



20 October, 2023

Government e-Marketplace (GeM)

Context: Exceeding its target, the Coal Ministry's procurement on GeM has reached a substantial sum of Rs. 28,665 crore.

- **GeM's Purpose:** GeM (Government e-Marketplace) serves as an online platform for the procurement of commonly used Goods and Services by various Government Departments, Organizations, and Public Sector Units (PSUs).
- **Inception:** The initiative was officially launched in August 2016 under the auspices of the Ministry of Commerce and Industry, Government of India.
- **GeM 3.0:** The latest version, known as GeM 3.0, was introduced on January 26, 2018.
- **Features:** GeM 3.0 offers tools such as e-bidding, reverse e-auction, and demand aggregation. These features are aimed at helping government users obtain the best value for their expenditures while enhancing transparency, efficiency, and speed in the public procurement process.
- **Public Procurement Significance:** Public procurement encompasses the processes through which governments and state-owned enterprises acquire goods and services from private sector suppliers.
- **Economic Impact:** Public procurement constitutes a substantial portion, approximately 15-20%, of India's Gross Domestic Product (GDP). Therefore, ensuring the efficient operation of the public procurement system is of paramount importance for the nation's economy.
- **Recent Developments in GeM**
 - **GeM Outlet Stores:** GeM has introduced outlet stores for various product categories, including SARAS, Ajeevika, Tribes India, Startup Runway, Khadi India, India Handloom, India Handicraft, Divyangjan, and more.
 - **GeM-CII MoU:** GeM has signed a Memorandum of Understanding (MoU) with the Confederation of Indian Industry (CII) to establish a GeM-CII Centre of Excellence (CoE). This CoE will offer training, research, and advocacy support to GeM.
 - **GeM, CSC, and India Post Integration:** India's postal system, India Post, and Common Service Center (CSC) have been integrated with GeM across the country. This integration enables India Post to provide logistics services to sellers and buyers on GeM, even in the most remote areas of the country.
 - **Bamboo Market Window:** A dedicated window for marketing Bamboo Goods has been created on the GeM portal, in collaboration with the National Bamboo Mission.

Special and Local Laws (SLLs)

Context: There have been calls for amendments in the SLLs as done in the recent tabling of Bills for IPC and others.

- **IPC and CrPC Part of Criminal Law:** IPC and CrPC cover a portion of general criminal law, including offenses and legal procedures.
- **Importance of SLLs:** Special and Local Laws (SLLs) hold the most crucial offenses and procedures in the Indian criminal justice system.
- **SLLs Neglected in Reforms:** Not addressing SLLs in ongoing legal reforms is a major oversight.
- **SLLs' Significance:** In 2021, 39.9% of all cognizable offenses were under SLLs, with 24.3 lakh offenses registered exclusively under them.
- **Qualitative Impact:** SLLs have sparked vital debates on the state's power to criminalize actions, especially in terms of individual rights and liberties.
- **What are these Laws?**
 - **Special Laws Defined:** Special laws are regulations that address specific issues. They primarily introduce new criminal offenses, essentially making actions illegal that were not covered by the Penal Code.
 - **Examples of Special Laws:** Special laws include Acts like the Excise, Opium, Cattle Trespass, Gambling, and Railway Acts. These laws focus on particular areas of the legal landscape.
 - **Unique Status of Negotiable Instruments Act:** The Negotiable Instruments Act is a distinct statute, and its provisions take precedence over those of the Code of Criminal Procedure (Cr PC), 1973.
 - **"Local Law" Definition:** A "local law" is a regulation applicable exclusively to a specific region or locality within India. These laws are designed to address matters specific to certain areas, such as the Port Trust Act.
- **Need for amendments**
 - **Substantive Issues in Special Laws (SLLs):**
 - Special laws, or SLLs, address a wide range of substantive legal matters.
 - Some SLLs, like the Unlawful Activities (Prevention) Act, 1967 (UAPA) and the Maharashtra Control of Organised Crime Act, 1999 (MCOCA), suffer from issues related to deficient, ambiguous, and vague definitions of offenses and terms, such as 'terrorist act,' 'unlawful activity,' 'organized crime,' and 'organized crime syndicate.'
 - The Protection of Children from Sexual Offences Act, 2012, has faced criticism for its applicability to consensual sexual activities between minors. Concerns have been raised about criminalizing such conduct through SLLs, which might be more appropriately addressed as civil wrongs or regulatory matters.
 - The Supreme Court, in the case of P. Mohanraj versus M/s Shah Brothers Ispat Ltd. (2021), referred to Section 138 of the Negotiable Instruments Act, 1881, as a 'civil sheep' in a 'criminal wolf's' clothing.

