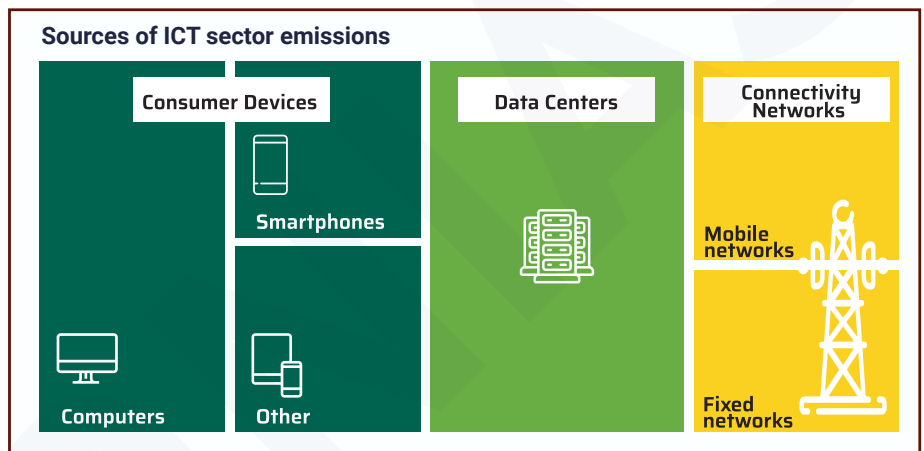


## "Measuring the Emissions and Energy Footprint of the ICT Sector: Implications for Climate Action" Report released

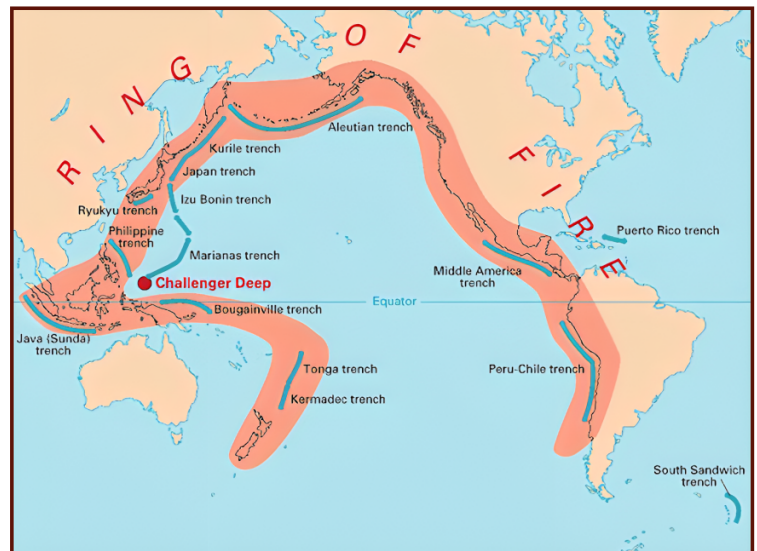
- The report has been jointly released by **International Telecommunication Union (ITU)** and the **World Bank**.
  - ⊕ It presents the **energy and emissions profile** of Information and Communication Technology (ICT) sector and assesses the **30 highest emitting countries (including India)** for telecommunications.
- **Key highlights of the report:**
  - ⊕ Rapid expansion of **Digitalization** is requiring more energy and resulting in **Greenhouse Gas (GHG) emissions**.
    - ◆ At least **1.7% of global emissions** stem from the ICT sector.
  - ⊕ **One-third** of the world's population (2.6 billion people), remain unconnected to the internet connecting whom will drive emissions even higher.
  - ⊕ ICT sector accounted for **60% of renewable power purchases** in 2021, pointing to potential avenues to abate increasing emissions.
  - ⊕ There is a **lack of comprehensive data on country-based ICT emissions** and France is the only country where regulator compiles telecommunications sector emissions.
- **Key Recommendations:**
  - ⊕ **Data-driven approach** is required to make informed policy decisions, set realistic emission reduction targets, and monitor progress.
  - ⊕ **Technology transitions** in ICT sector have potential to reduce emissions, but careful planning is required to ensure inclusivity.
  - ⊕ **Regulatory modifications**, along with incentives and collaboration between the ICT and energy sectors, can promote sustainable energy access.



