Standing Committee on Communications and Information Technology presented Digital Payment and Online Security Measures for Data Protection Report

- **Status of Digital Payment**
  - Expected to **grow over threefold by 2025** due to growing Smartphone penetration, COVID-led changes in consumer behaviour and Government policies for financial inclusion.
  - **Share of UPI transactions increased** from 4% in FY2017-18 to over **64% in FY2022-23.**
  - **Foreign entities like PhonePe and Google Pay dominate Indian fintech sector** with market share of 46.91% and 36.39% respectively in terms of transaction volume in October-November 2023, whereas for BHIM UPI it is 0.22%.

- **Challenges in Digital Payment**
  - High value of money lost in cyber frauds **(Rs. 5574 Crore,** reported Until September, 2023), whereas recovery rate is abysmally low.
    - ◆ **Recovery rate has been about 10.4% of the transactions** reported over 2020 to 2022.
  - **Illegal and fraudulent lending apps** on Google Playstore and Apple App Store.
  - **Virtual accounts to mask the funds trail** while making payments were not monitored and could evade Anti-money laundering mechanism.

> **Steps taken to promote Digital Payment**
> - **Incentive scheme** for promotion of RuPay Debit Cards and BHIM-UPI transactions (person-to-merchant).
> - **Financial inclusion initiatives**: PM Jan Dhan Yojana, etc.
> - **Awareness initiatives: Stay Safe Online Campaign** for adoption of digital payments, **Cyber Surakshit Bharat** etc.

- **Recommendations made by Committee**
  - **Maintaining a repository of Android and banking malwares** to strengthen digital payment security.
  - **Multipronged approach with effective coordination** of stakeholders to deal with cyber frauds.
  - Promotion of **Indian players in fintech sector.**

Standing Committee presented Action taken Report on 'Research and Development in Farm Mechanization for Small and Marginal Farmers in the Country'

- **Status of Farm mechanization**
  - **Overall Agriculture Mechanization Level of country is 47% which is comparatively lower** than that of developing countries like China (59.5%) and Brazil (75%).
  - India would take about **25 years to achieve 75-80% mechanisation.**

- **Significance of Farm mechanization**
  - **Increase productivity** and **ensure judicious use of other inputs** like seeds, fertilizers, and natural resources like water, soil nutrients etc.
  - Increases **efficiency of farm labor** and **reduces human drudgery** and cost of cultivation.
  - Helps in **conversion of uncultivable land to agricultural land** through advanced tilling techniques.

- **Small farm size, capital shortage, inadequate service centers, availability of cheap labor,** and **low cost of labor** pose **challenges** to growth of farm mechanisation industry.

> **Steps taken to promote Farm Mechanization**
> - Sub Mission on Agricultural Mechanization (SMAM)
> - Rashtriya Krishi Vikas Yojana
> - National Mission for Sustainable Agriculture

- **Recommendations made by committee**
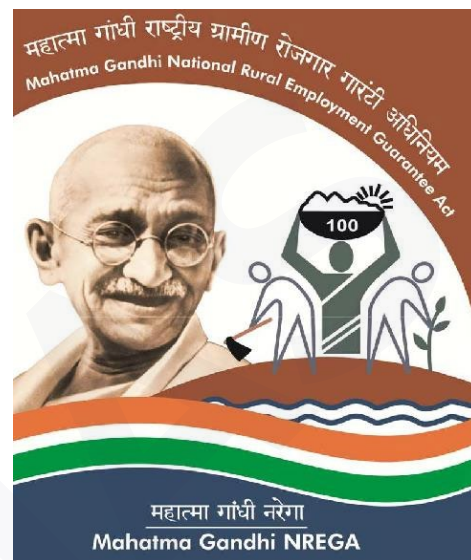 - **Mechanization level of 75 % should be achieved** in a shorter period than 25 years.
  - **Streamlining testing procedure,** training of engineers and testing of farm equipments.
  - Establishment of **National Institute of Agricultural Robotics and AI** and a directorate of engineering.
  - Need for **improvement in functioning of custom hiring centers and farm machinery banks** by issuing adequate allocation of fund, awareness campaign.

