UPSC Daily Current Affairs| Prelim Bits 21-03-2025

Revised National Program for Dairy Development (NPDD)

Why in news?

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has recently approved the Revised National Program for Dairy Development (NPDD).

- **NPDD scheme** – Was launched by the Department of Animal Husbandry and Dairying (DAHD) in *February 2014*.
- **Revised NPDD** – Is a *Central Sector Scheme* that focuses on *modernizing and expanding dairy infrastructure*, ensuring the sector's sustained growth and productivity.
- **Ministry** – Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying.
- The scheme consists of 2 key components:
- **Component A** – It is dedicated *to improve essential dairy infrastructure*, such as milk chilling plants, advanced milk testing laboratories and certification systems.
- Formation of *new village dairy cooperative societies* and strengthens milk procurement and processing in the underserved regions are promoted under this component.
    - The underserved regions includes North Eastern Region (NER), hilly regions, and Union Territories (UTs), especially in remote and backward areas.
- It also advocates for formation of *2 Milk Producer Companies (MPCs)* with dedicated grant support.
- **Component B** – Is also known as "Dairying through Cooperatives (DTC)".
- It will continue to foster dairy development through cooperation with the Government of Japan and *Japan International Cooperation Agency (JICA)*.
- This component focuses on the *sustainable development of dairy cooperatives*, improving production, processing, and marketing infrastructure in the 9 States.
- The 9 states include Andhra Pradesh, Bihar, Madhya Pradesh, Punjab, Rajasthan, Telangana, Uttarakhand, Uttar Pradesh and West Bengal.

The implementation of NPDD has positively impacted 1.87 million farmers by generating over 30,000 jobs and has increased daily milk procurement capacity by 10 million liters.

Significance

- **Impetus to infrastructure** – The program will give an impetus to the dairy sector by creating infrastructure for milk procurement, processing capacity, and ensuring better

quality control.

- **Aids farmers and rural development** – To gain better access to markets, to ensuring better pricing through value addition.
- It also *improve the efficiency of the supply chain*, leading to higher incomes and greater rural development.
- **White Revolution 2.0** – The program will transform India's modern infrastructure, in sync with White Revolution 2.0.
- **Technology and labs** – It will support the newly formed cooperatives by providing new technology, and quality testing labs.

Fourier Transform Infrared (FTIR) *milk analyzers use infrared light to analyze milk composition, offering rapid and accurate measurements of components like fat, protein, and lactose, as well as screening for adulteration and contaminants.*

The NPDD has supported upgradation of labs with FTIR.

- **Resilient diary sector** – Revised NPDD will improve rural livelihoods, generate jobs and build a stronger, more resilient dairy industry that benefits farmers and stakeholders across the country.

References

1. PIB | Revised NPDD

Iron in Sun

Why in the news?

New research is finding that theories of atomic physics have underestimated iron's contribution to the sun's temperature profile.

- **Iron in Sun -** Iron (Fe) makes up about *0.14% of the Sun's mass*, which is a small fraction compared to hydrogen (~74%) and helium (~24%).
- **Location -** Iron is found mostly in the *Sun's core and outer layers (photosphere, corona)* in ionized forms.



- **Source -** Iron in the Sun comes from *nucleosynthesis in earlier generations of stars*, which exploded as supernovae and contributed elements to the solar system.
- **Role in Opacity -** Iron plays a crucial role in *absorbing and scattering radiation*, influencing energy transfer within the Sun.
- **Role in Temperature Profile -** Iron opacity affects *temperature, density and fusion rates* inside the Sun.
- So, the new findings of higher opacity of iron in the sun impacts the present solar models.

Composition of the Sun		
Element	**By Mass (%)**	**Key Role**
Hydrogen (H)	74%	Primary fuel for nuclear fusion, produces energy.
Helium (He)	24%	Fusion product, contributes to Sun's stability.
Oxygen (O)	~0.8%	Influences solar opacity, involved in energy transport.
Carbon (C)	~0.3%	Important in nucleosynthesis, affects opacity.
Neon (Ne)	~0.2%	Present in the solar atmosphere, influences radiation absorption.
Iron (Fe)	~0.14%	Major contributor to opacity, affects energy transfer.

Reference

The Hindu | iron inside the sun is more opaque than expected

Lenacapavir

Why in the news?

Yearly HIV prevention injection shows promise in clinical trials.

