



Repealing of Assam Muslim Marriage Act

For Prelims: [Special Marriage Act, 1954](#), Assam Muslim Marriage and Divorce Registration Act of 1935, [Uniform Civil Code \(UCC\)](#), [Triple Talaq case](#).

For Mains: Issues Related to Muslim Personal Law, Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Source: [IE](#)

Why in News?

Recently, the Assam Government approved Assam Repealing Ordinance 2024, repealing the **Assam Muslim Marriage and Divorce Registration Act of 1935**.

- Following the decision, Muslim marriage or divorce registration can happen only through the [Special Marriage Act, 1954](#).

What is the Assam Muslim Marriage and Divorce Registration Act, 1935?

- The Act is in line with the [Muslim Personal Law](#), enacted in 1935. The Act lays down the **process for registration of Muslim marriages** and divorces.
- A 2010 amendment replaced the word **'voluntary' in the original Act with 'compulsory'**, making registration of Muslim marriages and **divorces compulsory in the state of Assam**.
- The Act authorises the state to grant **licences to "any person, being a Muslim" to register marriages and divorces**, with Muslim registrars deemed to be public servants.
- It lays down the process through which marriage and divorce applications can be made to the registrar, and the process for their registration.

What are the Reasons Behind the Repealing of Assam Muslim Marriage and Divorce Registration Act of 1935?

- **Alignment with Contemporary Norms:**
 - The Act was viewed as **outdated and not in line with modern societal norms**. It allowed for the registration of marriages if the bride and groom had not reached the legal marriageable age of 18 and 21, respectively, which contradicted current legal standards regarding marriageable age.
- **Crackdown on Child Marriage:**
 - The government-linked this decision to its ongoing efforts to combat child marriage. By repealing the Act, which contained provisions allowing underage marriages to be registered, the government aims to **eradicate child marriage in Assam**.
- **Informal and Misuse of Authority:**
 - The act provided an informal mechanism for marriage registration, which led to **potential misuse by kasis** (government-registered officials responsible for conducting marriages).
 - There were allegations of underage marriages and divorces being facilitated **without proper grounds, highlighting the need for reform**.

- **Move towards Uniform Civil Code (UCC):**

- The decision to repeal the Act is also seen as a step towards implementing a [Uniform Civil Code \(UCC\)](#) in Assam, similar to the recent move by Uttarakhand.
- The government aims to streamline marriage laws across different communities and bring them under a common legal framework.

What are the Arguments Against the Repeal of the Act?

- The Act provided a simple and decentralised process for marriage registration (**with 94 kazis spread across the state**), whereas, there are complexities of the [Special Marriage Act](#), which may deter some individuals, particularly the poor and illiterate, from registering their marriages.
- The Act faced criticism and legal challenges from various quarters, including advocates and political parties.
- Concerns were raised about the implications of complete repeal, **including the likelihood of increased instances of unregistered marriages.**

Why has the Muslim Personal Law been in the Public Eye in Recent Years?

- **Legal Reform and Judicial Intervention:**

- There have been significant legal reforms and judicial interventions in matters related to Muslim personal law.
 - Landmark cases such as the [Triple Talaq case \(Shayara Bano v. Union of India\) in 2017](#) and subsequent cases have brought issues like instant divorce, polygamy, and women's rights in Muslim marriages into the spotlight.
- These cases have prompted debates on the **need for reform within Muslim personal law** to align with constitutional principles of equality and justice.

- **Gender Justice and Women's Rights:**

- Concerns about gender justice and women's rights within Muslim personal law have gained prominence.
 - Debates focus on issues such as triple talaq, which allows husbands to instantly divorce their wives without legal proceedings, and the practice of **nikah halala**, where a woman must marry and divorce another man before remarrying her former husband.
- These practices have faced criticism for being discriminatory and unjust towards women.

- **Societal Change and Activism:**

- Changing **societal attitudes and increased activism** around gender equality have contributed to greater scrutiny of Muslim personal law.
- Women's rights activists, scholars, and [civil society organizations](#) have **advocated for reforms within Muslim personal law** to ensure gender equality and protection of women's rights in matters of marriage, divorce, maintenance, and inheritance.

- **Political Dynamics:**

- Muslim personal law has also become a political issue, with various political parties and interest groups taking positions on matters such as triple talaq and uniform civil code.
- Debates around these issues often intersect with broader political agendas, leading to **heightened public attention and discourse.**

- **Constitutional Principles:**

- There is a growing recognition of the need to uphold constitutional principles of **equality, justice, and non-discrimination** in matters of personal law.
- Calls for reform within Muslim personal law are often framed within the context of constitutional rights and the need to ensure equal treatment for all citizens, regardless of their religious affiliation.

What is Muslim Personal Law?

- **About:**

- Muslim Personal Law refers to the body of **laws that govern the personal matters** of individuals who **adhere to the Islamic faith.**
- These laws cover various aspects of personal life, including **marriage, divorce,**

inheritance, and family relationships, among others.

- Muslim Personal Law is derived primarily from the **Quran, the Hadith (sayings and actions of the Prophet Muhammad), and Islamic jurisprudence.**

▪ **Issues with Muslim Personal Laws:**

- According to **Sharia** or the [Muslim personal law](#), **men are allowed to practice polygamy** that is, they can have more than one wife at the same time, up to a total of four.
- '**Nikah halala**' is a process in which a Muslim woman has to marry another person and get divorced from him before being allowed to marry her divorced husband again.
- A Muslim man can divorce his wife by uttering Talaq once for three months. This practice is called **Talaq-e-Hasan**.
 - "Triple talaq" allows a husband to divorce his wife by repeating the word "talaq" (divorce) three times in any form, including email or text message.
 - In Islam, talaq and khula are two terms for divorce for men and women respectively. A man can part ways through 'talaq' while a woman can separate with her husband through 'Khula'.

▪ **Application in India:**

- The **Muslim Personal Law (Shariat) Application Act** was passed in 1937 with the aim to formulate an Islamic law code for Indian Muslims.
- The British who were at this point in time governing India, were trying to ensure that **Indians were ruled according to their own cultural norms.**
- When it came to distinguishing between laws made for the Hindus and those for the Muslims, they laid out the statement that “**clear proof of usage will outweigh the written text of the law**” in the case of Hindus. For the Muslims on the other hand, the writings in the Quran would be of foremost importance.
- Since 1937 therefore, the **Shariat Application Act mandates aspects of Muslim social life** such as marriage, divorce, inheritance and family relations.
- The Act lays out that in matters of personal dispute the state shall not interfere.

▪ **Personal Laws in Other Religions:**

- The [Hindu Succession Act, 1956](#) which lays out guidelines for property inheritance among Hindus, Buddhists, Jains and Sikhs.
- The **Parsi Marriage and Divorce Act, 1936** lays out rules to be followed by the Parsis according to their religious traditions.
- The [Hindu Marriage Act, 1955](#) had codified laws related to marriage among Hindus.

