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DAILY CURRENT AFFAIRS (DCA)

Time: 45 Min

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SC DECLARED ELECTORAL BONDS SCHEME AS UNCONSTITUTIONAL

In Context

- **The Supreme Court** has **struck down** the **Electoral Bonds Scheme.**

About the Judgement

- The apex court said that the Scheme is violative of the **Right to Information under Article 19(1)(a).** They also i**nfringe on the principle of free and fair elections** as stipulated in the constitution.
- SC also quashed the **amendments** made to the **Income Tax Act and the Representation of People Act** which made the donations anonymous.
- The SC also criticised the legal provision that allowed **unlimited political contribution**, saying it allowed companies with deep pockets to influence policy.
- The SBI shall submit details of electoral bonds purchased s**ince April 12, 2019, to date** to the Election Commission.

What is an Electoral Bond?

- Government of India notified the **Electoral Bond scheme in 2018.**
- An electoral bond is like a **promissory note** that can be bought by any Indian citizen or company incorporated in India from select branches of State Bank of India.
- The citizen or corporate can then **donate the same to any eligible political party of his/her choice.**

Why was it Introduced?

- The government contended that it would make **political donations transparent** while also protecting the identity of the donor.
- The electoral bonds would keep a **tab on the use of black money** for funding elections.

How does it Work?

- The bonds are issued in **multiples of Rs 1,000, Rs 10,000, Rs 100,000 and Rs 1 crore** .
- The receiver can encash the bonds through the party's verified account. The electoral bond will be valid **only for fifteen days.**
- The electoral bonds are available for purchase for **10 days at the beginning of every quarter.**
- **Eligibility:** Any party that is **registered under section 29A of the Representation of the Peoples Act, 1951** and has secured **at least one percent of the votes** polled in the **most recent** General elections or Assembly elections is eligible to receive electoral bonds.

- **Anonymous Donation:** The electoral bonds **will not bear the name of the donor.** Thus, the political party might not be aware of the donor's identity.
- **Tax exemption:** A donor will get a **deduction** and the recipient, or the political party, will get **tax exemption,** provided returns are filed by the political party.

Concerns with Electoral Bonds

- **Anonymity of Donor:** Concerns arose due to donor anonymity and lack of disclosure.
  - ◆ The cash donation limit was reduced from 20,000 to 2,000, while mandatory disclosure remained at 20,000.
- **Further Amendments:** Amendments removed the cap on corporate donations and disclosure obligations.
  - ◆ The petitioners argue that these changes allow unlimited, unchecked funding for political parties, with a bias toward the ruling government.
- **Corporate Dominance:** Electoral bonds, mainly issued in high denominations, raise concerns of corporate dominance over individual donors, and the anonymity for donors further fuels suspicion.
- **Lack of Transparency:** Transparency issues exist, as funds transferred to political parties make it challenging to track corporate contributions, infringing upon citizens' right to information and creating corruption risks.

