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

Animal Husbandry Infrastructure Development Fund (AHIDF)

Recently, the Union Cabinet has approved the extension of Animal Husbandry Infrastructure Development Fund.

- **Launched in** – 2020-21
- **Implemented by** – Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry & Dairying
- **Objectives** – To improve *processing capacity* and product diversification of ***milk and meat***.
- To ensure ***accessibility*** of quality food and feed, provide protein enriched food and to ***prevent malnutrition***.
- To develop ***entrepreneurship***, generate ***employment*** and to promote ***exports***.

Initially, the Budget was Rs.15000 crore, now extended with an outlay of Rs.29, 610.25 crore for another 3 years up to 2025-26, to be implemented under Infrastructure Development Fund (IDF).

- **Eligible entities** – Farmer Producer Organization (FPO), private companies, individual entrepreneurs, Section 8 companies and MSMEs.
- **Funding** – 3% interest subvention, credit guarantee and 2 years of moratorium for loan.

AHIDF loans are disbursed from Scheduled bank, National Cooperative Development Corporation (NCDC), NABARD and NDDB.

- **Permitted activities**
  - ***Dairy*** processing and value addition infrastructure
  - ***Meat*** processing and value addition infrastructure
  - ***Animal Feed*** Plant
  - ***Breed Improvement*** Technology
  - ***Animal Waste to Wealth*** (Agri waste management)
  - Setting up of ***Veterinary Vaccine and Drugs*** Manufacturing facilities
- **Significance** – So far, it has created an *increase of 2-4% in the overall processing capacity* in dairy, meat and animal feed sector.
- It has *benefitted about 15 lakh farmers* directly/indirectly and 20 lakh more farmers could be benefitted with the continuation.

References

1. PIB| Extension of AHIDF
2. AHIDF| Animal Husbandry Infrastructure Development Fund

Zodiacal Dust

A scientist at Physics Research Laboratory (PRL), Ahmedabad have published a paper regarding the possible source of Zodiacal dust to Mars's 2 Moons.

***Deimos and Phobos** are the 2 moons of the planet Mars.*

- **Zodiacal light** – It is *sunlight scattered by interplanetary dust* which is visible from the earth as a faint, diffuse glow on completely dark nights.
- It is present across the entire path of the ecliptic, which is the path along which the Sun moves in the sky over the course of a year.
- **Zodiacal Dust** – The ***interplanetary dust particles*** which cause zodiacal light are called as Zodiacal dust.

> ***Juno** is a spacecraft launched by NASA in 2011 to study the gas-giant Jupiter and its moons. Its solar panels were damaged by the dust particles in the space.*

- **Micrometeorites** – They are ***very small dust particles***.
- As they weigh no more than 1-10-1000th of a gram, they can move really fast, and when they do they can pack a punch.
- **Micrometeorites into Earth** - When they fall into Earth, they ***burn up and disintegrate*** in the atmosphere.
- **Micrometeorites into Mar's Moon** – Since Deimos and Phobos don't have atmospheres, most micrometeorites slam into their surfaces and ***kick up small clouds of dust***.
- **Escape of dust particles** – The ***smaller dust particles escape into space*** as Mar's Moon has low gravity.
- **Dust ring** - ***Mars's gravity pulls in the larger dust particles*** and forms a dust ring around Mars.
- Over time, they drift closer towards or away from Mars but stay in orbit.

> *The more gravity a planetary body has, the more spherical its shape. Deimos and Phobos are not at all spherical.*

- **Future prospects** – To study whether Phobos and Deimos are really losing more mass than they are gaining.

Mars

• **Location** – It is the 4th planet from the Sun and the 2nd smallest planet in the Solar System.
• **Size** – It is about half the size of Earth.
• **Phobos** – It is the *bigger of Mars's 2 moons*, drifting closer towards Mars whose surface is *covered with fine dust.*
• **Deimos** – Astronomers believe its actual *surface is buried under almost 100 metres of dust*.

Reference

The Hindu| Possible Sources of Zodiacal Dust

Vyasji ka tehkhana

The District Court of Varanasi has given permission to perform puja in the basement named 'Vyasji Ka Tahkhana' located in the Gyanvapi Masjid Complex.

