

National and International Weekly Current Affairs 26 Feb to 03 Mar 2024

National News

Surrogacy rules

- The Union government modified the **Surrogacy (Regulation) Rules, 2022**, on February 21, **allowing married couples to use donor eggs or sperm for surrogacy, a relief for those with medical issues.**

Key points:

- **Surrogacy, a process where a woman (the surrogate mother) carries and delivers a baby for a couple** (the intended parents), is a complex and evolving field.
- It involves two main types: **traditional surrogacy**, where the surrogate mother is also the biological mother of the baby, and **gestational surrogacy**, where an **embryo created through in vitro fertilization (IVF)** is implanted in the surrogate mother's uterus, making her not genetically related to the baby.
- In India, surrogacy has seen significant changes, with the **Surrogacy (Regulation) Act, 2021**, coming into effect. This Act prohibits commercial surrogacy and allows altruistic surrogacy, where a woman can voluntarily act as a surrogate for intended parents without any monetary compensation except for medical expenses and insurance.

Surrogacy (Regulation) Act 2021

- The Act aims to **regulate surrogacy in India, ensure ethical practices**, prevent exploitation, and safeguard the rights of intending parents, surrogate mothers, and born children.
- It permits altruistic surrogacy only and outlines specific criteria for surrogate mothers and intending parents.
- The Act also mandates registration for all surrogacy clinics, informed consent from the surrogate mother, and prohibits certain practices.
- It establishes **National and State Surrogacy Boards to oversee and regulate surrogacy practices.**
- Violations of the Act can lead to imprisonment of up to 10 years and a fine of up to Rs. 10 lakhs.

Maharashtra State New

Maharashtra MSME Defence Expo 2024

- The **Defence Research and Development Organisation (DRDO)** took a major step towards **strengthening India's self-reliance in defense equipment** during the **Maharashtra MSME Defence Expo 2024.**
- They transferred crucial technology to domestic industries by signing **23 Licensing Agreements for Transfer of Technology (LATOT)** with 22 companies.

About:

- These agreements span various fields crucial for defense, **including electronics, lasers, armaments, life sciences, materials science, combat vehicles, naval systems, and aeronautics.**
- This initiative **aims to empower Indian companies, particularly micro, small and medium enterprises (MSMEs), to contribute to the nation's defense needs.**

Key Points:

This collaboration between DRDO and the private sector is expected to:

1. **Reduce dependence on foreign imports:** By enabling domestic production of defense equipment, India can lessen its reliance on overseas suppliers.
2. **Boost domestic defense industry:** The technology transfer empowers Indian companies to participate in defense manufacturing, creating jobs and fostering innovation.
3. **Support "Atma Nirbhar Bharat" (Self-reliant India) initiative:** This initiative aligns with the government's vision of achieving self-sufficiency in critical sectors, including defense.

Maharashtra to roll out policy for boosting defense manufacturing

- Deputy CM said that a **new aerospace and defense policy** will be formulated to provide

a boost to defense manufacturing in Maharashtra

- **This policy aims to:**
 1. Enhance the success of Micro, Small and Medium Enterprises (MSMEs) in the sector.
 2. Establish a robust supply chain for defense manufacturing.

Key points:

- This initiative builds upon Maharashtra's existing efforts in defence manufacturing, including being the **first state to introduce such a policy in 2017**.
- The new policy will be collaboratively developed with industry stakeholders.
- The government plans to **create four dedicated clusters to strengthen the supply chain**.
- This renewed focus on defence manufacturing is seen as a crucial step towards achieving self-reliance in the sector.

Four defence clusters to come up in the State

- The Maharashtra government has announced **plans to establish four new defence manufacturing clusters across the state**.
- These clusters are aimed at consolidating Maharashtra's position as a leading destination for defence production.
- **Locations: Nagpur, Shirdi, Pune, and Ratnagiri will house the new clusters.**

Objectives:

- Foster innovation and collaboration in the defence sector.
- Stimulate economic growth.
- Leverage the existing strength of Micro, Small and Medium Enterprises (MSMEs) in the state.

Significance for Pune:

- Pune, already a hub for various industries, will further strengthen its position in the defence sector with the establishment of this cluster.
- This **initiative aligns with the Government of India's "Atma Nirbhar Bharat"** (Self-reliant India) program.
- The creation of these clusters is expected to generate employment opportunities, attract

investments, and contribute to the overall growth of the state's economy.

Pune gets state's second 30-bed AYUSH hospital

- **PM Modi virtually inaugurated the state's second 30-bed AYUSH hospital in Pune.**
- **Developed under the National AYUSH Abhiyan, this hospital promotes traditional Indian medicine systems like Ayurveda, Yoga, Unani, Siddha, and Homeopathy.**

AYUSH:

- **AYUSH is an acronym in India standing for Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy.**
- These represent a **group of traditional and non-conventional systems** of medicine practiced widely in the country.
- **Ancient Origins: Ayurveda, the oldest system, boasts a documented history exceeding 5,000 years.**
- **Holistic Approach: AYUSH systems emphasize a holistic approach to health, focusing on prevention, promoting well-being, and treating diseases.**
- **Governmental Support: Recognizing their significance, the Indian government established a dedicated Ministry of AYUSH in 2014 to promote research, education, and development in these fields.**

PM Modi to inaugurate ₹1,800 crore rail works of South Central Railway

- **PM Modi will be inaugurating railway projects worth ₹1,800 crore of the South Central Railway (SCR) on Today(February 26).**
- **About 06 stations are in Maharashtra**
- **34 stations are in Andhra Pradesh, 15 stations in Telangana and two stations in Karnataka**
- **The combined cost of nearly ₹925 crore and 156 road over bridges (RoBs) and road under bridges (RuBs) at a combined cost of nearly ₹927.31 crore comprise the projects.**

Mankapur sports complex gets cabinet nod for ₹747cr upgrade

- The Maharashtra cabinet approved ₹747 crore to renovate and upgrade the divisional sports complex in Mankapur on the lines of Shiv Chhatrapati Sports Complex at Balewadi in Pune.
- It would be revamped to provide state-of-the-art international-level facilities to sportspersons in Vidarbha.
- After upgradation, the sprawling Mankapur facility would have world-class facilities like Olympic-size swimming pool, squash court, tennis court, basketball court, archery range, hockey, and football pavilion among others.

