

SANGEET NATAK AKADEMI AMRIT AWARDS

Recently, Vice President Jagdeep Dhankhar presented the one-time Sangeet Natak Akademi Amrit Awards to 84 artists from varied fields of performing arts.



About Sangeet Natak Akademi Amrit Awards:

- It is a national honour bestowed on performing artists as well as teachers and scholars in the field of performing arts.
- The recipients are selected by the Akademi's General Council.
- The Akademi's General Council consisted of distinguished musicians, dancers, theatre artists and scholars in these disciplines and nominees of the Government of India, state governments, and Union Territories.
- The honour carries a **purse money of Rs. 1,00,000/-** (Rupees one lakh) besides a **Tamrapatra and Angavastram**.
- The award was constituted to honour Indian artists aged above 75 years who have not been accorded any national honour in their career so far.

Key facts about Sangeet Natak Akademi

- It is India's national academy of music, dance and drama.
- It was created by a resolution of the Ministry of Education, with P.V. Rajamannar as its first Chairman.
- It was **set up in 1953** for the preservation and promotion of the vast intangible heritage of India's diverse culture expressed in forms of music, dance and drama.
- Presently, it is an Autonomous **Body of the Ministry of Culture**.
- The Chairman of the Akademi is appointed by the President of India for a term of five years.
- It is fully funded by the Government for the implementation of its schemes and programmes.

JUNO SPACECRAFT

The National Aeronautics and Space Administration's (NASA) Juno mission completed its 53rd close flyby of Jupiter, sped past the gas giant's volcanic Moon Io, and captured a stunning frame of both of them together.



About the Juno spacecraft:

- JUNO is an acronym for **Jupiter's Near-Polar Orbiter**.
- It was **launched in 2011**; the Juno spacecraft initially embarked on a 5-year journey to the largest planet in our solar system.
- Towards the end of its primary mission, the spacecraft's objectives evolved, and it transitioned into a full Jupiter system explorer with flybys of Jovian moons.
- **Goal:** Understand the origin and evolution of Jupiter, look for a **solid planetary core, map the magnetic field, measure water and ammonia** in the deep atmosphere, and observe auroras.

Key facts about Moon Io

- Io is the most **volcanically active** world in the solar system, and it has hundreds of volcanoes that often erupt with molten lava and sulphurous gases.
- It is slightly **larger than the Earth's Moon** and has a diameter that is about one-quarter that of our planet.
- It is **tidally locked to Jupiter**, meaning that one side of the Moon always faces the planet.
- It takes around **1.8 Earth days to both rotate on its axis** and revolve once around Jupiter.
- It has a **very thin atmosphere** that is primarily **made of sulphur dioxide**, but one of the most interesting features of the Jovian moons is its volcanoes.
- The Juno mission has given scientists the closest look at Io since 2007, and it will continue to gather images and science data during even closer flybys later this year and early in 2024.

WHAT IS DRIVING THE GLOBAL BIOFUELS ALLIANCE?

Why in news?

- On the sidelines of the annual G-20 summit in New Delhi, an India-led grouping came together to give impetus to the production and use of biofuels.

- The grouping is called the **Global Biofuels Alliance (GBA)**.
- GBA would attempt to bring countries together to co-develop, accelerate technological advances in production processes, and advocate for the use of biofuels particularly in the transport sector.
- The three founding members, **India, U.S. and Brazil**, were joined by Argentina, Canada, Italy and South Africa.

What are biofuels?

- The International Energy Agency (IEA) defines biofuels as liquid fuels derived from biomass.
- It is used as an alternative to fossil fuel based liquid transportation fuels such as gasoline, diesel and aviation fuels.

Types of Biofuels

- **1G ethanol, or first-generation biofuel**
 - It is derived from crops grown specifically to produce biofuels such as sugarcane, corn, or soybean.
- **2G ethanol or second-generation biofuel**
 - It is derived from agricultural waste, used cooking oil and processed animal residues like fats.

Are biofuels an alternative to fossil fuels?

- Experts make a distinction between biofuels and sustainable biofuels.
 - The **1G ethanol** comes under the category of biofuels while the **2G ethanol** is categorised as sustainable biofuels by experts.
- This distinction has now come into sharp focus as climate change accelerates, with fears of threat to food security and increased loss of forests and biodiversity due to greater land required for farming.
- Estimates suggest that well over half of all vegetated land is under cultivation today, and that agriculture is one of the world's largest carbon emitters.
- The GBA has emphasised that its **focus would be to develop 2G ethanol**.

