GALLANTRY AWARDS

Recently, the President of India conferred Gallantry Awards to the personnel of the Armed Forces, Central Armed Police Forces, and State and Union Territory Police at Rashtrapati Bhawan.

- It recognises acts of **exceptional bravery, courage** and devotion to duty by the **Armed Forces and security personnel.**
- **Ministry:** The **Ministry of Defence seeks** recommendations **twice annually** from the Armed Forces and the **Ministry of Home Affairs** for Gallantry Awards in India.
- These gallantry **awards are announced twice in a year** - first on the occasion of the Republic Day and then on the occasion of the Independence Day.
- **History of Gallantry Awards:**
    - Three gallantry awards, namely **Param Vir Chakra, Maha Vir Chakra and Vir Chakra**, were instituted by the Government of India on **26th January, 1950.**
    - Thereafter, the other three gallantry awards, i.e. the Ashoka Chakra Class-I, the Ashoka Chakra Class-II and the Ashoka Chakra Class-III were instituted in 1952.
    - These were later renamed in January 1967 as **Ashoka Chakra, Kirti Chakra, and Shaurya Chakra, respectively.**
- **Order of precedence:** The order of precedence of these awards is **the Param Vir Chakra**, the Ashoka Chakra, the Mahavir Chakra, the Kirti Chakra, the Vir Chakra and the **Shaurya Chakra.**
- These awards are **divided into two main categories** based on whether the act of bravery occurs in the presence of the enemy or in peacetime situations.
    - **Wartime Gallantry Awards:** Param Vir Chakra, Maha Vir Chakra, and Vir Chakra
    - **Peacetime Gallantry Awards:** Ashoka Chakra, Kirti Chakra, and Shaurya Chakra are awarded for courageous actions during peacetime.

FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

Recently, the Food Safety and Standards Authority of India (FSSAI) has directed all food business operators to immediately discontinue the use of newspapers for packing or serving food items, citing serious health risks.

- It is a statutory institution formed by the **Ministry of Health and Family welfare**, Government of India under **the Food Safety and Standards Act, 2006.**
- **Mandate:** FSSAI is responsible for **setting food standards**, **regulating the manufacture, storage,** distribution, sale, and import of food, and ensuring the availability of safe and wholesome food for human consumption.

Functions of Food Safety and Standards Authority of India:

- **Standards Development:** It formulates standards for various food products, ensuring they are safe for consumption.
- **Food Safety Management Systems:** It provides guidelines for businesses to implement effective food safety management practices.
- **Licensing and Registration:** FSSAI manages the licensing process for food businesses, ensuring they comply with food safety regulations.
- **Surveillance and Monitoring:** Regular inspections and audits are conducted to assess compliance with food safety standards.
- **Consumer Awareness:** Initiatives to educate the public about food safety, hygiene, and nutrition are a key focus area.
- **Accreditation:** The FSSAI is also responsible for the accreditation of food testing laboratories throughout India.

AURORA BOREALIS

- It is **popularly called as 'northern lights'**.
- The phenomenon is called 'northern lights' because **they are concentrated around the North Pole** or the magnetic pole in Earth's northern hemisphere. They are frequently seen in Norway, Sweden, Finland, Iceland, Canada, Alaska, and Greenland.
- Aurora Borealis' is the scientific name for these lights in the night sky in **the northern hemisphere.**
- The ones in the **southern hemisphere** are called '**Aurora Australis' or 'southern lights.'**
- **Formation of Auroras:**
    - It is due to **activity on the surface of the Sun.**
    - The star continuously releases a **stream of charged particles**, mainly electrons and protons, and magnetic fields called the solar wind.
    - As the **solar wind approaches the Earth,** it is **deflected by the planet's magnetic field**, which acts like a protective shield.
    - However, some of the charged particles are trapped in the magnetic field and they travel down the magnetic field lines at the north and south poles into the upper atmosphere of the Earth.
    - These **particles then interact with different gases present** there, resulting in tiny flashes that light up the night sky.
    - When solar wind particles collide with oxygen, a green colour light is produced. Interaction with nitrogen produces shades of blue and purple.
    - **Auroras expand to midlatitudes** when the solar wind is extremely strong.
        - This happens when the activity **on the Sun's surface goes up**, leading to solar flares and coronal mass ejections (CMEs), which are essentially extra bursts of energy in the solar wind.

WHAT IS THE PROJECT 18 PROGRAMME?

