



14 May, 2024

Working of Poling Stations

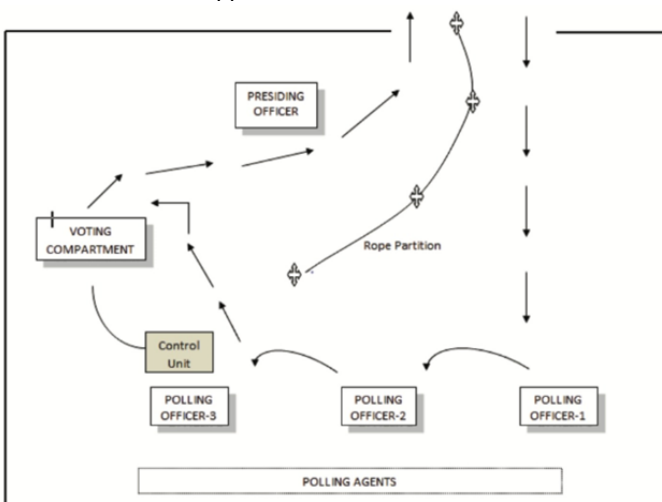
Context: In the ongoing Lok Sabha elections, 96.8 crore voters are enlisted across 10.5 lakh polling stations nationwide, spanning from urban hubs to remote areas.

➤ Setting up Polling Stations: Norms and Principles

- Under Section 25 of the Representation of the People Act, 1951 (RPA), the district election officer (DEO) is responsible for establishing and publishing the list of polling stations in their district.
- Principles for setting up polling stations include ensuring voters are within a two-kilometre radius, each station has a minimum area of 20 sq m, serves at most 1,500 electors, and villages with over 300 voters are provided with a polling station.
- Polling stations can cater to fewer than 300 voters in areas with accessibility challenges, while auxiliary stations are set up for electorates exceeding 1,500, preferably within the same building.
- Locations for polling stations are preferably chosen in government or semi-government institutions, with private buildings used only when necessary and with owner consent or requisition under Section 160 of the RPA.
- The list of polling stations undergoes verification and updating during annual electoral roll revisions, with input from local parties and citizens and approval from the Election Commission of India (ECI).

➤ Layout and Facilities

- Polling stations ensure separate entrance and exit points for voters, voting compartments away from windows or doors, and basic facilities like furniture, lighting, signage, and separate toilets.
- Assured Minimum Facilities (AMF) are provided to ensure smooth voting experiences and efficient polling personnel duties, including shade structures, seating, cooling devices, drinking water, and medical kits.
- Provisions for Persons with Disabilities (PwD) include ramps, wheelchairs, designated parking, priority voting, transport facilities, and assistance through the Saksham App.



➤ People Inside Polling Stations and Voting Day Restrictions

- Access inside polling stations is restricted to registered electors, polling officers, candidates, media personnel, public servants on election duty, and authorised individuals.
- A polling party comprises a Presiding Officer and three Polling Officers responsible for verifying identity, applying indelible ink, managing voter slips, and controlling the EVM.

➤ Critical Polling Stations

- Critical polling stations are those requiring extra measures for security and integrity, including vulnerable areas, abnormal law & order situations, high or low voter turnout rates, and instances of electoral offences or violence.
- The ECI conducts pre-poll confidence-building initiatives, gathers feedback from candidates and intelligence agencies, legally binds troublemakers, and deploys Central Armed Police Forces (CAPF) and Micro Observers on polling day.

Xenotransplantation

Context: The inaugural recipient of a modified pig kidney transplant died on Saturday (May 11), approximately two months following the surgery.

➤ What is Xenotransplantation?

Science Matters

Hope from pig organs

Researchers have taken a major step toward cloning pigs whose organs could be safely transplanted into humans, giving new hope to the thousands of ill people waiting for organs.

Xenotransplantation
Process of replacing human organs with those from other mammals

The problem
Pigs have two copies of the GGTA1 gene, which makes pig cells trigger the human immune system, which then rejects a transplanted pig organ

New solution
Scientists cloned pigs with altered GGTA1 genes

A good match
Pigs are promising sources for transplants because their organs closely match the size and shape of humans'

What's next
Researchers will work to breed pigs that can't transfer a harmful pig virus to humans
If the pigs' organs can be transplanted successfully into chimpanzees or other primates, human testing may start by 2006

Source: Science Express, PPL Therapeutics, United Network for Organ Sharing (U.S.)
Graphic: Chicago Tribune