- **Vyasji ka tehkhana** – It is ***1 of the 4 basements of Gyanvapi Mosque Complex*** in Varansi.
- Historically, members of ***Vyas family lived here*** who claim that it was given to them for worship and other religious rituals under the British rule in 1809.
- **Located in** – ***Southern area*** of the Gyanvapi mosque's complex, facing the Nandi statue of Kashi Vishwanath complex.
- **Structure** – It has a height of around 7 feet and carpet area of around 900 square feet.
- **Issue** – The family of Vyas's was *restricted to access the basement in 1993.*

According to the recent ASI report, before the construction of Gyanvapi Mosque in the 17th century, there was a big Hindu temple.

- **Recent controversy** – Following the court order, Varanasi district administration had taken possession of the southern cellar.

Gyanvapi Mosque Complex
• **Built in** – *1669* during the reign of *Aurangzeb*. • The name of the mosque is said to have derived from an adjoining well, the Gyanvapi, or Well of Knowledge. • **Issue** – It is believed to have been built by *demolition of the then Kasi Vishwanath temple.* • An old sculpture of the Nandi bull inside the compound of the present Kashi Vishwanath Temple faces the wall of the mosque instead of the sanctum sanctorum of the temple. • It is believed that Nandi is in fact, facing the sanctum sanctorum of the original temple.
Kashi Vishwanath Temple

• **Old temple** – It constructed by the *Hari Chandra* in the *11th century*.
• **Present temple** – It was built in the 18th century by *Rani Ahilyabai Holkar of Indore*, immediately to the south of the mosque.
• The temple stands on the western bank of the holy river Ganga, and is *one of the twelve Jyotirlingas*, the holiest of Shivatemples.

Reference

The Indian Express| Prayers inside Vyasji ka tehkhana

Cygnus X-1

India's space telescope AstroSat has measured X-ray polarisation from the Cygnus X-1, opening new possibilities in the study of the black hole's environment.

- It is one of the 1st confirmed ***black hole systems in our galaxy***.
- **Discovery** – Over 4 decades ago.
- **Location** – About 400 times more than the distance between Earth and Sun.
- **Size** – It is ***20 times heavier than the Sun***.
- It has a companion, *a heavy supergiant star* (40 times more massive than the Sun) in a binary system.
- **Generates soft X-rays** – Due to its gravitational pull material from the *supergiant falls and spirals-in towards the black hole* that forms a thin accretion disk which is responsible for soft X-rays.
- **Recent observation** – *Cygnus X-1 measured the high polarization in 100-380 keV range*, implying that the radiation is likely to have originated at the black hole jet.
- **Significance** – While normal X-ray measurements only reveal the energy or intensity of the radiations, polarisation characteristics *reveal the orientation of the oscillating electric field* thereby the *geometry* and *other properties of the black hole*.

It is the 1st time hard X-ray radiation is connected to the black hole jet.

Polarization

• It is one of the properties that *a photon carries from the celestial objects* in the sky to us (energy, time, and location of emission are the other 3 parameters).
• **Polarisation of light or electromagnetic waves** – It tells us about the *orientation of the oscillating electric field*, which is decided by the accelerating charged particle emitting the light.

***Astrosat** was launched by Indian Space Research Organisation (ISRO) in September 2015. It has 5 scientific instruments of which the Cadmium Zinc Telluride Imager (CZTI) measured the X-rays from the black hole.*

Reference

The Indian Express| Detection of X-rays from Black Hole

Blue Economy

India's recent Interim Budget stressed on environment-friendly development through the promotion of 'blue economy'.

- **Blue economy** – It simply refer to ***economic activities related to the sea and the coasts*** with the element of sustainability in it.
- **Definition**
  - **European Commission** – It refers to *all economic activities related to oceans, seas, coasts* and it covers a wide range of interlinked established and emerging sectors.
  - **World Bank** – It is the *sustainable use of ocean resources* for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem.
- **India's Blue Economy –** With long coastline, diversity in terms of fish & ocean produce, and multiple tourism opportunities, blue economy is highly significant.
- It is a *subset of national economy* which comprises of 2 components
  - Ocean resources.
  - Human-made economic infrastructure in marine, maritime, and onshore coastal zones.
- In 2022, a ***draft policy framework on India's Blue Economy*** was 1st released.