Conclusion

- All election funding should be made **completely transparent** so that voters know who is funding whom.
- A set of rules on limiting funding shall be brought **to prevent private interests** from unduly influencing elections or Governments.
- Elections should be a **more level playing field** so that good politicians, candidates and parties with less funds also stand a chance of competing in elections.
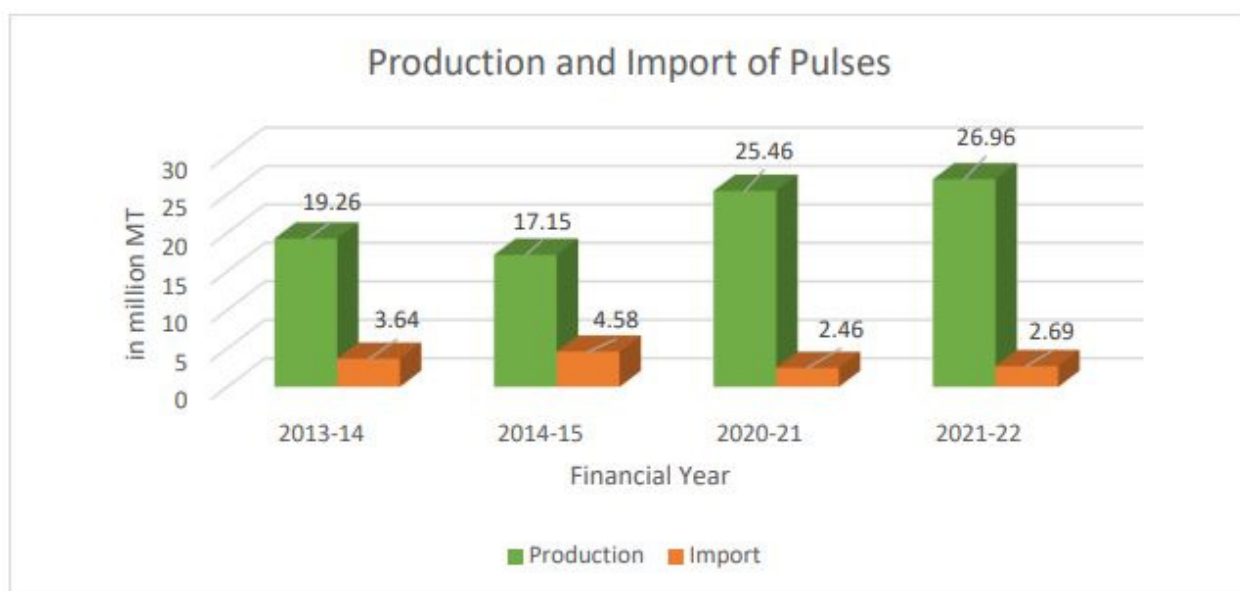
Source: TH

GLOBAL PULSES CONFERENCE

Context

- The Global Pulses Conference, an annual meeting of pulses producers, processors and traders, urges India to augment production of pulses to meet the nutritional requirements.

Production of Pulses in India

- India is the **largest producer** (25% of global production), **consumer** (27% of world consumption) and **importer** (14%) of pulses in the world.

- Pulses account for around **20 percent** of the area under food grains and contribute around **7-10 percent** of the total foodgrains production in the country.

- Though pulses are grown in both Kharif and Rabi seasons, **Rabi pulses** contribute more than 60 percent of the total production.

- **Gram** is the most dominant pulse having a share of around 40 percent in the total production followed by Tur/Arhar at 15 to 20 percent and Urad/Black Matpe and Moong at around 8-10 percent each.

- **The regions with high productivity** are Punjab, Haryana, Western Uttar Pradesh, West Bengal delta region, coastal Andhra Pradesh, Tamil Nadu, Kerala, coastal and eastern Karnataka and some parts of Maharashtra.

- Despite being the world's largest producer and consumer of pulses, India imports certain pulses, including masur and tur, to meet domestic shortages.

Benefits of Pulses Production

- **Nutritional Value:** Pulses are rich sources of protein, dietary fiber, vitamins, and minerals. Including pulses in the diet can help improve nutrition and promote overall health, particularly in regions where access to animal protein is limited.

- **Soil Health Improvement:** Pulses have the unique ability to fix atmospheric nitrogen through symbiotic relationships with nitrogen-fixing bacteria in their root nodules. This process improves soil fertility and reduces the need for synthetic nitrogen fertilizers, thereby promoting sustainable agriculture practices.

- **Income Generation:** Pulses can provide additional income streams for farmers, particularly smallholders, due to their relatively high market value compared to other staple crops.

- **Resistant to Climate Change:** Pulses contribute to climate change mitigation through their ability to sequester carbon in the soil and reduce greenhouse gas emissions associated with synthetic fertilizer use. Additionally, pulses require less water compared to many other crops, making them more resilient to drought conditions

Reasons for Low Production in India

- **Low Productivity:** Pulses have traditionally been a neglected crop because of the instability of its yields.

- **Climate Variability:** Pulses are often grown in rainfed areas where they are highly susceptible to climate variability, like erratic rainfall, droughts etc. which lead to yield fluctuations and lower production.

- **Residual Crop:** Pulses in India are considered a residual crop and grown under rain-fed conditions in marginal/less fertile lands, with very little focus on pest and nutrient management.

