

## DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

Date: 18-02-2025

### Table of Content

The Immigration and Foreigners Bill, 2025

9 Years of Pradhan Mantri Fasal Bima Yojana (PMFBY)

Obscenity in Online Content

Andhra Pradesh Promoting Work From Home for Women

RuTAGe Smart Village Center (RSVC)

China's EAST Reactor

### NEWS IN SHORT

Mutual Credit Guarantee Scheme For MSMEs

Kerala's Plan to Grant Industry Status to Tourism

Parambikulam Tiger Reserve

Puducherry-Villupuram-Auroville-Cuddalore (PVAC) Bioregion

Aravali Safari Park Project

Bacteria-made Band-Aid for Plants

DDoS Attack

SAKSHAM Campaign

Blair House

## THE IMMIGRATION AND FOREIGNERS BILL, 2025

### Context

- The government has developed a draft legislation, The Immigration and Foreigners Bill, 2025, to regulate foreigners coming to India.

### About

- Matters related to foreigners and immigration are currently governed by:** The Foreigners Act, 1946, The Passport (Entry into India) Act, 1920, The Registration of Foreigners Act, 1939 and The Immigration (Carriers' Liability) Act, 2000.
  - Three of these laws were enacted during the pre-Constitution period, particularly during the extraordinary times of World Wars I and II.
- The necessity has been identified **to repeal these laws and enact a new comprehensive legislation: The Immigration and Foreigners Bill, 2025.**
- The purpose of the new legislation is to:**
  - Avoid multiplicity and overlapping of laws.
  - Regulate matters related to foreigners, including: Requirement of visas, Registration and other travel-related documentation (passports, etc.).
  - Streamline the procedures for persons entering and exiting India.

### Provisions

- It obligates the mandatory registration of foreigners** upon their arrival and places restrictions on movement, name changes, and stays in protected/restricted areas.
  - The burden of proof is on individuals **to establish that they are not foreigners.**
- Entering India without valid passport/visa:** Up to 5 years in prison and a fine of up to Rs 5 lakh.
- Entry, stay, or exit with forged documents:** 2-7 years in prison and a fine of Rs 1-10 lakh.
- Overstaying, violating visa conditions, or accessing restricted areas:** Up to 3 years in prison, a fine up to Rs 3 lakh, or both.
- Reporting requirements:** Educational institutions, universities, hospitals, and nursing homes must report foreigners to the registration officer.
- Carrier accountability:** Carriers transporting foreigners without valid documents will have to pay a fine up to Rs 5 lakh and failure to pay penalty may lead to the potential seizure of transport.
  - If any foreigner's entry has been refused, he shall be handed over to the transport carrier

by the Immigration Officer, who is responsible for the individual's removal from India without delay.

- It empowers immigration officers** to arrest such individuals without a warrant.
- Government authority:** The bill also grants the central government increased authority to regulate the movement of foreigners, including the power to restrict entry, prevent departure, and prohibit access to specific areas.
  - The foreigners are required to exit at their own expense and provide biometric data.

Source: TH

## 9 YEARS OF PRADHAN MANTRI FASAL BIMA YOJANA (PMFBY)

### Context

- The **Pradhan Mantri Fasal Bima Yojana (PMFBY)** recently celebrated its ninth anniversary, marking nearly a decade of empowering Indian farmers with comprehensive crop insurance.

### About PMFBY

- Launch:** 2016 by the Ministry of Agriculture & Farmers Welfare.
- Coverage:** All farmers, including sharecroppers and tenant farmers, growing notified crops in designated areas.
- Crops Covered:**
  - Food Crops (Cereals, Millets & Pulses)
  - Oilseeds
  - Annual Commercial & Horticultural Crops

### Risks Covered

- Yield Losses (Standing Crops):** Losses due to non-preventable risks like drought, flood, pests, and diseases.
- Prevented Sowing:** Compensation when farmers cannot sow due to adverse weather conditions.
- Post-Harvest Losses:** Coverage for crop losses within 14 days of harvesting due to natural calamities.
- Localized Calamities:** Damage due to hailstorms, landslides, cloudbursts, etc.