"Rural employment through MGNREGA-An Insight Into Wage Rates and Other Matters Relating Thereto" report presented in Lok Sabha

- It was presented by the **Parliamentary Standing Committee on Rural Development.**
- MGNREGA launched in 2005, gives a **legal guarantee of a hundred days of wage employment** to adult members of a rural household willing for unskilled manual work.
  - **Implemented by the** Ministry of Rural Development.
  - The **Central Government notifies** the wage rate for each financial year.
- **Issues with the scheme as observed by the committee**
  - **Shortage of funds:** It has a cascading effect on various important aspects such as the timely release of wages, the release of materials, etc.
  - **Issue of Fake Job Cards:** deprives genuine beneficiaries of their dues and acts as a tool for diverting funds.
  - **Low wages rate:** labourers involved in miscellaneous work earn higher wages.
  - **Lack of social audits:** only 14% of planned gram panchayats were audited in 2020-21.
- **Recommendation of the committee**
  - **Revision of base rate and base year to solve the** issue of lower wage rates.
  - **Utilisation of a better inflation-linked index as the** current index (Consumer Price Index for Agricultural Labour) is not sufficient.
  - **Increase in number of days of work.**
  - **Issuance of separate job card** for a differently abled person in a household.

Government steps to increase the efficiency of MGNREGA

- **National Mobile Monitoring System (NMMS)** app to capture the attendance of MGNREGS workers.
- **Geo-MGNREGA** for geo-tagging of all completed works under MGNREGS.
- **Project "UNNATI"** to upgrade the skill base of the MGNREGS workers.
- **Aadhaar Payment Bridge System (APBS)** to ensure speedy payments and reduce rejection.

LNG as a Transportation Fuel in Medium and Heavy Commercial Vehicle(M&HCV): NITI Aayog report

- It is the outcome of **NITI Aayog and the Embassy of Netherlands** bilateral cooperation for energy transition and decarbonizing agenda.
- Liquefied Natural Gas(LNG) is a **clear, colourless, non-toxic liquid** that forms when **natural gas is cooled to the liquid state,** at about **-162 degrees Celsius for shipping and storage.**
- **Need of LNG push for M&HCV:**

  Government initiatives
  - **Inclusion of LNG as transport fuel** by modifying **Central Motor Vehicles Rules(1989)** in 2017
  - **Draft LNG policy** to increase LNG usage in the transportation and mining sector.
  - **Allowed retrofitting of the diesel vehicles** to LNG-fueled vehicles.

  - Achieving the target of **Net Zero by 2070** through CO_2 emission reduction.
  - Reducing **oil import dependency.**
  - **India's rapidly expanding trucking market** (expected to more than quadruple in 2050 from 2022)
  - **Contribute to a Gas-based economy** (achieving a share of natural gas in the primary energy mix to 15% by 2030).
- **Challenges in the adoption of LNG:** high initial cost compared to traditional diesel trucks, lack of availability of LNG retail outlets, hesitancy in the market, etc.
- **Recommendations in the report**
  - **Demand aggregator for** deployment of LNG-based vehicles aiming at cost reduction with higher order volumes.
  - **Fiscal Incentives** like bringing LNG under GST, revised depreciation schedules, toll fee exemption, production-linked incentives.
  - **Non-fiscal incentives** like preferential right of way, "ECO" labels, priority lane access, Fuel cards, etc.

