Prelim Bits 06-01-2024 | UPSC Daily Current Affairs

Wetland City Accreditation (WCA)

MoEF&CC has submitted 1st 3 Indian cities Indore, Bhopal & Udaipur for Wetland City Accreditation (WCA) under the Ramsar Convention on Wetlands.

- **WCA** – A ***voluntary scheme*** that recognizes cities which have taken exceptional steps to safeguard their urban wetlands.
- **Establishment** – During the Ramsar Convention COP12, 2015.
- **Objectives** – To recognize the importance of wetlands in *urban and peri-urban environments* and to take appropriate measures to conserve and protect these wetlands.
- **Significance** – Cities can ***gain international recognition*** and ***positive branding opportunities*** for their efforts and provides sustainable socio-economic benefits for local populations.
- It will ***generate public awareness*** about wetland conservation and also help in implementation of Amrit Dharohar in India which aims to foster sustainable ecosystem development with the help of local communities.

	Indore	Bhopal	Udaipur
Location	Madhya Pradesh	Bihar	Rajasthan
Ramsar Site (or) Wetland	Sirpur Lake, a bird sanctuary	Bhoj Wetland with Jal Tarang (wetland interpretation centre)	5 wetlands –Pichola Fateh Sagar Rang Sagar Swaroop Sagar Doodh Talai
Efforts & Recognitions	-Wetland mitras for Sarus Crane. -Cleanest city in India. -India's Smart City Award 2023.	-Wetland mitras for Sarus Crane. -Lake Conservation Cell -Draft City Development Plan 2031	

6 Criteria for getting WEA

- It has *one or more Ramsar Sites, or other significant wetlands* which provide(s) a range of ecosystem services to the city;
- It has *adopted measures for conservation* of wetlands.
- It has *implemented wetland restoration* measures.
- It *considers the challenges and opportunities* of integrated spatial/land-use planning for wetlands under its jurisdiction.
- It has *raised public awareness* about the values of wetlands and enabled public participation in decision-making processes.
- It has established *a local committee to support* the preparation work and the implementation of measures.

References

1. PIB| India's nomination for WEA
2. Ramsar| Criteria for getting WEA

Plasma waves

The researchers at Indian Institute of Geomagnetism (IIG) have examined the existence of high-frequency plasma waves in the Martian plasma environment.

> *IIG is an autonomous institute of Department of Science and Technology.*

- **Plasma waves** – A ***type of electromagnetic wave*** that propagates through plasma, a state of matter.

> ***Plasma*** *is formed when a gas is heated to high temperatures or subjected to strong electric fields, causing its atoms to become ionised by either losing or gaining electrons.*

- **In earth** – It is observed in the *Earth's magnetosphere* as a *short-time scale fluctuations* in the electric and magnetic field.
- **Role** – In the *energization and transport of the charged particles* in the Earth's magnetosphere.
- Some act as a *cleaning agent for the Earth's radiation belt*, which is hazardous to our satellites.
    - **Example**: Electromagnetic ion cyclotron (EMIC) waves

Plasma waves in Mars

- **Recent Study** – It was carried out by IIG scientists in collaboration with scientists from Japan, USA, and UAE *to understand the existence of plasma waves in unmagnetized planets like Mars*.

> ***Mars*** *does not have any intrinsic magnetic field therefore the high-speed solar wind coming from the Sun interacts directly with the Mars atmosphere, like an obstacle in the flow.*

- **Observation** – By using high-resolution electric field data from the MAVEN spacecraft of NASA when it crossed the magnetopause boundary and entered the magnetosheath region.
- **Cause** – It could be due to *electron oscillations* with respect to the background magnetic field in the magnetosheath region of the Mars.
    - **Langmuir waves** – Parallel oscillations

    - **Upper-hybrid type waves** – Perpendicular oscillations
- **2 distinct wave modes** – Either *broadband or narrowband type* with distinguishable features in the frequency domain.
- **Significance** – It provides a tool to explore *how electrons gain or dissipate energy in the Martian* plasma environment.

Reference

PIB| High Frequency Plasma Waves in Martian Upper Atmosphere

Amrit Dharohar Scheme

Recently, Ministry of Tourism started training in Bhitarkanika National Park, Odisha under Amrit Dharohar Capacity Building Scheme.