MH, TN to get ₹83,000cr port projects ahead of polls

- In a bid to boost infrastructure and create jobs ahead of the assembly elections, the central government has sanctioned ₹83,000 crore worth of port projects in Maharashtra and Tamil Nadu
- These projects are expected to give a major fillip to the maritime sector in these states.

About:

- The projects include the development of a new greenfield port at Sagar in Maharashtra and the expansion of existing ports in Chennai and Kamarajar in Tamil Nadu.
- The development of these ports is expected to improve cargo handling capacity, create new jobs, and boost the overall economy of the two states.

Maharashtra, one of the successful States in implementing PMFBY

- The central government has recognized MH as one of the leading states in successfully implementing the Pradhan Mantri Fasal Bima Yojana (PMFBY) scheme.
- Since the program's inception, over 8.46 crore farmer applications have been enrolled in Maharashtra, highlighting its significant participation.
- This recognition underscores Maharashtra's commitment to supporting its agricultural sector and ensuring the well-being of its farmers.

About:

- PMFBY is a crop insurance scheme launched by the Indian government in 2016.
- It aims to:
- Provide financial support to farmers who suffer crop loss due to natural calamities, pests, and diseases.
- Stabilize farmers' income and encourage them to stay in agriculture.
- Promote modern farming practices and ensure a steady flow of credit to the agriculture sector.

Maharashtra govt presents supplementary demands worth Rs 8,609.17 crore

- The Maharashtra government, on the first day of its five-day budget session, presented supplementary demands worth Rs 8,609.17 crore.
- This is a significant decrease compared to the Rs 55,520.77 crore requested in the winter session last year.
- The additional funds are meant to cover various government expenses, including:
- Rs 2,210 crore in financial assistance to farmers affected by unseasonal rains, hailstorms, and water scarcity.
- Rs 2,031 crore as subsidy for electricity supplied to agricultural pumps, handloom, and powerloom consumers.

National Science Day

- National Science Day is celebrated in India on February 28th each year.
- It commemorates the groundbreaking discovery of the Raman Effect by the renowned Indian physicist Sir C.V. Raman in 1928.
- This remarkable work earned C.V Raman the prestigious Nobel Prize in Physics in 1930.
- The purpose of National Science Day is to:
 1. Promote scientific awareness and inspire interest in science, especially among youth.
 2. Recognize contributions of scientists to the field of science and technology.
 3. Encourage scientific temper and a spirit of inquiry within society.

Theme 2024:

- The theme for National Science Day 2024 is “**Indigenous Technologies for Viksit Bharat.**”

Did you Know?

- The **first National Science Day** was celebrated on **February 28, 1987.**
- The **National Council for Science and Technology Communication (NCSTC)**, in 1986, asked the **Government of India** to announce **February 28 as National Science Day.**

Modi to launch development projects in MH

- PM Modi will participate in a public programme in Maharashtra's Yavatmal district and will inaugurate and dedicate to the nation various development projects.
- He will also **release benefits under the PM KISAN** and other schemes during the programme
- He will also **inaugurate the statue of Pandit Deendayal Upadhyaya** in Yavatmal city.
- PM Modi will **release the 16th installment amount of more than Rs 21,000 crore under the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** through **direct benefits transfer** to beneficiaries.
- **With this release, an amount of more than Rs 3 lakh crore** will be transferred to **more than 11 crore farmers' families.**
- The PM will also **disburse second and third installments of 'Namo Shetkari MahaSanman Nidhi'** of about Rs 3,800 crore and benefiting nearly 88 lakh farmers across Maharashtra.
- The scheme **provides an additional amount of Rs 6,000 per year** to the beneficiaries of the Pradhan Mantri Kisan Samman Nidhi Yojana in Maharashtra, the release said.
- Modi will also **disburse Rs 825 crore of Revolving Fund to 5.5 lakh women Self Help Groups (SHGs)** across Maharashtra.

Marathi Language Day

- **Marathi Language Day**, also known as **Marathi Bhasha Gaurav Din**, is celebrated annually on **February 27th.**
- This day **commemorates the birth anniversary of the renowned Marathi poet,**

Vishnu Vaman Shirwadkar, popularly known as **Kusumagraj.**

Significance:

- Celebrates the **rich cultural heritage and vibrant language of Marathi.**
- **Honors the contributions of Marathi speakers to literature, art, music, and society.**
- Raises awareness about the importance of preserving and promoting Marathi.

Did you Know?

- **First successful celebration of Marathi Bhasha Gaurav Din was in 1999.**

About:

- **Marathi is an Indo-Aryan language** predominantly spoken by **Marathi people in Maharashtra.**
- It is the **official language of Maharashtra**, and an **additional official language in the state of Goa.**
- It is **one of the 22 scheduled languages of India.**

Maharashtra sees rise in fiscal and revenue deficits

- Maharashtra is grappling with **rising fiscal and revenue deficits.**
- The recent **interim budget for 2024-25 projected a revenue deficit of Rs 9,733 crore and a fiscal deficit of Rs 99,288 crore.**
- Revised estimates show the **revenue deficit reaching Rs 19,531 crore, exceeding the initial budget estimate of Rs 16,122 crore.**
- Even more concerning, the **fiscal deficit crossed the Rs 1 lakh crore mark for the first time, reaching Rs 1.11 lakh crore.**

World NGO Day

- **World NGO Day** is an annual celebration held on **February 27th to acknowledge and appreciate the vital work of non-governmental organizations (NGOs)** around the world.
- The concept originated in **2010** and gained **official recognition in 2014**, with support

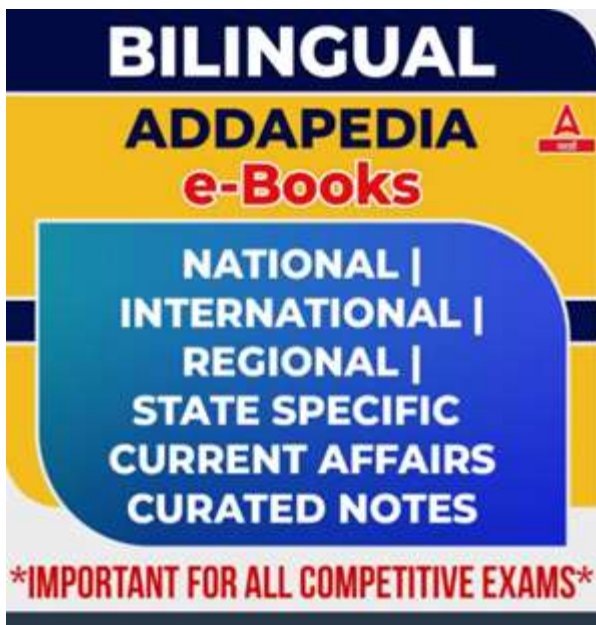
from organizations like the United Nations and the European Union.