## Taiwan rocked by earthquake of magnitude 7.4, biggest in 25 years

- Quake occurred as result of **reverse faulting** near boundary between **Eurasia and Philippine Sea plates**.
  - ⊕ A **reverse fault** is a **split between two sections of rock** in Earth's crust, caused by compressional forces.
- Notably, Taiwan is **prone to earthquakes** as it **lies along the Pacific "Ring of Fire" or Circum-Pacific Belt**.

- **Ring of Fire:**
  - ⊕ It is a horseshoe-shaped **string of volcanoes and sites of seismic activity** around the edges of **Pacific Ocean**.
  - ⊕ Roughly **90% of all earthquakes** occur along Ring of Fire, and it has **75% of all active volcanoes** on Earth.
  - ⊕ It is the **result of plate tectonics** as it traces the **meeting points of numerous tectonic plates**, including the Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.
  - ⊕ Much of the volcanic activity occurs along subduction zones, which are **convergent plate boundaries**.
    - ◆ As heavier plate is **subducted under other plate**, it melts and produces **magma** that erupts as volcano.
  - ⊕ A stretch of Ring of Fire - border between Pacific and North American Plates – is a **transform boundary**, where plates move sideways past one another.
    - ◆ This boundary generates **large number of earthquakes** as tension in Earth's crust builds up and is released.



## Delhi High Court has declared 'Haldiram' as well-known trademark

- High Court declared the 'Haldiram' as well as the red oval-shaped mark of the brand as a 'well-known mark' in respect of food items, restaurants and eateries in terms of the **Trade Marks Act (TMA), 1999**.
  - TMA defines **well-known trademark** as a mark which has become so as to the substantial segment of the public which uses such goods or receives such services that the use of such mark indicates a connection.
- India's Intellectual Property Rights (IPRs) Policy Management (IPRPM) framework** covers following types of IPRs:

IPRs	Legal provision	Subject Area	Term of Protection
<b>Patent</b>	Patent Act, 1970	Novel, Inventive and having industrial utility	20 Years
<b>Trademark</b>	Trademark Act 1999	Protects brand name, logo, design for a business or commercial enterprise	10 years; Can be renewed for 10 years.
<b>Designs</b>	Designs Act 2000	New or original designs	10 + 5 years
<b>Copyrights</b>	Copyrights Act 1957	Creative, artistic, literary, etc.	Authors – Lifetime + 60 years, Producers – 60 years, Performers – 50 year
<b>Geographical Indications (GI)</b>	GI Act, 1999	Unique characteristics due to geographical linkage	10 years; Can be renewed for 10 years.
<b>Trade Secrets</b>	Protected under Common Law	Confidential information having commercial value	Till confidentiality is safeguarded

## IMD warns of more tornadoes in northern Bengal

- In recent years, many tornadoes have formed across India. A **warming Bay of Bengal**, heated land and strange wind patterns could be a reason behind this.
- Tornado is **land-based vertical column** of violently rotating air that **extends from thunderstorm to ground**.
  - It can have wind speeds in **range of 105-322 Km/hr**.
- They **develop from severe thunderstorms** in warm, moist, unstable air along and ahead of cold fronts.
  - Thunderstorms are **severe local storms** associated with **thunder, lightning, heavy rain, hail, strong winds etc**.
- Tornadoes are most common in **United States, Argentina and Bangladesh**.
  - In India, these are reported in **eastern states of West Bengal, Odisha, and Jharkhand** during pre-monsoon period.
  - India is known for **formation of Tropical Cyclones**.

Parameters	Tropical Cyclones	Tornadoes
<b>Size and Scale</b>	Can span <b>hundreds of miles</b> and affect vast areas.	Size is only a <b>few hundred yards in diameter</b> .
<b>Wind Shear</b>	Require very <b>low values of tropospheric vertical shear</b> .	Require <b>substantial vertical shear</b> of horizontal winds.
<b>Temperature Gradient</b>	Generated in regions of <b>near-zero horizontal temperature gradient</b> .	Produced in regions of <b>large temperature gradient</b> .
<b>Area of Formation</b>	Purely an <b>oceanic phenomenon</b> .	Primarily <b>developed over land</b> .
<b>Time-Scale</b>	Lifetime that is measured in <b>days</b> .	<b>Typically lasts on the scale of minutes</b> .
<b>Impact</b>	Heavy rainfall, storm surges, and widespread flooding.	Cause <b>Localized destruction</b> .

