

DAILY CURRENT AFFAIRS (DCA)

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Table of Content

Unified Pension Scheme
What Justice Verma panel say on death penalty for rape?
China-Philippines Clash over South China Dispute
Supreme Court of India on SC/ST Act, 1989

BioE3 Policy
Vigyan Dhara
Elimination of Left Wing Extremism

NEWS IN SHORT

Chile's Atacama Salt Flat Sinking Due to Lithium Mining
Mass Wasting of Sedongpu Gully of Tibetan Plateau
Wular Lake
Lakhpati Didi Sammelan
Plea Bargaining
FSSAI Retracts Directive on A1 and A2 Milk Labeling
Scrub Typhus
Leptospirosis
Rs 23,000 Crore Pull Out by FPIs in Financial Sector
Sonoluminescence
Tanager-1 Satellite
India's Import of LNG Increased

UNIFIED PENSION SCHEME

Context

- Recently, the Union Cabinet, chaired by the Prime Minister, approved the **Unified Pension Scheme (UPS)** by replacing the **National Pension System (NPS)**.

About

- It is based on the recommendations of **T. V. Somanathan Committee (2023)**, will be effective from April 1, 2025.
- The UPS proposes to amalgamate **advantages of both Old Pension Scheme (OPS) and New Pension Scheme (NPS)**.
- It represents a **forward-looking approach** to retirement planning in India, aiming to provide a secure and sustainable pension system for all eligible employees.
- It aims to provide long-term financial security to government employees while maintaining flexibility and choice.

Key Features of the Unified Pension Scheme (UPS)

- Guaranteed Pension:** Under the UPS, eligible employees are **assured a pension equal to 50% of their average basic pay** drawn over the last 12 months prior to superannuation.
 - For service periods between 10 and 25 years, the pension will be proportional.
- Minimum Qualifying Service:** Employees with a **minimum qualifying service of 25 years** will receive the full assured pension.
 - In **case of an employee's demise**, their family will receive an assured pension equal to 60% of the employee's pension before their demise.

The Unified Pension Scheme ensures dignity and financial security for government employees, aligning with our commitment to their well-being and a secure future.

PM Narendra Modi

Superannuation

KEY ELEMENTS

- Assured pension of 50% of the last year's average basic pay for minimum 25 yrs service
- Assured family pension at **60%** of last pension in case of death of the employee

FINE PRINT

- FULLY FUNDED: Govt says scheme fiscally prudent as it will be funded
- Govt contribution is up from **14% to 18.5%**; employees' remains at 10%

Assured minimum pension of **₹10,000** per month after minimum 10 years service

Pension indexed to inflation

Lump sum payment at superannuation in addition to gratuity

Those on NPS have **₹6,250 cr** additional requirement in the first year to switch to new scheme

₹800 cr for payment of arrears

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- Assured Minimum Pension:** Upon superannuation after a minimum of 10 years

of service, employees will receive an assured minimum pension of Rs 10,000 per month. It ensures a **safety net for retirees**.

- The UPS promises central government employees who have completed at least 25 years of service a guaranteed pension.
- It is calculated as half of their average basic salary over the 12 months preceding superannuation.
- Inflation Indexation:** The UPS applies inflation indexation to the assured pension, assured family pension, and assured minimum pension.
 - In the form of Dearness Relief based on All India Consumer Price Index for Industrial Workers (AICPI-IW), similar to service employees.
- Lump Sum Payment:** In addition to gratuity, 1/10th of monthly salary+ Dearness Allowance for every completed six months of service.

Old vs New

A look at the difference between the old and the new pension schemes

Old Pension Scheme	National Pension Scheme
<ul style="list-style-type: none"> The scheme guarantees a life-long income, post-retirement 	<ul style="list-style-type: none"> It is a participatory scheme, where employees contribute to their pension corpus from their salaries, with matching contribution from the government
<ul style="list-style-type: none"> Government bears the expenditure incurred on the pension 	<ul style="list-style-type: none"> The funds are invested in earmarked investment schemes through Pension Fund Managers
<ul style="list-style-type: none"> Under the scheme, a monthly payment is assured, where the amount is equivalent to 50% of the last drawn salary 	<ul style="list-style-type: none"> On retirement, 60% of the corpus, which is tax-free, is withdrawn while the remaining 40% is invested in annuities, which is taxed

- Financial Contributions:** Employees choosing the UPS will continue to contribute 10% of their salary.
 - The government's contribution will increase from 14% to 18.5%.
 - It ensures that employees do not face any additional financial burden.

Choice Between UPS and NPS

- Central government employees have the option to choose between the UPS and the National Pension Scheme (NPS).
- Unlike the UPS, the NPS is market-linked.