- **Goal** – To promote unique conservation values of Ramsar Sites'.

  Ramsar Convention of 1971, an intergovernmental treaty for conservation and wise use of wetlands, was ratified by India in 1982.

- **Purpose** – To maintain healthy Ramsar Sites which
- Provide *water and food security* and b*uffer the landscape* from floods, droughts, and extreme events.
- Generate *local employment and support livelihoods*
- *Provide habitats* for species Maintain and enhance *carbon sinks*
- Conserve and *celebrate rich cultural heritage*
- **Timeline** – From June 5, 2023 ***till June 5, 2026***.

  June 5 is celebrated as World Environment Day.

- **Implementation** – In convergence with Central Government, State Wetland Authorities, institutions and individuals.

Amrit Dharohar Capacity Building Scheme

- **Aim** – To *enhance livelihood opportunities* for local communities.
- **Implemented by** - ***IITTM***, an autonomous body under Ministry of Tourism, in ***collaboration with MoEFCC***.
- **Training programmes** – Alternative Livelihood program (ALP) and Paryatan Navik Certificate (PNC).
- **Implementation** – In 1st phase, 5 Ramsar sites were identified.
    - Sultanpur National Park - Haryana
    - Sirpur wetland – Madhya Pradesh
    - Yashwant Sagar – Madhya Pradesh

- Bhitarkanika National Park – Odisha
- Chilika Lake – Odisha

References

1. PIB| Training programmes under Amrit Dharohar Scheme
2. Indian Wetlands| Amrit Dharohar Implementation Strategy

PRITHvi VIgyan (PRITHVI)

The Union Cabinet Chaired by the Prime Minister of India has approved the overarching scheme 'PRITHvi Vigyan' (PRITHVI).

- **Implemented by** – Ministry of Earth Sciences (MoES).

  The research & development and operational (services) activities of MoES are carried out by 10 Institutes of MoES.

- **Timeline** – ***2021-26***, at an overall cost of ***Rs. 4,797 crore***.
- It *encompasses 5 ongoing sub-schemes* namely
  - **ACROSS** – Atmosphere & Climate Research-Modelling Observing Systems & Services
  - **O-SMART** – Ocean Services, Modelling Application, Resources and Technology
  - **PACER** – Polar Science and Cryosphere Research
  - **SAGE** – Seismology and Geosciences
  - **REACHOUT** – Research, Education, Training and Outreach
- **Objectives**
  - To *observe* the atmosphere, ocean, geosphere, cryosphere and solid earth.
  - To *predict* weather, ocean and climate hazards.
  - To *explore* polar and high seas regions of the Earth.
  - To do *sustainable harnessing* of oceanic resources.
  - To *translate the knowledge* of Earth systems science into services for societal, environmental and economic benefit.

  Earth System Sciences *deal with all the 5 components of the earth system namely atmosphere, hydrosphere, geosphere, cryosphere, and biosphere and their complex interactions.*

- **Significance** – It will enable *development of integrated multi-disciplinary* earth science research and will *help in addressing the grand challenges* of weather and climate, ocean, cryosphere, seismological science and services.

Reference

PIB| Approval for PRITHVI Scheme

Yeonpyeong Island

North Korea has fired more than 200 rounds of artillery shells off its west coast, towards the South's Yeonpyeong Island.

- **Yeonpyeong Island** – It is home to a *military base and a small civilian population* of about 2,000 people ***in South Korea.***
- **Geography** – It lies 3km (2 miles) from the disputed maritime border in the Yellow Sea and 12km from the North Korean coast.



Yeonpyeong Island is close to what is known as the ***'Northern Limit Line,'*** *the de facto maritime border that separates the two Koreas.*

- **Military events** – It has been the scene of ***inter-Korean naval clashes*** over the years
- In 2010, 2 soldiers and 2 civilians were killed after North Korea fired dozens of artillery shells towards the island.
- **2024 firing** – The fired shells *did not enter South Korean territory* as they *all landed in the buffer zone* between the 2 countries.
- While there is *no damage to people or military* in South Korea, it *threatens peace* on the Korean peninsula and raises tensions.
- **Reaction of South Korea** – It ordered civilians to seek shelter on the island before holding ***live fire drills of its own***.
- **Response by North Korea** – It says that its firing drills off the west coast were *a natural response* to large-scale military actions by its neighbour.

