



DAILY CURRENT AFFAIRS-

1. China's Reusable Rocket Booster Recovery
2. INS Mahendragiri Commissioned
3. Foreign Contribution (Regulation) Amendment Bill, 2026
4. India's First Hydrogen Train
5. Constitution (130th Amendment) Bill: Suspension of High Constitutional Functionaries

1. China's Reusable Rocket Booster Recovery

Source: *The Hindu*

Subject: Science & Technology | Space Technology

Why in News?

- China has successfully carried out its **first controlled recovery of an orbital-class reusable rocket booster** after the maiden launch of the **Long March-10B** rocket, marking a major milestone in reusable launch vehicle technology.

Key Highlights

- It has successfully recovered the **first-stage booster** of the **Long March-10B** carrier rocket.
- It has achieved recovery through a **sea-based net-capture system** after successfully placing the payload into the designated orbit.
- It has become a major milestone in China's indigenous reusable launch vehicle programme.
- It has followed earlier unsuccessful attempts involving **vertical landing using grid fins and landing legs**.
- It has strengthened China's capabilities in cost-effective and high-frequency space launches.

Significance

- It has reduced the cost of space launches through booster reusability.

- It has increased the frequency and sustainability of future space missions.
- It has strengthened China's competitiveness in the global commercial space sector.
- It has reduced dependence on expendable launch vehicles, improving resource efficiency.
- It has challenged the technological leadership of reusable launch systems pioneered by **SpaceX**.

About Reusable Launch Vehicle (RLV) Technology

- It enables the recovery and reuse of rocket stages after launch.
- It has reduced launch costs by recovering expensive rocket components.
- It has supported frequent satellite launches, human spaceflight and deep-space missions.
- It has improved sustainability by reducing space launch waste.
- It has become a key technology for the commercial space economy.

India's Reusable Launch Vehicle Programme

- It is being developed by the **Indian Space Research Organisation (ISRO)**.
- It aims to develop a **Reusable Launch Vehicle–Technology Demonstrator (RLV-TD)**.

- It has successfully completed **Hypersonic Flight Experiment (HEX-01)** and **Landing Experiment (LEX)** missions.
- It has aimed to significantly reduce the cost of access to space through reusable launch systems.

Challenges & Way Forward

- It has required highly reliable recovery, navigation and precision landing technologies.
- It has needed advanced thermal protection systems for repeated atmospheric re-entry.
- It has required greater investment in reusable propulsion and autonomous guidance systems.
- It has needed continued testing to improve reliability and operational efficiency.
- It has required stronger public-private collaboration to develop reusable launch technologies.



UPSC Prelims MCQ

Q. With reference to Reusable Launch Vehicle (RLV) technology, consider the following statements:

1. It enables the recovery and reuse of rocket stages after launch.
2. It helps reduce the cost of access to space.
3. ISRO is developing a Reusable Launch Vehicle–Technology Demonstrator (RLV-TD).

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Question (15 Marks)

Discuss the significance of reusable launch vehicle technology for reducing the cost of space missions. Examine India's progress in reusable launch systems in comparison with recent global developments.

2.INS Mahendragiri Commissioned

Source: *PIB*

Subject: Defence | Internal Security

Why in News?

- The Indian Navy has commissioned **INS Mahendragiri**, the **sixth Project 17A (Nilgiri-class) stealth guided-missile frigate**, at **Visakhapatnam**, significantly enhancing India's indigenous naval capabilities.