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- **Procedural Changes in SLLs:**
 - SLLs have also introduced procedural changes that impact due process values.
 - Examples include increased powers of search and seizure under Section 43A of the UAPA and the admissibility of confessions recorded by police officers under Section 18 of the MCOCA.
 - Stringent provisions in Section 43(D)(5) of the UAPA, Section 37 of the Narcotic Drugs and Psychotropic Substances Act, 1985, and Section 45 of the Prevention of Money Laundering Act (PMLA) 2002 make it extremely difficult to obtain bail.

Heartland Tripura Campaign

Context: Shri Rajeev Chandrasekhar, the Union Minister of State for Skill Development & Entrepreneurship and Electronics & IT, will inaugurate the "Heartland Tripura" project.

Project "Heartland Tripura":

- This is a skill development initiative launched in collaboration with Deloitte and the National Institute of Electronics and Information Technology (NIELIT) in Agartala.
- **Objective:** The primary goal of "Heartland Tripura" is to offer skill development and employment opportunities to undergraduate students, both in engineering and non-engineering disciplines.
- **Implementing Partners:** Deloitte, in partnership with NIELIT, Agartala, is responsible for implementing the project, with support from the Government of India and the Government of Tripura.
- **Skill Development Courses:** "Heartland Tripura" will offer specialized skill development certification courses through NIELIT-Agartala. Successful completion of these courses, along with internships, can lead to promising job opportunities.
- **Course Topics:** The certification courses will cover a wide range of technical and professional skills, including areas like cybersecurity, internal audit, analytics, and soft skills such as business communication and executive presence.
- **PM-Development Initiative for North-East Region (PM-DevINE)**
 - **Infrastructure Development:** In alignment with the principles of PM GatiShakti, PM-DevINE aims to finance infrastructure projects in a coordinated manner, ensuring smooth connectivity and accessibility throughout the Northeastern Region (NER).
 - **Supporting Social Development Initiatives:** Acknowledging the distinct needs and challenges of the NER, the scheme aims to assist social development projects that address vital issues and enhance the overall quality of life for the region's residents.
 - **Empowering Youth and Women:** PM-DevINE strives to create livelihood opportunities with a specific focus on the NER's youth and women. This empowerment enables them to actively participate in the region's development and advancement.
- **North East Special Infrastructure Development Scheme (NESIDS)**
 - **NESIDS Scheme Funding:** NESIDS is a centrally funded scheme with a 100% central allocation. It has been approved for a renewed outlay of Rs. 8,139.50 crore covering the period from 2022-23 to 2025-26.
 - **Scheme Components:** The scheme consists of two components: NESIDS-Road and NESIDS-Other Than Road Infrastructure (OTRI).
 - **Integration of NERSDS:** The merger of the former North East Road Sector Development Scheme (NERSDS) into NESIDS-Road has resulted in the creation of new operational guidelines.
 - **NESIDS Objective:** NESIDS is designed to facilitate infrastructure development, with a primary focus on improving connectivity, within specified sectors across the North Eastern States.

Flexible Supercapacitors

Context: Conducting polymer and nanostructured inorganic oxide hybrids have been utilized to create flexible supercapacitors, enabling efficient energy storage.

