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Indian Navy Commissions INS Malvan to Boost Coastal Anti-Submarine Capability



Why is it in News?

- The Indian Navy has commissioned INS Malvan, the second Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), at Karwar Naval Base, Karnataka. The warship will strengthen India's ability to detect and neutralise enemy submarines operating in shallow coastal waters.

Background & Significance

- India's coastline of over 7,500 km and growing maritime interests require a strong coastal defence network.
- The increasing presence of submarines in the Indian Ocean Region (IOR) has highlighted the need for specialised anti-submarine platforms.
- The Mahe-class ASW-SWC project was launched to replace the ageing Abhay-class corvettes with modern, indigenously built shallow-water anti-submarine vessels.
- The induction of INS Malvan strengthens India's coastal surveillance, port security, and underwater warfare capabilities while promoting indigenous defence manufacturing under the Aatmanirbhar Bharat initiative.

Key Highlights

- Ship: INS Malvan
- Class: Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)

Commissioned at: Karwar Naval Base, Karnataka
Built by: Cochin Shipyard Limited (CSL), Kochi
Indigenous Content: Over 80%
Primary Role: Detect, track, and destroy enemy submarines in shallow coastal waters.
Other Roles: Coastal surveillance, search and rescue (SAR), low-intensity maritime operations, and protection of strategic ports and naval bases.

About Mahe-class ASW Shallow Water Craft

- Specially designed for anti-submarine warfare in shallow waters.
- Equipped with advanced sonars, lightweight torpedoes, anti-submarine rockets, and modern surveillance systems.
- Can also undertake mine-laying operations and coordinated coastal security missions.
- A total of eight ships are being built for the Indian Navy.

Way Forward

- Commission the remaining Mahe-class vessels to strengthen India's coastal defence network.
- Integrate these ships with maritime patrol aircraft, helicopters, underwater sensors, and coastal radar chains for enhanced maritime domain awareness.
- Continue promoting indigenous defence production to reduce dependence on imports and improve self-reliance in naval capabilities.

Exam Focus Points

INS Malvan is the second Mahe-class ASW Shallow Water Craft (ASW-SWC).
Built by: Cochin Shipyard Limited, Kochi.
Commissioned at: Karwar, Karnataka.

- Primary Role: Anti-submarine warfare in shallow coastal waters.
- Replaces: Abhay-class corvettes.
- Indigenous Content: More than 80%.
- Related Initiative: Aatmanirbhar Bharat.

- Strategic Importance: Enhances coastal security and India's anti-submarine capability in the Indian Ocean Region (IOR).

US House Passes Record \$1.15 Trillion Defence Bill for FY 2026



Why is it in News?

- The US House of Representatives has passed the National Defense Authorization Act (NDAA) 2026, authorising a record \$1.15 trillion for defence spending. The bill aims to strengthen the US military, modernise defence capabilities, and address emerging global security challenges.

- Authorised Defence Spending: \$1.15 trillion (record-high).
- Purpose: Strengthen national security and modernise US armed forces.

Major Focus Areas:

- Modernisation of military equipment and weapons.
- Investment in advanced technologies such as Artificial Intelligence (AI), cyber security, and space capabilities.
- Strengthening deterrence in the Indo-Pacific region.
- Improving military readiness and welfare of service personnel.

Why is it Important?

- Marks the largest defence authorisation in US history.
- Reflects increasing emphasis on competition with China and Russia.
- Enhances investment in next-generation military technologies.
- Reinforces the US commitment to maintaining global military presence and strategic alliances.

Background & Significance

- The National Defense Authorization Act (NDAA) is an annual law that authorises funding and sets policies for the US Department of Defense.
- It does not directly allocate money but provides the legal framework for defence programmes, military operations, procurement, and personnel policies.
- The FY 2026 NDAA reflects the US focus on maintaining military superiority amid rising geopolitical tensions, particularly in the Indo-Pacific, Europe, and the Middle East.

Key Highlights

- Bill: National Defense Authorization Act (NDAA), FY 2026.
- Passed by: US House of Representatives.

Exam Focus Points

- NDAA: National Defense Authorization Act.
- Country: United States.
- Passed by: US House of Representatives.
- Authorised Amount: \$1.15 trillion.
- Nature: Authorises defence spending and policies; does not directly appropriate funds.
- Key Focus: AI, cyber security, space, military modernisation, Indo-Pacific strategy.

- Strategic Context: Countering China and Russia; enhancing global military readiness.

