

CURRENT AFFAIRS

WEEKLY



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PRELIMS ARTICLE

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- ❑ NEPAL'S DILEMMA OVER SIGNING THE BRI AGREEMENT
- ❑ SYRIAN REBELS ENTER ALEPPO CITY
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- ❑ US THREATENS 100% TARIFF ON BRICS BLOC
- ❑ GOVERNMENT'S MOVE TO INCREASE FEMALE LABOUR FORCE PARTICIPATION
- ❑ THE RIGHT TO WORK DELETED
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POLITY & GOVERNANCE

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- ❑ Government's Tea Auction Mandate
- ❑ India's PRAGATI Platform
- ❑ 62nd Nagaland Statehood Day
- ❑ UGC approves flexible UG degree completion norms
- ❑ International Day of Persons with Disabilities 2024
- ❑ Scheduled Castes and Scheduled Tribes Act
- ❑ Controversies around Pardoning Power

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- ❑ India to revise Base Year
- ❑ India's GDP Growth Slows
- ❑ Vizhinjam Port's First Phase of Operations Completed

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- ❑ Arittapatti Tungsten Mining
- ❑ Global Treaty Negotiations on Plastic Pollution
- ❑ India's critically endangered species
- ❑ Spade-Toothed Whale Examination
- ❑ Kalasa-Banduri Project
- ❑ Science & Technology
- ❑ Gaganyaan Mission
- ❑ Syringe Tide of 1987
- ❑ India tests submarine-launched ballistic missile
- ❑ MH-60R helicopters
- ❑ India's first Google Safety Engineering Centre (GSEC)

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DISCLAIMER

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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SECTION -A

MAINS ISSUES

BANGLADESH ISSUE

CONTEXT

The **ongoing internal strife in Bangladesh** is seemingly a trap. Unlike in 1971, when India intervened militarily to help resolve the conflict, the continued civil unrest in the neighbouring country is an issue that needs to be dealt with carefully.

What factors are responsible for Bangladesh's current turmoil?

The situation in Bangladesh is influenced by several interrelated factors that span its history, politics, culture, and society. Key factors responsible for the current turmoil include:

- **Autocratic Governance and Political Instability:** The autocratic style of governance, particularly under the deposed Prime Minister, has contributed to political instability. Intense rivalry between the two major political parties has led to confrontational politics, creating a **dysfunctional democratic system**.
- **Conflict Between Secularism, Islamism, and Bengali Identity:** While about 90% of the population practices Islam, the secularist-nationalist discourse and the more inclusive, syncretic Bengali culture (which blends Islamic and Hindu elements) are in conflict. Islamic resurgence, especially with hardliner factions, threatens the more inclusive Bengali culture, which historically helped prevent extremism.
- **Historical Divisions from the Liberation War:** Deep-rooted divisions in society stem from differing roles during the **1971 Liberation War**. Some groups, including parts of the **Mukti Bahini**, resented India's involvement, perceiving it as an attempt to bring Bangladesh under its sphere of influence.

- **Negative Public Perception of India:** In Bangladesh, there is a widespread perception that India's involvement in the country's liberation came with a price, and this narrative has been politically expedient for some groups.
- **Role of the Military in Politics:** Bangladesh struggles with the institutionalization of stable civil-military relations. The military has a significant influence in both political and commercial spheres.
- **Weak Civil Institutions and Governance:** The lack of effective governance and institutional checks has led to a deeply fractured polity. Governance is often marked by inefficiency, and institutions have failed to build resilience against political crises.
- **Impact of Extremism and Religious Identity:** The rise of Islamic hardliners and the political influence of Islamist groups are creating significant tension within Bangladesh's society.
- **Economic Strains and Unemployment:** Economic challenges, including rising unemployment and the inability to create sustainable jobs for the youth, contribute to social unrest.

Religious Freedom and Minority Rights in Bangladesh

- The Constitution of Bangladesh, adopted in 1972, promises **secularism, democracy, and equal rights** for all religious communities. It establishes that **Bangladesh is not based on religion but on the secular idea of "Bangla" nationalism**. The Constitution enshrines several fundamental rights, including religious freedom and the right to practice one's religion without discrimination.
 - ▶ **Secularism and Equal Rights:** The preamble of Bangladesh's Constitution mentions **secularism**,

democracy, socialism, and nationalism as its core principles. Secularism was initially a part of the Constitution but was removed during military rule in the 1970s. However, it was reinstated in 2011.

- **Religious Freedom:** The Constitution guarantees **freedom of religion (Article 41)**, meaning citizens can practice, propagate, and manage their religious affairs. It also prohibits discrimination based on religion, as stated in **Article 28, which mirrors India's Constitution (Article 15)** in prohibiting religious discrimination in public spaces.
- Despite these provisions, the treatment of religious minorities in Bangladesh, especially Hindus, has come under scrutiny due to recent events.

The Role of Islam in Bangladesh's Constitution

Although Bangladesh's Constitution originally embraced secularism, it later underwent changes that brought Islam into a more prominent position.

- **Islam as State Religion:** In 1977, General Ziaur Rahman amended the Constitution to declare Islam as the state religion, although religious freedom was still allowed. Later, in 1988, General Ershad inserted Article 2A, explicitly stating that Islam is the state religion. However, the Constitution also promises equal rights for Hindus, Buddhists, and Christians, which creates a contradiction in the document.
- **Secularism Restored:** In 2011, following a court ruling, secularism was reinserted into the Constitution through the 15th amendment. The amendment removed certain religious references but retained others to maintain a balance between secularism and respect for Islam.

This duality of secularism with Islam as the state religion has led to tensions, especially in the treatment of religious minorities in practice.

What Needs to Change?

For Bangladesh to fulfill its constitutional promises and ensure the safety of its minority communities, immediate steps are necessary:

- **Strengthen Legal Protections:** The Bangladesh government must act swiftly to protect religious minorities from violence and discrimination. This includes implementing stronger legal measures and ensuring that offenders are held accountable.
- **Uphold Secularism:** The government must reaffirm its commitment to secularism and prevent any religious-based discrimination from taking root in society. It should also ensure that the principle of secularism is effectively enforced, as guaranteed by the Constitution.
- **Promote Tolerance and Inclusivity:** Bangladesh needs to foster a culture of tolerance and inclusivity, ensuring that all religious communities, regardless of their size or influence, are treated equally and with respect.
- **International Support and Pressure:** As a neighbor and regional partner, India has the right to express concern over the violation of human rights and minority rights in Bangladesh. International human rights organizations

and global diplomatic bodies must also pressure Bangladesh to uphold its commitments to minority protection.

Legal Provisions for Protecting Religious Minorities

The Constitution of Bangladesh outlines specific rights and protections for its religious minorities:

- **Article 2A:** Declares Islam as the state religion, but emphasizes that other religions will be practiced in peace and harmony. However, this provision has been criticized for creating a contradiction between state religion and secular principles.
- **Article 28(1):** Prohibits discrimination based on religion, race, caste, or sex in public life. This includes access to public places, educational institutions, and employment, ensuring that no citizen is discriminated against on religious grounds.
- **Article 39:** Guarantees the freedom of thought and conscience, providing the right to practice and propagate one's religion freely, within the limits of public order and morality.
- **Article 41:** Specifically guarantees the right to religious freedom, including the right of religious communities to establish and manage their own institutions.
- **Article 23A:** Imposes a duty on the state to protect the culture and traditions of ethnic and religious minorities, ensuring their rights are upheld.

NEPAL'S DILEMMA OVER SIGNING THE BRI AGREEMENT

CONTEXT

Nepal's Prime Minister, K.P. Sharma Oli, is preparing for a visit to China. The key issue during this visit is whether or not he should sign an implementation plan for the **Belt and Road Initiative (BRI)**, a global infrastructure and economic development plan proposed by China. This decision is causing a significant debate in Nepal's ruling coalition.

BRI in Nepal:

- Nepal joined the **BRI in 2017**, proposing 35 projects under the initiative, but this was later reduced to just **nine**. However, none of these projects have begun yet, and the funding details remain unclear.
- The **Pokhara International Airport**, built with Chinese funds, is one such project but is underused, with no international flights. There are concerns that it might become a "white elephant," a project with high costs but little benefit.
- **What's at Stake:**
 - Nepal views the **BRI** mainly as **loan assistance** for infrastructure development. However, **China sees it as a broader diplomatic strategy** to enhance its global influence and economic ties with countries like Nepal.

- ▶ The Chinese ambassador to Nepal, **Chen Song**, has been active in pushing for the BRI, even labeling ongoing projects like the Pokhara Airport as part of the BRI, which is controversial because the airport began before Nepal signed the agreement.

Oli’s Geopolitical Balancing Act:

- **India’s Concerns:** India is wary of China’s growing influence in Nepal, especially since Nepal’s relationship with India has become strained, particularly after the 2015 border blockade and the controversial 2020 map dispute over the Kalapani region.
- India has traditionally been Nepal’s key partner in trade and development. But **Oli’s push for closer ties with China** has raised concerns in India. Some believe that **Nepal’s alignment with China** through the BRI could upset the region’s balance of power.
- The **U.S.** is also concerned about the growing Chinese footprint in Nepal, as seen when China criticized a U.S.-funded \$500 million grant to Nepal.



FACT BOX

What is Belt and Road Initiative (BRI)?

- The Belt and Road Initiative (BRI)—also known as the **One Belt and One Road Initiative or the New Silk Road**, is an ambitious plan to develop two new trade routes connecting China with the rest of the world. But the initiative is about far more than infrastructure.
- The BRI was established with two primary components:
 - ▶ **Silk Road Economic Belt:** The Economic Belt part of the strategy aims to build and expand land routes for people and commerce across **Europe, the Middle East, Central Asia and Asia**
 - ▶ **21st Century Maritime Silk Road:** The Maritime Road component consists of plans for expanded sea routes across **East Asia, South Asia, the Middle East and Africa.**
- One of the largest and most notable BRI projects to date is the **China-Pakistan Economic Corridor (CPEC).**

Launched in 2015, the CPEC is a trade corridor that connects **Pakistan’s Gwadar port** on the **Arabian Sea with Kashgar**, a city in **China’s western Xinjiang Uygur Autonomous Region.**

- As of December 2023, about 150 countries worldwide have signed MoU on BRI.
- Of the 150 countries that have either signed an MoU or contracted for BRI projects, 44 are in Sub-saharan Africa, 17 in the European Union, 17 others in Europe and Central Asia, 31 in East Asia and South East Asia, 22 in South America and 19 in West Asia-North Africa.

India’s Concerns wrt BRI:

- India is of the opinion that the inclusion of the so-called CPEC which passes through parts of the Indian state of Jammu & Kashmir under illegal occupation of Pakistan as a flagship project of BRI, reflects lack of appreciation of India’s concerns on the issue of sovereignty and territorial integrity.
- The Indian Government firmly believes that connectivity initiatives must be based on the universally recognized international norms, good governance, rule of law, openness, transparency, and equality, and must be pursued in a manner that respects sovereignty and territorial integrity.

SYRIAN REBELS ENTER ALEPPO CITY

CONTEXT

The civil war in Syria, which had faded from global attention, has escalated once again. Syrian rebel forces launched a major offensive on **Aleppo**, a key city in northern Syria. This surge in violence threatens to destabilize the region even more.

Why is there crisis in Syria?

- The conflict in Syria **dates back to 2011.** Many people were unhappy about the high levels of unemployment, widespread corruption and lack of political freedom.
- Inspired by the **‘Arab spring’ uprisings** in **Tunisia and Egypt**, peaceful protests started in March.
- However, the peaceful demonstrations were met by swift government opposition.
- When the government used deadly force to crush the dissent, protests erupted nationwide. The violence rapidly escalated, eventually giving way to a brutal war.
- Now, the crisis is extending into its fourteenth year – with more people than ever sliding into deeper poverty and 16.7 million people in need of humanitarian assistance and protection.
- The Syria situation remains one of the largest displacement crises in the world, with a **2025 projection of 7.2 million internally displaced people (IDPs), and 6.2 million refugees**, primarily hosted in the neighbouring countries of **Egypt, Iraq, Jordan, Lebanon and Türkiye.**

Importance of Aleppo:

- Aleppo, roughly 350 km north of the **capital Damascus**, has been a critical battleground in the **Syrian civil war.** Before the conflict, it was **one of Syria’s largest cities**, home to 2.3 million people.
- In 2012, rebel forces seized the **eastern half of Aleppo**, making it a stronghold of the rebellion against President Assad.

- However, the balance shifted in 2016 when Syrian government forces, backed by a brutal Russian aerial campaign, recaptured the city.
 - ▶ Currently, the roughly 30% of Syria that is not under Assad's control is governed by a mix of opposition factions and foreign troops.
 - ▶ The United States has about 900 military personnel stationed in northeastern Syria.
- The **siege of Aleppo** became symbolic, marked by indiscriminate bombings, starvation tactics, and massive displacement.

Regional Implications:

- The significance of the fighting in Aleppo cannot be understated as it can turn around the power structure in conflict-hit Syria where President Bashar Assad has managed to steer away the opposition forces seeking his ouster for more than a decade.
- The timing of this offensive is crucial as **Iran, Hezbollah, and Hamas** are already involved in other conflicts, including in **Lebanon** and **Gaza**. These ongoing wars are draining their resources.
- **Russia**, which supports Assad in Syria, is distracted by its war in **Ukraine**, limiting its ability to provide full support to the Syrian regime.
- This offensive marks a significant shift in the Syrian civil war, with the potential to reignite conflict and further destabilize the region.

SOUTH KOREA DECLARES MARTIAL LAW

CONTEXT

South Korea was thrust into a political crisis when President Yoon Suk Yeol declared martial law, sparking six hours of uncertainty, chaos, and political turmoil. The military imposed restrictions on political activities, and South Korean troops secured the National Assembly. However, President Yoon quickly withdrew the martial law order, citing **threats from North Korea** and accusing opposition forces of destabilizing the state. This decision came amid rising political tensions and public dissatisfaction with Yoon's administration.

What Is Martial Law?

- Martial law refers to the temporary imposition of military control over civilian authorities during times of crisis when regular civil governance is deemed insufficient.
- It often involves suspending normal civil rights and enforcing military law.
- While intended as a temporary measure, martial law can sometimes persist for extended periods.
- **Article 77 of the Republic of Korea's constitution** contains provisions pertaining to the declaration of martial law in the country.
- **Historical Context of Martial Law in South Korea:** Martial law in South Korea has been historically tied to national crises and authoritarian rule.

- ▶ During the **Korean War (1950-1953)**, martial law was imposed to maintain order.
- ▶ It was also used during the **April Revolution (1960)** and the **May 16 Coup (1961)**, which led to significant political changes, including the authoritarian rule of Park Chung-hee.

Notable Instances of Martial Law

- ▶ **Gwangju Uprising (1980):** Martial law was declared by General Chun Doo-hwan after Park Chung-hee's assassination. The Gwangju Uprising, where citizens protested against Chun's rule, was brutally suppressed, leading to hundreds of deaths. This event remains a dark chapter in South Korea's history.
- ▶ **Transition to Democracy (1987):** Martial law played a role in the country's eventual democratic transition, particularly during the June Democratic Uprising. South Korea moved towards direct presidential elections, reducing the reliance on martial law.

Concerns and Impact

- The imposition of martial law has raised concerns about its effect on South Korea's democracy and civil liberties.
- While Yoon emphasized the need to address security threats, he provided limited details on how long the martial law would last or what specific measures would be taken.
- This situation has led to public and political scrutiny.

Historical Division of Korea:

- The Korean Peninsula has been divided since the end of **World War II in 1945**. The region was split by global powers—the US and the Soviet Union—along the **38th parallel, without consulting Koreans**.
- This division laid the foundation for **ideological and political tensions** between North and South Korea.
- **The Korean War and Its Aftermath:**
- In 1950, tensions erupted into the Korean War when North Korea, supported by the Soviet Union and China, invaded South Korea.
- The US and its allies intervened, and after three years of intense fighting, an armistice agreement was signed in 1953, creating a **heavily fortified border (DMZ)** but not a peace treaty. The war resulted in millions of deaths and displacement.

What Keeps North and South Korea Apart?

- **Ideological Divide:** Since the split, North Korea has remained a communist regime under the Kim dynasty, focusing on military strength and nuclear capabilities. Meanwhile, South Korea became a democratic, economically advanced country with strong ties to the West.
- **Failed Attempts at Reunification:** Numerous efforts at reunification through talks and summits have failed, as ideological differences and mutual mistrust continue to hinder progress.