### Implementation & Coverage Growth (2016–2024)

- Farmer Enrollment:** Over 40 crore farmer applications registered.
- Land Coverage:** More than 30 crore hectares of farmland insured.
- Affordable Premium & High Claims Settled:**
  - Farmers paid over **₹29,000 crore** as premiums.

- ♦ Over **₹1.50 lakh crore** in claims disbursed, proving it to be a pro-farmer initiative.
- **Customized Insurance Plans:** State-specific schemes and cluster-based models enhance efficiency.
- **Inclusive Growth:** More than 70% of beneficiaries are small and marginal farmers.
- **Climate Risk Mitigation:** Addresses challenges like erratic monsoons, droughts, floods, and unseasonal rains.

### Technological Advancements

- **AI & Geo tagging:** Enhance accuracy in crop loss assessment by enabling precise damage verification and yield estimation.
- **CCE-Agri App & YES-TECH:** Mobile-based tools to record Crop Cutting Experiments (CCEs) and estimate yields.
- **National Crop Insurance Portal (NCIP):** Centralized platform for real-time monitoring and claims processing.
- **Digital Claim Settlement:** Faster payouts through mobile apps and online platforms.

### Major Challenges

- **Delays in Claim Settlement:** Bureaucratic hurdles and disputes between insurance companies and state governments slow payouts.
- **State Withdrawals & Implementation Issues:** States like Bihar, West Bengal, Gujarat, and Andhra Pradesh withdrew due to financial concerns over premium subsidies.
- **Low Awareness & Farmer Participation:** Many farmers, especially in remote areas, remain unaware of the scheme's benefits.
- **Data & Technology Gaps:** Lack of real-time weather data and delays in crop loss assessment impact claim processing.

### Recent Reforms & Future Prospects

- **PMFBY 2.0 – Restructured Guidelines (2020-21):**
  - ♦ **Voluntary Enrollment:** Since 2020, participation has been made voluntary.
  - ♦ **State Flexibility:** States can customize insurance products to meet regional agricultural needs.
- **Alignment with Climate Resilience Policies:**
  - ♦ Linked with **National Adaptation Fund for Climate Change (NAFCC)** to promote climate-resilient farming.

### Restructured Weather-Based Crop Insurance Scheme (RWBCIS):

- ♦ A weather index-based insurance scheme introduced alongside PMFBY.
- ♦ **Difference from PMFBY:** RWBCIS calculates claims based on weather parameters rather than actual yield loss.

### Way Forward

- **Digitization:** Expanding technology use for faster claim settlements.
- **State Re-Engagement:** Encouraging states that have withdrawn to rejoin.
- **Private Sector Involvement:** Incentivizing private insurers to offer region-specific solutions.
- **Disaster Risk Reduction:** Strengthening proactive risk mitigation strategies.

Source: PIB

## OBSCENITY IN ONLINE CONTENT

### Context

- The recent debate over “India’s Got Latent” show has brought attention to the evolving interpretation of obscenity laws in the digital era.

### What is Obscenity?

- Obscenity refers to content or acts that are **offensive to public morality and decency**.
- Legally, it includes material that is vulgar, or repugnant to accepted social norms.

### Factors causing rise in Obscenity

- **Rapid Growth of Digital Platforms:** The proliferation of social media platforms has made it easier to share content globally, leading to greater exposure to varied forms of expression, some of which cross moral and legal boundaries.
- **Monetization of Controversial Content:** Some creators exploit controversy or shock value to gain attention, views, and revenue, leading to the production and dissemination of obscene material.

### Implications of rising Obscenity in India

- **Impact on Social Morality:** The growing presence of obscene content in digital media influences public morality, especially among impressionable audiences such as children and young adults.
- **Cybercrime and Exploitation:** The rise in online obscenity fuels exploitation, driving cyberbullying, harassment, and trafficking.



### Judiciary's View on what constitutes as obscene

- **Hicklin Test:** The test was most famously used by the Supreme Court to ban DH Lawrence's Lady Chatterley's Lover in the case of **Ranjit D Udeshi vs State Of Maharashtra (1964)**.
  - ♦ The test was established in English Law after the **case of Regina vs Hicklin (1868)**.
- **Community Standards Test:** The Indian Supreme Court referred to the "community standards" test in **Aveek Sarkar v. State of West Bengal (2014)**.
  - ♦ The courts now apply the contemporary community standards test to judge obscenity, moving away from the rigid Hicklin test.