Top 5 nations in SIPRI Military Expenditure Report 2026 (Data for 2025)

- | Rank | Country | Military Spending (US\$ Billion) | Share of Global % of GDP | Spending |
|------|---------|----------------------------------|--------------------------|----------|
|------|---------|----------------------------------|--------------------------|----------|

1.	United States	954.0	33.0%	3.1%
2.	China	336.0	12.0%	1.7%
3.	Russia	190.0	6.6%	7.5%
4.	Germany	114.0	3.9%	2.3%
5.	India	92.1	3.2%	2.3%

India and Myanmar Deepen Rare Earth Partnership to Reduce Dependence on China



Why is it in News?

- India and Myanmar are strengthening cooperation in rare earth elements (REEs) and critical minerals to secure a stable supply of strategic resources. The move comes as China continues to dominate the global rare earth supply chain, raising concerns over supply disruptions.

The partnership aims to:

- Secure a reliable supply of rare earths for India.
- Reduce dependence on China.
- Promote sustainable mining and investment.
- Strengthen bilateral economic and strategic ties.
- Myanmar can benefit through investment, technology, and responsible mining practices.

Background & Significance

- Rare earth elements (REEs) are essential for manufacturing electric vehicles (EVs), wind turbines, semiconductors, smartphones, defence equipment, and missiles.

- China controls most of the world's rare earth processing capacity, making many countries dependent on it.
- Myanmar's Kachin State is one of the world's largest sources of heavy rare earth elements, many of which are currently exported to China for processing.
- India is diversifying its supply sources to strengthen critical mineral security and support the Make in India and Aatmanirbhar Bharat initiatives.

Why is it Important?

- Strengthens India's critical mineral supply chain.
- Reduces vulnerability to Chinese export restrictions.
- Supports India's EV, renewable energy, electronics, and defence industries.
- Enhances India's strategic presence in Southeast Asia and the Indo-Pacific.

About Rare Earth Elements (REEs)

- A group of 17 metallic elements used in high-tech and clean energy industries.

Classified into:

Light Rare Earth Elements (LREEs)
Heavy Rare Earth Elements (HREEs) – more scarce and strategically important.

- Major applications: Electric vehicles, Wind turbines, Smartphones, Defence equipment, Aerospace and satellites & Permanent magnets

India–Myanmar Relations at a Glance

Aspect Details

- Diplomatic Relations Established after Myanmar's independence in 1948.
- Neighbourhood Myanmar is India's only land bridge to Southeast Asia and shares a 1,643 km border with Arunachal Pradesh, Nagaland, Manipur, and Mizoram.
- Act East Policy Myanmar is the gateway for India's Act East Policy and connectivity with ASEAN.
- Neighbourhood First Policy Myanmar is a key partner under India's Neighbourhood First Policy.
- Strategic Importance Crucial for border security, counter-insurgency operations, maritime security, and Indo-Pacific strategy.
- Trade Bilateral trade exceeds US\$2 billion annually (varies by year). India imports pulses, beans, timber, and minerals; exports pharmaceuticals, steel, machinery, and petroleum products.
- Connectivity Projects Kaladan Multi-Modal Transit Transport Project, India–Myanmar–Thailand Trilateral Highway, and border infrastructure development.
- Defence & Security Joint military exercises, intelligence sharing, coordinated border patrols, and operations against insurgent groups.
- Energy & Minerals Cooperation in oil & gas, rare earth elements, and critical minerals.
- Development Assistance India supports capacity building, healthcare, education, IT, agriculture, and infrastructure projects.

- Regional Groupings Both are members of BIMSTEC and Mekong–Ganga Cooperation (MGC). Myanmar is also an ASEAN member.
- People-to-People Ties Strong cultural and Buddhist links; India provides scholarships, training programmes, and humanitarian assistance.
- Border Trade Points Moreh (Manipur) – Tamu (Myanmar) and Zokhawthar (Mizoram) – Rih (Myanmar).

Way Forward

- Diversify imports through partnerships with mineral-rich countries.
- Develop domestic mining and refining capacity under the National Critical Minerals Mission.
- Invest in rare earth processing and recycling technologies.
- Strengthen international cooperation for resilient critical mineral supply chains.

Exam Focus Points

- Partner Countries: India and Myanmar.
- Resource: Rare Earth Elements (REEs) and Critical Minerals.
- Myanmar's Key Mining Region: Kachin State.
- Key Concern: China's dominance in rare earth processing.
- Major Use: EVs, semiconductors, renewable energy, electronics, and defence.
- Related Initiative: National Critical Minerals Mission.
- Strategic Objective: Secure supply chains and reduce dependence on China.

