

All PILs are Focused on Policy Matters Now, Genuine PILs are Being Missed: CJJ

Concern regarding misuse of PIL was raised while dismissing a PIL asking the government to set up an independent body to regulate content on OTT and other platforms.

About PIL

- **Definition:** PIL broadly refers to the litigations, filed by a party without any 'locus standi' (i.e., the party who is not aggrieved), to protect the general public interest.
- **Genesis:**
 - ⊕ In 'Mumbai Kamgar Sabha v. Abdulbhai Faizullabhai 1976, the SC relaxed the principle of locus Standi for the first time thereby paving the way for origin of PIL.
 - ⊕ **Hussainara Khatoun v. State of Bihar**, filed by an activist lawyer regarding the inhuman condition of the prison, was the first PIL in the country.
- **Significance:** It brings justice to people who are ignorant, indigent, or illiterate.

Misuse of PIL

- As PIL is not been defined in any act, there have been many instances of abuse of this practice.
- Hence, in **State of Uttaranchal vs Balwant Singh Chauhal & Ors, 2010 Case** the SC issued eight directions to High Courts to preserve the purity and sanctity of the PIL (refer to infographic).



MHA issues advisory to states & UTs to implement Section 479 BNSS for relief of Undertrial Prisoners

The advisory from the **Ministry of Home Affairs (MHA)**, raising the issue of long detention of undertrial prisoners, highlights the recent Supreme Court of India's order.

- The order legally mandates the state that **Section 479 of Bharatiya Nagarik Suraksha Sanhita (BNSS)** applies to all undertrials, irrespective of whether the case was registered before **1st July 2024** (BNSS came into effect).

Bail Provisions under BNSS for the detainees

- **Regular Cases:** Undertrial to be released if detention period reaches half of maximum specified imprisonment.
- **First-Time Offenders:** To be released if detention reaches 1/3rd of maximum imprisonment. Not applicable for offenses with death/life imprisonment.

Undertrials in India:

- As per **National Crime Records Bureau**, India's prisons (It's a state subject as per the 7th Schedule of the constitution) have a **131.4% occupancy. Around 75% are undertrials (2022).**
- An undertrial prisoner is in **prison or judicial custody** while the charges against them are **tried in court.**

Measures taken to alleviate hardships faced by the Undertrials

- **'Support to Poor Prisoners Scheme:** Provides relief to financially constrained prisoners who cannot pay fines or secure bail bonds.
- **E-prisons portal:** Provides data of inmates in a quick and easy manner for identifying eligible inmates for bail.
- **The Model Prison Manual 2016:** Detailed guidelines on the facilities which may be provided to undertrial inmates.
- **State Legal Services Authorities have established Legal Service Clinics in Jails** to provide free legal assistance.

Reasons for high number of Undertrial prisoners in India: Indiscriminate arrests by police, ignorance of legal rights, delay in trial, reluctance of the courts to grant bail, inability to provide surety.

Emissions from Rocket and satellite launches pose growing environmental threat

In 15 years, the rockets launched per year has nearly tripled, and the satellites orbiting the planet has increased 10 times.

- Space debris re-entry has doubled in decade and debris' atmospheric burning creates toxic emissions.

Atmospheric impact of rocket launches

- **Alumina (Al₂O₃) and black carbon (soot):** Al₂O₃ and soot absorb and trap the long-wave radiation from Earth, thus resulting in warming.
 - ⊕ A warmer stratosphere results in faster ozone depletion by speeding up the chemical reactions.
- **Ozone depletion:** Alumina, chlorine, nitrogen oxides, etc in rocket launch plumes all contribute to stratospheric ozone depletion.
 - ⊕ The Montreal Protocol for protection of the ozone, does not address rocket emissions.
- **Carbon dioxide:** Each rocket launch produces 50-75 tonnes of CO₂ per passenger, significantly higher than airplane flights (1-3 tonnes of CO₂).
- **Upper atmospheric-level pollution:** ~2/3rd of propellant exhaust is released into the stratosphere (12-50 km) and mesosphere (50-85 km), where it persists for at least 2-3 years.
 - ⊕ Even "green rockets," propelled by liquid hydrogen, produce water vapor, which is a greenhouse gas at high altitudes.
- **Metallic ash:** May disrupt Earth's magnetic field, allowing more harmful cosmic radiation to reach the planet's surface.