Way Forward

- A gradual approach to reforming personal laws, including Muslim personal law, is vital for aligning them with modern societal outlooks. This entails **comprehensive review, consultations with stakeholders**, and public awareness initiatives.
- Legislative reforms should **uphold constitutional values** while respecting religious diversity.
- Empowering women and enhancing their agency, along with promoting alternative dispute resolution **mechanisms, are key priorities.**
- Strengthening institutional capacity and monitoring implementation ensure effective reforms.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims

Q. Which Article of the Constitution of India safeguards one's right to marry the person of one's choice? (2019)

- (a) Article 19
- (b) Article 21
- (c) Article 25
- (d) Article 29

Ans: (b)

Exp:

- The right to marry is a component of the right to life under Article 21 of the Constitution of India which states that “No person shall be deprived of his life and personal liberty except according to the procedure established by law”.
- In *Lata Singh v. State of Uttar Pradesh* 2006, the Supreme Court viewed the right to marry as a component of the right to life under Article 21 of Indian Constitution.
- Therefore, option (b) is the correct answer.

Mains

Q. Customs and traditions suppress reason leading to obscurantism. Do you agree? (2020)

Karnataka's Temple Tax Amendment Bill

For Prelims: [Governor](#), [Article 25](#), [Article 26](#)

For Mains: Transparency and Accountability in Temple Governance, Government Policies & Interventions

[Source: IE](#)

Why in News?

The Karnataka Hindu Religious Institutions and Charitable Endowments (Amendment) Bill, 2024, was passed by the State Legislative Assembly and then the Council, it will now be sent to the [Governor](#) for approval.

- The Bill was meant to amend multiple provisions in the **Karnataka Hindu Religious Institutions and Charitable Endowments Act (KHRI& CE), 1997**.

What are the Key Highlights of the Bill?

- **Alteration of Taxation System:**
 - The Bill, aimed to **alter the taxation of Hindu temples**.
 - It proposed diverting **10% of gross income** from temples making over **Rs 1 crore annually** to a **common pool** for temple maintenance.
 - Previously, the allocation was **10% of the net income for temples** earning over **Rs 10 lakh annually**.
 - Net income is calculated based on the **profits of the temple after accounting for its expenses**, whereas gross income simply **refers to the total amount of money the temple makes**.
 - The Bill also suggested allocating 5% of income from temples earning between Rs 10 lakh and Rs 1 crore to the common pool.
 - These changes would have generated an additional Rs 60 crore from 87 temples with incomes over Rs 1 crore and 311 temples with income exceeding Rs 10 lakh.
- **Utilisation of Common Fund:**
 - The common fund may be utilised for purposes including religious studies and propagation, temple maintenance, and other charitable causes.
 - The common fund pool was created in 2011, by amending the 1997 Act.

- **Composition of Committee of Management:**
 - The Bill suggested adding a **member skilled in Vishwakarma Hindu temple architecture and sculpture** to the "committee of management" of temples and religious institutions.
 - Under Section 25 of the KHRI& CE 1997 Act, temples and religious institutions are required to form a **"committee of management"** consisting of **nine people**, including a priest, at least one member of a **Scheduled Caste** or **Scheduled Tribe**, two women, and one member of the locality of the institution.
- **Rajya Dharmika Parishat:**
 - The Bill empowered the Rajya Dharmika Parishat to appoint committee chairpersons and handle religious disputes, temple statuses, and trustee appointments. Additionally, it mandated the creation of district and state committees to oversee infrastructure projects for temples earning over Rs 25 lakh annually.

What are the Concerns Regarding the Bill?

- The Bill may also be challenged on the **grounds of discrimination, as it applies only to Hindu temples**, and not to other religious institutions.
 - The Bill may also face scrutiny under **Article 14 of the Constitution**, which guarantees **equality before the law and equal protection of the laws**, and prohibits arbitrary and unreasonable state action.
- Critics argued that such interference could potentially infringe on the constitutional rights granted under **Article 25**.
 - **Article 25** ensures individuals' freedom to profess, practice, and propagate religion, subject to public order, morality, and health.
 - Article 25(2) (a) empowers the **State to regulate or restrict those activities of any religious practice** which are economic, political, financial in nature or any other activity which is secular.
- Additionally, concerns were raised regarding the potential violation of rights guaranteed under **Article 26**.
 - Article 26 grants **religious denominations autonomy to manage their religious affairs and establish institutions** for religious and charitable purposes.
- It is feared that the **bill will lead to corruption and mismanagement of temple funds** and assets by the government-appointed Rajya Dharmika Parishath.
- It garnered criticism from the opposition, alleging governmental overreach and financial exploitation of temples.

Temple Revenue Handling in Other States:

- **Telangana's Model:**
 - Telangana follows a system akin to Karnataka's, where a **"Common Good Fund"** is created under **Section 70 of the Telangana Charitable and Hindu Religious Institutions and Endowments Act, 1987**.
 - Temples earning **more than Rs 50,000** annually are mandated to contribute **1.5% of their income** to the state government.
 - These funds are utilized for temple maintenance, renovations, veda-pathasalas (religious schools), and establishing new temples.
- **Kerala's System:**
 - Kerala employs a distinct approach where temples are predominantly managed by **state-run Devaswom (temple) Boards**.
 - The state has **five autonomous Devswom Boards** overseeing over 3,000 temples, with board members typically appointed by the ruling government, often politicians.
 - Each Devswom Board operates with a budget allocated by the state government and **isn't obliged to disclose revenue figures**. Separate laws govern the administration and management of temples under each Devswom board, **except for Travancore and Cochin, which are governed by a shared Act (Travancore-Cochin Hindu Religious Institutions Act, 1950)**.

What is the Historical Background of State Regulation of Temples?

- The **British government's Religious Endowments Act of 1863** aimed to secularize temple management by transferring control to local committees.
- In **1927, the Justice Party** enacted the Madras Hindu Religious Endowments Act, marking one of the earliest efforts by an elected government to regulate temples.
- In **1950, the Law Commission of India** recommended legislation to prevent misuse of temple funds, leading to the enactment of the **The Tamil Nadu Hindu Religious and Charitable Endowments (TN HR&CE) Act, 1951**.
 - It provides for the creation of a **Department of Hindu Religious and Charitable Endowments for the administration, protection, and preservation of temples and their properties**.
- The TN HR&CE Act was enacted, but its constitutional validity was challenged before the **Supreme Court**. In the landmark **Shirur Mutt case (1954)**, the Court upheld the overall law, though it struck down some provisions. A revised **TN HR&CE Act was legislated in 1959**.

How are other Religious Institutions Managed in India?

