Prelim Bits 26-10-2023 | UPSC Daily Current Affairs

Hanle Dark Sky Reserve (HDSR)

In a 1st of its kind event, the Indian Institute of Astrophysics (IIA) hosted an official Star Party 2023 at the Hanle Dark Sky Reserve in eastern Ladakh.

- It was organised by the IIA in collaboration with Department of Wildlife Protection, UT Ladakh to observe the optical phenomenon in the sky.

> ***Hanle Dark Sky Reserve (HDSR) is India's 1st dark sky region*** *which was notified by UT of Ladakh comprising an area of radius roughly 22 km around Hanle.*

- **Objectives of HDSR**– It *preserves the dark skies* by reducing light pollution in the surrounding areas.
- It uses these dark skies to *promote astrotourism* as a means to further *enhance socio-economic development* in the area.
- **Significance of Dark Sky** – To observe stars, star clusters, nebulae, and galaxies (such as Milky Way, Andromeda and the Triangulum) with the naked eye.

Bortle Scale

- It helps to *measure the night sky's brightness* at a given location.
- It scale ranges from Class 1 (darkest skies available over the earth) to Class 9 (pale, light-marred skies over the insides of cities).
- HDSR comes under Bortle Class 1 skies.

Optical phenomenon in the sky

- **Zodiacal light** – A *faint glow of diffuse sunlight* scattered by interplanetary dust in the Solar System.
- **Airglow** – An optical phenomenon caused by *faint emission of light* in the earth's atmosphere.
- **Gegenschein** – It is also known as counterglow, which is *a bright spot in the night sky* centred at the antisolar point, caused due to backscatter of sunlight by interplanetary dust.

> *Venus can be so bright in the night sky that its light can cast shadows on the ground, just as moonlight does.*

References

The Hindu| Hanle Dark Sky Reserve

SIM Card

SIM cards are the ID cards of the cellular world, and they have evolved in step with cellular networks.

- **SIM** – It stands for '*subscriber identification module'.*
- It is an integrated circuit (IC), or a microchip, that identifies the subscriber on a given network.

German engineer Helmut Gröttrup 1st had the idea to stick an IC in a plastic panel in the late 1960s which was basis of origin of the SIM card.



- **Design** – In accordance with *ISO/IEC 7816 international standard*.
- **Sizes** – They are available in *standard, micro and nano sizes*.
- **Types**
  - **GSM SIM** (Global System for Mobiles) – It can be removed and inserted in any mobile cell phone.
  - **CDMA SIM** (Code Division Multiple Access) – It cannot be removed from the original Phone.
  - **eSIM Card** (Embedded SIM) – It is a small chip pre-assembled inside the phone that enables easier swap of network operator as the information on eSIM is re-writable.

> *Until 2G networks, SIM card comprised both the hardware and the corresponding software. With the advent of 3G networks, it became only the software while the hardware was called the Universal Integrated Circuit Card (UICC).*

Functions of SIM card

- SIM card has a *unique authentication key* which when unlocked, allows access to the network.
- Any signals sent by the phone into the network are 'signed' by the key.
- **Connects mobiles to cellular network** – When a subscriber dials a recipient's number, the *phone sends data via the network signed by the key on the SIM card* to a telephone exchange.
- **Storage function of SIM Card**
  - Own ID number (the integrated circuit card identifier)
  - The International Mobile Subscriber Identity (IMSI)
  - The subscriber's location area identity

    - A list of preferred networks
    - Emergency numbers
    - The subscriber's contacts and SMS messages.
- **Challenges** – It is possible to duplicate a SIM card by accessing its key and storing it in multiple cards.

References

The Hindu| SIM Card

United Nation Forum on Forests (UNFF)

The Ministry of Environment, Forest and Climate Change is organising a Country-Led Initiative (CLI) event as part of the United Nations Forum on Forests (UNFF) in 2023 at the Forest Research Institute (FRI) in Dehradun, Uttarakhand.

- It is a subsidiary body within the UN Organisation.

United Nations Forum on Forests	
Formation Year	2000
Formed by	Resolution 2000/35 of Economic and Social Council of the United Nations (ECOSOC).
Membership	Universal membership that comprises all member states of the UN and its specialized agencies.
India's Membership	Founding member of UNFF.