Right to protest in India: What the Constitution allows and restricts

Why is it in News?

- More than 100 civil society organisations protested at Jantar Mantar, New Delhi, against the new restrictions imposed by the Delhi Police on public meetings and demonstrations. They

argued that these restrictions limit citizens' constitutional right to peacefully protest and express their views.



Background & Significance

- Jantar Mantar has long been one of Delhi's designated venues for peaceful protests and public demonstrations.
- Recently, the Delhi Police introduced new rules regulating protests at Jantar Mantar.
- Civil society organisations claim these rules make it difficult for citizens to organise protests and therefore weaken democratic participation.
- They have demanded that the government withdraw or review these restrictions.

Key Highlights

- Venue: Jantar Mantar, New Delhi.
- Participants: More than 100 civil society organisations.
- Reason for Protest: Opposition to the new Delhi Police rules governing protests at Jantar Mantar.
- Main Demands:
 - Withdraw the new restrictions on public protests.
 - Protect the constitutional right to peaceful assembly.
 - Ensure citizens can freely express dissent in a democracy.
- Protesters stated that peaceful demonstrations are an essential part of a democratic society.

Why is it Important?

- Raises concerns about the balance between public order and citizens' fundamental rights.

- Highlights the importance of the Right to Freedom of Speech and Peaceful Assembly under the Constitution.
- The issue is significant for polity, governance, and constitutional rights, making it relevant for competitive examinations.

Constitutional Provisions

Article	Provision
Article 19(1)(a)	Freedom of Speech and Expression
Article 19(1)(b)	Right to Assemble Peacefully and Without Arms
Article 19(1)(c)	Right to Form Associations or Unions
Articles 19(2)–19(6)	Allow the State to impose reasonable restrictions in the interest of sovereignty, security, public order, decency, morality, etc.

About Civil Society Organisations (CSOs)

- Voluntary, non-governmental organisations that work for public welfare and protect citizens' rights.
- They promote awareness, advocate policy changes, and hold governments accountable.
- Examples include NGOs, human rights groups, professional associations, and community organisations.

Way Forward

- Ensure that citizens' constitutional rights are protected while maintaining public order.
- Review protest regulations to ensure they are reasonable and proportionate.
- Encourage dialogue between the government and civil society to resolve concerns peacefully.

Exam Focus Points

- Place in News: Jantar Mantar, New Delhi.
- Issue: New restrictions on public protests imposed by Delhi Police.

- Key Constitutional Rights: Articles 19(1)(a), 19(1)(b), and 19(1)(c).
- Important Concept: Fundamental Rights are subject to reasonable restrictions under Articles 19(2)–19(6).

- Role of CSOs: Safeguard democratic values and represent citizens' concerns.

US and Saudi Arabia Sign Civil Nuclear Cooperation Agreement



Why is it in News?

- The United States and Saudi Arabia have signed a civil nuclear cooperation agreement to strengthen bilateral ties and support Saudi Arabia's peaceful nuclear energy programme. The agreement aims to help Saudi Arabia diversify its energy sources while ensuring that nuclear technology is used only for peaceful purposes.

Background & Significance

- Saudi Arabia is seeking to develop nuclear energy as part of its Vision 2030 programme to reduce dependence on oil and meet its growing electricity demand.
- The United States has been negotiating a nuclear cooperation agreement with Saudi Arabia for several years.
- The deal comes amid growing competition among major powers, particularly the US and China, for strategic influence in the Middle East.
- Civil nuclear cooperation can help Saudi Arabia generate clean electricity and support industrial development while reducing carbon emissions.

Key Highlights

- Partner Countries: United States and Saudi Arabia.

- Type of Agreement: Civil Nuclear Cooperation Agreement.
- Objective: Develop Saudi Arabia's peaceful nuclear energy programme.

Key Areas of Cooperation:

- Nuclear technology and technical expertise.
- Capacity building and workforce training.
- Nuclear safety and security.
- Development of civilian nuclear infrastructure.
- Both countries reaffirmed that cooperation will be for peaceful civilian purposes and in line with international nuclear safety standards.

Why is it Important?

- Strengthens the US–Saudi strategic partnership.
- Supports Saudi Arabia's Vision 2030 economic diversification plan.
- Promotes clean energy through nuclear power.
- Reinforces US influence in the Middle East amid increasing Chinese engagement in the region.
- Highlights the growing global importance of civil nuclear energy in achieving energy security and reducing carbon emissions.

About Civil Nuclear Cooperation Agreement

- A Civil Nuclear Cooperation Agreement is an agreement between two or more countries to cooperate in the peaceful use of nuclear energy.