### Legal Framework Governing Obscenity in Online Content

- **Information Technology (IT) Act, 2000:** Section 67 penalizes the publication or transmission of obscene material in electronic form.
  - ♦ The offense is punishable with imprisonment and a fine, with stricter penalties for repeated violations.
- **Bharatiya Nyaya Sanhita (BNS), 2023:** Section 294 (previously Section 292 of IPC, 1860) prohibits the sale, distribution, advertisement, or commercial exploitation of obscene materials, including books, paintings, and digital content.
  - ♦ It extends to electronic content, reinforcing legal accountability in the digital space.

Source: IE

## ANDHRA PRADESH PROMOTING WORK FROM HOME FOR WOMEN

### Context

- Andhra Pradesh Chief Minister has announced plans to expand work-from-home (WFH) opportunities, particularly targeting women professionals in the state.

### About

- The Andhra Pradesh **IT & Global Capability Centres (GCC) Policy 4.0** is designed to attract top IT companies and facilitate employment growth.
- A key feature of the policy is encouraging corporations to provide WFH options more liberally. This move aims to:
  - ♦ Foster work-life balance for women professionals.

- ♦ Ensure equal access to growth opportunities in science and technology fields.
- ♦ Make employment more accessible for women with familial responsibilities.

### Policy on Work-from-Home in India

- Unlike some countries with formal remote work regulations, **India does not have explicit laws** governing WFH policies.
  - ♦ Companies determine work hours and expectations through internal employment contracts.
- The government, however, has encouraged WFH in specific cases, such as **maternity leave** or roles that permit remote work.
- Despite the initial surge in WFH adoption during the COVID-19 pandemic, many Indian IT firms have since mandated return-to-office policies.

### Arguments in Favour of Work-from-Home

- **Cost Savings:** WFH has significantly reduced commuting costs and allowed employees to live in more affordable areas, leading to financial benefits for both individuals and organizations.
- **Improved Work-Life Balance:** WFH can offer greater flexibility to manage work and personal responsibilities, such as childcare or eldercare, which often disproportionately fall on women.
- **Increased Flexibility:** Employees can manage their time more efficiently, improving work-life balance, especially for women who juggle professional and personal responsibilities.
- **Higher Energy Levels:** Reduced travel time has enhanced employee productivity and well-being.
- **Employer Benefits:** Organizations benefit from reduced office rental costs and lower expenses related to client meetings.

### Arguments against WFH

- **Hindered Collaboration:** The absence of physical interactions affects teamwork, trust-building, and problem-solving capabilities.
- **Organizational Culture Challenges:** WFH weakens social, emotional, and human capital formation, impacting long-term workplace cohesion.
- **Lack of Recognition:** WFH can make it harder for women to be visible and recognized for their contributions, potentially leading to missed opportunities for promotions and raises.

### Way Ahead

- **Implement Hybrid Models:** A mix of remote and in-office work can provide flexibility while maintaining collaboration.

- **Invest in Digital Infrastructure:** Enhanced communication tools can bridge the gap in teamwork and productivity.
- **Develop Inclusive Policies:** Organizations should ensure that remote workers, especially women, receive equal opportunities for growth and leadership roles.

#### Concluding remarks

- Andhra Pradesh's WFH initiative for women has the potential to set a precedent for gender-inclusive employment policies in India.
- However, achieving long-term success will require strategic implementation and continuous evaluation of its impact on productivity and workforce engagement.

Source: BS

## RUTAGE SMART VILLAGE CENTER (RSVC)

#### In News

- The **RuTAGe Smart Village Center (RSVC)** was launched in Mandaura village, Sonipat, marking a transformative moment for **rural technological advancement**.

#### RuTAGe Smart Village Center (RSVC) model

- It was conceptualized by the **Office of the Principal Scientific Advisor (PSA)**.
- It is designed to serve as a permanent presence at the Panchayat level, providing deep handholding to cater to the technological needs of 15-20 villages over several years.
- It was honoured with the first prize at the NSE's Social Stock Exchange event in Varanasi in 2024.