Similarities to the Old Pension Scheme (OPS)

- The UPS shares similarities with the old pension scheme in terms of benefits. However, it **differs significantly in its funding mechanism**.
- Unlike the OPS, which was a pay-as-you-go program, the UPS is fully funded each year from the budget and absorbed into it. This approach prevents future generations from bearing the burden of pension payments.

Choice for NPS Subscribers

- Employees currently under the National Pension System (NPS) have the option to shift to the UPS.
- NPS, introduced in 2004, is a defined contribution scheme where employees accumulate a retirement corpus based on their contributions.
- UPS provides an alternative for those seeking a more assured pension.

Source: PIB

WHAT JUSTICE VERMA PANEL SAY ON DEATH PENALTY FOR RAPE?

Context

- The recommendations of Justice J.S. Verma Committee was in news, after the clamour of voices seeking the death penalty for the accused of the rape and murder of a doctor in Kolkata.

Background

- The **Justice J.S. Verma Committee recommendations**, which led to the **amendment of criminal laws in 2013**, was set up after the gang rape of a paramedic student in Delhi in 2012.
- The committee pointed out that seeking the **death penalty would be a regressive step** in the field of sentencing and reformation.

Recommendations of the committee

- The Justice Verma Committee provided for **increasing the minimum sentence for rape** from 7 years to 10 years, with provisions for a sentence of 20 years or even life imprisonment.
 - ◆ However, the Committee **did not recommend the death penalty** for rape

- The committee pointed out that “there is considerable evidence that the deterrent effect of the death penalty on serious crimes is actually a myth.
- According to the **Working Group on Human Rights**, the murder rate has declined consistently in India over the last 20 years despite the slowdown in the execution of death sentences since 1980.”

Stance of Union Cabinet

- The Union Cabinet did not take the recommendation on the death penalty when it cleared an ordinance on **sexual assault in 2013**, and signed the criminal amendments into law.
- Key amendments were brought in to provide the **death penalty for rape that led to death of the victim** or reduced her to a persistent vegetative state (**Section 376A** of the Indian Penal Code) and anyone found guilty of rape more than once (**Section 376E**).
- **In 2018**, further changes introduced **death as the maximum punishment** for every participant in a gang rape when the **victim is less than 12 years old (Section 376DB)**, and **life-long imprisonment if the victim is less than 16 (Section 376DA)**.
- Under the new **Bharatiya Nyaya Sanhita**, punishment for rape is laid down in several Sections including **64, 65 and 70(2)**, which notes the punishment for gang rape of a woman under the age of 18 is the death penalty.

Stance of Verma Committee on marital rape

- The Verma Committee recommended that the **exception to marital rape be removed**, pointing out that “a marital or other relationship between the perpetrator or victim is not a valid defence against the crimes of rape or sexual violation.”
- Concurring with the judgment of the European Commission of Human Rights, the Committee endorsed the conclusion that a **rapist remains a rapist regardless of his relationship with the victim**.
- However the Union government did not go by this recommendation and refused to criminalise marital rape.

Concluding remarks

- **The Verma Committee pointed out** that the ethos of empowerment of women does not limit itself to

political equality, but also extends, in equal terms, to **social, educational, and economic equality.**

- For true empowerment of women it is necessary that law, as well as public policy, must be capable of engaging substantially with **women's rights, opportunities, acquisition of skills, the ability to generate self-confidence** and insist on total equality in relationships, both with society and the state.

Source: TH

CHINA-PHILIPPINES CLASH OVER SOUTH CHINA DISPUTE

In Context

- The Philippine accused China of carrying out "repeated aggressive, unprofessional and illegal" actions in the South China Sea.

Background

- The South China Sea, located south of China, is bordered by Brunei, China, Indonesia, Malaysia,

the Philippines, Taiwan, and Vietnam.

- The tensions between China and other nations have escalated in recent years, largely due to China's rise as a global power.
- The South China Sea is of immense strategic importance, and China seeks to control it to assert dominance in the region.

China's Claims and the 'Nine-Dash Line'

- China's territorial claims in the South China Sea are marked by the "nine-dash line," which was first issued in 1947.
- This line encompasses nearly 90% of the South China Sea, including waters and islands.
- China argues that its claims are based on "historical maritime rights," though it has not provided clear coordinates for the line.
- To reinforce its claims, China has engaged in activities such as constructing artificial islands, military installations, and ports, particularly in the Paracel and Spratly Islands.



International Response

- China's claims have been contested by other countries, leading to heightened tensions.
- The United States, seeking to protect its own interests and support regional allies, has increased its military presence and aid to countries opposing China's claims.
- In 2016, the Philippines brought the dispute to an international tribunal, which largely rejected China's nine-dash line but China rejected the verdict.