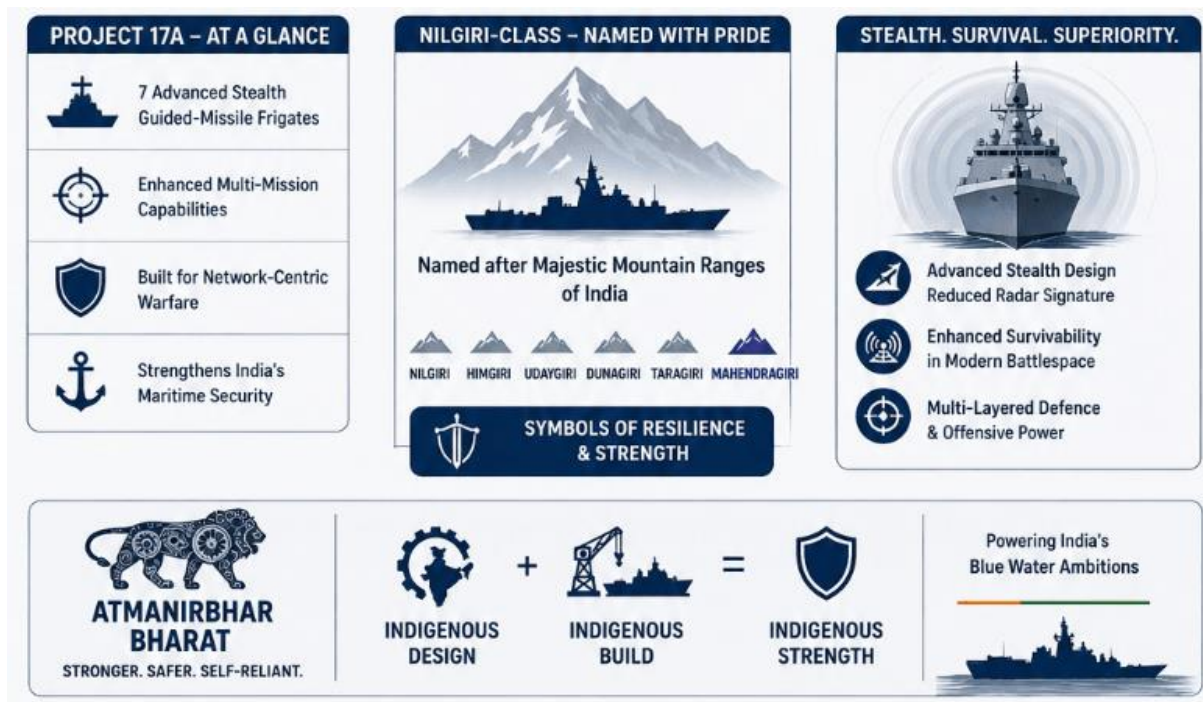
Key Highlights

- It has commissioned **INS Mahendragiri**, the sixth **Project 17A (Nilgiri-class)** stealth frigate.
- It has been **designed by the Warship Design Bureau (WDB)** of the Indian Navy and **constructed by Mazagon Dock Shipbuilders Limited (MDL)**.
- It has over **75% indigenous content**, supporting the **Atmanirbhar Bharat** initiative in defence manufacturing.
- It has adopted **Integrated Modular Construction (IMC)**, a modern shipbuilding methodology that reduces construction time and improves quality.
- It has been named after the **Mahendragiri Hills** of the Eastern Ghats.

Features & Significance

- It has advanced **stealth technologies** that reduce radar signature and improve battlefield survivability.
- It has a **Combined Diesel or Gas (CODOG)** propulsion system, enabling high-speed operations with long endurance.
- It has been equipped with **BrahMos supersonic cruise missiles**, **Barak-8 surface-to-air missiles**, advanced sensors and anti-submarine warfare systems.

- It has multi-mission capabilities for **anti-air, anti-surface, anti-submarine warfare, maritime security and Humanitarian Assistance and Disaster Relief (HADR)** operations.
- It has strengthened India's maritime security and operational preparedness in the **Indian Ocean Region (IOR)**.



About Project 17A

- It is the **follow-on programme to Project 17 (Shivalik-class) stealth frigates**.
- It aims to construct **seven advanced stealth guided-missile frigates** for the Indian Navy.
- It is being implemented by **Mazagon Dock Shipbuilders Limited (MDL), Mumbai** and **Garden Reach Shipbuilders & Engineers (GRSE), Kolkata**.
- It has incorporated advanced stealth features, integrated platform management systems and modern indigenous weapon systems.
- It has promoted indigenous defence manufacturing through extensive participation of Indian industries and MSMEs.

