

JULY 2024

Adda247



# संकल्प 2025

MONTHLY  
CURRENT AFFAIRS

MAGAZINE FOR

UPSC & State PSC  
Exam

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# Monthly Current Affairs Magazine for UPSC Prelims July 2024

## Environment

### India saw 536 Heatwave Days this Summer

**Context:** Large parts of India (especially states like Delhi, Bihar, Odisha, and Gujarat) are experiencing an intense and prolonged heatwave with record-breaking temperatures which is leading to fatalities.

#### What are the Impacts?

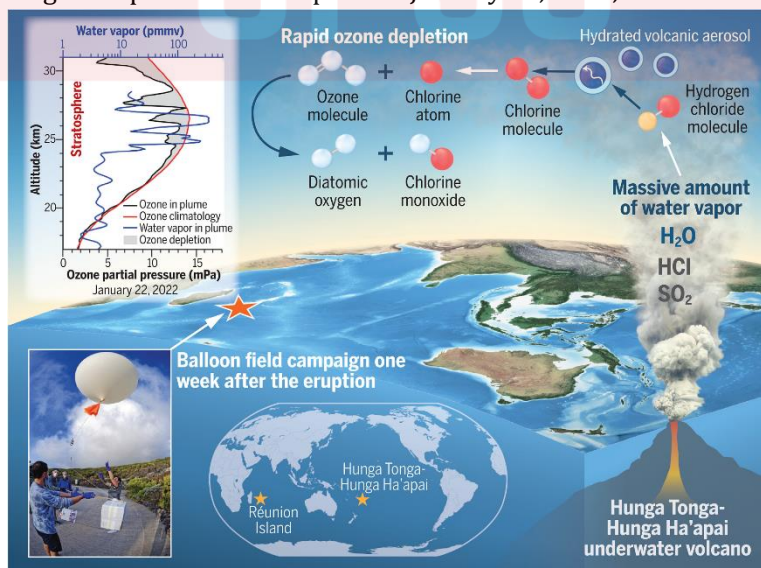
- **Impact of Urbanization on Nighttime Temperatures:** Research by the Indian Institute of Technology, Bhubaneswar, covering the period 2003-2020 across 141 Indian cities, found an average increase in nighttime temperatures of  $0.52 \pm 0.19$  degrees Celsius per decade.
  - The study, published in Nature, attributes 60% of this warming to urbanisation alone.
- **Changes in Temperature Variance:** A study from the Centre for Science and Environment (CSE) noted a reduction in the temperature difference between day and night over time.
  - While nights were 6.2-13.2 degrees Celsius cooler than days in the decade 2001-2010, the cooling difference reduced to 6.2-11.5 degrees Celsius in the decade 2014-2023, indicating less relief from heat at night.
- **Health Risks from Humidity and Warmer Nights:** Increased temperatures and humidity impair the body's ability to cool itself through sweating.
  - Doctors highlighted the health risks including dehydration, salt imbalances, and reduced blood flow to organs due to increased sweating.
  - High nighttime temperatures further prevent the body from recuperating, increasing the risk of heat-related illnesses like heat stroke.
- **Heat-Related Mortality:** A study from Science Advances linking data from 1960-2009 showed a 146% increase in the probability of heat-related mortality events affecting more than 100 people, correlating with the rise in average summer temperatures in India.

### Impact of the Hunga Tonga volcanic Eruption

**Context:** A new study published in the Journal of Climate that the Hunga Tonga-Hunga Ha'apai, an underwater volcano, erupted in January 2022, has had surprising and lasting effects on the climate.

#### About the Eruption

- The Hunga Tonga-Hunga Ha'apai volcano erupted on January 15, 2022, in the Pacific Kingdom of Tonga.