It generally includes:

- Exchange of nuclear technology and expertise.
- Development of nuclear power plants.
- Training of scientists and engineers.
- Nuclear safety and security measures.

- Supply of nuclear fuel, equipment, and related technology (subject to international rules).

About Saudi Vision 2030

• Launched: 2016
• Launched by: Crown Prince Mohammed bin Salman (MBS)
• Objective: Diversify Saudi Arabia's economy and reduce dependence on oil.

Major Focus Areas:

• Renewable and nuclear energy.
• Industrial development.
• Tourism and infrastructure.
• Foreign investment.
• Technology and innovation.

Way Forward

- Ensure that nuclear cooperation fully complies with International Atomic Energy Agency (IAEA) safeguards and non-proliferation norms.
- Promote transparency in nuclear activities to build international confidence.

- Expand cooperation in clean energy technologies while maintaining the highest standards of nuclear safety and security.

Saudi Arabia

• Capital: Riyadh
• Currency: Saudi Riyal
• King: Salman bin Abdulaziz Al Saud
• Continent: Asia

Exam Focus Points

• Partner Countries: United States and Saudi Arabia.
• Agreement: Civil Nuclear Cooperation Agreement.
• Purpose: Peaceful use of nuclear energy.
• Related Programme: Saudi Vision 2030.
• International Organisation: International Atomic Energy Agency (IAEA).
• Key Objective: Energy diversification, clean energy, and reduced dependence on oil.

Centre Appoints Anurag Jain as CEO of NITI Aayog



Why is it in News?

- The Central Government has appointed Anurag Jain, a 1989-batch IAS officer of the Madhya Pradesh cadre, as the Chief Executive Officer (CEO) of NITI Aayog for a period of two years.

Background & Significance

- The appointment was approved by the Appointments Committee of the Cabinet (ACC).
- Anurag Jain succeeds in a key leadership role responsible for coordinating policy implementation and development initiatives.
- The appointment comes after his tenure as Chief Secretary of Madhya Pradesh was extended till 31 August 2026.
- Earlier in April 2026, economist Ashok Kumar Lahiri was appointed as the Vice Chairperson of NITI Aayog, replacing Suman K. Bery.

Key Highlights

- Appointed: Anurag Jain

• Service: 1989-batch IAS officer (Madhya Pradesh Cadre)
• Position: Chief Executive Officer (CEO), NITI Aayog
• Tenure: Two years or until further orders, whichever is earlier.

• CEO: Anurag Jain.
• Objective: To promote cooperative and competitive federalism and provide strategic policy advice for India's economic and social development.

Professional Background

- Served as the 35th Chief Secretary of Madhya Pradesh.
- Has over three decades of administrative experience.
- Worked in both the Central Government and the Government of Madhya Pradesh across key policy and governance sectors.

Way Forward

- Strengthen evidence-based policymaking through greater Centre–State coordination.
- Accelerate implementation of national development priorities.
- Promote innovation, sustainable development, and outcome-based governance.
- Enhance collaboration with industry, academia, and international institutions.

Role as CEO, NITI Aayog

- Coordinate with Union Ministries, State Governments, and stakeholders.
- Support implementation of the Government's development agenda.
- Assist in policy formulation, monitoring, and cooperative federalism initiatives.

Additional Key Facts

• Appointing Authority: Appointments Committee of the Cabinet (ACC).
• Cadre: Madhya Pradesh.
• IAS Batch: 1989.
• Previous Position: Chief Secretary, Madhya Pradesh.
• NITI Aayog Headquarters: New Delhi.
• Chairperson of NITI Aayog: Prime Minister of India.

Why is it Important?

- Strengthens the leadership of India's premier public policy think tank.
- Enhances coordination between the Centre and States for development programmes.
- Brings extensive administrative and governance experience to national policymaking.
- Supports effective implementation of flagship government reforms and long-term development strategies.

Exam Focus Points

• Appointee: Anurag Jain.
• Position: CEO, NITI Aayog.
• Cadre: Madhya Pradesh (1989 IAS Batch).
• Tenure: Two years.
• Purpose: To lead NITI Aayog's administrative functions and coordinate national development policies.
• Vice Chairperson of NITI Aayog: Ashok Kumar Lahiri.
• Replaced Institution: Planning Commission.

About NITI Aayog

• Full Form: National Institution for Transforming India.
• Established: 1 January 2015.
• Replaced: Planning Commission.
• Chairperson: Prime Minister of India.
• Vice Chairperson: Ashok Kumar Lahiri.