- **Preference for Cash Crops:** Farmers may prefer cultivating cash crops such as rice, wheat, and sugarcane over pulses due to assured procurement, higher market prices, and perceived lower production risks.

- **Post Harvest Losses:** There are post-harvest losses during storage, due to excessive moisture and attack by stored grain pests especially the pulse beetle

- With the advent of the **Green Revolution,** which promoted rice and wheat using external inputs and modern varieties of seeds, pulses were pushed to the marginal lands. This resulted in decline in productivity and land degradation.

- Penetration and adoption of **high yielding varieties (HYV)** seeds are also low.

Measures taken by government to increase production

- **PM-AASHA:** To ensure remunerative prices to farmers, Government implements an umbrella scheme PM-AASHA comprising Price Support Scheme (PSS), Price Deficiency Payment Scheme (PDPS) and Private Procurement Stockist Scheme (PPSS) in order to ensure Minimum Support Price (MSP) to farmers for their produce of notified oilseeds, pulses and copra.

- **Integrated scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM)** was launched in 14 major pulses growing states.

- **National Food Security Mission:** The Department of Agriculture & Farmers Welfare is implementing the National Food Security Mission (NFSM)-Pulses with the objectives of increasing production through area expansion and productivity enhancement in all the districts.

- **Research and Development:** Indian Council of Agricultural Research (ICAR) is undertaking basic and strategic research in collaboration with State Agricultural Universities for developing location-specific high yielding varieties of Pulses.

- **Rashtriya Krishi Vikas Yojna:** It was launched under which states can undertake Pulses Development Programmes.

Way Ahead

- Pulses offer a range of **social, economic, and environmental benefits**, making them valuable components of sustainable agriculture.

- India had become self-reliant in chickpeas (chana) and many other pulses crops, with a slight deficiency remaining in pigeon peas (tur) and black gram. Consistent efforts are being made to **attain self-sufficiency in pulses by 2027.**

- Further enhancing farmer awareness and capacity-building initiatives can help improve productivity and production levels in the pulses sector.

Source: TH

MALFUNCTIONING OF ELECTRONIC VOTING MACHINES (EVMS)

- Several states had flagged the malfunctioning of Electronic Voting Machines (EVMs) during the 2019 Lok Sabha polls according to documents obtained through the Right to Information.

Electronic Voting Machine (EVM)

- Electronic Voting Machine (EVM) is a simple electronic device used to record votes in place of ballot papers and boxes which were used earlier in conventional voting systems.

- The use of EVM started back in **1982 Kerala Assembly elections.** Prior to this only ballot papers and ballot boxes were allowed.

How does the machine work?

- EVM has two parts, it consists of a **'control unit'** and a '**balloting unit',** connected by a **5-meter cable.**

- The control unit is with the Election Commission-appointed polling officer and it is the brain of the EVM.

- The balloting unit is in the voting compartment into which the voter enters to cast the vote in secret by pressing the button against the name and symbol of the candidate of her choice.

    - **The balloting unit** is turned on only after the polling officer presses the 'Ballot' button on it.

- The EVM runs on a **6 volt single alkaline battery** fitted in the control unit, and can even be used in areas that have no electricity.

Production and design

- There are **only two Indian PSUs** that manufacture EVM machines;

    - Bharat Electronic Limited (BEL) and

    - Electronics Corporation of India Limited (ECIL).

- The secret source code is only accessible to a few engineers.

How long can EVM be used?

- EVMs have a life of 15 years. Chips that have the code need to be crushed in the presence of an officer of EC.

- Even CU, BU display units are removed from the plastic holding and are crushed.

What is malfunctioning of EVMs?

- Malfunction or breakdown of EVMs doesn't imply they are open to rigging or tampering.

- Like any machine, EVMs too can malfunction. However, frequent instances of breakdown can lead to interruptions in voting, slowing down the process and potentially affecting voter turnout.

- To ensure the functionality of EVMs, First-level check (FLC) is done.