Importance of the South China Sea

- **Strategic Importance:** It is one of the most strategically and economically important waterways in the world, extending from the Strait of Malacca in the southwest, to the Strait of Taiwan in the northeast.
 - ♦ It is a crucial **maritime gateway** and junction for shipping **between the Pacific and Indian Oceans.**
- **Natural Resources:** The sea contains an estimated 11 billion barrels of oil and 190 trillion cubic feet of natural gas.

- **Fishing Grounds:** It is home to rich fishing grounds, vital for the livelihoods of millions in the region.
- **Trade Route:** The sea is a crucial maritime trade route, with over 21% of global trade, amounting to \$3.37 trillion, passing through it in 2016.

India and South China Sea

- India's stance on the South China Sea has seen a significant shift in recent years, reflecting its broader strategic and economic aspirations on the global stage.
- **India** has been **increasing cooperation, defence as well as economic**, with these countries to take its resistance to maritime Chinese influence to China's own backyard.

Way Ahead

- The disputes in the South China Sea require a political framework, which can only be created through dialogue.
- Leaders of the Association of Southeast Asian Nations (ASEAN) should try to find a political solution through 'quiet diplomacy'.
 - ♦ The potential for resolving this issue through legal methods is very low.

Source: IE

SUPREME COURT OF INDIA ON SC/ST ACT, 1989

Context

- Recently, the Supreme Court held in a judgement that **not all insults and intimidatory comments** aimed at a Scheduled Caste or Scheduled Tribe person would be an offence under the **Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 (SC/ST Act)**.

Background of SC / ST Act

- The **Untouchability (Offences) Act, 1955** was initially passed in Parliament to eradicate inherent discriminatory attitudes against the SCs and STs.
- It was renamed as the **Protection of Civil Rights (PCR) Act in 1976**.
- Later, owing to the **ineffectiveness of the above acts**, the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 came into existence.
- According to the SC/ST Act, the **protection is provided from social disabilities** such as denial

of access to certain places and to use a customary passage, personal atrocities like forceful drinking or eating of inedible food, sexual exploitation, injury, etc, and atrocities affecting properties, malicious prosecution, political disabilities, and economic exploitation.

- The SC/ST Act is in place to deliver justice to the marginalised through proactive efforts, giving them a life of dignity, self-esteem, and a life without fear, violence, or suppression from the dominant castes.

Provisions of Criminal Law

- Atrocities can be **committed only by non-SCs and non-STs** on members of the SC or ST communities.
 - ♦ **Crimes among or between SCs and STs** do not come under the purview of this Act.
- Cancellation of arms licences in the areas identified where an atrocity may take or has taken place and grant arms licences to the SCs and STs.

Amendment

- The Act was **amended in 2015** to make it more effective and to provide greater justice and enhanced redressal to injustice suffered by the atrocity victims.
 - It includes new offences, expanded scope of presumptions, institutional strengthening, and establishment of **Special Courts and Exclusive Special Courts** to exclusively try offences under the SC/ST Act to enable expeditious disposal of cases.

Recent Observation of Supreme Court

- **Intent Matters:** The court emphasised that the intention behind the insult or intimidation is crucial. Mere knowledge that the victim belongs to an SC/ST community is insufficient to invoke the provisions of the Act.
 - ♦ Instead, the insult must be intentionally directed at the victim because of their caste identity.
- **Caste-Based Humiliation:** To trigger the Act, the 'humiliation' inflicted by the aggressor must be intricately associated with the victim's caste identity.
 - ♦ In other words, **it's not every intentional insult** that results in caste-based humiliation. The court clarified that this applies only in cases where the insult reinforces historically entrenched ideas, such as untouchability or notions of caste superiority.

- The court recognised that **insults or intimidation can occur without reference** to caste. If the insult is not specifically tied to the victim's SC/ST status, it **does not fall under the purview of the Act**.
- **Anticipatory Bail:** It **cannot be denied under Section 18 of the Act** unless a prima facie case under the Act is established against the accused. It ensures that individuals are not unfairly deprived of their right to seek anticipatory bail.

Source: IE

BIOE3 POLICY

Context

- The Union Cabinet cleared a proposal to **bolster biotechnology-based manufacturing**, called **BioE3 (Biotechnology for Economy, Environment and Employment) Policy**.

About

- **High performance biomanufacturing** is the ability to produce products from medicine to materials, address farming and food challenges, and promote manufacturing of bio-based products through integration of advanced biotechnological processes.

BioE3 Policy

- To address the national priorities, the BioE3 Policy would broadly focus on the following strategic/thematic sectors:
 - ♦ high value bio-based chemicals, biopolymers & enzymes;
 - ♦ smart proteins & functional foods;
 - ♦ precision biotherapeutics;
 - ♦ climate resilient agriculture;
 - ♦ carbon capture & its utilisation;
 - ♦ marine and space research.
- The policy includes **innovation-driven support** to R&D and entrepreneurship across thematic sectors.
- **Significance:**
 - ♦ The policy will accelerate **technology development and commercialization** by establishing Biomanufacturing & Bio-AI hubs and Biofoundry.
 - ♦ Along with prioritizing regenerative bioeconomy models of green growth, this policy will facilitate **expansion of India's skilled workforce** and **provide a surge in job creation**.