- Being an underwater volcano, Hunga Tonga produced minimal smoke but emitted a significant amount of water vapour (100–150 million tonnes, equivalent to 60,000 Olympic swimming pools) into the stratosphere, a dry layer of the atmosphere 15-40 kilometres above the surface.
- Unlike typical volcanic eruptions that cool the Earth's surface through sulphur dioxide and sulphate aerosols, the water vapour from Hunga Tonga acted as a potent greenhouse gas and contributed to ozone depletion.

### Impact of Eruption On Climate

- **Ozone Depletion:** The eruption contributed to a significant **enlargement of the ozone hole** observed from **August to December 2023**.
  - The large volume of water vapour released by the eruption played a role in chemical reactions that destroyed ozone molecules.
- **Influence on Weather Patterns:** The presence of water vapour in the stratosphere influenced the **Southern Annular Mode, leading to an unusually wet summer in 2024 for Australia**, which was unexpected given the concurrent El Niño conditions.
  - This indicates that the eruption's impact on atmospheric conditions could override or interact complexly with other climatic phenomena.
- **Regional Weather Changes:** The eruption is expected to affect winter weather patterns up to 2029, with predictions of **colder and wetter winters in northern Australia, warmer winters in North America, and colder winters in Scandinavia**.
- **Atmospheric Waves:** The eruption altered atmospheric wave patterns, which **impact weather systems such as highs and lows**.
- **Minimal Effect on Global Temperatures:** Despite its other substantial impacts, the eruption had a **very small effect on global mean temperatures**, causing an increase of only about 0.015 degrees Celsius.
  - This minimal change suggests that the direct warming effect of the water vapour was overshadowed by other factors influencing global climate.

### Diadromous Fish

**Context:** A research article in the Journal of Applied Ecology, issued by the British Ecological Society, indicates that 62% of Marine Protected Areas (MPAs) designated for migratory fish species, like diadromous fish, fail to cover their primary habitats.

#### About Diadromous Fish

- Diadromous fish are those species that **migrate between saltwater and freshwater environments**. This group includes both **anadromous and catadromous species**.
  - **Examples:** Notable diadromous fish include the allis shad (*Alosa alosa*), twait shad (*Alosa fallax*), Mediterranean twait shad (*Alosa agone*), and the European eel (*Anguilla anguilla*).
- **Scientific Classification of Migrations:**
  - **Anadromous Fish:** Born in freshwater, migrate to the ocean as juveniles to mature, and then return to freshwater to spawn.
  - **Catadromous Fish:** Born in saltwater, migrate to freshwater as juveniles to mature, and then return to the ocean to spawn.
  - **Amphidromous Fish:** Born in freshwater or estuaries, drift to the ocean as larvae, and then return to freshwater to mature and spawn.
  - **Potamodromous Fish:** Born in upstream freshwater locations, migrate downstream (within freshwater) as juveniles to mature, and return upstream to spawn.
- **Threats:** Diadromous fish face numerous threats from human activities. These include exposure to agricultural pollutants and runoff, habitat destruction, barriers to migration like dams, overfishing, accidental capture (bycatch), and the impacts of climate change.

## Heavy Metal Contaminants

**Context:** Researchers at the Indian Institute of Science (IISc) have created a new remediation technique to eliminate heavy metal pollutants like arsenic from groundwater.

### More In News

- According to the Indian Institute of Science (IISc), their three-step, patent-pending method not only removes heavy metals but also disposes of them in an environmentally friendly and sustainable way.
- This approach prevents the usual practice of depositing untreated, heavy metal-laden sludge in landfills, which could lead to recontamination of groundwater.

