

- An EV is propelled by an **electric motor**, powered by **rechargeable battery packs** (refer to box).
 - ⊕ Contrary to this an **Internal Combustion Engine (ICE)** generates power by burning a **mix of fuel and gases**.
- **Key issues highlighted**
 - ⊕ **Frequent changes in EV policies** create uncertainties in the market.
 - ⊕ **Lowering targets** under the **FAME-II** due to budgetary constraints.
 - ◆ FAME-II (under Ministry of Heavy Industries) focuses on **supporting electrification of public & shared transportation**.
 - ⊕ MoRTH issued guidelines to **States to encourage EV adoption**, lowering initial expenses.
 - ◆ Nevertheless, **exemptions and rebates for road tax** are currently available in **only 19 states/UTs**.
 - ⊕ **Lack of charging infrastructure** and the overall **time required to charge** such batteries is a **major hurdle in the adoption of EVs**.
- **Recommendations**
 - ⊕ Formulation of a stable **national policy on Electric Mobility**.
 - ⊕ Enhancement of **budgetary allocation** for e-Buses under FAME-II and **extend it for at least 3 more years** (current tenure 2019-2024).
 - ⊕ **Incentivize installation of charging stations** for individual investors.
 - ◆ **Women SHGs and Cooperative Societies** may be assisted to open and operate charging Stations.
 - ⊕ Establish **dedicated Manufacturing Hubs and Industrial Parks** for manufacturing of batteries, cells and EV auto components.
 - ⊕ Conduct a study regarding the **feasibility of battery standardisation**.

Types of EVs

- **Battery BEVs/ All EVs:** Run entirely on a **battery-powered electric drive train**.
- **Hybrid EVs (HEVs):** Involving both the **engine and electric motor**, the transmission rotates concurrently driven by both power sources.
- **Plug-in HEVs:** Encompasses both an **engine and a motor but its battery pack is much larger** when compared to other HEVs.
- **Fuel Cell Electric Vehicles:** Referred to as **Zero-Emission Vehicles**, these vehicles utilize 'fuel cell technology' to generate electricity for propulsion.



International Organisation for Migration (IOM) launches Project PRAYAS

- The **Project Promoting Regular Assisted Migration for Youth and Skilled Professionals (PRAYAS)**, was launched in **partnership with Ministry of External Affairs (MEA) for the year 2023-24**.
 - ⊕ **Objective:** To facilitating **safe, orderly, and regular migration** for aspiring Indian migrant workers and students in collaboration with MEA, NITI Aayog, and State Governments.
 - ⊕ Project will **promote dissemination of communication materials** on safe and orderly migration pathways.
 - ◆ India has a large diaspora with **over 32 million** spread across the globe (2021 Dec).
 - ◆ Also, India is the **world's largest recipient of remittances**.
- **Problems faced by Indian diaspora abroad**
 - ⊕ **Wage insecurity, casual work arrangements, lack of social protection and skills gap**.
 - ⊕ Poor working conditions, absence of a proper **grievance redress mechanisms**, and access to a **transparent judicial system** etc.
- **Steps taken by India for diaspora**
 - ⊕ **Pre-Departure Orientation Training** is imparted to workers before they migrate.
 - ⊕ **Indian Community Welfare Fund (ICWF)** for assisting Overseas Indians in times of distress.
 - ⊕ **MADAD Portal** addresses grievances related to Indians in distress abroad.
 - ⊕ **Know India Programme** to expose India's young diaspora to various aspects of contemporary India.