- ♦ The Policy will further **strengthen Government's initiatives** such as **'Net Zero' carbon economy & 'Lifestyle for Environment'** and will steer India on the path of accelerated **'Green Growth'** by promoting **'Circular Bioeconomy'**.
- ♦ It will foster an advanced future that is **more sustainable, innovative, and responsive** to global challenges and lays down the Bio-vision for Viksit Bharat.

Need for the Policy

- The biotechnology sector, mainly due to its multidisciplinary approach, holds the potential to provide an array of solutions for challenges in various sectors such as **health, agriculture, environment, energy, and industrial processes**.
- The present era is an **opportune time to invest in the industrialization of biology** to promote sustainable and circular practices **to address some of the critical societal issues:**
 - ♦ such as climate change mitigation, food security and human health.
- India is home to young minds and has the **potential to build a pool of affordable high-quality skilled workforce**.
- **Global biotechnology industry** is growing at the **rate of 7.4 percent** and there is huge demand within each segment of the industry that Indians can cater to.
 - With an **established IT system and infrastructure**, growth in Bio-IT, an untapped segment, could propel the growth.
 - **Biofuels** could be of strategic importance given the **increasing global energy needs**.
 - **New diseases & lifestyle changes** will boost demand for drugs and devices.
 - ♦ **Patient pool is expected to increase** over 20% in the next 10 years, mainly due to the rise in population.

India's Bio-Economy

- India is among the **Top 12 destinations for biotechnology** worldwide and **3rd largest destination** for biotechnology in Asia Pacific.
- India's BioEconomy has crossed an estimated **\$130 Bn** in the year 2024 with projections to reach **\$300 billion by 2030**.
- India's Biotechnology sector is **categorised into Biopharmaceuticals, Bio agriculture, Bio IT and Bio Services**.

- ♦ **Biopharmaceuticals:** India is one of the biggest suppliers of low cost drugs and vaccines in the world. India also leads in biosimilars, with the most number of biosimilars approved in the domestic market.
- ♦ **Bio Agriculture:** With nearly 55% of Indian terrain under agriculture and allied activities, India is one of largest producers of Bt-Cotton and has the 5th Largest Area of Organic Agriculture Land globally.
 - BioAgri, consisting of Bt Cotton, pesticides, marine biotech, and animal biotech has the potential to nearly double its BioEconomy contribution from \$10.5 Bn to \$20 Bn in 2025.
- ♦ **Bioindustrial:** The application of biotechnology to industrial processes is transforming manufacturing and waste disposal across the country.
- ♦ **Bio IT & Services:** India offers a strong capability in contract manufacturing, research and clinical trials, and is home to the most US FDA approved plants globally outside of the US.

Challenges

- The **educational curriculum** does not prepare the students for the industry's demands.
- **Need for state-of-the-art research facilities** across the country to boost R&D.
- **Lack of venture capital funding** due to information asymmetry regarding the biotech industry.
- **Low percentage of clinical trials** conducted in India when compared to the rest of the world is a concern.
- **Lack of Investment in Research:** Israel invests as much as 4.2 percent of its GDP in research, being the second largest spender after South Korea (4.3 percent).
 - ♦ By comparison, India's spending on research is less than 1 percent of its GDP.
- **Lack of Private Funding:** The Indian government undertakes more than 60% of the total research and development expenditure.
 - ♦ This is in stark contrast with countries like Israel, US, China, Japan, Republic of Korea and Australia where more than 70 % of the spending is undertaken by the private sector on an average.

Government Initiatives

- There are 9 DBT-supported biotech parks and 60 BIRAC-supported bio-incubators in the country.

- In the **Interim Budget 2024-25**, the Department of Biotechnology (DBT) was allotted Rs. 2,251.52 crore (US\$ 271 million).
- **National Biopharma Mission** is supporting 101 projects including more than 150 organizations and 30 MSMEs.
- **The National Biotechnology Development Strategy 2020-25**, provides the government with a platform to strengthen skill development, resource and innovation converging into one strong ecosystem for knowledge sharing.

Way Ahead

- With a total population of 1.4 billion, 47% being under the age of 25, **India has a large pool of young and skilled workforce.**
- India has a **large reservoir of scientific human resources** including scientists and engineers.
- An increase in the number of biotech incubators will **boost research and promote the growth of start-ups**, which is critical for the success of the Indian biotech industry.
- It is important to **build a resilient biomanufacturing ecosystem** in the country to accelerate **cutting-edge innovations** for developing bio-based products.