### About Heavy Metals

- Heavy metals are metallic elements with a high density relative to water.
- **Sources and Release:** These metals are naturally found in the Earth's crust and are released into the environment through industrial processes, mining, and the burning of fossil fuels.
- **Indestructibility:** Heavy metals cannot be broken down through biological degradation.
- **Essential vs. Toxic:** Depending on the type and concentration, heavy metals can be either essential or toxic to living organisms.
  - **Essential Heavy Metals:** Certain heavy metals like copper, zinc, and iron are vital as micronutrients for various biochemical and physiological functions, such as oxygen transport in haemoglobin (iron) and enzymatic reactions (zinc).
  - **Toxic Heavy Metals:** Other heavy metals, including lead, mercury, cadmium, arsenic, and chromium, are toxic even at low concentrations and can cause health issues like:
    - Cancer
    - Neurological damage
    - Kidney and liver damage
    - Reproductive and developmental problems
- **Sources of Heavy Metals:**
  - **Natural sources** include weathering of rocks and soils, volca

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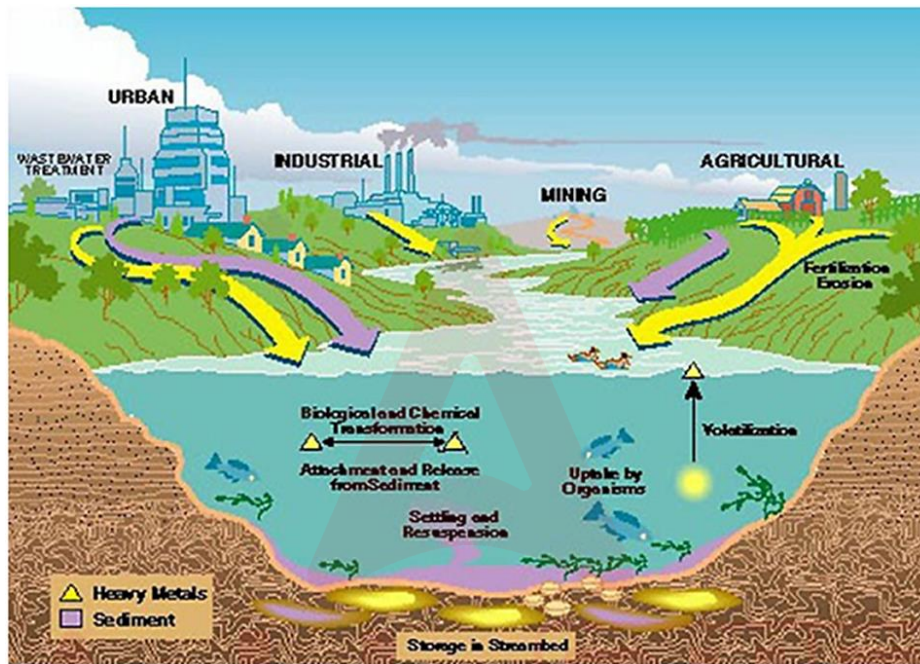
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- Cancer
- Neurological damage
- Kidney and liver damage
- Reproductive and developmental problems
- **Sources of Heavy Metals:**
  - **Natural sources** include weathering of rocks and soils, volcanic eruptions, and forest fires.
  - **Human activities** include mining, industrial wastewater, agricultural runoff, and urban stormwater runoff.



## Elephants Use Names To Communicate

**Context:** Researchers studying elephants have noticed that sometimes when an elephant makes a vocalisation to a group, all members respond, while other times only a single individual does. This led to the hypothesis that elephants might address each other by the equivalent of names.

### Study Overview

- A study involving wild African savannah elephants in Kenya supports this idea. Researchers analysed vocalisations of more than 100 elephants in Amboseli National Park and Samburu National Reserve.
- These vocalisations were mostly rumbles produced using the elephants' vocal cords, similar to human speech.
- **Methodology**
  - **Machine-Learning Analysis:** The researchers used a machine-learning model to identify a name-like component in the calls, suggesting that a specific elephant was the intended addressee.
  - **Audio Playback Experiment:** Audio recordings were played to 17 elephants to observe their responses to calls apparently addressed to them versus calls meant for others.
- **Findings**
  - **Response to Calls:** Elephants responded more strongly to calls addressed to them, displaying more enthusiasm, moving toward the audio source, and making more vocalisations.
  - **Indication of Naming:** The findings suggest that elephants address each other with something akin to names, as proposed by behavioural ecologist Mickey Pardo, the lead author of the study published in Nature Ecology & Evolution.
- **Implications**
  - **Social Bonds:** Addressing one another individually highlights the importance of social bonds for elephants, emphasising the need for sophisticated learning and understanding of social relationships.
  - **Communication Complexity:** Elephants are known for their intelligence, keen memory, problem-solving skills, and sophisticated communication, which includes visual, acoustic, and tactile gestures during interactions.