Scientists develop world's first 3D-printed brain tissue that functions like human brain

- This will **aid research programmes for scientists** specially focused on **treatments of neurological and neurodevelopmental disorders,** like Alzheimer's and Parkinson's disease.
  - This could also help to **understand how brain cells and parts of the brain communicate** in humans.
- **3D printing or additive manufacturing** uses **computer-aided designing** to make prototypes or working models of objects by laying down successive layers of materials like plastic, resin, thermoplastic, metal, fiber or ceramic.
  - In 2020, Ministry of Electronics and Information Technology released **"National Strategy for Additive Manufacturing"** to tap its potential.
- **Benefits of 3D Printing**
  - Enables **quick and cost-effective prototyping,** allowing designers to iterate designs swiftly, **reducing time-to-market** for new products.
  - **Create complex designs** that would be challenging to achieve otherwise.
  - **More efficient** as it uses only materials necessary for object being printed, thus **minimizing waste.**
  - **Reduces need for large inventories** and **streamlines supply chain** by producing parts as needed.
- **Applications of 3D Printing**
  - **Construction: India's first 3D-printed post office** was **created in Bengaluru.**
    - **First pedestrian bridge was 3D printed in Spain** using micro-reinforced concrete.
  - **Medical and Dental:** Creating patterns for casting metal dental crowns and manufacturing tools for creating dental aligners.

Digitalization of land records to boost India's GDP by 1.5%: Minister of Rural Development and Panchayati Raj

- Digitization of land records is the **process of transforming physical documents** into digital formats.
- **Computerization of Land Records** is completed in 95.08 % of villages by providing Records of Rights (RoR).
- **Significance of Digitalisation**
  - **Clear land titles facilitate** the supply of capital and credit for agriculture.
  - Will help in mitigating **the huge pendency of court** cases involving land disputes.
  - Will be useful to the central and state governments in **bringing out land reforms.**
  - **Reduce interface** between citizens and Government functionaries and will increase transparency.
- **Government initiative for improving land digitalisation**
  - **Digital India Land Records Modernization Programme (DILRMP):** To develop a modern, comprehensive and transparent land record management system.
  - **Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar:** provide a 14-digit alpha-numeric unique ID generated using the longitude and latitude coordinates of a land parcel.
  - **SVAMITVA scheme:** to provide a 'Record of Rights' to village household owners with the issuance of legal ownership cards.
  - **National Generic Document Registration System (NGDRS):** To address the diversity prevailing across States with regard to the registration of documents.
- **Way-forward:** Use of emerging technologies like Blockchain, review of registration act, etc.

Also in News

Fund of Funds Scheme (FFS)

- Crisil assessment **report called PRABHAAV (Powering a Resilient & Agile Bharat for the Advancement of Visionary Startups)** was launched by Small Industries Development Bank of India (SIDBI).
  - As per this, Rs 17,534 crore invested in 938 startups under FFS.
- **About FFS**
  - Established in 2016 with corpus of Rs 10,000 crore to **boost Indian startup ecosystem** and enable **access to domestic capital.**
  - Monitoring agency: Department for Promotion of Industry and Internal Trade.
  - **Operating agency:** SIDBI.
  - **Provides capital to Securities and Exchange Board of India (SEBI)-registered Alternative Investment Funds,** which invests money in startups.

Olive Ridley Turtles

- Olive Ridley Turtles are back on Mangalore beaches.
- **About Olive Ridley Turtles**
  - **Smallest and most abundant of all sea turtles** found in world, inhabiting warm waters of Pacific, Atlantic and Indian oceans.
  - Best known for their **unique mass nesting called Arribada,** where thousands of females come together on same beach to lay eggs.
  - **Gahirmatha Marine Sanctuary** (Odisha) is known as world's largest rookery (a colony of breeding animals) of sea turtles.
  - **Conservation**
    - **IUCN status: Vulnerable.**
    - Wildlife Protection Act, 1972: **Schedule 1.**
  - **Threats:** Unsustainable fishing methods, tourism, poaching etc.