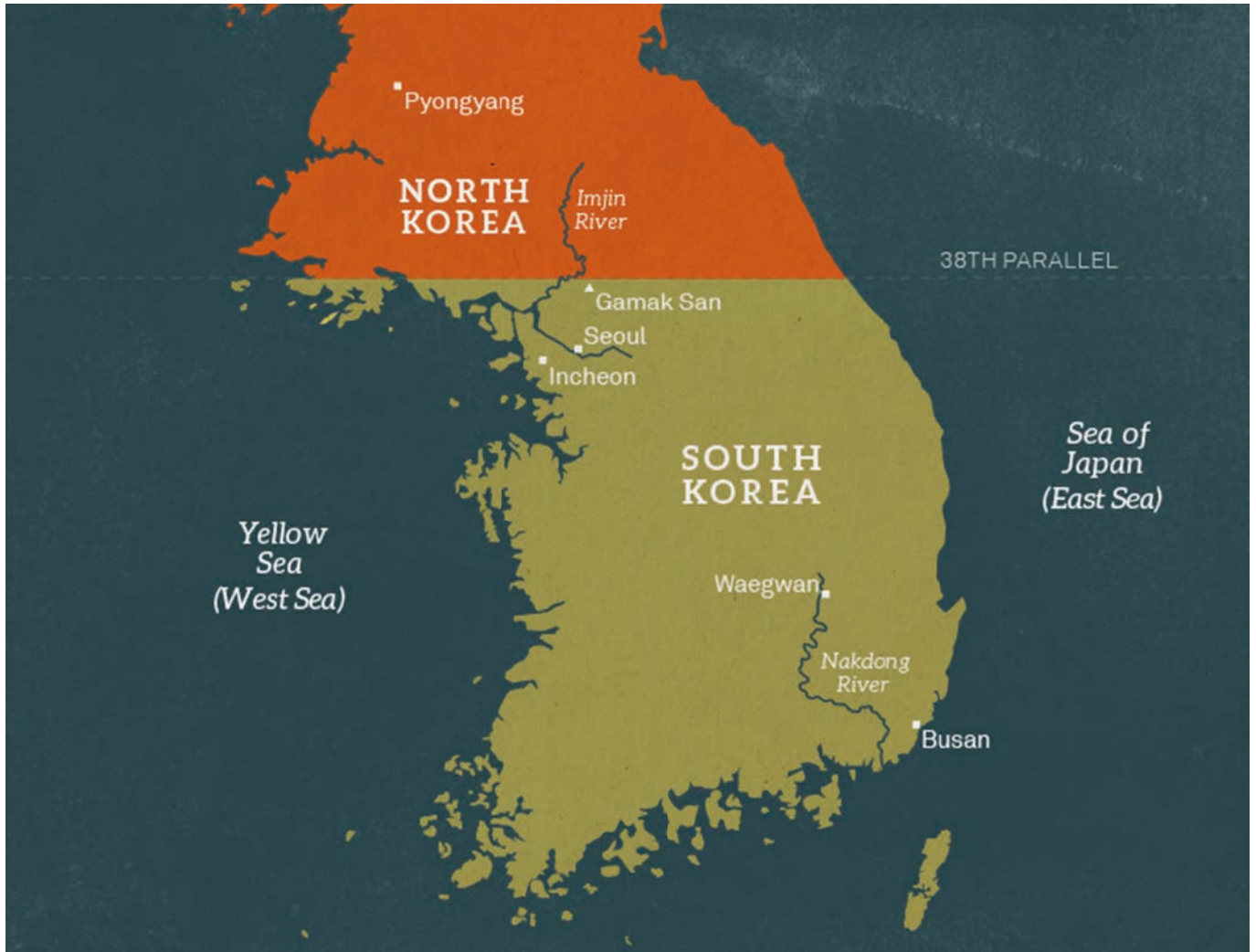


Figure No. 01

	National Emergency	Martial Law
Concept:	Borrowed from the German Constitution	Borrowed from English Common Law .
Impact:	Affects Fundamental Rights , Centre-State relations, distribution of revenues, and legislative powers. May extend the tenure of Parliament.	Affects only Fundamental Rights (FRs) .
Governance:	Government and ordinary courts continue to function.	Government and ordinary courts are suspended.
Grounds for Imposition:	Can be imposed on grounds of war, external aggression, or armed rebellion .	Imposed to restore law and order due to any breakdown, not limited to specific causes.
Scope:	Can be declared nationwide or in any specific region.	Imposed only in specific areas of the country.
Constitutional Provisions:	Clearly defined with detailed provisions under Article 352 .	Not explicitly mentioned, only implied in Article 34 .

Table No. 01

- **Ongoing Tensions:** Military provocations from the North, alongside a lack of progress in reunification talks, have kept the two Koreas apart, with occasional escalations in tensions.



FACT BOX

Martial Law in India:

- The concept of martial law in India is not explicitly defined in the Constitution. However, it is implied under **Article 34** of the Indian Constitution, which allows for restrictions on fundamental rights when martial law is declared in any part of India.
- Article 34 provides the legal framework for imposing martial law by restricting fundamental rights during such circumstances.
- **Martial law** (under **Article 34**) and **National Emergency** (under **Article 352**) are distinct in both their scope and impact on governance.
 - ▶ While National Emergency can have widespread effects on the country's structure, Martial Law is a more localized measure focused primarily on maintaining law and order through military control.

(See table No. 01 on previous page)

US THREATENS 100% TARIFF ON BRICS BLOC

CONTEXT

Fears of a **global trade war** have risen after Donald Trump threatened to impose 100% tariffs on countries in the Brics group if they create a new currency to rival the US dollar. The warning came less than a week after Trump declared he would impose tariffs on **Canada, Mexico and China** once he was inaugurated as president.

Background on US Dollar Dominance:

- After **World War II**, the **Bretton Woods Agreement (1944)** established the **US dollar** as the central currency for global trade. This system initially pegged the dollar to gold, and other currencies were linked to the dollar.
- Though the **gold standard** ended in **1971**, the dollar continued to dominate because of its stability and trust.
- The **US dollar** became the world's **primary reserve currency**, with over **58% of global foreign exchange reserves** held in dollars.
- In the **1970s**, the US made deals with oil-exporting countries (especially **Saudi Arabia**) to sell oil only in US dollars. This created a constant demand for the dollar, known as the "**petrodollar**" system.
- Many global systems, like **SWIFT** (for international payments), the **IMF**, and the **World Bank**, still operate primarily in dollars.

What is De-dollarisation?

- The US dollar, which accounts for around **58% of global foreign exchange reserves**, is a cornerstone of international trade and finance.
 - ▶ It is involved in nearly 90% of global forex transactions and remains the primary currency for commodities like oil. However, its share of global reserves has dropped to a 20-year low of 58%.
- **De-dollarisation** refers to countries reducing their dependence on the US dollar for trade, reserves, and financial transactions.
- Countries are shifting to using their own currencies or regional currencies in trade, rather than relying on the US dollar. They might also explore **cryptocurrencies** or other systems.
- **Key aspects of de-dollarisation include:**
 - ▶ **Reduced use of the US dollar in trade:** Countries are forming **bilateral trade agreements** to settle transactions in their own currencies.
 - ▶ **Diversifying reserves:** Instead of holding most reserves in US dollars, countries are investing in other currencies like the **euro, yuan**, or even **gold**.
 - ▶ **Alternative payment systems:** Countries are developing or joining payment systems that don't depend on US dollar-dominated networks like **SWIFT**. For example, **China's CIPS** is an alternative to SWIFT.
 - ▶ **Economic sovereignty:** De-dollarisation helps countries protect themselves from US economic sanctions and the instability of dollar fluctuations.

Where BRICS's 'de-dollarisation' call is leading?

- The Brics group was originally made up of **Brazil, Russia, India, China and South Africa** and has been joined by **Egypt, the United Arab Emirates, Ethiopia and Iran**.
- **Turkey, Azerbaijan and Malaysia** have applied to become members, and several other countries have expressed interest in joining.
- Some Brics members have shown interest in de-dollarising the world economy. In October, Vladimir Putin called for an **alternative international payments system** that could prevent the US from using the dollar as a political weapon. Others, though, fear the consequences of severing relations with the US and other western countries by breaking away from the dollar, which underpins world finance.
- While the U.S. dollar is by far the **most-used currency** in global business and has survived past challenges to its pre-eminence, members of the alliance and other developing nations say they are fed up with America's dominance of the global financial system.

What gives the US dollar the power in international trade?

- The U.S. dollar is not forced on anyone to be accepted as a medium of exchange for cross-border transactions.

- It is widely used in international transactions because people actually prefer to use American currency over others for various economic reasons.
- Other currencies that have tried to compete against the U.S. dollar are not as popular as the greenback for carrying out international transactions.
- The global acceptability of the U.S. dollar has primarily been attributed to the
 - ▶ the popularity of U.S. assets among investors
 - ▶ high level of trust of global investors in the US

Benefits of De-dollarization	Disadvantages of De-dollarization
<ul style="list-style-type: none"> ◦ De-dollarization can benefit local economies in a number of ways. ◦ Trading in local currencies allows exporters and importers to balance risks, have more options to invest, to have more certainty about the revenues and sales. 	<ul style="list-style-type: none"> ◦ De-Dollarisation could potentially undermine the economic power of the US, but it also presents challenges and potential costs for developing countries. ◦ Moving away from an established currency like the dollar will impact a country's networking effect and create substantial barriers. <ul style="list-style-type: none"> ▶ The US dollar is the cheapest means of access to acquire nominally risk-free US Treasury instruments.

India’s Pursuit of De-dollarisation:

India, as a BRICS member, is challenging traditional financial systems through de-dollarisation efforts.

- **Shift in Trade Dynamics:** Increased trade in local currencies, like the Indian Rupee, grants India more control over monetary policy and shields it from external shocks.
- **Monetary Policy Autonomy:** Reduced reliance on the U.S. dollar empowers India to set independent monetary policies, enhancing economic stability.
- **Enhanced Trade Relations:** Trade in local currencies fosters stronger economic ties, streamlines transactions, and reduces costs.
- **Strengthened Indian Rupee:** De-dollarisation can lead to a stronger rupee, boosting purchasing power and reducing inflationary pressures.
- **Economic Independence:** By diversifying away from the dollar, India reduces vulnerability to U.S.-led sanctions, enhancing economic independence.

Impact on India

- **NITI Aayog CEO B.V.R. Subrahmanyam** highlighted the potential opportunities for India arising from **U.S. President-elect Donald Trump’s proposal** to impose

high tariffs on Mexico, Canada, and China. This would disrupt global trade relations, creating new avenues for India’s growth in international trade.

◦ **Key Points from Subrahmanyam’s Statement:**

- ▶ **Opportunities for India:** Trump’s tariff proposals, including a 25% tariff on Mexico and Canada and a 10% tariff on Chinese imports, present huge trade opportunities for India. India must be prepared to capitalize on the **incoming trade shift**, leading to significant growth if the country acts strategically.
- ▶ **U.S.-India Relationship:** The U.S.-India relationship is not solely reliant on trade but is multi-dimensional, involving various other aspects of cooperation. This broader engagement would be taken into account in the face of shifting global trade dynamics.
- ▶ **India’s Trade Statistics and Trends:**
 - ◆ According to the **NITI Aayog’s Trade Watch Quarterly report**, in the first quarter of 2024-25, India’s exports to North America constituted 21% of total exports, with the EU following at 18.61%. While exports grew by 5.95%, imports increased by 8.40%, contributing to a growing trade imbalance. The report also noted a significant decline in exports of iron and steel, particularly due to **weak domestic demand and oversupply in global markets**, primarily from China.

Additional Insights from the Report:

- **Declining Share in Certain Exports:** India’s share in global exports of certain labour-intensive sectors, including pearls, lac, gums, resins, and leather goods, has declined since 2015. This suggests challenges in maintaining competitiveness in these sectors on the global stage.
- **Growth in Services Exports:** A notable positive trend highlighted in the report is India’s growing share in global services exports.
 - ▶ India’s global services export share has more than doubled since 2005, reaching 4.6% in 2023.
 - ▶ This includes significant contributions from IT services (10.20%) and other business services (7.16%).

GOVERNMENT’S MOVE TO INCREASE FEMALE LABOUR FORCE PARTICIPATION

CONTEXT

The Indian government is planning to release a **national policy document** focused on improving **female labour force participation (FLFP)**. This policy initiative comes after findings from a **World Bank report**, which highlighted a significant drop in **female employment rates post-marriage**. The government aims to address this issue by improving the **care economy** and creating an **enabling environment** for women to participate more actively in the workforce.

What is the Care Economy?

- The **care economy** refers to a sector that involves both **paid and unpaid** care activities.
- These include direct care activities like **feeding babies**, as well as **indirect care** such as **cooking, cleaning, healthcare, and education**.
- The government's policy will focus on developing this sector to create a more supportive environment for women, especially those who face barriers due to caregiving responsibilities.
- **Why is This Important?** A major concern is that **married women** in India face a sharp **drop in labour force participation**. The **World Bank report** reveals that after marriage, women's employment rates drop by **12 percentage points**, which is about one-third of their pre-marital employment rate. This drop happens even when women do not have children, indicating that marriage itself is a major factor in reducing female participation in the workforce.
- **Existing Schemes to Support Female Workers:** The **Ministry of Women and Child Development** already runs the '**Palna**' scheme, which provides **daycare facilities** for the children of working parents.
- The scheme is aimed at children aged **6 months to 6 years** and provides various services, including:
 - ▶ **Nutritional support**
 - ▶ **Health monitoring**
 - ▶ **Cognitive development**
 - ▶ **Immunisation**
 - ▶ **Education**
- As of now, **1,000 Anganwadi creches** have been operational under this scheme. These creches aim to create a safe environment for children, allowing women to participate in the labour market without worrying about their children's wellbeing.

Rural vs Urban Female Labour Force Participation

- Women's participation in India's workforce has seen a remarkable rise in recent years, according to the latest **Annual Periodic Labour Force Survey (PLFS) reports**.
 - ▶ The **Worker Population Ratio (WPR) and Labour Force Participation Rate (LFPR) for women** aged 15 years and above have steadily increased from 22.0% and 23.3% respectively in 2017-18 to 40.3% and 41.7% in 2023-24.
- According to the **Union Labour Ministry data** for 2021-2022, the female labour force participation rate is higher in **rural areas** compared to **urban areas**. The data shows:
 - ▶ In **rural areas**, **36.6%** of women aged **15 years and above** are part of the labour force.
 - ▶ In **urban areas**, this figure is much lower at **23.8%**.
- This difference suggests that women in rural areas are more likely to be involved in economic activities, although these jobs may often be informal or low-paying.

- This disparity also highlights the need for more structured support systems, especially in urban areas, where women face different challenges related to employment.

Schemes to Promote Women Empowerment:

- **National Commission for Women:** Established in 1992, this statutory body is tasked with monitoring and addressing issues related to women's rights and welfare, including political representation.
- **Reservation for Women in Local Self-Government:** The 73rd Constitutional Amendment Act of 1992 mandates one-third reservation for women in all elected offices in local bodies, aiming to enhance their participation in grassroots governance.
- **Women's Reservation Act of 2023:** The Act provides that reserved seats for women may be allotted by rotation to different constituencies in States or Union Territories.
- **Pradhan Mantri Jan-Dhan Yojana:** Improving access to financial services.
- **Priority Sector Lending (PSL) Mandate:** Encouraging banks and microlenders to extend credit to underserved segments, including women entrepreneurs.
- **RBI Regulations:** Mandating literacy centers in each district to promote financial education.
- **Other Initiatives:** Various government schemes and programs, such as
 - ▶ Beti Bachao Beti Padhao
 - ▶ Pradhan Mantri Awas Yojana
 - ▶ National Social Assistance Programme
 - ▶ Samagra Shiksha
 - ▶ Mahila Shakti Kendra (MSK)
 - ▶ Mission Shakti (Integrated Women Empowerment Programme)

THE RIGHT TO WORK DELETED

Context

The **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** guarantees 100 days of work per year for rural households. Each household has a job card that lists its registered adults, and no one can work without a job card. To add new members to a job card, proof of adulthood is required. However, under certain circumstances, people can be removed from these job cards, a process outlined in the Act.

Guidelines for Deletions:

- Job cards can be deleted if:
 - ▶ The household permanently migrates.
 - ▶ The job card is found to be a duplicate.

- ▶ It was issued based on forged documents.
- ▶ If a Gram Panchayat is reclassified as a municipal corporation, all job cards in that Panchayat are deleted.
- If a person is to be removed from the list, they must be given a chance to explain, in the presence of two independent witnesses. These rules are mentioned in the **Master Circular**, a guideline document issued by the **Ministry of Rural Development (MoRD)** to ensure that deletions are fair and transparent.

The Rise in Deletions:

- In 2021-22, around 1.49 crore workers were deleted from **MGNREGA job cards**. However, this number surged to **5.53 crore in 2022-23** — an increase of 247%. Over the past four years, **10.43 crore workers** have been removed from job cards across the country.
- ▶ This sudden surge coincided with the government’s push to make **Aadhaar-based payments (ABPS) mandatory for MGNREGA workers**. For ABPS to work, every worker’s Aadhaar number must be linked with their job card.
- In the process of increasing Aadhaar linkage, officials were pressured to delete workers to make the compliance percentage look better. This led to deletions without proper verification, with some workers being removed based on incorrect reasons, even though they were still entitled to work.

Reasons for Deletions:

- A large number of deletions (about **83%** in 2023) were attributed to workers being labeled as **“Not willing to work.”** However, many of these workers had either worked or asked for work during the same year they were deleted. The most troubling part is that many deletions were done without informing the workers or following the required process, like involving the **Gram Sabha (local village council)**.
- **Other Issues:**
 - ▶ Some deletions were justified as “village becomes urban,” even though, according to the Act, all job cards in an urbanized village should be deleted, not just a few workers.
 - ▶ A staggering **71% of deletions** were attributed to workers being “Not willing to work,” despite the high unemployment in rural areas. This number raises serious concerns about the accuracy and fairness of these deletions.