Challenges & Way Forward

-

- It has required continuous indigenisation of advanced propulsion, sensors and weapon systems.
- It has needed greater investment in indigenous shipbuilding technologies and defence R&D.
- It has required faster execution of naval modernisation programmes to address evolving maritime threats.
- It has needed stronger public-private collaboration for developing next-generation naval platforms.
- It has supported India's vision of becoming a major maritime power under **Aatmanirbhar Bharat**.

UPSC Prelims MCQ

Q. With reference to Project 17A of the Indian Navy, consider the following statements:

1. It is a programme for constructing indigenous stealth guided-missile frigates.
2. It is the successor to the Project 17 (Shivalik-class) frigates.
3. The ships are being constructed by Mazagon Dock Shipbuilders Limited (MDL) and Garden Reach Shipbuilders & Engineers (GRSE).

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Question (15 Marks)

Discuss the significance of Project 17A in strengthening India's maritime security and promoting self-reliance in defence manufacturing.

3.Foreign Contribution (Regulation) Amendment Bill, 2026

Source: *The Hindu*

Subject: Polity & Governance

Why in News?

- The **Catholic Bishops' Conference of India (CBCI)** has raised concerns over the **Foreign Contribution (Regulation) Amendment Bill, 2026** and the **FCRA Amendment Rules, 2026**, particularly regarding provisions on **proselytisation** and NGO asset management.

Key Highlights

- It has objected to the inclusion of the term "**proselytisation**" in the **FCRA Amendment Rules, 2026**, citing the absence of a legal definition.
- It has raised concerns over provisions empowering a **designated authority** to take over the assets of NGOs whose FCRA registration is suspended, cancelled or not renewed.
- It has required NGOs receiving foreign contributions to specify their activities under **five categories** and identify their geographical areas of operation.
- It has permitted specified religious activities while prohibiting **proselytisation** under the amended rules.
- It has expanded the regulatory oversight of foreign-funded civil society organisations.

Significance

- It has strengthened government oversight over foreign contributions received by NGOs.
- It has aimed to improve transparency and accountability in the utilisation of foreign funds.
- It has sought to prevent misuse of foreign contributions for activities inconsistent with national interest.
- It has raised concerns regarding the autonomy and functioning of charitable and faith-based organisations.
- It has highlighted the need to balance national security with constitutional freedoms and humanitarian activities.

About the Foreign Contribution (Regulation) Act (FCRA), 2010

- It regulates the **acceptance and utilisation of foreign contributions and foreign hospitality**.

- **Nodal Ministry:** Ministry of Home Affairs (MHA).
- It requires individuals, associations and NGOs receiving foreign contributions to obtain **FCRA registration or prior permission**.
- It prohibits the acceptance of foreign contributions by specified persons, including **election candidates, legislators, political parties, judges, government servants and media persons**.
- It aims to ensure that foreign contributions do not adversely affect **national security, sovereignty, public interest or democratic institutions**.

Challenges & Way Forward

- It has raised concerns regarding ambiguity in the interpretation of terms such as **proselytisation**.
- It has required safeguards against arbitrary suspension or cancellation of NGO registrations.
- It has needed greater clarity on asset management provisions following cancellation of registration.
- It has required transparent adjudication mechanisms and effective appellate remedies.
- It has needed a balanced regulatory framework that promotes accountability while protecting legitimate civil society activities.

UPSC Prelims MCQ

Q. With reference to the Foreign Contribution (Regulation) Act (FCRA), consider the following statements:

1. It regulates the acceptance and utilisation of foreign contributions by individuals and organisations in India.
2. It is administered by the Ministry of Home Affairs.
3. Political parties are prohibited from accepting foreign contributions under the Act.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Question (15 Marks)

Discuss the objectives of the Foreign Contribution (Regulation) Act (FCRA). Examine the challenges in balancing regulatory oversight of foreign-funded organisations with the constitutional freedoms of civil society institutions.