Source: TH

VIGYAN DHARA

Context

- The Union Cabinet approved continuation of the three umbrella schemes, merged into a **unified central sector scheme** namely '**Vigyan Dhara**' of Department of Science and Technology (DST).

About

- **DST** acts as the **nodal department** for organising, coordinating and promoting S&T activities in the country.
- **Three central sector umbrella schemes** were being implemented by DST towards promoting Science, Technology and Innovation (STI) in the country:
 - ♦ Science and Technology (S&T) Institutional and Human Capacity Building,
 - ♦ Research and Development and
 - ♦ Innovation, Technology Development and Deployment.

- **These three schemes have been merged** into the unified scheme 'Vigyan Dhara'.

Vigyan Dhara

- **The objective** was to focus **scientific energies** on some specific areas that were key to India's sustainable growth and development in the coming decades.
- **Implementation of the scheme** will strengthen the S&T infrastructure of the country by fostering well-equipped R&D labs in the Academic Institutions.
- **The scheme endeavours to promote research in areas** such as basic research with access to the international mega facilities, translational research in sustainable energy, water, etc. and collaborative research through international bilateral and multilateral cooperation.
- All the programs proposed under the 'Vigyan Dhara' scheme would be aligned **with the 5-year goals** of DST towards realising the vision of Viksit Bharat 2047.
- The research and development component of the scheme will be **aligned in line with the Anusandhan National Research Foundation (ANRF)**.
- **Internships** would be arranged for students in the 11th and 12th grades and fellowships for research at the graduate and postgraduate level.

Significance

- The merger of the schemes into a single scheme would **enhance efficiency in fund utilization and establish synchronization** among the sub-schemes/programs.
- It will contribute to **building a critical human resource pool** to strengthen the science and technology landscape and expand the R&D base of the country towards improving the **Full-Time Equivalent (FTE) researcher count**.
- Focused interventions will be taken up to enhance the **participation of women** in the field of S&T with the ultimate goal of bringing **gender parity** in Science, Technology and Innovation (STI).
- The scheme would reinforce the efforts of the government towards **promoting innovations at all levels**, starting from school level to higher education, and for the industries and startups through targeted interventions.

Source: IE

ELIMINATION OF LEFT WING EXTREMISM

In News

- The Union Home Minister claimed that Left Wing extremism will be **completely eliminated in the country before March 2026**.

About Left Wing Extremism (LWE)

- **The Left Wing Extremism (LWE) or Naxal insurgency in India** originated in a **1967 uprising in Naxalbari, West Bengal** by the **Communist Party of India (Marxist)**.
- **Ideology:** They are a group of people who believe in the political theory derived from the teachings of the Chinese political leader Mao Zedong.
 - ♦ The Naxals strongly believe that the solution to social and economic discrimination is to overthrow the existing political system.
- **Leader:** The initial uprising was led by Charu Majumdar, Kanu Sanyal and Jangal Santhal, who were members of the Communist Party of India (Marxist).
 - ♦ The initial uprising was in the form of a peasant revolt .
- **Affected Regions:** Although originated in West Bengal, the movement spread to the less-developed rural regions of southern and eastern India, in Telangana, Andhra Pradesh, Odisha and Chhattisgarh.

Factors Responsible for rise of LWE

- **Tribal dissatisfaction arises** from the Forest (Conservation) Act of 1980, which prohibits tribes who rely on forest resources for their livelihood from even harvesting bark.
- **The implementation of development projects**, mining operations, and other factors has resulted in significant displacement of tribal populations in states affected by LWE.
- **Vulnerable individuals lacking sustainable means** of support become susceptible to joining the Naxalite movement.
 - ♦ Maoists exploit this situation by providing weapons, ammunition, and financial assistance to these individuals.
- **The country's socio-economic system** exhibits gaps wherein the government measures its success based on the number of violent attacks in Naxal-affected regions, rather than focusing on developmental efforts.

- **Insufficient technical intelligence** hampers effective strategies against Naxalism.
- Following the police's control over a region, the **administration often fails to deliver essential services to the local population**, leaving them without the necessary support.

Threats posed by LWE

- They **threaten the locals** before the conduct of elections and prevent them from voting. **Violating the principle of participative democracy.**
- They **resort to violence** through their guerrilla tactics and attempt to set up their own government in the local villages.
- **They destroy the roads, transport system** and government resources, thereby creating hindrance in governance and connectivity.
- **Urban Naxals**, who sometimes operate under the cloak of NGOs or social-work units, raise questions about the use of force by government machinery.
 - ♦ This helps them build a strong bastion of sympathisers and volunteers in towns and cities and across social media.
- **They resort to extortion**, abduction of important personalities like Politicians, bureaucrats, police etc. and put up their demand.
- They hire vulnerable people who have low literacy levels, unemployed or low income, particularly the tribals, who aren't aware of the consequences of joining such forces, building up their cadre.
- They attack the police, government and collect weapons, technological devices to fight against them on the technological front.