Problems with the Process:

- ▶ Many workers were deleted without any verification or due process, which is required by the Act.
- ▶ The government, despite listing the reasons for deletions in the MGNREGA Management Information System (MIS), hasn’t conducted any analysis of these deletions, leading to potential misuse of the system.

Recommendations for Improvement:

- **Verification and Audits:** Independent audits and checks should be implemented to ensure that deletions are legitimate.
- **Involving Gram Sabhas:** Deletions should be conducted transparently, with Gram Sabhas (village councils) involved in the decision-making process.
- **Accountability and Transparency:** There should be clear records, public consultations, and grievance redress systems to ensure that no worker is wrongfully removed from the job card.
- **Training Local Authorities:** Gram Panchayats (local councils) should be trained to follow proper protocols when making decisions about deletions.



FACT BOX

MGNREGA

- Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), is an **Indian labour law and social security** measure that aims to guarantee the **‘right to work’**.
- It aims to enhance livelihood security in rural areas by providing at least **100 days of wage employment** in a financial year to every household whose adult members volunteer to do unskilled manual work.
- Employment under MGNREGA is a **legal entitlement**.
- MGNREGA is to be implemented mainly by gram panchayats (GPs). The involvement of contractors is banned.

INDIA’S SEED POLICIES AND THE NEED FOR REFORM

CONTEXT

During the **National Seed Congress (NSC)**, experts, scientists, and industry partners came together to highlight the need to **revise and modernize the Seeds Bill of 2004** and the **Seeds Policy of 2002**. They called for these policies to reflect the **current challenges and advances in the seed industry**, as well as to address **farmers’ concerns** more effectively.

India’s Seed Industry

- Seed is the most important and vital input for agricultural production.
- In fact, it is the most cost efficient means of increasing agricultural production and productivity.
- Seeds Efficacy of other agricultural inputs in enhancing productivity and production, such as fertilizers, pesticides and irrigation is largely determined by the quality of seed.

- The Indian seed industry's foundation was established in the 1960s and subsequent policies in the late 1980s, including the **New Seed Development Policy (1988-1989)**, transformed the industry and provided Indian farmers access to superior seed and planting materials.
- In 2022, the Indian seed market was valued at \$6.3 billion, projected to reach \$12.7 billion by 2028, with a CAGR of 12.43 per cent.
- **Focus area for the sector:** Pest and disease-resistant seeds, drought and heat-tolerant varieties, and more nutritious options to address the challenges of climate change and enhance nutritional value.
- **Technological Advancement made in Seed Industry:**
 - ▶ **Genetic advancement** - Seed technology used today combines genetic advancement with applied technologies to provide quality-enhanced seeds with the ability to withstand a range of biotic and abiotic stressors.
 - ▶ **Priming and enhancement technologies**- Priming and enhancement technologies are emerging as an essential package of practices to ensure that seeds perform well under a wide range of growing conditions.
 - ▶ **Film coating technology**- Film coating technology is applied to organic and inorganic cultivation to improve seed handling, precision planting and use as carriers of pesticides and nutrients.

Issues in the Seed sector

There are several **roadblocks** to the growth of India's seed sector:

- **Outdated laws and conflict between Central and State regulations** make it difficult to implement policies effectively.
- **Poor availability of quality seeds**, especially for **smallholder farmers**, and high dependency on informal seed systems are major challenges.
- **Conflicts over proprietary technologies** (like genetically modified seeds) and **farmers' rights** were also mentioned, as well as disagreements over **royalties** and **technology-sharing** agreements between private companies and farmers.
- The sector's **reliance on imported germplasm** (genetic material for creating hybrid seeds) is also a concern, as it prevents self-sufficiency.
- There is a **lack of investment in seed research and development** to develop better varieties suited for local conditions.
- **Climate Change:** Heatwaves caused a 4.5 per cent decrease in wheat yield across India, with some areas experiencing up to a 15 per cent drop in April 2022 due to an unprecedented rise in temperatures in the month.
 - ▶ The combination of water scarcity, heatwaves, frequent droughts, and unpredictable monsoons presents a significant challenge to India's agricultural productivity.
 - ▶ These challenges underscore the urgent need to prioritise the development of drought-resistant crop varieties.

Suggestions for Reform:

- **The government should focus on improving farmer education** on the importance of good quality seeds.
- There is need for strengthening **seed cooperatives** to help empower smallholder farmers and make high-quality seeds more accessible.
- The seed certification system should be made more transparent and in line with **global standards** to ensure better seed quality.



FACT BOX

Types of seed:

- **Breeder seed:** Breeder seed is **seed or vegetative propagating material** directly controlled by the **originating or sponsoring plant breeder** of the breeding programme or institution and/ or seed whose production is personally supervised by a qualified plant breeder and which provides the source for the initial and recurring increase of foundation seed.
 - ▶ Breeder seed shall be genetically so pure as to guarantee that in the subsequent generation i.e. certified foundation seed class shall conform to the prescribed standards of genetic purity.
 - ▶ The other quality factors of breeder seed such as **physical purity, inert matter, germination** etc. shall be indicated on the label on actual basis.
- **Foundation seed:** Foundation seed shall be the progeny of Breeder seed or be produced from foundation seed, which can be clearly traced to Breeder seed. Thus foundation seed can even be produced from foundation seed during the production of Foundation Seed the minimum seed certification standard shall be the same for both foundation seed stage-I and II.
 - ▶ The certification tag shall be white colour for both foundation seed stage-I and II.
 - ▶ The production of foundation seed stage I and II shall be supervised and approved by the certification agency and be so handled as to maintain specific genetic identity and genetic purity and shall be required to confirm to certification standards specified for the crop / variety being certified.
- **Certified Seed:** Certified seed shall be the progeny of foundation seed and its production shall be so handled as to maintain specific genetic identity and purity according to the standards prescribed for the crop being certified.
 - ▶ Certified seed may be the progeny of certified seed provided this reproduction does not exceed three generations beyond foundation seed stage-I.

Key Schemes/Acts

Central Sector Scheme “Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds”:

- The restructured Central Sector Scheme “Development and Strengthening of Infrastructure Facilities for Production and Distribution of Quality Seeds” is under implementation from the year 2005-06.
- The objective of the scheme is to develop and strengthen the existing infrastructure for the production and distribution of certified /quality seeds to farmers.

Protection of Plant Varieties and Farmer’s Rights Act, 2001

- It provides for the establishment of an effective system for protection of plant varieties, the rights of farmers and plant breeders and to encourage the development of new varieties of plants.
- The scheme is implemented by Protection of Plant Varieties and farmers’ Rights (PPV&FR) Authority and autonomous statutory body corporate established under PPV & FR Act, 2001 in November, 2005.

BOILERS BILL, 2024

CONTEXT

The Boilers Bill, 2024 was introduced in the Rajya Sabha for consideration and was passed. It will now be moved for consideration in the Lok Sabha.

About the Bill

- This Bill aims to replace the old **Boilers Act, 1923**, a **pre-constitution law**, to ensure the safety of life and property in relation to boilers.
- It addresses the need for reviewing outdated provisions, and aligning the law with the **Jan Vishwas (Amendment of Provisions) Act, 2023** which aims to decriminalize certain offenses.
- The existing Boilers Act was last amended in 2007, introducing **third-party inspections**, but further changes are necessary to improve its relevance and clarity.

Key Changes in the Boilers Bill, 2024:

- **Simplification and Reorganization:** The new Bill has been divided into six chapters, unlike the old Act which had no chapters, making it easier to understand.
 - ▶ Redundant provisions from the **original 1923 Act** have been removed, including applicability to feed-pipes and economizers, and a section on the applicability of the Act to the whole of India.
- **Definitions and Clarifications:** New definitions have been added, such as terms for “notification,” “regulations,” and “State Government.” Some existing definitions have been updated for clarity, including those for “boiler

components,” “competent authority,” and “inspecting authority.”

- **Decriminalization and Penalties:** The Bill introduces decriminalization provisions in line with the **Jan Vishwas (Amendment) Act**. Some offenses, instead of leading to criminal prosecution, will now incur a penalty that is imposed through an executive mechanism (instead of court proceedings).
 - ▶ The Bill keeps criminal penalties for severe offenses, especially those that could lead to loss of life or property, but allows for penalties (rather than fines) for non-criminal offenses.
 - ▶ New provisions for appeals and adjudications (i.e., resolving disputes) have been added.
- **Expanded Powers:** The Bill grants more detailed powers to the Central Government, State Governments, and the Central Boilers Board to make rules and regulations. These powers have been clearly defined in the Bill.
 - It also allows for the removal of difficulties in implementing the new law over the next three years, and saves existing rules under the 1923 Act until new rules are framed.

Impact and Benefits:

- The reorganization into six chapters and clearer definitions will make the law easier to follow.
- The introduction of decriminalization provisions aligns the law with the goal of simplifying business processes and reducing legal burdens on the industry, especially for smaller businesses (like MSMEs).
- Enhanced safety measures ensure that boilers are operated and repaired only by qualified personnel, thus improving safety for those working with boilers.

INDIA’S TRADE POLICY AND RCEP

CONTEXT

The **World Bank** has advised India to reconsider its decision not to join the **Regional Comprehensive Economic Partnership (RCEP)**, a major trade agreement in Asia. The World Bank believes that by joining RCEP, India could tap into regional value chains and meet its target of **USD 1 trillion in exports**.

Background

- India had previously **pulled out of RCEP** in **2019**, citing unresolved issues, especially concerns over trade deficits (India imports more than it exports) and the effect of cheaper imports on domestic industries.
- This decision followed a 2018 report that highlighted India’s growing **trade deficit** with countries having **free trade agreements (FTAs)** with India.
- **Why did India opt out?** India was a member of the RCEP drafting committee from its inception in 2011, but in November 2019, it decided to opt out.

- ▶ **Concerns regarding China:** India did not join RCEP raising a concern that this deal would open it up to Chinese goods.
- ▶ **Safeguarding domestic interest:** Its decision was to safeguard the interests of industries like agriculture and dairy and to give an advantage to the country's services sector.

India's Self-Reliance and Manufacturing Push:

- In response to these challenges, India has focused on becoming more **self-reliant** through policies like the **Production Linked Incentive (PLI) scheme**, launched in **2020**. The PLI aims to boost domestic manufacturing by offering incentives to companies that produce goods locally, in sectors such as **smartphones, automobiles, medical devices, and solar products**.
- **India's manufacturing output** under this scheme has increased significantly. For example, **smartphone production** grew to **\$51 billion** in FY24, a 21-fold increase over a decade. **Exports** from this sector grew **81-fold** to **\$16 billion**.
- However, these industries still rely heavily on imports from China. For instance, **60%** of India's solar equipment imports come from China, and **30% of India's industrial imports** are from China. The government is working to reduce this dependence by developing domestic production of components and inputs.

Concerns About China's Influence in RCEP:

- One of the main reasons India pulled out of **RCEP** was the fear that joining this trade bloc would expose India's markets to **cheap, subsidized imports** from China. This could harm India's developing industries, especially since China has a dominant position in many industries, such as **electronics, solar panels, and electric vehicle batteries**.
- The **RCEP** trade agreement could increase India's reliance on China, worsening the **trade deficit** (India imports much more from China than it exports). For example, India's trade deficit with China grew from **\$63 billion in FY19** to **\$85 billion in FY24**.
- India's concern is that RCEP's value chains are **dominated by China**, which could disrupt the progress made by domestic industries under the PLI scheme.

Global Trade and Geopolitical Challenges:

- **Global trade policies** have become more **protectionist** due to rising geopolitical tensions. For example, the **US** and **EU** have implemented measures to protect their domestic industries, like the **Inflation Reduction Act** and **Carbon Border Adjustment Mechanism**.
- **China's subsidies** to its industries (including solar, batteries, and EVs) have distorted global trade, making it difficult for countries like India to compete with China's cheap exports.

- Countries in **RCEP**, such as **ASEAN nations, Japan, and South Korea**, have seen their trade deficits with China grow since the agreement. For example, ASEAN's **trade deficit with China** increased from **\$82 billion in 2020** to **\$135.6 billion in 2023**.

Regional Comprehensive Economic Partnership (RCEP) Agreement

- RCEP is a **free trade agreement** between **Asia-Pacific nations** of **Australia, Brunei, China, Cambodia, Japan, Indonesia, Laos, South Korea, Malaysia, New Zealand, Myanmar, Singapore, Thailand, the Philippines, and Vietnam**.
 - ▶ India and the United States are **not members of RCEP**.
- The **15-member grouping** accounts for 30% of the world's population and 30% of global GDP (2.2 billion people). Thus, it is the largest trade bloc in history.
 - ▶ By comparison, the **United States-Mexico-Canada trade agreement (USMCA)** covers 28% of world trade, while the **European Union's Single Market** is a distant third at nearly 18%.

TRADE COMPETITIVENESS

Context

India has made significant strides in global trade, becoming a major player in various export sectors. This progress reflects India's growing manufacturing capacity, technological advancements, and government initiatives designed to boost exports.

Key Export Achievements:

- **Petroleum Products:** India is now the second-largest global exporter of petroleum oils, with exports rising from \$60.84 billion in 2014 to \$84.96 billion in 2023, capturing 12.59% of the global market. This growth is due to India's advanced refining infrastructure and increased production capacity.
- **Agrochemicals:** India is now the third-largest global exporter of agrochemicals, including insecticides and fungicides. Exports in 2023 reached \$4.32 billion, up from \$2.04 billion in 2014. This success is driven by investments in research and development and adherence to international standards.
- **Sugar:** India is the second-largest global exporter of sugar, with exports growing from \$1.17 billion in 2014 to \$3.72 billion in 2023. India's share in the global sugar market rose from 4.31% in 2014 to 12.21% in 2023, fueled by strong agricultural policies.
- **Electronics and Electrical Components:** Exports of electrical transformers and components grew from \$1.08 billion in 2014 to \$2.85 billion in 2023, making India the 10th largest global exporter in this category. The growth is due to initiatives like "Make in India" and the Production-Linked Incentive (PLI) scheme.

- **Rubber Tyres:** India's exports of rubber pneumatic tyres grew from \$1.49 billion in 2014 to \$2.66 billion in 2023, securing the 8th position in the global market. The focus on quality and cost competitiveness has made India a key player in this sector.
- **Semiconductors:** India's semiconductor exports have increased from \$0.23 billion in 2014 to \$1.91 billion in 2023, rising from 20th to 9th globally. India is expanding its role in the global semiconductor supply chain through domestic manufacturing and innovation.
- **Precious Stones:** India has become the world leader in the export of precious and semi-precious stones, with exports reaching \$1.52 billion in 2023. India's market share surged from 2.64% in 2014 to 36.53% in 2023, owing to its centuries-old craftsmanship and modern technology in gemstone processing.

Government Initiatives to Boost Exports:

- **New Foreign Trade Policy (FTP):** Launched in 2023, the FTP focuses on four main areas: providing incentives for remission, promoting export collaboration, enhancing business ease, and focusing on emerging sectors like e-commerce. The policy also includes initiatives like the "Towns of Export Excellence Scheme" to recognize new export hubs.
- **Production-Linked Incentive (PLI) Scheme:** With an investment of ₹1.97 lakh crore, the PLI scheme aims to enhance manufacturing in 14 key sectors, such as electronics, automobiles, and textiles. This scheme has already contributed to job creation and increased production and exports.
- **RoDTEP and RoSCTL Schemes:** These schemes aim to rebate taxes and levies on export products, making exports more competitive. The RoDTEP scheme, expanded in 2022, now covers more sectors, including pharmaceuticals and chemicals.
- **Districts as Export Hubs:** This initiative supports local exporters and manufacturers by identifying export-potential products in each district and addressing bottlenecks. It encourages employment generation and regional economic growth.
- **Digital Platforms and Ease of Doing Business:** The government has launched various digital platforms like the Trade Connect e-Platform to link exporters with resources and improve export processes. Additionally, measures like reducing compliance burdens and streamlining business procedures through the National Single Window System (NSWS) have helped improve India's business environment.
- **Attracting Investments:** Reforms in Goods and Services Tax (GST), corporate tax reduction, and the introduction of quality control orders (QCOs) have made India more attractive for both domestic and foreign investments. This has strengthened India's manufacturing base and its ability to export more competitively.
- **E-Commerce Export Hub (ECEH):** India is developing cross-border e-commerce to boost exports, particularly from SMEs and artisans. The goal is to reach USD 100 billion in e-commerce exports by 2030, improving market access for small producers.

- **Logistics and Infrastructure Development:** The PM GatiShakti National Master Plan and the National Logistics Policy aim to improve connectivity and reduce logistics costs. These policies are designed to enhance India's integration into global supply chains.

BHOPAL GAS TRAGEDY AT 40

CONTEXT

India has become the **sixth-largest chemical-producing country in the world**. However, this growth has come with a rise in chemical accidents, particularly in the past few years. Despite significant industrial growth, safety regulations and transparency in chemical processes remain insufficient, raising serious concerns about public health and the environment.