- It is an **annual award** given by **Exploration Museum in Iceland's Husavik**. It is **dedicated to the history of human exploration**, from the early explorers to the exploration of space.
 - ⊕ It is named after the **Icelandic explorer Leif Erikson** who is considered the **first European to land in North America**.
 - ⊕ The 2023 award celebrates **first soft-landing of a spacecraft near lunar south-pole**, which marked another major achievement for **ISRO**.
- **About Indian Space Research Organisation (ISRO, HQ: Bengaluru)**
 - ⊕ ISRO, previously the **Indian National Committee for Space Research (INCOSPAR)**, was set up in **1962**.
 - ⊕ Later, on **August 15, 1969**, ISRO superseded INCOSPAR and was subsequently brought under **Dept of Space in 1972**. **Role of ISRO in nation-building**
 - ◆ **Earth Observation, Meteorological Satellite Systems:** Supports disaster management, etc.
 - ◆ **Communication Satellite Systems:** INSAT satellites contributes significantly to socio-economic and strategic activities.
 - ◆ **Navigation Systems:** GPS Aided Geo Augmented Navigation (GAGAN) assists in civil aeronautical navigation.
 - ◆ **Capacity Building:** ISRO has transferred more than 363 technologies across India for commercialization, societal application, etc.
 - ◆ **Space Science and Planetary Research Systems:** Aditya-L1 project for understanding the Sun.
 - ◆ **Space Transportation System:** India has achieved self-reliance in space transportation capability via PSLV and GSLV.

World Bank releases its annual International Debt Report (IDR), 2023

- The report analyses **external debt** statistics for **122 low- and middle-income countries (LMICs)**.
- **Key highlights**
 - ⊕ **Historic rise in debt:** Public and publicly guaranteed (PPG) debt service payments by LMICs totaled **US\$443.5 billion in 2022**.
 - ◆ Over 1/3rd of such debt carries **variable interest rates**, posing **risk of sudden increases**.
 - ⊕ **Debt Service cost:** Due to **rising interest rates and unfavourable exchange rate** movement, servicing external debt could become burdensome.
 - ◆ **India's debt service** was **2% of the GNI** in 2022.
 - ⊕ **Crowding out of priorities:** Debt servicing could crowd out spending on other development priorities (**health, education, etc**).
 - ⊕ **Outflow of money:** Due to a **tighter monetary policy** in advanced economies investors found **attractive returns in US and European bond markets**.
 - ◆ This led to a net outflow of **US\$127.1 billion from LMICs**.
- **Recommendations**
 - ⊕ **Portfolio analysis:** Closely scrutinize terms of debt instruments to identify risks and costs.
 - ⊕ **Debt buybacks:** To reduce a country's stock of nominal debt **if the debt is trading at a deep discount**.
 - ⊕ **Debt exchanges:** Swapping outstanding debt for new debt to **lengthen the average maturity of the debt portfolio** and reduce short-term maturities.
 - ⊕ **Debt-for-nature swaps:** To combine **debt relief** to participating sovereigns with partial earmarking of the **freed-up resources for green projects**.

About external debt

- **External debt** refers to **money borrowed from a source outside the country**.
- It is a vital source to **supplement the local revenue for development**.
 - ⊕ However, it has to be **paid back in the currency in which it is borrowed** which enhances the debt vulnerability due to exchange rate fluctuations.

Centre reconstituted National Startup Advisory Council (NSAC); nominated non-official members

- Upon completion of the two-year term of the NSAC, the Central Government nominated **non-official members**.
- **About NSAC**
 - ⊕ **Genesis:** NSAC was **notified in 2020** by **Department for Promotion of Industry and Internal Trade**, Ministry of Commerce and Industry.
 - ⊕ **Aim:** To advise Government on **fostering innovation and startups** for sustainable economic growth and widespread employment.
 - ⊕ **Composition:** It consists of **members** from relevant line Ministries, Departments, and Organizations, as well as **non-official members**.
 - ◆ Non-official members include **founders of successful startups**, persons representing interests of investors, incubators and accelerators, etc.
 - ◆ Their term is **two years or until further orders**, whichever is earlier.
 - ⊕ **Headed by:** **Union Minister of Commerce & Industry**.
 - ⊕ **Key functions:** NSAC meets on a **regular basis** to suggest measures to:
 - ◆ Foster a **culture of innovation** amongst citizens and students.
 - ◆ Mobilize **global capital for investments** in Indian startups.
 - ◆ Keep **control of startups with original promoters**.
 - ◆ Provide **access to global markets** for Indian startups, etc.
 - ⊕ **Achievements:** Programs such as **MAARG, National Mentorship Program, Adoption of NavIC Grand Challenge, Startup Champions 2.0** etc. are some of the programs **ideated and incubated by NSAC**.