Government's Efforts

- As per **Seventh Schedule of the Constitution of India**, subjects of Police and Public Order are with the State Governments.
 - ♦ However, the Government of India (GoI) has been supplementing the efforts of States affected by Left Wing Extremism (LWE).
- **National Policy and Action Plan (2015)**: Multi-pronged strategy to address LWE.
- **Security Measures**: Deployment of Central Armed Police Forces battalions
 - ♦ Training and modernization funds for State police
 - ♦ Provision of equipment and arms
 - ♦ Intelligence sharing
 - ♦ Construction of Fortified Police Stations

Development Initiatives:

- ♦ Expansion of road network/Improved telecommunication connectivity
- ♦ Skilling and financial inclusion programs
- **The Bandyopadhyay Committee** (2006) highlighted the lack of governance, economic, socio-political and cultural discrimination against the tribals as the chief reason for the spread of Naxalism.
 - ♦ The Committee recommended tribal-friendly land acquisition and rehabilitation as a means to counter this issue.
- **Operation Green Hunt**: It was started in 2009-10 and massive deployment of security forces was done in the Naxal-affected areas
- **Aspirational Districts Programme**: Launched in 2018, it aims to rapidly transform the districts that have shown relatively lesser progress in key social areas.
- **SAMADHAN** doctrine is the one-stop solution for the LWE problem

Progress

- 53% reduction in incidents.
- 70% reduction in fatalities.
- Affected districts decreased from 126 (2013) to 38 (2024).
- States like Bihar, Jharkhand, Odisha, Andhra Pradesh, and Madhya Pradesh are largely free of Naxalism.

Suggestions and Way Forward

- Strategy should be developed for LWE, inter-state coordination, capacity building of security forces, investigation and prosecution, and development of LWE-affected areas.
- **Special Investigation Agency (SIA)**: States' SIA should be trained like NIA for effective prosecution Inter-State Cases Should be handled by NIA, with a focus on preventing financing and weapon supply.
- There is a need for **continuous monitoring of government schemes** to benefit LWE-affected areas.
- There is a **need to formulate policies** for educating those affected by LWE.
- **Address LWE supply chains**, financing, and ideological support comprehensively.
- **States must work together** to achieve the goal of eradicating LWE by 2026.

- Innovative measures are required to be employed in preventing IED(Improvised Explosive Device) related incidents which have caused significant casualties in recent years.
 - ♦ **Emphasis should be laid** on the capacity-building and modernization of the local police forces.
- States should rationalise their surrender policy in order to bring innocent individuals caught in the trap of LWE into the mainstream.
- States also need to adopt a focused time-bound approach to completely eliminate LWE groups and ensure all-round development of the affected regions
- **Environmental Impact:** Lithium extraction is depleting water sources, using 2,000 tons of water per ton of lithium, and contaminating soil and water with chemicals.
 - ♦ The decline in water levels has negatively affected local flamingo populations, reducing reproduction rates

Source:TH

Do you know?

- The **salt flat is the Salar de Atacama**, one of the largest sources of lithium, a key ingredient in rechargeable batteries.
- The **salar is in Chile's Atacama Desert**, probably the driest place on the planet.
 - ♦ Water leaves the salar only through evaporation, a process that leaves behind salts.

Source: IE

NEWS IN SHORT

CHILE'S ATACAMA SALT FLAT SINKING DUE TO LITHIUM MINING

In News

- The Atacama salt flat in Chile is sinking at 1 to 2 centimeters per year due to lithium mining.

About

- Referred to as "white gold," lithium is crucial for rechargeable batteries in devices like laptops, mobile phones, and electric vehicles.
- **Lithium Triangle: Argentina is the part of "Lithium Triangle"** along with **Chile and Bolivia** with more than half of world's total lithium resources and having the distinction of **having 2nd largest lithium resources, 3rd largest lithium reserves and 4th largest production in the world.**
- **India's Lithium Supply:** India imports all its lithium needs and is exploring domestic extraction in J&K, Rajasthan, Gujarat, Odisha, and Chhattisgarh.
- Lithium is extracted by pumping salt-rich water to the surface and using evaporation ponds.
- **Study Details:** Researchers from the University of Chile used satellite data from 2020 to 2023 to observe deformations in the salt flat's crust.
- **Affected Area:** The sinking primarily affects an 8 km by 5 km area in the southwest where mining is concentrated.

MASS WASTING OF SEDONGPU GULLY OF TIBETAN PLATEAU

In News

- Environmental scientists have raised concerns in a recent study regarding the high frequency of **mass wasting** events occurring in the **Sedongpu Gully of the Tibetan Plateau since 2017.**

About Mass Wasting

- Mass wasting refers to the movement of soil, rock, and debris down slopes, often triggered by factors such as heavy rainfall, earthquakes, or human activities.