#### Technological Solutions Offered

- RSVC offers a comprehensive range of 12 technology tracks to address diverse rural challenges:
  - ♦ **Agriculture & Waste Management:** Services for agriculture, waste management, homestays, and village tourism, supported by pre-sowing to post-harvest technologies, in collaboration with KVKs.
  - ♦ **RuTAG Technologies:** Innovations from 7 IITs, developed under the Office of the Principal Scientific Adviser to the Government of India.
  - ♦ **Livelihood & Entrepreneurship:** Promoting local entrepreneurship through schemes like NRLM in Uttar Pradesh.

- ♦ **Renewable Energy:** Solar hybrid and wind technology solutions, with technical assistance from SELCO Foundation.
- ♦ **WASH:** Waste management, water, and sanitation solutions, including IIT Madras Aquamaps and weVois technologies.
- ♦ **FinTech:** Financial inclusion apps and AR/VR technologies developed by IISC and XR Group.
- ♦ **Capacity Building:** Research and capacity-building initiatives with Tier 2 & 3 colleges where NIFTEM is a facility for piloting biscuit manufacturing from locally sourced materials like sugar, ghee. NAARM undertaking capacity building of RSVC centre heads.
- ♦ **Govt. Scheme Apps:** Dissemination of government schemes through citizen-centric apps for science, tech, and welfare programs.
- ♦ **Assistive Technologies:** Solutions for differently abled individuals through the Assistive Technology Foundation.

#### Purpose of RSVC

- RSVC aims to bridge the gap between rural needs and technological advancements, ensuring innovation reaches grassroots communities.
- Focuses on addressing challenges like animal intrusion, organic farming, and livelihood-enhancing technologies.

#### Role of Technology in Rural Growth

- **Farming:** Precision tools (GPS, sensors) and mechanization (tractors) increase crop yields and efficiency.
- **Education:** Online learning and digital literacy bridge the gap for rural students. Initiatives like **PM e-VIDYA** and **SWAYAM** provide digital learning opportunities.
- **Financial Inclusion:** The DBT program and PM Jan Dhan Yojana facilitate cashless transfers, improving transparency and reducing fraud.
- **Water Management:** The National Program on Aquifer Mapping and Management utilizes technology for efficient groundwater management in agriculture.

#### Future Outlook

- RSVC initiative marks a significant step towards empowering rural India through sustainable, scalable, and impactful technological solutions.
- Continuous updates and feedback will be used to refine and scale the impact of RSVCs.

Source :PIB

## CHINA'S EAST REACTOR

### Context

- Chinese scientists reported that they were able to **maintain a plasma at a temperature of 100 million degrees C** for about **1,066 seconds** in a **nuclear fusion reactor** called the **Experimental Advanced Superconducting Tokamak (EAST)**.

### About

- EAST is a testbed reactor for **(International Thermonuclear Experimental Reactor) ITER**, an international megaproject.
- Members of the Project:** Six countries around the world, including India, and the European Union.
- They are working together to **build a tokamak** that will **sustain nuclear fusion** that releases more energy than that required to sustain the plasma.
  - A tokamak is a machine that uses magnetic fields to confine plasma for nuclear fusion research.

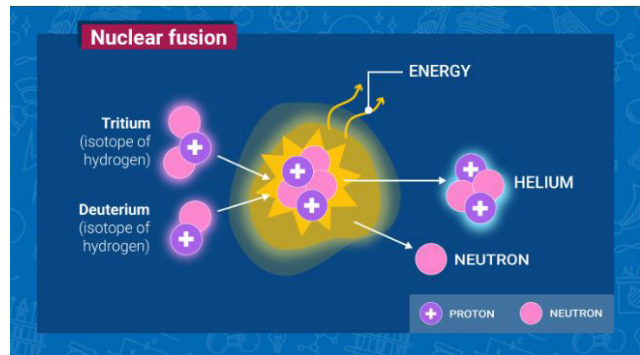
### Background

- 1939:** Lise Meitner and Otto Frisch explained fission as a process of energy release.
- 1942:** The first sustainable nuclear fission reactor was built by Enrico Fermi and team.
  - Nuclear fission **produces harmful radioactive waste** whereas nuclear fusion doesn't.
  - Nuclear fusion reactors have become an important technological goal for a world keenly interested in **new sources of clean energy**.
- Current Progress:** Projects like ITER are working on creating viable fusion reactors, but net-positive energy from fusion is still a work in progress.