- **The Places of Worship Act, 1991:**
 - It was enacted to **freeze the status of religious places of worship as they existed on 15th August 1947**, and prohibits the conversion of any place of worship and ensures the maintenance of their religious character.
 - The Act excludes ancient and historical monuments, archaeological sites, and remains governed by the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
 - It also doesn't cover settled cases, resolved disputes, or conversions before its implementation. Specifically, the Act doesn't apply to the place of worship known as **Ram Janmabhoomi-Babri Masjid in Ayodhya**, including associated legal proceedings.
- **Constitution of India:**
 - The constitution under **Article 26** states that **religious groups have the right to establish and maintain institutions** for religious and charitable purposes, manage their own affairs in religious matters, and own, acquire, and administer property.
 - Muslims, Christians, Sikhs and other religious denominations utilize these constitutional guarantees to the fullest and manage their institutions.
- **Shiromani Gurdwara Parbandhak Committee (SGPC):**
 - The SGPC is a **Sikh-led committee** that manages Sikh Gurdwaras in India and abroad.
 - SGPC is directly elected through election by the Sikh sangat i.e. Sikh male and female voters above 18 years of age who are registered as voters under the provisions of the **Sikh Gurdwaras Act, 1925**.
- **Waqf Act of 1954:**
 - The Waqf Act of 1954 established the Central Waqf Council, which advises the Central Government on the administration of Auqaf (assets that are donated) and the working of state Waqf Boards.
 - **State Waqf Boards exercises control over mosques, graveyards and religious waqfs** in their state. The primary function of Wakf Board is to ensure its properties and revenue are appropriately managed and utilized.
 - Waqf is a permanent dedication of movable or immovable properties for religious, pious or charitable purposes as recognized by Muslim Law.

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Mains:

Q. How the Indian concept of secularism is different from the western model of secularism? Discuss. (2016)

Status of Leopards in India 2022

For Prelims: International Big Cat Alliance, [Tigers](#), [Lions](#), [Leopards](#), [Snow Leopards](#), pumas, jaguars, [Sustainable Development Goals \(SDGs\)](#).

For Mains: International Big Cat Alliance, Conservation.

[Source: IE](#)

Why in News?

The Ministry of Environment, Forest and Climate Change has released a report on the **Status of Leopards in India 2022**. The survey covered 20 States of India, and focussed on about 70% of the animals' expected habitat.

- Recently, the Union Government, while commemorating the 50th anniversary of [Project Tiger](#), has approved the establishment of the **International Big Cat Alliance (IBCA)** with headquarters in India with a one-time budgetary support of Rs.150 crore for a period of five years from **2023-24 to 2027-28**.

What are the Key Highlights of the Report on the Status of Leopards in India 2022?

- **Overall population:**
 - India's leopard population **rose by 8% from 12,852 in 2018 to 13,874 in 2022**.
 - About 65% of the leopard population is **present outside protected areas** in the Shivalik landscape. Only about a third of the leopards are within protected areas.
 - The Shivalik landscape refers to the **outermost range of the Himalayas, known as the Shivalik Hills** or the Shivalik Range. This range extends across several states in northern India, including Uttarakhand, Himachal Pradesh, Haryana, Punjab, and parts of Jammu and Kashmir and Uttar Pradesh.
- **Regional variation:**
 - Central India shows a stable or **slightly growing population** of leopards (2018: 8071, 2022: 8820), **Shivalik hills and Gangetic plains** experienced decline (2018: 1253, 2022: 1109).
 - In Shivalik hills and Gangetic plains, there is a 3.4% decline per annum, while the largest growth rate was in **Central India and Eastern Ghats of 1.5%**.
- **State-level distribution:**
 - Madhya Pradesh has the **highest number of leopards (3,907)**, followed by Maharashtra, Karnataka, and Tamil Nadu.
 - In Odisha the number of leopards dropped from 760 in 2018 to 562 in 2022, and in Uttarakhand, the population declined from 839 in 2018 to 652 in 2022.
 - Kerala, Telangana, Chhattisgarh, Bihar, and Goa too reported population declines.
- **Benefits From Tiger Conservation Efforts:**
 - The Central India and Eastern Ghats landscape is home to the largest population of leopards, which is growing due to protective measures within the framework of tiger conservation.
 - The report highlights that **leopard densities are higher in Tiger Reserves compared to areas outside Protected Areas**, despite the regulatory pressure exerted by tigers on

leopards.

