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23rd December, 2023

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S.NO.	TOPIC
1.	WHY TAMIL NADU EXPERIENCED HEAVY RAINFALL IN DECEMBER MONTHS?
2.	INDIA- FRANCE RELATION
3.	PRELIMS POINTERS

WHY TAMIL NADU EXPERIENCED HEAVY RAINFALL IN DECEMBER MONTHS?

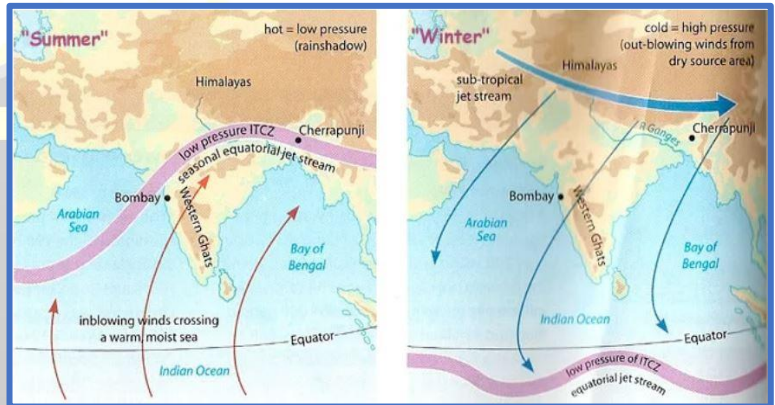
SOURCE: [INDIAN EXPRESS](#)

WHY IN NEWS?

- *Tamil Nadu witnessed unprecedented rainfall causing severe flooding and destruction, particularly in Kalyanapattinum, Thoothukudi district.*

MONSOON DYNAMICS IN INDIA:

- **Southwest Monsoon:**
 - ✓ **Duration:** Early June to mid-September.
 - ✓ **Wind Direction:** Southwest monsoons prevail due to extreme South-West trade winds blowing to the northern hemisphere.
 - ✓ **Trigger:** Central India becomes a low-pressure region during summer, and the Arabian Sea turns into a high-pressure region.
 - ✓ **Wind Movement:** Winds move from the Arabian Sea to land, carrying moisture as South-West monsoon clouds.
- **Impact on Tamil Nadu:**
 - ✓ **Hindered by the Western Ghats,** leading to rainfall in the Western Ghats.
 - ✓ Tamil Nadu, in the rain shadow area, receives minimal rainfall.
- **Reasons for Winter Rainfall in Tamil Nadu:**
 - ✓ **North-East Trade Winds:** Reversal of South West Monsoon winds leads to North-East Trade Winds.
 - ✓ **Weakening Heat Flow in North-west India:** As the Sun moves south of the equator post-equinox, North-west India cools rapidly, forming high-pressure regions.
 - ✓ **Wind Movement:** High-pressure regions over the North Bay of Bengal and northern India push winds southward, creating a U-shaped low-pressure trough over India's southern coast, including Tamil Nadu.
 - ✓ **Formation of North-East Monsoon:** Winds from the North Bay of Bengal's high-pressure region are drawn toward the low-pressure trough, initiating the North-East monsoon.
 - ✓ **Monsoon Retreat:** Different wind direction and positioning of low and high-pressure zones compared to the southwest monsoon season.
 - ✓ **Impact on Tamil Nadu:** Tamil Nadu experiences monsoons during winter due to North-East trade winds.



RECENT SCENARIO IN TAMIL NADU:

Normalcy in December:

- **Northeast Monsoon:**
 - ✓ Tamil Nadu receives 48% of its annual rainfall (443.3mm) during October to December, crucial for rabi cultivation.



- ✓ Heavy rainfall during these months is typical.
- **Rainfall Records:**
 - ✓ From October 1, Tamil Nadu received **450mm** of rainfall, with **14 out of 38 districts** facing deficient rainfall.

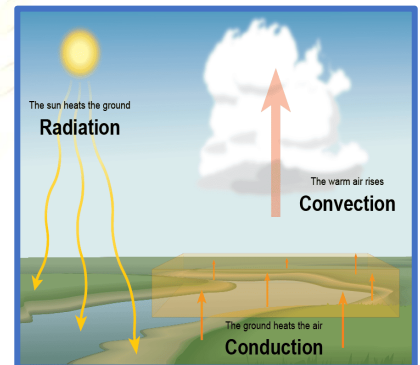
Exceptional Rainfall Events:

- **Southern Tamil Nadu (Dec 17-19):**
 - ✓ **IMD reported 'exceptionally' heavy rainfall**, with districts receiving **100%** or more surplus rain during Dec 17–19.
- **Unprecedented Figures:**
 - ✓ Kalyanapattinam recorded **950mm in 24 hours** on Dec 18, exceeding annual rainfall in Lucknow and Ambala.
 - ✓ **Two-day total rainfall at 1160mm**, surpassing annual figures of Chandigarh and Bengaluru.
- **Wettest Places (Dec 18):**
 - ✓ Notable rainfall in Nalumukku, Oothu, Manjolai, Tiruchendur, Srivaikuntam, Kakkachi, and Kulasekarapattinam.
- **Kanyakumari District:**
 - ✓ **Annual rainfall is 760mm**; recorded 1050.7mm during Oct 1 – Dec 20.



FACTORS BEHIND RECORD RAINFALL IN SOUTHERN TAMIL NADU:

- **Vigorous Northeast Monsoon:**
 - ✓ **Situation:** The northeast monsoon was **robust over Tamil Nadu throughout the week**.
 - ✓ **Effect:** **Steady rainbands**, particularly **over south Tamil Nadu and neighbouring Kerala**.
- **Development of Cyclonic Circulation:**
 - ✓ Southwest Bay of Bengal, **off the western Sri Lankan coast**.
 - ✓ Westwards towards southern Tamil Nadu.
 - ✓ Enhanced **northeast monsoon winds**, contributing to heavy rainfall.
 - ✓ Thoothukudi, Tirunelveli, and Kanyakumari districts in Tamil Nadu and Idukki district in Kerala.
- **Persistence of the System:**
 - ✓ Continuous influence over the **southern Tamil Nadu region**.
 - ✓ **Heavy cloud convection**, leading to **exceptionally heavy rainfall exceeding 200mm in 24 hours**.



IMD'S CURRENT FORECAST:

- **Cyclonic Circulation Location:**
 - ✓ Over **southeast Arabian Sea**, away from the Indian land mass.
- **Forecast:**
 - ✓ **No significant rainfall** expected over Tamil Nadu.
- **IMD Advisory:**
 - ✓ Anticipates **light to moderate intensity rainfall** (up to 64mm in 24 hours) in some southern Tamil Nadu areas until Thursday.
- **Future Expectation:**
 - ✓ **Reduction in overall rainfall** activity after Thursday.



INDIA- FRANCE RELATION

SOURCE: [INDIA EXPRESS](#)

WHY IN NEWS?

- The Ministry of External Affairs confirmed in a statement saying: “At the invitation of Prime Minister Narendra Modi, H.E. Mr. Emmanuel Macron, President of France, will be visiting India as the **Chief Guest for the 75th Republic Day celebrations.**”
- “As **Strategic Partners**, India and France share a **high degree of convergence** on a range of regional and global issues.
- This year, we are celebrating the **25th anniversary of the India- France Strategic Partnership**”, said the MEA in the announcement.

FRENCH GUESTS

- 1976** Prime Minister Jacques Chirac
- 1980** President Valéry Giscard d'Estaing
- 1998** President Jacques Chirac
- 2008** President Nicolas Sarkozy
- 2016** President Francois Hollande

INDIA-FRANCE RELATIONS: HISTORICAL BACKGROUND

- **Strategic Partnership (1998):**
 - ✓ Initiation of a **Strategic Partnership in 1998** marked the beginning of close and friendly relations between India and France.
 - ✓ **Emblematic of shared views on international issues**, fostering a growing bilateral relationship.
- **Principal Pillars of Cooperation:**
 - ✓ **Defence & Security cooperation**, Space Cooperation, and **Civil Nuclear Cooperation** are the key pillars of the Strategic Partnership.
 - ✓ Reflects the depth and breadth of **collaboration between the two nations.**
- **Robust Economic Partnership:**
 - ✓ Beyond traditional areas, India and France have a **robust economic partnership.**
 - ✓ French businesses contribute significantly to **India's goal of becoming 'Atmanirbhar Bharat.'**
- **Diverse Areas of Cooperation:**
 - ✓ Engagement in new areas such as **maritime security** in the Indo-Pacific, counter-terrorism, climate change, **renewable energy**, and sustainable growth.
 - ✓ Reflects the evolving **nature of the bilateral relationship** to address contemporary challenges.
- **Global and Regional Alignment:**
 - ✓ **Convergence on regional and global issues**, including support for **India's claim for permanent membership in the United Nations Security Council.**
 - ✓ France played a vital role in **India's accession to the Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA), and Australia Group (AG).**
 - ✓ Continued French support for **India's bid to join the Nuclear Suppliers Group (NSG).**
- **Economic Linkages:**
 - ✓ Bilateral trade reached **\$13.4 Bn in 2022-23**, a **7.72% increase from the previous year.**
 - ✓ **France ranks as the 11th largest investor in India**, contributing **\$10.5 Bn in FDI from April 2000 to March 2023.**
 - ✓ Economic synergy fosters linkages between French businesses and the Indian economy, **supporting India's 'Aatmanirbhar Bharat' vision.**