### What is Nuclear Fusion?

- Nuclear fusion is the process by which **two light atomic nuclei** combine to form **a single heavier one** while releasing **massive amounts of energy**.
- Fusion reactions take place in a **state of matter called plasma** — a hot, charged gas made of positive ions and free-moving electrons with **unique properties distinct from solids, liquids or gases**.
- The sun, along with all other stars, is powered by this reaction.
- Process:** The **Deuterium (H-2)** and **Tritium (H-3)** atoms are combined to form **Helium (He-4)**. A free and fast neutron is also released as a result.
  - The neutron is powered by the kinetic energy converted from the 'extra' mass left over after the combination of lighter nuclei of deuterium and tritium occurs.

- Challenges:** Achieving controlled fusion requires extremely high temperatures and pressures, similar to those in stars.



### Significance of Fusion energy?

- Clean Energy:** Nuclear fusion does not emit carbon dioxide or other greenhouse gases into the atmosphere, so it could be a long-term source of low-carbon electricity from the second half of this century onwards.
- More Efficient:** Fusion could generate four times more energy per kilogram of fuel than fission (used in nuclear power plants) and nearly four million times more energy than burning oil or coal.
- Fusion fuel is plentiful and easily accessible:** Deuterium can be extracted inexpensively from seawater, and tritium can potentially be produced from the reaction of fusion-generated neutrons with naturally abundant lithium.
  - These fuel supplies would last for millions of years.
- Safer to Use:** Future fusion reactors are also intrinsically safe and are not expected to produce high activity or long-lived nuclear waste.
  - Furthermore, as the fusion process is difficult to start and maintain, there is no risk of a runaway reaction and meltdown.

### Way Ahead:

- EAST's** successes are crucial for ITER's future, which faces criticism for delays and cost overruns.
  - ITER's cost exceeds EUR 18 billion, making it the most expensive science experiment in history.
  - High costs have deterred some governments from pursuing such projects.
- Alternative Fusion Methods:**
  - Stellarator:** A device with a twisting design that eliminates the need for a poloidal magnetic field, using complex external magnets to achieve magnetic confinement.
  - Laser Fusion:** Uses powerful laser beams to compress deuterium-tritium pellets, causing fusion and releasing energy.

- ♦ The heat from **laser fusion** can be used to generate steam, which drives turbines to produce electricity.

Source: TH

## NEWS IN SHORT

### MUTUAL CREDIT GUARANTEE SCHEME FOR MSMEs

#### Context

- The Union government launched the 'Mutual Credit Guarantee Scheme for MSMEs', announced in the **Union Budget 2025-26** to boost the micro, small, and medium enterprises.

#### About

- The scheme facilitates collateral-free loans to MSMEs by providing loans up to **Rs 100 crore** for the **purchase of plant, machinery, or equipment**.
- Under this scheme, the **National Credit Guarantee Trustee Company Ltd (NCGTC)** will provide **60% guarantee coverage** to member lending institutions (MLIs) for loans sanctioned to eligible MSMEs.
- The borrower must be an MSME with a valid **Udyam Registration Number**.
- The guaranteed loan amount will not exceed **Rs 100 crore**, although the total project cost can be higher.
  - ♦ Additionally, at least **75%** of the project cost must be for purchasing equipment or machinery.

Source: AIR

### KERALA'S PLAN TO GRANT INDUSTRY STATUS TO TOURISM

Syllabus :GS 3/ Economy

#### In News

- The Kerala government is planning to grant 'industry status' to tourism, a long-standing demand of the tourism and hospitality sector.

#### Granting industry status

- It provides benefits like reduced power tariffs, water tariffs, and property taxes, promoting investment and job creation.
- The **Ministry of Tourism** has launched a handbook which aims to serve as a guide to States/UTs to support efforts of States/UTs in

granting and implementing 'industry status' for the tourism and hospitality sector.