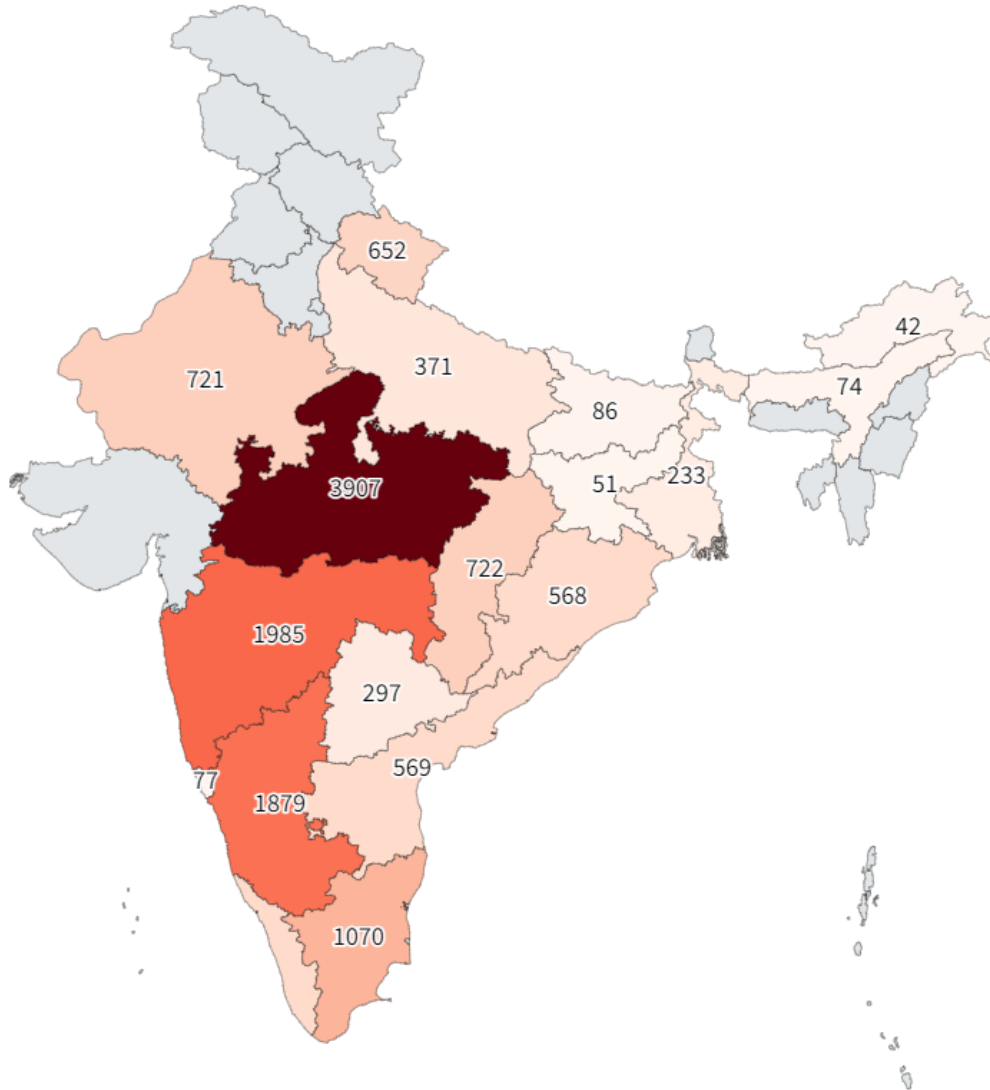
▪ **Common Threats:**

- Common threats are **poaching of prey for bush meat**, targeted poaching for tiger and leopard skins and body parts and habitat loss due to mining and other human activities.
 - In Odisha, as many as **59 leopard skins were seized from wildlife smugglers** between 2018 and 2023.
- Additionally, **road accidents** are a significant cause of leopard fatalities.

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Leopard count in states

The estimated leopard population in 2022 is 13,874



What is the International Big Cat Alliance (IBCA)?

▪ **About:**

- The IBCA is a multi-country, multi-agency coalition aimed at conserving big cat species and their habitats.
- It brings together **96 big cat range countries**, non-range countries interested in big cat conservation, conservation partners, scientific organizations, and businesses.

▪ **Objective:**

- The primary goal of the alliance is to collaborate on efforts to secure the future of **big cats, including [Tigers](#), [Lions](#), [Leopards](#), [Snow Leopards](#), pumas, jaguars, and cheetahs**, and the landscapes they inhabit.

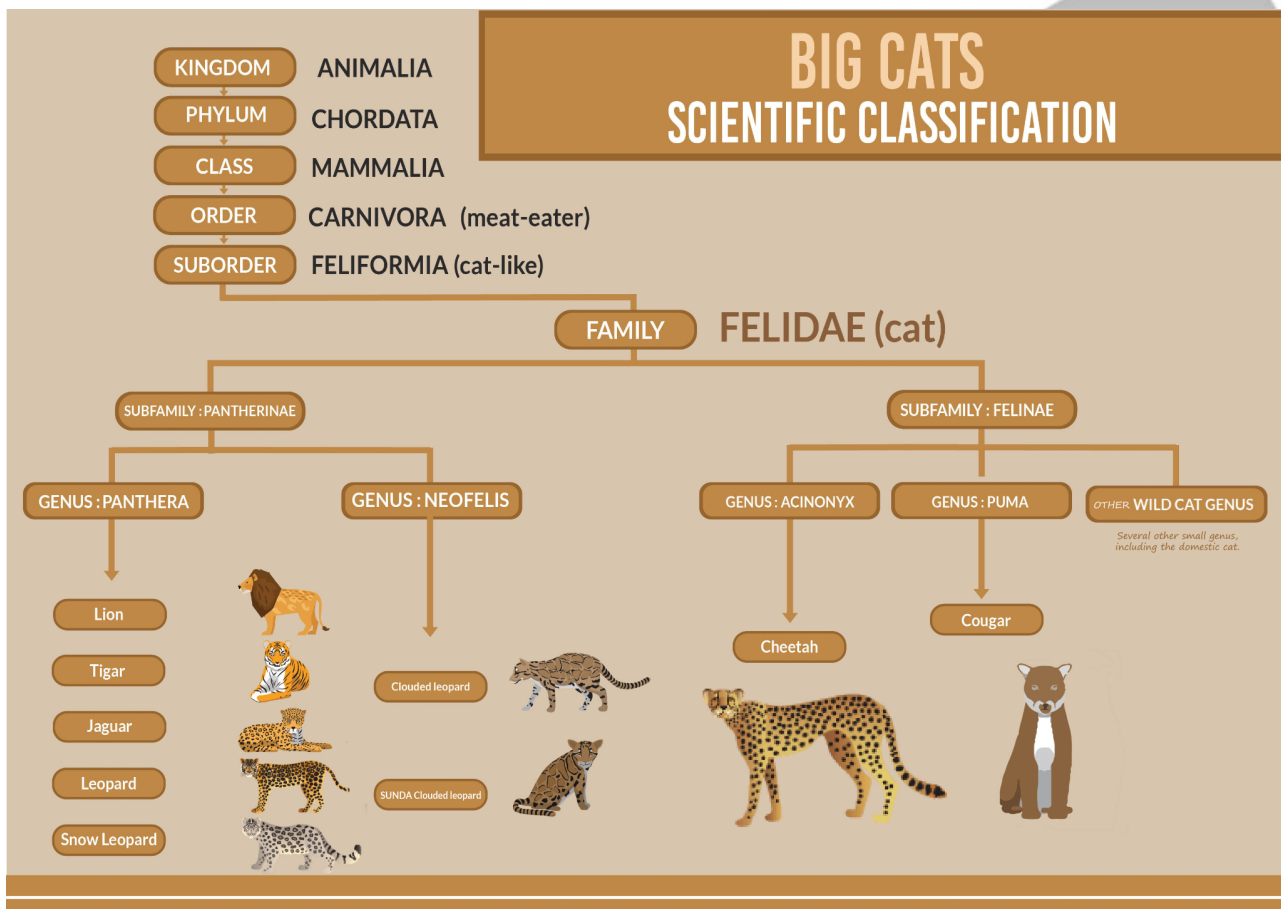
- IBCA would work towards **mitigating the adverse effects of climate change**. It will advocate for policy initiatives that **align biodiversity conservation efforts** with local needs and contribute towards the attainment of **United Nations**-mandated **Sustainable Development Goals** within member countries.

▪ **Structure:**

- The grouping's structure will consist of an Assembly of Members, a Standing Committee and a Secretariat, **with its headquarters in India.**

▪ **Conservation Efforts of India:**

- **Project Lion**
- **Project Leopard**
- **Cheetah Reintroduction Project**
- **Wildlife Protection Act, 1972**
- **Snow Leopard Conservation:**
 - Conservation efforts **include habitat protection**, community engagement, research, and anti-poaching measures.
 - Collaboration with neighbouring countries and international organizations helps in safeguarding this high-altitude predator.



What are the Key Points Related to Leopards?

