NEXT IAS

DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

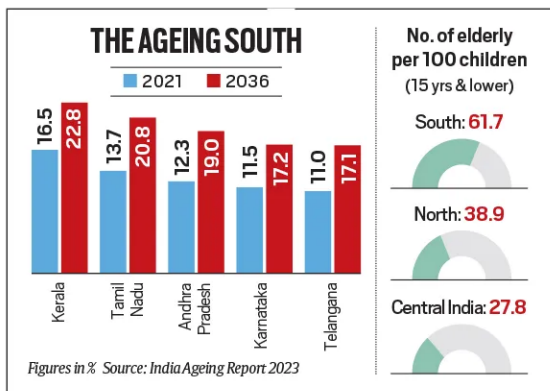**Date:** 22-10-2024

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SOUTH INDIA'S AGEING POPULATION

Context

- Andhra Pradesh Chief Minister pointed to a **declining fertility rate** in southern states, which has dropped to 1.6—well below the national average of 2.1.

Trends in Southern India Population

- **Declining Fertility Rates:** Southern Indian states like Andhra Pradesh, Tamil Nadu, and Kerala have already reached or are **nearing replacement-level fertility (2.1 children per woman)**. For instance:

THE AGEING SOUTH

2021　2036

Kerala 16.5 / 22.8
Tamil Nadu 13.7 / 20.8
Andhra Pradesh 12.3 / 19.0
Karnataka 11.5 / 17.2
Telangana 11.0 / 17.1

Figures in % Source: India Ageing Report 2023

No. of elderly per 100 children (15 yrs & lower)
South: 61.7
North: 38.9
Central India: 27.8

  - **Andhra Pradesh** achieved this in 2004.
  - **Kerala** reached this level as early as 1988.
  - These states have significantly **lower fertility rates compared to Northern India**, contributing to slower population growth.

- **Aging Population:** With **lower fertility rates and increasing life expectancy**, the population in Southern India is aging rapidly:

  - **Kerala's 60+ population is projected to rise from 13% in 2011 to 23% by 2036.**
  - Andhra Pradesh and Tamil Nadu are also witnessing a similar demographic shift, creating a growing proportion of elderly residents.

- **Population Growth Contribution:** Southern states are projected to **contribute only 9% to India's total population growth from 2011 to 2036**. In contrast, Northern states like Uttar Pradesh and Bihar will account for a much larger share of India's future population growth.

- **Internal Migration and Workforce:** Due to declining birth rates and a shrinking working-age population, Southern states are **becoming more reliant on migrants from Northern India** to fill labor shortages and maintain economic growth.

- **Impact on Political Representation:** Slower population growth in Southern India raises concerns about political representation. After the delimitation of constituencies, Southern states might lose some parliamentary seats, while more populous Northern states like Uttar Pradesh and Bihar may gain representation.

- **Economic and Healthcare Strain:** The growing elderly population in Southern states is expected to increase healthcare expenditures and place further demands on social security systems.

POPULATION BY PERCENTAGE IN DIFFERENT AGE BRACKETS

INDIA	2011	2036 (PROJECTED)
0-14 years	30.9	20.1
15-59 years	60.7	64.9
60+ years	8.4	14.9

Andhra Pradesh	2011	2036	Uttar Pradesh	2011	2036
0-14 years	25.2	15.7	0-14 years	36	22
15-59 years	64.8	65.3	15-59 years	56.7	66.1
60+ years	10.1	19	60+ years	7.3	11.9

Source: Population Projection by Ministry of Health and Family Welfare

Challenges With Population Decline

- **Economic Impact:** A high percentage of the aging population does imply that the state may have to spend more on taking care of this growing population.

  - There is an increased pressure on pension systems and social security.

- **Need of Caregiving:** With a rise in the elderly population, there is a growing need for caregivers.

  - Families can struggle to balance caregiving responsibilities with work and personal lives.

- **Social Isolation:** Older adults often face social isolation, especially in urban areas where traditional family structures are changing.