INDIA'S PUSH FOR DEFENCE SECTOR INDIGENISATION

Why in News?

- Recently, the Indian Air Force (IAF) received the first of the 56 C295 aircraft, which are set to replace its ageing Avro-748 aircraft fleet.

Background:

- In September 2021, India signed a deal with a European Corporation named **Airbus Defence and Space** to procure **56 C295 aircraft** to replace the Indian Air Force's ageing **Avro-748 planes**, which entered service in the early 1960s.
- Under the agreement, Airbus will deliver the first 16 aircraft in 'fly-away' condition from its final assembly line in Seville, Spain within four years.
- The subsequent 40 aircraft will be manufactured by **Tata Advanced Systems Ltd (TASL)** in India as part of an industrial partnership between the two companies.
- The 16 fly-away aircraft are scheduled to be delivered to the IAF between September 2023 and August 2025.
- The first Made-in-India aircraft will be rolled out of the manufacturing facility in September 2026 and the remaining 39 will have to be produced by August 2031.
- After the completion of the delivery of 56 aircraft to the IAF, Airbus Defence and Space will be allowed to sell the aircraft manufactured in India to civil operators and export to countries which are cleared by the Government of India.
- All 56 aircraft will be fitted with an indigenous electronic warfare suite to be developed by **Bharat Electronics Ltd** and **Bharat Dynamics Limited**.

Indigenisation of Defence Production in India:

- The Central Government has taken several policy initiatives in the past few years under '**Make in India**' program and brought in reforms to encourage indigenous design, development and manufacture of defence equipment in the country.
- To make India self-reliant in the Defence sector, the Ordnance Factory Board (OFB) was split into seven different companies in October 2021.

- These seven new Defence PSUs are 100 per cent government-owned corporate entities and will help in improving the country's self-reliance in defence preparedness.
- **Budgetary Allocation:**
 - For the year 2023-24, the budgetary allocation for defence is **Rs 5.94 lakh crore**, 13 per cent of the government spending and 2.04 per cent of the GDP.
 - Though Rs 5.94 lakh crore allocation is 4.43 per cent more than the previous year, a major chunk, around 63 per cent of the capital procurement budget is be earmarked for the domestic industry in 2022-23.
- **Exports:**
 - India's defence exports have recorded nearly a six-fold increase between 2017 and 2021, growing from Rs. 1,520 crore to Rs. 8,435 crore.
 - Defence items being exported by India include missiles, the advanced light helicopter, offshore patrol vessels, personal protective gear, surveillance systems and a variety of radars.
- The value of defence production in Financial Year (FY) 2022-23 has crossed the figure of **Rs 1 lakh crore** for the first time ever.

Defence Acquisition Procedure (DAP) 2020:

- The DAP 2020 has been established as a **potential catalyst for the Atmanirbhar Bharat Abhiyaan, in the sector of defence manufacturing.**
- The DAP focuses on simplifying the defence acquisition and institutionalising monitoring mechanism for selection of best equipment in a transparent and competitive manner.

Conclusion:

- As a result of such policies, the industries, including MSMEs and start-ups, are forthcoming in defence design, development and manufacturing.
- There is **almost a 200 per cent increase in the number of defence licenses issued** to the industries in the last 7-8 years by the Government.
- These measures have given a boost to the defence industrial manufacturing ecosystem in the country and generated tremendous employment opportunities.

P-7 HEAVY DROP PARACHUTE SYSTEM

P-7 Heavy Drop Parachute System recently received a bulk order, a move slated to enhance the armed forces' paradropping capabilities.



About the P-7 Heavy Drop Parachute System:

- It is a **military parachute system** primarily used for the **airdrop of heavy equipment**, vehicles, and supplies from aircraft.
- It was **indigenously designed and developed** by the Defence

Research and Development Organisation (DRDO).

Features:

- Weighing approximately **500 kg**, the parachute **guarantees the secure delivery of heavy cargo**, even under challenging conditions.
- It **comprises a platform and a specialised parachute system**, promising to enhance the operational capabilities of the armed forces.
- It **boasts eight main canopies, three extractor parachutes, one drogue parachute, and a suite of electrical, electronic, and mechanical systems.**
- With a **maximum load-bearing capacity of 8,500 kg** and a **permitted payload limit of 7,000 kg**, the system **operates at drop speeds ranging from 260 to 400 kph.**
- **Landing Speed: 7 m/sec**
- **Reusability: 5 times**
- **Its compact design allows seamless integration onto various aircraft**, including the C-17, C-130, and other cargo aircraft of the IAF, providing versatility in deployment.