- **Objectives**
    - It promotes the *management, conservation, and sustainable development* of all types of forests.
    - To *strengthen long-term political commitment.*
- **Odd-year sessions** – It will focus on discussions on implementation, technical advice and exchange of experiences.
- **Even-year sessions** – It will focus on policy dialogue, development and decision-making.

The 19th session of UNFF scheduled at UN Headquarters, New York in May 2024.

- **Target basis** – Based on Rio Declaration, Forest Principles, Agenda 21 and outcome of the Intergovernmental Panel on Forests (IPF)/ Intergovernmental Forum on Forests (IFF) and other key milestones of international forest policy.
- Collaborative Partnership on Forests was established in 2001 to Support the work of UNFF and its member countries.

UN Strategic Plan for Forests

- *The UN General Assembly adopted the 1st ever strategic plan for the period of 2017-2030.*
- *It serves as a global framework to achieve the sustainable management of all types of forests, including trees outside forests, and to combat deforestation and forest degradation.*
- *6 Global Forest Goals and 26 associated targets to be achieved by 2030, which are voluntary and universal.*

References

1. PIB| India hosts UNFF session
2. UN| UNFF

Banni Festival of Andhra Pradesh

3 dead during 'Banni' festival at Mala Malleswara Swamy temple located at Devaragattu in Andhra Pradesh's Kurnool district.

- It is a tradition *stick fight celebration*.
- **Banni Festival** – It is *celebrated every year*, on the night of Dussehra festival (Vijayadashami).

Banni Festival is celebrated to mark the victory of Lord Shiva (Mala Malleswara Swamy) and Goddess Parvati (Malamma) over demons Mani and Mallasura who used to trouble people at Devaragattu region.

- **Origin** - Since the *times of Vijayanagara Empire*.
- **Participants** – Devotees *from Andhra Pradesh and Karnataka* participate as the temple is located on the border of these states.

Banni actually refers to mock fight for capturing the idols during the Banni festival.

- **Ritual** – Devotees visit the temple with weapons like long sticks or lathis for *hitting each other with these sticks on the head* to get hold of ceremonial idols of local deities.
- While one group of devotees make attempts to hijack the idols, the other group try to defend themselves along with protecting the deities.
- **Victory Parade** – Thus devotees walk in a procession down to the hill with their shirts drenched in blood symbolizing Lord Shiva's victory over demons.

The Banni grassland in Gujarat's Kachchh district is one of the largest grasslands in the Indian subcontinent which was notifies as a reserve forest in 1955 by

court.

References

1. The Hindu| Death during Banni Festival
2. Times of India| Banni Festival

Mahua Liquor

Mahua, a traditional liquor, once banned by the British now finds relevance in modern India

- **Mahua liquor** – It is a traditional s*weetened liquor with strong floral notes* that has been made for ages by the tribal people of India.
- It is a *pungent, potent drink* that is usually brewed in unorganised, small-scale backyard stills.

Mahua Liquor is the only pot-distilled and fermented spirit in the world made from naturally sweet flowers.

- **Preparation** – It is made from the *flowers of the Mahua tree*.
- Mahua tree is found largely in the central, northern and southern Indian forests.
- **Cultural Significance** – Tribal communities consume mahua liquor at local gatherings and ceremonies.
- **Ban** – British Raj banned production of liquor along with collection & storage of mahua flowers through
  - Bombay Abkari Act, 1878 and Mhowra Act, 1892

Country Liquor (CL) label is bound by the antiquated laws of 1878 and 1892, which forbid non-Adivasis from consuming or producing it and restrict Adivasis from producing it within a certain limit.

- **Measures taken**
  - Madhya Pradesh declared Mahua as a *heritage liquor* and also organised *National Mahua Conclave in 2023*.
  - Ministry of Tribal Affairs and IIT-Delhi had developed *Mahua Nutri-beverage*, a Mahua-based alcoholic beverage.