Aadi Mahotsav 2024

- **Aadi Mahotsav 2024** is being organized in New Delhi to showcase **rich diversity of India's tribal heritage.**
  - It is an **annual National Tribal Festival,** organized by **Tribal Co-Operative Marketing Development Federation of India Ltd. (TRIFED)** under **Ministry of Tribal Affairs (MoTA).**
- **About TRIFED**
  - **Established in 1987** under Multi-State Cooperative Societies Act, 1984.
  - **Objective: Socio-economic development of tribal people** by marketing development of tribal products on which lives of tribals depends.
  - **Functioning under administrative control of MoTA.**
  - **Head-Office located in New Delhi** and has a network of 15 Regional Offices located at various places in country.

Peer-to-Peer (P2P) Lending

- RBI deputy governor has **cautioned non-banking finance companies (NBFCs) on peer-to-peer lending.**
- **About P2p Lending**
  - It is the practice of **lending money through online services** that match lenders with borrowers, cutting out the financial institution as the middleman.
  - **Rates and terms** are set by each website.
  - Regulated by the **Reserve Bank of India (RBI).**
  - **All P2Ps are to be registered with the RBI as** an NBFC.
  - **Challenges:** risk of default, Lack of trust on the P2P platform, etc.

Trichoglossum syamviswanathii

- Scientists have discovered a new fungus species, **Trichoglossum syamviswanathii,** from Thrissur, Kerala.
  - It is named after renowned scientist **Syam Viswanath** for his contribution to the field of forestry in India.
- It belongs to the **family Geoglossaceae** and is characterized by its **club-shaped apothecia in dark shades of black or brown.**
- Trichoglossum species play a **vital role in the decomposition of organic matter and the recycling of nutrients** in forest ecosystems.

Plankton, Aerosol, Climate, ocean Ecosystem (PACE)

- **SpaceX has recently launched NASA's PACE satellite** to monitor ocean, atmosphere, and climate.
- PACE was placed in **a sun-synchronous orbit,** which means that it will always be synced to the same position relative to the Sun.
- **Objectives**
  - Will help in understanding **how the ocean and atmosphere exchange carbon dioxide.**
  - Will reveal how aerosols might fuel phytoplankton growth in the surface ocean
  - Will contribute to **new global measurements of ocean color, cloud properties, and aerosols.**

infexnTM

- Kerala is about to launch **India's 1st genomics-based infectious diseases test.**
- It is developed by the **IIT-Bombay-based HaystackAnalytics and NIMS Medicity.**
- The 'infexnTM' is a **state-of-the-art targeted next-generation sequencing test.**
  - It is designed to detect **any bacterial and/or fungal infection along with the detection of relevant antimicrobial resistance genes,** within 24 hours.
- The test is a **kit-cum-software solution** and can be performed within a hospital.

DC-8

- NASA has started a **series of marathon flights in Asia** with DC-8 to improve the models that help forecast and fight air pollution.
  - DC-8 is the **world's biggest flying laboratory.**
- DC-8 flies very close to the ground to assess how **much pollution is coming from different sources.**
- It is accompanied by a smaller **NASA Gulfstream jet** whose instruments can create **three-dimensional maps of pollutants** in the air.
- It is under a **project named ASIA-AQ,** which is a collaboration between NASA and governments in a region.

Places in News — Chile (Capital: Santiago)

- Chile records its deadliest wildfire.
- **Political Boundaries**
  - Country situated along **western seaboard of South America.**
  - Bounded by **Peru** and **Bolivia** (north), **Argentina** (east), and **Pacific Ocean** (west).
- **Geographical features**
  - **Major Mountain Range:** Andes.
  - **Highest peak:** Ojos del Salado.
  - **Major Rivers:** Loa, Biobío, Maipo etc.

AHMEDABAD BHOPAL CHANDIGARH DELHI JAIPUR JODHPUR GUWAHATI HYDERABAD LUCKNOW PRAYAGRAJ PUNE RANCHI SIKAR