CRITICAL RAW MATERIALS ACT (CRM ACT)



The European Union Parliament recently voted in favour of the **Critical Raw Materials Act.**

About the Critical Raw Materials Act (CRM Act):

- **Critical raw materials (CRMs) are raw materials of high economic importance for the EU, with a high risk of supply disruption** due to their concentration of sources and lack of good, affordable substitutes.
- **The CRM Act identifies a list of 30 critical raw materials**, including lithium, cobalt, nickel, rare earths, and magnesium.

Objectives of the Act:

- **Increase and diversify the EU's CRMs supply;**
- **Strengthen circularity, including recycling;**
- **Support research and innovation on resource efficiency and the development of substitutes;**
- **Setting benchmarks by 2030 for domestic capacities:** The Act sets these benchmarks along the strategic raw materials value chain and for the diversification of EU supplies
 - at least **10% of the EU's annual consumption for extraction;**
 - at least **40% of the EU's annual consumption for processing;**
 - at least **15% of the EU's annual consumption for recycling;**
 - **no more than 65% of the EU's annual consumption from a single third country;**
- The Act will **reduce the administrative burden**, streamlining permitting procedures for critical raw materials projects in the EU.
- To ensure supply chain resilience, the Act **creates CRMs for supply chain monitoring and stress-testing**, coordinates strategic stocks and sets **risk preparedness obligations on large companies producing strategic technologies**.
- In addition to a list of CRMs for the whole EU economy, **it lists strategic raw materials, which are those most crucial for strategic technologies** used for green, digital, defence and space applications.

WHAT IS SAMUDRA PRAHARI?



The Indian Coast Guard Ship (ICGS) Samudra Prahari is presently deployed on an overseas mission encompassing ASEAN nations.

About Samudra Prahari:

- It is an **Indian Coast Guard Ship (ICGS)** specially designed for pollution control.
- It is the **first pollution control vessel** of its kind in Southeast Asia.
- **Features:**
 - It is equipped with the most advanced pollution Response and Control equipment for **mitigating oil spills in the Exclusive Economic Zone.**
 - It has **tanks and inflatable barges** for storage of oil spills.
 - The ship is capable of unhindered oil recovery operations with a **storage capacity of 500 KL.**
 - The vessel is **designed to operate a twin-engine Advanced Light Helicopter** and to **operate and embark Chetak helicopter.**
 - Special features include an **integrated platform management system**, power management system, **high power external fire fighting system** and one **indigenous gun mount with fire fighting system.**
 - The ship has **unmanned machinery operation capabilities.**

Key Facts about ASEAN:

- The **Association of Southeast Asian Nations (ASEAN)** is a **regional grouping** which was **established in 1967** with the **signing of the Bangkok Declaration.**
- **Founding members: Indonesia, Malaysia, Philippines, Singapore, and Thailand.**
- **Presently, ASEAN comprises 10 member states**, namely Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia and Vietnam.
- It **promotes intergovernmental cooperation and facilitates economic, political, security, military, educational, and sociocultural integration between its members** and other countries in Asia.
- **Secretariat:** ASEAN Secretariat is located in **Jakarta, Indonesia.**



[TRAILGUARD AI CAMERA](#)

The TrailGuard AI camera-alert system installed at the Kanha-Pench corridor in Madhya Pradesh has come in handy for wildlife officials.



CROSS & CLIMB ROHTAK



About the TrailGuard AI camera:

- These are **slim devices** that can be inconspicuously set up within the foliage of trees.
 - **Features**
 - It is Shaped like a pen, 13.8 cm long and 1.4 cm wide; it is wired to another ‘communications’ unit, the size of a notepad.
 - The system **has embedded software** that can be instructed to take pictures of specific species of interest.
 - It is incredibly small – the head of the camera, along with **the passive infrared sensor**, is only about the size of a person’s index finger.
 - It can be **set to specifically capture humans or species** of interest — lions, tigers, cheetahs.
 - If the camera is located in a place within the range of cellphone towers, it can send pictures within 30 seconds.
 - If it is out of this range, it can rely on a longer protocol that can take from 3-10 minutes.
 - The ‘AI’ element, or ‘embedded AI’ as it is technically known, in this system is that instead of transmitting every image captured, the **camera only sends pictures of interest to forest officials**.
 - The product was **developed by RESOLVE**, an international non-profit, in which the operative AI processor is Intel’s Myriad chip.
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