CSIR-IICT and ISRO's VSSC Sign MoU to Develop Indigenous Eco-Friendly Blowing Agent Technology



Why is it in News?

- The CSIR-Indian Institute of Chemical Technology (CSIR-IICT) and ISRO's Vikram Sarabhai Space Centre (VSSC) have signed a Memorandum of Understanding (MoU) to jointly develop indigenous next-generation environmentally sustainable blowing agent technology for strategic applications.

Background & Significance

- The collaboration aims to promote Atmanirbhar Bharat by reducing India's dependence on imported speciality fluorochemicals.
- The technology will support the development of lightweight polymer foams used in aerospace, defence, and other strategic sectors.
- The project focuses on developing Hydrofluoroolefins (HFOs), which are environmentally friendly alternatives to conventional blowing agents.
- It strengthens collaboration between India's scientific research institutions and the space sector for advanced material technologies.

Objective:

- Develop indigenous next-generation eco-friendly blowing agents for strategic and high-technology applications.

Key Areas of Cooperation

- Development of Hydrofluoroolefin (HFO)-based blowing agents.
- Fluorochemical synthesis and process development.
- Technology scale-up and validation.
- Technical evaluation for aerospace and strategic applications.

Technology Highlights

Hydrofluoroolefins (HFOs) have:

- Zero Ozone Depletion Potential (ODP).
- Ultra-low Global Warming Potential (GWP).
- HFOs are emerging as sustainable replacements for conventional high-GWP blowing agents.

Institutional Expertise

CSIR-IICT will contribute expertise in:

- Fluorochemical synthesis.
- Process scale-up.
- Safe handling of Anhydrous Hydrogen Fluoride (HF).

VSSC will provide:

- Application-specific technical requirements.
- Performance evaluation and validation for strategic use.

Why is it Important?

- Promotes self-reliance in advanced fluorochemical technologies.
- Reduces dependence on imported speciality chemicals.
- Supports environmentally sustainable industrial practices.
- Strengthens India's aerospace, defence, and strategic manufacturing capabilities.

- Encourages the adoption of climate-friendly technologies with low environmental impact.

About Blowing Agents

- A blowing agent is a substance used to create gas bubbles within polymers, producing lightweight foam materials.

It is commonly used in:

- Thermal insulation materials.
- Aerospace and defence components.
- Packaging materials.
- Refrigeration and construction industries.

About CSIR-IICT

- Full Name: CSIR–Indian Institute of Chemical Technology.
- Location: Hyderabad, Telangana.
- Parent Organisation: Council of Scientific and Industrial Research (CSIR).
- Focus: Chemical sciences, process technologies, pharmaceuticals, catalysis, and fluorochemicals.

About Vikram Sarabhai Space Centre (VSSC)

- A lead centre of ISRO for the design and development of launch vehicles and rocket technologies.
- Location: Thiruvananthapuram, Kerala.
- Named after Dr. Vikram Sarabhai, the father of India's space programme.

Way Forward

- Accelerate indigenous development of advanced fluorochemicals.

- Commercialise HFO technology for strategic and industrial applications.
- Strengthen collaboration between research institutions and the space sector.
- Promote sustainable technologies aligned with global environmental standards.

Additional Key Facts

- MoU Partners: CSIR-IICT and ISRO's VSSC.
- Technology Focus: Hydrofluoroolefins (HFOs).
- Key Chemical: Anhydrous Hydrogen Fluoride (HF).
- ODP of HFOs: Zero.
- Global Warming Potential (GWP): Ultra-low.
- Parent Organisation of IICT: CSIR.
- Parent Organisation of VSSC: ISRO.

Exam Focus Points

- Partner Organisations: CSIR-IICT and ISRO's VSSC.
- Agreement: Memorandum of Understanding (MoU).
- Purpose: Develop indigenous eco-friendly blowing agent technology using HFOs.
- Key Objective: Reduce import dependence and strengthen India's advanced fluorochemical capabilities.
- Technology Used: Hydrofluoroolefins (HFOs).
- Environmental Benefit: Zero ODP and ultra-low GWP.

Paninian India Unveils 'Yantur 4.5 kN' – India's First Privately Developed Turbofan Engine Programme

Why is it in News?

- Hyderabad-based startup Paninian India Private Limited has unveiled the 'Yantur 4.5 kN Turbofan Engine Programme'.