- **Cultural and Educational Ties:**
 - ✓ Vibrant bilateral **cultural and educational linkages** enhancing mutual understanding.
 - ✓ Growing people-to-people contacts strengthening the bond between the two nations.
- **Diaspora Presence:**
 - ✓ Significant **Indian diaspora presence** in metropolitan France and its overseas departments/territories.
 - ✓ Illustrates the depth of **people-to-people connections** and cultural exchange.

RECENT TIES BETWEEN INDIA AND FRANCE:

- **Building Sovereign Defence Capabilities:**
 - ✓ France is a key partner in **India's self-reliant defence efforts**.
 - ✓ Cooperation in co-development of advanced defence technologies.
 - ✓ Timely delivery of **36 Rafale aircraft**, highlighting a **five-decade partnership**.
 - ✓ Joint development of a combat aircraft engine and industrial cooperation for the **Indian Multi-Role Helicopter (IMRH) program**.
 - ✓ Success in the **Scorpene submarine construction program (P75 – Kalvari)**, showcasing the **Make in India initiative**.
- **Indo-Pacific Cooperation for Stability:**
 - ✓ Shared vision on **Indo-Pacific for economic and security interests**.
 - ✓ Adoption of a new Indo-Pacific Roadmap for stability and sustainability.
 - ✓ Trilateral cooperation with **the United Arab Emirates and Australia**.
 - ✓ Introduction of **Indo-Pacific Triangular Cooperation (IPTDC) Fund** for green technologies.
- **Space Collaboration at the Core:**
 - ✓ Deepening cooperation in space, including **scientific and commercial partnerships**.
 - ✓ Strengthened partnership between **CNES and ISRO on climate, space exploration, and more**.
 - ✓ Commitment to enhancing sovereign access to space.
 - ✓ **Institutionalized bilateral strategic** space dialogue.
- **Counterterrorism and Internal Security:**
 - ✓ Strengthened cooperation in counterterrorism, **covering operational aspects and online radicalization**.
 - ✓ Emphasis on **internal security collaboration**.
 - ✓ **Formalization** of cooperation between **NSG of India and GIGN of France**.
 - ✓ Focus on technology utilization by internal security agencies.
- **Promoting Effective Multilateralism:**
 - ✓ **Rejection** of attempts to undermine **international order**.
 - ✓ Support for reforming global governance.
 - ✓ **Advocacy for UN Security Council reform**, including the G4 nations.
 - ✓ Commitment to a comprehensive **international convention on countering ICT-related crimes**.
- **Science, Technology, and Academic Cooperation:**
 - ✓ Establishment of an **India-France Joint Strategic Committee** for scientific cooperation.
 - ✓ **Bilateral cooperation on advanced digital technologies**, supercomputing, and AI.

India's expanding sphere of Influence in the World



PM's visit to France to **deepen the strategic ties** (22-23 August 2019)



PM termed **India - France cooperation as IN-FRA** meaning India France Alliance.



France and India further **strengthened their cooperation** in the areas of bilateral trade, space, defence and others.



The two countries decided to **train medical personnel for supporting the Indian astronauts**, who will be a part of the India's manned space mission by 2022. The training will be carried out in France and in India.



Space Climate Observatory launched enhancing Indo-French cooperation on combating climate change.



- ✓ Intensified cooperation in health and medicine, including digital health.
- ✓ Collaborative **efforts in cyber cooperation, digital regulation,** and digital public infrastructure.
- **Innovation Ecosystems and Start-ups:**
 - ✓ Commitment to **deepen cooperation** in promoting research partnerships.
 - ✓ Support for bilateral cooperation in **digital infrastructure, AI, and cybersecurity.**
 - ✓ Emphasis on the **power of start-ups in driving innovation.**
 - ✓ Implementation of **Unified Payment Interface (UPI) in France and Europe.**
 - ✓ Advancement of **multi-stakeholder exchanges** through platforms like **InFrastructures and InInfinity.**
- **Promoting Exchanges and Mobility:**
 - ✓ Implementation of the **Partnership Agreement on Migration and Mobility.**
 - ✓ Mutual visa exemptions for official passport holders.
 - ✓ Encouragement of student mobility, **joint training programs,** and linguistic cooperation.
 - ✓ France's commitment to **welcome 20,000 Indian students by 2025 and 30,000 by 2030.**
- **Cultural Dialogue and Exchanges:**
 - ✓ Establishment of foundational programs for cultural exchanges.
 - ✓ **Cooperation in museums, heritage, cinema, and literary endeavours.**
 - ✓ Promotion of French language teaching in India and vice versa.
 - ✓ Exploration of India's potential participation in the **Organisation internationale de la francophonie.**