4. India's First Hydrogen Train

Source: *The Hindu*

Subject: Science & Technology | Transport | Environment

Why in News?

- The Prime Minister will flag off **India's first hydrogen-powered train** on **17 July** on the **Jind–Sonipat section in Haryana**, marking a major milestone in clean railway transportation.

Key Highlights

- It has become **India's first hydrogen-powered train** and the **world's longest hydrogen train on a broad-gauge platform**.
- It has been **designed and developed indigenously** by the **Integral Coach Factory (ICF), Chennai**, with design support from the **Research Designs and Standards Organisation (RDSO)**.
- It has operated on the **89-km Jind–Sonipat route** with **10 coaches** and a passenger capacity of about **2,600**.
- It has established an indigenous **hydrogen storage and refuelling facility** at **Jind**, licensed by the **Petroleum and Explosives Safety Organisation (PESO)**.
- It has formed part of the "**Hydrogen for Heritage**" initiative under Indian Railways, with plans to introduce **35 additional hydrogen trains**.

Significance

- It has promoted **zero-emission railway transportation**, with **water vapour** as the only emission.
- It has supported the **National Green Hydrogen Mission** and India's **Net Zero** commitments.
- It has reduced dependence on fossil fuels and improved energy security.
- It has strengthened indigenous capabilities in hydrogen fuel-cell technology.

- It has positioned India among the few countries developing hydrogen-powered rail transport.

About Hydrogen Fuel Cell Technology

- It has generated electricity through the electrochemical reaction between **hydrogen and oxygen**.
- It has emitted only **water vapour** as a by-product.
- It has offered higher energy efficiency and lower emissions than conventional diesel engines.
- It has been suitable for railways, heavy transport and other sectors difficult to electrify.

Components of a Hydrogen Fuel Cell

A typical hydrogen fuel cell, specifically a Proton Exchange Membrane Fuel Cell (PEMFC), consists of several key parts:

- **Anode:** The negative electrode where hydrogen fuel is introduced.
- **Cathode:** The positive electrode where oxygen (from air) is introduced.
- **Electrolyte (PEM):** A Proton Exchange Membrane (often Nafion) sandwiched between the anode and cathode, allowing only protons to pass through.
- **Catalyst:** Typically platinum-based, coated on both sides of the membrane, facilitating the chemical reactions.
- **Gas Diffusion Layers (GDL):** Porous materials that allow reactants to reach the catalyst and products to exit.

Challenges & Way Forward

- It has high production cost of green hydrogen compared to conventional fuels.
- It has required expansion of hydrogen production, storage and refuelling infrastructure.
- It has depended on large-scale renewable energy for sustainable hydrogen production.
- It has required stronger indigenous manufacturing of fuel-cell components.
- It has needed greater investment in R&D, safety standards and commercial deployment.

UPSC Prelims MCQ

Q. With reference to Hydrogen Fuel Cell technology, consider the following statements:

1. Hydrogen fuel cells generate electricity through an electrochemical reaction between hydrogen and oxygen.
2. Water vapour is the primary emission from hydrogen fuel-cell vehicles.
3. The National Green Hydrogen Mission aims to promote the production and use of green hydrogen in India.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Question (15 Marks)

Discuss the role of hydrogen fuel-cell technology in decarbonising India's transport sector. Examine its potential and challenges in achieving sustainable and energy-efficient mobility.

5. Constitution (130th Amendment) Bill: Suspension of High Constitutional Functionaries

Source: *The Hindu*

Subject: Polity & Governance

Why in News?

- A Joint Parliamentary Committee (JPC) has recommended replacing "removal" with "suspension" for the **Prime Minister, Chief Minister or Ministers** who remain in **judicial custody for 30 consecutive days** in serious criminal cases.