## Integration of technology into criminal justice system (CJS) requires careful consideration: CJI

- **Need for technology in CJS**
  - ⊕ **Facilitate speedy and fair trials:** To leverage technology to avoid delays.
  - ⊕ **Potential to shape cause of crime detection.** E.g. AI aided in cutting investigation time by 63% in USA in rescuing children from sex trafficking.
  - ⊕ **Predictive policing:** Algorithms capable of forecasting criminal activity.
  - ⊕ Improved accuracy, with reliable forensic solutions, emerging biometric systems including Iris recognition etc.
- **Concerns**
  - ⊕ **Issue of privacy** to questions of accountability and transparency.
  - ⊕ **Exclusion** of those without Internet access or technological proficiency.
  - ⊕ AI is not free of **prejudice and biases**.
- **Steps taken:**
  - ⊕ **Network for Evidence Tracing, Research, and Analysis (NETRA) Lab:** To further strengthen **investigative processes of CBI in the digital domain**.
  - ⊕ **National Intelligence Grid (NATGRID)** is integrated intelligence master database structure for counter-terrorism purposes.
- **Way Ahead**
  - ⊕ **Clear guidelines and safeguards** to prevent misuse of advanced technologies and protecting **privacy rights**.
  - ⊕ **Multidisciplinary teams** consisting law enforcement officers, domain experts, including data analysts to deal with the global nature of crime.
  - ⊕ **Digitalisation of foundational processes** such as filing of FIRs etc.

## South Asia, India risk squandering demographic dividend: World Bank

- As per "Jobs for Resilience, South Asia Development Update" released by world bank, South Asia region including India is not reaping its demographic dividend.
- **Demographic dividend** is increased economic growth potential that can result when share of working-age population (15 to 64) is larger than non-working-age.
  - ⊕ India is expected to enjoy this window for **37 years starting 2018** and up to 2055.
- **Issues in harnessing demographic dividends**
  - ⊕ **Jobless growth: Employment ratio** (employment relative to total working-age population) is only 59% (2023) in South Asian countries, lower than other emerging economies (~70%).
    - ◆ Exceptionally **low shares of women** in employment
    - ◆ Weak employment trends in **non-agricultural sectors**
  - ⊕ **Private investment has slowed** and growth is mainly driven by public investment.
  - ⊕ **Slowing global growth** and heightened risks.
- **Recommendations**
  - ⊕ **Greater openness to international trade** by reducing barriers to trade.
  - ⊕ **Development of flexible labour laws and efficient land markets.**
  - ⊕ **Investment in Infrastructure with a focus on transportation and agricultural sectors**
  - ⊕ **Improving Female labor force participation** by wage subsidies, tax benefits etc.
  - ⊕ **Improved human capital** for easy switching of employment from agriculture to non-agriculture.

## Also in News



### S.A.R.A.H.

- World Health Organization unveils a **digital health promoter prototype S.A.R.A.H harnessing generative Artificial Intelligence (AI)** for public health.
- **About S.A.R.A.H.**
  - ⊕ It is a **Smart AI Resource Assistant for Health** which uses new language models and cutting-edge technology.
  - ⊕ It can provide **information across major health topics**, including healthy habits and mental health.
  - ⊕ It aims to provide an additional tool for people **to realize their rights to health**.
  - ⊕ It can support people in **developing better understanding of risk factors** for some leading causes of death in world E.g., **cancer, heart disease, lung disease, and diabetes**.



### PRATUSH Radio Telescope

- Researchers from Bengaluru's **Raman Research Institute (RRI)** have started work on PRATUSH (Probing ReionizATIOn of the Universe using Signal from Hydrogen).
  - ⊕ PRATUSH is currently **funded for pre-project studies by ISRO**.
- **About PRATUSH:**
  - ⊕ It is a **future space radio telescope** that will be **placed in lunar orbit**.
  - ⊕ **Objectives:** Revealing the transformation of the **Universe after the Big Bang** and determining **when the first stars formed**, their nature, and the color of the light emitted.
  - ⊕ **Advantage:** Ground-based experiments, including **SARAS**, face limitations such as **radio-frequency interference (RFI)** and **atmospheric contaminants**, which can be mitigated through a space-based telescope.