- Lenacapavir is an *investigational anti-retroviral* drug developed by Gilead Sciences.
- **Approved by** - U.S. Food and Drug Administration (FDA).
- It acts as a long-acting ***HIV treatment and prevention drug*** designed to be administered as an injection.

- **Administration and Dosage -** Lenacapavir is available in two forms
  - **Subcutaneous Injection** (Twice a Year)
  - **Intramuscular Injection** (Once a Year – Under Trial)
- **Working** - Lenacapavir is a capsid inhibitor, that targets the HIV-1 capsid, a protein shell that protects the virus's genetic material.
- By interfering with the capsid's function, it prevents HIV from replicating and infecting new cells.
- Unlike most HIV drugs that target enzymes (like reverse transcriptase or protease), Lenacapavir disrupts multiple stages of the viral life cycle, making it a unique and effective approach.
- The yearly version aims to provide long-term HIV prevention, making it more convenient than daily PrEP pills.
- **Current Status -** The Phase 1 trial for yearly prevention showed promising results, but larger studies are needed.
- A twice-a-year version for treatment has already shown *success in Phase 3 trials.*

Currently, there is no cure or vaccine approved for HIV/AIDS.

Reference

The Hindu | Lenacapavir

Chabahar Port

Why in News?

India is looking to continue capacity building at Iran's Chabahar Port.

- **Located in -** Iran's *Sistan and Baluchistan Province* on the Gulf of Oman, owned by the ***Iranian government.***
- It serves as ***Iran's only oceanic port***.
- It consists of two separate ports named

1. Shahid Kalantari and
2. Shahid Beheshti.

- **Regional Connectivity -** It is a key trade route for India, Iran, Afghanistan, and Central Asian countries.

- **Geopolitical Importance** - It is seen as a strategic counter to China's Belt and Road Initiative and its development of the Gwadar port in Pakistan.
- **Significance for India -** Chabahar Port was a coveted strategic interest for India.
- It is a critical gateway for the proposed International North-South Transport Corridor (INSTC).

INSTC is a multi-modal route between India, Central Asia and Russia, reducing transit time for trade between the three regions.

- **Chabahar agreement –** India, Iran, and Afghanistan signed a trilateral agreement to establish the International Transport and Transit Corridor, also known as the Chabahar Agreement.
- **Aim -** To improve transportation and trade connectivity between the three countries by utilizing the port of Chabahar in Iran as a key transit point.
- It is a 10-year contract signed in May 2024.
- It allows India to operate the ***Shahid Beheshti terminal*** at Chabahar port in Iran.
    - **Operated by -** State-owned India Ports Global (IPGL).
- The signed Chabahar agreement *includes a clause on cargo targets*, *but no penalties* will be imposed if such traffic is not achieved.
- **Revenue-sharing arrangement** – It has been confirmed as following,
- **For exports** – From the Shahid Behesti terminal, both IPGL and Iran will retain 50% of the revenue share.
- **For imports** – Iran's maritime organization will receive 60% of the revenue.
- **Recent Negotiation between India and Iran** – Among the negotiations for the contract
- India requested not have a ***minimum guaranteed traffic (MGT),*** under which an operator is penalized for failing to meet minimum targets.

Reference

Business Standard | Chabahar Port

World Happiness Report 2025

Why in News?

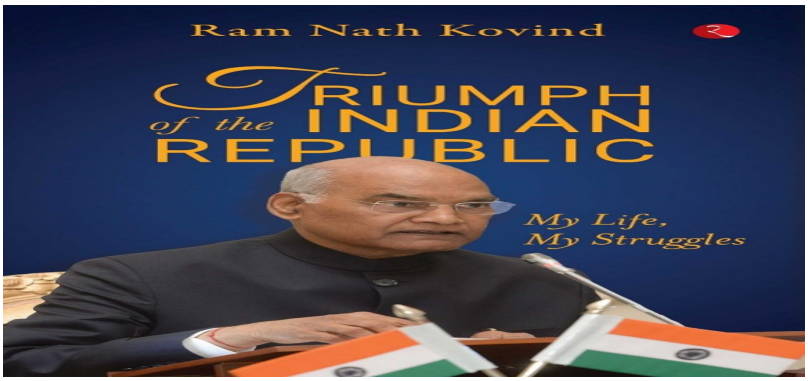
The world happiness report, 2025 released recently.