About:

- These organizations, also known as charities, non-profits, or civil society organizations, operate independently of government control and work in diverse areas like:
 1. Humanitarian aid and disaster relief
 2. Environmental protection and sustainability
 3. Education and healthcare access
 4. Social justice and human rights advocacy

Theme:

- The theme for the 2024 World NGO Day is 'Building a Sustainable Future: The Role of NGOs in Achieving the Sustainable Development Goals (SDGs).'



7 stations to monitor noise in Pune, Pimpri Chinchwad

- The Maharashtra Pollution Control Board (MPCB) is setting up seven real-time noise monitoring stations across Pune and Pimpri Chinchwad under Phase II of the Centre's National Ambient Noise Monitoring Network (NANMN).
- The stations will monitor noise levels, generate reports, and help mitigate issues like traffic congestion, sleep problems, and

noise from industrial and construction activities.

- The stations will be located at:

A. Pune:

- Karve Road
- near Katraj Dairy
- Hadapsar Industrial Area near Honeywell Industries
- Savitribai Phule Pune University (SPPU) campus

B. Pimpri Chinchwad:

- Jagtap Dairy in Pimple Nilakh
- Dange Chowk
- Rose Garden near Bhosari

Zero Discrimination Day

- **Zero Discrimination Day**, observed annually on **March 1st**, is a global initiative to **promote equality and combat discrimination in all its forms.**
- **UNAIDS** had launched its **Zero Discrimination Campaign** on 'World AIDS Day' in **December 2013.**
- The day was **first celebrated** on **March 1, 2014**
- The day **emphasizes everyone's right to live a dignified and fulfilling life free from prejudice and bias.**
- This year marks the **10th anniversary of Zero Discrimination Day**

Theme:

- The Theme of **Zero Discrimination Day 2024** is "**To protect everyone's health, protect everyone's rights.**"
- It emphasizes upon **building association with human rights and public health and achieving the goal of eliminating AIDS by 2030.**

Pavana river now among most polluted in country

- The **Pavana River** has earned the **dubious distinction of being one of the most polluted rivers in India.**
- This alarming development is a **consequence of water quality readings, with Biochemical Oxygen Demand (BOD) levels exceeding 30 mg/L** in recent tests conducted between **November 2023 and January 2024.**

- Previously **categorized as 'priority 2'** by the Central Pollution Control Board (CPCB), the river's **current state** has necessitated an **upgrade to 'priority 1,'** signifying the urgent need for intervention.

Did you Know?

- **Origin:** The river originates from the Western Ghats, about 6 km south of Lonavala.
- **Course:** It flows eastwards initially, then turns southbound and passes through the suburbs of Ravet, Thergaon, Chinchwad, Pimpri, and Dapodi before its confluence with the Mula river near Sangvi.
- **Length:** The total length of the river is nearly 60 kilometers
- The Pavana river is the main source of water for the twin cities, with the Pimpri Chinchwad Municipal Corporation (PCMC) sourcing **80% of drinking water for its citizens from this waterbody.**

World Civil Defence Day

- **World Civil Defence Day** is an annual event observed on **March 1st** to **raise awareness about the importance of civil defence and emergency preparedness.**
- This day **highlights the crucial role of civil defence organizations in protecting communities from natural disasters, conflicts, and other emergencies.**
- It also encourages individuals to be prepared for various crises.
- It was established by the **International Civil Defence Organisation (ICDO)** in **December 6, 1990**

Theme:

- The theme of World Civil Defense Day 2024 is **"Honor Heroes and Promote Safety Skills."**

Postal dept begins its survey in Marathwada for Surya Ghar scheme

- The **Postal Department** has initiated a survey in **Marathwada to assess the feasibility of the Surya Ghar scheme.**
- This **scheme aims to provide solar powered homes to residents in the area.**

- During the survey, postal department **officials will visit households to gather information about their electricity needs** and assess their suitability for solar panel installation.
- The **collected data will be used to determine the scope of the Surya Ghar scheme in Marathwada.**

About Surya Ghar Scheme

- **Launched in February 2024,** it aims to **promote rooftop solar panels and provide free electricity to Indian households.**

Key features:

- **Target:** Equip **1 crore (10 million) homes with rooftop solar systems.**
- **Benefit:** Up to **300 units of free electricity per month.**
- **Subsidy:** Up to **60% of system cost for 2 kW systems, 40% for additional costs in 2-3 kW systems (capped at 3 kW).**

Maharashtra's GSDP has expanded by 10%, govt focus on farmers

- Finance Minister **Ajit Pawar** said that **Maharashtra's gross state domestic product (GSDP) has grown by 10 per cent in the current fiscal year** and the government is committed to ensure that revenue deficit doesn't cross the prescribed limit
- He also said that the **fiscal deficit has been restricted at 2.32 per cent of state GDP.**
- Also the **GST revenue has increased 19.9 per cent, which is the highest for a state in the country.**

About:

- **GSDP indicates total economic output generated within a state's boundaries** over a specified period, typically a fiscal year.
- Pawar said the **state's current debt is 18.02 per cent of the GSDP** and added the **prescribed limit should be 25 per cent.**

Diversion of 18 lakh tonne of sugar for ethanol production

- The **National Federation of Cooperative Sugar Mills** has **demande to divert 18 lakh tonnes of sugar for ethanol production**

- It has also demanded an **increase in MSP of sugar and removal of the 90% mandatory sale** of the monthly quota order.

Did you Know?

- **National Federation of Cooperative Sugar Mills** is the apex body of cooperative sugar mills in India.

'Trafficking of women has increased post-Covid'

- **Rupali Chakankar, chairperson of Maharashtra State Commission for Women** said that **cases of trafficking of women and girls have increased post-Covid**, and the commission has **traced nearly 1,750 of them so far**.
- She said some of them have already been brought back to India, and the rest are in the process of being brought back.
- Reason is being stated that during Covid, many **girls and young women lost their fathers and brothers who were the backbone of the family**.