Background & Significance

- The programme aims to establish indigenous private-sector capability in compact turbofan propulsion technology.
- It supports the Atmanirbhar Bharat initiative by reducing dependence on foreign propulsion systems.
- The engine is being developed for Svayatt L1, a long-range autonomous cruise missile platform designed for the Ministry of Defence's Make-I programme.
- Compact turbofan engines are among the most strategic technologies for advanced autonomous missiles and unmanned combat aircraft.



Key Highlights

- Programme Name: Yantur 4.5 kN Turbofan Engine Programme.
- Developer: Paninian India Private Limited, Hyderabad.
- Claim: India's first privately developed turbofan engine in the 4.5 kN class.

Objective

- Develop an indigenous compact turbofan engine for strategic autonomous aerospace platforms.
- Strengthen India's sovereign capability in advanced propulsion technologies.

Applications

- To power Svayatt L1, a long-range autonomous cruise missile platform.
- Designed to meet the Ministry of Defence's Make-I programme requirements for the Long-Range Land Attack Cruise Missile (LRLACM).

- Engine core can be further scaled up to 12.5 kN for the Svayatt CCAV (Collaborative Combat Aerial Vehicle) platform.

Current Status

- Conceptual and detailed design phases have been completed.
- Programme is progressing towards:
- Subsystem testing.
- Validation.
- Full engine certification.

Key Innovations

Five patent claims covering:

- Engine family architecture.
- Combustor and diffuser-nozzle design.
- Compressor technology.
- Digital twin-based health monitoring.
- Advanced manufacturing techniques.

Why is it Important?

- Marks a major milestone in India's private aerospace and defence manufacturing sector.
- Reduces dependence on imported aircraft and missile propulsion systems.
- Supports indigenous development of long-range autonomous defence platforms.
- Enhances India's capabilities in advanced aerospace technologies and strategic defence manufacturing.
- Promotes innovation through collaboration between startups, industry, and government.

About Turbofan Engine

- A turbofan engine is a type of jet engine in which a large fan at the front generates additional thrust, making it more efficient than a turbojet.

It is widely used in:

- Military aircraft.

• Cruise missiles.
• Unmanned aerial vehicles (UAVs).
• Commercial aircraft.
• Advantages
• Higher fuel efficiency.
• Greater thrust.
• Lower noise.
• Better performance over long distances.

About Make-I Programme

- A category under the Defence Acquisition Procedure (DAP).
- Supports government-funded development of advanced defence equipment.
- Aims to promote indigenous design, development, and manufacturing under Atmanirbhar Bharat.

Additional Key Facts

• Startup: Paninian India Private Limited.
• Headquarters: Hyderabad, Telangana.
• Engine Name: Yantur 4.5 kN.

• Missile Platform: Svayatt L1.
• Future Platform: Svayatt CCAV.
• MoD Programme: Make-I.
• Target Missile: Long-Range Land Attack Cruise Missile (LRLACM).
• Potential Engine Upgrade: Up to 12.5 kN thrust.

Exam Focus Points

• Company: Paninian India Private Limited.
• Programme: Yantur 4.5 kN Turbofan Engine Programme.
• Purpose: Develop India's first privately built compact turbofan engine for autonomous strategic platforms.
• Key Objective: Achieve self-reliance in aerospace propulsion technology.
• Related Defence Programme: Make-I (Defence Acquisition Procedure).
• Platform Powered: Svayatt L1.
• Future Expansion: Svayatt CCAV with 12.5 kN engine.

Indian Grandmaster Rohith Krishna Wins Menuires International Chess Championship 2026



Why is it in News?

- Indian Grandmaster Rohith Krishna won the Menuires International Chess Championship held in France, defeating compatriot Raja Rithvik on the tie-break after both finished unbeaten with identical points.

Background & Significance

- The championship featured 86 players from several countries, including France, India, China, Germany, Poland, the Netherlands, and Italy.

Key Highlights

• Event: Menuires International Chess Championship 2026.
• Venue: France.
• Champion: Rohith Krishna (India).

Final Standings

Gold Medal: Rohith Krishna (India) – 7/9 points (Tie-break: 43).	Full Name: Fédération Internationale des Échecs (International Chess Federation).
Silver Medal: Raja Rithvik (India) – 7/9 points (Tie-break: 41.5).	Established: 1924.
Bronze Medal: GM Omelja Artem (France) – 6.5 points.	Headquarters: Lausanne, Switzerland.
Raja Rithvik's Performance	Objective: Governs international chess competitions and awards official chess titles and ratings.

Finished unbeaten with:

5 wins.
4 draws.
Defeated French Grandmaster Maxime Lagarde (2622) with the black pieces in the final round.
Competed as the fourth seed.