Chemical Accidents in India (2020-2023)

- **Between 2020 and 2023,** 29 chemical accidents **took place in India, leading to 118 deaths and around 257 injuries.**
- **These incidents, which included** plant malfunctions, chemical leaks, explosions, **and factory fires, underline the inadequacy of safety measures in the chemical industry.**
- **There is the lack of transparency** due to the absence of a law governing trade secrets. In India, there is no dedicated law for trade secrets, and companies often use Non-Disclosure Agreements (NDAs) to shield information from public scrutiny, even if it poses environmental and health risks.
 - ▶ **Trade secrets** refer to proprietary information companies consider crucial to their competitive advantage.
- The issue has persisted despite the **Bhopal Gas Tragedy of 1984**, which remains one of the deadliest industrial disasters in history. 40 years later, safety regulations for chemical processes in India have not improved significantly.
- **Continued Use of Hazardous Chemicals**
 - ▶ **Methyl isocyanate (MIC):** Despite the **Bhopal Gas Tragedy** and the hazardous nature of chemicals involved, **methyl isocyanate (MIC)** is still used in India for the production of certain pesticides. It remains listed as a hazardous chemical under India's regulations.
 - ▶ **Asbestos and DDT** are banned in other countries but still in use in India, such as asbestos and DDT. India has delayed banning it, with the latest phase-out deadline set for December 2024.
 - ▶ **PFAS (Per- and Polyfluoroalkyl Substances),** also known as '**forever chemicals**', remain under-regulated in India. These chemicals, commonly found in non-stick cookware, food packaging, and water-resistant products, are linked to adverse health effects but remain poorly regulated in India, despite significant efforts being made in other countries to address their dangers.

Inadequate Regulation

- India's existing laws and regulations regarding chemicals are fragmented and often inadequate.
- Currently, there are **15 laws and 19 rules related to the chemical industry**, but none are designed specifically to ensure comprehensive safety in the chemical sector.
- For instance, the **Manufacture, Storage, and Import of Hazardous Chemicals Rules (1989)** do not fully address the growing complexity of the industry.
- Meanwhile, the **Chemical Management and Safety Rules** are still in the draft stage and have not been finalized. This lack of regulatory clarity makes it difficult to address the challenges posed by hazardous chemicals effectively.
- Moreover, India **does not have a system to register or track chemicals comprehensively**, unlike other countries like the **US (under the Toxic Substances Control Act) or the EU (under the REACH Regulation)**.
- The industry continues to push for trade secret protections under the **Protection of Trade Secrets Bill, 2024**, which would make it even harder to obtain information about hazardous chemicals. Critics argue that the bill would further shield industries from scrutiny, increasing the risk to public health and the environment.



FACT BOX

Bhopal gas tragedy

- The Bhopal gas tragedy occurred on the night of December 2-3, 1984.
- It took place at the Union Carbide India Limited (UCIL) pesticide plant in Bhopal when a toxic gas leak, primarily **methyl isocyanate (MIC)**, released into the atmosphere, leading to widespread deaths, injuries, and ecological damage.
- Over the last four decades, the survivors have suffered from recurring health issues like respiratory problems, vision defects, neurological problems and various kinds of cancer.

Methyl Isocyanate

- Methyl Isocyanate is a **colourless liquid** used for making pesticides.
- MIC is safe when maintained properly. The chemical is **highly reactive to heat**. When exposed to water, the compounds in MIC react with each other causing a **heat reaction**.
- Methyl Isocyanate is no longer in production, although it is still used in pesticides.
- The **Bayer CropScience plant in Institute, West Virginia** is currently the only storage location of MIC left across the globe.
- While **MIC** was likely a major component of the toxic fumes, other substances, such as **hydrogen cyanide**, are also suspected to have been present, as indicated by the **red coloration of the victims' viscera**.

Key Toxic Compounds Associated with the Disaster

The disaster site and surrounding areas still show significant levels of **toxic contamination**, with several harmful chemicals present in the environment:

- Mercury:** A highly toxic heavy metal known to accumulate in soft tissue, mercury can damage multiple organs and interfere with cellular functions. It is dangerous even at low concentrations and poses long-term environmental and health risks.
- Heavy Metals:** Other heavy metals like **chromium, copper, nickel, and lead** were also found in the area. These metals are **carcinogenic** and can cause **immune system damage** and various cancers, particularly of the **lungs, kidneys, and brain**.
- Hexachlorobutadiene:** This compound is a potential **carcinogen** and can cause severe damage to the **liver, kidneys, and brain**. Exposure also leads to **fat accumulation in the liver, cellular destruction, and nervous system impairment**.
- Chloroform:** Known for affecting the **central nervous system**, chloroform can lead to **fainting** at lower concentrations and death at higher concentrations. It is also classified as **possibly carcinogenic** to humans.
- Carbon Tetrachloride:** This chemical is a **health hazard** and can damage the **liver**, causing **cancer**. Exposure can also affect vision and heart function.
- Trichlorobenzene:** These volatile compounds spread easily in the air and accumulate in the body's fatty tissues. They can damage the **liver and kidneys**.
- Persistent Organic Pollutants (POPs):** These are chemicals that persist in the environment and bioaccumulate. They are linked to **cancers, nervous system damage, reproductive disorders, and developmental issues**. POPs also disrupt the **immune system** and are associated with **serious health outcomes**, including cancer of the **liver, breast, pancreas, and prostate**.

ILLEGAL SAND MINING SERIOUS, NEEDS TO BE CURBED: SC

Context

The Supreme Court underscored the severity of illegal sand mining in India, labeling it a significant issue that **"needs to be dealt with effectively"**.

Sand Mining in India

- Sand mining is a widespread issue across India and globally.
- It has been prevalent in various regions, including the **Garo Hills in Meghalaya, Sutlej in Punjab, Yamuna in**

Delhi, Ganga in Haridwar, Chambal and Narmada in Madhya Pradesh, Musi in Telangana, and Cauvery in Tamil Nadu, among others.

- Globally, sand consumption is over 40 billion tons annually, with demand exceeding natural replenishment by rivers, according to a United Nations study.
- Sand, the **second most consumed natural resource** after water, is essential for construction, glass production, paint, and road paving, among other things.
- **River sand**, specifically, is preferred over desert or marine sand due to its angular grains, which are more suitable for industrial uses.
- However, sand generation is **static and not uniform**, leading to shortages and illegal mining. The extraction of sand from riverbeds, which is a crucial source, causes environmental and socio-economic issues.

Why the World Is Running Out of Sand?

The rapid demand for sand is driven by growing populations, urbanization, and infrastructure development. However, sand production is insufficient to meet global consumption due to:

- **Static Natural Generation:** Natural sand replenishment by rivers is slow and insufficient compared to the rising demand.
- **Desert Sand vs. River Sand:** Desert sand is unsuitable for construction as its grains are too rounded, and marine sand is corrosive. River sand is ideal, but its extraction causes long-term damage to ecosystems.
- **Price Variability:** Due to supply constraints, the price of sand fluctuates significantly, leading to black markets and illegal mining.

Environmental Impact of Sand Mining

- **Alteration of Riverbeds:** Excessive sand mining deepens rivers, erodes banks, changes river courses, and can lead to flooding.
- **Biodiversity Loss:** Mining harms river ecosystems, destroys habitats, and negatively impacts species like the Gharials in the Chambal River.
- **Water Quality Degradation:** Sand mining leads to increased erosion, which raises suspended solids in water, impacting water quality and aquatic ecosystems.
- **Altered Sediment Budget:** Mining disrupts sediment flow to oceans, affecting beaches and river deltas, and contributing to coastal erosion.
- **Saline Intrusion:** Excessive mining can lead to saltwater intrusion from nearby seas into freshwater systems.



FACT BOX

Geology and Composition of Sand

- Sand is mainly composed of finely divided rock and mineral particles, often rich in silica (silicon dioxide or SiO₂), usually in the form of quartz.

- Under the **Mines and Minerals (Development and Regulations) Act, 1957 (MMDR Act)**, sand is classified as a "minor mineral."

Legal Classification of Minerals in India

- ▶ **Minor Minerals:** Sand falls under the category of "minor minerals" as per the MMDR Act, with the State Governments overseeing their regulation and extraction. The central government has the power to notify such minerals.
- ▶ **Major Minerals:** Major minerals, including coal, uranium, iron ore, and gold, are managed by the central government. There is no official definition for "major minerals" in the MMDR Act; any mineral not listed as a minor mineral is considered a major mineral.

Regulations and Provisions for Sand Mining in India

Since sand is a minor mineral, different state governments in India have their own rules for regulating sand concessions and mining activities. To curb illegal mining, various judicial bodies have intervened:

- **National Green Tribunal (NGT):** In August 2013, the NGT banned sand mining without proper environmental clearance.
- **Sustainable Sand Mining Management Guidelines 2016:** The Ministry of Environment, Forest and Climate Change (MoEFCC) introduced guidelines to promote scientific and environmentally friendly sand mining practices.
- **Mining Surveillance System (MSS):** The Ministry of Mines has implemented a system to monitor illegal mining activities using space technology.
- **Punitive Measures:** Under the Indian Penal Code, 1860 (Sections 120B and 34), illegal sand mining without a legal permit is punishable.

SPACE TRAFFIC AND SATELLITE CONGESTION

Context

The rapid increase in satellites and space debris is making **Low Earth Orbit (LEO)**, the region where most satellites orbit, increasingly congested and unsafe. If this issue isn't managed, it could make this critical space unusable for communication, navigation, and scientific exploration.

What is Low Earth Orbit (LEO)?

- **LEO** is the region between **160 km** and **2,000 km** above Earth's surface, where most satellites, including those for internet, weather, and GPS, are located.
- It is ideal for satellites due to its low cost and proximity to Earth. However, it is becoming crowded with both active satellites and debris.

- Low Earth orbit must remain safe to prevent costly disruption to the technology behind global communication, navigation and scientific exploration
- The Problem:**
 - More than 14,000 satellites** are currently in LEO, with **3,500 inactive**.
 - Additionally, there are **around 120 million pieces of debris**, including rocket fragments and broken satellite parts. Only a few thousand of these are large enough to track.
 - The increasing number of satellites, especially from companies like SpaceX with their **Starlink** internet satellites, is causing **collisions** and **risking the safety of all space activities**.
- Commercial Concerns:** Private companies are reluctant to share sensitive data for fear of compromising their **competitive advantage**.
- Inconsistent Data:** Operators currently rely on **informal methods** to avoid collisions, using data from sources like the **U.S. Space Force**, but these methods lack consistency and accountability.

Recent Developments:

- Space Debris from Explosions:** A **Chinese rocket stage exploded** in August, creating thousands of debris pieces. A **Russian satellite exploded** in June, forcing astronauts on the International Space Station (ISS) to shelter for an hour due to flying debris.
- The Growing Risk of Collisions:** Data shows a **17% rise** in the number of satellites getting close to each other over the past year. Projections suggest **tens of thousands more satellites** will be launched in the coming years, increasing the collision risk. The potential **financial damage** from such collisions could be **\$556 million** over five years.
- SpaceX and Starlink:** SpaceX has already launched **6,764 Starlink satellites** and plans to add thousands more. To avoid collisions, Starlink satellites perform **collision-avoidance maneuvers** — nearly **50,000** in the first half of 2024 alone. Other space agencies, like the **European Space Agency**, are also increasing their maneuvers.

The Need for International Coordination:

- The **United Nations** (U.N.) has called for **urgent action** to manage this growing congestion. They propose:
 - Creating a **shared database** of all objects in space to track them effectively.
 - Forming an **international framework** to ensure countries and companies cooperate in managing space traffic.
- The **U.N. Panel on Space Traffic** in **October 2023** emphasized that this coordination is essential for space safety and to avoid costly disruptions in global communication, navigation, and scientific research.
- The **U.N. panel** suggested using existing tools like **telescopes, radars, and sensors** to track objects in space. The goal is to create a system similar to **air traffic control** for space, ensuring safe passage for all objects and reducing the risk of collisions.

Barriers to Cooperation:

- Geopolitical Tensions:** Some countries hesitate to share data due to security concerns, especially since satellites may also have **military uses**.

Measures to tackle space debris

- Project NETRA** is an **early warning system** in space to detect debris and other hazards to Indian satellites.
- In 2022, ISRO set up the **System for Safe and Sustainable Operations Management (IS 4 OM)** to continually monitor objects posing collision threats, predict the evolution of space debris, and mitigate the risk posed by space debris.
- The **Inter-Agency Space Debris Coordination Committee (IADC)**, an international governmental forum, was established in 1993 to coordinate efforts between spacefaring nations to address the issue of space debris.
- The **United Nations** has established the **Committee on the Peaceful Uses of Outer Space (COPUOS)** to develop guidelines for the **long-term sustainability** of outer space activities, including the mitigation of space debris.
- And in 2025, the **European Space Agency** will launch the first space mission to remove debris from Earth's orbit.

EXTRACHROMOSOMAL DNA (ECDNA)

Context

Extrachromosomal DNA (ecDNA), a small fragment of genetic material found outside the main chromosomes in cells, has gained significant attention in cancer biology. Discovered about 50 years ago but initially overlooked due to its rarity, recent research has highlighted its crucial role in cancer development and drug resistance.

What is ecDNA?

- Normally, human cells contain 23 pairs of chromosomes that store our genetic information.
- However, during **certain types of cancer**, damage to these chromosomes can result in pieces of DNA breaking off and forming small circular structures.
- These fragments are called ecDNA and float freely within the nucleus of the cell.
- Recent Findings:** Researchers investigated how ecDNA contributes to cancer growth and resistance to treatment. They discovered that:

- ▶ **ecDNA in Cancer:** EcDNA is present in **17% of tumor samples**, with higher prevalence in cancers like **liposarcoma, brain tumors, and breast cancer**. Interestingly, the presence of ecDNA increases after chemotherapy and is linked to **cancer spread (metastasis) and poorer patient outcomes**.
- ▶ **ecDNA and Tumor Growth:** EcDNA often carries multiple copies of **oncogenes**, genes that drive cancer growth.
 - ◆ Unlike normal chromosomal DNA, ecDNA is free to move and interact with other ecDNA, forming hubs that significantly increase the activity of oncogenes. This boosts cancer cell growth and accelerates tumor evolution.
- ▶ **Mendel's Law Challenged:** Normally, when cells divide, genetic material is passed on randomly, as per **Mendel's third law of independent assortment**. However, ecDNA doesn't follow this rule. During cell division, ecDNA is clustered together and passed to daughter cells as a unit.
 - ◆ This process, called the **"jackpot effect,"** allows cancer cells to retain advantageous genetic combinations, making them more resilient and capable of growing more aggressively.
- ▶ **Vulnerability in Cancer Cells with ecDNA:** While ecDNA presents new challenges, it also creates potential weaknesses. The unusual structure and high activity of ecDNA lead to conflicts in the cell's machinery responsible for making RNA, resulting in DNA damage.
 - ◆ The cancer cells rely heavily on a protein called **CHK1** to repair this damage. When researchers used a drug that **blocks CHK1 (BBI-2779)**, they observed a reduction in tumor growth in mice, particularly in **stomach cancer** cells containing ecDNA.
 - ◆ This suggests that targeting CHK1 could be a new way to treat cancers driven by ecDNA.

DNA PROFILING CASE AND LEVIRATE CUSTOM

CONTEXT

The **Centre for DNA Fingerprinting and Diagnostics (CDFD)** in Hyderabad recently conducted **DNA profiling** for a family in which the father was offering to donate an organ to his son. DNA profiles of the father, son, and the mother were created. The analysis revealed an unexpected result: the man who was believed to be the father of the son was not the biological father, but likely a close relative, possibly the brother of the actual father. This unexpected revelation pointed to a practice called **levirate marriage**.

What is Levirate Marriage?

- **Levirate marriage** is a custom in some cultures, including parts of India, where a woman whose husband is deceased or incapacitated may have children fathered by her husband's brother. This ensures the family line continues, especially if the deceased or incapacitated husband cannot produce heirs.

- In this case, the DNA suggested the woman's husband was not the biological father but a **close male relative**, likely the brother of the actual father. This finding, while not affecting the organ transplant, could lead to a **breach of the family's privacy**.

What is DNA Profiling?

- **DNA profiling** is a technique used to identify individuals based on the unique patterns in their DNA.
- Each person has two copies of each chromosome: one from their mother and one from their father. These chromosomes contain DNA, which is made up of long sequences of chemicals called **adenine (A), cytosine (C), guanine (G), and thymidine (T)**.
- Specific regions of chromosomes, called **STR loci (Simple Tandem Repeats)**, have repeated sequences of DNA.
- The number of repeats at each locus varies between individuals, and this variation is used to create **DNA profiles**.

The DNA Profile Results in This Case:

- The DNA profile showed that the **father** (the man thought to be the biological father) and the **son** did not share the expected genetic markers.
- For example, one of the loci (D18S51) had **14 and 15 repeats** for the mother, and **15 and 17 repeats** for the son. The father only had **14 and 14 repeats**, so he couldn't be the biological father.
- This inconsistency in the DNA suggested that the father was not the biological parent, but someone **closely related**, likely a **brother** of the actual father. This is where the practice of levirate marriage came into play.

The Role of DNA in Revealing Levirate Marriages:

- DNA analysis exposed the biological relationship, which might have been kept private due to cultural practices.
- Families in certain cultures, like in India, may not openly discuss the true paternity due to **cultural and social reasons**. They may prefer to keep the **biological relationship private** to avoid any **social stigma** or embarrassment.
- In India, the **practice of levirate marriage** is sometimes seen as a way to ensure that a family continues to have a male heir to perform important cultural rituals. This was discussed by historian **Projit Bihari Mukharji** in his book *Brown Skins, White Coats*.