- Researchers at Sanatana Dharma College, Alappuzha, have developed a flexible symmetric supercapacitor with a hybrid electrode.
- This supercapacitor demonstrates exceptional electrochemical properties, cycle stability, and a high energy density.
- The quest for efficient and stable electrode materials is a significant focus of research due to the growing energy demands.
- The objective is to increase the energy density of supercapacitors to approach that of batteries.
- Conducting polymers, with their pseudocapacitive properties, are crucial for supercapacitor electrodes.
- The hybrid electrode is composed of high-molecular-weight polyaniline (PANi) and vanadium pentoxide nanostructures.
- Unlike traditional PANi-based electrodes, this hybrid electrode is created from a dispersion of PANi with a secondary dopant in m-cresol, resulting in superior performance.
- The incorporation of high-molecular-weight PANi with nanostructured V2O5 addresses the shortcomings of individual materials and exhibits a synergistic effect.
- The flexible supercapacitor made using these electrodes shows outstanding electrochemical characteristics, with very high energy density and cycling stability.

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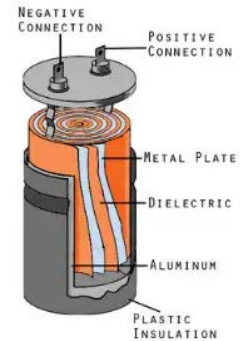
➤ It surpasses previously reported values for supercapacitors using aqueous electrolytes.

➤ **Capacitors:**

- A capacitor is an electrical device.
- It has two terminals.
- Its purpose is to store electric energy as an electric charge.
- It consists of two electrical conductors.
- These conductors are separated by a specific distance.
- The space between the conductors can be filled with a vacuum or an insulating material called a dielectric.

➤ **Working of a capacitor**

- A capacitor stores electric energy.
- It has two plates with a voltage applied.
- During charging, one plate accumulates a positive charge, and the other plate accumulates a negative charge.
- Charging time is when the capacitor reaches its maximum charge.
- The capacitor holds the charge.
- It can serve as an energy source when connected to a load.
- Current flows from one plate to the other, dissipating the stored charge.
- The time taken to discharge is called the dissipation time.



NEWS IN BETWEEN THE LINES

Air Quality Index



Recently, Mumbai's air quality has significantly worsened, with an AQI level of 161, surpassing that of Delhi.

About Air Quality Index:

- It was launched by the central government in 2014 as part of the Swachh Bharat campaign.
- It aims to simplify the common understanding of pollution.
- AQI transforms complex air quality data of various pollutants into a single number (index value), nomenclature and color.
- It monitors pollutants such as **PM 10, PM 2.5, Nitrogen Dioxide, Ozone and Carbon.**

Color-Coded Index: The color-coded AQI index makes it easier for the public and the government to understand air quality conditions and take appropriate measures.

AQI Categories: The Air Quality Index (AQI) includes six categories: 'Good' (0-50), 'Satisfactory' (50-100), 'Moderately polluted' (100-200), 'Poor' (200-300), 'Very Poor' (300-400) and 'Severe' (400-500).

Muthuvan Tribe



Recently, the Forest Department has initiated a collaboration with the Muthuvan tribe of the Anamalai hills to enhance efforts in conserving the Nilgiri Tahr.

About Muthuvan Tribe:

- The Muthuvan tribe residing in the Anamalai hills will be actively involved in Project Nilgiri Tahr, dedicated to protecting the Nilgiri Tahr.
- The Muthuvans are renowned for their extensive traditional knowledge and understanding of the hills.
- The Muthuvan tribe's population is confined to fragmented habitats within the Western Ghats, spanning the states of Tamil Nadu and Kerala.
- Traditionally, the Muthuvans are known as nomadic agriculturists, hunters and trappers.
- Their primary agricultural activities include cultivating coffee, ginger, sugarcane and paddy.
- They live in small communities referred to as "Kudi," each headed by a leader known as "Kani" or "Moopan."