Modi inaugurates projects worth over ₹4,900 crore in MH

- **PM Modi inaugurated and dedicated to the nation multiple development projects related to rail, road and irrigation worth more than ₹4900 crores at Yavatmal in Maharashtra recently**.
- He also **released benefits under PM KISAN and other schemes during the program**
- **Modi also initiated the distribution of 1 crore Ayushman cards across Maharashtra**
- **The PM launched the Modi Awaas Gharkul Yojana for OBC category beneficiaries and also flagged off two train services**.
- **Lamenting the leakage in the financial assistance to farmers, tribals and the needy during the previous governments, the PM highlighted the contrast during today's occasion of disbursement of PM Kisan Samman Nidhi worth ₹21,000 crores and deemed the gesture as Modi ki Guarantee**.

International News

Sweden joins NATO

- **Sweden has overcome the final obstacle to join NATO as Hungary has approved its accession**.
- **Sweden's parliament approved NATO accession on, marking the end of its neutrality that endured two world wars and the Cold War**.

Key points:

- **Sweden's membership will also contribute resources like advanced submarines and Gripen fighter jets to NATO**.
- **Russia's invasion of Ukraine accelerated support in Sweden for NATO membership, especially after Finland joined last year**.
- **Turkey and Hungary, however, initially raised objections, with Turkey seeking tougher action against Kurdish militants in Sweden and Hungary expressing annoyance over Swedish criticism of its democracy under Orban**.
- **Now the count of NATO countries has become 32**.

NATO:

- **The North Atlantic Treaty Organization was created in 1949** by the United States, Canada, and several Western European nations to provide collective security against the Soviet Union.
- **NATO was the first peacetime military alliance the United States entered into outside of the Western Hemisphere**.

S. Korean President to visit India

- **South Korean President Yoon Suk Yeol is expected to visit India this year, as announced by South Korean envoy Chang Jae-bok**.

Key points:

- **The two countries are hopeful of concluding ongoing negotiations to upgrade the existing CEPA**. The last round of talks on the CEPA upgrade was held in January in Delhi
- **The existing CEPA was made in 2009 and became effective in 2010**.

- Negotiations for an upgraded CEPA were held in **2016** and 2017 but halted during the pandemic.
- External Affairs Minister S. Jaishankar is **scheduled to pay bilateral visits to South Korea and Japan from March 5 to 8.**
- He will co-chair the **10th India-Republic of Korea Joint Commission Meeting (JCM) with his counterpart Cho Tae-yul.**
- There will be discussions on **defence, defence production, and economic cooperation.**
- South Korea is going to **launch its space administration very soon and is looking to cooperate with the Indian Space Research Organisation (ISRO) in low orbit satellites.**

Read more about the India- South Korea Relations

International Big Cat Alliance

- The Union Environment Ministry of India plans to establish and **coordinate an International Big Cat Alliance (IBCA).**
- This initiative, approved by the Cabinet, is similar to the International Solar Alliance.

Key points:

- India's global leadership in tiger conservation has been acknowledged.
- The IBCA, which will be headquartered in India, will spearhead initiatives to share best practices in big cat conservation. **India has committed ₹150 crore for this cause over the next five years.**

Addressing Conservation Challenges:

- Currently, there is no international body that addresses the **conservation challenges faced by big cats across their various habitats.**
- The IBCA aims to fill this gap by replicating India's pioneering and long-standing good practices in **tiger and other big cat conservation in other countries.**

Participation in the IBCA:

- So far, **16 countries have given their written consent to join the IBCA.**
- The alliance is open to the **96 countries** that are home to 'big cats', as well as other countries, conservation organizations, scientific organizations, businesses, and corporations interested in supporting 'big cats'.

India is home to **five out of seven big cat species: Tiger, Lion, Leopard, Snow Leopard, and Cheetah.** The long-standing conservation practices in India, especially for tigers, are considered pioneering and could serve as a model for other countries.

Summits & Conferences News

37th African Union Summit

During the 37th African Union Summit, African leaders underscored the imperative for overhauling the global financial framework to more effectively address the unique challenges faced by African nations, particularly in relation to climate change and advancement.

Key points:

Launch of 'Africa Club':

- The establishment of the **'Africa Club', comprising African-owned and managed multilateral financial institutions**, aimed at realigning financial operations with Sustainable Development Goals (SDGs) and Agenda 2063 of the AU.
- The objective includes **introducing innovative financial tools** and fostering collaboration to cater to the specific requirements of African countries.

Establishment of African Union Financial Institutions:

- Leaders reiterated the necessity for creating an **African Monetary Union by instituting three AU financial entities: the African Central Bank, the African Monetary Fund, and the African Investment Bank.**
- Despite historical challenges, there was a proposal to evaluate the feasibility of establishing a Pan-African Stock Exchange.

African Leaders' Call for Financial System Reforms:

- Leaders outlined key priorities for rectifying **structural imbalances in the global financial setup**, including resolving the debt crisis, augmenting grants and concessional funding to Africa, redirecting **Special Drawing Rights (SDRs) from the IMF to African financial institutions**, and enhancing African representation in global decision-making forums.
- A commitment was made to pursue an **ambitious green growth agenda for Africa**.

Presidential Dialogue on Reforming Africa's Global Financial Architecture:

- Heads of state deliberated on strategies to **meet Africa's financial requisites, stressing the need to triple concessional resources from the IMF and World Bank to African development banks**.
- They advocated for rerouting IMF SDRs to multilateral development banks for climate action financing and for including middle-income countries in the G20 Common Framework for debt restructuring.

Proposals by the President of Ghana:

- Ghana's President suggested that **30% of all African reserves held in non-African banks be allocated to African multilateral financial institutions**.
- Additionally, he proposed designating these institutions as 'AU agencies' to signify unified endorsement from all AU member states.

Schemes and Committees News

PM-Surya Ghar: Muft Bijli Yojana

The Union Cabinet approved ₹75,021-crore package for the 'PM-Surya Ghar: Muft Bijli Yojana' (PM Free Electricity scheme) aimed at **promoting rooftop solar (RTS) installations in India**.

Key points:

- Under the scheme, households can receive a subsidy of up to Rs 78,000 per household, along with 300 units of free power.

