
 - ◆ **Article 23:** Prohibition of traffic in human beings and forced labour.
 - ◆ **Article 24:** Prohibition of employment of children in factories, etc.
 - ◆ **Bonded Labour System (Abolition) Act, 1976, etc.**

Ministry of Information and Broadcasting issues advisory on surrogate advertisements of online betting platforms

- **Key highlights**
 - ⊖ Influencers on social media must **refrain from promoting offshore online betting and gambling platforms in any form, including surrogate advertisements**.
 - ◆ Surrogate advertisements are substitute advertisement for goods which cannot be directly advertised due to prohibition of law.
 - ⊖ **Online advertisement intermediaries** are advised against targeting such content to the Indian audience.
 - ⊖ **Non-compliance** may result in proceedings under **Consumer Protection Act, 2019**.
- **Earlier regulating provisions for the same:**
 - ⊖ **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**
 - ◆ It focussed on clear disclaimers and advertising targeting children.
 - ⊖ **IT Act’s Section 79** exempts intermediaries but mandates removal of unlawful content upon notification.
 - ⊖ **Ministry of Information & Broadcasting** can order intermediaries to remove illegal ads.
 - ⊖ **Consumer Protection Act, 2019** enables action against stakeholders promoting illegal activities in ads.
- **Concerns:**
 - ⊖ **Addictive behaviour**, social detachment, and emerging cybercrime trends.
 - ⊖ **Regulatory ambiguity**, money laundering and cyber-attacks.
- **Way forward:** Strict monitoring, awareness campaigns, collaboration with social media platforms, celebrity engagement, and partnerships for responsible online behaviour to address online betting and gambling concerns.

Legal Provisions for gambling and betting:

- **Seventh Schedule Entry 34** empowers states to regulate Betting, and Gambling.
- **Public Gambling Act, 1867, Lotteries Regulation Act, 1998, and FEMA, 1999** are central laws governing gambling and income.
- **Finance Ministry imposes GST** on online money gaming, casinos, and horse racing.

Union Government seeks report from Punjab government on alleged violation of Assisted Reproductive Technology (ART) Regulation Act, 2021

- **ART Regulation Act, 2021** was enacted for the regulation and supervision of the assisted reproductive technology clinics, banks, etc.
 - ⊕ As per the Act, **ART** includes all techniques that attempt to obtain a **pregnancy** by handling the sperm or the oocyte (immature egg) outside the human body and transferring the gamete or the embryo into the reproductive system of a woman.
 - ⊕ **Common methods of ART :**
 - ◆ **In-vitro fertilisation:** Fertilising an egg in the lab and placing it into woman's womb.
 - ◆ **Gamete donation:** Using eggs, sperm, or embryos from someone else to help intended parents have a child.
 - ◆ **Gestational surrogacy:** An embryo from intended parents or from a donated oocyte or sperm is transferred to the surrogate uterus.
- **Key Provisions of the Act:**
 - ⊕ **Established governing bodies:** National and State Assisted Reproductive Technology and Surrogacy Board.
 - ⊕ **Registration of Units:** Provides for registration of assisted reproductive technology clinic and banks.
 - ⊕ **Eligibility for Beneficiary: Women** between 21 years and 50 years. For men upper limit is 55 years.
 - ⊕ **Eligibility for Donor:** Women between 23 years and 35 years. For men it is 21 to 55 years.

ISRO successfully conducted the Pushpak Reusable Landing Vehicle (RLV) LEX 02 Landing Experiment

- **RLV LEX 02** is the **second of the series of experiments** conducted by the ISRO under the **Reusable Launch Vehicle Technology Demonstration (RLV-TD) Programme**.
 - ⊕ RLV LEX 02 re-validated the **indigenously developed technologies** for performing high speed autonomous landing of a space returning vehicle.
 - ⊕ In it, the winged body and all flight systems used in RLV-LEX-01 were reused.
 - ◆ In 2023, RLV-LEX-01 mission was successfully conducted.
- **RLV-TD Programme** aims at **developing essential technologies** for a **fully RLV** to enable low-cost access to space
 - ⊕ **RLV** is essentially a space plane with a low lift to drag ratio and can travel to low earth orbits to deliver payloads and return to earth for use again.
 - ⊕ This vehicle will be scaled up to become the **first stage of India's reusable two-stage orbital launch vehicle**.
 - ⊕ **NASA is using RLV for long time** and private space agencies such as Space X demonstrating partially reusable launch systems.
- **Advantages:** RLV is considered a low-cost, reliable, and on-demand mode of accessing space.
- **Challenges:** Selection of materials like special alloys, composites, and insulation materials and the crafting of its parts is very complex and demands highly skilled manpower.