Sedongpu Gully

- The **Sedongpu Gully**, in the catchment of the Sedongpu glacier and its valley, is 11 km long and covers 66.8 sq. km.
- It drains into the **Yarlung Zangbo, or the Tsangpo River**, near where it takes a sharp turn — called the **Great Bend** — while flowing around **Mt. Namcha Barwa** (altitude 7,782 metres) and **Mt. Gyala Peri** (7,294 metres) to create a gorge 505 km long and 6,009 metres deep.
- This is one of the deepest gorges on the earth.
 - ♦ The **Great Bend is close to Tibet's border** with Arunachal Pradesh, where the Tsangpo flows as the Siang River.
 - ♦ In Assam further downstream, the **Siang meets the Dibang and Lohit** to form the Brahmaputra, which flows as the Jamuna in Bangladesh.

Source :TH

WULAR LAKE

In News

- Wular Lake is confronted with extensive siltation.

About Wular Lake

- Located in Jammu and Kashmir's Bandipora district, it is the **largest freshwater lake in India and second largest in Asia (after Lake Baikal)**.
- It was formed by tectonic activity and **fed by the Jhelum River**.
- Zain Lank is a small island in a lake constructed by **King Zainul-Abi-Din**. Wular Lake is designated as a **Ramsar site**.
- Threats:** Pollution, encroachment, and siltation have reduced the lake's size and ecological health.

Source: DTE

LAKHPATI DIDI SAMMELAN

Context

- Recently, the Prime Minister participated in 'Lakhpati Didi Sammelan' at **Jalgaon, Maharashtra**.

About the Lakhpati Didi Sammelan

- It is an inspiring gathering that recognises and celebrates the achievements of women who have become '**Lakhpati Didis**' – those who earn an annual sustainable income of at least ₹1 lakh (approximately \$1,350).
 - This income is **calculated for at least four agricultural seasons** and/or business cycles, with an average monthly income exceeding Rupees Ten Thousand (Rs. 10,000), so that **it is sustainable**.

Lakhpati Didi Yojana

- It aims to uplift women **in rural areas** by providing them with skill development, **training programmes, and financial support**, organised under the **Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM)** scheme of the **Ministry of Rural Development (MoRD)**.
- It facilitates diversified livelihood activities, by ensuring convergence across all Government departments/ Ministries, Private sector and Market

players. The strategy includes focused planning, implementation and monitoring at all levels.

- The government disburses funds to **self-help groups (SHGs)** through a revolving fund.
- Since the inception of the **Lakhpati Didi Yojana, one crore women** have already achieved Lakhpati status, and the government has set a **target of three crore Lakhpati Didis**, reflecting its commitment to women's economic empowerment.

Source: TH

PLEA BARGAINING

Context

- According to the Ministry of Law and Justice, only 0.11% of cases were resolved through **plea bargaining** in 2022.

About Plea Bargaining

- A "**plea bargain**" is a practice whereby the accused forgoes his right to plead not guilty and demand a full trial and **instead uses a right to bargain for a benefit**.
- Plea bargaining was incorporated into the **Code of Criminal Procedure (CrPC) in 2005** with the expectation that it would streamline the judicial process by allowing accused persons to **admit guilt in exchange for leniency in sentencing**.
- It applies only to offences **punishable by up to seven years of imprisonment**, with further restrictions **excluding cases involving** crimes against women, children, or socio-economic offences.

Source: TH

FSSAI RETRACTS DIRECTIVE ON A1 AND A2 MILK LABELING

Context

- The Food Safety and Standards Authority of India (FSSAI), has withdrawn its recent advisory that directed food businesses to remove claims regarding A1 and A2 types of milk and milk products from packaging.

Background

- FSSAI directed food businesses, including e-commerce players, to **remove claims of 'A1'**

and 'A2' types of milk and milk products from packaging, calling such labeling misleading.

- It said that these claims do not conform with the **Food Safety and Standards Act, 2006**.
- A1 and A2 milk differ in their **beta-casein protein** composition, which varies based on cow breed.

A1 vs. A2 Variety

- Casein proteins make up roughly 80% of proteins in cow milk. There are **four casein subtypes**: alpha S1, alpha S2, beta, and kappa-casein.
 - ♦ Beta-caseins, specifically **A1 and A2 beta-casein**, are the most abundant.
- Cow milk contains a **combination of A1/A2-beta casein**, despite being conventional, organic, grass-fed, full-fat, or skim.
- A1 and A2 are similar, with **only one difference at position 67 in the amino acid sequence**: histidine for A1 and proline for A2.