- **World Happiness Day –** Celebrated globally on March 20.
- **Theme, 2025- *"Caring and Sharing".***
- **Proclaimed by -** General Assembly of the United Nations, in a resolution initiated by Bhutan in July 2012, recognizing the relevance of happiness and well-being as universal goals.

- **World Happiness Report, 2025** – **Published by -** University of Oxford's Wellbeing Research Centre in partnership with Gallup, the UN Sustainable Development Solutions Network.
- Rankings are based on a ***3-year average*** of people's life evaluations.
- The happiness score or subjective well-being is based on the national average response to the life evaluations question in the Gallup World Poll (GWP).
- The survey asks respondents to evaluate their current life as a whole using a ladder scale, with the best possible life as 10 and the worst possible life as 0.
- **Indicators**

1. GDP per capita,
2. Social support,
3. Healthy life expectancy,
4. Freedom,
5. Generosity, and
6. Perceptions of corruption.

- **Top ranking countries**



- U.S. Ranked in the ***24*** and Canada ranked in ***18.***
- **Low Ranking Countries -** Sierra Leone (No. 146), Lebanon (No. 145), Malawi (No. 144) and Zimbabwe (No. 143) make up the rest of the bottom five for happiness.
    - ***Afghanistan (No. 147)*** is once again last on the list.
- **India's Ranking -** India ranks at ***118th*** position in 2025.
- Over the past few years, India has seen gradual progress in some social and economic indicators.
- **Rankings of South Asian Nations -** Nepal secured the highest position at 92nd, Pakistan 109th, Myanmar 126th, and Sri Lanka closely followed Bangladesh at 133rd.

References

1. CNBC TV | World Happiness Report 2025
2. Hindustan Times | World Happiness Report 2025

Changing Dynamics of India's Remittances

Why in News?

Reserve Bank of India's (RBI's) March 2025 bulletin shows that there has been a gradual shift in the dominance of India's remittances away from Gulf Cooperation Council (GCC) countries.

- The data shows that the *growth of remittances from Advanced economies (AEs)*, outpaced that of the GCC, resulting in more money coming in from these countries.
- Advanced economies (AEs), particularly the US, the UK, Singapore, Canada, and Australia, together accounted for more than half of India's remittances in 2023-24 (FY24).
- It reflects a shift in migration patterns towards a skilled Indian diaspora.
- The US remained the ***largest contributor to India's total remittances***, with its share rising to 27.7% in FY24 from 23.4% in 2020-21 (FY21).
- 78% of Indian migrants in the US are employed in high-earning sectors such as management, business, science, and arts.

India's inward remittances have more than doubled from $55.6 billion in 2010-11 to $118.7 billion in 2023-24.

- The Gulf Cooperation Council (GCC) countries like United Arab Emirates (UAE), Saudi Arabia, Kuwait, Qatar, Oman, and Bahrain — contributed ***38%*** of the total remittances received by India in FY24.



- UAE maintained its position as the ***2nd-largest source*** of India's remittances, with its share increasing from 18% in FY21 to 19.2% in FY24.
- The UAE is the largest hub for Indian migrant workers, *primarily engaged in blue-collar jobs* dominated by the construction industry, followed by healthcare, hospitality, and tourism.
- Higher remittances received from the US despite a lower number of migrants compared to the UAE.
- Share of inward remittances from the *UK also increased* to 10.8% in FY24 from 6.8% in FY21, which may be attributed to the Migration and Mobility Partnership between India and the UK.
- The study also noted a marked uptick in the share of remittances from Singapore (6.6%), Canada (3.8%), and Australia (2.3%) in FY24 compared to the pandemic year (FY21).

Reference

Business Standard | India's top remittance hubs

One Liners 21-03-2025

History, Art and Culture

Guruvayur festival

• It is an *annual* festival at *Guruvayur Sreekrishna Temple in Kerala*.
• The temple is often referred to as Bhuloka Vaikundam (Holy Abode of Vishnu on Earth).
• This festival is conducted in the month of Kumbha (Feb-March) and lasts *for 10 days*.

Social Issues

Measures Against Online Gaming Addiction

• **Recent amendments** – Provisions added in *Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 ("IT Rules")* under the IT Act, 2000 to address various socio-economic concerns emanating from online games.
• It casts specific *obligations on online gaming intermediaries*, including other intermediaries, social media intermediaries or platforms in relation to online games.
• **Blocking directions – Ministry of Electronics & IT (**MeitY) has issued 1298 blocking directions related to online betting/gambling/gaming websites between the year 2022- 24.