India's ambitious Project 18 programme is steadily taking shape as what is expected to be one of the most powerful surface combatant projects ever undertaken by the Indian Navy, according to a recent report.

- Project 18 (P-18) **Indian Navy's Next-Generation Destroyer (NGD) programme.**
- It is **overseen** by the **Indian Navy's Warship Design Bureau (WDB)** in collaboration with **Mazagon Dock Shipbuilders Limited (MDL) and Garden Reach Shipbuilders & Engineers (GRSE).**
- Conceived as a **successor to the Visakhapatnam-class (P-15B) destroyers**, the P-18 class will be a fleet of advanced, **multi-role stealth destroyers.**

Features:

- With an estimated **displacement exceeding 13,000 tonnes,** the P-18 will rank among the largest destroyers ever operated by the Indian Navy.
- **Under international classification,** warships above 10,000 tonnes fall into the **cruiser category** — a segment that **India currently does not possess.** Project 18 will mark India's entry into this class of warships.
- They will use an advanced **electric propulsion system** powered by gas turbines and diesel generators.
- It is also expected to incorporate **extensive automation** throughout the ship, **reducing crew requirements** by an estimated **25 to 30 percent** compared to existing platforms.
- Each ship will feature **114 vertical launch systems** capable of firing a range of India's homegrown missiles, such as:

- **BrahMos and BrahMos Next Generation**
- Long-Range Land-Attack Cruise Missiles (LR-LACM)
- Precision-Guided Long-Range Surface-to-Air Missiles (PGLRSAM)
- Short-Range Surface-to-Air Missiles (SRSAM)
- Supersonic Missile-Assisted Release of Torpedo (SMART)

- The ships will be able to **carry unmanned underwater vehicles** and **kamikaze drones**, used for surveillance, detecting mines, and attacking submarines.
- **Advanced radar systems** will give the ships 360-degree awareness and the ability to detect threats up to 500 kilometres away.

WHAT IS BOVISTA COLORATA?

Researchers recently documented a rare bright yellow puffball mushroom named Bovista colorata in Arunachal Pradesh's Longding district.

- Bovista colorata, commonly known as the **yellow puffball mushroom,** is a species of **puffball fungus** belonging to the family Agaricaceae.
- It is generally found in grasslands, open fields, meadows, and disturbed soils.
- **Bovista colorata** has a **spherical shape** and **striking yellow fruiting body.**
- **Unlike conventional mushrooms** that produce spores through gills beneath a cap, **puffball fungi develop spores inside** a closed **spherical fruiting body.**
  - **As the mushroom matures**, the **internal tissue transforms into a fine powdery mass of spores**, which are **dispersed** through wind, raindrops, or physical disturbance, allowing the species to spread over considerable distances.
  - Puffball species play an important ecological role as **decomposers**, aiding nutrient recycling, carbon cycling and soil formation.
  - Some species are also known for their **nutritional value and bioactive compounds** with potential medicinal properties.

WHAT IS HOLDING BACK HOUSEHOLD SOLAR ADOPTION IN INDIA

India added more solar power in 2025 than any country in the world except China. Solar now accounts for nearly **30% of India's total installed electricity capacity**.

Yet two flagship government schemes for decentralised solar — PM Suryaghar Yojana and PM-KUSUM — are performing well below their targets.

The Two Flagship Schemes

- **PM Suryaghar Yojana**: Targets installation of rooftop solar units on one crore households. Benefits include free electricity up to 300 units per month and a cash subsidy for equipment purchase.
- **PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha Evam Utthan Mahabhiyan):** Targets farmers — helping them set up small solar plants on unused land or install solar water pumps for irrigation. Farmers can earn income by selling surplus solar electricity or save on diesel and pump electricity bills.
- Together, both schemes carry a combined budget of roughly Rs 95,000 crore.
- **Achievements: How Far Have These Two Schemes Reached**
    - Combined, the two schemes have installed about **13 GW** of decentralised solar against a **target of 40 GW** by the end of the FY2025-26 — less than one-third of the goal.
    - PM-KUSUM's most successful component has been standalone off-grid solar water pumps for farmers — 10.9 lakh pumps installed against a target of 14 lakh.
    - The scheme, originally meant to be completed by 2022, has been extended due to pandemic disruptions.
    - Under PM Suryaghar, the five best-performing states — Gujarat, Maharashtra, Uttar Pradesh, Kerala, and Rajasthan — account for nearly 70% of all 33 lakh rooftop installations so far.
    - States like Tamil Nadu, Karnataka, Punjab, Bihar, and Jharkhand lag significantly.