Key Highlights

- It has recommended **suspension**, instead of removal, of the **Prime Minister, Chief Minister or Ministers** after **30 consecutive days of judicial custody**.

- It has defined **serious criminal offences** as offences punishable with **five years or more imprisonment**.
- It has proposed **automatic restoration of office** if the individual is discharged, acquitted or prosecution fails.
- It has recommended the establishment of **fast-track courts** for cases involving high constitutional functionaries.
- It has proposed a **separate schedule of offences** to which the provisions would apply.

Significance

- It has addressed the constitutional vacuum relating to **governance from jail**.
- It has balanced the **presumption of innocence** with the need for continuity and integrity in governance.
- It has reduced the stigma associated with permanent removal before judicial determination of guilt.
- It has promoted constitutional morality, accountability and public confidence in democratic institutions.
- It has ensured continuity of executive functioning during prolonged judicial custody.

Challenges

- It has raised concerns that **judicial custody is not a determination of guilt**, but an executive or judicial process during investigation or trial.
- It has created the possibility of misuse through politically motivated investigations and arrests.
- It has required objective criteria for identifying offences attracting suspension.
- It has needed safeguards against arbitrary action while preserving constitutional principles.
- It has required speedy disposal of criminal cases involving constitutional functionaries.

Political and Legal Context of the 130th Constitutional Amendment Bill Judicial Observations and Constitutional Gap

- **Lily Thomas v. Union of India (2013)**: The Supreme Court held that Members of Parliament and State Legislatures convicted of certain offences are immediately disqualified from membership. However, it did not address the status of Ministers who remain in prolonged judicial custody without conviction, leaving a constitutional gap.

- **Association for Democratic Reforms (2002):** The Supreme Court stressed the need for greater transparency in electoral politics and highlighted concerns regarding the criminalisation of politics. However, it left the issue of disqualification and eligibility largely to Parliament.
- **Constitutional Ambiguity:** Under the Constitution, Ministers hold office during the pleasure of the President or Governor. In practice, however, this pleasure is exercised on the aid and advice of the Prime Minister or Chief Minister. Consequently, there is no explicit constitutional mechanism to deal with Ministers who continue in office while under prolonged detention but have not been convicted.
- **Overlap with the Existing Legal Framework:** Under **Section 8 of the Representation of the People Act, 1951**, an MP or MLA is disqualified only upon conviction for specified offences, generally involving a sentence of two years or more. The proposed Bill seeks to impose consequences at the stage of prolonged detention, potentially creating tensions with the existing statutory framework and judicial precedents.
- **Present Practice:** At present, the removal or resignation of a Minister in judicial custody depends entirely on the political discretion of the Prime Minister or Chief Minister, as there is no binding constitutional or statutory provision requiring suspension or removal.

Present Constitutional Position

- The **Constitution of India** does **not prescribe automatic suspension or removal** of a sitting **Prime Minister, Chief Minister or Minister** upon arrest or judicial custody.
- The **Representation of the People Act, 1951** provides for **disqualification upon conviction** for specified offences but does not address prolonged judicial custody before conviction.
- Ministers hold office **during the pleasure of the President or Governor**, subject to the advice of the Prime Minister or Chief Minister.

UPSC Prelims MCQ

Q. With reference to the Representation of the People Act, 1951, consider the following statements:

1. It provides for disqualification of legislators upon conviction for specified criminal offences.
2. It provides for automatic suspension of a Prime Minister or Chief Minister after 30 days of judicial custody.
3. The Constitution of India presently contains no provision for automatic removal of a Minister solely on the ground of arrest.

Which of the statements given above are correct?

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Answer: (b)

UPSC Mains Question (15 Marks)

Discuss the constitutional and governance issues arising from the continuation of high constitutional functionaries in office during prolonged judicial custody. Should India adopt a legal framework for temporary suspension in such cases? Examine.