Also in News



Pancreas

- JNCASR scientists develop a **pancreas-mimicking silk-based hydrogel system** for responsive insulin delivery in diabetes treatment.
- **Pancreas**
 - ⊕ Pancreas is located behind the stomach in the upper left abdomen.
 - ⊕ **Functions of the Pancreas**
 - ◆ **Exocrine Function:** Pancreas contains exocrine glands that produce enzymes that help break down carbohydrates, proteins, and fats in the small intestine.
 - ◆ **Endocrine Function:** Pancreas produces several hormones, including insulin and glucagon.
 - ⊕ Disorders affecting pancreas include pancreatitis, Diabetes, pancreatic cancer, etc.



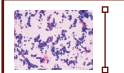
Right Whale

- Study finds female right whales may never breed after entanglement in fishing gear.
- **Right Whale**
 - ⊕ They are named for being "**right**" whales to hunt because they were easy to catch (found close to shore, swam slowly, and floated when they were dead).
 - ⊕ **It has 3 species**
 - ◆ **Southern Right Whales** (Least Concern)
 - ◆ **North Atlantic Right Whales** (Critically Endangered)
 - ◆ **North Pacific Right Whales** (Endangered)
 - ⊕ They **feed almost exclusively on zooplankton**.
 - ⊕ They are **threatened** by entanglement in fishing gear, ship collisions, bycatch, climate change etc.



IMT TRILAT- 2024

- India, Mozambique, Tanzania (IMT) Tri Lateral (TRILAT) is a joint maritime exercise.
- **First edition of IMT TRILAT** exercise was conducted on Oct 2022.



Project ANAGRANINF

- Technology Development Board grants funds for Project **ANAGRANINF - Development of a Novel Class of Antibiotics Against Gram-Negative Bacterial-Infections.**
- **About Project:**
 - ⊖ It is a collaborative initiative between **Indian** and **Spanish** companies.
 - ⊖ **Objective:** Develop a novel lead compound (particularly an antibiotic) and combatting critical gram-negative pathogens.
 - ◆ It will **produce compounds** which are aligned with the criteria laid out by the **World Health Organization (WHO)** for tackling **Antimicrobial Resistance (AMR)** infections.
- **Gram-negative bacteria** are resistant to multiple drugs and are increasingly resistant to most available antibiotics.



The International Telecommunication Union (ITU)

- ITU elected India as co-chair of its Digital Innovation Board.
- ITU is specialized **United Nations agency** for information and communication technologies (ICTs), driving innovation in ICTs.
- **Members:** 193 Member States (including India) and over 900 companies, universities, and international and regional organizations.
- **Established** in 1865 to manage the first international telegraph networks.
- **Headquarters:** Geneva, Switzerland



Operation Indravati

- India launched Operation Indravati to evacuate its nationals from **Haiti to the Dominican Republic.**
- As part of the ongoing operation, 12 Indians were evacuated.
- Haiti has been under a **state of emergency** after some armed groups attacked the country's largest prison in Port-au-Prince earlier this month.



Universal Acceptance

- **Ministry of Electronics and Information Technology** launched the **BhashaNet portal** based on the concept of Universal Acceptance (UA).
 - ⊖ It is developed by the **Centre for Development of Advanced Computing** with support of **National Internet Exchange of India.**
- **About Universal Acceptance**
 - ⊖ It ensures that **all domain names**, including Internationalized Domain Names and email addresses, are **treated equally.**
 - ⊖ It can be **used by all Internet-enabled applications, devices, and systems.**
 - ⊖ BhashaNet portal is such a step, aims to make .in (dot in) universally accepted domain.



Uniting For Consensus (UfC) Model

- India criticised the UfC model at the United Nations for its opposition to Security Council reforms.
- **About Uniting For Consensus (UfC)**
 - ⊖ Group created in 1990's, also known as **Coffee Club.**
 - ⊖ **Objective:**
 - ◆ **Expand non-permanent seats** for regional inclusivity.
 - ◆ **Avoid new permanent seats and limit veto power.**
 - ⊖ **Members:** It comprises 12 countries and 2 observers including a P5 country (China), Italy, Turkey, Pakistan etc. are part of it.

Places in News



Papua New Guinea (Capital: Port Moresby)

- Recently, two warring groups Yopo Alliance & Palinau Alliance signed ceasefire agreement in Papua New Guinea.
- **Political Boundaries**
 - ⊖ **Island country in south-western Pacific Ocean.**
 - ⊖ Encompassing eastern half of **New Guinea** (world's second largest island), **Bismarck Archipelago, Bougainville** and **Buka**, etc.
 - ⊖ Stretches from **just south of Equator to Torres Strait.**
 - ⊖ **Neighbours:** **Indonesia** (west), **Australia** (south) and **Solomon Islands** (south-east).
- **Geographical Features**
 - ⊖ **Situated along a Pacific Ring of Fire.**
 - ⊖ **Main rivers:** Sepik and Fly
 - ⊖ **Highest peak:** Mount Wilhelm