- The scheme, known as **PM-Surya Ghar: Muft Bijli Yojana**, offers a **central financial assistance (CFA) of 60% of the system cost for 2 kW systems and 40% of the additional system cost for systems between 2 kW and 3 kW capacity**, with the CFA capped at 3 kW.
- This initiative is expected to help households save on electricity bills and generate additional income by selling surplus power to DISCOMs.
- The scheme, running from **2023-24 to 2026-27**, aims to achieve a target of one crore households.
- Additionally, subsidies will be provided to resident welfare associations (RWAs) and group housing societies for solar-powered lighting.
- Out of the **targeted 45 GW solar capacity, 30 GW will be allocated for domestic housing requirements**.
- By 2025, rooftop solar panels will be installed in all government buildings.

Awards News

First Pey Jal Survekshan Awards

- The **inaugural Pey Jal Survekshan Awards**, to be presented by the President on **March 5th**, will **commend cities and states** for their outstanding achievements in the **water sector**.
- The ceremony, hosted at Vigyan Bhawan, will **honor a diverse array of 130 awards, recognizing exemplary performance in various categories**.

Key points:

- Awards comprise of **Prestigious Pey Jal Gold, Silver, and Bronze City Awards**, where Gold signifies top performers (1st) in their respective population categories (1 to 10 Lakh, 10 to 40 Lakh, and More than 40 Lakh), Silver denotes the 2nd position, and Bronze the 3rd.
- Additionally, commendations will be awarded for **Best Water Body, Sustainability Champion, Reuse Champion, Water Quality, City Saturation, and the coveted AMRUT 2.0 Rotating Trophy of the Year**.
- The meticulous evaluation process, conducted **under AMRUT 2.0 in 485 cities**, considered a **wide range of parameters, including**

access, coverage, water quality, and sustainability.

- Cities will be graded on a star rating scale, reflecting their performance across critical criteria.

AMRUT Mitra Initiative:

- This initiative aims to **actively involve women Self-Help Groups (SHGs)** in the urban water sector, empowering them to contribute significantly to **household water management and infrastructure maintenance**.

Aegis Graham Bell Awards

- C-DOT, India's leading telecom Research and Development center, has received significant recognition by winning three awards at the **14th Annual Aegis Graham Bell Awards**.
- These awards highlight C-DOT's innovative telecom solutions developed and designed in India across various categories.

Awards:

Innovation in AI: ASTR Project

- The first award, jointly shared with Google India, was conferred upon **C-DOT for its pioneering ASTR Project under the category "Innovation in AI."**
- This innovative solution is designed to **analyze, identify, and eliminate fake/forged mobile connections, marking a significant stride towards ensuring a secure telecom environment.**

Innovation in Social Good: CEIR Solution

- C-DOT secured the second award in the category **"Innovation in Social Good"** for its groundbreaking **CEIR (Central Equipment Identity Register) solution**.
- CEIR has revolutionized mobile security by detecting clone IMEIs, restricting the import of counterfeit mobile devices, and facilitating the blocking and tracing of lost or stolen phones.

Innovation in Telecom: Quantum Key Distribution (QKD) Product

- The third accolade was bestowed upon C-DOT in the category **"Innovation in Telecom"** for

its **Quantum Key Distribution (QKD) product**.

- This revolutionary solution ensures unparalleled security, marking a significant advancement in the field of telecommunications.

Defense News

Defence Ministry Signs Five Major Contracts

- The Union Ministry of Defence signed five major capital acquisition contracts worth **₹39,125.39 crore for the three services**.
- These deals aim to strengthen **indigenous capabilities, save foreign exchange, and reduce dependency on foreign origin equipment manufacturers**.

Key points:

Contract with Hindustan Aeronautics Limited (HAL):

- A contract worth **₹5,249.72 crore was signed with HAL for the procurement of RD-33 aero engines for MiG-29 aircraft**.
- These engines will be manufactured by the Koraput Division of HAL **under a Transfer of Technology (TOT) licence from the Russian OEM**.
- This programme will focus on the indigenisation of high-value critical components, which would help **increase the indigenous content of future Repair and Overhaul (ROH) tasks of RD-33 aero-engines**.

Impact on Indian Air Force (IAF):

- The IAF operates three squadrons of upgraded **MiG-29UPG**.
- These aero engines are expected to fulfil the need of the IAF to sustain the operational capability of the MiG-29 fleet for the residual service life.

Contracts with Larsen & Toubro (L&T):

- Two contracts were signed with L&T.
- The contract for **Close-in Weapon System (CIWS)** is worth ₹7,668.82 crore, and the deal for **High-Power Radar (HPR)** is at a cost of ₹5,700.13 crore.

- The CIWS will provide terminal air defence to select locations of the country.
- The HPRs contracted will replace existing long-range radars of the IAF with modern active aperture phased array-based HPR with advanced surveillance features.
- **This will significantly enhance the terrestrial air defence capabilities of IAF.**

Employment Generation: The projects with L&T are expected to generate direct and indirect employment of approximately an average of 2,400 persons per year for five years (CIWS) and 1,000 people/year over five years (HPR).

Contracts with BrahMos Aerospace Private Limited (BAPL): Two contracts were signed with BAPL for the procurement of **missiles worth ₹19,518.65 crore and ship-borne BrahMos system worth ₹988.07 crore.** These missiles will be utilised to meet combat outfit and training requirements of the Navy. This project is likely to generate employment of nine lakh man-days in Joint Venture entity and around 135 lakh man-days in ancillary industries, including MSMEs.

Exercise SAMUDRA LAKSAMANA

- Exercise Samudra Laksamana is currently underway from 28 Feb - 02 Mar 24 at/ off Visakhapatnam.
- The Indian Naval Ship Kiltan and the Royal Malaysian Ship KD Lekir are participating in the 3rd edition of this exercise.

Key points:

- During the harbour phase, the crew of both ships engage in various professional interactions, Subject Matter Expert Exchanges on topics of mutual interest, sports fixtures, and other interactions. **These interactions aim to enhance the knowledge base, share best practices, and further cooperation on maritime aspects.**
- In the sea phase, units jointly hone their skills while conducting various operations at sea.
- **The exercise aims to strengthen bonds and enhance interoperability between the Indian and Royal Malaysian Navy.**

Exercise Harimau Shakti: It is a bilateral exercise between the Indian Army and the Malaysian Army. It focuses on counter-insurgency and counter-terrorism operations in rural and urban environments.

