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Weekly
Current Affairs
Compilation
for UPSC
TNPSC KPSC

Guiding Dreams, Empowering Future
By **DR. V. RAM PRASATH MANOHAR, IAS**



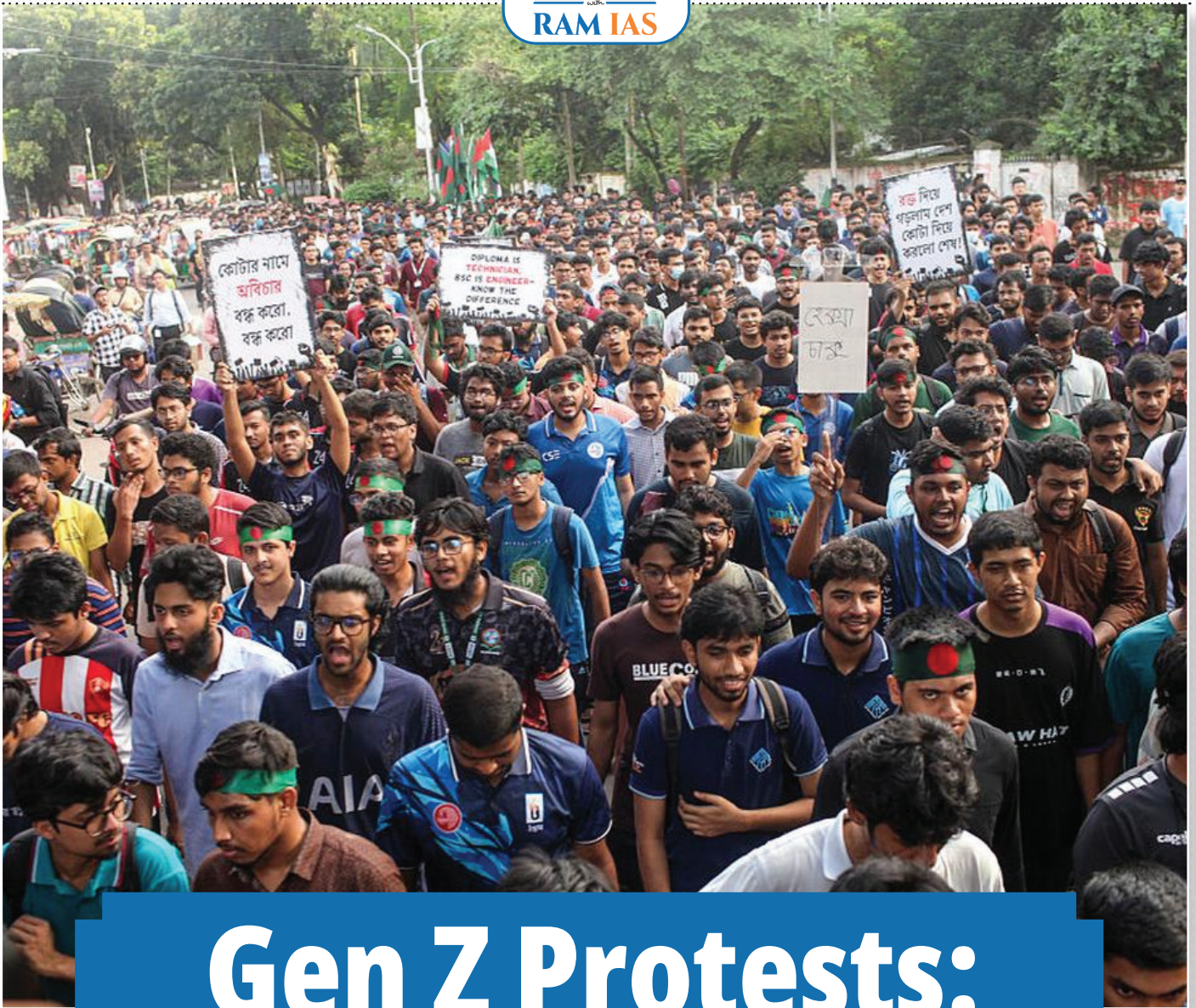
EXCLUSIVE CURRENT AFFAIRS BULLETIN

Newsletter | August 2026



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Gen Z Protests:

Redefining Democratic Participation in India

Why in News?

A wave of Generation Z-led demonstrations, spearheaded by the satirical Cockroach Janta Party (CJP), has emerged in India. The protests are centered on alleged irregularities in the NEET exam, rising graduate unemployment, and the growing financial burden of education.

The Global Context

- Definition: Gen Z, or "Zoomers," are the cohort born between the mid-1990s and early 2010s, known for their digital nativity and heightened civic awareness.
- Global Examples:
 - Bangladesh: Student-led job quota protests led to a government change.
 - Nepal: Anti-corruption protests resulted in a change in government and emergence of youth-backed leadership.

- Indonesia: Protests against lawmakers' privileges led to the government rolling back several measures.
- Peru: Protests over crime and political instability intensified political turmoil.
- India: The government accepted several demands, including the Education Minister's resignation.

Evolution of Youth Movements in India

- 1950s–1960s (Ideological Politics): Campus-centric movements; Anti-Hindi Agitation (1965), Naxalbari Movement (1967).
- 1970s: Nav Nirman Andolan (1974), JP Movement (1974–75).
- 1980s–1990s: Assam Agitation; Anti-Mandal Commission Protests.
- 2000s–2010s: Anna Hazare Movement; Nirbhaya Protests.

- 2020s–Present: Anti-CAA/NRC, Agniphath protests, CJP movement.

Major Shifts

- From charismatic leaders to decentralised networks.
- From ideology to issue-based activism.
- From party-linked to independent mobilisation.
- From physical to hybrid protest models.
- From campus issues to national policy debates.

Underlying Causes

- Jobless growth, skill mismatch, gig economy and educational inflation.
- Compromised meritocracy and institutional decay.
- Relative deprivation, student suicides and brain drain.
- Democratic alienation and shrinking spaces for dissent.

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Measures Needed

- Youth in All Policies framework.
- Expand Orange, Creator, Space and Green Economy.
- National Youth Council and Youth Parliaments.
- Strengthen Public Examinations Act, 2024 and reform NTA.
- Implement NEP 2020 with AI, entrepreneurship and apprenticeships.
- National Youth Well-being Mission.
- Expand PARAKH and skill-based hiring.
- Strengthen MyGov.
- National Youth Strategy 2047.
- Employment-intensive growth and Code on Social Security, 2020.