First-level check (FLC)

- FLC is the initial technical examination of the EVM's Ballot Unit (BU) and Control Unit (CU) as well as the Voter-Verified Paper Audit Trail (VVPAT).

- This process is conducted by engineers in the six months leading up to the Lok Sabha polls at the district level under the supervision of a District Election Officer (DEO).

- If any EVM part malfunctions during the FLC, it is returned to the manufacturers.

> **Voter verifiable paper audit trail (VVPAT)**
>
> - A VVPAT is intended as an independent verification system for voting machines designed to allow voters to verify that their vote was cast correctly, to detect possible election fraud or malfunction, and to provide a means to audit the stored electronic results.
>
> - It contains the name of the candidate (for whom vote has been cast) and symbol of the party/individual candidate.
>
> - The VVPAT offers some fundamental differences as a paper, rather than electronic recording medium when storing votes.

Source: IE

USE OF AI TO CLONE VOICES FOR CREATIVE PURPOSES
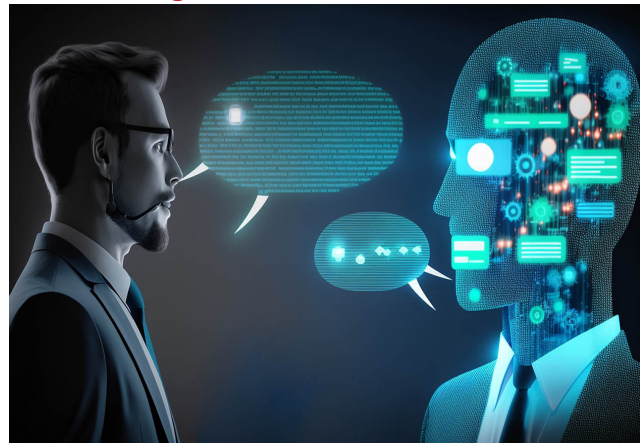
Context

- Recently, music composer A.R. Rahman used an **Artificial Intelligence (AI) software to recreate the voices of singers** Bamba Bakya and Shahul Hameed who are now dead.

About

- A report by Market US has revealed that **the global market for these voice cloning applications stands at $1.2 billion in 2022** and is estimated to touch almost **$5 billion in 2032 with a CAGR above 15-40%.**

Voice cloning

- Voice cloning technology employs **sophisticated AI algorithms** to replicate the intricacies of human speech patterns.

- This innovative process hinges on the **principle of training neural networks,** a fundamental aspect of artificial intelligence, using extensive datasets of recorded speech.

- There's a **host of these applications** online with popular ones like **Murf, Resemble and Speechify.**

  - Recently, **former Pakistani Prime Minister Imran Khan's political party used an AI-generated speech** from the now imprisoned leader in an attempt to rally for votes.

Applications

- **Preserving legacy:** Can keep the voices of loved ones alive for future generations.

  - **Apple** introduced a **voice cloning feature** in iOS 17 intended to **help people who may be in danger of losing their voice to a degenerative disease.**

- **Personalized experiences:** Custom virtual assistants, interactive storytelling, and more immersive digital interactions.

- **Gaming:** Prominent tech companies also have a hand in the **AI voice game**. Recently, **Meta** launched **SeamlessM4T,** which can understand nearly 100 languages from speech or text and generate translations in real-time.

- **Accessibility:** Can offer voice to those who have lost it or will lose it due to illness or disability.

- **Song creations: YouTube** took a similar route and announced **Dream Track** that allows them to create song clips featuring AI vocals with permission from pop stars like Demi Lovato, Sia and John Legend.

- **Creative applications:** Enhancing storytelling, audio games, and immersive experiences.

Issues/Concerns

- **Scams**: In April 2023, a family living in Arizona, U.S. was threatened to **pay ransom for a fake kidnapping pulled off by an AI cloned voice.**

- **Reporting issues: Several cases went unreported and** only some came to light.

- **Fake news:** Easy access to AI voice clones also **spawned disinformation.**

  - **Harry Potter actress Emma Watson** allegedly read out a portion of the Mein Kampf**.**

- **Privacy and consent:** Concerns about unauthorized recording and use of voices without consent need to be addressed.