Measures for controlling Pollution

- **Horizontal Launch of Small satellite:** From under the wing of Boeing 747. It uses about 1/20th of the fuel of typical ground-launched, heavy-lift rockets.
- **Trajectory control for reentry:** New efforts suggest burning satellites at lower altitudes (12-18 miles) to allow metal oxides to settle back to Earth faster.
- **Alternative fuels and design improvements:** Such as Bio propane and develop reusable launch systems to reduce waste.

8 years of Regional Connectivity Scheme (RCS) – UDAN (Ude Desh Ka Aam Nagrik)

PM inaugurated Saharanpur, Rewa and Ambikapur airports in Uttar Pradesh as part of the celebrations under RCS-UDAN.

Key Features of the Scheme

- **Nodal Ministry:** Ministry of Civil Aviation
- **Genesis:** Launched in 2016, a vital component of National Civil Aviation Policy (NCAP) 2016.
 - ⊕ The first RCS-UDAN flight was inaugurated in 2017, connecting Shimla to Delhi.
- **Type:** Central Sector Scheme
- **Purpose:** To improve infrastructure and connectivity in India, especially in remote and underserved regions, making air travel affordable for the masses.
- **Benefits**
 - ⊕ **Subsidised seats for passengers:** Travel fee is capped (initially it was capped to Rs.2500- per passenger)
 - ⊕ **Support to Airlines:** Government compensates in the form of Viability Gap Funding (VGF) to airlines for losses due to low fares.
- **Regional Connectivity Fund (RCF):** It facilitates the self-financing mechanism of the scheme by funding the VGF through a levy on certain domestic flights.
- **Market-driven model:** Airlines assess demand on specific routes and submit proposals during bidding rounds.
- **Recent changes:** Currently 5th phase of the scheme is ongoing. The distance gap of 600 km and Airfare Caps is reduced VGF is enhanced
- **Implementing Agency:** Airports Authority of India (AAI)

Key achievements of the scheme

- **Demand for new aircraft of all sizes:** Scheme has generated an escalating demand for new aircraft.
- **Promoting tourism:** UDAN 3.0 introduced tourism routes. Scheme has successfully connected destinations such as Khajuraho (Madhya Pradesh), Deoghar (Jharkhand,), Amritsar (Punjab), and Agatti Island (Lakshadweep).
- **Boosting air connectivity:** From Mundra (Gujarat) to Tezu in Arunachal Pradesh and Kullu in Himachal Pradesh to Salem in Tamil Nadu, RCS-UDAN has connected 34 States/UTs across the country.
 - ⊕ A total of 86 aerodromes have been operationalized under UDAN.

At Food and Agriculture Organization's World Food Forum (WFF) Global Family Farming Forum (GFFF) was launched

GFFF celebrates **essential role of family farmers** in building **sustainable agrifood systems** and **tackling the impacts of the climate crisis**.

- GFFF also marked the halfway completion of the **United Nations Decade of Family Farming 2019-28 (UNDF)**.
- UNDF was declared by **United Nations General Assembly** and it serves as a **framework for countries to develop public policies and investments to support family farming**.

About Family farming

- **Family Farming:** Is a means of **organizing agricultural, forestry, fisheries, pastoral and aquaculture** production that is managed and operated by a family, and is predominantly reliant on the **family labour** of both women and men.
- **Significance of Family farming**
 - ⊕ **Food security:** With over **550 million farms worldwide**, it is the backbone of food production.
 - ◆ It produces **70 to 80%** of the **world's food** in value terms.
 - ⊕ **Nutritional diversity:** Family farming, in **low- and middle-income countries**, grow **diverse, nutritious food and support crop biodiversity**.
 - ⊕ **Sustainable stewardship:** Family farmers use **traditional methods**, minimal external inputs to maintain **soil health** and build **climate resilience naturally**.

Challenges faced by Family farming: Financial barriers, limited access to assistance, genetics and knowledge., fragmentation of land, market access difficulties, climate threats, lack of generational succession support, etc.

In a related news

- On the **sideline WFF, Food and Agriculture Organization (FAO) & Global Framework on Water Scarcity in Agriculture (WASAG)**, adopted the **Rome Declaration on Water Scarcity in Agriculture**.
- **The WASAG initiative:** Launched at the United Nations Climate Conference in Marrakesh in 2016 to support countries in addressing water scarcity challenges.
- **Objectives:** Mobilise greater political support in terms of policies, legal and institutional frameworks, access to financing, and responsible water governance.