Right to Protest

Context and Trigger for Debate

- Recent Incident: Violent clashes between protesters and police during the youth-led 'Chalo Sansad' march in New Delhi in July 2026 have reignited the debate on the constitutional limits of policing public protests and the State's power to restrict civil and digital liberties.
- Allegations: The demonstrations witnessed Metro station closures and internet restrictions, along with allegations of the use of tear gas, pellet guns, shock batons, and lathi charges by security forces. This prompted legal scrutiny before the Delhi High Court.

Constitutional Basis for the Right to Protest

- Implicit Right: The Indian Constitution does not explicitly mention the word 'protest'. However, the right is implicitly derived from a combination of fundamental rights under Part III:
- Article 19(1)(a): Freedom of speech and expression.
- Article 19(1)(b): Right to assemble peacefully and without arms.
- Article 19(1)(c): Right to form associations or unions.
- Article 21: Right to life and liberty including dignity and voicing grievances.

Significance: Essential for democratic accountability and public discourse.

Limitations on the Right to Protest

- Reasonable Restrictions under Articles 19(2) and 19(3) on grounds such

as sovereignty, integrity, security of State, public order, decency, morality, contempt of court, defamation and incitement.

- Section 163 of the Bharatiya Nagarik Suraksha Sanhita (BNSS), 2023 empowers Executive Magistrates to issue prohibitory orders.
- Local Police laws regulate routes, timings and conditions of assemblies.
- Under the Bharatiya Nyaya Sanhita (BNS), 2023 an assembly becomes unlawful only when its common object involves criminal force, resisting law, committing offences or compelling others by threat.

Standards & Laws

Governing Police Action

- NHRC Manual emphasises democratic policing and protection of rights.
- UN Basic Principles on the Use of Force and Firearms (1990): force must be lawful, necessary and proportionate.
- BNSS and Police Code require warnings, persuasion and minimum force.
- D.K. Basu v. State of West Bengal (1997): visible identification for arresting police personnel.
- 5. Supreme Court Judgments
- Ram Manohar Lohia v. State of Bihar (1965): distinction between law and order and public order.
- Himat Lal K. Shah v. Commissioner of Police (1973): State may regulate but not extinguish protests.
- In Re: Ramlila Maidan Incident (2012): force only as last resort.
- Anita Thakur v. State of J&K (2016): excessive force violates fundamental rights.
- Mazdoor Kisan Shakti Sangathan v. Union of India (2018): regulation permitted but not complete prohibition.
- Amit Sahni v. Commissioner of Police (2020): protests cannot indefinitely occupy public spaces.

Concerns Regarding Excessive Policing

- Political interference affects police independence.
- Training gaps in human rights and de-escalation.
- Police shortages and stress contribute to coercive policing.
- Disproportionate force violates proportionality.
- Lack of transparency through unidenti-

23rd Commonwealth Games 2026

Why in News

- The 23rd Commonwealth Games are being held in Glasgow, Scotland from 23 July to 2 August 2026.
- The **2026 Commonwealth Games in Glasgow, Scotland**, witnessed a strong start for India as **Mirabai Chanu won gold medal** in the **women's 48 kg** category.

Overview

- Host City: Glasgow, Scotland.
- Duration: 23 July–2 August 2026.
- Athletes from 74 nations and territories are participating.
- This edition is a scaled-down Games featuring only 10 sports, nine fewer than Birmingham 2022.
- Sports: Athletics, Swimming, 3x3 Basketball, Track Cycling, Weightlifting, Bowls, Artistic Gymnastics, Netball, Boxing and Judo.

India's Participation

- India has sent a 125-member contingent including para-athletes.

- India is competing in athletics, boxing, weightlifting, judo, artistic gymnastics, track cycling, bowls, swimming and para-sports.
- India is not participating in 3x3 Basketball and Netball.
- Medal tally (up to 30 July 2026): 15 medals – 3 Gold, 9 Silver and 3 Bronze.
- India is placed 8th in the medal standings.
- India first participated in 1934; best-ever performance was 101 medals at Delhi 2010.

India's Medal Winners

• Gold Medals

- Mirabai Chanu – Women's 48 kg Weightlifting – Third consecutive Commonwealth Games gold; total lift 190 kg; Games record in snatch.
- Sharmila Dhankar – Women's Shot Put F57 – India's first-ever Commonwealth Games gold in para-athletics; season-best throw of 9.81 m.
- Dilip Mahadu Gavit – Men's T47 100 m – Gold in Games record time of 10.71

seconds.

• Silver Medals

- Rishikanta Singh – Men's 60 kg Weightlifting – Total 264 kg; Games record in snatch (121 kg).
- Muthupandi Raja – Men's 65 kg Weightlifting – Total lift 286 kg.
- Gyaneshwari Yadav – Women's 53 kg Weightlifting – Personal-best total 199 kg.
- Valluri Ajaya Babu – Men's 79 kg Weightlifting – Total 330 kg; Games record 149 kg.
- Sarvesh Kushare – Men's High Jump – First Indian silver in the event; cleared 2.25 m.
- Harjinder Kaur – Women's 69 kg Weightlifting – Total lift 227 kg.
- Gulveer Singh – Men's 10,000 m – First Indian Commonwealth medal in a long-distance event.
- Mohammed Basil Morssinganakth – Men's T47 100 m – Silver in 10.83 s.
- Murali Sreeshankar – Men's Long Jump – Second successive CWG silver; jump of 8.09 m.

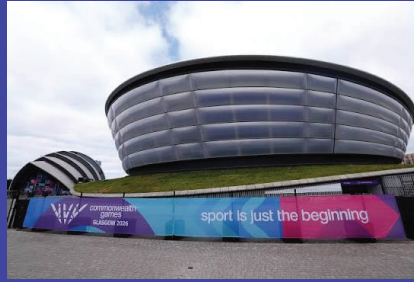


• Bronze Medals

- Jhandu Kumar – Men's Heavyweight Para Powerlifting – Best lift 190 kg.
- Bindyarani Devi – Women's 58 kg Weightlifting – Total lift 199 kg.
- Shilpa K. Shyla – Women's Shot Put F57 – Bronze awarded after successful protest.

Background

- Commonwealth Games are the world's second-largest multi-sport event after the Olympics.
- Most participating members are former British colonies.
- Concept proposed by Melville Marks Robinson following the 1911 Inter-Empire Championships.
- First Games held in Hamilton, Canada in 1930 as the British Empire Games.
- Renamed Commonwealth Games in 1978.
- Governing body: Commonwealth Games Federation (CGF).
- India hosted the Games in New Delhi in 2010 and will host the Centenary Commonwealth Games in Ahmedabad in 2030.