Graphic Selected by SIRS Staff

Face to Face Centres





14 May, 2024

- Xenotransplantation involves transplanting, implanting, or infusing live cells, tissues, or organs from nonhuman animal sources into human recipients.
- It addresses the gap between the high demand for organ transplants and the limited availability of donor organs.
- **How does Xenotransplantation Happen?**
 - Animal organs undergo genetic modifications to prevent rejection by the human body.
 - CRISPR-Cas9 technology is utilised to remove pig genes that trigger immune reactions and add human genes to enhance compatibility.
 - Post-surgery, constant monitoring is essential to assess the body's response to the transplanted organ.
- **Why are Pigs Often Used for Xenotransplantation?**
 - Pig heart valves have been used in humans for over 50 years due to anatomical and physiological similarities.
 - Pigs are extensively farmed, providing cost-effective options for organ harvesting.
 - Various pig breeds allow matching organ sizes to human recipients' needs.
- **What is the potential?**
 - Organ shortage leads to 20-35% of patients dying while awaiting transplants.
 - Xenotransplantation explores using animal organs, genetically altered with human genes, to address organ shortages.
 - Xenotransplants offer potential solutions by tricking the immune system into accepting transplanted organs.
 - Xenotransplantation is also used in oncology research to predict tumour sensitivity to treatments.
 - Transplanting human organs into animals aids in studying human biology and provides an alternative source of organs for future transplantation.
 - For instance, human foetal kidneys transplanted into rats demonstrated functional support and growth.

Memory of the World Programme

Context: *The Ramcharitmanas, Panchatantra, and Sahridayaloka-Locana have been listed in UNESCO's Memory of the World Asia-Pacific Regional Register.*

➤ Overview of UNESCO's Memory of the World Programme:

- The Memory of the World Programme aims to safeguard humanity's documentary heritage from neglect, decay, and deliberate destruction.
- It calls for the preservation of archival holdings, library collections, and individual compendia worldwide.
- The programme seeks to reconstitute dispersed or displaced documentary heritage and enhance accessibility and dissemination of these items.

➤ Memory of the World Register:

- It is a collection of documents, manuscripts, oral traditions, audio-visual materials, and library and archival holdings of universal value.
- Inscription on the register facilitates improved conservation and calls upon experts to exchange information and raise resources for preservation, digitisation, and dissemination.
- Technology is used to enhance accessibility and diffusion of the registered items.

➤ Nomination and Selection Process:

- Any organisation or individual can nominate a documentary item for inscription on the register through UNESCO Member States.
- Proposals undergo examination by the International Advisory Council (IAC) regarding description, origin, significance, and conservation.
- The IAC recommends items for inscription to the Executive Board of UNESCO.

➤ Memory of the World International Register:

- It catalogues the world's documentary heritage recommended by the International Advisory Committee and endorsed by the Director-General of UNESCO.
- Selection criteria emphasise "world significance and outstanding universal value."
- The first inscriptions on the register were made in 1997, and the programme has since encouraged the establishment of national and regional organisations and registers to streamline applications and fundraising.

Face to Face Centres





14 May, 2024

NEWS IN BETWEEN THE LINES

United Nations Office on Drugs and Crime



The 2024 World Wildlife Crime Report released by the United Nations Office on Drugs and Crime recently noted that several endangered species such as rhinos, elephants, pangolins and certain trees like cedars, rosewoods and agarwood have been most affected by illegal wildlife trade.

About United Nations Office on Drugs and Crime:

- The United Nations Office on Drugs and Crime (UNODC) is a **global leader in the fight against illicit drugs and international crime.**
- It is a **United Nations agency** that was established in **1997 through a merger between the United Nations Drug Control Programme and the Centre for International Crime Prevention.**
- Its **mission is to educate people about the dangers of drug abuse** and to strengthen international **action against illicit drug production** and trafficking and drug-related crime.
- The organization **relies on voluntary contributions**, mainly from governments, to carry out its activities.
- It **collaborates with various stakeholders** including governments, civil society organizations, academia, private sector, and international organizations to maximize the impact of its work.
- Its Strategy for the period of 2021-2025 is committed to **promoting human rights, gender equality** and disability inclusion, as well as **protecting children** and harnessing the transformative power of youth.
- Its headquarter is in **Vienna, Austria.**

Chenchu Tribe



Recently, voters from the Chenchu tribe participated in elections at a special polling station in the SC-reserved Achampet Assembly segment within the Nagarkurnool Lok Sabha constituency in Telangana.