Training & Coaching

- Pursuing an engineering degree at KL University, Hyderabad.
- Trains at RACE Chess Academy under N. Rama Raju.
- Also receives online coaching from Ukrainian Super GM Alexander Goloshchapov.

Why is it Important?

- Reinforces India's reputation as a global chess powerhouse.
- Highlights the consistent rise of Indian Grandmasters in international competitions.
- Encourages young Indian players to compete successfully on the world stage.
- Demonstrates India's growing depth in competitive chess talent.
- About Menuires International Chess Championship
- An international open chess tournament held annually in Les Menuires, France.
- Attracts Grandmasters and strong international players from multiple countries.
- Conducted under FIDE (International Chess Federation) rules.

About FIDE

Way Forward

- Continue supporting young Indian chess players through international exposure.
- Strengthen grassroots chess infrastructure and coaching programmes.
- Encourage greater participation in global tournaments to improve international rankings.

Additional Key Facts

Champion: Rohith Krishna (India).
Runner-up: Raja Rithvik (India).
Third Place: GM Omelja Artem (France).
Venue: France.
Winning Score: 7 points from 9 rounds.
Tie-break Scores: Rohith Krishna – 43; Raja Rithvik – 41.5.
Final-round Highlight: Raja Rithvik defeated GM Maxime Lagarde (France).

Exam Focus Points

Tournament: Menuires International Chess Championship 2026.
Champion: Rohith Krishna.
Runner-up: Raja Rithvik.
Venue: France.
Purpose: International chess competition under FIDE regulations.
Key Achievement: Rohith Krishna won the title on tie-break after both Indian players remained unbeaten.

Killai Becomes Tamil Nadu's First Climate-Resilient Village



Why is it in News?

- Killai village in Cuddalore district, Tamil Nadu, has become the State's first Climate-Resilient Village.

Background & Significance

- Killai is located near the ecologically significant Pichavaram Mangrove Forest, one of the world's largest mangrove ecosystems.
- The village has adopted community-based climate adaptation measures to tackle the impacts of climate change.
- It serves as a model for protecting vulnerable coastal communities from cyclones, floods, sea-level rise, and coastal erosion.
- The initiative demonstrates how ecosystem conservation and community participation can enhance climate resilience while improving livelihoods.

Objective

- Build resilience against climate-related disasters through sustainable development and community participation.

Major Climate Adaptation Measures:

- Conservation and restoration of mangrove forests.
- Community-led climate planning.
- Strengthening disaster preparedness and early warning systems.
- Development of climate-resilient infrastructure.

- Rainwater harvesting and improved water resource management.
- Promotion of climate-smart agriculture and sustainable fishing.
- Diversification of livelihoods for local communities.

Climate Challenges Addressed:

- | |
|---|
| • Cyclones |
| • Flooding due to extreme rainfall |
| • Coastal erosion |
| • Sea-level rise |
| • Saltwater intrusion into groundwater and agricultural land |
| • Livelihood insecurity among fishing and farming communities |

Nature-Based Solutions (NbS):

- Protection and restoration of mangrove ecosystems
- Conservation of wetlands and coastal biodiversity
- Enhancement of natural barriers against storms and erosion
- Improved carbon sequestration through ecosystem restoration

Why is it Important?

- | |
|---|
| • Demonstrates an effective model for climate change adaptation in coastal regions. |
| • Strengthens disaster resilience through community participation. |
| • Protects biodiversity and critical coastal ecosystems. |
| • Supports sustainable livelihoods and water security. |
| • Provides a replicable model for other climate-vulnerable coastal villages across India. |

About Climate-Resilient Village

- A Climate-Resilient Village is a community that develops the capacity to prepare for, adapt to, recover from, and withstand climate-related disasters while ensuring sustainable development.

Key Features

• Community participation.
• Disaster preparedness.
• Climate-resilient infrastructure.
• Sustainable natural resource management.
• Livelihood diversification.
• Environmental conservation.

About Pichavaram Mangrove Forest

- Located in Cuddalore District, Tamil Nadu.
- One of the largest mangrove forests in India.
- Situated between the Vellar and Coleroon (Kollidam) rivers.
- Acts as a natural barrier against cyclones, storm surges, and coastal erosion.
- Supports rich biodiversity and serves as an important carbon sink.