#### Objectives and Need

- The tourism sector, which employs 5 lakh people directly and 20 lakh indirectly, has struggled due to natural disasters, the COVID-19 pandemic, and a major landslide in 2024.
- The recent move aims to boost investment and development in the sector, which contributes around 10% to the State's GDP.

#### Do you know ?

- India's tourism sector, rich in heritage, culture, and diversity, is emerging as a global favorite and a key driver of economic growth.
- The tourism sector's contribution to GDP regained the pre-pandemic level of 5 per cent in FY23. The tourism sector created 7.6 crore jobs in FY23.
- The **Travel and Tourism Development Index 2024 (TTDI)** ranked India at **39th** among 119 countries in the 2024 report published by the World Economic Forum.
- The **Union Budget 2025-26** has allocated 2541.06 crore to enhance infrastructure, skill development, and travel facilitation.



Source :TH

### PARAMBIKULAM TIGER RESERVE

#### Context

- A faunal survey by the Forest Department at the Parambikulam Tiger Reserve in Palakkad has added 15 new species to the protected area's checklist.



### About

- **Location:** Parambikulam Tiger Reserve is nestled in the AnamalaiNelliampathy landscape of the **Western Ghats** Mountains in Palakkad and Thrissur districts of **Kerala**.
- **Tribes:** The Tiger Reserve is the home of four different tribes of indigenous peoples including the **Kadar, Malasar tribe, Muduvar and Mala Malasar** settled in six colonies.
- **Flora:** The reserve supports diverse habitat types viz., evergreen, semi-evergreen, moist deciduous, dry deciduous and shola forests.
  - ♦ Other unique habitats like **montane and marshy grasslands**, locally known as 'vayals', are also found.
  - ♦ The sanctuary has a variety of trees mainly **teak, neem, sandalwood and rosewood**. The oldest ever teak tree, **Kannimara Teak** exists here.
- **Fauna:** It has a rich biodiversity of animal life including mammals, birds, fishes etc. Parambikulam is referred to as the "**state capital for the massive gaur**".
  - ♦ **Tomopterna parambikulamana (Parambikulam Frog)** and one species of **sucker fish, Garro surendranathanii**, are endemic to the reserve.

### Key Findings of the Faunal Survey

- **Avian Diversity:** The survey recorded **206 bird species**, adding 7 new species, i.e. the **Painted spurfowl, Rufus-bellied hawk-eagle, Indian grey hornbill, Anamalai Sholakili, Taiga flycatcher, Plain prinia and Green leaf warbler**.
- **Butterfly Diversity:** Five new butterfly species were added, including the **Long-brand bushbrown, Shot silverline, Scarce shot silverline, White-disc hedge blue and Palni dart**, increasing the total butterfly count to 273.
- **Odonate Diversity:** Three new species of odonates (dragonflies and damselflies) were identified: **Brown darner, Parakeet darner, and Vestalis submontana**.

Source: TH

## PUDUCHERRY-VILLUPURAM-AUROVILLE-CUDDALORE (PVAC) BIOREGION

### Context

- A database on the biodiversity of the Puducherry-Villupuram-Auroville- Cuddalore (PVAC) region is being developed, with significant contributions from citizens.

### What is a Bioregion?

- A bioregion is a geographical area **defined by ecological systems** rather than political boundaries.
- It represents a distinct environmental zone with unique biodiversity and natural resources.

### About PVAC Bioregion

- The PVAC bioregion spans **2,500 sq km** across **Tamil Nadu and Puducherry**, covering key ecological zones such as wetlands, lagoons, and coastal habitats.
- It is part of the **Know Your Bioregion initiative** launched by **Svarnim Puducherry**, a unit of the Sri Aurobindo Society, to enhance ecological awareness and conservation efforts.
- Major water bodies in the region include **Thengaithittu Lagoon** and **Nallavadu Lagoon**, which support rich biodiversity.

### Ecological Significance

- The region harbors **vulnerable species** such as the **smooth-coated otter**, intertidal species like **mudskippers**, fish such as **mangrove red snapper**, and other aquatic life like **mud crabs, Indian glassy fish, and grey mullets**—all indicators of a healthy ecosystem.
- The Nallavadu Lagoon is a vital habitat for migratory birds, including **redshank, common greenshank, gulls, and terns**.