- **Ethical considerations:** Potential for exploitation, manipulation, and emotional harm through impersonation and misuse.

- **Social implications:** Impact on identity, trust, and communication dynamics in the digital age.

- **Hate speech:** Recently, users started flocking to free AI voice cloning tools **to generate celebrity hate speech**.

  - **Conservative political pundit Ben Shapiro allegedly made racist comments** against Democrat politician Alexandra Ocasio-Cortez.

India: a major target for AI voice clone scams

- A report titled **'The Artificial Imposter'** published in May last year revealed that **47% of surveyed Indians have either been a victim or knew someone who had fallen prey** to an AI generated voice scam.

- The **numbers are almost twice the global average of 25%.** In fact, **India topped the list with the maximum number of victims** to AI voice scams.

  - In December, a **Lucknow resident** fell prey to a cyberattack that used AI **to impersonate the voice of the victim's relative**, requesting the person to transfer a substantial amount through UPI.

- Indians have been found to be **particularly vulnerable** to scams of this nature.

  - According to McAfee, **66% of Indian participants admitted that they would respond to a voice call** or a phone call that appeared to be from a friend or family member in urgent need of money.

  - The report also shared that **86% Indians were prone to sharing their voice data online** or via voice notes at least once a week which has made these tools potent.

Measures

- **Regulatory frameworks:** Robust legal and ethical guidelines are crucial to prevent misuse and protect privacy.

  - The **U.S. Federal Trade Commission is considering** the adoption of a recently-proposed **Impersonation Rule that will help deter deceptive voice cloning.**

- **Technological safeguards:** Watermarking and other authentication mechanisms can help identify and verify cloned voices.

- **Public awareness and education:** Educating the public about voice cloning technology and its potential risks is vital.

  - The **US Federal Trade Commission** has also launched a **Voice Cloning Challenge** which asked the public to send in their **ideas to detect, evaluate and monitor cloned devices.**

- **Responsible development and application:** Promoting ethical and transparent use of voice cloning for positive societal impact.

Way Ahead

- The future of voice cloning hinges on **responsible development and utilization, balancing its potential benefits** with ethical considerations and safeguards to avoid its misuse.

Source: TH

'SANGAM: DIGITAL TWIN' INITIATIVE

Context:

- The **Department of Telecommunications (DoT)** recently unveiled the **'Sangam: Digital Twin' initiative.**

About Digital Twin:

- **Digital Twin technology creates virtual replicas of physical assets,** constantly updated with real-time data and replicating its behavior.

- It allows for **real-time monitoring, simulation and analysis** for experimental iterations.

- It **leverages data collected from sensors and other sources** to create a real-time representation that reflects the physical counterpart's state and behavior.

Applications across Industries:

- **Manufacturing**: Optimizing production lines, predicting equipment failures, and testing new designs virtually.

- **Smart cities:** Monitoring infrastructure health, managing traffic flow, and optimizing energy consumption.
- **Healthcare:** Personalized patient care, virtual surgery simulations, and real-time monitoring of medical equipment.
- **Logistics and supply chain:** Tracking goods in real-time, optimizing delivery routes, and predicting potential disruptions.

Sangam: Digital Twin initiative

- **Aim**:
  - To demonstrate practical implementation of innovative infrastructure planning solutions.
  - To develop a model framework for facilitating faster and more effective collaboration.
  - To provide a future blueprint that may serve as a roadmap to scale and replicate successful strategies in future infrastructure projects.
- It is a **Proof of Concept (**a demonstration of a product or service) distributed in **two stages** to be conducted in one of the major cities of India.
  - **First stage is Exploratory for clarity of horizon** and creative Exploration to unleash potential.
  - **Second stage is for practical demonstration of specific use cases** generating a future blueprint that may serve as a roadmap to scale and replicate successful strategies in future infrastructure projects through collaboration.