Significance

- Demonstrates India's growing strength in weightlifting, athletics and para-sports.
- Reflects improved sports infrastructure and athlete development.
- Provides momentum for future Olympic preparations.

Conclusion

The Glasgow 2026 Commonwealth Games underline India's expanding sporting excellence through consistent performances in weightlifting, athletics and para-sports. Historic achievements and a strong medal haul strengthen India's global sporting profile and provide valuable momentum ahead of the 2030 Commonwealth Games, which India will host in

Ahmedabad.

Prelims Practice Question

Consider the following statements regarding the 23rd Commonwealth Games 2026:

1. The Games are being held in Glasgow, Scotland, and feature participation from 74 nations and territories.
2. India is participating in all the 10 sports that are part of the official programme for this edition.
3. The Commonwealth Games Federation (CGF) is the governing body for the Games, and the event was formerly known as the British Empire Games.

Which of the statements given above is/are correct?

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

Answer: (b) 1 and 3 only

SARNATH: India's 45th UNESCO World Heritage Site

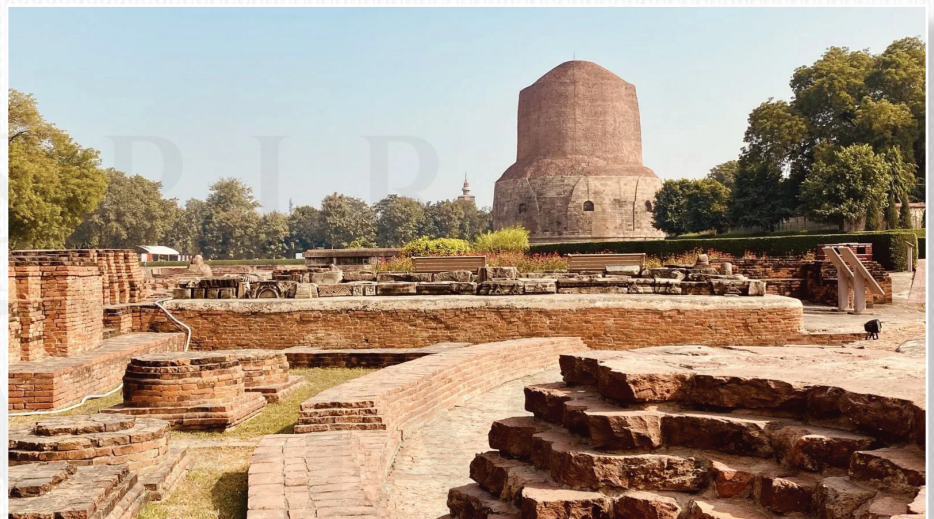
News and Context

- Inscription: The Ancient Buddhist Site of Sarnath in Uttar Pradesh has been inscribed on the UNESCO World Heritage List.
- Event: The decision was made during the 48th Session of the World Heritage Committee, held in Busan, Republic of Korea.
- India's Ranking: With this inscription, India now has 45 UNESCO World Heritage Sites, ranking 6th globally and 2nd in the Asia-Pacific region in terms of the number of sites.

Key Facts

About Sarnath

- Historical and Spiritual Significance:
- Sarnath is the sacred place where Gautama Buddha delivered his first sermon after attaining enlightenment in Bodhgaya.
- This event is known as the 'Turning of the Wheel of the Law' (Dharmachakra



Pravartana).

- It is also where the Buddha met his first disciples, marking the formal inception of the Buddhist monastic order (the Sangha) and the establishment of the Noble Eightfold Path.
- One of the Four Principal Pilgrimage Sites:

- The Buddha identified Sarnath as one of the four key Buddhist pilgrimage sites alongside Lumbini, Bodhgaya and Kushinagar.
- Three of these four sites are now UNESCO World Heritage Properties: Lumbini, Mahabodhi Temple at Bodhgaya and Sarnath.



- Historical Nomenclature: Ancient names include Rishipatana, Ishipatana and Mrigadava (Deer Park).
- National Emblems Found:
- Excavations yielded the Mauryan Lion Capital, India's National Emblem, and the Dharmachakra Pravartana Buddha statue of the Gupta period. These are preserved in the Sarnath Site Museum established in 1904.

Sarnath as a UNESCO World Heritage Property

- Nomination: Included in India's Tentative List in 1998.
- Selection Criteria:
- Criterion (iii): Enduring spiritual significance as a pilgrimage destination.
- Criterion (vi): Direct association with Buddha, his teachings and the Triratna (Buddha, Dharma and Sangha).
- Site Components:
- Chaukhandi Stupa – marks the place where Buddha met his first five disciples.
- Archaeological Remains including Dhamekh Stupa, Dharmarajika Stupa, Mulagandhakuti Vihara and Ashokan Pillar.
- Dhamekh Stupa marks the site of the First Sermon.
- Dharmarajika Stupa is among the earliest Buddhist stupas commissioned by Emperor Ashoka.
- Mulagandhakuti Vihara marks Buddha's residence during his first rainy season retreat.
- Ashokan Pillar bears the Lion Capital adopted as India's National Emblem.
- The site preserves ancient temples,

monasteries, shrines and other structures reflecting over two millennia of history.

UNESCO World Heritage Site Framework

- World Heritage Sites receive international legal protection under UNESCO.
- The 1972 Convention governs inscription; currently there are 1,248 properties across 170 countries.
- India ratified the Convention in 1977.
- India served on the World Heritage Committee (2021–2025) and hosted the 46th Session in New Delhi in July 2024.
- India has 69 sites on the Tentative List; only one nomination is permitted each year.
- The Archaeological Survey of India (ASI) is the nodal agency.
- Categories: Cultural, Natural and Mixed.
- List of World Heritage in Danger identifies sites under severe threat.
- Emergency Nomination Procedure enables urgent inscription of threatened sites.

2026 UNESCO List of World Heritage in Danger (Examples)

- Boma-Badingilo Migratory Landscape (South Sudan): Infrastructure, poaching and insecurity.
- Mount Amel Castles (Lebanon) and Sebastia (State of Palestine): Armed conflict.
- Ancient City of Tauric Chersonese and its Chora: Temporary occupation and

unauthorized construction.

- Historic Inner City of Paramaribo (Suriname) and Tyre (Lebanon): Incompatible development and hostilities.

Conclusion

The inscription of Sarnath as India's 45th UNESCO World Heritage Site recognises its unparalleled spiritual, historical and cultural significance. It strengthens global recognition of India's Buddhist heritage while promoting conservation, sustainable tourism and preservation of one of the world's most important centres of Buddhist civilisation.