- **Impact on women:** Poverty is inherently gendered in old age when older women are more likely to be widowed, living alone, with no income and with fewer assets of their own, and fully dependent on family for support.

- **Policy Development:** There is a need for comprehensive policies addressing the needs of older adults, including healthcare, housing, and social welfare.

- **North-South Divide:** Northern states like Uttar Pradesh, which contribute more to India's population, may see increased political and economic focus, affecting resource distribution.

Way Ahead

- **Promoting Internal Migration:** Southern states can alleviate workforce shortages by drawing in workers from Northern India, which has a larger working-age population. This can help bridge the gap created by a declining young population in the South.

- **Workforce Development:** Investments in automation, advanced technology, and skills retraining programs will be key to efficiently

managing a shrinking labor force. This approach can maintain productivity while mitigating the effects of fewer young workers.

- **Incentivize families:** Focus on healthcare, education, and employment opportunities—could be more effective in encouraging higher birth rates.

- **Balanced Growth:** To minimize regional disparities, equal emphasis on economic and social development across both Northern and Southern states is crucial. This can ensure sustainable internal migration and reduce socio-economic imbalances across regions.

Source: IE

RURAL YOUTH LEAD INDIA'S DIGITAL TRANSFORMATION

In News

- Rural Youth are seen as the driving force behind India's aspirations, especially during the digital transformation.

About

- Rural India is undergoing a remarkable transformation as more young people embrace technology and connect to the digital world.

- The adoption of mobile technology is on the rise, with a growing number of rural youths integrating digital tools into their daily lives

Data Analysis

- **Mobile Usage:** High Adoption: 95.7% of rural youth (aged 15-24) use mobile phones; 99.5% have 4G coverage**.**

- **Internet Access:** 82.1% of rural youth can access the internet, with rapid growth noted.
  - 80.4% of rural youth used the internet in the three months prior to the survey.
  - Internet usage is increasing, closing the gap with urban areas, which stands at 91.0%.

Impact of Digitalization

- **Digital competence grows:** 74.9% of rural youth can send basic messages.
  - Skills in data management (copying, pasting) are growing, with 67.1% capable of these tasks.
  - 60.4% actively search for information online**.**

- The digital expansion is helping rural youth adopt technology, improving **communication, education, and financial activities.**
  - The shift towards digitalization is enhancing efficiency and empowering individuals, particularly in rural areas.

Challenges in Digital Skills

- Emailing skills are limited (43.6% can send emails).

- Online banking capabilities are low, with 31% able to conduct transactions.

Government Initiatives:

- Digital India Initiative: Promotes technology and innovation through various schemes (e.g., TIDE 2.0, GENESIS).

- BharatNet Project: Aims to connect rural areas with optical fiber for broadband access.

- Public Wi-Fi Initiatives: PM-WANI provides public Wi-Fi hotspots across India.

Future Outlook:

- Rural digital expansion in India is enabling young people to adopt technology, bringing significant changes to everyday life and narrowing the gap between urban and rural areas

- Continued improvements in digital literacy and infrastructure will enable rural youth to play a vital role in a more connected and inclusive India.

Source :PIB

ADMINISTRATIVE ALLOCATION OF SATELLITE SPECTRUM

Context

- The Union Communications Minister confirmed that the spectrum for satellite communication will be allocated administratively, rather than through an auction of airwaves.

What is Satellite spectrum?

- Satellite spectrum refers to the **radio frequencies** used for satellite communications.
  - These frequencies enable satellite-based systems to **transmit data and signals between satellites** in orbit and ground stations.

- Unlike terrestrial spectrum, satellite spectrum operates without national territorial limits and is managed globally by the **International Telecommunications Union (ITU).**

- Satellite spectrum is divided into different frequency bands, each suited for specific types of communication;
  - **L-band (1–2 GHz):** Used for mobile satellite services, GPS, and maritime communication.
  - **S-band (2–4 GHz):** Used for mobile satellite communication, weather satellites, and some satellite TV.