Significance

- 'Sangam: Digital Twin' symbolizes a **collaborative leap towards reshaping infrastructure planning and design**.
  - It combines the **prowess of 5G, IoT, AI, AR/VR, AI native 6G,** Digital Twin and next-gen computational technologies with the collective intelligence of **public entities, infrastructure planners, tech giants, startups, and academia.**
- Its collaborative approach is to **break the silos and engage in a whole-of-nation approach.**
- Sangam **brings all stakeholders on one platform aiming to transform innovative ideas into tangible solutions**, bridging the gap between conceptualization and realization, ultimately paving the way for infrastructure advancements.
- Echoing global movements towards smart infrastructure, **Sangam carves out a position of leadership for India in digital infrastructure and innovation**, while acknowledging similar strides made by global leaders.

Source: PIB

NEWS IN SHORTS

JARDIANCE (EMPAGLIFLOZIN)

In Context

- The apex drug regulatory body **Central Drugs Standard Control Organisation (CDSCO),** has approved use of **Jardiance for treating kidney failure.**
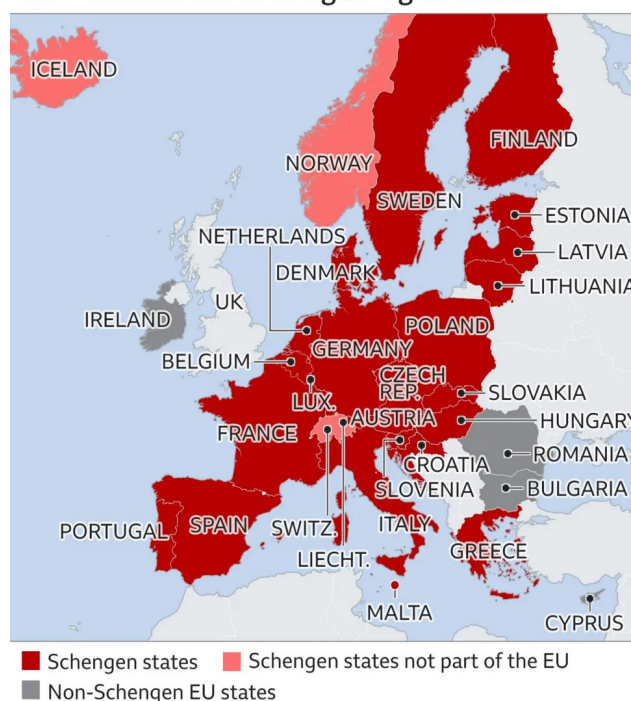
About

- The drug Jardiance (empagliflozin) 10mg tablets has been approved to reduce the risk of sustained decline in estimated **glomerular filtration rate (eGFR)** which is done to check how well the kidneys are filtering.
- Earlier, the Jardiance was given approval **only for the treatment of heart failure** with reduced ejection fraction (HFrEF).
- **Significance:** The approval has the potential to advance the standard of care for an estimated more than 33 million adults in India living with chronic kidney disease (CKD).
  - It can help relieve the burden on healthcare systems by reducing the risk of hospitalizations.
  - It will also delay the progression to kidney failure, for people with CKD.

Source: LM

SCHENGEN ZONE

Countries in the Schengen Agreement

■ Schengen states　■ Schengen states not part of the EU
■ Non-Schengen EU states

Context:

- Recently, **Kosovo** secured **visa-free access to the Schengen zone**, facing opposition due to its declaration of independence from Serbia.

About the Schengen Zone:

- It's an area in the **European Union** without internal borders, allowing for the **free and unrestricted movement of people**.
  - It allows for **passport-free travel, work and living** in an EU country without special formalities between countries that fall within the European zone.
- **The Schengen Agreement** was signed in 1985 at a Schengen village in **Luxembourg (bordering France and Germany)**.
- The Schengen Zone covers most of the EU countries, **except Cyprus and Ireland**, and it includes few non-EU countries like **Norway, Iceland, Switzerland, and Liechtenstein**.

India and the Schengen Visa:

- Indian passport holders can stay in the Schengen area for up to 90 days within any 180-day period.

Source: TH

JAN BHARAT RANG

Context:

- Recently, the National School of Drama (NSD) has invited all performing art groups for participation in Jan Bharat Rang under the banner of Bharat Rang Mahotsav 2024.

