Current Affairs - 05 January 2026

BATTERY PACK AADHAAR SYSTEM

- It is an **indigenous digital identification** and data storage system developed to ensure **end-to-end traceability of batteries** throughout their entire lifecycle.
- **Objective:** This system aims to bring **transparency, accountability, and sustainability** to the **battery ecosystem** by enabling accurate tracking of performance, and environmental impact.
- **Features of Battery Pack Aadhaar System:**
  - The **battery producer or importer** shall have the obligation of **assigning a unique Battery Pack Aadhaar Number (BPAN)** to each battery that they introduce in the market and the battery they put to self-use.
  - Every Electric Vehical battery pack and **industrial battery above 2 kWh** will be assigned **a Battery Pack Aadhaar Number**, or BPAN, along with a **QR code.**
  - The BPAN will **store:**
    - **Static information:** It includes the **manufacturer's identity**, battery specifications, material composition, and carbon footprint.
    - **Dynamic data**, including **battery health, thermal events**, charge-discharge cycles, and end-of-life status — will be maintained on a central server, enabling predictive maintenance and efficient recycling.
  - **Significance:** BPAN will play a crucial role in **enabling second-life usage**, regulatory compliance, and efficient recycling.

RE-CIRCULATORY AQUACULTURE SYSTEM

- It is a technology where **water is recycled and reused** after mechanical and biological filtration and removal of suspended matter and metabolites.

- It is used for **high-density culture** of various species of fish, **utilizing minimum land area and water.**
- **Key Features of Re-circulatory Aquaculture System:**
    - It is an **intensive high density fish culture** unlike other aquaculture production systems.
    - It is also a **closed-loop tank-based farming** that recycles water after filtration.
    - RAS filters and cleans the water in the tank, removing waste and keeping it safe for the fish to live in.
    - It has automated set up of culture tanks with **both mechanical and biological filtration units**, and effectively prevents the entry of pathogens from external sources.
    - It **requires the minimal interventions** to assess the culture, water and disease monitoring, which allows for improved biosecurity.
    - It can be **set up indoors or in areas without natural water sources**, allowing fish to be raised closer to cities and where demand is high.

INDIA'S SEAFOOD EXPORTS - GROWTH, DIVERSIFICATION AND EMERGING MARKETS

- India has one of the largest and most diverse seafood sectors in the world, supported by a long coastline of over 7,500 km, extensive inland water resources, and a strong aquaculture base.
- The sector plays a critical role in employment generation, rural livelihoods, foreign exchange earnings, and food security.

Production and Resource Base

- India is the 3rd largest fish producer globally and the 2nd largest producer of aquaculture products.
- Marine fisheries are concentrated along the eastern and western coasts, while inland fisheries rely on rivers, reservoirs, ponds, and wetlands.

- Aquaculture, particularly shrimp farming, has emerged as the dominant contributor to export volumes and value.

Export Composition

- Shrimp accounts for the largest share of India's seafood exports, especially frozen shrimp varieties such as Vannamei.
- Other exported products include frozen fish, cuttlefish, squid, crabs, and value-added marine products.
- Export orientation has increased steadily over the last decade, driven by improved cold-chain infrastructure and compliance with international food safety standards.

Major Export Markets

- Traditionally, the United States has been India's largest seafood export destination, followed by China, Japan, the European Union, and Southeast Asian countries.
- However, recent years have seen a strategic push towards market diversification to reduce over-dependence on a single region.

Institutional Support

- The **Marine Products Export Development Authority** (MPEDA), under the Ministry of Commerce, plays a key role in export promotion, quality control, traceability, and market access.
- Government initiatives such as the **Pradhan Mantri Matsya Sampada Yojana** (PMMSY) have strengthened infrastructure, processing capacity, and sustainability in fisheries.

Sign of Resilience

- Government departments, including the Fisheries and Commerce Ministries, have held regular consultations with exporters and MPEDA to identify new markets, resolve non-tariff barriers, and strengthen compliance with importing countries' standards.
- Officials have described the sector's performance as a sign of resilience, adaptability, and improved export competitiveness.