▪ **Scientific Name: Panthera pardus**

▪ **About:**

- The leopard is the smallest of the Big Cat family (of **genus Panthera** namely the **Tiger, Lion (Panthera leo), Jaguar, Leopard, and Snow Leopard**), and is known for its ability to adapt in a variety of habitats.
- A **nocturnal animal**, feeds on smaller species of herbivores found in its range, such as the chital, hog deer and wild boar.
- Melanism is a common occurrence in leopards, wherein the entire skin of the animal is

black in colour, including its spots.

- A melanistic leopard is often called a [black panther](#) and is mistakenly thought to be a different species.

▪ **Habitat:**

- It occurs in a wide range in **sub-Saharan Africa**, in small parts of Western and Central Asia, on the Indian subcontinent to Southeast and East Asia.
 - The **Indian leopard (*Panthera pardus fusca*)** is a leopard widely distributed on the Indian subcontinent.

▪ **Threats:**

- Poaching for the illegal trade of skins and body parts.
- Habitat loss and fragmentation
- Human-Leopard conflict

▪ **Conservation Status:**

- [IUCN Red List](#): **Vulnerable**
- [CITES](#): **Appendix-I**
- [Indian Wildlife \(Protection\) Act, 1972](#): **Schedule-I**

UPSC Civil Services Exam, Previous Year Questions (PYQ)

Q. Consider the following: (2012)

1. Black-necked crane
2. Cheetah
3. Flying squirrel
4. Snow leopard

Which of the above are naturally found in India?

- (a) 1, 2 and 3 only
(b) 1, 3 and 4 only
(c) 2 and 4 only
(d) 1, 2, 3 and 4

Ans: (b)

India's Battle Against Single-Use Plastics

For Prelims: India's Battle Against Single-Use Plastics, [United Nations Environmental Assembly](#), [Extended Producer Responsibility \(EPR\)](#)

For Mains: India's Battle Against Single-Use Plastics, Environmental Pollution and Degradation, Conservation.

[Source: DTE](#)

Why in News?

India had committed to phase out Single-Use Plastics (SUP) by 2022, three years later, while some

progress has been made with the ban on selected SUP items, challenges persist.

- According to a report launched during the **6th United Nations Environmental Assembly (UNEA-6)**, the thriving street food sector across India depends heavily on single-use plastics.

What are the Key Highlights of the Report Released at UNEA-6 Regarding SUP?

- **Street Food Sector's Reliance on SUP:**
 - Single-use plastics such as plates, bowls, cups, and containers are extensively **used in India's street food sector**. Despite their affordability, these items contribute significantly to the country's waste management challenge.
- **Benefits of Reuse System:** The findings reveal the reuse system offers a compelling business case with various benefits:
 - **Reduced costs:** Both vendors and customers experience cost savings.
 - **Waste reduction:** The system significantly reduces the amount of packaging material needed.
 - **Financial viability:** The report highlights a potential 21% return on investment with a payback period of 2-3 years.
 - **Additional considerations:** Material choice, retention time, return rate, deposit amounts, and government incentives are crucial factors for optimizing the system's effectiveness.
- **Recommendation:**
 - Adopting a reusable packaging system in India's street food sector presents a win-win solution.
 - It is both economically viable and environmentally sustainable, benefiting all stakeholders and paving the way for a more resilient and sustainable future for Indian cities.

What is Single-Use plastic?

- It refers to a **“plastic item intended to be used once for the same purpose before being disposed of or recycled.”**
 - Single-use plastic has among the highest shares of plastic manufactured and used — from packaging of items to bottles (shampoo, detergents, cosmetics), polythene bags, face masks, coffee cups, cling film, trash bags, food packaging etc.
- On the current trajectory of production, it has been projected that **single-use plastic could account for 5-10% of greenhouse gas emissions by 2050.**

What is the Current Landscape of Single-Use Plastics?

- **Share of Banned Single-Use Plastic Items:**
 - India banned **19 identified single-use plastic items in 2021**, but it fell short of addressing the broader spectrum of single-use plastics still in circulation.
 - The annual share of banned single-use plastic items is roughly 0.6 million tonnes per year.
 - The remaining single-use plastic items, comprising mostly packaging products, are covered under the **Extended Producer Responsibility (EPR)** policy introduced by the Ministry of Environment, Forest and Climate Change (MOEFCC) in 2022.
 - The **EPR policy specifies target collection and recycling**, ignoring the fact that some single-use plastics that are not banned (such as multilayered packaging) are non-recyclable.

PARAMETERS FOR THE BAN ON SINGLE-USE PLASTIC IN INDIA

Utility Index—parameters (100)	Environmental Impact—parameters (100)
Hygiene (20)	Collectability (20)
Product safety (20)	Recyclability (20)
Essentiality (20)	Possibility of end-of-life solutions (20)
Social Impact (20)	Environmental Impact of alternative products (20)
Economic Impact (20)	Littering propensity (20)

▪ India's share in Plastic Production:

- According to the report **Plastic Waste Makers Index 2019**, India was the 13th largest investor in **single-use plastic polymer production** globally.
- India ranked 3rd globally, contributing 5.5 million tonnes of single-use plastic (SUP) waste, and ranked 94th with **per capita single-use plastic waste of 4 kg per year**, indicating that the SUP ban in India addresses roughly 11% of the entire gamut of single-use plastic waste.

▪ India's Mismanagement in Plastic Waste:

- The UNEP's country-wise plastic data revealed that **India mismanages 85% of its plastic waste**.
- This waste, **predominantly single-use in nature**, is dumped or even burnt at roadsides, choking drains and flowing into the rivers from where it disperses into the ocean, **harming marine life directly or indirectly as it degrades into micro- and nano-sized particles** over months, years and decades.

What are the Challenges in Tackling Single-Use Plastic?

▪ Lack of Alternatives:

- One of the major hurdles in phasing out single-use plastics is the **limited availability of viable alternatives**.
- While there are some alternatives available, they may not be **cost-effective, convenient, or widely accessible**, making it difficult for consumers and businesses to transition away from single-use plastics.

▪ Economic Considerations:

- Single-use plastics are often **preferred for their affordability and convenience**. Transitioning to alternatives may require investments in research, development, and infrastructure, which **can be costly for both businesses and governments**.
- Additionally, **consumers may be unwilling to pay higher prices** for alternative products.

▪ Infrastructure:

- Adequate waste **management infrastructure is essential for managing the disposal** and recycling of plastics. However, many regions, particularly in developing countries, lack the **necessary infrastructure for proper waste management**, leading to plastic pollution and environmental degradation.

▪ Policy and Regulation:

- While some governments have implemented regulations to restrict the use of single-use plastics, enforcement and compliance can be challenging.
- There may also be resistance from industries that rely on single-use plastics, as well as from consumers who are accustomed to their convenience.