Prelims Question

With reference to the UNESCO World Heritage Sites, consider the following statements:

1. A country can nominate a maximum of two sites per year for consideration as a World Heritage Site.
2. The Archaeological Survey of India (ASI) is the nodal agency for UNESCO World Heritage matters in India.
3. The 'List of World Heritage in Danger' is a mechanism to identify sites threatened by serious and specific dangers.

Which of the statements given above is/are correct?

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

Answer: (b) 2 and 3 only.

Electronic Gold Receipt (EGR): Revolutionizing India's Bullion Market

Why in News?

India's Electronic Gold Receipt (EGR) ecosystem has come into focus as the country's Gold Exchange promotes transparent, standardized, and exchange-based trading of physical gold. By digitising ownership while retaining the option of physical delivery, EGRs are modernising India's bullion market and strengthening investor confidence.

What is the Electronic Gold Receipt (EGR)?

- **Gold Exchange Ecosystem:** The Securities and Exchange Board of India (SEBI)-regulated Gold Exchange creates a national platform for trading physical gold in a standardised manner.
- It formalises India's fragmented physical gold trade, generating a transparent, real-time domestic spot price for gold.
- **Electronic Gold Receipt (EGR):** An EGR is a SEBI-regulated electronic security that represents ownership of physical gold stored in SEBI-accredited vaults.
- Introduced under India's Gold Exchange framework, EGRs enable investors to trade standardised physical gold electronically on recognised stock exchanges while retaining the option to convert it into physical gold whenever required.
- Unlike physical gold, an EGR is held in demat form, making ownership secure, transparent, and easily transferable.
- Every EGR is fully backed by an equivalent quantity and purity of physical gold (typically 995 or 999 fineness) stored with a SEBI-registered Vault Manager.

- The term 'Receipt' signifies that every EGR is 100% backed by actual physical gold, unlike derivative or synthetic products.
- An investor holding an EGR becomes the beneficial owner of the corresponding quantity of physical gold without needing to store or transport it.

Need for EGR

SEBI introduced the Gold Exchange Framework (2022) to address the long-standing challenges of India's fragmented bullion market, including:

- Inconsistent purity standards
- Opaque pricing
- High transaction costs
- The dominance of unorganised trade

The framework aims to establish a transparent and regulated national market for physical gold, enable efficient price discovery, standardise quality, promote investor protection, and provide a fungible, dematerialised instrument that can be seamlessly converted into physical gold.

Working of EGR

- **Stage I: Creation:** Eligible 995/999 purity gold is deposited with a SEBI-registered Vault Manager, who verifies and stores it.
- The Depository then issues equivalent EGRs, which are credited to the depositor's demat account.

- **Stage II: Trading:** The issued EGRs are traded on the NSE and BSE Gold Exchange, with prices linked to the domestic spot gold market.
- Ownership changes electronically on a T+1 settlement basis, while the physical gold remains securely stored in the vault.
- **Stage III: Redemption (Withdrawal):** Investors can redeem EGRs for physical gold by submitting a request through their broker or Depository Participant (DP).
- The Vault Manager delivers the gold and simultaneously extinguishes the corresponding EGR from the investor's demat account.

Significance of EGRs

- **Unified Price Discovery:** Replaces fragmented and opaque jeweller quotes with a single, transparent, 'One Nation, One Price' domestic spot price based on real-time supply and demand.
- **Reduced Import Dependence for Pricing:** A liquid domestic exchange creates an Indian reference price, making the domestic market less reliant on London (LBMA) or Dubai benchmarks.
- **Storage and Security:** Removes the burden of locker costs and the risk of theft from individual investors. Vaults are highly secure and fully insured.



- **Quality Assurance:** Mandatory purity verification at the vaulting stage eliminates the risk of adulteration common in the unorganised physical gold market.
- **Tax Efficiency:** There is Zero GST levied on the trading of EGRs on the exchange. A 3% GST is only applicable if the investor converts the EGR back into physical gold.

Limitations of EGRs

Despite their advantages, EGRs face challenges such as:

- Limited investor awareness
- Relatively low trading volumes
- Competition from alternatives like Gold ETFs, digital gold, and Sovereign Gold Bonds (when available)
- The developing vault infrastructure
- Additional storage and redemption charges
- GST on physical withdrawal may also constrain wider adoption

EGR and India International Bullion Exchange (IIBX)

- **India International Bullion Exchange (IIBX):** Located in GIFT City, Gujarat, it is India's first International Bullion Exchange, established to facilitate the import and international trading of bullion under the International Financial Services Centres Authority (IFSCA).
- **Relationship:** IIBX supplies standardised bullion, while EGRs facilitate its domestic electronic trading.
- Gold imported through IIBX can be deposited in SEBI-accredited vaults, where it may be converted into EGRs after meeting prescribed standards.

Conclusion

The Electronic Gold Receipt (EGR) is a transformative step towards formalising India's bullion market. By offering a secure, transparent, and efficient way to trade physical gold, EGRs address long-standing issues like opaque pricing and quality concerns. While challenges like low awareness and competition from other gold-linked products remain, the EGR ecosystem, in conjunction with the India International Bullion Exchange (IIBX), has the potential to establish India as a global gold trading hub, reduce import dependence, and boost investor confidence in the commodity.

PARTICIPANTS IN THE EGR ECOSYSTEM	
PARTICIPANT	ROLE
 VAULT MANAGER	 Stores, verifies, assays, and delivers physical gold under the SEBI (Vault Managers) Regulations, 2021.
 DEPOSITORY (NSDL/CDSL)	 Maintains EGRs electronically in investors' demat accounts.
 STOCK EXCHANGES (NSE/BSE)	 Provide the trading platform for EGRs.
 STOCK BROKERS	 Facilitate buying, selling, and redemption of EGRs.
 INVESTORS	 Resident individuals, HUFs, NRIs, trusts, institutions, etc., who hold EGRs through demat accounts.



Prelims PYQ

Question: What is/are the purpose/ purposes of Government's 'Sovereign Gold Bond Scheme' and 'Gold Monetization Scheme'? (2016)

1. To bring the idle gold lying with Indian households into the economy.
2. To promote FDI in the gold and jewellery sector.
3. To reduce India's dependence

on gold imports.

Select the correct answer using the code given below:

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

Answer: (c).

Amrit Bharat Station Scheme (ABSS)

Context and Recent Inauguration

- **Recent News:** The Prime Minister recently inaugurated 75 redeveloped railway stations across 20 States under the Amrit Bharat Station Scheme.
- **Cost:** These 75 stations were redeveloped at a combined cost of approximately ₹1,570 crore.
- **Second Major Event:** This is the second nationwide dedication of redeveloped stations under the scheme. The first event took place on 22 May 2025, when 103 stations across 18 States and Union Territories were inaugurated.