MADURO'S CAPTURE SIGNALS RETURN OF US INTERVENTIONISM

- US President Donald Trump, once a critic of the Iraq invasion and a self-proclaimed peacemaker upon taking office a year ago, has reversed course.
- He justified the operation as being in line with an over 200-year-old foreign policy agenda set under the **Monroe Doctrine of 1823**, which warned European powers not to interfere in the affairs of the Western Hemisphere.
- Trump has reasserted this doctrine—recently rebranded by him—as a guiding principle, marking a sharp departure from decades of US administrations that kept it largely dormant.
- **Pattern of Escalating Military Action**
    - The Maduro operation fits a broader trend over the past year of expanded US military assertiveness:
        - Airstrikes ordered in Syria and Nigeria
        - Threats of intervention amid protests in Iran
        - Earlier 2025 actions targeting Iranian nuclear facilities, drug-trafficking boats in the Caribbean, Houthi forces in Yemen, militants in Somalia, and Islamic groups in Iraq
    - Together, these moves point to a worrying reassertion of unilateral military power, with Venezuela's intervention serving as the clearest signal yet that US interventionism is back—this time with **oil and hemispheric dominance at its core**.

Why Venezuela: The Oil Factor?

- Venezuela holds the largest proven crude oil reserves in the world—over 300 billion barrels, roughly one-fifth of global reserves, according to the US Energy Information Administration (EIA).
- Despite this, Venezuela produces only ~1 million barrels per day, about 0.8% of global output, highlighting a stark gap between potential and realisation.

- Chevron is the only foreign oil major with exposure to Venezuelan crude, positioning US interests uniquely within the country's energy sector.
- **Trump's Oil-Centric Agenda**
    - US President Donald Trump has made oil central to his rationale.
    - He stated that the US would take control of Venezuela's reserves and deploy American companies to invest "billions of dollars" to refurbish broken oil infrastructure and ramp up production.
- **Criticism and Allegations**
    - Critics say the intervention is mainly about taking control of Venezuela's oil resources.
    - They have described the move as "straight up theft," arguing that ignoring Venezuela's massive oil reserves hides the real reason behind the action.
    - Some analysts also believe the move may help shift attention away from domestic political problems in the US, while allowing Washington to assert control over a valuable energy asset.

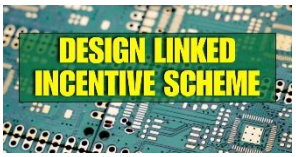
MAGA Pushback: Disquiet Over Renewed US Interventionism

- US President Donald Trump's move against Venezuela has triggered unease within his **Make America Great Again** (MAGA) base, which supported him on the promise of ending "never-ending wars" and avoiding new overseas entanglements.
- Trump's assertion that a US team would work with Venezuelans to effectively "run the country" until a transition is achieved has raised fears of prolonged American involvement, contradicting core MAGA expectations.

Venezuela's Uncertain Endgame

- It remains unclear whether the US will occupy Venezuela or back a US-approved leadership in Caracas.
- While President Donald Trump hinted at cooperation from interim President Delcy Rodríguez, she quickly denounced the US action.

DESIGN LINKED INCENTIVE SCHEME



- It is a key instrument in advancing India's ambition to **develop a strong fabless capability.**
- It is implemented by the **Ministry of Electronics and Information Technology** (MeitY) under the **Semicon India Programme.**
- **Aim:** The scheme aims to **reduce import dependence**, **strengthen supply chain resilience**, and enhance **domestic value addition.**
- **Eligibility: Start-ups and MSMEs** are eligible for financial incentives and design infrastructure support for **semiconductor product design & deployment**.
- Other **domestic companies** are eligible for financial incentives for deploying semiconductor designs.
- **The DLI Scheme supports:** Semiconductor design across the full lifecycle—from design and development to deployment—covering Integrated Circuits (ICs), chipsets, Systems-on-Chip (SoCs), systems and IP cores.
- **Nodal Agency:** C-DAC (Centre for Development of Advanced Computing).
- **Financial Incentives and Design Infrastructure Support under DLI:**
  - **Product Design Linked Incentive:**
    - Reimbursement of up to **50% of eligible expenditure.**
    - The reimbursement **is capped at ₹15 crore** per application.
    - The support is available to entities involved in semiconductor design for:
      - **Integrated Circuits** (ICs) Chipsets Systems on Chips (SoCs) Systems & IP Cores Semiconductor-linked designs.
  - **Deployment Linked Incentive:**
    - Incentives **of 6% to 4% of net sales turnover** are provided for **five years.**
    - The incentive is capped at **₹30 crore per application.**
    - The minimum cumulative net sales required **over Years 1–5 is 1 crore for startups**/ ₹ MSMEs and 5 crore for other domestic companies.

