Prelim Bits 02-01-2024 | UPSC Daily Current Affairs

Project Kusha

The Defence Research and Development Organisation (DRDO) is working on the Project Kusha to operationally deploy its own long-range air defense system by 2028-29.

- **Aim** – To develop India's own ***Long-Range Surface-to-Air Missiles (LR-SAM)***
- **Jointly developed with** - Israel Aerospace Industries, Israel's major aerospace and aviation manufacturers
- **Ranges** - Hit hostile targets at 150 km, 250 km, and 350 km ranges.

- **Features** – The LR-SAM system will be a mobile platform equipped with long range surveillance and fire control radars.
- It seeks to establish a formidable ***3 layered*** defense system to detect and destroy incoming stealth fighters, aircraft, drones, cruise missiles and precision-guided munitions.
- It will be made capable of interacting with an *integrated command and control system (IACCS),* an automated air defence command and control centre used by the Indian Air Force (IAF).

The ground systems include Igla, OSA-AK-M, Pechora missiles, Spyder quick-reaction missiles, indigenous Akash area defence missiles and the Barak-8 medium-range SAM systems.

Missile defence system	Country
S-400 Triumf	Russia
Patriot	United States
Iron Dome	Israel

References

1. The Print | All about Project Kusha
2. Times of India | Project Kusha

X-Ray Polarimeter Satellite (XPOSAT)

ISRO's XPoSat was successfully launched from the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh.

- **About-** India's inaugural scientific satellite to measure space-based polarization of X-ray emissions from celestial sources such as black holes and neutron stars in the medium energy band (8-30 keV).
- **Orbit location** - Low earth orbit ***(650 km***), low inclination of 6 degree)
- **Launch vehicle** - PSLV C58
- **Mission life** - 5 years
- **Payloads** - The satellite carries 2 payloads.

Payloads	Usage	Developed by
POLIX (Polarimeter Instrument in X-rays)	An advanced X-ray camera that captures image and measures unique X-ray vibrations	Raman Research Institute, Bengaluru
XSPECT (X-ray Spectroscopy and Timing)	A scientific detective, examining the colours and timing of X-rays	UR Rao Satellite Centre's (URSC's) Space Astronomy Group, Bengaluru

> *XPoSAT is the 2nd spacecraft in the world which will study celestial bodies using polarimetric techniques, after NASA's Imaging X-Ray Polarimetry Explorer (IXPE).*

PSLV Orbital Experimental Module (POEM)

- The fourth stage of PSLV (PS4), also called the PSLV Orbital Experimental Module (POEM) will perform orbital experiments.
  - *Since this is the 3rd time ISRO has used PS4 to exhibit orbital experiments, XPoSAT's PS4 is called* ***POEM-3.***
- The spent PS4 stage will be used to conduct in-orbit scientific experiments in microgravity conditions for an extended duration of 4-6 months.
- It derives power from the solar panels mounted around the PS4 tank and a Lithium-ion battery.
- POEM-3 is equipped with 10 payloads.

References

1. Indian Express | XPOSAT
2. Hindustan Times | PSLV Orbital Experimental Module (POEM)

Genocide Convention, 1948

South Africa has moved the International Court of Justice (ICJ) to declare that the Israel was in breach of its obligations under the 1948 Genocide Convention.

- The convention was officially called as the UN’s Convention on the Prevention and

Punishment of the Crime of Genocide.

- It is an instrument of international law that codified for the ***first time*** the crime of genocide in 1948.
- The Convention calls on all States to maintain vigilance, and push for action to prevent genocide, everywhere.
- According to the convention, genocide means any of the following acts committed with intent to destroy a national, ethnical, racial or religious group, as such:

  (a) Killing members of the group;

  (b) Causing serious bodily or mental harm to members of the group;

  (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;

  (d) Imposing measures intended to prevent births within the group;

  (e) Forcibly transferring children of the group to another group.

- According to the Convention, genocide is a crime that can take place both in time of ***war as well as in time of peace***.
- India ratified the convention in 1959.

Every year on 9 December, the UN marks the adoption of the Genocide Convention with the International Day of Commemoration and Dignity of the Victims of the Crime of Genocide and of the Prevention of this Crime.

References

1. The Indian Express | South Africa files genocide case
2. The Wire | India is in breach

Wine tourism

Over 5,000 tourists visited Sula Vineyard facilities in Bengaluru and Nashik on December 24th 2023, the most on a single day sale of ₹85 lakh.

- **Wine** – An alcoholic beverage with ***alcohol content from 12% or more*** so of distilled spirits (all by volume).
- **Production** - India's shares ***less than 1% in global production***, while France, Italy, Spain and the US tops globally.
- ***Maharashtra holds 90%*** of India's total wine production.

Over the last few years wine as a category has grown faster than Indian Made Foreign Liquor segment but its share in total alcohol sales in the country is still less than a 1%.

- **Wine tourism** – The *growth of home grown brands* and the availability of *imported wines* are driving travel interest to vineyards in India and overseas.
- Maharashtra's Nashik is emerging as the **'Wine Capital of India'**
    - It receives more than 3.5 lakh visitors every year.

***Sula**, India's largest wine producer, with its 1st resort at its vineyard in Nashik. Over 3 days in 2023, it received 12,000 visitors who contributed ₹2.28 crore in revenue.*

- **Steps taken** – ***Reduction in duties*** and stepped-up ***marketing campaigns***.
- **Economic importance** - According to International Spirits & Wines Association of India, wine tourism in Nashik has benefitted nearby villages by creating *new opportunities like hotel properties, food industry, local farmers and retail merchants*.
- It also helps Maharashtra to *improve state GDP by nearly 20%.*

Ghol fish, the State fish of Gujarat whose air bladder is used in the production of wine and beer.