- ◆ **C-band (4–8 GHz):** Primarily used for satellite TV broadcasting and long-distance communication.
- ◆ **X-band (8–12 GHz):** Used for military communication and radar applications.
- ◆ **Ku-band (12–18 GHz):** Common for satellite TV, broadband internet, and fixed satellite services.
- ◆ **Ka-band (26–40 GHz):** Used for high-speed satellite internet, military communications, and high-resolution satellite imagery.

Potential of Satellite Communication (Satcom) in India

- India's satcom sector, currently standing at **$2.3 billion** a year and will reach **$20 billion by 2028.**
- **India is ranked fourth** in terms of investments in the sector globally.
- **In India roughly 290.4 million households** are untapped with broadband, which present a strong market opportunity for satellite operators.

Benefits of Satellite Communication

- Satcom services use an array of satellites in orbit to provide connectivity on the ground. They do not require wires to transmit data, and are an alternative to ground-based communication, called terrestrial networks, such as cable, fiber, or digital subscriber line (DSL).
- **Wider Coverage:** Satcom can reach remote and rural areas that are inaccessible to terrestrial networks.
- **Resilient Network:** Satellite-based Internet is generally more resilient than terrestrial services due to fewer components on the ground. This makes it less vulnerable to damage from extreme weather events, ensuring more reliable service during crises.
- **Reduced Infrastructure Requirements:** Unlike terrestrial networks, which require extensive physical infrastructure (like cables and towers), satcom can cover vast areas with minimal equipment installation.

Spectrum allocation in India

- **Spectrum for satcom** is part of the first schedule of **The Telecommunications Act, 2023** ("Assignment of spectrum through administrative process").
- **Under Section 4(4)** of the Act, telecom spectrum shall be assigned through auction "except for entries listed in the **First Schedule** for which assignment shall be done by administrative process".
- **Administrative process** under the Act means assignment of spectrum without holding an auction (a bid process for assignment of spectrum).

Purpose of Administrative Allocation

- **For terrestrial mobile services,** spectrum is exclusive, and is managed only by a single mobile operator in a given geographical area; therefore, this cannot be shared between or amongst operators.
- **In the case of satellites**, the same spectrum is **non-exclusive** in nature, and can be used by multiple satellite operators to serve the same geographical area.
  - ◆ The general trend, therefore, is to allocate satellite spectrum administratively.
- **Countries like the US, Brazil, and Saudi Arabia** previously held auctions for satellite spectrum, including orbital slots. However, both the US and Brazil reverted to administrative assignment after finding auctions impractical.

International Telecommunications Union (ITU)

- **It is the United Nations specialized agency** for Information and Communication Technologies (ICTs).
- **Founded in 1865** to facilitate international connectivity in communications networks.
  - ◆ **India** has been a member of **ITU since 1869.**
- **Functions:** It allocates global radio spectrum and satellite orbits.
  - ◆ It develops the technical standards that ensure networks and technologies seamlessly interconnect, and strive to improve access to ICTs to underserved communities worldwide.

Source: IE

ROME DECLARATION ON WATER SCARCITY IN AGRICULTURE

Context

- The Food and Agriculture Organization (FAO) and Global Framework on Water Scarcity in Agriculture (WASAG) adopted the Rome Declaration on Water Scarcity in Agriculture.

About

- The declaration was launched on the occasion of the **High-level Rome Water Dialogue,** taking place on the sidelines of FAO's annual **World Food Forum (WFF).**
- **The Declaration was aimed** at addressing water scarcity increasingly exacerbated by the climate crisis.

- **The WASAG initiative** was launched at the United Nations Climate Conference in Marrakesh in **2016** to support countries in addressing water scarcity challenges.

Food and Agriculture Organization (FAO)

- FAO is a **specialized agency of the United Nations** that leads international efforts to defeat hunger and improve food security.

- **It was founded** on 16 October 1945.

- **Members:** The FAO comprises 195 members, including 194 countries and the European Union.

- **Headquarters:** Rome, Italy.

World Food Forum (WFF)

- **WFF was launched in 2021** by the Youth Committee of the Food and Agriculture Organization as an independent network of partners.