Source: TH

## ARAVALI SAFARI PARK PROJECT

### Context

- The Haryana government's 3,858 hectare Aravali safari park project spread across Gurugram and Nuh is envisaged to be the world's largest safari park.

### About

- It seeks to **conserve endangered species** and **boost tourism in the region**.
- **Project Announcement:** In 2022.
- **Phase 1 Development:** Covering 2,500 acres and is focusing on creating large enclosures for big cats and other wildlife.
- **Conservation Efforts:** The project includes a specialized unit dedicated to conserving and breeding endangered species such as blackbucks, vultures, and soft-shelled turtles.
- **Environmental Concerns:** The project has faced opposition from environmentalists and retired Indian Forest Service officers, who have urged the government to reconsider the plan due to potential ecological impacts.



### • **Current Status:**

- The Aravali Safari Park project is in the planning and development stages, with ongoing efforts to address environmental concerns and finalize the design and implementation plans.
- The Haryana government continues to engage with stakeholders to ensure the project's success and sustainability.

**Source: TH**

## BACTERIA-MADE BAND-AID FOR PLANTS

### In News

- According to a recent study, Bacterial cellulose can be used as a bandage to improve healing and regeneration in plants.

### Bacterial cellulose

- It is a natural and renewable nanomaterial produced by certain bacteria.
- It is characterized by a unique three dimensional structure that endows it with excellent mechanical properties and high water holding capability.
- It is a very pure, crystalline and biocompatible polymer.
- It has been widely used in human medicine, often for wound healing.

### Potential Applications in Agriculture:

- Bacterial cellulose could be used in agriculture for Facilitating grafting, Preserving cut plant material, Serving as a growth medium in laboratories.

### Importance of recent study

- It opens up new possibilities for using bacterial cellulose to aid plant growth and agricultural practices.

Source :IE

## DDOS ATTACK

### In News

- Recently, Karnataka's Kaveri 2.0 portal, which handles land registration, faced severe server outages due to a DDoS attack.

### About DDoS (Distributed Denial-of-Service)

- It is a type of denial-of-service (DoS) attack, which includes all cyberattacks that disrupt or stop services.
- It aims to disable or take down websites, web applications, cloud services, or other online resources.

- It overwhelms the target with fake packets, pointless connection requests, or malicious traffic.

- It involves traffic from multiple sources, making them "distributed."

- **Effect:** DDoS attacks cause the target to slow down or crash, making it unavailable to legitimate users.

- They can lead to service downtime, disrupting operations and potentially causing revenue loss.

- DDoS attacks do not directly steal data, they can serve as distractions for other cyberattacks

- **Mitigation Measures:** Traffic filtering, bot detection, rate limiting, strong authentication, and collaboration with cybersecurity agencies can prevent such attacks.

### Other Major DDoS Attacks:

- X (formerly Twitter): Targeted in August 2024, disrupting the platform.
- GitHub: Targeted by a China-based botnet in 2015, aiming to circumvent censorship.

Source :TH

## SAKSHAM CAMPAIGN

### Context

- Indian Oil Corporation Limited and Bharat Petroleum Corporation Limited launched a 14-day awareness campaign called **SAKSHAM**.

### About

- The campaign was launched **on green energy and fuel conservation**.
- It aims to **raise awareness about fuel conservation** and the judicious use of petroleum products to ensure a safer environment and sustainable energy resources for future generations.
- The idea is to **convince consumers to switch to cleaner fuels** and bring in behavioural change to use fossil fuel intelligently.

**Source: TH**

## BLAIR HOUSE

### Context

- Prime Minister Narendra Modi was greeted by a large Indian crowd outside **Blair House in Washington DC**.

**About**

- The PM stayed at the historic building during his two-day visit to the US.
- Blair House has been the **premier accommodation for dignitaries** visiting Washington DC since it was bought by the **US government in 1942**.
- It is also known as '**The President's Guest House**', and is maintained by the US Department of State and the General Services Administration.
- Blair House hosted Prime Ministers Jawaharlal Nehru and Indira Gandhi during their US visits.

**Source: IE**

■■■■