***Judima**, a home-made rice wine of Assam's Dimasa tribe has become the 1st traditional brew in all of northeast to earn a Geographical Indication (GI) tag for its distinct sweet taste.*

References

1. The Hindu Business Line| Wine Tourism
2. Times of India| Wine tourism in Maharashtra

Litchi

National Research Centre on Litchi (NRCL) has successfully expanded litchi cultivation in India by providing technical help, plants and training to farmers.

- It is a *sweet juicy fruit* which is also known as *lychee or lichee.*
- **Scientific name** – ***Litchi chinensis*** under soapberry family (Sapindaceae).
- It is a small, oval roundish fruit that is ***native to Southeast Asia***.
- **Growing conditions** – A *sensitive fruit* influenced by temperature, rainfall, humidity and soil suitability as well.
- Climate changes can make the fruit to *grow smaller, less sweet and juicy and crack*.
- **In India** – It mainly grows in the foothills of the Himalayas in Uttarakhand, Bihar, West Bengal and Jharkhand.
- **Commercial cultivation** – *More than 0.1 million hectares* of land across ***19 Indian states*** including Andhra Pradesh, Tamil Nadu, Karnataka, Mizoram among others.
- **Litchi harvest –** It takes place *in summer in North India* while in Karnataka, it takes place in the winter.

- **Production** – *Bihar, West Bengal, Jharkhand and Assam* accounts for 78% of the total production in the country.
- ***Bihar alone produces 43%*** of total litchi and occupies nearly 35% of the area in India.

*Muzaffarpur region of Bihar, the **litchi capital of India**.*

- **Popular varieties** – Shahi litchi, China, Gandki Lalima, Gandki Sampada and Gandki Yogita.

Shahi litchi from Bihar known for its sweet, juicy, unique flavour and aroma with pearly white aril has a Geographical Indication (GI) tag.

National Research Centre on Litchi (NRCL)
• **Established in** – 2001. • **Located at** – Mushahari in Muzaffarpur, Bihar. • **Umbrella Institution** – Indian Council of Agricultural Research (*ICAR*). • **Aim** – To act as a *nodal institution for research and development* on litchi in India, acts as a national repository of information and also provides consultancy services to end users. • **Activities** – It is *preparing 1000's of litchi saplings* at its nursery each year and supply them to farmers in different states.

Litchi fruit contains a toxin, methylene cyclopropyl-glycine (MCPG), which is known to be fatal by causing encephalitis-related deaths. This is especially harmful when consumed by malnourished children.

References

1. Down To Earth| Expansion of Litchi cultivation in India
2. NRCLitchi| National Research Centre on Litchi

Other Important News
National Cooperative Dairy Federation of India (NCDFI) • National Cooperative Dairy Federation of India (NCDFI) was registered on 1970 under the ***Bombay Cooperative Societies Act (VII of 1925).*** • **Headquarters -** New Delhi. • NCDFI is an apex body of cooperative dairies. • **Members -** NCDFI members include federal dairy cooperatives of states and union territories.

Tehreek-e-Hurriyat

• The Ministry of Home Affairs has officially declared 'Tehreek-e-Hurriyat (TeH)' as an '***unlawful association***' for the next 5 years under the Unlawful Activities (Prevention) Act.
• Tehreek-e-Hurriyat Jammu Wa Kashmir is a ***separatist political party in Jammu and Kashmir***, India founded by Syed Ali Shah Geelani.

Guinness World Record in Gujarat

• Gujarat set a Guinness World Record recently after more than 50,000 people performed 'Surya Namaskar' simultaneously at 108 venues.
• ***Surya Namaskar or sun salutation*** is an ancient Yogic practice of paying respect to the rising sun and comprises different postures or Asanas.

Valmiki

• Valmiki, also known as Maharishi Valmiki, is a legendary poet and revered sage in Hindu mythology.
• He is known as the author of the epic poem ***Ramayana***, and is revered as the ***1st poet in Sanskrit literature***.
• He is called as the ***Adikavi or First Poet*** - the Poet of Poets of India.
• Valmiki's birth anniversary is celebrated every year on ***Ashwin Purnima.***

Warli tribe

• The Warli are an indigenous of ***Maharashtra and Gujarat***.
• The name "Warli" comes from the word "Warla", which means "piece of land" or "field".
• The Warli are considered by some to be a *sub-caste of the Bhil tribe*, and their history dates back to the 10th century AD.
• The Warli people speak Varli or Warli, an Indo-Aryan language.

Chairman of Finance Commission

• Centre appoints former NITI Aayog Vice Chairman ***Arvind Panagariya*** as Chairman of 16th Finance Commission recently.
• The Finance Commission of India is a ***constitutional body*** that allocates revenues between the central and state governments.
• It was established in 1951 by the President of India under ***Article 280*** of the Indian Constitution.

Leap Year, 2024

• A leap year has 366 days in a year as opposed to the regular 365 days.
• The extra day is added to February, the shortest month of the year, as February 29.

All-Girls Sainik School

• Defence Minister recently inaugurated the ***Samvid Gurukulam Girls Sainik School***, the 1st all-girls Sainik School, at Vrindavan in Mathura, Uttar Pradesh.
• **Sainik Schools** are residential schools that provide public school education with a military bias.
• They are affiliated with the Central Board of Secondary Education (CBSE) and are supported by Central and State funding.



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