- **It serves as the premier global platform** to actively shape agrifood systems for a better food future, accelerating the achievement of the Sustainable Development Goals (SDGs).

- **Key highlight:** The **Global Family Farming Forum** was launched by the FAO and the International Fund for Agricultural Development (IFAD).

- **The theme of 2024 WFF**: 'Good food for all, for today and tomorrow'.

What is Family Farming?

- Family farming refers to agricultural activities that are managed and operated by families, relying primarily on family labor.

- It encompasses all family-based agricultural activities, including crops, forestry, fisheries, and pastoralism.

Significance of Family farming

- Family farming, with over **550 million farms worldwide,** is the backbone of food production, accounting for over **90 per cent of all farms**,

  - It produces **70 to 80 percent of the world's food** in value terms.

- Family farmers, especially in low- and middle-income countries, grow diverse, **nutritious food, support crop biodiversity** and manage natural resources responsibly.

- **The United Nations Decade of Family Farming (UNDFF) 2019-2028** was adopted on December 20, 2017 by the UN General Assembly unanimously and supported by 104 countries.

Challenges Faced by Family Farming

- **Climate Change:** It is vulnerable to the impacts of climate change, such as droughts, floods, and unpredictable weather patterns, which affect crop yields and food production.

- **Access to Resources:** The small family farms face limited access to land, water, financial services, technology, and markets, impeding their ability to increase productivity and income.

- **Policy and Institutional Support:** In many regions, family farmers receive insufficient government support in terms of subsidies, infrastructure, and favorable policies that could help them compete in larger markets.

Way Ahead

- **Promoting climate-smart agricultural** practices is essential to help family farmers adapt to changing environmental conditions.

- **Engaging the younger generation** in farming through education, skill development, and financial incentives will help ensure the continuity of family farming.

Source: DTE

NEED FOR NATURE RESTORATION LAW IN INDIA

Context

- India needs a comprehensive nature restoration law, inspired by the **European Union (EU) Nature Restoration Law**, to address its growing environmental crises and land degradation.

Nature Restoration Law

- The law aims to **repair the 80% of European habitats** that are in poor condition by **2050.**

- There will be **legally binding targets** for every Member State.

- The aim is to cover at least **20% of the EU's land and sea areas by 2030** with nature restoration measures, and eventually extend these to all ecosystems in need of restoration by 2050.

Need for Restoration Law in India

- **Land Degradation:** According to the Indian Space Research Organisation (ISRO)'s Desertification and Land Degradation Atlas, nearly **97.85 million hectares (29.7%) of India's** total geographical area underwent land degradation in **2018-19.**

- **Global Commitments:** India has committed to restoring **26 million** hectares of degraded land by 2030 as part of the **Bonn Challenge** and the UN's Land Degradation Neutrality goals.

- **Climate Change Vulnerability:** Degraded land exacerbates the impacts of climate change, making regions more prone to droughts, floods, and other climate-related disasters.

Benefits of restoration

- According to the **World Economic Forum**, nature restoration could globally generate economic returns of up to **$10 trillion annually by 2030.**
  - In India, restoring degraded lands would enhance agricultural productivity, improve water security, and create millions of jobs, particularly in rural areas.
- **SDG Goal 15:** The law could also help India meet its Sustainable Development Goals (SDGs) Goal 15, which calls for the sustainable management of forests and combating desertification.
- **Climate resilience:** Restoring ecosystems can also mitigate the effects of climate change, which exacerbates land degradation. Degraded land loses its capacity to absorb carbon dioxide, further contributing to global warming.
- **International agreements:** By restoring its ecosystems, India can enhance its carbon sinks and meet its commitments under the **Paris Agreement.**

Initiatives taken by India

- **Green India Mission:** It aims to increase forest and tree cover by 5 million hectares and improve the quality of forest cover in another 5 million hectares.
- **Pradhan Mantri Krishi Sinchayee Yojana:** It aims to improve irrigation coverage and enhance water use efficiency in agriculture.
  - It focuses on "more crop per drop," through measures like rainwater harvesting, watershed management, and micro-irrigation
- **Integrated Watershed Management Programme:** It is the second-largest watershed programme in the world. It seeks to restore ecological balance by harnessing, conserving, and developing degraded natural resources like soil, vegetation, and water.
- **National Afforestation Programme:** It supports the afforestation, reforestation, and eco-restoration of degraded forests and non-forest lands.