About the Jan Bharat Rang:

- It is an **initiative by the NSD** and is part of their annual theatre festival, Bharat Rang Mahotsav.
  - It is celebrated on the **25th anniversary of the Bharat Rang Mahotsav**.

Bharat Rang Mahotsav:
- It is the **largest theatre festival in Asia**, established by the NSD to stimulate the growth and development of theatre across India.
- It includes several **national and international** performances, and various associated events.

- It is an attempt to create a record with over 2,000 short performances taking place simultaneously across India.

- **Themes:**
  - Vasudeva Kutumbakam;
  - Panch Pran; and,
  - Vikasit Bharat
- The theatre groups participating in Jan Bharat Rang can develop their own scripts as long as they stay true to any of the above themes.

The National School of Drama, New Delhi:

- It is one of the foremost theatre training institutions in the world and the only one of its kind in India.
- It was **set up by the Sangeet Natak Akademi** as one of its constituent units in 1959.
- In 1975, it became **an independent entity** and was registered as an autonomous organisation under the Societies Registration Act XXI of 1860, fully financed by the **Ministry of Culture.**
- Training in the School is intensive and is based on a thorough, carefully planned syllabus. As a part of their training, students are required to produce plays which are then performed before the public.

Source: IE

INDIA-NEPAL SIGN PACT FOR UPI-NPI LINKAGE

Context

- Reserve Bank of India (RBI) and Nepal Rastra Bank (NRB) signed Terms of Reference (ToR) to integrate fast payment systems of India and Nepal.

About

- The **Unified Payments Interface (UPI)** of India and **National Payments Interface (NPI)** of Nepal linkage will deepen financial connectivity and reinforce the enduring historical, cultural, and economic ties between the two countries.
- Recently, Sri Lanka, Mauritius, and France have enabled the UPI in these countries.

What is Unified Payments Interface (UPI)?

- UPI was designed and launched by the **National Payments Corporation of India** (NPCI) in **2016.**
- It is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood.

- It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience.
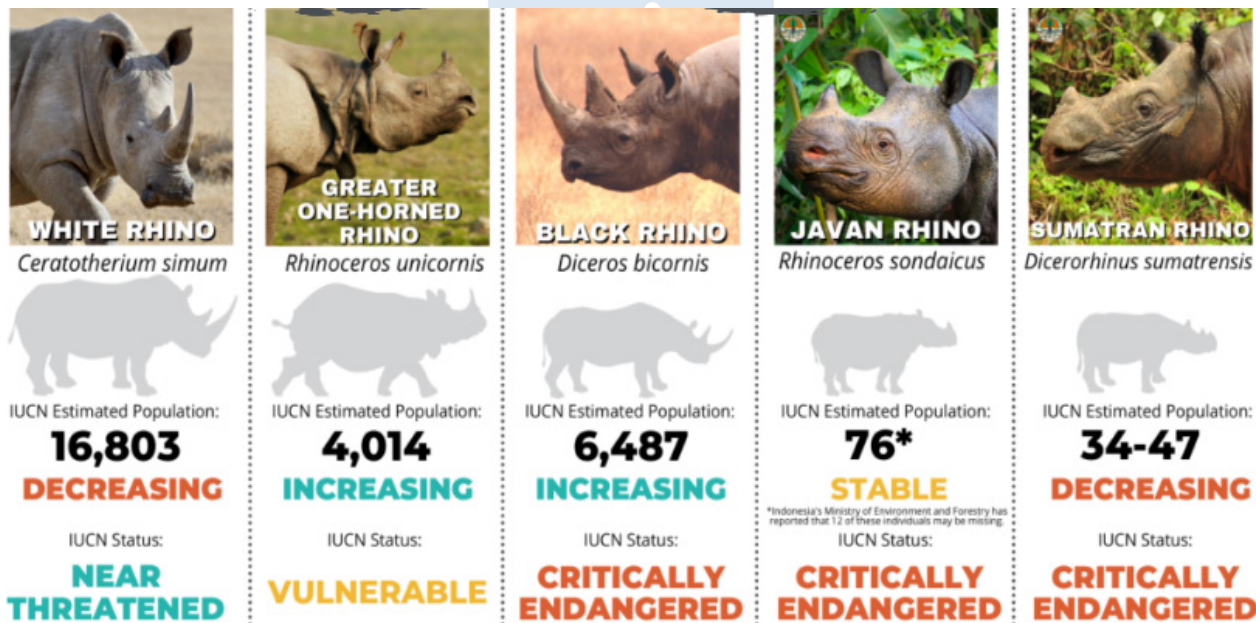
Source: TH