About Chenchu Tribe:

- The Chenchus, also called "**Chenchuvaru**" or "**Chenchwar**" are a **Dravidian tribe of Adivasis** who live in the Indian states of **Andhra Pradesh, Telangana, Karnataka and Odisha.**
- They are an aboriginal **semi-nomadic schedule tribe** whose traditional way of life has been based on **hunting and food gathering.**
- They are known as the "children of the forest" and are the original inhabitants of the **Nallamala Hill ranges in south eastern part of India.**
- They **speak a language of their own called 'Chenchu'** which belongs to the Dravidian language family.
- It is believed that the Chenchus were **employed by the kings of the south** to protect the river **Krishna and Thungabhadra.**
- In 1961 Census, they numbered 52 and were concentrated in Koraput district **only; in 1971** Census their number drastically **came down to 08 only.**
- As per the latest **2011 Census** their population in the state alarmingly came down by more than **50 percent, to 13 persons only including 6 males and 7 females** largely found in Nowrangpur district.

Semal Tree



Recently, semal trees in Rajasthan face depletion due to their widespread use in Udaipur's Holi celebrations.

About the Semal Tree:

- The semal tree, scientifically **known as Bombax ceiba L.,** is native to India and **belongs to the Bombacaceae family.**
- The Semal tree, **also known as the red silk cotton tree or Bombax ceiba,** is a **deciduous tree with large red flowers that blooms in the spring.**
- It's **one of the largest trees in North India** and is found in dry teak and mixed deciduous forests in peninsular India, moist forests on the Western coast, and the sub-Himalayan tract.
- It's also found in **Myanmar, South China and throughout tropical southeast Asia.**
- Its parts, including **roots, fruits, seeds, stem, bark and gum, possess medicinal properties,** contributing to traditional medicine practices.
- The tree holds cultural significance in Indian traditions, particularly during festivals like Holi, where debarked stems or branches are traditionally **used for bonfire's main pillar.**
- **Tribal communities rely on semal for food, fodder, fuelwood, and crafting purposes.**
- Members of the **Kathodi tribe** use its wood to **craft musical instruments** while those of the **Bhil use it to make utensils.**
- Illegal cutting of semal trees for cultural practices like Holika Dahan poses a significant threat to its population, **violating the Rajasthan Forest Act 1953 and the Forest (Conservation) Act 1980.**

Face to Face Centres





14 May, 2024

Armoured Sailfin Catfish



Recently, CSIR-Centre for Cellular and Molecular Biology (CCMB) scientists have found out that the invasive armoured sailfin catfish has spread to 60% in the water bodies of Eastern Ghats.

About Armoured Sailfin Catfish:

- The armoured sailfin catfish, also known as the sailfin pleco or janitor fish, is a South American tropical fish, particularly found in the Amazon River basin.
- The fish is named for its sail-like dorsal fin, and its scientific name, *Pterygoplichthys multiradiatus*, means "many-rayed".
- It was introduced for its unique appearance and ability to clean algae in tanks and aquariums.
- It can grow to over 20 inches and weigh up to 3 pounds.
- Some species of armoured sailfin catfish include the Orinoco sailfin catfish (*Pterygoplichthys multiradiatus*), the Amazon sailfin catfish (*Pterygoplichthys pardalis*, also known as the common pleco or "leopard pleco") and the Vermiculated sailfin catfish.

Place in News

Chabahar Port

Recently, India and Iran have signed the long-term contract for the operation of the Shahid Beheshti Port in Chabahar.

About Chabahar Port:

- Chabahar Port is located in Iran's Sistan-Balochistan province on the Makran coast along the Gulf of Oman.
- It is Iran's only oceanic port and consists of two separate ports named Shahid Beheshti and Shahid Kalantari.
- This Port is considered a gateway to trade opportunities for India, Iran and Afghanistan with central Asian countries.
- India and Iran signed an initial agreement in 2016 for India to develop and operate Shahid Beheshti terminal for 10 years.
- It was proposed in 1973 by the last Shah of Iran, but development was delayed by the 1979 Iranian Revolution.
- The first phase opened during the Iran-Iraq War (1983) to shift seaborne trade eastward, reducing dependency on Persian Gulf ports vulnerable to attacks.
- It diversifies India's trade routes by circumventing Pakistan, which has historically imposed restrictions on India's trade with Afghanistan and Central Asia.



POINTS TO PONDER

- Where did the 5th Joint Group of Customs (JGC) meeting between India and Bhutan take place? – Ladakh
- Which state recently initiated the 'Pirul Lao-Paise Pao' campaign to combat forest fires? – Uttarakhand
- What organisation is associated with Agenda 2063, recently highlighted in the news? – African Union (AU)
- With which disease is the Widal Test linked, as observed in recent news? – Typhoid
- Where was the Krishi Integrated Command and Control Centre (ICCC) launched recently by the Ministry of Agriculture & Farmers Welfare (MoA&FW)? – New Delhi

Face to Face Centres