Way Ahead

- **Restoration targets:** India should aim to restore 20% of its degraded land by 2030, with a goal of restoring all ecosystems by 2050. This includes forests, wetlands, rivers, agricultural lands, and urban green spaces.

- **Wetland restoration:** Critical wetlands such as the Sundarbans and Chilika Lake support biodiversity and carbon sequestration. A law could target restoring **30% of degraded wetlands by 2030.**
- **Biodiversity in agriculture:** Promoting agroforestry and sustainable practices could restore farmlands. Indicators such as the butterfly or bird index used in the EU, could track progress.
- **Urban green spaces:** India should ensure no net loss of green spaces, promoting urban forests in cities such as Bengaluru and Delhi, which face heat islands and declining air quality.

Concluding remark

- The EU's Nature Restoration Law sets an important precedent for countries worldwide.
- Given the alarming levels of land degradation and biodiversity loss in India, such a law would not only help India restore its degraded ecosystems but also contribute to its socio-economic development and climate resilience.

Source: TH

NEW ASSESSMENT HIGHLIGHTS ROLE OF WETLANDS IN NATIONAL BIODIVERSITY STRATEGIES

Context

- A recent assessment by an organisation commissioned by Wetlands International, highlighted the **critical importance of wetlands in the National Biodiversity Strategies and Action Plans (NBSAP)** submitted after the COP15.

About

- It provides insights into how effectively the wetlands have been incorporated into NBSAPs worldwide.
- It aims to highlight the crucial role that wetland conservation and restoration play in the successful implementation of the Global Biodiversity Plan.

Major Findings

- The assessment includes **24 NBSAPs** from around the world, representing **12 per cent of the 196 countries** that are parties to the Convention on Biodiversity.
- **83 percent of the submitted NBSAPs e**xplicitly mention wetlands, inland waters or freshwater in their targets.
- **71 percent** of the plans articulate specific measures for restoration (Target 2) and **50 percent** include protection for these important ecosystems (Target 3).

- **Fewer NBSAPs provide specific, measurable targets,** indicating a need for improvement in those areas.

- **16 NBSAPs mentioned specific wetland types,** including mangroves, rivers, lakes and peatlands.

  - Among these, mangroves, **rivers and lakes received the highest mentions**, indicating their importance in various environmental targets.

- **Recommendation:** The report emphasised the need for countries to enhance the integration of wetlands within national biodiversity targets, establishing clear, measurable goals for wetland restoration and protection.

> **COP 16**
> - The Sixteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 16) is to be held in **Cali, Colombia from 21 October – 1 November 2024.**
> - It will be the first Biodiversity COP since the adoption of the **Kunming-Montreal Global Biodiversity Framework at COP 15 in 2022.**
> - At COP 16, governments will be tasked with **reviewing the state of implementation of the Kunming-Montreal Global Biodiversity Framework.**
> - Parties to the Convention are expected to show the **alignment of their National Biodiversity Strategies and Action Plans (NBSAPs) with the Framework**.

The Kunming-Montreal Global Biodiversity Framework (GBF)

- GBF was adopted by the **COP15** to the **Convention on Biological Diversity in 2022.**

- It has been promoted as a "**Paris Agreement for Nature".**

- The GBF contains **4 global goals and 23 targets.**

  - **Among the twenty-three targets** to be achieved by **2030** include halving the introduction of invasive species, and $500 billion/year reduction in harmful subsidies.

  - **"Target 3"** is especially referred to as the **"30X30" target.**

- **'30X30' target**

  - Under it, delegates committed to protecting **30% of land and 30% of coastal and marine areas by 2030,** fulfilling the deal's highest-profile goal, known as 30-by-30.