- **Purpose of "Naming"**
  - **Contact Calls:** Elephants often use names during contact calls to other individuals.
  - **Maternal Communication:** Mothers frequently use names when communicating with their calves to calm them or check in.
  - **Greeting Ceremonies:** Names were less common in greeting vocalisations than expected.
- **Comparison with Other Animals**
  - **Dolphins and Parrots:** Like elephants, dolphins and parrots **use individual-specific vocal labels, but they typically imitate the sounds made by others.**
    - In contrast, elephants' names appear to be arbitrary, similar to human names, indicating a capacity for abstract thought.

### Future Prospects

- **Understanding Elephant Communication:** There is a need for further research to understand the syntax and basic elements of elephant vocalisations.
- **Potential for Human-Elephant Communication:** While the idea of "talking" with elephants is appealing, significant progress in understanding their communication system is necessary.
- **Intelligence and Conservation:** The study underscores the intelligence and intriguing nature of elephants, aiming to foster greater interest in their conservation and protection.

## International Relation

### India presents its priorities under Colombo Process

**Context:** For the first time since its establishment in 2003, India has assumed the chairmanship of the Colombo Process.

#### About the Colombo Process

- **Nature:** The Colombo Process is a Regional Consultative Process.
- **Purpose:** It offers a vital platform for discussions on managing overseas employment and contractual labour from Asian countries of origin.
- **Functionality:** It acts as a venue for sharing best practices in managing overseas employment.
- **Objectives:**
  - To exchange experiences, lessons, and effective practices in labour migration management.
  - To address challenges encountered by migrants, their countries of origin, and destination countries, and to suggest feasible solutions for the well-being of overseas workers.
  - To maximise the developmental benefits derived from organised overseas employment and to strengthen dialogues with destination countries.
  - To evaluate and track the implementation of previously made recommendations and to determine additional steps needed.
- **Membership:**
  - The Colombo Process includes 12 Member States from Asia, which are the origin countries for migrant workers.
  - Member countries are Afghanistan, Bangladesh, China, Cambodia, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand, and Vietnam.
  - India has been part of the Colombo Process since it began in 2003.
- **Operational Mechanics:**
  - The process is non-binding and operates on a consensus basis for decision-making.
  - Coordination is managed through the Permanent Missions of Member States at the United Nations in Geneva.
  - Governance is through Ministerial Consultations where participating countries' Ministers discuss, adopt recommendations, and plan actions.
- **Support and Administration:** The International Organization for Migration (IOM) has been providing technical support to the Colombo Process from its start and functions as its Secretariat.

## Netherlands - 3rd Largest Export Destination

**Context:** In FY 2023-24, the Netherlands rose to become India's third largest destination for exports, following the U.S. and UAE.

### More In News

- There was a **decline of more than 3%** in the country's **merchandise exports**.
- The main commodities that saw robust growth in exports to the Netherlands were **petroleum products (\$14.29 billion), electrical goods, chemicals, and pharmaceuticals**.
- The Netherlands has **taken over** major destinations such as the **K., Hong Kong, Bangladesh and Germany**.