Cultural and Social Impact:

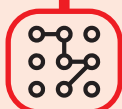
- DNA testing brought to light a **genetic fact** that contradicted the family's social narrative. This raised the issue of **genetic privacy**, as families may prefer to keep certain aspects of their ancestry and relationships hidden, especially when traditional practices like levirate marriage are involved.
- The case shows how **DNA analysis** is powerful but can sometimes reveal **uncomfortable truths** that might breach privacy, especially in cultures where family and ancestry hold significant importance.

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SECTION - B

QUICK BYTES

PAMBAN BRIDGE,
RAMESHWARAM

CONTEXT

The **Commissioner of Railways Safety** has identified serious flaws in the newly constructed vertical lift **bridge at Pamban**, which was built to replace the old bridge from 1914, which was closed in December 2022.

About

- It is **India's first vertical lift rail bridge**. It is being built parallel to the existing 110-year-old **Pamban Bridge at Rameshwaram in Tamil Nadu**.
 - The old bridge, which has served its lifespan and is facing structural issues like corrosion and damage to its lift spans, has had to impose a permanent speed restriction of 10 km/h.
 - It was the sole connection between Mandapam and Rameswaram until a parallel road bridge was built in 1988.
 - In recent years, there were intermittent closures for repairs, which prompted the need for a new bridge.
- The new Pamban Rail Bridge is designed to improve both rail traffic and facilitate the movement of ships, as it features a vertical lift span that can be raised to allow larger ships to pass underneath.
- This modern bridge will be 2,070 meters long, with the ability to accommodate future track doubling.
- It will connect **Mandapam town** in mainland India to **Pamban Island** and **Rameswaram**.
- The bridge's construction is expected to enhance the efficiency and safety of rail operations while also facilitating maritime activity, thereby benefiting both the transportation and shipping sectors in the region.

- The project is being executed by **Rail Vikas Nigam Limited (RVNL)**, on behalf of Southern Railway.
- The Pamban Bridge is located in a **cyclone-prone area** with high wind velocities.

TELANGANA (IN SAFE SEISMIC
ZONE) HIT BY EARTHQUAKE

CONTEXT

A **5.3-magnitude earthquake** jolted **Telangana's Mulugu district**, with tremors reported in Hyderabad and parts of Andhra Pradesh.

Why it is unusual?

- Telangana lies in the **Indian Peninsular Shield**, which is composed of **ancient, stable rock formations with minimal tectonic activity** compared to **plate boundary regions** like the Himalayas.
 - Earthquakes in stable regions are typically of low magnitude, and significant quakes are rare.
 - While minor tremors may occur due to **localised stress or human-induced activities** like mining or reservoir-induced seismicity, the probability of a high-magnitude natural earthquake is extremely low.
- Telangana **rarely experiences seismic activity**, making the quake a rare event in the region. Telangana is grouped in **Zone II**.
 - Zone II typically represents areas with **low seismic activity**. The average magnitude of earthquakes in such regions depends on the geographical context but generally falls within the magnitude range of **3.0 to 5.0 on the Richter scale**.

- The quake struck the Mulugu district, with its epicentre near Medaram, which is part of the **Godavari rift zone 3**.
- The **Godavari rift zone** is prone to moderate earthquakes. The recent quake was caused by the release of strain energy along the fault system, occurring at a depth of 40 kilometre.

Seismic zones in India

- There are four Seismic zones in India: **Zone II, Zone III, Zone IV, and Zone V**.
- Zone V expects the **highest level of seismicity**, whereas Zone II is associated with the **lowest level of seismicity**.
- Approximately, 11% of the country falls in zone V, approximately 18% in zone IV, approximately 30% in zone III and the remaining in zone II.
- A total of approximately 59% of the landmass of India (covering all states of India) is prone to earthquakes of different intensities.



FACT BOX

INDIAN PENINSULAR SHIELD

- The Peninsular Indian Shield is more than 2,500 million years old, dating back to the **Archean Eon**. This makes it one of the most ancient geological formations on Earth.
 - ▶ A "shield" refers to a large area of exposed Precambrian crystalline igneous and metamorphic rocks that form the stable cores of continents. Shields are characterized by geological stability and resistance to deformation over time.
- **Composition and Structure:** The Indian Peninsular Shield consists of an assembly of several **Archean to Early Proterozoic cratons** separated by **high-grade granulite facies mobile belts**. These cratons also serve as the basement to several mid- to late **Proterozoic platform intracratonic basins**.

(see Figure No. ...)

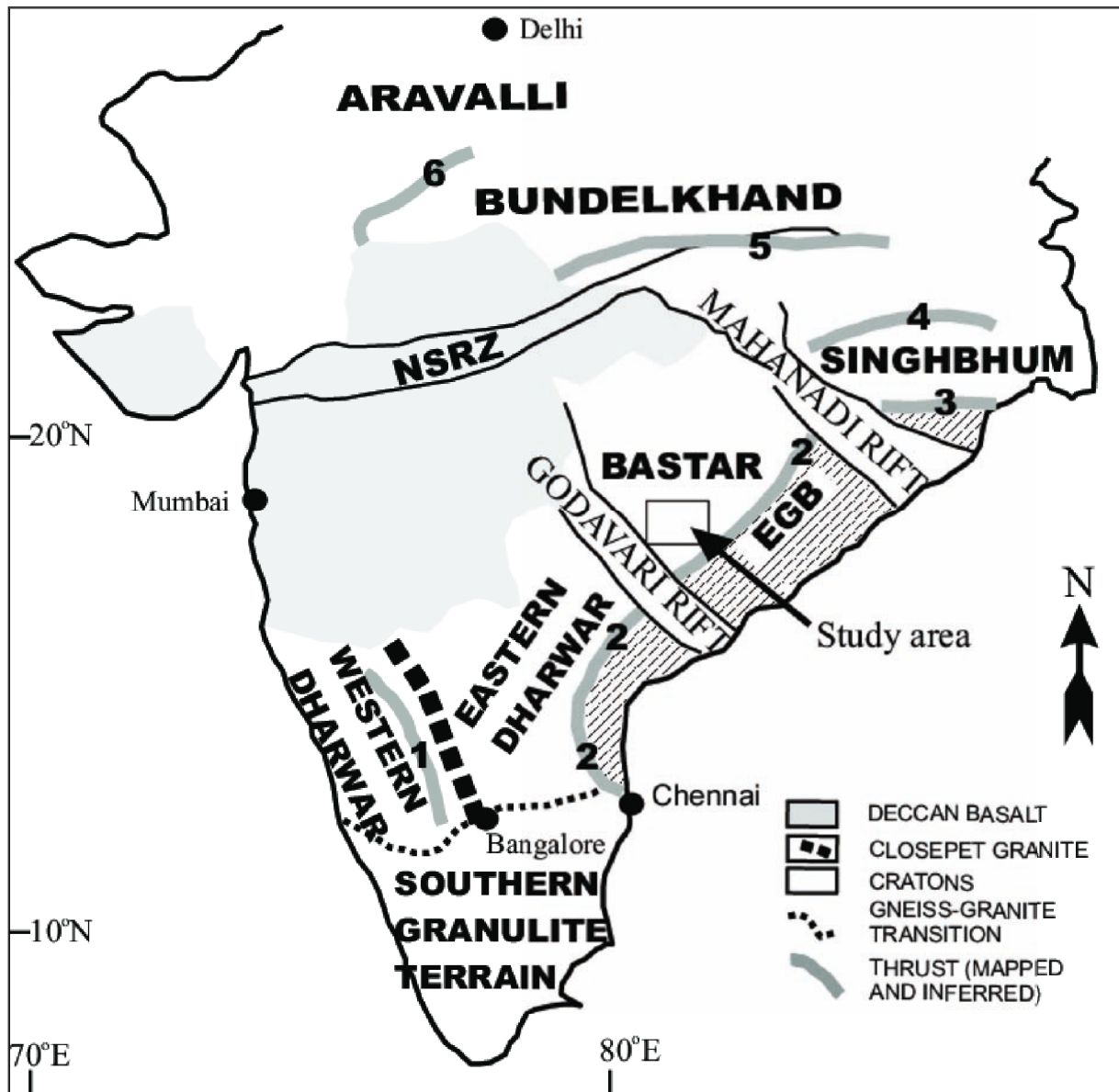


Figure No. 03

- **Geological Stability:** Peninsular India is considered **tectonically stable**, as it has not been significantly affected by tectonic movements or mountain-building processes in recent geological history. Unlike the Himalayas, which are still undergoing tectonic activity, the Indian Shield has remained largely inactive for millions of years.
- **Composition of Rocks:** The Peninsular Indian Shield is primarily composed of ancient igneous and metamorphic rocks, such as **granite and gneiss**. These are some of the **oldest rocks on Earth**, providing key insights into the early formation of Earth's crust.
- **Geographical Influence:** The stability of the Indian Shield has shaped the geography of Peninsular India. It provides a stable foundation for the land, contributing to the formation of prominent features like the **Deccan Plateau, Western Ghats, and Eastern Ghats**, which are integral parts of this ancient landmass.

MAHA KUMBH MELA

CONTEXT

The Uttar Pradesh government has declared the Maha Kumbh area a new district ahead of the 2025 Maha Kumbh Mela. The district will be known as **Maha Kumbh Mela district**, marking preparations for one of the largest religious gatherings in the world.

What is Maha Kumbh Mela?

- The **Maha Kumbh Mela** is a major Hindu religious festival held once every 12 years.
- It is the **world's largest public gathering**, attracting millions of pilgrims, including **ascetics, saints, pilgrims, and other devotees**, from across India and the world.
- The festival is centered around bathing at **sacred rivers**, which is believed to cleanse sins and bring spiritual benefits.
- **Locations of the Kumbh Mela:** The Kumbh Mela is celebrated at four locations in India, rotating every 12 years. These locations are:
 - ▶ **Haridwar (Uttarakhand)** – on the banks of the Ganges
 - ▶ **Ujjain (Madhya Pradesh)** – on the banks of the Shipra river
 - ▶ **Nashik (Maharashtra)** – on the banks of the Godavari river
 - ▶ **Prayagraj (Uttar Pradesh)** – at the confluence of the Ganges, Yamuna, and the mythical Sarasvati river (which is invisible)
- The festival at each location is based on specific astrological positions of the **Sun, Moon, and Jupiter**, and occurs at a particular moment when these planets align in a way considered holy in Hinduism.

Historical Significance

- ▶ The origins of the Kumbh Mela can be traced back to ancient times.
- ▶ It is mentioned in texts dating back to the **Maurya and Gupta periods (4th century BCE to 6th century CE)**.
- ▶ Over the centuries, the Mela grew in size and significance.
- ▶ Rulers, including the **Guptas**, supported the festival, and during the **medieval period**, various dynasties like the **Cholas, Vijayanagar, Delhi Sultanate, and Mughals** patronized it.
- ▶ Even **Emperor Akbar** participated in the Mela, emphasizing unity among different religious and cultural communities.

Modern Relevance

- ▶ After India's independence, the Kumbh Mela became a symbol of national unity and the country's cultural heritage.
- ▶ It was **recognized by UNESCO in 2017 as an Intangible Cultural Heritage of Humanity**, further cementing its importance.
- The **Maha Kumbh Mela** will be held in **January 2025** in **Prayagraj, Uttar Pradesh**.

UNGA RESOLUTION ON PALESTINE

CONTEXT

In a landmark move, India voted in favour of a pivotal **United Nations General Assembly resolution** calling for Israel to withdraw from Palestinian territories occupied since 1967, including **East Jerusalem**.

Key Points of the UNGA Resolution

- The resolution demands Israel's immediate withdrawal from Palestinian territories, a move that includes the **controversial East Jerusalem**.
- It emphasises the realisation of the **inalienable rights of the Palestinian people**, particularly their **right to self-determination and to establish an independent state**.
- The resolution goes further by demanding that Israel adhere to international law, particularly the advisory opinion issued by the **International Court** in July 2024.
- The court called for an end to Israel's unlawful presence in Palestinian territories, urging the cessation of settlement activities and the evacuation of settlers.
- In addition, the resolution rejects any demographic or territorial changes in Gaza, reaffirming that the region is an integral part of Palestinian territories occupied in 1967.

India's Stance

- India's endorsement is significant, as it reflects the country's longstanding stance on the Palestinian issue and its consistent support for the realisation of a two-state solution.
- In addition to its support for **Palestinian rights**, India also backed a resolution demanding Israel's withdrawal from the occupied **Syrian Golan Heights**.
 - It stressed the illegality of the Israeli settlement construction and other activities in the occupied **Syrian Golan** since 1967.

- Syria tried to retake the Golan Heights during the **1973 Middle East war**. Despite inflicting heavy losses on Israeli forces, the surprise assault was thwarted.
 - Both countries signed an **armistice in 1974** and a **UN observer force** has been in place on the ceasefire line since 1974.
- Israel unilaterally annexed the **Golan Heights in 1981**. The move was not recognised internationally, although the **US Trump Administration** did so unilaterally in March 2019.

(See Figure No. ...)



FACT BOX

Golan Heights

- The Golan Heights is a **rocky plateau** in south-western Syria, about 60km (40 miles) south-west of Damascus and covers about 1,000 sq km.
- Israel seized the Golan Heights from Syria in the closing stages of the **1967 Six-Day War**. Most of the Syrian Arab inhabitants fled the area during the conflict.
- An **armistice line** was established and the region came under **Israeli military control**. Almost immediately Israel began to settle the Golan.

DEVELOPMENT OF TOURISM SITES AND INFRASTRUCTURE

CONTEXT:

The Centre has approved **interest-free loans** worth Rs 3,295 crore to States for the development of tourism sites and infrastructure. As part of this initiative, 40 new projects have been identified across 23 States.

About the Scheme:

- This initiative, called **Special Assistance to States for Capital Investment (SASCI)**, aims to support the comprehensive development of iconic tourist centres in India.



Figure No. 03

- The scheme offers **interest-free loans** for a period of **50 years** to the States, helping them enhance tourism infrastructure, promote tourism in lesser-known locations, and market these destinations globally.
- The initiative is **part of a broader strategy** to enhance the tourism sector, promote lesser-known destinations, and boost local economies by improving infrastructure and facilities for tourists.
- The objectives of the scheme include:
 - **Development of Tourism Infrastructure:** The funds will be used for the development of infrastructure such as roads, hotels, transport facilities, and other amenities to make these sites more attractive and accessible to tourists.
 - **Promotion of Lesser-Known Destinations:** The Tourism Ministry is encouraging States to develop new and lesser-known tourism destinations, like **Bateshwar in Uttar Pradesh, Ponda in Goa, Gandikota in Andhra Pradesh, and Porbandar in Gujarat**, in order to reduce the pressure on already overcrowded popular destinations.
 - **Sustainable Growth and Employment:** By funding these projects, the scheme aims to generate sustainable growth in local economies and create employment opportunities in tourism-related sectors.
 - **Global Branding and Marketing:** The scheme also envisions branding and marketing of these tourist centres at a global scale to attract international visitors, thereby boosting the tourism sector in India.
 - **Collaboration with Hospitality Chains:** The Tourism Ministry is collaborating with global hospitality chains to train Indian youth in the tourism sector. Upon completion of training, they will be absorbed by these hotel chains, improving employment prospects for young Indians in the hospitality industry.



FACT BOX

India's Tourism Sector

- India has been ranked **39th among 119 countries** in the latest **TTDI 2024 report** published by the **World Economic Forum**.
- In 2023, India recorded 9.24 million foreign tourist arrivals (FTAs), a growth of 43.5% compared to 6.44 million in 2022. FTAs contributed Foreign Exchange Earnings (FEEs) of Rs 2.3 lakh crores (Provisional estimates), a growth of around 65% in the same period compared to Rs. 1.39 lakh crores in 2022.
- Over the last few years, India has built extensive tourism infrastructure worth approximately \$1 billion (Rs. 7,000 Crores) to improve the tourist experience.

- In 2022-23, 76.17 million direct and indirect jobs were created due to tourism in India, compared to 70.04 million direct and indirect jobs created in 2021-22.
- Initiatives Implemented to Enhance Tourism Promotion
 - Swadesh Darshan
 - National Mission on Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive (PRASHAD)
 - Assistance to Central Agencies for Tourism Infrastructure Development Scheme
 - Dekho Apna Desh initiative
 - Vibrant Village Programme
 - SWADESH 2.0
 - Regional Connectivity Scheme – Udaan

GOVERNMENT'S TEA AUCTION MANDATE

CONTEXT

The **North Eastern Tea Association (NETA)** has raised concerns over the Central government's new mandate, requiring 100% of dust-grade tea to be sold exclusively through public auctions, set to take effect on April 1, 2024. NETA argues that this policy limits producer flexibility and could harm the diverse tea industry's operational needs.

What's the issue?

- The Central government of India has introduced a new policy that mandates **100% of dust-grade tea** produced in specific states, including Assam and other northeastern states, to be sold exclusively through public auctions.
- This policy is part of the **Tea (Marketing) Control (Amendment) Order, 2024**, and is set to come into effect on **April 1, 2024**.
- The **North Eastern Tea Association (NETA)**, which represents tea producers in the region, has raised concerns about the policy, arguing that it restricts the **freedom of producers to choose between public auctions and private sales**, both of which have coexisted for over 150 years in the Indian tea industry.