Ranks & Reports News

India's leopard population rises to 13,874

- India's leopard population has increased to 13,874, with **Madhya Pradesh** leading the count at 3,907.
- Only three other States reported over 1,000 animals each — Maharashtra (1,985), Karnataka (1,879) and Tamil Nadu (1,070)

Key points:

- The **Shivalik hills and the Gangetic plains recorded 3.4% yearly decline**, while **Central India and the Eastern Ghats, the Western Ghats and the hills of the northeast**, and the Brahmaputra flood plains recorded growth of **1.5%, 1%, and 1.3%** per annum respectively
- **The decline in Uttarakhand's big cat population by 22%** is likely due to poaching and man-animal conflicts.
- **Arunachal Pradesh, Assam, and West Bengal** collectively saw a 150% rise to 349 animals.
- The survey focused on about 70% of the animals' expected habitat, including tiger reserves and protected forest areas.

Science and Technology News

CE-20 engine

- The Indian Space Research Organisation (ISRO) achieved a notable accomplishment on February 21 by declaring the successful human-rating of the **CE-20 rocket engine.**
- This homegrown cryogenic engine, designed to propel the GSLV Mk III (**currently known as LVM-3**) launch vehicle, signifies a crucial progression in India's space exploration efforts, especially with regard to the **forthcoming Gaganyaan mission.**

Key points:

- ISRO has developed three cryogenic engines: KVD-1, CE-7.5, and CE-20.
- The CE-20 engine, using the gas-generator cycle, is easier to build and test compared to the CE-7.5 engine, which uses the **staged-combustion cycle**.
- Despite the CE-7.5 engine's higher fuel-use efficiency, the **CE-20 engine achieves a higher maximum thrust, making it ideal for the LVM-3 launch vehicle and the Gaganyaan mission.**

Read more about Cryogenic Engines.

Garbhini-GA2

- Researchers from BRIC-THSTI(Translational Health Science and Technology Institute) Faridabad and IIT Madras have developed an India-specific model, **Garbhini-GA2, to precisely determine the age of a foetus in pregnant women during the second and third trimesters.**

Key points:

- It is part of an interdisciplinary group for advanced research on birth outcomes – the Department of Biotechnology (DBT) India initiative (GARBH-Ini) programme.
- The model's accuracy is crucial for pregnant women's care and determining delivery dates accurately.

Gestation period:

- Gestation refers to the duration between **conception and birth, during which the baby develops inside the mother's womb.**
- Gestational age, a common term in pregnancy, indicates how far along the pregnancy has progressed, typically measured in weeks from the first day of the woman's last menstrual cycle.
- **A normal pregnancy usually lasts between 38 to 42 weeks.**

Gaganyaan crew

- **Four IAF pilots have been identified as potential crew members for the Gaganyaan mission, as Prime Minister Narendra Modi honored them with 'astronaut wings' during his**

visit to the Vikram Sarabhai Space Centre in Thiruvananthapuram.

Key points:

- These pilots have undergone rigorous training **both in Russia and at the ISRO Astronaut Training Facility in Bengaluru.**
- In preparation for the crewed mission, ISRO is conducting various tests, including Integrated Air Drop tests, Test Vehicle Missions, and pad Abort Tests, with unmanned flights preceding the actual mission.
- **Additionally, ISRO has unveiled plans to send astronauts to the moon by 2040.**

Gaganyaan:

- The Gaganyaan Mission is India's ongoing endeavor **to launch a three-day manned mission into Low Earth Orbit (LEO) at an altitude of 400 km, carrying a crew and safely returning them to Earth.**
- The inaugural manned spaceflight is scheduled for **2024(by the end of the year).**
- Success in this mission will elevate India to join the elite group of nations—**US, Russia, and China—with human spaceflight capabilities.**

India Completes '10,000 Genome' Project

- The **Department of Biotechnology (DBT)** has announced the completion of the **'10,000 genome' project, aiming to create a reference database of whole-genome sequences from India.**
- The **United Kingdom, China, and the United States** are among the countries that have programmes to sequence at least 1,00,000 of their genomes.

Key points:

- Project was launched in **2020.**
- India's 1.3 billion population comprises over 4,600 endogamous groups, leading to **significant genetic diversity.**
- Over **20 institutions**, including the Indian Institute of Science (IISc), Bengaluru, and the Centre for Cellular and Molecular Biology, Hyderabad, are involved in the project.

Aim:

- The project aims to gain deeper insights into **India's population diversity, improve diagnostic methods and medical counseling, find genetic predispositions to disease, develop personalized drugs, improve gene therapy, and understand individual susceptibility to infectious diseases.**

Definition: A genome is the complete set of genetic material within an organism. It contains all the information needed for the development, functioning, and reproduction of that organism.

India to have its own space station by 2035

- India is set to establish its own space station by 2035, as announced by Prime Minister Narendra Modi.
- Emphasizing India's space ambitions, Modi mentioned plans for a crewed lunar mission by 2040, with an Indian astronaut landing on the moon using an Indian spacecraft during "Amrit Kaal."
- PM described the Gaganyaan astronauts as not just individuals but embodiments of the nation's collective strength.

Miscellaneous News

Temple Discoveries in Telangana: Unveiling the Chalukya Kingdom's Reach

- Despite the nearly 500 km distance between Mudimanikyam in Telangana and Badami in Karnataka, recent archaeological findings reveal that **Mudimanikyam, a Village in Nalgonda District, was once under the rule of the Badami Chalukyas.**

Key points:

- Archaeologists unearthed **two temples on the river bank and five within the village.**
- Additionally, they found an **inscription** dating back to the reign of the Badami Chalukyas, who ruled from **543 AD to 750 AD.**
- Temples reflect the **cosmopolitan nature of the Deccan region**, where multiple religions coexisted.

- Alongside the Brahmanical religion, there was room for **Buddhism and Jainism**, demonstrating the religious diversity of the time.
- Even after the fall of the kingdom, which once governed present-day Karnataka and Andhra Pradesh, the region maintained a vibrant community of devotees worshipping **Hindu deities Vishnu and Shiva.**
- The farthest known boundaries of the Chalukya Badami kingdom were previously identified as the **Jogulamba temples at Alampur and the submerged Yeleswaram sites.**
- These new discoveries extend the historical reach of the kingdom.