About the Amrit Bharat Station Scheme (ABSS)

- **Launch:** The scheme was introduced by the Ministry of Railways in December 2022.
- **Objective:** It aims to redevelop 1,309 railway stations across India into modern integrated transport hubs.
- **Approach:** The scheme follows a phased, station-specific approach. Redevelopment plans are prepared according to local requirements, passenger footfall, and future growth needs.
- **Core Focus:** The scheme focuses on improving passenger experience, integrating regional architecture, enhancing accessibility, and supporting urban development.

Features of the Scheme

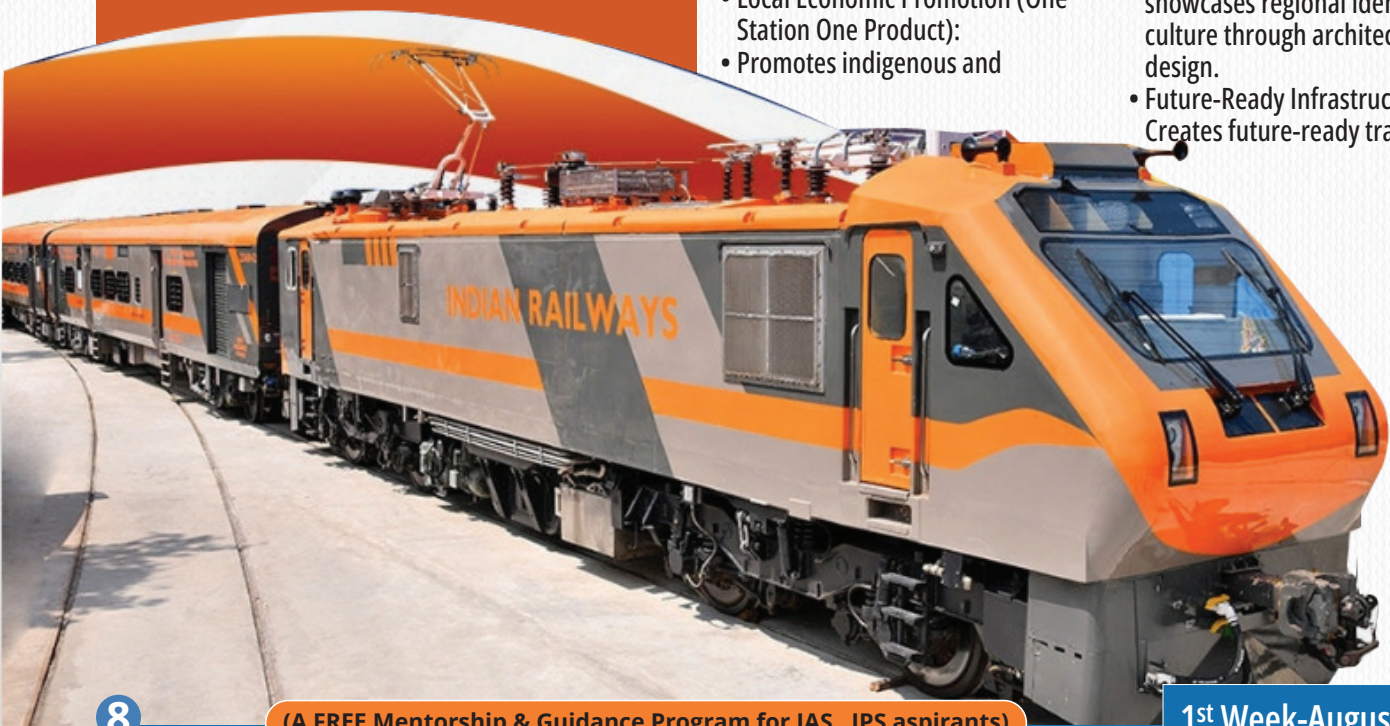
- **Customised & Culturally Integrated Redevelopment:**
- Stations are redeveloped with location-specific designs that combine modern facilities with local heritage, culture, and architectural themes.
- **Passenger Amenities & Modern Facilities:**
- Provides improved entry and exit points, modern waiting areas, covered platforms, and clean restrooms.
- Includes lifts, escalators, free Wi-Fi, executive lounges, business areas, food courts, and enhanced passenger information systems.
- Features aesthetically designed façades, landscaping, roof plazas, improved lighting, and better parking and circulation areas.
- **Inclusive & Accessible Design:**
- Aligned with the Accessible India Campaign (Sugamya Bharat Abhiyan).
- Ensures facilities for Divyangjan (persons with disabilities) and passengers with reduced mobility through ramps, accessible parking, low-height counters, Braille signage, tactile pathways, accessible toilets, and lift-equipped subways or foot overbridges.
- **Local Economic Promotion (One Station One Product):**
- Promotes indigenous and

regional products by providing kiosks and outlets for local artisans, weavers, tribal communities, and for selling handicrafts, handlooms, and region-specific food products.

- **Urban Connectivity & Sustainability:**
- Develops stations as multimodal urban centres by integrating railways with bus and metro networks.
- Connects both sides of cities through improved station planning.
- Incorporates eco-friendly measures such as green spaces, sustainable infrastructure, and improved environmental planning.

Significance of the Scheme

- **Beyond Transit Points:** Aims to transform railway stations from mere transit points into vibrant city centres.
- **Passenger Convenience:** Significantly improves passenger convenience and the overall travel experience.
- **Local Economy:** Promotes local economies and provides a market for regional products.
- **Regional Identity:** Preserves and showcases regional identity and culture through architectural design.
- **Future-Ready Infrastructure:** Creates future-ready transport



infrastructure that integrates with other urban transport modes.

Conclusion

The Amrit Bharat Station Scheme represents a transformative and holistic approach to modernizing India's vast railway network. By focusing on passenger-centric amenities, inclusive design, cultural integration, and economic promotion, the scheme aims to convert railway stations into dynamic urban hubs rather than just transit points. The recent inauguration of 75 redeveloped stations underscores the government's commitment to this vision. The phased redevelopment of over 1,300 stations has the potential to significantly enhance the passenger experience, boost local economies, and set a new benchmark for public infrastructure development in India.

Prelims Practice

Question

Q. With reference to the 'Amrit Bharat Station Scheme', consider the following statements:

1. It was launched by the Ministry of Housing and Urban Affairs in 2023.
2. One of its objectives is to integrate railway stations with other modes of urban transport like bus and metro networks.
3. The scheme includes provisions for promoting local artisans and products through the 'One Station One Product' initiative.

Which of the statements given above is/are correct?