North Korea and South Korea are formally still at war, as the Korean War in 1953 ended with an armistice and not a formal peace treaty.

Reference

BBC| Firing over Yeonpyeong Island

Other Important News

Project 'Veer Gatha'

• The 3rd edition of Project 'Veer Gatha', a joint initiative of ***Ministry of Defence and Ministry of Education*** will take part in Republic Day celebrations.
• Project Veer Gatha is a project that was established in 2021 under the ***Gallantry Awards Portal (GAP).***
• **Aim –** To disseminate the details of the bravery and sacrifice of the Gallantry Awardees (Soldiers of Armed Forces) among the students so as to raise the spirit of patriotism.

Pariksha Pe Charcha 2024

• Pariksha Pe Charcha (PPC) is an ***annual event*** where Prime Minister Narendra Modi interacts with students, teachers, and parents.
• Students of ***Classes 6 to 12*** are eligible to participate in this event.
• The event is part of the larger movement, ***'Exam Warriors',*** which aims to create a stress-free environment for young people.
• PPC 2024 is the 7th edition of the event and will take place in Bharat Mandapam, New Delhi.

International Braille Day

• World Braille Day is celebrated on ***January 4th*** to commemorate the birthday of ***Louis Braille***, the inventor of braille.
• The day recognizes the importance of braille as a means of communication and the role it plays in the lives of blind and visually impaired people.
• Braille is a tactile representation of alphabetic and numerical symbols using 6 dots to represent each letter and number, and even musical, mathematical and scientific symbols.

SC Legal Services Committee

• Supreme Court judge ***Justice BR Gavai*** has been nominated as the Chairman of the Supreme Court Legal Services Committee (SCLSC) recently.
• The SCLSC is a statutory body constituted under Section 3A of the ***Legal Services Authorities Act, 1987.***
• It gives free legal services to the poor, marginalized, and unprivileged.

X-65

• The X-65 is an experimental jet aircraft developed by the *Defense Advanced Research Projects Agency's (DARPA*) *Control of Revolutionary Aircraft with Novel Effectors (CRANE)* program.
• It is a full-scale aircraft to demonstrate a new method of flight control that uses no external moving parts.

Hot Jupiters

• Hot Jupiters are a ***class of exoplanets*** that have features similar to Jupiter, but are much closer to their host star & its upper atmosphere is hotter than 1,800 degrees Celcius.
• The harsh ultraviolet radiation from its star is heating the planet's upper atmosphere, which in turn causes ***magnesium and iron*** gas to escape into space.
• The star's powerful gravitational tidal forces altered the planet's shape, making it more ***oblong-shaped***.

Bobbili Veena

• The Bobbili veena is a large plucked string instrument used in ***Carnatic classical music***, also known as the *Saraswati veena* and is named after the *town of Bobbili*, where it was invented.
• In 2011, the Government of India gave the instrument a ***Geographical Indication tag.***
• The Bobbili veena is known for its distinctive notes and fine tune which is made from a single piece of jackfruit tree wood.
• The making of the veena began in the 17th century during the reign of ***Pedda Rayudu, the king of Bobbili Samsthanam*** in Andhra Pradesh.

National Birds Day

• ***January 5*** is observed as National Birds Day introduced by U.S.A in 2002 and followed in some parts of the world.
• It is aimed at raising awareness for the conservation of avian species that have been adversely affected by habitat destruction, reducing food choices and climate change.
• The ***theme*** of the National Birds Day 2024 is ***'Right to Fight'***.
• **Birds in News -** Jungle Babbler, Oriental Magpie-Robin, Common Hoopoe, Indian Roller, Indian white-eye, Brown-headed barbet, House Sparrow.

Investment bankers

• An investment banker is an individual who often works as part of a financial institution and is primarily concerned with raising capital for corporations, governments, or other entities.
• **Examples of investment banker employers -** Goldman Sachs (GS), Morgan Stanley (MS), JPMorgan Chase (JPM), Bank of America Merrill Lynch (BAC), and Deutsche Bank (DB).

National Anti-Doping Agency (NADA)

• National Anti-Doping Agency (NADA) was set up as a registered society under the ***Societies Registration Act of 1860 on 2005*** with a mandate of creating *dope-free sports* in India.

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