New Partnership for 'Scam Se Bacho,' campaign

• **Scam Se Bacho** – A campaign against online scams and spam.
• **New partnership** – Department of Telecommunications (DoT) collaborates with WhatsApp to extend the safety campaign.
• **Aim** – To enhance digital safety through training workshops and citizen awareness campaigns.
• It will include train-the-trainer workshops for DoT officials, Sanchar Mitras, Telecom Service Providers (TSPs), and field units.

Nidaan Portal

• **Nidaan** – National Integrated Database on Arrested Narco-Offenders.
• **Nodal Ministry** - Ministry of Home Affairs
• **Aim** – To *provide data of narcotics offenders* involved in narcotics offences under Narcotic Drugs & Psychotropic Substances (NDPS) Act, 1985.
• **Usage** – It is exclusively meant *for use of Drugs Law Enforcement Agencie*s.
• It has helped them in connecting dots, previous involvements, fingerprint search, working inter-linkages, busting the network, monitoring habitual offenders and financial investigations.

Polity & Governance

NYPS 2.0

• It is an *upgraded version of the National Youth Parliament Scheme* (NYPS) web portal.
• **Nodal ministry** – Ministry of Parliamentary Affairs.
• **Upgradation** – While the previous version was limited to students of recognized institutions, NYPS 2.0 is *open to all citizens* across the country regardless of economic status, gender, caste, creed, religion, race, region and place.
• **Participation mechanism**
  - Institution Participation
  - Group Participation
  - Individual Participation

Agriculture

Revised Rashtriya Gokul Mission (RGM)

• **Aim** - To boost growth in livestock sector.
• To conserve and develop indigenous bovine breeds in a scientific and holistic manner.
• **Nodal Ministry** – Ministry of Animal Husbandry, Dairying and Fisheries.
• **Revised budget** – An additional outlay of Rs.1000 crore, totalling to Rs.3400 crore.
• **New components** – One-time assistance of *35% of the capital cost* for establishment of Heifer Rearing Centres.
• Encouraging farmers to purchase High genetic merit (HGM) IVF heifers by providing *3% interest subvention* on loan taken by the farmer from milk unions / financial institutions/ banks for such purchase.
Related News – Rashtriya Gokul Mission

Nationwide Artificial Insemination Programme (NAIP)

• **Umbrella scheme** – Rashtriya Gokul Mission.
• **Nodal Ministry** – Ministry of Animal Husbandry, Dairying and Fisheries.
• **Aims** – To provide *free of cost Artificial Insemination (AI)* at the farmer's doorstep in 605 districts across the country where the baseline AI coverage was below 50%.
• To protect and preserve of India's *indigenous bovine breeds*.
• **Activities** – A total of 22 in vitro fertilization (IVF) labs have been set up under the State Livestock Boards (SLBs) or in Universities and over 2541 High genetic merit (HGM) calves have been born.

Indigenous Developments for improving Bovine Breeds

• **Gau Chip and Mahish Chip** – Genomic chips for indigenous bovines, that are developed by National Dairy Development Board (NDDB) and ICAR National Bureau of Animal Genetic Resources (NBAGR).
• **Gau Chip** - It helps in *identifying high-quality bulls and cows* for breeding to enhance the herd's genetic quality.
• **Mahish Chip** – It is to help in *selecting superior buffaloes* for breeding purposes.
• **Gau Sort** – It is indigenously developed *sex sorted semen production technology* developed by NDDB.

Science

Audible enclaves

• **Concept** – They are small *pockets of sound that are not disturbed by surrounding noise*.
• **Aim** – To *deliver sounds that only one specific person* can hear, even if they are in a crowd.
• **Working principle** – 2 ultrasound beams are chosen at different frequencies that are completely silent on their own.
• But when they intersect in space, they *interact nonlinearly* enabling to *generate a new sound wave at an audible frequency* that would be heard only in that specific region.

Indian Biological Data Centre (IBDC)

• It is the *first national repository for life science data* in India.
• **Located in** – Haryana.
• **Established in** – Department of Biotechnology (DBT), Ministry of Science and Technology in collaboration with National Information Centre.
• **Objectives** – To *archive all life science data* generated from publicly funded research in India.
• To develop standard operating Procedures (SOPs) for storing and sharing the data as per FAIR (Findable, Accessible, Interoperable and Reusable) principle.



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