NOTIFIABLE DISEASE

- A notifiable disease **is any disease** that is required by law to be **reported to government authorities.**
- Effective notification allows the authorities to monitor the disease and provides early warning of possible outbreaks.
- The **Epidemic Diseases Act, 1897**provides the **legal framework** for notifying diseases in India.

Criteria for Declaring a Disease as Notifiable may be:

- It is of **interest to national or international regulations** or control programs.
- Its national/ State/District incidence.
- Its severity (potential for rapid mortality).
- Its communicability/Its potential to cause outbreaks.
- Significant risk of international spread.

- **Medical practitioners and diagnostic labs** are required **to notify the local health department** of cases of notified diseases.
- In India, the state **government is responsible** for **determining which diseases** must be reported to the medical officer in their area and to notify the diseases.
- The government and regional authorities maintain a list of notifiable diseases in India, which is **subject to change as new diseases** are added or existing ones are removed.
  - **Examples:** Cholera, tuberculosis, AIDS, dengue, hepatitis, leprosy, meningitis, plague, and measles.

WHO's International Health Regulations (1969): Mandates countries to report diseases for global surveillance and advisory purposes.

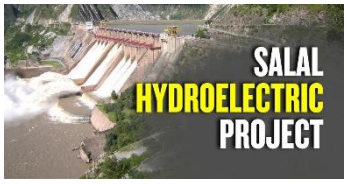
WHAT IS HYDROKINETIC TURBINE TECHNOLOGY?

- Hydrokinetic turbines are an emerging hydropower technology that **takes advantage of moving water currents to generate power.**
- **Unlike traditional hydroelectric dams** that require larger in-channel infrastructure **that can disrupt flow** and the river ecosystem, **hydrokinetic turbines** are **placed directly in the river channel** and have a **much smaller environmental footprint.**
- These turbines offer a **renewable energy source** by **tapping into the natural flow of water** in aquatic environments.
- It **uses kinetic energy of flowing water with practically zero potential head** for generation of electrical energy, **unlike conventional units, which utilize potential energy of water through construction of suitable civil structures such as dams,** diversion weirs, and barrages for creation of necessary 'Head'.

Benefits of Hydrokinetic Turbines

- **Renewable Energy Source**: Hydrokinetic turbines harness the steady flow of water to generate power. This clean energy source reduces reliance on fossil fuels.
- **Minimal Environmental Impact:** These turbines **operate with the natural flow of water**, unlike traditional dams. It **preserves ecosystems and minimizes disruption to aquatic life** and landscapes.
- **Scalable and Flexible:** Hydrokinetic turbines can be adjusted to meet different energy needs. They **work well for small local setups or larger multi-turbine arrays,** making them suitable for various projects.
- **Cost-Effective Maintenance:** With **fewer moving parts and strong debris protection,** these turbines r**equire less upkeep.** This reduces maintenance costs and ensures reliable long-term operation.

SALAL HYDROELECTRIC PROJECT



- It is a **690 MW run-of-the-river** power project on the **Chenab River** in the Reasi District of **Jammu and Kashmir.**
- Although the **plan** for a water reservoir was originally **conceived in pre-independent India,** the **planning** of the project **started in the 1960s.**
- The project **construction commenced in 1970** and subsequently entered into **commercial operation in 1987.**
- The project is **developed and owned by National Hydroelectric Power Corporation (NHPC).**
- This was the **first hydropower project,** which was **built by India under the Indus Water Treaty regime in Kashmir.**
- **Salal Dam** is 130 meters high with an elevation of 1627 feet above mean sea level.
- **Jammu and Kashmir receives 12.5 percent of the energy** generated from the project.
- The **rest is transmitted to the Northern Grid,** where it is distributed to the states of Punjab, Haryana, Delhi, Himachal Pradesh, Rajasthan, and Uttar Pradesh.
- Jammu and Kashmir also purchases additional power at regular prices.