CHALLENGES IN FRANCE-INDIA RELATIONS:

- **Defence Sector Dynamics:**
 - ✓ India's pursuit of military capabilities through **orders like Rafale Marine aircrafts.**
 - ✓ Negotiations on **Scorpene-class submarines** and co-development of a **fighter plane engine.**
 - ✓ Challenges in aligning strategic objectives in military equipment and satellite development.
- **Trade Imbalance and Focus Areas:**
 - ✓ Breakdown of trade products, with a heavy reliance on **aeronautics for French exports.**
 - ✓ Key imports by France include **petroleum products, clothing, and machinery.**
 - ✓ **Addressing trade imbalances** and diversifying focus areas for sustainable economic growth.
- **Educational Objectives:**
 - ✓ Macron's **target of 20,000 Indian students by 2025,** with current **enrollment at around 10,000.**
 - ✓ Promoting educational exchange and cultural understanding despite numerical disparities.
- **Investment Landscape:**
 - ✓ Presence of **700 French subsidiaries in India,** contributing to jobs and economic turnover.
 - ✓ Industrial successes, such as **Renault's localization efforts, reflecting market competitiveness.**





- ✓ Encouraging continued investments, including in **green hydrogen, smart factories, and infrastructure projects.**
- **Cultural Differences Impacting Business:**
 - ✓ Varied perceptions of individualism and collectivism, affecting work dynamics.
 - ✓ Importance of **hierarchy in Indian companies** contrasting with French matrix organizations.
 - ✓ Challenges in communication, interpersonal relations, and **flexibility due to cultural disparities.**
- **Time Management and Decision-Making:**
 - ✓ Differences in perceptions of time, punctuality, and meeting expectations.
 - ✓ **Cultural nuances influencing flexibility** and decision-making processes.

WAY FORWARD:

- **Shared Convergence on Global Issues:**
 - ✓ Highlighting a **high degree of convergence between India and France** on regional and global matters.
 - ✓ **Strengthening ties as strategic partners** with a shared commitment.
- **Defence Partnership Milestones:**
 - ✓ Recognizing France as a **key defence partner for India.**
 - ✓ Emphasizing the consistent **high-level engagements and collaborations in defence.**
- **Bilateral Commitment:**
 - ✓ Macron's acceptance of the invitation **reflects a commitment to bilateral relations.**
 - ✓ Building on the **momentum of past interactions**, including PM Modi's participation in the **Bastille Day parade.**
- **25th Anniversary Celebrations:**
 - ✓ Capitalizing on the **symbolic 25th anniversary of the India-France Strategic Partnership.**
 - ✓ Exploring opportunities for **deepening collaboration across sectors.**
- **Global Diplomacy:**
 - ✓ Leveraging the visit **to enhance diplomatic efforts on regional and global platforms.**
 - ✓ Mutual engagement on shared global challenges, including climate change, terrorism, and economic cooperation.
- **Economic and Trade Discussions:**
 - ✓ Exploring avenues for **boosting economic and trade relations.**
 - ✓ Discussing potential collaborations in areas such as **technology, innovation, and green initiatives.**
- **Strategic Dialogues:**
 - ✓ Holding strategic dialogues on geopolitical **issues of mutual interest.**
 - ✓ Addressing evolving geopolitical landscapes and strategizing on shared security concerns.
- **Innovation and Technology Collaboration:**
 - ✓ Emphasizing joint **efforts in innovation and technology.**
 - ✓ Exploring opportunities for collaborative projects in areas like **space exploration, renewable energy, and advanced technologies.**



PRELIMS POINTERS:

TOPIC	DISCRIPTION
<p>The Seven and Nine Judge Constitution Benches</p>	<p>WHY IN NEWS?</p> <ul style="list-style-type: none"> ❖ <i>The Supreme Court's agenda for the upcoming year includes a series of crucial issues to be heard by seven-judge Constitution Benches.</i> ❖ <i>The key matters involve the passage of laws, such as Money Bills and the sub-classification of Scheduled Castes and Tribes.</i> ❖ <i>Additionally, the court will address the interplay between the breach of privilege of legislatures and citizens' fundamental rights, the Speaker's authority in hearing disqualification petitions, criteria for minority-run educational institutions, and the validity of state laws imposing surcharge on sales tax.</i> <p>CONSTITUTION BENCHES IN THE SUPREME COURT:</p> <ul style="list-style-type: none"> ❖ Understanding of Constitution Benches: <ul style="list-style-type: none"> ☛ A Constitution Bench in the Supreme Court comprises five or more judges. ☛ They are not routine; their formation is exceptional, addressing specific circumstances. ☛ Constitution Benches assembled 55 times in the first half of 2023. ☛ None of them were seven and nine-judge Benches. ❖ Circumstances Warranting Constitution Benches: <ul style="list-style-type: none"> ☛ Mandate of Article 145: Article 145 of the Indian Constitution mandates a minimum of five judges for benches dealing with substantial constitutional questions. ☛ Presidential Reference: Initiated when the President seeks the Supreme Court's opinion under Article 143. ☛ Conflicting Judgments: Arises when conflicting judgments occur within three-judge benches. ☛ Doubts on Previous Judgments: When a later three-judge bench questions the correctness of a previous judgment. ❖ Impactful Precedents: <ul style="list-style-type: none"> ☛ Example: The 2017 nine-judge Bench in K.S. Puttaswamy v Union of India recognized the right to privacy as fundamental. ☛ Such precedents guide subsequent cases, e.g., supporting arguments for LGBTQIA+ marriage equality. ❖ Basic Structure Doctrine: <ul style="list-style-type: none"> ☛ Established by the 13-judge Bench in Kesavananda Bharati v State of Kerala (1973), serving as a binding precedent for constitutional matters. <p>STAGNATION OF LARGER BENCH CASES: REASONS AND SPECULATIONS</p> <ul style="list-style-type: none"> ❖ Silence on Seven and Nine-Judge Benches: <ul style="list-style-type: none"> ☛ Speculation on the stagnation of larger benches.





PM-DevINE Scheme

- Possible challenges for the Supreme Court due to the **current caseload of 69,776 cases.**
- ❖ **Judicial Burden Concerns:**
 - Larger benches occupy a significant portion of the court's sanctioned strength.
 - **For a seven-judge bench, 21% of the court's judges are occupied; for a nine-judge bench, it rises to 26%.**

WHY IN NEWS?

- ❖ **Ministry of Development of North Eastern Region (DoNER) convenes a meeting with Chief Ministers of Northeastern States.**
- ❖ **Discussion centered on projects under the Prime Minister's Development Initiative for North East Region (PM-DevINE).**
- ❖ **Review by the Prime Minister's Office (PMO) reveals slow progress despite adequate funds allocated to PM-DevINE.**
- ❖ **Only a little over 10% of funds sanctioned.**

ABOUT PM-DEVINE SCHEME

- ❖ **Introduction:**
 - The Prime Minister's Development Initiative for North-East Region (PM-DevINE) was **introduced in the Union Budget 2022-23.**
 - It is a **Central Sector Scheme**, exclusively **funded by the Central Government** and implemented by the **Ministry of Development of North Eastern Region (DoNER)** through the **North Eastern Council or Central Ministries/agencies.**
- ❖ **Objectives of the PM-DevINE Scheme:**
 - PM-DevINE **aims to facilitate the rapid and comprehensive development** of the North-East Region.
 - The scheme focuses on **funding infrastructure and social development** projects tailored to the **perceived needs of the States.**
 - It emphasizes **convergence with the PM GatiShakti initiative**, supports social development based on **regional requirements, enables livelihood activities for youth and women**, and addresses development gaps in various sectors.
 - Notably, **PM-DevINE does not act as a substitute for existing Central and State Schemes.**
- ❖ **Empowered Committee:**
 - An Empowered Committee, chaired by the **Secretary of the Ministry of DoNER**, has been established.
 - This committee, serviced by the **Ministry of DoNER**, will **screen, appraise, and recommend project proposals for implementation.**





PALNA SCHEME

- Additionally, it will **monitor the progress of sanctioned projects** to ensure the **effective utilization of allocated funds** under the PM-DevINE Scheme.