Blue Economy 2.0

- **Aim** – To *build resilience* against the impacts of climate change while *fostering sustainable growth* in coastal regions.
- **Restoration and adaptation measures** – Protecting the *health of the oceans* while carrying out economic activities.
- **Aquaculture** – *Farming of aquatic plants and animals.*
- **Mariculture** – *Rearing and harvesting marine creatures* in salt water.
- **Integrated & multi-sectoral approach** – Harnessing collective efforts to achieve sustainable development goals in coastal areas.

> ***Amrit Kaal Vision 2047*** *is the long-term blueprint for the Indian maritime blue economy for enhancing port, promoting sustainable practices and facilitating global collaboration.*

Reference

The Indian Express| Relevance of Blue Economy in India

Other Important Topics

Shri Kalki Dham

• PM to lay foundation stone of Shri Kalki Dham on Feb 19.

C-CARES & CMPFO

C-CARES

• Union Minister of Coal launched a web portal of CMPFO namely C- CARES developed and designed by the Centre for Development of Advanced Computing (C-DAC).

• It is an R&D organization under the ***Ministry of Electronics and Information Technology.***

Coal Mines Provident Fund Organization (CMPFO)

• It is an ***autonomous organization*** under the aegis of Ministry of Coal.

• It was established in the year ***1948*** for administering Provident Fund and Pension schemes for the purpose of providing social security to the coal sector workers.

India -UAE Bilateral Investment Treaty

• The Union Cabinet approved an investment treaty with the United Arab Emirates (U.A.E.) recently.

• It is likely to significantly boost bilateral economic engagement in a range of areas, including manufacturing and foreign direct investment (FDI).

Marketing Margin to Domestic gas

• The Cabinet recently approved determination of marketing margin on supply of domestic gas to fertiliser (urea) units for the period from May 1, 2009 to November 17, 2015.

• The marketing margin is charged by gas marketing companies from consumers over and above the cost of gas for taking on the additional risk and cost associated with marketing of gas.

Extension of sugar subsidy for AAY Families

• The Union Cabinet approved extension of scheme of sugar subsidy for Antyodya Anna Yojna (AAY) families distributed through Public Distribution Scheme (PDS) for 2 more years.

• Under the Scheme, the Central Government gives subsidy of ***Rs.18.50 per kg*** per month of sugar to AAY families of participating States.

RoSCTL Scheme

• The Union Cabinet has approved the continuation of the Rebate of State and Central Taxes and Levies (RoSCTL) scheme for the export of apparel and made-ups until March 31, 2026.

• The RoSCTL scheme is a ***Ministry of Textiles scheme*** that reimburses state and central taxes and levies for exports of apparel and garments.

• The scheme is aimed at compensating for taxes and levies in addition to the rebate provided under the duty drawback scheme.

• The scheme was launched in 2020.

Snow Moon

• The full moon in February is called the Snow Moon since there will be snow on the ground, according to Time and Date.

• Some Native American tribes also call it the ***Hunger Moon*** while others call it the Storm Moon.

Great White Sharks

• The great white shark ***(Carcharodon carcharias)*** is a large mackerel shark that lives in the coastal waters of all the world's oceans.
• It is one of the ***most powerful and dangerous predatory sharks*** in the world.
• It's also known as the ***white shark and white pointer***.
• **Conservation status**
  - **IUCN** – Vulnerable
  - **CITES -** Appendix I.

Rashtriya Arogya Mela & Har din Har Ghar Ayush campaign

Rashtriya Arogya Mela
• Union Ayush Minister Shri Sarbananda Sonowal inaugurates Rashtriya Arogya Mela recently.
• The National Arogya Fair is a gathering of India's healing traditions, including Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy.
'Har din Har Ghar Ayush' campaign
• It is build to impart the benefits of Indian traditional medicine systems to the people.

MQ-9B UAV

• The U.S. formally notified of the possible sale of 31 MQ-9B high altitude long endurance armed Unmanned Aerial Vehicles (UAV) to India recently.

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