▪ Consumer Behavior:

- Changing consumer behavior and attitudes towards single-use plastics is crucial for reducing their use.
- However, this can be difficult to achieve, as habits are deeply ingrained, and there may be a lack of awareness about the environmental impacts of single-use plastics.

▪ Impact on Livelihoods:

- In some cases, bans or restrictions on single-use plastics may have unintended consequences for livelihoods, particularly for those employed in industries that rely on the production or sale of single-use plastics.
- Efforts to phase out single-use plastics must consider the socio-economic implications and provide support for affected individuals and communities.

What Measure can be Taken to Deal With the Issue of Single-Use Plastic?

▪ Enforce Laws:

- **Upgrade the capacity of officials**, especially those issuing challans, on what to look for during inspections. **Equip inspection teams with instruments** like gauge meters. Ensure reporting on inspection scale in various facilities.

▪ Mandate Public Disclosure of Environmental Compliance:

- The **CPCB (Central Pollution Control Board)** and **MOEFCC** should mandate local governments and states to provide quarterly updates on their websites, including **information on environmental compensation**, units shut, and fines imposed.
- States should also submit enforcement reports to the CPCB fortnightly. The CPCB should ensure **this information is included in its Annual Report as per the Plastic Waste Management Rules, 2016**, and share data collected from private players and state authorities.

▪ Stop the Micron Business:

- Carry bags irrespective of thickness should be banned. This has been done successfully in countries that are weaker economies than India such as various East African countries, for example, **Tanzania and Rwanda**.
- The Indian state of Himachal Pradesh through its **Non-biodegradable Garbage Control Act of 1998** has completely **banned** the production, distribution, storage and **use of carry bags**.
 - This is not just a policy on paper but has been implemented at scale in the entire state of Himachal Pradesh.

▪ Invest in the SUP Alternative Market:

- The **scarcity of alternatives is a major obstacle to moving away from SUP**. The market will transition when cost-effective and convenient options become widely available.
- However, **substitutes are currently not abundant**. This scarcity is largely due to the government's past neglect in promoting the alternative industry, while also attempting bans at the national and state levels.

How are other Countries Dealing with SUP?

▪ Sign Resolution:

- In 2022, 124 countries, parties to the **United Nations Environment Assembly**, including **India**, signed a resolution to draw up an agreement which will in the future make it **legally binding for the signatories** to address the full life of plastics from production to disposal, to end plastic pollution.
- As of July 2019, **68 countries have plastic bag bans** with varying degrees of enforcement.

▪ Countries which Ban Plastic:

- **Bangladesh:**
 - Bangladesh became the **first country to ban thin plastic bags in 2002**.
- **New Zealand:**
 - New Zealand became the latest country to **ban plastic bags in July 2019**.
- **China:**
 - China issued a ban on plastic bags in 2020 with phased implementation.
- **US:**
 - **Eight states in the US have banned single-use plastic bags**, beginning with California in 2014. Seattle became the first major US city to ban plastic straws in 2018.
- **European Union:**
 - In July, 2021, the Directive on Single-Use Plastics took effect in the European Union (EU).

- The directive **bans certain single-use plastics** for which alternatives are available, single-use plastic plates, cutlery, straws, balloon sticks and cotton buds cannot be placed on the markets of the EU member states.
- The same measure applies to cups, food and beverage containers made of expanded polystyrene, and all products made of oxo-degradable plastic.

Conclusion

- India's battle against single-use plastics demands a concerted effort from policymakers, industry stakeholders, and citizens alike. While strides have been made, gaps in enforcement, awareness, and infrastructure persist. By embracing sustainable solutions and prioritizing proactive measures, India can mitigate the adverse impacts of single-use plastics and pave the way for a cleaner, greener future.

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. Why is there a great concern about the 'microbeads' that are released into environment? (2019)

- (a) They are considered harmful to marine ecosystems.
- (b) They are considered to cause skin cancer in children.
- (c) They are small enough to be absorbed by crop plants in irrigated fields.
- (d) They are often found to be used as food adulterants.

Ans: (a)

- Microbeads are small, solid, manufactured plastic particles that are less than 5mm and do not degrade or dissolve in water.
- Mainly made of polyethylene, microbeads can also be prepared from petrochemical plastics such as polystyrene and polypropylene. They may be added to a range of products, including rinse-off cosmetics, personal care and cleaning products.
- Because of their small size, microbeads pass unfiltered through the sewage treatment system and reach the water bodies. The untreated microbeads in the waterbodies are taken up by the marine animals, thus producing toxicity and causing harm to the marine ecosystem.
- In 2014, Netherland became the first country to ban cosmetics microbeads.
- **Therefore, option (a) is the correct answer.**

Gene Therapy for Hemophilia A

For Prelims: [National Science Day](#) , [Hemophilia A](#) , [DNA technology](#) , [Raman Effect](#) , [Global Innovation Index](#) , [Maya OS](#) , [Chandrayaan-3 Mission](#) , [Gaganyaan mission](#) .

For Mains: Gene Therapy for hemophilia A, India's Achievements in Science and Technology.

[Source:PIB](#)

Why in News?

Recently, the Union Minister of Science & Technology addressing the [National Science Day 2024](#) programme stated that India conducted its first human clinical trial of gene therapy for [hemophilia A \(FVIII deficiency\)](#) at Christian Medical College (CMC) Vellore.

- India's progress in [science and technology \(S&T\)](#) was also highlighted at the event.

What is Hemophilia A?

- **About:** Hemophilia is a group of **rare bleeding disorders** caused by a congenital deficiency in specific clotting factors. The most prevalent form is **Hemophilia A**.
 - **Hemophilia A** results from a deficiency in a crucial blood clotting protein known as **factor VIII**.
 - Due to this deficiency, individuals experience prolonged bleeding after injuries, as their blood takes longer to clot than usual.
- **Causes:** It is primarily inherited ([genetic](#)) and follows an **X-linked recessive pattern**, meaning the gene responsible for **factor VIII production** is located on the X chromosome.
 - Males have **one X and one Y chromosome**, while females have two X chromosomes.
 - If a male inherits an X chromosome with the defective gene from his mother, he will have hemophilia A.
 - Females with one defective copy typically do not experience symptoms because the other X chromosome usually provides enough factor VIII.
 - However, females can have hemophilia A if they **inherit two defective copies**, one from each parent (much less common).
- **Symptoms:** The severity of hemophilia A varies depending on the level of factor VIII activity in the blood. Common symptoms can include:
 - **Easy bruising** and excessive bleeding from minor injuries (cuts, scrapes)
 - Bleeding in the joints (especially knees, elbows, and ankles), causing pain, swelling, and stiffness
 - Bleeding after surgery or dental procedures.
- **Treatment:** The treatment involves replacing the missing blood clotting factor so that the blood can clot properly. This is typically done by injecting treatment products, called **clotting factor concentrates**, into a person's vein. The two main types of clotting factor concentrates available are:
 - **Plasma-derived Factor Concentrates:** Derived from human plasma, which is the liquid component of blood containing various proteins, including clotting factors.
 - **Recombinant Factor Concentrates:** Introduced in 1992, recombinant factor concentrates are **genetically engineered using DNA technology** and do not rely on human plasma.
 - They are free from plasma or albumin, eliminating the risk of transmitting bloodborne viruses.
 - However, gene therapy is now gaining prominence.
 - In recent trials, they used a new method that involves using a special type of virus called a **lentiviral vector to insert a gene that produces FVIII** into the patient's own stem cells.
 - These modified stem cells then produce FVIII when they develop into specific types of blood cells.
- **Acquired Hemophilia A:** While Hemophilia A is typically inherited, it can also be acquired later in life as a **result of auto-antibodies targeting factor VIII**.
 - This condition, known as acquired hemophilia A, is **rare** and differs from the congenital form in its onset and progression.