Other initiatives for Startups promotion

- **Startup India** to catalyse startup culture in India.
- **Fund of Funds for Startups Scheme** with corpus of Rs. 10,000 crore to meet funding needs of startups.
- **Scheme for Facilitating Start-Ups Intellectual Property Protection (SIPP)** to protect and promote Intellectual Property Rights (IPR) of Startups
- **Mentorship, Advisory, Assistance, Resilience, and Growth (MAARG)** programme, virtual platform to **mentor startups**

Registration of Books(PRB) Act, 1867

- ▶ The current PRB Act 1867 was aimed at curbing what the British Government **thought** was the role of the press in the “revolt of 1857”.
 - ⊕ It was introduced during the Viceroyship of **Lord John Lawrence (1864-1869)**

Basis of differentiation	PRB Act, 1867	PRP Bill, 2023
Registration of periodicals	<ul style="list-style-type: none"> ⊕ Provides for the registration of newspapers, periodicals, and books. ⊕ Provides for the cataloguing of books. 	<ul style="list-style-type: none"> ⊕ It includes any publication containing public news or comments on public news. ⊕ Periodicals do not include books or scientific and academic journals.
Decriminalization	<ul style="list-style-type: none"> ⊕ Minor violations have provision of imprisonment up to six months. 	<ul style="list-style-type: none"> ⊕ Decriminalizes violations under the Act. ⊕ For certain violations, financial penalties have been proposed like publishing periodicals without registration.
Registration of a printing press	<ul style="list-style-type: none"> ⊕ Requires a printing press to be declared before the DM. 	<ul style="list-style-type: none"> ⊕ Allows for information regarding printing presses to be submitted through an online portal.
Appellate authority	<ul style="list-style-type: none"> ⊕ No such appellate board. 	<ul style="list-style-type: none"> ⊕ Provides for the Press and Registration Appellate Board. ⊕ Aggrieved persons can appeal to the board within 60 days.
Suspend/cancel the Certificate of Registration	<ul style="list-style-type: none"> ⊕ Only the DM could cancel the declaration of a periodical 	<ul style="list-style-type: none"> ⊕ Empowers the Press Registrar General to suspend/cancel the Certificate of Registration.

Also in News



Parliament passes 3 Bills

Both the Houses of the Parliament have passed following 3bills:

- ⊕ The **Post Office Bill, 2023** to ensure the effective functioning of the Postal Department
 - ⊕ The **Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Bill, 2023** provides for the appointment, salary, and removal of the CEC and ECs
 - ⊕ The **Telecommunications Bill, 2023** to regulate activities related to telecommunication
- ▶ For details kindly refer to the News Today dated Dec 06, 2023; Dec 13, 2023; and Dec 19, 2023 (respectively).



UNESCO's 2023 Prix Versailles

- ▶ **Kempegowda International Airport** Bengaluru (Karnataka) was honored at UNESCO's **2023 Prix Versailles**, and named among the 'World's most beautiful airports'.
- ▶ Granted annually at UNESCO since 2015, the Prix Versailles consists of **architecture awards that showcase the finest contemporary achievements worldwide.**
 - ⊕ The **Official list** align with the with the principles of **intelligent sustainability** and takes into consideration **projects' ecological, social and cultural impacts into consideration.**
 - ⊕ It highlights the primary role of the **Laureates in beautifying and improving the living environment.**



ECI guidelines on Persons with Disabilities(PwDs).

The **guidelines seek to nudge political parties** to move towards respectful discourse for PwDs and ensure their equal participation.

▶ Key highlights

- ⊕ Any usage of derogatory references to PwDs may attract provisions of **Section 92 of Rights of Persons with Disabilities Act 2016.**
 - ◆ The Section discusses **punishment for atrocities** against PwD.
- ⊕ All political parties shall use rights-based terminologies as mentioned in CRPD (**Convention on Rights of Persons with Disabilities**).
 - ◆ CPRD (**India is signatory**) aims to promote, ensure full and equal enjoyment of all human rights and fundamental freedoms by all PwDs.