### Article 293 (Borrowing of States)

- SC has referred to constitution Bench questions raised in the petition on the interpretation of Article 293.
- **Article 293**
  - ⊕ **Article 293(1)**, executive power of State **extends to borrowing within territory of India** upon security of **Consolidated Fund of State**.
  - ⊕ **Article 293(2)**, empowers **central Government** to make loans to any State and give **guarantees for State loans**.
  - ⊕ **Article 293(3)**, restricts states from borrowing without **consent of Central Government** if they have **outstanding loans or guarantees** from Central Government.



### Dornier 228

- India delivered two state-of-the-art Dornier 228 aircraft to Guyana.
- **About Dornier 228 aircraft:**
  - ⊕ It is a **twin engine turboprop**, multi-mission maritime patrol aircraft.
  - ⊕ **Manufactured by** Hindustan Aeronautics Limited (HAL).
  - ⊕ It can be deployed for tasks like **surveillance, gathering information**, medical rescue, and transporting goods.
- **Maldives and Sri Lanka** have received these aircraft from India.



### Commonwealth Games

- Singapore rules out hosting the commonwealth games (CWG) of 2026
- **About CWG**
  - ⊕ It takes place **every four year**.
  - ⊕ **Members of Commonwealth Nations** along with overseas territories, island states also participate in this.
  - ⊕ It is managed by **Commonwealth Games Federation**, based in **London, England**.
  - ⊕ Earlier known as **British Empire Games** and they were held for **first time** in Canada in **1930**.
- **Commonwealth Nations** members are countries which were formerly British.
  - ⊕ However, presently **other members can also join it**.
  - ⊕ **India** is a member.



### Strategic Petroleum Reserves (SPR)

- India plans to build its **first privately managed SPR** by 2029-30.
- **Aim:** To enhance stockpiles against potential supply disruptions.
- **Authority:** The project will be overseen by Indian Strategic Petroleum Reserves Ltd (ISPRL), a special purpose vehicle created by the government for building and operating SPR.
- **Location:** Padur (Karnataka), also second site is planned in Odisha.
- **Current SPRs in India:** Visakhapatnam in Andhra Pradesh and Mangalore & Padur in Karnataka.



### Paired cropping system

- This conservation agricultural practice in **Odisha** is dwindling in recent years.
- **About Paired cropping system**
  - ⊕ It is a relay method of sowing in which **short-duration pulses/oilseeds are broadcast** in standing crop of rice ~2 weeks before its harvest.
  - ⊕ It **does not allow interventions** such as tillage, weeding, irrigation, and fertilizer application.
  - ⊕ **Benefits:** maximize land use efficiency, boost farmers income, etc.
  - ⊕ **Areas of Practise:** Bihar, Eastern Uttar Pradesh, West Bengal, Chattisgarh and Odisha.



### Indian Ocean Geoid Low

- According to researchers, Indian Ocean hosts a phenomenon known as 'gravity hole' or 'Indian Ocean Geoid Low (IOGL)', where the **Earth's gravitational pull is weaker** and the **sea level dips** by around 100 meters.
  - ⊕ This creates a gravitational/geoid anomaly with **depression** in the ocean and a **lowest point** in geoid.
- Technically, Earth is **not a sphere but a geoid**, with its middle part bulging outward, flattening poles and uneven surface.
  - ⊕ This **uneven surface** results from **non-uniform gravity** due to **unequal distribution of matter** within the planet's interior.

## Personality in news



### Kamaladevi Chattopadhyay (1903 – 1988)

- Recently, she was remembered on her birth anniversary.
- Born in Mangalore, she was a **freedom fighter, social reformer, art enthusiast and politician**.
- **Key Contributions:**
  - ⊕ Played a key role in **All India Women's Conference (AIWC)**.
  - ⊕ **First woman to run for a legislative seat in India**, in the Madras provincial elections.
  - ⊕ She **convinced Mahatma Gandhi to give women equal opportunity** in Salt Satyagraha of 1930.
  - ⊕ She joined **Seva Dal** and trained women activists.
  - ⊕ In 1936, she became **President of Congress Socialist Party**.
- **Values:** Courage, Patriotism, Leadership, Justice etc.