Note

[World Haemophilia day](#) is celebrated on **17th April every year**, aiming to increase awareness about hemophilia and other inherited bleeding disorders. The day is celebrated in the honor of **Frank Schnabel**, founder of the World Federation of Haemophilia (WHF).

What is National Science Day?

- The National Science Day is celebrated on **28th February** every year to commemorate the discovery of '**Raman Effect**' in 1928 by **Sir Chandrasekhara Venkata Raman**, which led to the **Nobel Prize being awarded to him in 1930**.
 - **Raman effect** is a method for identifying materials **based on how they scatter light**.
 - By shining light on a substance, scientists can analyze the unique way it interacts with molecules, revealing its chemical composition and structure.
- The purpose of celebrating this day is to **enhance scientific temper, popularization of science** and encouraging innovative activities by infusing scientific temperament in the masses and creating a positive scientific research culture.
 - Theme for National Science Day 2024: '**Indigenous Technologies for Viksit Bharat.**'

What are India's Recent Advancements in Science and Technology?

- India has emerged as the **world's third-largest startup ecosystem**, boasting over 100 unicorns, showcasing remarkable entrepreneurial growth.
- The **bio-economy sector** has witnessed an extraordinary **13-fold increase** in the past decade, reaching a staggering USD 130 billion in 2024.
- India ranks among the **top five countries for scientific research publications** and holds the **40th position in the Global Innovation Index (GII)**, highlighting its commitment to innovation.
- Groundbreaking initiatives like the **Aroma Mission** and **Purple Revolution** have revolutionized agriculture, fostering a thriving community of agri-startups.
- The development of **Maya OS** by the **Indian Defence Research and Development Organisation** has bolstered cybersecurity measures, protecting against online threats from foreign entities.
- India's intellectual property landscape is experiencing a surge, with **patent filings surpassing 90,000**, marking the highest in two decades.
- The successful **Chandrayaan-3 Mission** has showcased India's prowess in space exploration, paving the way for the historic **Gaganyaan mission**.
- **Related Government Initiatives:**
 - [India Semiconductor Mission](#)
 - [Artificial Intelligence Mission](#)
 - [Unified Payment Interface](#)
 - [INS Vikrant](#)
 - [Bharat 6G project](#)
 - [Initiative on Critical and Emerging Technology \(India and US\)](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. How is science interwoven deeply with our lives? What are the striking changes in agriculture triggered by science-based technologies? (2020)

Nordic-Baltic Cooperation

Source: [TH](#)

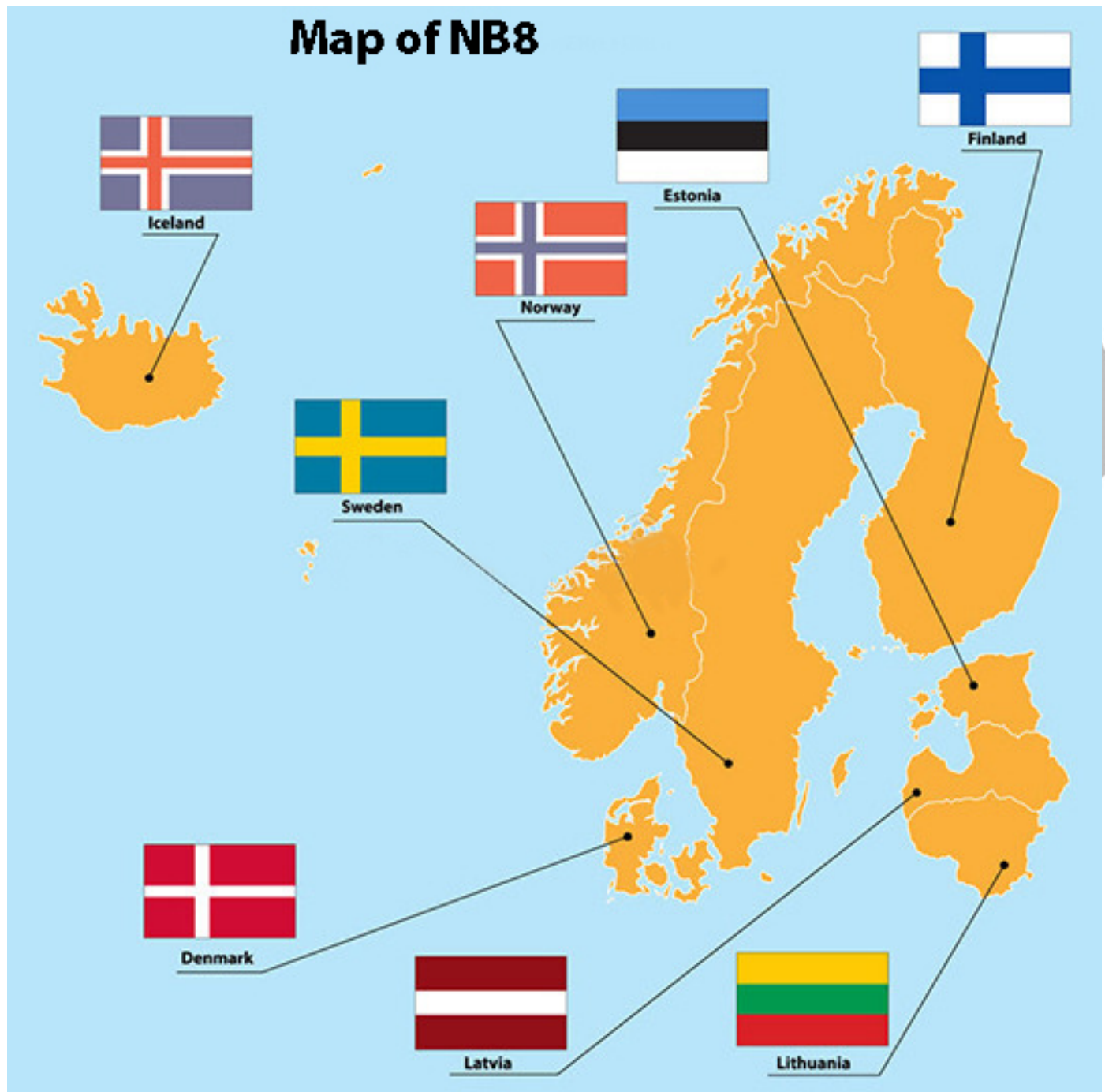
Why in News?