Nuclear Briefcase



Recently, Vladimir Putin's appearance with a 'nuclear briefcase' in China has sparked interest in its history and the classified contents it holds.

About the Nuclear Briefcase:

- Nuclear Briefcase is a crucial component in authorizing nuclear strikes in Russia.
- It plays a critical role in the command and control of a nation's nuclear arsenal.
- The briefcase is also known as the "Cheget," named after Mount Cheget in the Caucasus Mountains.
- It is a part of a secure communication system to convey orders for nuclear strikes to the rocket forces.
- The communication is facilitated through the 'Kazbek' electronic command-and-control network, which supports 'Kavkaz'.

Historical Use:

- Nuclear briefcase is being used during a crisis was in 1995 when it was opened in response to a mistaken rocket launch near Norway's northern coast.
- In 2019, Prime Minister Imran Khan was seen with a black briefcase that contained the codes for Pakistan's nuclear weapons.

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Pink Bollworm



Recently, the Cotton crops in North Indian states, including Punjab, Haryana and Rajasthan are severely affected by pink bollworm attacks.

About Pink Bollworm:

- Pink Bollworm (**Scientific Name: Pectinophora gossypiella**) is one of the most **destructive pests of cotton**.
- It is originally **native to India** and is now found in nearly all cotton-growing countries worldwide.
- The adult moths are small, about **3/8 inch long, dark brown** and have markings on the forewing.
- However, the most destructive stage is the larval stage, characterized by distinctive pink bands and reaching a length of up to **1/2 inch** before pupation.

Ecological Threat:

- Adult moths have a short lifespan, but a single female can lay over 200 eggs.
- These eggs are laid on cotton bolls, and the hatched larvae feed on cotton seeds and damage the fibers, leading to reduced crop yield and quality.

Ophthalmology



Recently, there has been a remarkable surge in the application of artificial intelligence in the field of ophthalmology,

About Ophthalmology:

- Ophthalmology is a **medical subspecialty** focusing on the diagnosis and **treatment of eye disorders**.
- Ophthalmology has a history of **innovation and research** in eye care.
- Common eye diseases treated by ophthalmologists include cataracts, **glaucoma, diabetic retinopathy and macular degeneration**.
- Ophthalmologists use various diagnostic methods such as visual acuity assessment, tonometry and specialized tests like **optical coherence tomography (OCT)** and **fluorescein angiography**.

Place in News

Lao PDR

Recently, the Lao PDR has become the second country in 2023 after Bangladesh to eliminate lymphatic filariasis.

Lao PDR (Capital: Vientiane)

Location: Lao PDR is a **landlocked country** and situated in **northeast-central mainland Southeast Asia**.

Political Boundaries: It shares its borders with **China** to the north, **Vietnam** to the northeast and east, **Cambodia** to the south, **Thailand** to the west and **Myanmar** to the northwest.

Geographical Features:

- The country is characterized by rugged, forest-covered mountains.
- Its highest point is the **Phu Bia** at **9245 feet**.

Major River: The **Mekong River** flows through Lao PDR, contributing to its geography and landscape.



POINTS TO PONDER

- ❖ Which Committee recommended to increase the age of marriage for females to 21 from 18? - **the Jaya Jaitley committee in 2020**
- ❖ Which rivers flow through Simlipal Tiger Reserve (STR) in Odisha? - **Burhabalanga, Palpala Bandan, Salandi, Kahairi and Deo**
- ❖ What type of computer program is fed with a ton of text data to learn human language patterns and structures for generating text that sounds human-written? - **LLM (Large Language Model)**
- ❖ Where are the coral reef fossils found in Ladakh located? - **Burtse, eastern Ladakh Himalayas**
- ❖ What type of volcano is Mount Vesuvius? - **Composite Stratovolcano**

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