### Relations Between India and Netherland

- India and the Netherlands established diplomatic ties in 1947.
- In 2023-24, the **bilateral trade** between the two countries **marginally dipped** to \$27.34 billion as against \$27.58 billion in 2022-23.
- **India's trade surplus with the Netherlands has increased** to \$17.4 billion in the last fiscal from \$13 billion in 2022-23.
- India's **exports to the Netherlands rose by about 3.5%** to \$22.36 billion in 2023-24
- During 2023-24, **India received about \$5 billion in foreign direct investment** from the Netherlands. It was \$2.6 billion in 2022-23.

## Russia's Growing Footprints in Africa

**Context:** Russia is increasing its presence in Africa's sub-Saharan region, particularly the Sahel, through military assistance and political support.

### Russia's Growing Influence In Africa

Strategic Security Partnership:

- Russia is becoming the preferred security partner over traditional Western allies like France and the U.S.
- It utilises private security companies like Wagner and its successor, Africa Corps, to establish a military presence.

### Objectives and Strategies

- **Political and Economic Motives:** Russia aims to secure political support or neutrality from African countries concerning its actions in Ukraine.
  - Africa's 54 countries form the largest voting bloc at the United Nations, where opinions on Russia's actions in Ukraine have been divided.
- **Disinformation Campaigns:** Russia-linked entities have conducted disinformation campaigns to weaken ties between African states and Western countries, targeting over 22 countries with 80 documented campaigns.

### Why African Nations Are Turning to Russia

- **Appeal of Russian Partnership:** Russia offers security assistance without political interference, appealing to countries like Mali, Niger, and Burkina Faso— all governed by military juntas.
  - African nations are discontent with former colonial powers and perceive Western demands on democracy and human rights as hypocritical.
- **Resource Access:** Russia seeks access to Africa's rich mineral resources, such as cobalt and lithium, vital for electronics and batteries.
  - It has signed mining deals in several countries, including the Central African Republic (gold and diamonds), Congo (cobalt), and Sudan (gold and oil).

### Russian Mercenary Activities

- **Wagner Group Operations:** Wagner mercenaries first appeared in Sudan in 2017 to support then-President Omar al-Bashir in exchange for gold mining rights.
  - Their presence has expanded to Libya, where they supported Khalifa Hifter, and the Central African Republic, gaining access to gold and diamond mines.

The Wagner Group is a private military company (PMC) known for its operations in conflict zones around the world, particularly in regions where Russia seeks to extend its influence but maintain plausible deniability about its involvement.

- **Impact of Coups:** Military coups in Mali (2020 and 2021), Burkina Faso (2022), and Niger (2023) have led to the ousting of French and other Western forces, with these countries turning to Russia for military support.

#### Economic and Trade Relations

- **Trade and Economic Impact:** Despite Russia's increasing role in the military and mining sectors, it remains a minor overall trading partner with Africa, accounting for less than 1% of Africa's exports.
  - The European Union, by contrast, accounts for 33% of Africa's exports.

### Senkaku Island

**Context:** Japan lodged a protest against Beijing after four armed Chinese coast guard vessels entered waters that Tokyo considers its territory.

#### About Senkaku Island

- **Location:** The islands are located in the East China Sea, northeast of Taiwan, consisting of eight uninhabited islands covering a total area of about 7 sq km.
- **Strategic Importance:** The islands are situated near crucial shipping lanes, provide rich fishing grounds, and are believed to contain oil deposits.
- **About The Dispute:** The dispute involves a group of uninhabited islands known by different names: Senkaku Islands in Japan, Diaoyu Islands in China, and Tiaoyutai Islands in Taiwan.
- Both Japan and China, along with Taiwan, claim ownership of these islands.

### Haiti's transitional council appoints new Cabinet

**Context:** Haiti's transitional council appointed a new Cabinet, marking the final step in restructuring the government that will lead a country besieged by gangs.

#### About Haiti

- **Location:** Situated between the Caribbean Sea and the North Atlantic Ocean.