Department of Chemicals & Petrochemicals jointly with FICCI organised 13th Edition of "India Chem 2024" in Mumbai

'India Chem' is **one of the largest composite events of the industry in the Asia-Pacific region** and comprises an International Conference and Exhibition.

About India's chemical and petrochemical industry

- Chemical and petrochemical industry in India forms an **integral part of the growing Indian manufacturing industry**
- **Market segment**
 - ⊕ **Bulk chemical:** They are chemicals **produced in large quantities but with lower value**.
 - ◆ They could be **alkali, organic and inorganic**. They significantly **cater to the downstream industries**
 - ⊕ **Petrochemicals:** Also known as petroleum distillates, these chemicals are **derived from petroleum and natural gas by refining**.
 - ◆ It includes **polymers, and synthetic fibres, performance plastics** and others.
 - ◆ The **production-consumption gap** in these has remained **negative over the years**
 - ⊕ **Specialty Chemicals:** Chemicals with **high value but low production volume** are considered specialty chemical.
 - ◆ For examples, **surfactants, textile chemicals, paints and coating, dyes, agrochemicals** and others.
- **Economic significance:** Contributes **over 9% to manufacturing gross value added** and **7% to total exports**.
- **Growth potential:** Currently it is valued about worth **\$178 billion** and is projected to **surpass \$300 billion by 2028** and is on track to reach **\$1 trillion by 2040**.

Initiatives taken to promote the chemical and petrochemical industry

- **100% FDI in manufacturing through the automatic route:** Over the past decade, the sector has attracted **US \$12.48 billion** in investments.
- **Petroleum, Chemical and Petrochemical Investment Regions (PCPIRs):** They are **hubs of high-class infrastructure** which creates a competitive environment conducive to setting up new firms.
- **Plastic Parks:** Aims to boost the **investment, production, and exports in the plastics sector**.

Also in News



Kala-azar

India is on track to **eliminate Kala-azar** (or Visceral leishmaniasis) as a **public health problem**.

- The country has maintained **fewer than one case per 10,000 people for two consecutive years**, meeting WHO's criteria for elimination certification.

About Kala-azar

- **Pathogen:** **Protozoa** parasite from over 20 Leishmania species.
- **Transmission:** Bites of **infected female phlebotomine sandflies**, which feed on blood to produce eggs.
- **Symptoms:** Irregular bouts of fever, weight loss, enlargement of the spleen and liver, and anaemia.
- **Prevalence:** Most cases occur in **Brazil, east Africa and India** (four endemic states are **Bihar, Jharkhand, Uttar Pradesh and West Bengal**).
 - ⊕ Kala-azar is the second deadliest parasitic disease after malaria in India.



African Baobab

New research by South African ecologists **disproves claims that African Baobab trees are dying due to climate change**, noting they have survived past extreme climate fluctuations.

About African Baobab

- **'Tree of Life':** Vital to **dry African savanna**, helping keep soil humid, recycling nutrients, and reducing erosion.
- **Trunk:** As a succulent, the tree **absorbs and stores water from the rainy season** in its massive trunk.
- **False cavities:** The bark regenerates in the space between these stems, called false cavities.
- **Flowers:** Large and whitish flowers open at night and fall within 24 hours.
- **Fruit:** Contains **tartaric acid and Vitamin C**, serving as a vital nutrient and food source for many species.

e-Shram

'eShram-One Stop Solution'

Ministry of Labour & Employment is set to launch the 'eShram-One Stop Solution'

About 'eShram-One Stop Solution'

- **Aim:** To integrate information on beneficiaries of all social security and welfare schemes for Unorganised Workers (UW) on a single platform.
- **Significance:** Making UW aware of schemes meant for them and ensuring easy access to these programs.

eShram portal is a centralized database (seeded with Aadhaar) of all UWs including Gig and Platform workers. Since its launch in 2021, over 30 crore UWs are enrolled on it.



International Telecommunication Union (ITU)

ITU's World Telecommunication Standardization Assembly (WTSA) 2024 held in New Delhi.

- WTSA is the governing conference for the standardization work of the ITU, organized every four years.
- It is for the first time that the ITU-WTSA is being hosted in India and the Asia-Pacific.