NETA's Opposition to the Mandate

- **Freedom of Choice in Sales Mechanisms:** Tea producers should have the autonomy to decide between selling through public auctions or private sales. A **one-size-fits-all** policy does not suit the diverse business models of tea producers in different regions. Some producers may find private sales more efficient based on their operations, while others may prefer public auctions.
- **Inefficiencies in the Auction System:**
 - ◆ **Extended Printing Times:** In **Sale No. 48** at the Guwahati auction, the printing time for results was extended to **28 days**, instead of the usual **17 days**.

- ◆ **High Unsold Inventory:** Around **40% of CTC (crush, tear, curl) teas** remained unsold at the Guwahati auction due to factors like **lot size** and **divisibility rules**.
- ◆ **Lot Size and Divisibility:** NETA suggested that the **minimum lot size** for peak production months should be fixed at **20 bags** (instead of the current rule of 30), and **divisibility** for lots exceeding **30 bags** should be allowed.
- ▶ **Impact on Diverse Business Models:** There is need for flexibility in the tea sales mechanism, allowing producers to choose the most efficient model based on their unique business needs. Imposing a **single, mandatory system** would limit operational flexibility and could be detrimental to certain producers.

Tea Consumption in India:

- In India, tea is cultivated in almost 15 states, of which **Assam, West Bengal, Tamil Nadu, and Kerala** are the **major tea-growing states**, accounting for nearly 98% of the total production.
- India is also known for producing some of the finest teas in the world, like the **Darjeeling, Assam, Sikkim, Nilgiris, and Kangra tea varieties**.
 - ▶ **Darjeeling Tea**, called the '**Champagne of Teas**', was the first Indian product to get the **GI (Geographical Identification) tag** in 2004 for its distinctive aroma and flavour.
- **However, the** share of tea exports from India has significantly reduced from **60% in the 1960s** to just **16% in 2023**.
- The stagnant export volume (231.08 million kgs in 2022 vs. 231.69 million kgs in 2023) has contributed to the **demand-supply mismatch** in the domestic market.
- **Climate change** has had a significant impact on tea production in India. **Reduced rainfall** and **increased temperatures** are affecting crop yields.

Tea Crop

- **Family:** Camelia family.
- The cultivated tea plant is a bush with evergreen leaves, the upper surfaces of which are shiny and the undersides matt and paler.
- **Main growing countries are:**
 - ▶ **Asia:** China, India, Japan, Taiwan, Nepal, Sri Lanka, Indonesia, Malaysia, Vietnam, Bangladesh.
 - ▶ **Africa:** Cameroon, Mauritius, Kenya, Rwanda, Zimbabwe.
 - ▶ **South America:** Argentina, Brazil.
 - ▶ **Around the Caspian and Black Seas:** Georgia, Iran and Turkey.
- Tea is a **rain-fed crop**, and inadequate rainfall during crucial months affects the production of premium tea flushes.
- **Robert Bruce** in 1823 discovered tea plants growing wild in upper Brahmaputra Valley.

- **Largest tea-growing region in India:** Assam (*Camillia sinensis assamica*)

Tea Board of India

- **Established in:** 1954 by the Tea Act (1953)
- **Headquarters:** Kolkata
- The Tea Board of India functions as a statutory body under the **Ministry of Commerce**.

North Eastern Tea Association (NETA)

- **Established in:** 1981
- The **North Eastern Tea Association (NETA)** is an association of tea producers' headquartered at Golaghat, Upper-Assam in the state of Assam, India.

INDIA'S PRAGATI PLATFORM

CONTEXT

A recent **University of Oxford** study, "**From Gridlock to Growth: How Leadership Enables India's PRAGATI Ecosystem to Power Progress,**" highlights **PRAGATI platform** has revolutionized project execution in India.

What is PRAGATI Platform?

- India's **PRAGATI (Pro-Active Governance and Timely Implementation)** platform was launched in **2015**
- PRAGATI uses **real-time data, drone feeds, and video conferencing** to monitor projects, streamline processes, and ensure timely execution.
- It connects multiple government agencies, enabling quicker decision-making and better accountability in project execution.

Achievements of PRAGATI

- By June 2023, PRAGATI had reviewed over **340 projects** worth ₹17.05 lakh crore (approx. **\$205 billion**), spanning sectors like **railways, roads, power, and aviation**.
- PRAGATI's efforts have significantly improved the implementation of several key infrastructure projects, some of which had been delayed for decades.
- **Notable Projects Transformed by PRAGATI**
 - ▶ **Bogibeel Rail and Road Bridge, Assam:** **Delayed since 1998**, the project was fast-tracked under PRAGATI, leading to its inauguration in **December 2018**.
 - ▶ **Jammu Udhampur Srinagar Baramulla Rail Link, J&K:** Approved in **1995**, the project faced challenges until PRAGATI's intervention in **2015**. It will connect **Kashmir Valley** to the rest of India and is expected to be completed by **2025**.
 - ▶ **Bengaluru Metro Rail Project, Karnataka:** **Phase 1** was operationalized in **2017** after resolving land acquisition challenges. PRAGATI's support is helping complete **Phase 2** by **2026**.

- ▶ **Haridaspur-Paradeep Rail Line, Odisha:** Stalled for over **10 years**, this **82 km** project was completed after PRAGATI's intervention, halving travel time between mining hubs and **Paradeep Port**.
- ▶ **Dahisar-Surat Highway, Maharashtra-Gujarat:** A **239 km** highway expansion project, delayed due to land acquisition issues, was completed after **PRAGATI's review in 2014**.
- ▶ **Varanasi-Aurangabad Highway, UP-Bihar:** **Stuck for years** due to land acquisition challenges, this road project is nearing completion after **PRAGATI's review in 2016**.
- ▶ **North Karanpura Thermal Power Plant, Jharkhand:** Approved in **2014**, the **1,980 MW** plant faced delays until PRAGATI expedited necessary approvals. It is expected to begin operations in **2024**.
- ▶ **Navi Mumbai International Airport, Maharashtra:** **Delayed since 2007** due to land disputes, PRAGATI's intervention in **2015** led to the resolution of disputes, with the airport set to open by **December 2024**.
- **Environmental and Sustainable Impact:** PRAGATI has not only fast-tracked stalled projects but also promoted **sustainable practices** by integrating **green technologies** and facilitating necessary **environmental clearances** for projects.

- **Language:** Nagaland's official language is English while **Nagamese**, a kind of pidgin Assamese, has become the common lingua.
- **Tribes in Nagaland:** Angami, Ao, Chakhesang, Chang, Kachari, Khamniungan, Konyak, Kuki, Lotha, Phom, Pochury, Rengma, Sangtam, Sumi, Tikhir, Yimkhiung, and Zeliang.
- Nagaland is the **Land of Festivals**, with each tribe having its festivals and customs. Most of Nagaland's festivals revolve around agriculture as that is the main occupation of the people in Naga society. Over 71% population of Nagaland is directly dependent on agriculture.
- The state is also known as the "**Falcon Capital of the World**" as it is the primary stopover roosting site for Amur falcons in places like **Wokha, Longleng, Peren, Dimapur, Phek etc.**
 - ▶ The Hornbill Festival - also called the "**Festival of Festivals**" - is celebrated in Nagaland to encourage intertribal interaction and to promote the cultural heritage of Nagaland.
- **Naga Ghost Chilli:** Naga chilli, considered one of the **world's hottest chillies** based on the **Scoville Heat Units (SHUs)**, is grown in Nagaland.
- **Literacy rate:** 79.55% (much higher than the national literacy rate of 74.04%)

62ND NAGALAND STATEHOOD DAY

Context

Nagaland recently celebrated the 62nd Nagaland Statehood Day on December 1.

About

- The state was formed on December 1, 1963, and since then the day is annually celebrated as **Nagaland Statehood Day**.
- In 1957, Naga leaders and the central government reached an agreement to create a separate region of the Naga Hills. The **State of Nagaland Act, 1962**, was enacted by the Parliament to give Nagaland statehood.
- It was formally recognized as a separate state on **December 1, 1963**, with **Kohima** being declared its capital.



FACT BOX

About Nagaland

- One of the seven sister States, Nagaland is bound by **Assam** in the west, **Myanmar** in the east, **Arunachal Pradesh** and part of **Assam** in the North and **Manipur** in the South.

UGC APPROVES FLEXIBLE UG DEGREE COMPLETION NORMS

CONTEXT

The **University Grants Commission (UGC)** has approved new guidelines that will allow students in **Higher Education Institutions (HEIs)** to shorten or extend the duration of their undergraduate degree programs. This means students will now have the flexibility to finish their degree earlier (**Accelerated Degree Programme or ADP**) or take longer to complete it (**Extended Degree Programme or EDP**), while still meeting the same academic requirements as the standard duration.

Key Details of the New System:

- Under the new guidelines released as part of the Compendium of UGC Regulations, higher education institutions (HEIs) can offer two distinct options –
 - ▶ accelerated degree programme (ADP)
 - ▶ extended degree programme (EDP)
- The UGC's initiative is also in sync with the objectives of the **National Education Policy (NEP) 2020**, which emphasises learner-centric education and skill development.
- **Same Credits, Different Duration:** In both ADP and EDP, students will earn the same number of credits as in the regular degree program, but they will do so in either a shorter or longer time frame.

- ▶ The degree certificate will state that the student has completed the program in a shortened or extended duration, and these degrees will be treated the same as a regular degree for academic and job purposes.
- **Option to Choose Duration:** Students can choose to shorten their program by completing more credits per semester (ADP) or extend their program by taking fewer credits per semester (EDP).
- **Evaluation and Eligibility:** HEIs will form committees to evaluate which students are eligible for the ADP or EDP. These committees will assess students based on their performance during the first or second semester.
 - ▶ The committee will decide whether a student can take on **extra credits (for ADP)** or **reduce credits (for EDP)** to fit the chosen duration.
- **Degree Certification:** Once the student completes the program within their opted duration, HEIs will issue the degree. There is no need to wait for the standard duration to end.
 - ▶ The degree will include a note mentioning that the program was completed in either a shortened or extended time frame.
- **Foreign University Model:** This system of flexible degree durations is similar to what is already offered by several top foreign universities, which allow students to complete their degrees faster or slower based on their preferences.
- **Guidelines for HEIs:** HEIs are allowed to reserve up to 10% of their intake for students who choose the ADP. A committee will review applications from students who want to opt for ADP or EDP after their first or second semester, and select those eligible for the program.
- **Transcripts and Evaluation:** The student's transcripts will reflect the actual courses taken each semester. The evaluation system for these students will remain the same as for regular students. Both ADP and EDP students will undergo the same exams and assessment process as regular students.
- The theme for this year is: **"Amplifying the leadership of persons with disabilities for an inclusive and sustainable future."**
- **History of IDPD:**
 - ▶ The day was proclaimed by the **United Nations General Assembly** in **1992** under resolution **47/3**.
 - ▶ The aim was to promote the **rights** and **well-being** of persons with disabilities and increase awareness of their challenges in various aspects of life (political, social, economic, and cultural).
 - ▶ The **Convention on the Rights of Persons with Disabilities (CRPD)**, adopted in **2006**, further advanced the rights of PwDs in line with the **2030 Agenda for Sustainable Development**.

Initiatives by the Indian Government:

India has implemented several policies and initiatives to empower and include PwDs:

- **Department of Empowerment of Persons with Disabilities (DEPwD):** Created in **2012** under the Ministry of Social Justice and Empowerment, this department focuses on the welfare of PwDs. Renamed in **2014**, it coordinates efforts between various ministries, state governments, NGOs, and other stakeholders.
- **Accessible India Campaign (Sugamya Bharat Abhiyan) - 2015:** It was launched to achieve **universal accessibility** across India, focusing on:
 - ▶ **Built Environment Accessibility** (e.g., public spaces).
 - ▶ **Transportation Accessibility** for independent mobility.
 - ▶ **Information and Communication** accessibility.
 - ▶ **Sign Language Access** through interpreter training.
- **Deendayal Divyangjan Rehabilitation Scheme (DDRS)** provides **grants** to NGOs for projects supporting PwDs' rehabilitation and empowerment, helping them reach their optimal physical, sensory, and intellectual levels.
- **District Disability Rehabilitation Centres (DDRC)** provide **early identification** of disabilities, raise awareness, supply assistive devices, and offer self-employment loans. They also promote a **barrier-free environment**.
- **Assistance to Persons with Disabilities for Purchase/Fitting of Aids/Appliances (ADIP) Scheme:** It grants agencies the funds needed to help PwDs buy **modern aids and appliances** to aid their rehabilitation and enhance economic potential.
- **Schemes for Implementation of Rights of Persons with Disabilities Act 2016 (SIPDA):** It is a comprehensive scheme supporting:
 - ▶ **Creation of Barrier-Free Environments.**
 - ▶ **Accessible India Campaign.**
 - ▶ **Skill Development** for PwDs.
 - ▶ Issuing **Unique Disability Identification (UDID)** cards.

INTERNATIONAL DAY OF PERSONS WITH DISABILITIES 2024

CONTEXT

The **International Day of Persons with Disabilities (IDPD)**, observed annually on **December 3**, celebrates the resilience, contributions, and leadership of persons with disabilities (PwDs) worldwide.

What is IDPD?

- The **International Day of Persons with Disabilities (IDPD)**, observed annually on **December 3**, celebrates the resilience, contributions, and leadership of **persons with disabilities (PwDs)** worldwide.
- This day is a reminder of the global commitment to **foster inclusivity**, advocate for the rights of PwDs, and create equitable opportunities for all.

- ▶ **Awareness Generation** and training for stakeholders.
- ▶ **Research and Development** for suitable aids.
- **Divya Kala Mela is a national-level fair** celebrating **Divyangjan artisans**. It focuses on showcasing the artistic contributions of PwDs, highlighting their skills and creating a platform for them to showcase their work.
- **PM-DAKSH Yojana: It is a skill development platform** for PwDs, connecting them to **training organizations** and **employers**. The scheme consists of two modules:
 - ▶ **Divyangjan Kaushal Vikas:** Skill training for PwDs.
 - ▶ **Divyangjan Rozgar Setu:** Connecting PwDs with employment opportunities.

- Popularly known as **POA, the SC/ST Act**, lists 22 offences relating to various patterns or behaviours inflicting criminal offences and breaking the self-respect and esteem of the scheduled castes and tribes community.
 - ▶ This includes denial of economic, democratic and social rights, discrimination, exploitation and abuse of the legal process.
- **'Police' and 'Public Order'** are **State subjects** under the **Seventh Schedule (List-II)** to the Constitution of India. The primary responsibility for implementation of the Act rests with the State Governments/UT Administrations.

SCHEDULED CASTES AND SCHEDULED TRIBES (PREVENTION OF ATROCITIES) ACT

CONTEXT

The Union government told the Lok Sabha that **“growing awareness, wider publicity, and capacity building of police personnel”** were among the reasons for the increasing number of cases being registered across the country under the **Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act**.

Key-highlights

- Data from the **National Crime Records Bureau (NCRB)** show that over 67,000 cases had been registered in 2022 under the SC/ST Act for crimes of atrocities against people belonging to Scheduled Castes (SC) and Scheduled Tribes (ST).
- This is the highest number of cases registered under this Act since 2013.
- Among these cases, 57,582 cases were registered with regard to atrocities against people belonging to SC communities, and 10,064 cases were registered with regard to atrocities against people from ST communities.



FACT BOX

Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act of 1989 (SC/ST Act)

- The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act of 1989 (SC/ST Act) is a law that aims to prevent crimes against members of Scheduled Castes and Scheduled Tribes (SCs and STs).
- The Act came into effect in 1990.

CONTROVERSIES AROUND PARDONING POWER

CONTEXT

U.S. President Joe Biden has granted an **unconditional pardon** to his son, **Hunter Biden**, who was facing sentencing for **federal tax and gun convictions**. This means that Hunter Biden is forgiven for these crimes and will not have to serve any punishment. The pardon also covers any possible federal crimes he may have committed between 2014 and 2024.

Can the President Grant Pardons?

- Yes, under the **U.S. Constitution**, the President has the **absolute power to grant pardons** for **federal criminal offenses**.
- This includes forgiving someone for a crime before or after a conviction, and it applies to all crimes except those related to **impeachment**. A pardon **relieves** a person from punishment but **does not remove the criminal record**.
- **What's the Controversy?** The use of **presidential pardons** has been controversial throughout history. Some notable examples include:
 - ▶ **George Washington** pardoning leaders of the **Whiskey Rebellion** in 1795.
 - ▶ **Bill Clinton** pardoning his half-brother **Roger Clinton** in 2001.
 - ▶ **Donald Trump** pardoning his father-in-law's father in 2020.
- In Hunter Biden's case, **President Joe Biden** granted the pardon, which is controversial because **he had earlier promised not to do so**. Biden justified his action by saying that his son was **“unfairly prosecuted”** and was **targeted only because he is his son**. Hunter Biden had been convicted by a jury for illegally purchasing and possessing a gun while being a drug user. He also pleaded guilty to **tax evasion**.

What's the Situation in India?

- In **India**, the **President** and **Governor** have the power to **grant pardons** (forgive someone for a crime).