PM-DEVINE SCHEME BUDGET ALLOCATION:

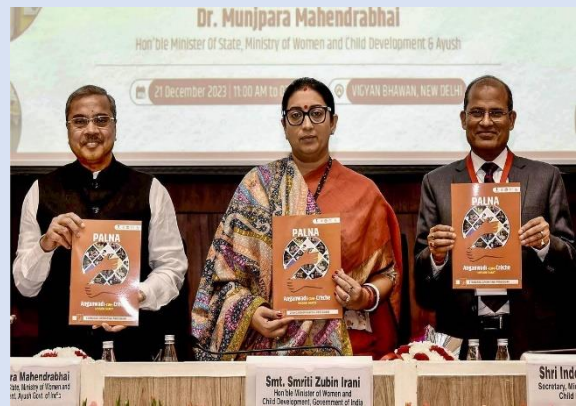
- ❖ **Total approved outlay for 2022-23 to 2025-26 is ₹6,600 crore.**
- ❖ **Nine projects worth ₹855.85 crore** approved as of the provided information.
- ❖ The scheme, announced in the 2022-23 Union Budget with **an initial allocation of ₹1,500 crore, focuses on holistic development** by funding infrastructure and social projects based on regional needs

WHY IN NEWS?

- ❖ *The **Women and Child Development Ministry** has announced its **intention to establish 17,000 creches** in anganwadis nationwide under the '**Palna**' scheme.*
- ❖ *The Ministry has **approved 5,222 creches** thus far and **plans to establish a total of 17,000 creches** in anganwadis.*

ABOUT THE 'PALNA SCHEME'

- ❖ **Scheme:**
 - The initiative, known as the '**Palna**' scheme, focuses on **providing safe and secure daycare facilities (creches) within anganwadis.**
 - The scheme aims to address the **need for quality daycare facilities for children of working women**, enabling women from **various socio-economic** backgrounds to engage in **gainful employment in both organized and unorganized sectors.**
- ❖ **Objectives Of the Scheme:**
 - Quality crèche care facility by **providing a safe and secure environment** for children.
 - To **support nutritional, health and cognitive development** of children
 - Enable mothers to take up **gainful employment.**
- ❖ **Key Services:**
 - Sleeping facility.
 - Early stimulation for **children below 3 years of age.**
 - Pre-school education for **children between the ages of 3 to 6 year.**
 - Supplementary nutrition (to be locally sourced).
 - Growth Monitoring, **health check ups** and immunization in **convergence with POSHAN 2.0.**



KEY HIGHLIGHTS

- ❖ **Additional Creche Workers:**
 - **Two additional creche workers** and helpers will be deputed **alongside existing anganwadi workers** and helpers to enhance the quality of childcare services.
- ❖ **Standard Operating Procedure (SOP):**



**National
Mathematics
Day:
Celebrating
Srinivasa
Ramanujan's
Legacy**

- ☛ A new **Standard Operating Procedure (SOP)** has been released for **anganwadi-cum-creche centres** under the 'Palna' scheme.
- ☛ The SOP outlines a comprehensive framework, including **administrative hierarchy, roles, responsibilities of workers**, and a monitoring checklist for effective implementation.
- ❖ **Women Workforce Participation:**
 - ☛ According to government data, **women's participation in the workforce increased to 37% in 2022.**
 - ☛ The scheme aligns with the **goal of supporting women who work outside their homes**, such as **agricultural laborers or construction workers**, by providing a secure environment for their children.
- ❖ **Operational Anganwadi Centers:**
 - ☛ **As of March 31, 2021**, there are **13.87 lakh operational anganwadi and mini-anganwadi centres** across the country.

WHY IN NEWS?

- ❖ **National Mathematics Day:**
- ❖ **December 22 declared National Mathematics Day by then Prime Minister Manmohan Singh in 2012 to honor Ramanujan's legacy.**

ABOUT SRINIVASA RAMANUJAN

- ❖ **Birth Anniversary Celebration:**
 - ☛ **December 22** is celebrated as **National Mathematics Day**, marking the birth anniversary of the **legendary mathematician Srinivasa Ramanujan (1887-1920).**
- ❖ **Humble Beginnings:**
 - ☛ Born in **Erode, Tamil Nadu**, Ramanujan displayed **exceptional mathematical talent from a young age despite facing health challenges**, surviving **smallpox at 2.**
- ❖ **Academic Struggles, Mathematical Brilliance:**
 - ☛ Despite excelling in mathematics, Ramanujan faced **academic challenges and struggled in other subjects.**
 - ☛ Failed scholarship and **limited job prospects** led him into poverty, with mathematics being his sole pursuit.
- ❖ **Early Mathematical Achievements:**
 - ☛ At 14, he **demonstrated advanced mathematical aptitude**, completing exams in half the time.
 - ☛ **By 1910**, he **gained recognition in Madras' mathematical circles.**
- ❖ **Collaborative Breakthrough:**
 - ☛ In 1913, **GH Hardy of Cambridge recognized Ramanujan's theorems and invited him to London.**
 - ☛ Ramanujan's intuition and innovative thinking impressed Hardy.
- ❖ **Cambridge Years:**
 - ☛ Enrolled at Trinity College, Cambridge, in 1914, **Ramanujan collaborated with Hardy and Littlewood.**