Chilla-i-Kalan began in Kashmir

- ▶ Chilla-i-Kalan is a **Persian term** that means ‘major cold’ and it refers to the **40-days of harsh winter** in Kashmir.
 - ⊕ It begins from **December 21** and ends on **January 31**. Snow during the period **replenishes the streams, rivers, and lakes of Kashmir.**
- ▶ It is followed by a **20-day-long ‘Chillai Khurd or small cold** (occurs between **January 31 and February 19**)’ and a **10-day-long ‘Chillai Bacha or baby cold** (February 20 to March 2)’.



Black Tiger (Melanistic Tiger)

- According to Union government Melanistic tigers have been recorded **only in Similipal Tiger Reserve (STR) in Odisha.**
 - ⊕ As per All India Tiger Estimation (2022), out of 16 tigers **10 were melanistic at STR.**
 - ⊕ A **single mutation** in the gene **TransmembraneAminopeptidase Q (Taqpq)** causes the **black tigers to develop broadened stripes.**
- **STR** harbours the **only population of melanistic tigers in the world.**
 - ⊕ It has been identified as a **distinct genetic cluster for conservation.**
 - ⊕ It receives funding assistance under **Centrally Sponsored Scheme of Integrated Development of Wildlife Habitats (CSS-IDWH).**



Winter solstice 2023

- On December 22, the shortest day occurs when direct sunlight hits the **Tropic of Capricorn in the southern hemisphere.**
- Earth's 23.5-degree tilt along with its spin, and orbit cause sunlight duration variations at different locations throughout the year.
 - ⊕ This leads to **Equinox and Solstice** phenomena
 - ◆ **Equinox:** When sun is directly over the equator and it occurs on **-21 March and 23 September.**
 - ◆ **Solstice:** Two types-Winter and Summer Solstice
 - » **Summer Solstice:** 21st June when direct sunlight is over the **Tropic of Cancer** in the Northern hemisphere.



R21/Matrix-M malaria vaccine

- **WHO** prequalified the **second malaria vaccine R21/Matrix-M** (having 75% efficacy), developed by **Oxford University** and manufactured by the **Serum Institute of India.**
 - ⊕ This clears the way for countries to **buy the vaccine for a broader rollout.**
 - ⊕ **RTS,S/AS01 vaccine** was the **first vaccine** to obtain prequalification in 2022.
- **About Malaria**
 - ⊕ Malaria is caused by **5 Plasmodium parasite species** (2 of these species – *P. falciparum* and *P. vivax* – pose the greatest threat).
 - ⊕ **Plasmodium parasites** are spread to people through the bites of infected **female Anopheles mosquitoes.**



White-bellied sea eagle (Ichthyophaga leucogaster)

- Bird which is common to coastal habitats was spotted unusually in Tiruchirappalli (Tamil Nadu).
- **White-bellied sea eagle**
 - ⊕ **Geographic range:** They range north to south from southern China to Australia and Tasmania, and west to east from India to New Guinea.
 - ⊕ **Habitat:** Terrestrial habitats near the ocean, especially coasts, islands, and estuaries, etc.
 - ⊕ **Food Habits:** Feed on aquatic animals, especially fish, eels, and crustaceans, etc.
 - ⊕ **Threats:** Habitat destruction, hunting, and poisoning by pesticides
 - ⊕ **IUCN Status:** Least-concern



Places in News



Papua new Guinea (Capital: Port Moresby)

- Recently \$1 million relief assistance announced by India for the volcanic eruption at Mount Ulawun affected people of Papua New Guinea.
- **Political features**
 - ⊕ It is an island country in the **southwestern Pacific Ocean.**
 - ⊕ Situated between the **Coral Sea** and the **South Pacific Ocean.**
 - ⊕ It has **Indonesia** in the west, **Australia** in the South, **Solomon Islands** in the East.
- **Geographical Features**
 - ⊕ **Highest point: Mount Wilhelm in the Bismarck Range**
 - ⊕ **Major Rivers:** Sepik, Ramu, Fly.