Chalukyas: Period

- The Chalukya dynasty was a Hindu dynasty that ruled large parts of southern and central India between the **6th and the 12th centuries.**

They ruled as three related yet individual dynasties:

Badami Chalukyas: Ruled from Vatapi (modern Badami) in Karnataka, from the middle of the 6th century.

Eastern Chalukyas: Became an independent kingdom in the eastern Deccan after the death of Pulakeshin II. They ruled from Vengi until about the 11th century.

Western Chalukya Empire: Descendants of the Badami Chalukyas, they emerged in the late 10th century and ruled from Kalyani (modern-day Basavakalyan) until the end of the 12th century.

Architecture:

Vesara Style: The Chalukyas invented the Vesara style while constructing structural temples. This style is a hybrid of **Nagara and Dravida styles.**

Distinctive Features:

- Chalukya architecture has both **cave temple design and structured temple design**.
- Chalukya architects used the stellate plan or northern stepped diamond plan for architectural design.

First Lunar Landing by a PRIVATE FIRM

- On 24th February, 2024, a significant milestone in the field of Science and Technology was achieved when the **Odysseus lander, built by Intuitive Machines, successfully landed on the moon**.

Key points:

- This achievement marks the return of the United States to the lunar surface for the first time since the closure of **NASA's Apollo program in 1972**.
- The successful landing by Intuitive Machines marks a significant milestone in space exploration, demonstrating the growing capabilities of the private sector in lunar missions.
- With more planned missions in the future, the moon continues to be a focal point for exploration and scientific discovery.

Sudarshan Setu

- Prime Minister Narendra Modi inaugurated the **Sudarshan Setu, India's longest cable-stayed bridge**, linking mainland Gujarat with Bet Dwarka island off the Okha coast in Devbhumi Dwarka.
- Also known as **Signature Bridge**, it is **Gujarat's first sea link**.
- **Total length:** 4,772m, including a 900-m-long cable-stayed section.
- **Cost:** Rs 978 crore, funded by the Union government.

Maryam Nawaz sworn in as Chief Minister

- Maryam Nawaz has been sworn in as the Chief Minister of Punjab.
- This makes her the **first woman to hold this position in Pakistan's eastern Punjab province**.
- She won after receiving 220 votes in the 371-member Punjab Assembly.

About:

- Maryam Nawaz, the **daughter of former Pakistan Prime Minister Nawaz Sharif**, has become the fourth member of her family to hold the position of Punjab Chief Minister.
- Previously, this role was held by her father, his brother Shehbaz, and Shehbaz's son Hamza.
- Maryam became more involved in politics and assumed a significant role in the party after **Nawaz Sharif was disqualified from the prime minister's post in 2017**.

India's First Indigenous Hydrogen Fuel Cell Ferry

- Prime Minister Narendra Modi flagged off **India's first indigenously built hydrogen fuel cell ferry boat**.
- This vessel, part of the Harit Nauka initiative, was built at the **Cochin Shipyard**.
- It's a 24-metre catamaran that can carry 50 passengers in a fully air-conditioned space.
- This initiative aligns with India's commitment to **net-zero emissions, showcasing the potential of green hydrogen as a sustainable fuel source**.
- The launch of this ferry marks a significant stride in India's technological prowess and is expected to provide impetus for using hydrogen in marine applications.
- The vessel's technology is **fully home-grown and can be replicated in other parts of the country for urban mobility applications**.

Pancheshwar project

- More than a month after **India and Nepal signed an agreement on long-term power sharing**, the two sides have not managed to make any forward movement on the stalled negotiations over the landmark **Pancheshwar Multipurpose Project (PMP)**.

About:

- The PMP is aimed at generating around **6,480 MW energy (to be divided equally between two sides)**, along with water for irrigation of **1,30,000 hectares of land in Nepal and 2,40,000 hectares of Indian territory, respectively**.

- The project is stalled because the Indian and the Nepali sides are unable to come to a consensus on sharing of benefits.
- While electricity is divided equally, India gets the lion's share of irrigation and flood control benefits.
- On the other hand, Kathmandu feels water is 'white gold' and India should pay Nepal for it.

Details:

- The **Sharda River, also called Kali River and Mahakali River, originates at Kalapani** in the Himalayas at an elevation of 3,600 m (11,800 ft) in the Pithoragarh district in Uttarakhand.
- It flows along **Nepal's western border with India and has a basin area of 14,871 km².**
- The Pancheshwar Dam, a joint venture of India and Nepal for irrigation and hydro-electric power generation was proposed on this river.

Read more about the Mahakali treaty.

India's Fight Against Rare Diseases

The tragic death of 19-year-old child actress Suhani Bhatnagar from dermatomyositis, a rare disorder that causes inflammation in muscles, came in the same month as Rare Disease Day. The last day of February every year is consecrated to support crores of individuals who, because of their rare medical conditions, have long been neglected and stigmatised.

Global Perspective

- According to the **World Health Organization, rare diseases afflict 1 or less per 1,000 population.**
- Barely 5% of the over 7,000 known diseases worldwide are treatable.
- Most patients typically receive only basic treatment that alleviates symptoms.
- Some require exorbitantly priced antidotes and supportive medication throughout their lives, which they can't afford.

Rare Diseases in India

- India accounts for **one-third of the global rare disease incidence**, with over 450 identified diseases.
- These range from widely known ones such as Spinal Muscular Atrophy and Gaucher's disease to lesser-known ones such as

Mucopolysaccharidosis type 1 and Whipple's disease.

- Roughly about **8 crore-10 crore Indians suffer from one rare disease or another**; over 75% are children.
- Yet these diseases are **largely overlooked**. Resource constraints apart, India languishes near the bottom on awareness, diagnosis, and drug development for rare diseases.

Way forward:

- State governments must introduce **social assistance programmes and develop satellite centres under the CoEs.**
- Public and private companies could be co-opted for funding;
- CSR initiatives and partnerships can be leveraged to meet shortfalls.