  - The deal also aspires to **restore 30% of degraded lands and waters** throughout the decade, up from an earlier aim of **20%.**

- Also, the world will strive to prevent destroying intact landscapes and areas with a lot of species, bringing those losses **"close to zero by 2030".**

What is a Wetland?

- A wetland is an ecosystem in which the land is covered by **water—salt, fresh, or somewhere in between—either seasonally or permanently.** It functions as its **own distinct ecosystem.**

- **It includes water bodies** such as lakes, rivers, underground aquifers, swamps, wet grasslands, peatlands, deltas, tidal flats, mangroves, coral reefs, and other coastal areas as well.

- These wetlands can be classified into three segments such as **inland wetlands, coastal wetlands, and human-made wetlands.**

Wetlands in India

- India includes high-altitude wetlands of the Himalayas, floodplains of rivers such as Ganges and Brahmaputra, lagoons and mangrove marshes on the coastline, and reefs in marine environments.

- India has around **4.6%** of its land as wetlands, **85 Wetlands of India** covering are under the **List of Wetlands of International Importance.**

- Presently, India stands **first in South Asia** and **third in Asia in terms of number of designated sites.**

Importance of Wetlands

- **Biodiversity Hotspots:** Wetlands are among the most biologically diverse ecosystems on Earth, supporting a wide variety of plant and animal species.

- **Water Filtration and Purification:** Wetlands act as natural filters, trapping and removing pollutants and sediments from water.

- **Flood Control and Water Regulation:** Wetlands function as natural buffers against floods by absorbing and slowing down excess water during heavy rainfall or storm events.

- **Carbon Sequestration:** The waterlogged conditions in wetlands slow down the decomposition of organic matter, leading to the accumulation of carbon in the soil.

- **Economic Benefits:** Wetlands support various economic activities, including fisheries, agriculture, and tourism. They provide valuable resources for local communities and contribute to the overall economy.

Threats to Wetlands

- **Urbanization:** Wetlands near urban centres are under increasing developmental pressure for residential, industrial and commercial facilities.

- **Agricultural activities:** Following the Green Revolution of the 1970s, vast stretches of wetlands have been converted to paddy fields.

- **Deforestation:** Removal of vegetation in the catchment leads to soil erosion and siltation.

- **Pollution:** Unrestricted dumping of sewage and toxic chemicals from industries has polluted many freshwater wetlands.

- **Aquaculture:** Demand for shrimps and fishes has provided economic incentives to convert wetlands and mangrove forests to develop pisciculture and aquaculture ponds.

- **Introduced species:** Indian wetlands are threatened by exotic introduced plant species such as water hyacinth and salvinia.

- **Climate change:** Increased air temperature; shifts in precipitation; increased frequency of storms, floods; and sea level rise also affect wetlands.

- **Drought:** Prolonged dry periods lead to reduced water levels in wetlands, impacting their ecological functions and the species that depend on them.

Conclusion

- Conserving and properly managing wetlands is crucial to maintaining the ecological functions and ensuring the continued provision of the services they offer to both the environment and society.

Source: DTE

NEWS IN SHORT

EGYPT: 2ND COUNTRY IN 2024 TO BE DECLARED 'MALARIA-FREE'

In News

- The World Health Organization (WHO) has certified **Egypt as malaria-free**.

> **Do you know?**
> - Certification is granted when a country can prove that indigenous malaria transmission has been interrupted nationwide for at least three consecutive years and has the capacity to prevent re-establishment.
> - Egypt is the **second country, after Cabo Verde**, to achieve this status in 2024 and the fifth in Africa.

Historical Context

- Malaria has been documented in Egypt since 4000 B.C.E., with historical genetic evidence found in mummies.

- The disease was particularly concentrated in **Nile river communities due to favorable mosquito breeding conditions**.

Malaria

- Malaria is a life-threatening disease, is caused by the Plasmodium parasite and transmitted through bites from infected **female Anopheles mosquitoes.**

- It is most prevalent in tropical and subtropical regions, including **sub-Saharan Africa, Southeast Asia, and South America.**

- The most deadly species is **Plasmodium falciparum, but Plasmodium vivax** is the most widespread.