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

Answer: (b) 2 and 3 only.

Design Inspirations by City



Ahmedabad

Inspired by
Modhera Sun Temple



Dwarka

Inspired by
Dwarkadhish Temple



Kumbakonam

Reflects
Chola architecture



Gurugram

Based on
modern urban design



Pickaxe Mountain:

Iran's Underground Nuclear Fortress & the Escalating West Asia Crisis

Why in News?

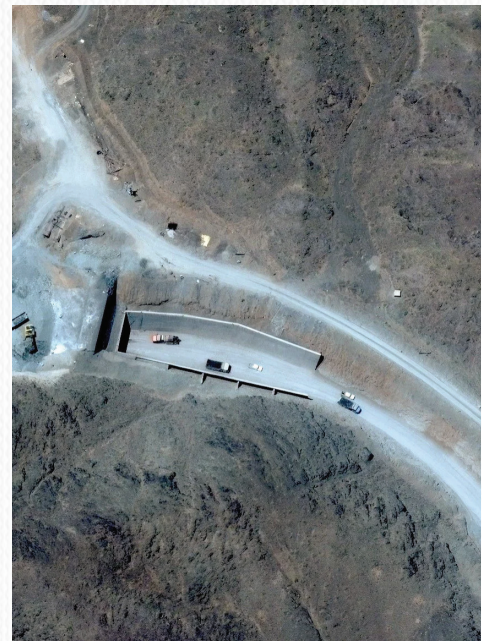
The West Asia conflict has intensified with US President Donald Trump threatening to strike 'Pickaxe Mountain' (Kūh-e Kolang Gaz Lā) — a heavily fortified underground nuclear facility in Iran. This site has emerged as a new flashpoint in US-Iran tensions, with both sides exchanging threats of military action.

What is Pickaxe Mountain?

- Name and Location:
- Also known as Kūh-e Kolang Gaz Lā, meaning 'Pickaxe Mountain'.
- Located approximately 220 km south of Tehran and about 2

km from Iran's Natanz nuclear complex.

- Situated in the Zagros Mountain Range in Isfahan Province, central Iran.
- Physical Characteristics:
 - A deeply buried underground nuclear facility constructed beneath a mountain.
 - Buried at least 100 meters (328 feet) under hard granite and reinforced rock.
 - Features several tunnel complexes, a large security perimeter, and entrances hardened with concrete.
 - Among the deepest and most heavily fortified nuclear-related facilities publicly known.
- Construction Timeline:



- Construction began around 2020.
- Iran declared the facility to the IAEA in 2020 as a future site for an advanced centrifuge assembly plant.
- Construction intensified after attacks on other facilities in June 2025.
- The facility is believed not yet operational.

Why is Pickaxe Mountain in the News?

- Israeli Intelligence Reports:
- Israel assessed Iran moved thousands of centrifuges into the facility.
- Iran allegedly transferred enriched uranium stockpile and advanced centrifuges after June 2025 attacks.
- The movement reportedly occurred in fall 2025 following the 12-day war.
- US Threats:
- President Trump warned of striking the facility heavily.



- Quoted that any nuclear-related site would be hit very powerfully.
- Iran's Response:
- Iran denied undeclared nuclear activity.
- Warned any US attack would expand the conflict.
- Threatened disruption of regional oil, gas and economic infrastructure.

Strategic Significance

- Protection from Attacks
- Built to protect nuclear infrastructure from sabotage or military attacks.
- Depth challenges conventional bunker-busting weapons including the Massive Ordnance Penetrator (MOP).
- Air strikes may only damage entrances

Historical strikes on nuclear facilities



- rather than the core facility.
- Geopolitical Implications
- Represents the intersection of nuclear security, deterrence, diplomacy and geopolitics.
- International access remains limited; Western and Israeli officials differ from Iran's claims.
- Connection to Other Strategic Sites
- Natanz – Iran's main uranium enrichment complex.
- South Pars – World's largest gas field shared by Iran and Qatar.
- Fordow – Another underground nuclear facility.

Historical Context of Striking Nuclear Programmes

- World War II: Allied operations against Germany's heavy-water facility in Norway.
- Operation Opera (1981): Israel struck Iraq's Osiraq reactor.
- Operation Scorch Sword (1980): Iran attacked Osiraq.
- Operation Outside the Box (2007): Israel destroyed Syria's al-Kibar reactor.
- Operation Midnight Hammer (2025): US bombed Iran's Natanz enrichment site.

The 'Kahuta Question' — India's Strategic Dilemma

The Pickaxe Mountain crisis has revived debate over whether India could have crippled Pakistan's nuclear programme at Kahuta during the 1980s, highlight-

ing the strategic complexity of striking nuclear facilities.

Conclusion

Pickaxe Mountain represents a critical flashpoint in the escalating West Asia conflict. Its fortified underground construction and proximity to Natanz make it strategically significant, with implications for nuclear non-proliferation, regional stability, global energy security, diplomacy and India's strategic interests.

Prelims : PYQ

Question: Consider the following statements regarding the International Atomic Energy Agency (IAEA): (2019)

1. The IAEA is an autonomous international organization under the aegis of the United Nations.
2. The IAEA's main functions include promoting the peaceful use of nuclear energy and preventing the proliferation of nuclear weapons.
3. The IAEA reports to both the UN General Assembly and the UN Security Council.

Which of the statements given above is/are correct?

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

Answer: (d).

Why in News?

- The Reserve Bank of India (RBI) has revived its long-discussed proposal to test polymer, or “plastic”, currency notes in India.
- The Government has authorised an initial field trial involving about two billion polymer banknotes—one billion each in the ₹10 and ₹20 denominations—according to information placed before Parliament in July 2026.
- The proposed exercise is intended to assess durability, print quality, security, public handling, machine compatibility and performance under India’s diverse climatic conditions.
- The Government has clarified that the trial does not amount to a decision to replace existing paper currency. Paper and polymer notes may coexist during evaluation.
- The subject is important because India must simultaneously manage high cash usage, the recurring cost of replacing soiled notes, counterfeit risks, environmental concerns and the rapid expansion of digital payments.

What Are Polymer Currency Notes?

- Polymer banknotes are currency notes printed on a thin synthetic polymer substrate rather than conventional cotton-based banknote paper.
- A commonly used substrate is biaxially oriented polypropylene (BOPP), which is stretched in two directions to improve strength, dimensional stability and resistance to tearing.
- The substrate is coated with printable layers while selected areas may remain transparent, creating clear windows that can carry holograms, diffraction elements or other complex security devices.
- “Plastic money” in this context means physical polymer banknotes. It should not be confused with debit cards, credit cards, prepaid cards or digital currency.