ZSI names a newly discovered sea slug after President Murmu

- The Zoological Survey of India (ZSI) has named a newly discovered **sea slug, Melanochlamys droupadi, after President Droupadi Murmu.**

Key points:

- This head-shield sea slug, characterized by a ruby red spot, was identified by researchers.
- **Melanochlamys droupadi**, a species found exclusively along the **West Bengal and Odisha** coasts, features a **short, blunt, cylindrical body with a smooth dorsal surface, including two dorsal shields named the anterior cephalic and posterior shield.**
- **Melanochlamys droupadi** is a small **invertebrate**, reaching a **maximum length of 7 mm, with a brownish-black color and a ruby red spot at the hind end.**
- It is hermaphroditic and typically crawls in the intertidal zone, leaving crawl marks on sandy beaches.
- The species reproduces between **November and January.**
- Although species of the **Melanochlamys** genus are primarily found in temperate regions of the Indo-Pacific Oceanic realm, three species, including **Melanochlamys droupadi**, are distributed in tropical regions.

- According to the researchers, live *Melanochlamys droupadi* animals secrete transparent mucus to form a sheath that prevents sand grains from entering the parapodial space.
- They crawl beneath smooth sand, creating a moving capsule where the body is rarely visible.

Roen olmi

- Researchers in Goa have achieved a significant breakthrough by **producing gold nanoparticles from a wild mushroom species known as Termitomyces**, which is popularly consumed in the coastal state.
- The mushrooms, locally called '**roen olmi**' and **growing on termite hills**, have been cultured in a pure three-dimensional pelletised form for this purpose.

About:

- Roen Olmi is a mushroom species that falls under the **Termitomyces genus**.
- In Goa, it's commonly referred to as 'roen olmi' and is a favored edible wild mushroom, particularly relished during the monsoon season.

Habitat and Proliferation

- Roen Olmi mushrooms thrive on termite mounds and are dependent on termites for their growth, lacking an independent existence.
- They are native to the **Western Ghats**, where the dense forest canopy and high humidity create a perfect environment for their proliferation.

Ecological Impact

- Roen Olmi contributes significantly to forest and grassland ecosystems by transforming half of the dead plant matter into **nutrient-dense soil**.
- It serves as a **potent bio degrading fungus**.

Nutritional and Health Benefits

- Termitomyces species, including Roen Olmi, are **edible and are valued for their unique**

texture, taste, nutritional composition, and medicinal benefits.

- They exhibit **antioxidant and antimicrobial properties**.
- Their ethno-medicinal significance is acknowledged in various indigenous communities across Asia and Africa.

Vikramaditya Vedic Clock

The Vikramaditya Vedic Clock, situated on an 85-foot tower within Jantar Mantar in Ujjain, Madhya Pradesh, was virtually inaugurated by Prime Minister Narendra Modi.

Timepiece Based on Indian 'Panchang':

- This unique timekeeping system is based on the **Indian 'panchang'** (almanack).
- It provides a wealth of information, including **planetary positions, Muhurat, and astrological calculations**.
- It also displays Indian Standard Time (IST) and Greenwich Mean Time (GMT).
- Ujjain has a rich history in time calculation. The standard time of the world was determined from Ujjain 300 years ago.
- The city, through which the **Tropic of Cancer passes, is considered a hub for time calculation**.

Unique Features of the Vedic Clock:

- The clock serves multiple purposes beyond just indicating time.
- It provides details such as the **moon's position, Parva, Shubh Muhurat, Ghati, Nakshatra, and more**.
- Its design aims to revive the tradition of Indian time calculation based on astronomical theories.

Clock's Operational Mechanism:

- The Vedic clock calculates time from one sunrise to the next, dividing the period into 30 parts.
- Each hour consists of 48 minutes according to ISD. The clock starts at 0:00 with the sunrise and operates for 30 hours.

Understanding Greenwich Mean Time (GMT): Greenwich Mean Time, the mean solar time at the Royal Observatory in Greenwich, London, serves as the benchmark for timekeeping. Established in the 19th century, the Royal Observatory was designated as the prime meridian (0° longitude), dividing the Earth into Eastern and Western Hemispheres.

Civil Accounts Day 2024

The Civil Accounts Day 2024 on 1st March was celebrated in New Delhi to mark the **48th foundation day of the Indian Civil Accounts Service (ICAS).**

Key points:

- The **Indian Civil Accounts Service was constituted in 1976**, following the separation of the maintenance of Accounts of the Union government from Audit.
- This led to the **Comptroller and Auditor General of India being divested of this responsibility.**
- ICAS is one of the Civil Services of India ("Group A") and falls under the **Department of Expenditure in the Union Ministry of Finance.**
- The service was created with the purpose of separating **Auditing and Accounting functions of the Union Government**, with deputation and transfer from the Indian Audit and Accounts Department.
- ICAS is **responsible for the development of processes, systems, and forms related to government accounts of the Union of India and the states.**
- It frames and optimises manuals, rules, and procedures for accounting of receipts and payments according to Government Accounting Rules, 1990.
- ICAS also prepares **monthly and annual account statements, conducts periodic audits of revenue, deficits, and borrowings, and monitors and reconciles cash balances of the Government of India with the Reserve Bank of India.**

DoomsDay Glacier

- The **Thwaites Glacier, often referred to as the "doomsday glacier,"** began its rapid

retreat earlier than previously known, likely starting in the **1940s, according to a study that utilized new satellite technology.**

Location: Located in **West Antarctica, the Thwaites Glacier spans approximately 192,000 square kilometers (74,000 square miles) and is situated adjacent to the Amundsen Sea.**

Significance: Thwaites Glacier, one of the widest and fastest-flowing glaciers in Antarctica, **acts as a major conduit for the flow of ice from the West Antarctic Ice Sheet into the ocean, significantly contributing to global sea-level rise.**

Concerns:

- Recent years have seen accelerated melting and thinning of the Thwaites Glacier.
- The retreat of the grounding line, the transition point where the glacier's ice shifts from resting on bedrock to floating on the ocean, destabilizes the glacier and contributes to sea-level rise.
- The glacier's complete collapse could raise sea levels by several feet and undermine the stability of the West Antarctic Ice Sheet, causing catastrophic global flooding.

The Thwaites Glacier is a critical component of the Antarctic ice sheet. Its rapid melting poses significant risks for global sea-level rise, highlighting the urgent need for strategies to mitigate the impacts of climate change. The glacier's retreat was likely triggered by an extreme El Niño event at a time when the glacier was already in a phase of melting.

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