- This is mentioned in **Article 72** (for the President) and **Article 161** (for the Governor) of the **Constitution**. These powers are exercised on the **advice of the Council of Ministers**. A **pardon** in India **removes** the person's conviction and punishment.
- Like in the U.S., the use of this power has led to **political controversies** in India. For instance, there have been cases where the government's decision to accept or reject mercy petitions has been criticized as politically motivated.
- The **Supreme Court** of India, in the **Epuru Sudhakar case (2006)**, stated that **pardon decisions** could be **judicially reviewed** if they are found to be **arbitrary** or influenced by personal or external factors.
- ▶ Additionally, directors of **Central Cooperative Banks** will now be allowed to serve on the board of **State Cooperative Banks**, which could improve the coordination and management of cooperative banks.
- **Freedom in Remuneration of Statutory Auditors:** The amendment seeks to give greater flexibility to banks regarding the **remuneration of statutory auditors**, allowing them to set the pay structure as per their needs.
- **Changes to Reporting Dates:** The bill proposes to change the **reporting dates** for banks for **regulatory compliance** to the **15th and last day** of each month, instead of the previous system of the second and fourth Fridays.
- **Enhancing Investor and Customer Protection:** The amendments would **strengthen banking governance** and enhance **investor protection**, particularly through improved nomination processes for depositors and safer banking practices.

BANKING LAWS (AMENDMENT) BILL, 2024

CONTEXT

The **Banking Laws (Amendment) Bill, 2024** was passed in the **Lok Sabha** on **December 3, 2024**, marking the first bill to be approved after the end of the week-long parliamentary logjam. The bill, which was introduced by **Finance Minister Nirmala Sitharaman**, aims to strengthen governance in the banking sector and improve customer convenience.

Key Provisions of the Bill:

- The **Banking Laws (Amendment) Bill 2024** aims to improve banking governance and enhance investors' protection.
- The amended law would strengthen governance in the banking sector and enhance customer convenience.
- **Amendments** are proposed in the:
 - ▶ Reserve Bank of India Act, 1934
 - ▶ Banking Regulation Act, 1949
 - ▶ State Bank of India Act, 1955
 - ▶ Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970
 - ▶ Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980
- **Nomination Facility:** The bill allows **bank account holders** to have **up to four nominees** for their accounts, providing more flexibility in case of the account holder's demise. **Locker holders** will have **successive nominations**, meaning that only one nominee can be appointed at a time, but it can be updated as needed.
- **Redefining 'Substantial Interest' for Directorships:** The bill proposes increasing the cap for **'substantial interest'** for directorships from Rs 5 lakh to Rs 2 crore, a threshold that had remained unchanged for nearly **six decades**.
- **Tenure of Directors in Cooperative Banks:** The tenure for directors (excluding the chairman and whole-time directors) in cooperative banks will be extended from **8 years to 10 years**, bringing it in line with the **Constitution (Ninety-Seventh Amendment) Act, 2011**.

INDIA TO REVISE BASE YEAR

CONTEXT

The Government of India will revise the **base year** for calculating **Gross Domestic Product (GDP)** from 2011-12 to 2022-23, marking the first update in over a decade.

What is base year?

- The base year is a benchmark for calculating GDP by eliminating the effects of inflation, allowing for a comparison of economic growth over time.
- Updating the base year is crucial because it ensures that GDP data reflects the latest economic activities, consumption patterns, and industry contributions.
- The shift from **2011-12 to 2022-23** is particularly relevant because the Indian economy has undergone substantial transformations over the past decade.
 - ▶ New sectors have emerged
 - ▶ Digitalisation has accelerated
 - ▶ Economy has adapted to post-pandemic realities
- This change aims to better reflect the structural shifts in India's economy and provide a more accurate foundation for economic policymaking.
- A **26-member Advisory Committee on National Accounts Statistics (ACNAS)**, chaired by economist **Biswanath Goldar**, will oversee the transition.
- The GDP base year of 2011-12 was fixed in January 2015 when **the Central Statistics Office (CSO)**, now part of the **Ministry of Statistics and Programme Implementation (MoSPI)**, revised the base year for calculating national accounts.
- This extends beyond GDP to include updates for the Consumer Price Index (CPI), Index of Industrial Production (IIP), Wholesale Price Index (WPI), and Producer Price Index (PPI).
- The new GDP series is scheduled for rollout in February

FY26 and will encompass key estimates, including the FY26 Q3 estimate, FY26 second advance estimate, FY25 first revised estimate, and FY24 second revised estimate.

- Similarly, a revised CPI series for inflation will be introduced in February FY26, followed by an updated IIP series in March FY26. These revisions aim to provide a more accurate reflection of the economy's structural and sectoral shifts.

INDIA'S GDP GROWTH SLOWS

CONTEXT

India's **GDP growth** has sharply slowed from **8.1%** to **5.4%** in the **second quarter of FY25**, according to government data released recently. This marks a significant drop from the previous quarter and aligns with predictions from various economists.

Key Reasons for Slowdown:

Weak Consumption:

- Food Inflation:** Retail food inflation surged to **10.87%** in October, which reduced the purchasing power of consumers.
 - Urban Private Consumption:** Higher food prices, **stagnating wages**, and **higher borrowing costs** dampened urban demand.
- Adverse Weather Impact:** The mining and electricity sectors faced disruptions due to adverse weather conditions, further slowing down growth. Although agriculture saw **3.5% growth**, the sector's performance had been weaker in the previous quarters.
- Weaker Corporate Earnings:** Corporate earnings in the July-September quarter were weak, with Indian companies reporting their **worst performance in four years**, contributing to the overall economic slowdown.
- Global Economic Factors:** Reduced global demand and slow recovery from previous disruptions also contributed to the slowdown.
- The slowdown in India's economic growth highlights challenges like **high inflation**, **low consumption**, and **sector-specific disruptions**

Sectoral Performance:

- Manufacturing:** Growth in the manufacturing sector slowed to **2.2%**. The **Mining & Quarrying** sector even saw a **negative growth of -0.1%** due to the disruptions caused by the rains.
- Agriculture:** The **Agriculture and Allied sectors** bounced back with a **3.5% growth**, after lower growth in the previous quarters.
- Tertiary Sector:** This sector, which includes services like trade, communication, and tourism, grew by **7.1%** in Q2 of FY 2024-25, up from **6.0%** in the same period last year. Specific sectors like **trade, hotels, transport, communication, and broadcasting services** grew by **6.0%**.

- Construction:** This sector grew by **7.7%** in Q2 and **9.1%** in the first half (H1) of FY25, supported by strong domestic demand for finished steel.



FACT BOX

Gross Domestic Product (GDP)

- GDP stands for "Gross Domestic Product" and represents the total monetary value of all final goods and services produced (and sold on the market) within a country during a period of time.
- It is the macroeconomic factor that determines a country's economic efficiency and capacity.**
- Formula:**
 - GDP = private consumption + gross private investment + government investment + government spending + (exports – imports).
 - or, expressed in a formula:
 - GDP = C + I + G + (X – M)

VIZHINJAM PORT'S FIRST PHASE OF OPERATIONS COMPLETED

CONTEXT

Vizhinjam Port is set to begin its commercial operations, following the completion of a four-month trial-run phase.

Details of the Completion:

- The Vizhinjam Port is developed by **Adani Ports and SEZ** under a **public-private partnership**.
- It is India's latest **international deep-water transshipment facility**.
- Vizhinjam's strategic location, deep-water capacity, and proximity to major shipping lanes position it as a competitive alternative to Colombo, the region's primary transshipment hub.
 - Vizhinjam has been an important port since ancient times, serving as a key maritime trade centre for the **Kingdom of Travancore**. It played a significant role in the spice trade, **connecting Kerala to global trade routes**.
 - The location of the port facilitated cultural and economic exchanges between Kerala and various civilizations, including the **Greeks, Romans, Arabs and Chinese**, which influenced the region's culture, cuisine and architecture.
- The new port aims to bolster India's trade capabilities while attracting global shipping traffic.
- Vizhinjam is envisaged to be an all-weather, multipurpose, deepwater, mechanised, greenfield port that seeks to garner the lion's share of the Indian transshipment cargo now being handled by the nearby foreign ports and emerge as the future transshipment hub of the country.

- During its **five-month trial run**, **70 cargo ships**, including **ultra-large motherships**, successfully docked at the port. In this period, a total of **1.47 lakh containers** were handled, demonstrating the port's operational capabilities.
- The port, developed by **Adani Ports and Special Economic Zone Ltd (APSEZ)**, part of the **Adani Group**, was built under a **public-private partnership model** with an investment of approximately **₹8,867 crore**.
- Vizhinjam International Seaport Limited**, **Adani Vizhinjam Port Private Limited**, and the **Indian Institute of Technology, Madras** played key roles in completing all necessary steps to meet the project's agreement conditions.
- The port is set to become a **key player in regional trade**, potentially serving as a gateway for trade between **Southeast Asia, the Middle East and Africa**.

ARITTAPATTI TUNGSTEN MINING

CONTEXT

Tamil Nadu State Government has requested the Centre to cancel the **tungsten mining rights** awarded to a private company in Madurai district, considering the **biodiversity heritage site** in the proposed area.

About the region

- The Nayakkarpatti tungsten block comprises six villages, including Arittapatti in Madurai, which is a **notified biodiversity heritage site**.
- Hillocks in Arittapatti village have rich biological significance with the presence of around 250 bird species, including 3 flagship Raptor species – Laggar Falcon (Falco jugger), Shaheen Falcon (Falco peregrines), and Bonelli's Eagle (Aquila fasciata).
- It is also famous for archaeological monuments, including **cave temples, sculptures, Jain symbols, Tamil Brahmi scripts, and Pancha Pandavar stone beds**.
- Any mining activity will cause irreparable damage to these sites.

About Tungsten

- Tungsten is a critical component in a wide range of industries, including aerospace, automotive, construction, and electronics.
- It is a rare and highly valued metal that is found naturally in the Earth's crust.
- The major sources of tungsten are minerals scheelite (Calcium tungstate, CaWO_4) and Wolframite [mixture of ferrous tungstate and manganous tungstate, $(\text{Fe,Mn})\text{WO}_4$] which are predominantly hydrothermal in origin.

Properties:

- Tungsten has a melting point of 3,422 °C, the highest of all metals and is resistant to all acids at ordinary temperatures.
- It has good corrosion resistance, good thermal & electrical conductivity and low co-efficient of expansion.
- It is elastic, ductile and has high tensile strength and can be drawn into very thin wires
- Tungsten is a critical component in a wide range of industries, including **aerospace, automotive, construction, and electronics**
- Two primary mining methods:** underground mining and open-pit mining.
- It is one of the '**30 critical minerals**' identified by the Centre.
 - Others are:** Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Vanadium, Zirconium, Selenium and Cadmium.

GLOBAL TREATY NEGOTIATIONS ON PLASTIC POLLUTION

CONTEXT

The ongoing **global negotiations** in **Busan, South Korea**, for a treaty to combat **plastic pollution** are being led by the **Intergovernmental Negotiating Committee (INC-5)**. The chair released a **draft document** with a key focus to create the world's first set of **global rules** to reduce plastic pollution.

The Draft Document:

- The chair released a **draft document** outlining two key options for **plastic production cuts**, a **highly contentious issue** in the negotiations. These options are:
 - Option 1: No target to reduce plastic production.** This option does not include any provisions or targets aimed at cutting the production of plastic.
 - Option 2: Setting global targets to reduce plastic production.** This option includes provisions to curb plastic production, which was proposed by **Panama**.
- The **debate over production cuts** has been a major point of contention among countries, with several nations opposing it.
- India** has not supported the proposal to cut plastic production. Countries like **Saudi Arabia, Iran, and Russia** have strongly opposed production cuts, with Saudi Arabia calling it a "**red-line issue**".



FACT BOX

Plastic Pollution

- According to a **United Nations report**, the world is producing around **430 million tonnes of plastics** every year of which two-thirds are for short-term use.
- About **350 million tonnes of plastic waste** are generated every year of which less than **10 percent is recycled**, about 15 percent is incinerated while the remaining is dumped in landfills or littered on land, rivers, lakes, and the oceans.
- It is estimated that **11 million tonnes of plastics** enter the oceans every year and this is projected to triple in the next two decades.
- **This has led to adverse economic, social, environmental and health impacts.**
 - ▶ **Health:** Plastics can take up to 500 years or more to decompose and emit harmful pollutants that degrade the environment and are harmful to humans, and animals including livestock, aquatic, and marine life.
 - ▶ **Environment:** Plastic waste dumped in soils affect soil quality, soil biodiversity, and groundwater aquifers.
 - ▶ **Biodiversity:** Cases of wild animals, birds and cattle dying due to the ingestion of microplastics are not uncommon.

Plastic Waste Problem in India:

- India produces about **24 million tonnes of plastic packaging annually**, but the country only has the capacity to **recycle 9.8 million tonnes**.
- Around **20% of the plastic waste** is collected, and the rest is not properly managed.
- This leads to **massive plastic pollution**, and there are increasing calls for **reducing plastic production** itself.

Major initiatives to end plastic pollution

- **Swachh Bharat Abhiyaan:** In 2014, the Indian government launched the Swachh Bharat Abhiyaan (Clean India Mission) to make India cleaner and free from open defecation and litter.
- **GloLitter Partnerships Project:** Launched by the **International Maritime Organization (IMO)** and the **Food and Agriculture Organization of the United Nations (FAO)**, the project aims to prevent and reduce marine plastic waste from shipping and fisheries.
- **Global treaty:** In May 2022, the fifth **United Nations Environment Assembly (UNEA 5.2)** adopted the decision to initiate negotiations for a **new legally binding, global treaty to end plastic pollution**.

- **Ban on single-use plastic:** India has taken sound and effective measures for plastic waste management by putting a ban on **single-use plastic items** (having low utility and high littering potential) and imposing **Extended Producer Responsibility (EPR)** on plastic packaging.
- **Plastic Waste Management (Amendment) Rules, 2021**, prohibited the manufacture, import, stocking, distribution, sale, and use of SUP, including polystyrene and expanded polystyrene, commodities

INDIA'S CRITICALLY ENDANGERED SPECIES

CONTEXT

World Wildlife Conservation Day, observed on **December 4**, serves as a reminder to reflect on India's biodiversity and the urgent need for better protection and conservation efforts. India's role as a **megadiverse** country places it at the center of global conservation efforts.

India's Biodiversity and Challenges in Conservation

- India is a **megadiverse** country, hosting a remarkable array of species despite covering only **2.4%** of the world's land area.
- With **7-8%** of all recorded species, India is home to over **45,000 species of plants** and **91,000 species of animals**.
- The country has **10 biogeographic zones** and is particularly rich in **mammals, birds, reptiles, amphibians, fish, and plants**, with India accounting for a significant proportion of the world's species:
 - ▶ **Mammals:** 8.58%
 - ▶ **Avian Species:** 13.66%
 - ▶ **Reptiles:** 7.91%
 - ▶ **Amphibians:** 4.66%
 - ▶ **Fish:** 11.72%
 - ▶ **Plants:** 11.80%
- India is home to **four of the world's 34 biodiversity hotspots:** the **Himalaya, Indo-Burma, the Western Ghats-Sri Lanka, and Sundaland**, which makes it a key area for global biodiversity.

Critically Endangered Species in India

- As of 2022, India is home to **73 critically endangered species** according to the **IUCN**, a significant rise from the **47 species** identified in 2011. This increase is partly due to **improved monitoring** and **data collection** rather than a significant rise in extinctions.
 - ▶ **Mammals:** Of the **nine** critically endangered mammal species in India, **eight are endemic**, meaning they are found only in India and nowhere else in the world. These species include:

- ◆ Kashmir Stag (Hangul)
- ◆ Malabar Large-spotted Civet
- ◆ Andaman Shrew
- ◆ Nicobar Shrew
- ◆ Jenkin's Shrew
- ◆ Namdapha Flying Squirrel
- ◆ Large Rock Rat
- ◆ Leafletted Leaf-nosed Bat
- ▶ **Birds:** The **Great Indian Bustard**, a critically endangered bird species, is under threat from **human-made structures** such as **powerlines**, especially in regions like **Rajasthan**. Despite being an important species, it often does not receive the attention it deserves for its conservation.
- ▶ **Carnivores:** While iconic carnivores such as **lions**, **tigers**, and **cheetahs** attract significant attention, they are only a few among the many endangered species that need protection.

SPADE-TOOTHED WHALE EXAMINATION

CONTEXT

A spade-toothed whale, believed to be the world's rarest whale species, is being examined in New Zealand. This is the first time that a complete specimen of the spade-toothed whale is being dissected, providing scientists with valuable insights into the species.

Key Facts About the Species

- **Spade-toothed whales** are named after their **spade-shaped teeth**, resembling the "flensing" blade once used to strip whales of their blubber.
- Almost nothing is known about the enigmatic species.
- Only **seven specimens** of this species have been documented since the 1800s, with all but one found in **New Zealand**.

New Zealand is a whale-stranding hotspot, with more than 5,000 episodes recorded since 1840.

The **first spade-toothed whale bones were found in 1872 on New Zealand's Pitt Island**. Another discovery was made at an offshore island in the 1950s, and the bones of a third were found on **Chile's Robinson Crusoe Island** in 1986.