4. India’s Earlier Journey Towards Polymer Notes

- The idea is not new. India has

POLYMER CURRENCY NOTES

India’s Proposed Field Trial and the Future of Physical Currency



3. How Polymer Notes Differ from Present Banknotes

Parameter	Cotton-based banknote paper	Polymer substrate
Material	Special security paper, generally cotton-based; not ordinary wood-pulp paper.	Synthetic film, commonly BOPP, with specialised coatings.
Water and dirt	Absorbs moisture and becomes soiled more quickly.	Non-porous surface resists water, sweat and dirt.
Durability	More vulnerable to folding, abrasion and tearing.	Usually lasts substantially longer in circulation.
Security design	Watermarks, threads, intaglio, latent images and inks.	Transparent windows, holographic devices and layered optical features, along with printed security features.
End of life	Generally shredded or briquetted after withdrawal.	Can potentially be granulated and recycled where a suitable collection and recycling chain exists.
Initial cost	Lower unit production cost.	Higher initial unit cost, but potentially lower lifecycle cost because fewer replacements are required.

examined polymer banknotes for more than a decade, particularly for low denominations that circulate frequently and wear out rapidly.

- An earlier proposal envisaged a limited field trial of ₹10 polymer notes in selected cities with different climatic conditions. Implementation was delayed by procurement, technical, security and localisation-related issues.
- The renewed process indicates that the authorities are again evaluating the economics and operational feasibility of polymer substrates rather than announcing an immediate nationwide conversion.
- The present focus on ₹10 and ₹20 notes is logical because lower denominations change hands more frequently and therefore offer a clearer test of circulation life

and resistance to soiling.

Why Is RBI Considering Polymer Currency?

A. Longer circulation life

- Polymer notes are more resistant to moisture, sweat, repeated folding, abrasion and accidental washing.
- Central banks such as the Bank of England and Bank of Canada report that polymer notes can last around two-and-a-half times longer than comparable paper notes, although actual life varies by denomination and usage.
- Longer life means fewer notes need to be printed, transported, sorted and destroyed over a currency series.

B. Improved resistance to counterfeiting

- Transparent windows are integral to the substrate and are difficult to reproduce using ordinary scanners, printers or photocopyers.
- Polymer can support holograms, optically variable devices, complex transparent elements, tactile features and machine-readable authentication features.
- The advantage does not arise from plastic alone; it depends on combining the substrate with advanced design, secure inks, high-quality printing and effective public verification.

C. Cleaner notes and better public handling

- The non-porous surface absorbs less moisture and dirt, helping notes remain cleaner during circulation.
- This is particularly relevant in tropical climates and for small-value cash transactions where notes undergo intense handling.

D. Potential lifecycle savings

- The initial printing cost of polymer notes is normally higher, but longer circulation life can reduce replacement, logistics and destruction costs.
- The correct policy comparison is therefore lifecycle cost per year of service, not merely the cost of printing one note.

E. Environmental considerations

- Polymer is fossil-fuel based and its production has an environmental cost; therefore it is not automatically “green”.
- However, lifecycle studies cited by the IMF, Bank of Canada and Bank of England have found lower overall en-

environmental impact in many categories because polymer notes last longer and require fewer production and distribution cycles.

- Environmental gains depend on durability actually achieved in Indian conditions, efficient logistics and credible end-of-life recycling rather than landfilling or uncontrolled burning.

Major Advantages

- Greater durability and resistance to moisture, reducing the volume of soiled notes.
- Advanced security features, especially transparent windows and optical devices.
- Potential reduction in long-term printing, transport, sorting and disposal costs.
- Cleaner notes and improved quality of currency in circulation.
- Possible environmental benefits over the full lifecycle if notes last longer and are recycled.
- Opportunity to modernise banknote design and domestic security-printing technology.
- Reduced disruption for citizens because a trial can be conducted without withdrawing existing legal tender.

Challenges & Concerns

A. Higher upfront cost and technology dependence

- Polymer substrates and specialised security elements are costlier initially and may involve proprietary technology.
- Dependence on imported substrate or foreign intellectual property can create supply-chain and strategic vulnerabilities.

B. Adaptation of the cash ecosystem

- ATMs, counting machines, note acceptors, vending machines and sorting systems may require calibration, software changes or hardware modification.
- Banks, retailers, transport operators and cash-management companies must be trained to authenticate and handle the new substrate.

C. Handling limitations

- Polymer notes may become slippery, can stick together in certain conditions and may not hold a sharp fold like paper notes.
- They can shrink or deform under high heat and may be damaged by strong solvents or prolonged exposure to extreme conditions.

D. Environmental trade-offs

- Polymer notes are plastic products. Without a secure recycling system, the environmental claim weakens.
- End-of-life recycling must comply with currency-security requirements and prevent fragments from entering ordinary waste streams.
- E. Counterfeiting will evolve
 - No banknote is counterfeit-proof. Criminal networks may imitate visible features or exploit low public awareness.
 - Public education and machine-based authentication must accompany new note issuance.
- F. Inclusion and accessibility
 - Design must preserve easy denomination recognition for senior citizens, persons



with low vision and people with limited literacy.

- The note should work reliably in rural and informal cash markets, not merely in modern banking infrastructure.

Polymer Notes and India's Digital Payments Revolution

- Polymer banknotes and digital payments are not substitutes in a simple either-or sense. India requires a resilient mix of cash and digital instruments.
- UPI has become a dominant high-frequency retail payment platform, but cash remains important for inclusion, small transactions, emergencies, areas with poor connectivity and citizens who prefer or depend on physical money.
- Modernising cash can reduce currency-management costs even while the relative role of cash gradually changes.
- Physical currency is a public payment instrument that works without electricity, a mobile device, internet access or an intermediary account; it therefore contributes to payment-system resilience.

Institutional & Legal Framework in India

- Under Section 22 of the Reserve Bank of India Act, 1934, RBI has the sole right to issue banknotes in India, except the one-rupee note.
- The one-rupee note and coins are issued by the Government of India under the applicable coinage framework; the one-rupee note bears the signature of the Finance Secretary.
- The design, form and material of RBI banknotes are determined by the Central Government after considering recommendations of the RBI's Central Board, as provided under the RBI Act.

- Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL), a wholly owned RBI subsidiary, operates banknote presses at Mysuru and Salboni. Government-owned SPMCIL operates currency presses at Nashik and Dewas.
- A polymer note issued under the existing legal framework would remain sovereign fiat currency and legal tender; the change concerns the physical substrate, not the monetary value or issuer's liability.