At [Raisina Dialogue 2024](#), **8 Nordic-Baltic countries (NB8)** participated together as representatives of

the **Nordic-Baltic cooperation**.

What is Nordic-Baltic Cooperation?

- **About:** The Nordic-Baltic cooperation is an informal regional cooperation format established in **1992**, bringing together **5 Nordic (Finland, Sweden, Norway, Denmark, and Iceland)** and **3 Baltic countries (Estonia, Latvia, and Lithuania)**.
 - It was named the **Nordic-Baltic Eight (NB8)** in 2000 on the initiative of Toomas Hendrik Ilves (former Estonian Foreign Minister).
 - **Sweden** holds the chairmanship of the NB8 in 2024.



- **Key Report:** One of the main documents on NB8 cooperation is the **NB8 Wise Men Report**, also known as the **Birkavs-Gade Report**, which provides concrete guidelines for promoting cooperation between the eight countries.
- **NB8 and India:** Collaboration between Nordic-Baltic countries and India spans various fields including innovation, **green transition, maritime affairs, health, intellectual property**

rights, technology, space and tourism.

- In November 2023, the [2nd CII \(Confederation of Indian Industries\) India Nordic-Baltic Business Conclave](#) was held in New Delhi, aiming to foster collaboration between India and the NB8.
- **Outreach of NB8:** Since 2003, there have been regular meetings at the political directors' level between the NB8 countries and the United States, known as the **e-PINE format**.
 - Additionally, in 2011, an agreement was reached to convene meetings between the prime ministers of the NB8 countries and the United Kingdom, evolving into what is now recognised as the **Northern Future Forum**.
- **NB6:** When the Baltic countries became members of the [European Union](#) in **2004**, the NB6 format was created.
 - This includes the European Union member states of the NB8, namely **Denmark, Finland, Sweden, Latvia, Lithuania and Estonia**, and provides a framework for informal meetings to discuss topical EU issues.
 - **Iceland and Norway** are not members of the European Union.



Successful Flight Tests of VSHORADS Missile by DRDO

[Source: PIB](#)

Recently, the [Defence Research and Development Organization \(DRDO\)](#) conducted two successful flight tests of the [Very Short-Range Air Defence System \(VSHORADS\) missile](#).

- These tests were carried out from a ground-based portable launcher off the **coast of Odisha** at the **Integrated Test Range, Chandipur**, and targeted high-speed unmanned aerial targets in various interception scenarios.
- VSHORADS, a **Man Portable Air Defence System (MANPAD)**, is an indigenous creation developed by the **Research Centre Imarat (RCI)** in collaboration with other DRDO laboratories and Indian industry partners.
- The missile incorporates advanced technologies such as a **miniaturized Reaction Control System (RCS)** and integrated avionics.
- Propelled by a **dual-thrust solid motor**, the missile is designed to **neutralize low-altitude aerial threats** at short ranges while ensuring easy portability due to highly optimized design.

Read more: [Very Short-Range Air Defence System](#)

National Bank for Financing Infrastructure and Development

[Source: PIB](#)

Recently, the Union Finance Minister chaired a meeting to evaluate the performance of [National Bank for Financing Infrastructure and Development \(NaBFID\)](#),

- NaBFID, established by the Government of India in **April 2021**, is the nation's **5th All India Financial Institution (AIFI)**, aimed at fostering long-term non-recourse infrastructure financing.
- NaBFID serves both developmental and financial objectives, facilitating credit flow and enhancing infrastructure finance accessibility.
 - It plays a pivotal role in advancing India's infrastructure sector by addressing financing gaps through innovative tools like **longer tenor loans, blended finance, and partial credit enhancement**.
- The other 4 AIFIs in India are:
 - [National Bank for Agriculture and Rural Development](#)
 - [National Housing Bank \(NHB\)](#)
 - [Small Industries Development Bank of India \(SIDBI\)](#)
 - [Export-Import Bank of India \(EXIM Bank\)](#)

Read more: [National Bank for Financing Infrastructure and Development](#)

Electronic Data Interchange (EDI) Launched for North East

[Source: PIB](#)

- Union Minister for Finance launched the **Electronic Data Interchange (EDI)** at Land **Customs Stations (LCS)** of the **North East Region (NER)** aiming to enhance **regional trade** and foster **economic growth** by making the movement of goods and customs clearances more efficient.
- The implementation of Electronic Data Interchange (EDI) is set to **empower trade community** members and stakeholders in **customs clearance** by reducing dwell time and costs in **cross-border trade**.
 - The export basket at these LCSs consists primarily of [minerals](#) and [agricultural produce](#), whereas the import basket includes [processed food items](#), **cement**, and **plastic products**.
- Digitizing these LCSs along the [India-Bangladesh](#) and [India-Myanmar](#) borders, established from 1948 onwards to boost trade and travel, complements the [Act East Policy](#), enhancing market linkages and regional development through secure, paperless transactions and online payments.
 - The [Central Board of Indirect Taxes and Customs \(CBIC\)](#) has successfully enabled Electronic Data Interchange (EDI) at various LCSs along the Indo-Bangladesh and Indo-Myanmar borders, overcoming challenges posed by **remote locations** without [Optical Fibre](#) or Mobile Networks.

Read more: [Act East Policy](#)

Google Removes a Few Indian Apps from Play Store

Source: [IE](#)

Google has delisted a few popular **Indian apps from its Play Store**, citing non-compliance with its billing policies.

- The recent [Supreme Court of India](#) order declined to prevent Google from delisting apps from its Play Store, paving the way for app removal if they don't comply with Google's billing policy.
- The issue revolves around Google's requirement for **developers to pay fees for in-app purchases made by their customers**.
 - **In-app purchasing allows users to buy goods or services within a mobile app**. This includes **virtual items, premium features, subscriptions**, and more. Payments are made directly through the app, often using stored payment methods. It's a common way for app developers to **generate revenue**.
- Google adjusted its fees for in-app purchases in India, ranging from 11 to 26%, but the delisted companies failed to meet these revised terms.

Read more: [CCI Penalty on Google](#), [Google Unveils Project Gemini](#)

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