Additional Key Facts

• First Climate-Resilient Village in Tamil Nadu: Killai

• District: Cuddalore
• State: Tamil Nadu
• Nearby Ecosystem: Pichavaram Mangrove Forest
• Approach: Community-Based Climate Adaptation
• Key Focus: Climate adaptation, disaster resilience, and ecosystem conservation
• Nature-Based Solution: Mangrove conservation and restoration

Exam Focus Points

• Village: Killai.
• State: Tamil Nadu.
• District: Cuddalore.
• Purpose: Build resilience against climate change impacts through community-based adaptation.
• Key Objective: Protect coastal communities from cyclones, floods, sea-level rise, and coastal erosion.
• Important Ecosystem: Pichavaram Mangrove Forest.
• Key Strategy: Nature-Based Solutions (NbS).

Lets Revise

- ❖ INS Malvan, recently commissioned by the Indian Navy, belongs to which class of warships? **Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC).**
- ❖ INS Malvan has been built by which shipyard? **Cochin Shipyard Limited (CSL), Kochi.**
- ❖ The Mahe-class ASW Shallow Water Craft is being inducted to replace which class of ships? **Abhay-class Corvettes.**
- ❖ The National Defense Authorization Act (NDAA) is associated with which country? **United States.**
- ❖ Which legislative body passed the National Defense Authorization Act (NDAA) 2026? **US House of Representatives.**
- ❖ The NDAA 2026 authorises defence spending of: **US\$ 1.15 trillion.**
- ❖ The NDAA primarily provides the legal framework for which department? **US Department of Defense (DoD).**
- ❖ Which country dominates the global rare earth processing industry? **China.**
- ❖ Which state of Myanmar is known for its large reserves of Heavy Rare Earth Elements (HREEs)? **Kachin State.**
- ❖ Rare Earth Elements (REEs) comprise how many metallic elements? **17.**
- ❖ Which Government initiative supports India's self-reliance in critical minerals? **National Critical Minerals Mission.**
- ❖ Which four Indian states share a border with Myanmar? **Arunachal Pradesh, Nagaland, Manipur, and Mizoram.**
- ❖ Myanmar is regarded as India's gateway to which region? **Southeast Asia (ASEAN).**
- ❖ Which Article of the Constitution guarantees the Freedom of Speech and Expression? **Article 19(1)(a) of the Constitution of India.**

- ❖ Which Article guarantees the Right to Assemble Peacefully and Without Arms?
Article 19(1)(b) of the Constitution of India.
- ❖ Which Article guarantees the Right to Form Associations or Unions? **Article 19(1)(c) of the Constitution of India.**
- ❖ Under which Articles can the State impose reasonable restrictions on the freedoms guaranteed under Article 19? **Articles 19(2) to 19(6) of the Constitution of India.**
- ❖ Which international organisation is responsible for promoting the peaceful use of nuclear energy and monitoring nuclear safeguards? **International Atomic Energy Agency (IAEA).**
- ❖ The recently signed Civil Nuclear Cooperation Agreement is between which two countries? **United States and Saudi Arabia.**
- ❖ Who has been appointed as the new Chief Executive Officer (CEO) of NITI Aayog?
Anurag Jain.
- ❖ Which two organisations signed an MoU to develop indigenous environmentally sustainable blowing agent technology for strategic applications? **CSIR-Indian Institute of Chemical Technology (CSIR-IICT) and ISRO's Vikram Sarabhai Space Centre (VSSC)**
- ❖ Which Hyderabad-based startup unveiled the 'Yantur 4.5 kN Turbofan Engine Programme'? **Paninian India Private Limited.**
- ❖ Who won the Menuires International Chess Championship 2026 held in France?
Indian Grandmaster Rohith Krishna.
- ❖ Which village has been recognised as Tamil Nadu's first Climate-Resilient Village?
Killai (Cuddalore district, Tamil Nadu)



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IMPORTANCE OF CURRENT AFFAIRS IN UPSC EXAMINATIONS

Current Affairs hold a crucial place in the preparation for the UPSC Civil Services Examination. A comprehensive understanding of recent national and international developments helps aspirants strengthen their General Studies foundation and develop a well-rounded perspective on important issues. Topics such as government policies, schemes, economy, international relations, science and technology, environment, defence, social justice, governance, reports, indices, appointments, awards, and major global events are highly relevant for both the Prelims and Mains examinations. Regular study of current affairs not only enhances factual knowledge but also improves analytical ability, critical thinking, answer-writing skills, and decision-making aptitude. Since UPSC questions often connect contemporary developments with static subjects, consistent preparation of current affairs enables aspirants to understand issues in depth and present balanced, informed, and relevant answers. It also plays an important role in Essay writing, Ethics, and the Personality Test, giving candidates a strong edge throughout the examination process.

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