Significance for India

Economic significance

- May reduce recurring currency-management expenditure over time.
- Can strengthen domestic security-printing, materials science and specialised manufacturing.
- Could reduce import dependence if substrate and security components are localised.

Security significance

- Raises the technological barrier for counterfeiters.
- Supports better machine authentication and cleaner note circulation.

- Can protect confidence in physical currency when combined with public awareness and enforcement.

Environmental significance

- Potentially lowers resource use and emissions per year of circulation because fewer replacement notes are required.
- Creates an incentive to develop a closed-loop system for secure recovery and recycling.
- Requires transparent Indian lifecycle assessment before broad claims are made.

Governance significance

- A limited field trial allows evidence-based policy rather than a sudden nationwide shift.
- Parallel circulation avoids unnecessary disruption and protects public confi-

dence.

- Results can guide denomination-wise adoption instead of an all-or-nothing conversion.

Conclusion



India's proposed polymer banknote trial is a cautious attempt to modernise physical currency rather than a plan to abruptly replace paper money. Polymer notes can offer longer life, cleaner circulation, stronger security features and lower lifecycle costs, but these benefits must be proven under Indian climatic, technological and social conditions. A transparent field trial, domestic capability, accessible design and secure recycling system should determine whether adoption is economi-

cally sound, environmentally responsible and consistent with public confidence in the rupee.

Prelims PYQ : 2018

Q. Which one of the following statements correctly describes the meaning of legal tender money?

- (a) The money which is tendered in courts of law to defray the fee of legal cases
- (b) The money which a creditor is under compulsion to accept in settlement of his claims
- (c) The bank money in the form of cheques, drafts, bills of exchange, etc.
- (d) The metallic money in circulation in a country

Answer: (b)

Maharashtra's First AI-Powered Bird Sanctuary



News and Context

- Approval: The Maharashtra government has approved the development of a ₹45-crore Eco-Nature Park at the Thane Creek Flamingo Sanctuary.
- Innovation: This park will feature India's first Artificial Intelligence (AI)-powered bird detection and monitoring centre.

Important Features of the AI-Powered Initiative

- Technology: The sanctuary will use Artificial Intelligence-based cameras and monitoring systems to automate bird

identification, track migration patterns, and collect scientific data.

- Functioning: The AI technology will analyse bird activity across a 1.5-kilometre stretch of the park through automated image and sound recognition.
- Objective: The primary goals are to enhance scientific research, improve conservation efforts, and provide a modern, data-driven approach to managing the sanctuary.

About Thane Creek Flamingo Sanctuary

- Location: The sanctuary is situated between Mumbai and Navi Mumbai along

the Thane Creek.

- Declaration: It was declared a wildlife sanctuary in 2015.
- Significance: It is India's first dedicated flamingo sanctuary.
- Ecosystem: The sanctuary is an important coastal wetland ecosystem that supports thousands of flamingos and over 200 bird species, including:
 - Greater and Lesser Flamingos.
 - Herons and Egrets.
 - Shorebirds.
 - Kingfishers.
- Flyway: The sanctuary forms part of the Central Asian Flyway, connecting Europe, Central Asia and the Indian subcontinent.

Facts About Flamingos

- Flamingos are tall water birds with long S-shaped necks and long legs, living in large flocks.
- Habitat: Shallow eutrophic water bodies such as saline lagoons, salt pans and alkaline lakes.
- Only two species occur in India: Greater Flamingo and Lesser Flamingo.
- Other global species include Chilean, American/Caribbean, Andean and James's (Puna) Flamingos.
- Diet: Algae, molluscs and crustaceans; plumage colour depends on carotenoid pigments in their diet.
- Threats include habitat degradation, pollution, coastal development,

human disturbance and changes in water quality.

Conclusion

The development of an AI-powered Eco-Nature Park at the Thane Creek Flamingo Sanctuary marks a significant step in India's biodiversity conservation efforts. By integrating artificial intelligence into bird monitoring and scientific research, the project will strengthen conservation, improve ecological management and serve as a model for technology-driven wildlife protection.

Prelims Practice Question

Q. Consider the following statements

regarding the Thane Creek Flamingo Sanctuary:

1. It is the first dedicated flamingo sanctuary in India.
2. It is part of the East Asian-Australasian Flyway.
3. The sanctuary is located in the state of Gujarat.

Which of the statements given above is/are correct?

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

Answer: (a) 1 only.

White-bellied Heron (*Ardea insignis*)

Why in News

Bhutan recorded a historic population of 31 White-bellied Herons in March 2026, the highest ever documented in the country.

Introduction

Critically Endangered on the IUCN Red List. One of the world's rarest birds and an indicator of healthy Himalayan freshwater ecosystems. Global population estimated at fewer than 60 to a maximum of about 249 mature individuals.



Distribution and Habitat

- Found mainly in Bhutan, Northeast India and Northern Myanmar.
- Inhabits pristine, fast-flowing rivers in subtropical and temperate forests.

Conservation Success in Bhutan

- Record population of 31 birds in 2026.
- 26 birds in the wild and 5 at the Conservation Breeding Centre.
- Five active nests recorded, indicating successful breeding.
- First record from Kanamakarachhu in Royal Manas National Park.
- Royal Society for Protection of Nature (RSPN) leads conservation efforts.

Major Threats

- Hydropower projects, dams, roads and habitat fragmentation.
- Sand, stone and timber extraction from

riverbanks.

- Agricultural expansion and human disturbance.
- Illegal fishing and hunting.
- Power-line collisions.
- Weak environmental governance in conflict-affected areas.

Conservation Measures

- International collaboration through the White-bellied Heron Working Group.
- Community-based conservation and awareness programmes.
- Scientific monitoring and threat assessment.
- Bird diverters on power lines and habitat protection.
- Conservation breeding as an ex-situ safety measure.

Way Forward

- Strengthen habitat protection across the species' range.
- Integrate biodiversity safeguards into

infrastructure projects.

- Enhance law enforcement, research and community participation.
- Promote transboundary conservation among India, Bhutan and Myanmar.

Conclusion

The White-bellied Heron is a flagship indicator of healthy Himalayan river ecosystems and remains on the brink of extinction. Bhutan's conservation success offers hope, but sustained international cooperation, habitat protection and community-led conservation are essential to secure the species' future.

Preliminary Practice Question

With reference to the White-bellied Heron (*Ardea insignis*), consider the following statements:

1. It is classified as 'Vulnerable' on the IUCN Red List.
2. Bhutan currently harbours the largest and most secure population of this species globally.
3. Its primary habitat is restricted to coastal mangrove forests in Southeast Asia.

Which of the statements given above is/are correct?

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

Answer: (b) 2 only