- Elected to the **London Mathematical Society in 1917** and became a Fellow of the **Royal Society in 1918**.
- ❖ **Return to India and Legacy:**
 - Plagued by health issues, Ramanujan **returned to India in 1919** and **passed away in 1920**.
 - Hardy considered Ramanujan's genius comparable to Euler and Jacobi.
- ❖ **Mathematical Contributions:**
 - Renowned for contributions to **number theory, partition function, continued fractions, Riemann series, elliptic integrals, and more**.
 - Left behind notebooks with unpublished results, continuing to influence mathematicians.

CREDIT RATING AGENCIES

WHY IN NEWS?

- ❖ *The Finance Ministry released a document criticizing the "opaque methodologies" used by major global credit rating agencies, including Moody's, Standard & Poor's, and Fitch.*
- ❖ *Chief Economic Advisor V Anantha Nageswaran stated it aims to present alternate perspectives on economic policy with implications for India's growth.*

CREDIT RATING AGENCIES

❖ Definition:

- An agency that **evaluates and assigns creditworthiness ratings** to organizations, individuals, or entities.

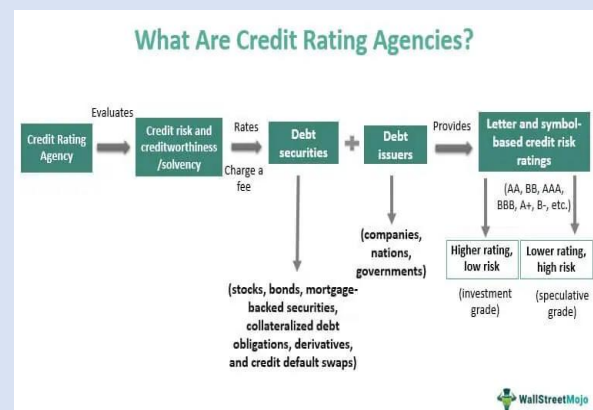
❖ Regulation in India:

- **Regulated by SEBI (Credit Rating Agencies) Regulations, 1999,**

under the Securities and Exchange Board of India Act, 1992.

❖ Global Concentration:

- Dominated by three major agencies - **Moody's, Standard & Poor's, and Fitch**.



SOVEREIGN CREDIT RATING

❖ Definition:

- An independent assessment of a country or **sovereign entity's creditworthiness**.

❖ Purpose:

- Allows external **credit rating agencies to assess a country's financial health**, demonstrating **transparency to investors**.

❖ Factors Considered:

- **Per capita income, GDP growth, inflation rate, external debt,** economic development, history of defaults.

❖ Impact:

- **Higher ratings facilitate easier access to funds from international markets and attract foreign direct investment.**



❖ **Grading Pattern:**

- ☛ **Similarity Among Agencies:** Standard & Poor’s, Moody’s, and Fitch follow comparable grading patterns.
- ☛ **Highest Grade:** AAA, denoting the **highest capacity** to meet financial commitments.
- ☛ **Lowest Grade:** D, indicating a **high probability of payment default** or breach of promises.
- ☛ **Grading Slabs:** Use letters **A, B, and C, with additional single or double letters** denoting higher grades.
- ☛ **Moody's Separation:** Differentiates **short-term and long-term ratings**, with **Aaa** as the highest for long-term and **P-1** for short-term.
- ☛ **Fitch Range:** AAA to D, following a **succession pattern similar to Moody's and S&P.**

No	S&P	Moody's	Fitch	Meaning and Color
1	AAA	Aaa	AAA	Prime
2	AA+	Aa1	AA+	High Grade
3	AA	Aa2	AA	
4	AA-	Aa3	AA	
5	A+	A1	A+	Upper Medium Grade
6	A	A2	A	
7	A-	A3	A-	Lower Medium Grade
8	BBB+	Baa1	BBB+	
9	BBB	Baa2	BBB	
10	BBB-	Baa3	BBB-	Non Investment Grade Speculative
11	BB+	Ba1	BB+	
12	BB	Ba2	BB	Highly Speculative
13	BB-	Ba3	BB-	
14	B+	B1	B+	Substantial Risks
15	B	B2	B	
16	B-	B3	B-	Extremely Speculative
17	CCC+	Caa1	CCC+	
18	CCC	Caa2	CCC	