The Central Problem: Free Electricity Kills the Incentive

- When grid electricity is already **free or heavily subsidised**, households and farmers have no financial reason to invest in rooftop solar.
- Installing a solar system requires an upfront cost of a few lakh rupees. That investment only makes financial sense if it saves you money on your electricity bill. If your bill is already near zero, the calculation simply does not work.
- **Punjab** is the clearest example. It offers 300 units of free electricity to domestic consumers every month and completely free power to all agricultural tubewells.

The Solution: Ironically, More Subsidies

- The answer some states have found is to offer **additional, one-time financial incentives** on top of the central scheme's benefits — making the upfront equipment purchase easier to bear.
- **Uttar Pradesh** and **Rajasthan**, both of which already offer heavily subsidised power, have done remarkably well on PM Suryaghar and PM-KUSUM by layering extra state-level subsidies to help consumers cross the upfront cost barrier.
- This is not as contradictory as it sounds. Recurring power subsidies are an unending fiscal liability for state governments — they go on forever.
- A one-time equipment subsidy is a finite expenditure that eventually reduces the need for recurring subsidies.
- If PM Suryaghar is fully implemented, it is estimated to save the government approximately Rs 75,000 crore per year in electricity costs.

Conclusion

- India aims for 500 GW of non-fossil fuel capacity by 2030. Understanding why decentralised solar schemes underperform despite large budgets is important for policy analysis.
- The paradox of power subsidies undermining solar adoption illustrates the unintended consequences of poorly designed subsidy regimes.

NATIONAL FAMILY HEALTH SURVEY - KEY INDICATORS & CHANGES

- The National Family Health Survey (NFHS) is a large-scale, multi-round household survey conducted by the Ministry of Health and Family Welfare, with the **International Institute for Population Sciences (IIPS),** Mumbai, as the nodal agency.

What NFHS-6 Gained?

- NFHS-6 introduced several new dimensions:
  - Direct Benefit Transfers (DBT)
  - Self-Help Group (SHG) memberships
  - Digital literacy
  - Financial transactions
  - Hepatitis-B and Hepatitis-C testing among women and men
  - Dried blood spot collection from children aged 4-5 for Hepatitis-B testing
  - Biological HIV testing has been brought back as part of clinical and biochemical testing
- **Improvements in Key Indicators**
  - Mothers receiving at least 4 antenatal check-ups: Up about 7 percentage points from NFHS-5.
  - Institutional births: Increased to 90.6% from 88.6%.
  - Women's Internet use: Notable increase across states.
  - Stunting among children under 5: Declined by over 6 percentage points, compared to under 3 percentage points between NFHS-4 and NFHS-5.
  - Spousal violence: Dropped from 29.3% to 22.3%.
- **Concerns Over Transparency**

The lack of a published rationale for many changes raises questions about:

- Transparency in survey design decisions.
- Consistency in measuring progress over time.
- Continuity of long-term data series critical for policy evaluation.

PRADHAN MANTRI SURAKSHIT MATRITVA ABHIYAAN

- It was **launched in 2016** by the Ministry of Health & Family Welfare (MoHFW).
- It aims to ensure **early risk detection, timely medical intervention**, and safer pregnancies for every woman in India, regardless of where she lives.

- **Key features:**
  - It provides free, **comprehensive antenatal care to pregnant** women — particularly those in **their second and third trimesters** — at designated government health facilities **on the 9th of every month.**
  - Minimum one comprehensive and quality antenatal checkup by Obstetrician & Gynaecologist or Comprehensive Emergency Obstetric and Newborn Care (CEmONC).
  - **Comprehensive Emergency Obstetric and Newborn Care** (CEmONC) / Basic Emergency Obstetric and Newborn Care (BEmONC) trained doctor during the second or third trimester.
  - Mobilizing the pregnant women for specialist Antenatal care services at designated public health facilities.
  - **High Risk Pregnancy** (HRP) identification by screening for 25 high risk factors and management at an early stage.
  - Linking of HRPs to the nearest first referral unit (FRU) for a safe delivery.
  - **Empanelment of private service** providers for PMSMA service provision.
  - High-risk pregnancy cases receive priority attention and follow-up care.
  - Women **who are dropouts from regular antenatal care** are actively encouraged to participate.