WHITE RHINOCEROS

In News

- Scientists performed the first successful embryo transfer in white rhinos with the help of In-vitro fertilization (IVF)

White Rhinoceros(Ceratotherium simum)

- White rhinos are the second largest land mammal after the elephant.
- Their name comes from the **Afrikaan's,** a West Germanic language, word "weit" which means wide and refers to the animal's mouth.
- They are also known as the square-lipped rhinoceros due to their square upper lip.
- They are the only grazer among the five rhino species.
- **Subspecies**: The white rhinoceros includes two **genetically distinc**t subspecies, **northern and southern,** found in two different regions in Africa.
- **Distribution :** The majority of white rhinos occur in just four countries: South Africa, Namibia, Zimbabwe and Kenya.
- **Threats :** The main threat to the population is illegal hunting (poaching) to supply the illegal international rhino horn trade
- **IUCN status:**
    - Northern White Rhino: **Critically Endangered**
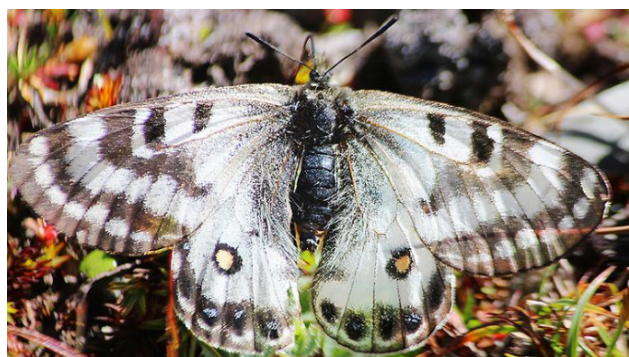   - Southern White Rhino: **Near Threatened**

WHITE RHINO	GREATER ONE-HORNED RHINO	BLACK RHINO	JAVAN RHINO	SUMATRAN RHINO
Ceratotherium simum	*Rhinoceros unicornis*	*Diceros bicornis*	*Rhinoceros sondaicus*	*Dicerorhinus sumatrensis*
IUCN Estimated Population:	IUCN Estimated Population:	IUCN Estimated Population:	IUCN Estimated Population:	IUCN Estimated Population:
16,803	**4,014**	**6,487**	**76***	**34-47**
DECREASING	INCREASING	INCREASING	STABLE *Indonesia's Ministry of Environment and Forestry has reported that 12 of these individuals may be missing.	DECREASING
IUCN Status:	IUCN Status:	IUCN Status:	IUCN Status:	IUCN Status:
NEAR THREATENED	VULNERABLE	CRITICALLY ENDANGERED	CRITICALLY ENDANGERED	CRITICALLY ENDANGERED

DUSTED APOLLO

In News

Dusted Apollo has been sighted and photographed for the first time in Himachal Pradesh

About Dusted Apollo (Parnassius stenosemus)

- It is a rare high-altitude butterfly.
- The species was discovered in 1890.

- The distribution range of Dusted Apollo extends from **Ladakh** to **west Nepal** and it flies between 3,500 to 4,800 metres in the inner Himalayas.

- There are 11 Apollo species recorded from Himachal Pradesh and five of them are declared as Scheduled species.

  - Most of the Apollo butterflies are now endangered .

  - Regal Apollo is protected under Schedule II of the Wildlife Protection Act, 1972

- **Importance:** It is an encouraging indication of the flourishing diversity of Apollo butterflies in the region.

  - Apollos are considered commercially important butterflies and they fetch high prices in the poaching industry.

  - and need immediate attention for their conservation and protection,

■■■■