Impact of A1 beta-casein

- Research suggests that the structural difference, albeit small, has a significant impact on digestion.
- The digestion of A1 beta-casein, unlike A2, releases **beta-casomorphin 7 (BCM-7)** which is believed to be an antecedent to various health problems like gut issues, heart disease, type 1 diabetes, autism, and cognitive decline.

Source: HT

SCRUB TYPHUS

In News

- Recently, the Chief Minister of Meghalaya tested positive for Scrub Typhus.

About Scrub Typhus

- It is an acute febrile illness caused by the bacterium *Orientia tsutsugamushi*.
- Transmitted to humans through bites from infected chiggers (larval mites).
- It is common in rural and forested areas of the Asia-Pacific region, including India.
- Symptoms include high fever, headache, rash, and a characteristic eschar at the bite site.
- No vaccine is available for scrub typhus.

Source: TH

LEPTOSPIROSIS

In News

- A severe Leptospirosis outbreak, also known as 'rat fever', has emerged as a major public health concern across Kerala.

About

- Leptospirosis is a bacterial infection caused by *Leptospira*, transmitted to humans through contact with water, soil, or food contaminated with the urine of infected animals, especially rodents. It is a Zoonotic Disease.
- Common in tropical regions, it can range from mild flu-like symptoms to severe illness, including kidney damage and liver failure.

Source: DTE

RS 23,000 CRORE PULL OUT BY FPIs IN FINANCIAL SECTOR

Context

- According to **National Securities Depository Ltd (NSDL)** data, the financial services sector witnessed outflows of **Rs 23,000 crore** by foreign portfolio investors (FPIs) between July 16 and August 15.

About

- The selling by FPIs in the financial sector was mainly on concerns over **slower deposit growth compared to loan growth**, which can affect profitability of banks.
- Automobile and **auto components, capital goods, construction materials, oil, gas and consumable fuels and services** were the other sectors where FPIs pulled out money in the period.

Foreign portfolio investment (FPI)

- FPI consists of securities and other financial assets held by investors in another country.
- It does **not provide the investor with direct ownership of a company's assets** and is relatively liquid depending on the volatility of the market.
- **FPI holdings can include** stocks, American Depositary Receipts (ADRs), Global Depositary Receipts (GDRs), bonds, mutual funds, and Exchange-traded funds (ETFs).

- It is different from **Foreign direct investment (FDI)**, which is an ownership stake in a foreign company or project made by an investor, company, or government from another country.

Source: IE

SONOLUMINESCENCE

In Context

- **Pistol shrimp (family Alpheidae)** possess a specialised claw that can snap shut with incredible speed causing **Sonoluminescence**.

About

- The human eye is highly sensitive to light, able to detect even the faintest glimmers, but light pollution often obstructs this ability. This fascination with light led to the discovery of **sonoluminescence in 1934 by two German engineers** studying sonar.
- They observed that a small bubble in liquid, when struck by powerful sound waves, **emits a brief flash of light**.
- This occurs as the bubble rapidly expands and collapses due to sound waves, **creating extreme temperatures that ionize gases inside**, producing light.
 - ♦ The alternating high and low pressure of sound waves leads to rapid expansion and contraction of bubbles.

Source: TH

TANAGER-1 SATELLITE

Context

- NASA has recently launched the **Tanager-1** satellite to track **methane emissions**.

How will the Tanager-1 satellite track methane emissions?

- The satellite will use **imaging spectrometer technology** to track methane and carbon dioxide emissions.
- It will do so by measuring hundreds of **wavelengths of light** that are reflected by Earth's surface.

- ♦ Different compounds in the planet's atmosphere — including methane and carbon dioxide — absorb different wavelengths of light, leaving spectral **"fingerprints"** that the imaging spectrometer can identify.
- ♦ These infrared fingerprints can enable researchers to pinpoint and quantify strong greenhouse gas emissions.

Why do researchers want to track methane emissions?

- Methane is an invisible but **strong greenhouse gas**, and the **second largest contributor to global warming after carbon dioxide**, responsible for 30 percent of global heating since the Industrial Revolution.
- According to the United Nations Environment Programme, over a period of 20 years, methane is 80 times more potent at warming than carbon dioxide.
- It also contributes to the **formation of ground-level ozone** that causes around one million premature deaths annually.

Source: IE

INDIA'S IMPORT OF LNG INCREASED

Context

- According to energy intelligence firm Vortexa, **India's monthly liquefied natural gas (LNG) imports** in May - July 2024 **hit a four year record**, averaging 2.57 million tonnes (MT).

About

- **LNG** stands for **liquefied natural gas**.
 - ♦ It's **natural gas** that has been **cooled down** to about -260°F (-162°C) to turn it into a liquid form.
 - ♦ LNG is primarily composed of **methane (CH₄)**, but it can contain small amounts of other hydrocarbons.
 - ♦ It is used just like conventional natural gas for **heating, electricity generation, and as a fuel for vehicles**.

Source: IE