- These whales are **deep divers**, rarely seen at sea, and live in some of the **deepest ocean trenches** in the **South Pacific Ocean**, where they hunt squid and small fish.

KALASA-BANDURI PROJECT

Context

Despite the Union government's indifference to **Karnataka's demands** for approval to proceed with the **Kalasa-Banduri project** along the **Goa border**, the state government continues to exert pressure on the Centre.

About Kalasa-Banduri Project

- The **Kalasa-Banduri project** is a **water diversion scheme** proposed by Karnataka to address the **drinking water needs** of several **arid districts** in the state, including **Belagavi, Dharwad, Bagalkot, and Gadag**.
- The project involves constructing **barrages** (small dams) on two **tributaries** of the **Mahadayi River**: the **Kalasa** and **Banduri** streams.
- The goal is to divert water from these streams into Karnataka's **Malaprabha River** basin, which is a tributary of the **Krishna River**, to meet the drinking and irrigation water requirements of these water-scarce areas.

Key Features:

- ▶ **Location:** The project targets the **Mahadayi River** which originates in the **Western Ghats** in **Karnataka's Belagavi district**, flowing through **Goa** before joining the Arabian Sea.
- ▶ **Water Diversion:** The plan is to construct barrages on the Kalasa and Banduri streams, which are tributaries of the Mahadayi, and then divert the water towards Karnataka's Malaprabha River.
- ▶ **Purpose:** The main aim of the project is to **supply drinking water** to the districts in Karnataka that face chronic water shortages.
- ▶ **History:** The project was first proposed in the **1980s** but has faced repeated setbacks due to a **long-standing dispute** between Karnataka and Goa over the sharing of the Mahadayi River water.

Background of the Dispute:

- **Mahadayi River:** The river is shared between Karnataka and Goa. It rises in **Karnataka** and flows through **Goa**, where it is known as the **Mandovi River**.
- The river is **rain-fed**, making it essential for both states, particularly Goa, which depends on it for drinking and irrigation needs.
- **Inter-state Dispute:** Goa has objected to Karnataka's plans to divert water, arguing that it would impact the availability of water for its own needs. **Maharashtra** is also involved in the dispute due to its interest in the shared water resources.
- The issue has been **in the courts** for years, with both states unable to reach a resolution.

GAGANYAAN MISSION

CONTEXT

The **Indian Space Research Organisation (ISRO)** has successfully completed the **Initial Phase of Training** for the Gaganyatris (astronauts) in collaboration with **NASA** as part of the **joint ISRO-NASA mission** to the **International Space Station (ISS)**. This marks a significant step toward India's **maiden crewed space mission**, the **Gaganyaan mission**.

About the Gaganyaan Mission

- The **Gaganyaan mission**, meaning ‘celestial vehicle’, will send astronauts into **Low Earth Orbit (LEO)** about **400 km above Earth**. The mission will last **three days**, with the spacecraft returning safely to Earth and landing in the **Indian Ocean**.
- The primary goal is to **demonstrate India’s ability** to launch and bring back astronauts safely to Earth.
- **Astronauts:** The first batch of **astronauts** (referred to as **Gaganyatris**) are four **Indian Air Force (IAF)** pilots: **Group Captains Prashanth Balakrishnan Nair, Ajit Krishnan, Angad Pratap, and Wing Commander Subhanshu Shukla**.
- **Launch Vehicle:** The mission will use the **Launch Vehicle Mark-3 (LVM3)**, India’s heaviest and most powerful rocket, to carry the crew into space.
- **Mission Phases:** The mission will include **four test flights**, including two **uncrewed flights** and one with a **humanoid robot** to test systems before the final crewed flight.
 - **TV-D1 (October 2023):** The first test successfully demonstrated the **crew escape system** in case of a malfunction.
 - **TV-D2 (2024):** The second test will focus on testing **orbital modules** and **re-entry technologies**.

Significance of the Gaganyaan Mission

- **Advancing Scientific and Technological Expertise:** The mission will provide data on **microgravity, radiation, and human physiology**, advancing India’s knowledge in these areas, which can have broader scientific and health applications.
- **Inspiring the Next Generation:** It will inspire **young Indians** to pursue careers in **STEM fields** (science, technology, engineering, and mathematics), contributing to long-term educational growth and innovation.
- **Global Space Cooperation and Prestige:** The mission showcases India’s capability to participate in international space projects, including collaborations with the **International Space Station (ISS), Artemis Program, and Lunar Gateway**. It also raises India’s **global prestige** as a **space-faring nation**.
- **Social and Economic Impact:** The mission is expected to generate **economic benefits** through **job creation** and innovations in sectors like **education, healthcare, agriculture, disaster management, and environmental protection**.



FACT BOX

India’s Growing Space Power

- The **Gaganyaan Mission** places India in an elite group of nations—the **United States, Russia, and China**—that have sent astronauts into space using their own **indigenous rockets**.

- Success in the Gaganyaan mission would further solidify **ISRO’s** status after recent triumphs like the **Chandrayaan Mission** to the Moon and the **Aditya L-1** mission to study the Sun.

SYRINGE TIDE OF 1987

CONTEXT

The story of the **Syringe Tide of 1987** and the response to the **HIV/AIDS crisis** highlights the importance of **proper waste management** and **public health** in addressing environmental and health risks.

About

- The **Syringe Tide of 1987** was an unfortunate event where **medical waste** including syringes washed up on U.S. beaches.
- Occurring during the **HIV/AIDS epidemic**, it fueled fears about disease transmission and led to the **Medical Waste Tracking Act of 1988**, regulating biomedical waste disposal.
- The incident also influenced **global waste management** practices, including in India, where it spurred the introduction of the **Biomedical Waste (Management and Handling) Rules in 1998**.
- This event highlights the connection between **public health crises and stronger environmental regulations**.
- **International Environmental Standards:** The U.S. response to the **syringe tide** influenced global approaches to **medical waste management**.
 - In India, this indirectly contributed to the introduction of the **Biomedical Waste (Management and Handling) Rules, 1998**. The international influence of the U.S. laws and their adoption in India provides insights into **environmental governance** and **policy evolution** across countries.
- The management of **biomedical waste** continues to be a pressing issue, especially in developing countries, with concerns regarding **public health risks** (e.g., infections) and **environmental degradation**. The **HIV/AIDS epidemic** remains an ongoing challenge in many parts of the world, making it relevant to public health discussions and **international health regulations**.
- **Health and Environment Governance:**
 - **India’s Response:** India introduced the **Biomedical Waste Management and Handling Rules (1998)** after the global incident, marking an important development in **Indian environmental law**.
 - **Judicial Intervention and Environmental Justice:** The **Dr. B.L. Wadehra vs. Union of India (1996)** case is a key example of **judicial intervention** that spurred action on waste management in India.
- **Challenges in Biomedical Waste Management:** Despite regulatory improvements, challenges remain, especially in **rural and resource-limited settings**. Issues such

as **non-compliance**, the **lack of infrastructure**, and **occupational health hazards** for healthcare workers are relevant for understanding the **implementation gaps** in **healthcare policy**.



FACT BOX

What is HIV (human immunodeficiency virus)?

- **HIV (human immunodeficiency virus)** is a virus that attacks cells that help the body fight infection, making a person more vulnerable to other infections and diseases.
- It is spread by contact with certain bodily fluids of a person with HIV, most commonly during unprotected sex (sex without a condom or HIV medicine to prevent or treat HIV), or through sharing injection drug equipment.
- If left untreated, HIV can lead to the disease **AIDS (acquired immunodeficiency syndrome)**.
 - ▶ **AIDS** is the **late stage of HIV infection** that occurs when the body's immune system is badly damaged because of the virus.
- **Treatment:** The human body can't get rid of HIV and no effective HIV cure exists. However, effective treatments are available that enable individuals to manage the virus and lead healthy lives.
- **Antiretroviral Therapy (ART):** ART consists of medications specifically designed to treat HIV. When taken consistently as prescribed, ART can significantly reduce the amount of HIV in the bloodstream, a process known as viral suppression.
 - ▶ **Viral Load:** The term "viral load" refers to the amount of HIV present in the blood. ART can lower this to very low levels, and if the viral load becomes so low that it is undetectable by standard laboratory tests, this is referred to as having an undetectable viral load.
 - ▶ **Living with HIV:** Individuals with HIV who maintain an undetectable viral load through consistent ART can live long, healthy lives. Importantly, they will not transmit the virus to HIV-negative partners through sexual contact.
- **Prevention Methods:** In addition to treatment, there are effective strategies to prevent HIV transmission:
 - ▶ **Pre-Exposure Prophylaxis (PrEP):** PrEP is a medication taken by individuals at high risk of contracting HIV to help prevent infection from sexual activity or injection drug use.
 - ▶ **Post-Exposure Prophylaxis (PEP):** PEP involves taking HIV medications within 72 hours after a potential exposure to the virus, reducing the likelihood of HIV establishing an infection.
- **India's Measures:**
 - ▶ National AIDS and STD Control Programme (2021-2026)
 - ▶ HIV and AIDS (Prevention and Control) Act 2017

INDIA TESTS SUBMARINE-LAUNCHED BALLISTIC MISSILE

Context

India has successfully tested a **nuclear-capable ballistic missile** called the **K4** from a **nuclear-powered submarine** in the **Bay of Bengal**, marking a significant advancement in the country's defense capabilities. The test was conducted from the submarine **INS Arighaat**, which is based off the coast of **Visakhapatnam**.

Key Details:

- The K4 missile, which has a range of about **3,500 km**, was tested for nearly its full range. This missile is designed to be launched from submarines, providing India with the ability to strike from the sea.
- The missile was launched from the **INS Arighaat**, India's second **Arihant-class submarine**.
 - ▶ This submarine was commissioned in **August 2023** to strengthen India's **nuclear deterrence**.
- **India's Strategic Capability:** With this test, India joins a **small group of countries** that can launch nuclear missiles from **land, air, and undersea**. This boosts India's **nuclear deterrence** by diversifying its missile launch platforms.
- The K4 missile has been tested several times before, though from **submersible platforms** instead of a fully functional submarine. This test from a **nuclear-powered submarine** is the first of its kind.
- The K4 is a **solid-fuelled missile**, which makes it more reliable and quicker to launch compared to liquid-fuelled missiles.



FACT BOX

Nuclear Submarine

- India's nuclear submarines are advanced naval vessels powered by nuclear reactors, enabling them to operate underwater for extended periods without the need to surface frequently.
- Nuclear-powered submarines are of three kinds.
 - ▶ **SSN:** The one that carries conventional weapons is called an SSN.
 - ▶ **SSGN:** The second type is capable of carrying guided missiles with conventional warheads.
 - ▶ **SSBN:** The third, and typically the largest and most complex, is the one that is capable of carrying ballistic missiles that may be nuclear armed — an SSBN.
- The SSBN can remain under water for months, and their range limitation is only due to logistics, supplies and crew changes.

- **India's SSBN:**
 - ▶ **INS Chakra (S1):** It was India's first leased nuclear attack submarine.
 - ▶ **INS Arihant (S2):** India launched its first indigenous SSBN in 2009 and commissioned it in 2016.
 - ▶ **INS Arighaat (S3):** This year, the Indian Navy inducted its second SSBN, INS Arighaat in August 2024.
 - ▶ **INS Aridhaman (S4):** The third submarine, INS Aridhaman, is expected to be commissioned in 2025.
- **INS Arihant and INS Arighat** are already on deep-sea patrols, and India is set to receive a Russian Akula-class nuclear-powered attack submarine on lease by 2028.
- In parallel, the **sixth diesel-electric Kalvari-class submarine, INS Vagsheer**, is expected to be commissioned in December this year.
- India's SSBNs are critical to its strategy against adversaries like China, as aircraft carriers are increasingly vulnerable to Chinese long-range missiles such as the **Dong Feng-21 and Dong Feng-26**.
- **India's nuclear policy:**
 - ▶ India's policy is to have '**Credible Minimum Deterrence**' (CMD) that underpins its '**No First Use**' commitment.
 - ▶ In 1998, India conducted nuclear tests under **Phokran-II**, and in 2003, India declared its nuclear doctrine based on CMD and a NFU policy while reserving the right of massive retaliation if struck with nuclear weapons first.

MH-60R HELICOPTERS

Context

The United States has approved a potential sale of **MH-60R helicopters** and related equipment to India, estimated at a cost of USD 1.17 billion.

What is the MH-60R Helicopter?

- The MH-60R is a **versatile helicopter** that can perform several types of missions, including anti-submarine warfare, surface warfare, and logistics support.

- **Design and Features:** The helicopter has a crew of 3-4 people and can carry around 5 passengers. It can fly at speeds up to 330 km/h and has a range of 830 km.
- **Weaponry:** It can be armed with torpedoes, air-to-surface missiles, and machine guns for defense.
- **Global Use:** The MH-60R is used by several countries, including the US, Australia, and Japan, for similar roles.
- India already inducted MH-60R helicopters into its navy in 2024. These helicopters are used for anti-submarine warfare, anti-surface warfare, search and rescue, and other operations.

Strategic Importance:

- ▶ The helicopters will help India enhance its "blue-water" capabilities, meaning it will be able to conduct operations across vast ocean areas, far from its shores, particularly in the Indo-Pacific region.
- ▶ The US sees India as an important partner in maintaining peace and stability in this region, so the sale aligns with both countries' security interests.

INDIA'S FIRST GOOGLE SAFETY ENGINEERING CENTRE (GSEC)

Context

The Telangana entered into a strategic agreement with Google for establishing **India's first Google Safety Engineering Centre (GSEC)** at Hyderabad.

About

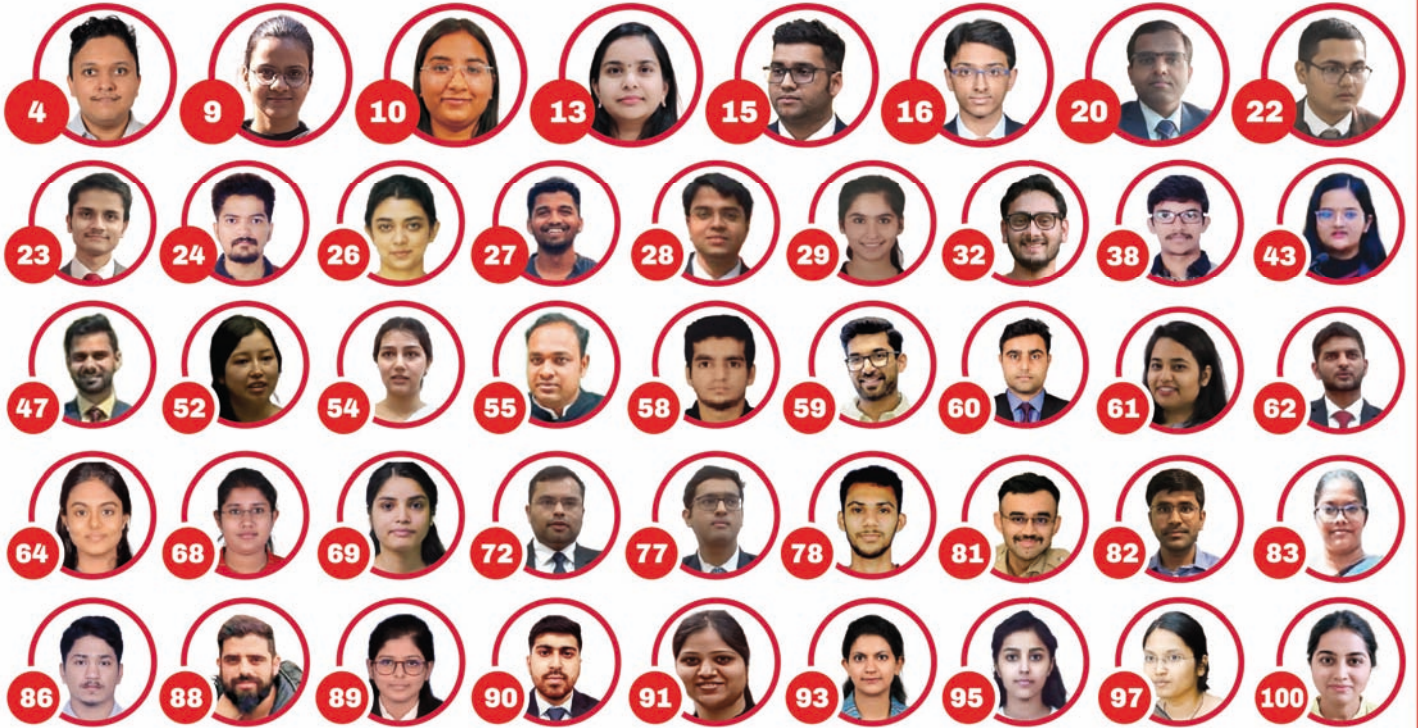
- GSEC in Hyderabad would be the second-of-its-kind in the **Asia-Pacific region**, after Tokyo, and only the fifth in the world, with similar facilities in **Dublin, Munich and Malaga**.
- This GSEC is a **specialized international cybersecurity hub** that will play a vital role in developing advanced security and online safety products for the Indian context.
- The centre will focus on cutting-edge research, AI-driven security solutions, and creating a collaborative platform for leading experts and researchers in cybersecurity.
- It also aims to foster skill development, boost employment, and enhance cybersecurity capabilities in India.





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