- After entering the human body, the parasite **multiplies in the liver and then infects red blood cells**

- **Symptoms**: Fever, headache, chills, Fatigue, confusion, seizures, difficulty breathing, jaundice, and dark urine.

- **Prevention Strategies :**
    - **Vector Control:** Key strategies include insecticide-treated nets (ITNs) and indoor residual spraying (IRS), though resistance to insecticides is emerging.
    - **R21/Matrix-M Vaccine**: Recommended in October 2023, further enhancing prevention efforts.
    - **Chloroquine**: Effective for P. vivax in sensitive regions, often supplemented with Primaquine to prevent relapses.

Global and Indian Efforts

- **Global Malaria Program:** Launched by WHO with a strategy to reduce malaria incidence and mortality by 90% by 2030.

- **E-2025 Initiative:** Aimed at halting malaria transmission in 25 countries by 2025.

- **India's National Vector-Borne Disease Control Programme (NVBDCP):** Focuses on multiple vector-borne diseases, including malaria, through integrated measures.

Source :DTE

PRADHAN MANTRI BHARTIYA JANAUSHADHI PARIYOJANA (PMBJP)

In News

- **Pradhan Mantri Bhartiya Janaushadhi Pariyojana** has reached a remarkable milestone by achieving sales worth one thousand crore rupees.

About PMBJP

- It was **launched in 2008** by the Department of Pharmaceuticals, Ministry of Chemicals & Fertilizers, Government of India.
- It aims to **provide quality generic medicines** at affordable prices to all, particularly the underprivileged.
- The scheme is **implemented by the Pharma & Medical Bureau of India (PMBI)**, a registered society.
- **Implementation** : Dedicated outlets, known as **Janaushadhi Kendras**, are established to offer these medicines.
    - These provide generic medicines at much lesser price. The potency of these medicines are the same as compared to expensive branded medicines available in the open market.
    - As of June 30, 2024, there are 12,616 operational Janaushadhi Kendras across India.

Do you know?
- Generic drugs are marketed under a non-proprietary or approved name rather than a proprietary or brand name. Generic drugs are equally effective and inexpensive compared to their branded counterparts.

Source :Air

6TH INDIA-SINGAPORE DEFENCE MINISTERS' DIALOGUE

In News

- The 6th India-Singapore Defence Ministers' Dialogue will be co-chaired by India's Raksha Mantri Rajnath Singh and Singapore's Defence Minister Dr. Ng Eng Hen.

About Dialogue

- India and Singapore share a Comprehensive Strategic Partnership.
- Singapore is a key pillar of India's Act East Policy and an important partner of the Indo-Pacific vision.
- The defence and security partnership between the two countries is an important factor of stability in the Indo-Pacific region.
- The meeting aims to carry forward defence cooperation between the two countries and they will also exchange views on regional and global issues of shared interest.

Source :PIB

ICTP GALATHEA BAY

Context

- The mega international container transshipment port (ICTP) at **Galathea Bay** has been notified as the **13th major port.**

About

- It is located in the **Great Nicobar island** in the Bay of Bengal.
- **Great Nicobar Island** is a part of the Union territory of Andaman and Nicobar islands, is 40 nautical miles from Malacca Strait.
    - **Malacca Strait** is the international shipping channel catering to about 35 percent of the annual global sea trade.
- The port will be strategically located on the **East-West international trade** and shipping route in proximity to transshipment terminals like **Singapore, Klang and Colombo.**
- It is also a part of the rapidly evolving Indo-Pacific geopolitical region.
- As a gateway to the region, it will capture transshipment cargo from **Indian east coast ports, as also Bangladesh and Myanmar.**

- **Significance:** Currently nearly 75 per cent of India's transshipped cargo is handled at overseas ports.
    - The ICTP at Galathea Bay can save Indian ports $200-220 million each year in transshipment charges.

Source: BL

Z-MORH PROJECT

In News

- A Pakistan-backed Lashkar-e-Taiba, claimed responsibility for the recent terror attack on the **Z-Morh Project** site in J&K.