About ITU

- **Genesis:** In 1865, the first International Telegraph Convention signed in Paris established International Telegraph Union (the first incarnation of ITU).
- **Role:**
 - ⊕ UN's specialized agency for digital technology
 - ⊕ Harnessing innovation and connecting everyone to ensure a better future for all
- **Members:** 193 Member States (including India)
- **Headquarters:** Geneva (Switzerland)



Sky Shield

Switzerland joins European Sky Shield Initiative (ESSI)

About ESSI

- **Genesis:** Founded in 2022 after Russia invaded Ukraine
- It is a German led European Iron Dome-style defence system.
- **Aim:** Bolstering Europe's defence against air strikes as it will strengthen NATO's integrated air and missile defence.
- **Members:** 21 member states, including the UK
- At the heart of this initiative is the Arrow 3, an Israeli-American missile defence system that can intercept long-range ballistic missiles.



Lighthouse Tourism

2nd National Lighthouse Festival with first of its kind 'Lighthouse Tourism Conclave 2024' began in Puri, Odisha.

- It is an initiative of Ministry of Ports, Shipping, and Waterways that aims to explore the vast potential of lighthouse tourism.

About Lighthouse Tourism

- **Leveraging India's maritime heritage:** Lighthouses have played a crucial role in guiding ships safely through treacherous waters for centuries.
- **Align with Maritime India Vision 2030:** Strives to repurpose lighthouses into multifunctional facilities, including maritime museums and cultural centers.
- **Current Status:** 75 iconic lighthouses across 10 coastal states and union territory have been developed.



Ramgarh Vishdhari tiger reserve

Tigress' death and a missing cub has hit reintroduction plan in Ramgarh Vishdhari reserve

About Ramgarh Vishdhari Tiger Reserve

- **Status:** It is the fourth tiger reserve in Rajasthan state and the 52nd tiger reserve in the country.
- **Location:** Bundi district, Rajasthan (southeastern part of Rajasthan).
 - ⊕ Represents both Vindhyan and Aaravalli elements.
 - ⊕ It's continuation with the buffer area of Ranthambore tiger reserve and Mukundara Hills tiger reserve.
- **River:** Mez, tributary of the Chambal River, passes through it.
- **Major tree species:** Dhok, Khair, Amaltas, etc.
- **Major Animal species:** Tigers, Panthers, Sloth Bears, etc.



Pyromes

Forest fire CO2 emissions increased 60% globally since 2001: A Study.

- The study separated forest and non-forest fires into 12 ecoregion pyromes to analyze CO2 emissions.

About Pyromes:

- 'Pyromes' are defined as regions where forest fire patterns are affected by similar environmental, human, and climatic factors, thereby revealing the elements pushing recent increases in forest fires.
- The term is a blend of "pyro" (fire) and "biomes," reflecting that fire behaves differently across various ecological zones.

Significance: help scientists and policymakers assess fire risk, predict the impacts of climate change on fire behavior and design fire management strategies.



UV photodetector

Memorandum of understanding (MoU) signed with IIT-Delhi for the development of diamond-based deep ultraviolet (UV) photodetectors for the first time in India.

About Photodetectors

- It's an optoelectronic device that converts light or other electromagnetic radiation into an electrical signal.
- It generates a small current or voltage, which can be measured.

Diamond-based UV Photodetector:

- Specifically detects deep UV light due to diamond's high UV photon sensitivity.
- Durable in harsh conditions (resistant to radiation and heat damage).
- Exhibit high efficiency at room and higher temperatures
- **Applications:** UV imaging, secure communications, biological and military detection, etc.



Trojan asteroid

Discovery of a Trojan asteroid (2019 UO₁₄) for Saturn establishes the presence of celestial bodies alongside all giant planets (Jupiter, Neptune & Uranus).

About Trojan asteroids

- They occupy a stable Lagrange Point (Usually L₄ and L₅) in a planet's orbit around the sun.
 - ⊕ **Lagrange Point** is a position in space where objects stay in a relatively stable position without drifting away.
- **Significance:** As they remain gravitationally stable for long period of time, studying them can provide useful insights into the evolution of the solar system.
- **Mission Lucy (launched in 2021):** The first mission to explore the Jupiter Trojan asteroids.