*According to the **Centre for People's Forestry**, the estimated national production of Mahua flowers is 0.85 million tonnes and an estimated 90-95% of Mahua flower's annual production goes into the brewing of beverages.*

Usage of Mahua tree

- **Flowers** – Edible with sugar content ranging from 68% to 72%, are the foundation for the alcoholic drink Mahua.
- **Fruits** – It provide both oil and starch.
- **Bark** – It yields fibres for ropes and mats.
- **Seeds** - Valuable oil for cooking and biodiesel is extracted.
- **Leaves** – They are fashioned into bowls, plates, and cones.
- **Medicinal properties** – It offer remedies for ailments like malaria and diarrhoea.

Mahua flowers are one of the top 5 minor forest products (MFP) in terms of volume produced in the nation each year.

References

1. Down to Earth| Rebranding Mahua Liquor
2. TPCI| Usage of Mahua tree

Other important topics
Jamrani Dam Multipurpose Project (JDMP) • Cabinet Committee on Economic Affairs approves inclusion of Jamrani Dam Multipurpose Project of Uttarakhand under Pradhan Mantri Krishi Sinchayee Yojana-Accelerated Irrigation Benefit Programme (PMKSY-AIBP) • JDMP is located in Nainital district of **Uttarakhand**. • The project involves building a concrete gravity dam across the Gola River. • The Gola River is a tributary of the Ramganga river.
First Vertical Wind Tunnel (VWT) • Indian Army installed its 1st vertical wind tunnel to train special forces in Special Forces Training School (SFTS) in ***Bakloh, Himachal Pradesh***. • The system simulates varied freefall scenarios which is crucial in assessing individual reactions to numerous airborne situations. • As a freefall simulator, it creates a column of air at specific velocities, orchestrating different *Combat Free Fall (CFF)* conditions.
25 by 25 target • The 25 by 25 target is a United Nations goal to reduce the risk of premature death from *non-communicable diseases (NCDs)* by 25% by 2025. • **4 major NCDs -** Cardiovascular disease, Chronic respiratory disease, Diabetes mellitus and Cancer. • The *World Health Assembly* adopted the target in 2012.
Mauritius on same-sex relations • The Mauritius Supreme Court has declared unconstitutional a law that criminalises consensual same-sex acts between adult men. • Mauritius is an island country in the Indian Ocean, located off the eastern coast of Africa. • There are 64 countries worldwide that have laws that criminalize homosexuality, and nearly half of these are in Africa.

Free visas of Srilanka

• To revive the country's fledgling tourism industry, Sri Lanka has recently announced that Indians will get free visas to the nation as part of a pilot program which will extend till March 31, 2024.

India - Nepal border

• India and Nepal decided to carry out joint survey to remove farms on 'no-man's land'.
• Nepal shares an international border with 5 Indian states - *Uttarakhand, Uttar Pradesh, West Bengal, Bihar and Sikkim.*
• **Treaty -** In 1950, the ***Indo-Nepal Peace and Friendship Treaty*** was signed for the free movement of citizens of both countries.
• **Disputed areas -** The Lipulekh pass, Kalapani and Limpiyadhura in western Nepal.

RBI on private banks' directors

• The Reserve Bank of India (RBI) has recently asked the private banks to ensure the presence of ***at least 2 Whole Time Directors*** (WTDs), including the MD & CEO, on their Boards.
• The number of WTDs shall be decided by the Board of the bank by taking into account factors such as the size of operations, business complexity, and other relevant aspects.

Xuntian Telescope

• China has recently announced to send a new telescope, named Xuntian to probe deep into the universe.
• It will be installed by China's Tiangong space station and set to co-orbit with it.
• The telescope will allow astronomers to conduct sky surveys. It has roughly the same spatial resolution as the Hubble Space Telescope, but its field of view is more than 300 times larger.

Exercise Harimau Shakti 2023

• It is a Joint bilateral training exercise of ***Indian and Malaysian Armies.***
• It aims to enhance military capabilities for conducting multi-domain operations in sub-conventional scenarios.
• The previous edition of the exercise was conducted in Pulai, Kluang, Malaysia in 2022.

National Medal for Technology & Innovation of U.S.

• U.S. President Joe Biden presented the National Medal for Technology and Innovation to Indian-American scientist Ashok Gadgil recently.
• It is the *highest honor in the United States* for technological achievement.
• It was created by statute in 1980 and is administered for the White House by the US Department of Commerce's Patent and Trademark Office.

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