GOVERNMENT'S CRITICISM

The Finance Ministry highlighted three main issues **with rating agency methodologies:**

- ❖ **Opacity and Bias:**
 - ☛ Agencies' methodologies are **opaque** and may **disadvantage developing economies**, with biases **against public-sector banks.**
- ❖ **Lack of Transparency in Expert Selection:**
 - ☛ The selection of experts for rating assessments **lacks transparency.**
- ❖ **Unclear Parameter Weights:**
 - ☛ Agencies don't clearly convey the **assigned weights for each parameter considered**, leading to ambiguity.

India-made LCA, LCH can boost clout in Global South: IAF Chief

WHY IN NEWS?

- ❖ **Air Chief Marshal V R Chaudhari emphasized the competitiveness and reliability of indigenous aerospace platforms like Light Combat Aircraft (LCA), Light Combat Helicopter (LCH), Akash Missile systems, and radars.**

KEY HIGHLIGHTS

IAF's Role and Contributions:

- ❖ **Catalyst for Progress:**
 - ☛ The Indian Air Force (IAF) seen as a **catalyst for progress, fostering strategic partnerships**, and **contributing to the collective advancement of the Global South.**
- ❖ **Economic and Technological Boost:**
 - ☛ These platforms **enhance India's economic and technological influence in the Global South.**
- ❖ **Export Potential:**





- The platforms have **export potential**, offering mutually beneficial opportunities for joint ventures with other countries.
- ❖ **Increased Footprint:**
 - IAF's **increased footprint in regular training engagements** with partner nations facilitates **sharing of best practices in operations and maintenance**.
- ❖ **Training Initiatives:**
 - **Indian Military Advisory Teams** and courses through the Indian Technical and **Economic Cooperation programme** contribute to increased cooperation.
- ❖ **Foreign Trainees:**
 - **Over the past nine years**, IAF has trained **more than 5,000 foreign trainees** from **Global South countries**.

LIGHT COMBAT AIRCRAFT (TEJAS) PROGRAMME

- ❖ **Initiation:**
 - Started in the **1980s** to replace **India's aging MiG-21 fighters** and later integrated into the fleet modernization program.
- ❖ **Official Name:** Designated "**Tejas**" in **2003**.
- ❖ **Significance:** India's **first self-made fighter jet**.
- ❖ **Operational Clearance:** Received final operational clearance in **February 2019**.
- ❖ **Development:**
 - Developed by **Hindustan Aeronautics Limited (HAL)**, the **second supersonic fighter jet** after **HAL HF-24 Marut**.

THE NEW TEJAS
The long-awaited indigenous fighter Tejas Mk II, which will be manufactured by HAL, will go into production by 2025-2026

17.5 ton
Tejas Mark II will be the same weight as the Mirage, Jaguar and Grippen

ADDITIONS THE NEW GEN

- Heavier stand-off weapon capacity
- State-of-the-art AESA radar
- Indigenously developed air-to-air missile Astra (with a range of 70km)

WHEN: Set to go into production after the Tejas LCA order of 123 aircraft to replace the IAF's ageing MiG-21s is completed

ALSO IN THE WORKS
Advanced medium combat aircraft (AMCA) given a go-ahead by IAF late last year

25-ton fighter will be powered by two engines capable of super-cruise speeds

Will have advanced tech to ensure minimum radar signatures

LIGHT COMBAT HELICOPTER (LCH) PROGRAMME:

- ❖ **Origin:**
 - Conceived to meet **the Indian Air Force's (IAF) need** for a dedicated **light helicopter for combat operations**.
- ❖ **Inspiration:**
 - The requirement arose **during the 1999 Kargil war** for a **lightweight assault helicopter for precision strikes**.
- ❖ **Government Sanction:**
 - LCH project sanctioned in **2006** with HAL assigned the development task.

WHAT IS PRACHANDA?

WHAT: Prachanda is a Light Combat Helicopter (LCH), designed and developed by Hindustan Aeronautics Limited (HAL)

WHEN: A fleet of four helicopters was inducted into IAF's newly raised No. 143 Helicopter Unit on 3 October, 2022

Eventually **65** Prachanda helicopters will be inducted into the IAF and 97 into the army

Prachanda is India's first indigenous Multi-Role Combat Helicopter