About Z-Morh Project

- The Z-Morh tunnel is a 6.5-kilometer tunnel connecting the Sonamarg health resort with Kangan town in central Kashmir's Ganderbal district.

- The name "Z-Morh" refers to the **Z-shaped road section** near the construction site.
- The tunnel will provide all-weather connectivity to Sonamarg, a famous tourist destination on the Srinagar-Leh highway.
- The Billion Dollar tunnel project is also important for the success of the Zojila tunnel project, which is situated at an altitude of approximately 12,000 ft.

Source: TH

2024 INDEX OF ECONOMIC FREEDOM

In News

- The **Fraser Institute** has released the **2024 Economic Freedom of the World Report**, which assesses economic freedom in 165 jurisdictions.

About

- The report ranks **Hong Kong, Singapore, and Switzerland** as the top three regions with the highest levels of economic freedom for the **year 2022**. **India's rank is 84th.**
- It is based on 42 variables, covering areas such as **government size, property rights, monetary policy, and trade freedom.**
- The report highlights a global **decline in economic freedom** over the past three years.
- Countries with high economic freedom show significantly better economic outcomes. For example, their **GDP per capita** is on average 7.6 times greater than that of countries with low economic freedom.
- **Other benefits** in these countries include longer life expectancy, lower poverty rates, and higher happiness levels.

Source: TH

SPADEX (SPACE DOCKING EXPERIMENT)

In News

- A private entity based in Hyderabad, has delivered two 400 kg satellites to ISRO for its upcoming Space Docking Experiment.

About SPADEX (Space Docking Experiment)

- The goal of SPADEX is to enable two spacecraft, a **'Chaser' and a 'Target,'** to autonomously dock in orbit, demonstrating precision, navigation,

and control—skills crucial for assembling space stations, refueling, and transferring astronauts and cargo in space.

- The development of docking systems dates **back to the Cold War**, with the Soviet Union achieving the **first successful docking in space in 1967**, followed by the **USA's Apollo-Soyuz Test Project in 1975.**
- Since then, docking technology has evolved significantly, becoming more automated and integral to modern space missions, as seen in Russia's Soyuz spacecraft, NASA's Crew Dragon, and China's Tianzhou cargo spacecraft.

Significance

- The mission is significant for India's future space exploration plans, including human spaceflight, satellite servicing, and constructing large space structures.
- This experiment is a stepping stone toward India's ambitious space exploration vision, following ISRO's recent successes like **Chandrayaan-3 and Aditya-L1.**

Source: BS

CAENORHABDITIS ELEGANS

Context

- A **study on Caenorhabditis elegans** found that small changes to the gene that controls the way that cells respond to nutrients around them led to the worms doubling their lifespan.

About C. elegans

- C. elegans is a **nematode** (roundworm)—a member of the phylum Nematoda.
- It is a non-hazardous, non-infectious, non-pathogenic, non-parasitic organism.
- It plays a role in **soil ecosystems,** feeding on bacteria and contributing to **nutrient cycling.**
- It is widely **used in studies** of aging, neurodegenerative diseases, and the effects of various genetic mutations.
  - Researchers can easily manipulate its genetics and observe the effects on development and behavior.

Source: IE

EXERCISE NASEEM-AL-BAHR

Context

- The **Indian Navy and the Royal Navy of Oman** recently concluded a bilateral naval exercise, **'Naseem-Al-Bahr'** off the coast of Goa.

About

- **Initiated in 1993,** the exercise was conducted in **two phases**: the harbour phase and the sea phase.

- The exercise reaffirms India's commitment to constructive collaboration and mutual growth with like-minded nations in the **Indian Ocean Region**.

Do you know?

- Oman is a crucial pillar of **India's West Asia Policy** and its oldest regional strategic partner.

- Also, Oman is the **first Gulf country** with which all the three wings of India's defense forces hold joint exercises.

  ◆ The exercise **Eastern Bridge** is conducted between the **Air Force** of the two countries, while the exercise **Al**-**Najah** is conducted between the **Army** of the two countries.

Source: PIB

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