- **Island of Hispaniola:**
  - Occupies the western one-third of the island of Hispaniola.
  - Shares a border with the Dominican Republic on the eastern side, Jamaica to the west and Cuba to the northwest.
- **Capital and Major Cities:**
  - The capital city is Port-au-Prince.
  - Other major cities include Cap-Haïtien, Les Cayes, and Gonaïves.
- **Population:** Haiti has an estimated population of around 11 million people.
- **Language:** The official languages are Haitian Creole and French.
- **Government:**
  - It is the second oldest republic in the Western Hemisphere, after the United States.
  - A president as head of state and a prime minister as head of government.
  - The political situation has been unstable, with frequent changes in leadership and ongoing challenges related to governance.

## Examples, Case Studies and Data

**Air Pollution, Environment (GS 3):** Fine particulate matter (PM 2.5) has caused an alarming 135 million premature deaths globally between 1980 and 2020, according to a new study.

- The research also underscores the impact of climate variability phenomena such as El Nino-Southern Oscillation, Indian Ocean Dipole, and North Atlantic Oscillation in worsening PM2.5 pollution levels.



- **Japan's Claim:**
  - Post World War II, Japan relinquished claims to several territories including Taiwan as per the 1951 Treaty of San Francisco.
  - Under this treaty, the Nansei Shoto islands, which Japan claims include the Senkaku Islands, were placed under U.S. trusteeship and later returned to Japan in 1971.
  - Recently, a local council in southern Japan passed a bill to rename an area including the Senkaku Islands from Tonoshiro to Tonoshiro Senkaku.
  - China did not initially object to the islands' status under the San Francisco Treaty but began to assert claims in the 1970s following the discovery of potential oil resources.
- **China's Claim:**
  - China contends that the islands have been part of its territory since ancient times, primarily used as important fishing areas, and were administratively part of Taiwan province.
  - China argues that when Taiwan was returned in the Treaty of San Francisco, the islands, as a part of Taiwan, should also have been returned to Chinese control.

## Under Kafala, workers are dispensable

**Context:** There is a need to humanise migrant workers and safeguard their rights, which would require dismantling the Kafala system.

### Background

- A fire in the Mangaf area of Al Ahmadi municipality, Kuwait, killed 49 migrant workers, mostly Indians.
- Kuwait's Interior Minister, Fahad Al-Yousuf Al-Sabah, blamed the fatalities on the greed of the employer and building owner, NBTC.

### Facts

- With 18 million international migrants residing primarily in the UAE, USA, and Saudi Arabia, India hosts the world's largest number of international migrants.
- India came in 13th as the destination country for immigrants, with 4.48 million.
- Foreigners make up 70% of Kuwait's 4.3 million population and a significant portion of the GCC states' populations (Saudi Arabia, UAE, Qatar, Bahrain, Oman).
- The six GCC states house around 35 million migrant workers, accounting for 10% of all international migrants, with Indians being the largest group.
- The Government of India launched a portal "**Madad**" that has enabled migrant workers from the country to file their grievances.

### Challenges Associated

- **Labor Accommodation Issues:** Migrants live in crowded, unsafe, and unhygienic accommodations.
  - During the COVID-19 pandemic, GCC states struggled to contain the virus in labour accommodations.
  - Kuwait implemented discriminatory lockdowns and deported tens of thousands of workers in April 2020.
  - Despite having housing standards, Kuwait focuses more on evicting 'bachelors' from family zones and relocating them to subpar spaces rather than ensuring decent housing.
- **Economic Disparities and Kafala System:** Employers in government contracts must provide housing or an allowance (25% of wages for minimum wage earners or 15% for higher earners). The cost of decent living is around KD200 per person, not including rent.
  - The discrepancy between the cost of living and wages is a control factor in the Kafala system.
  - Migrant workers are dependent on employers for accommodation, food, and transportation.
  - Low wages prevent migrants from bringing their families, ensuring their perpetual vulnerability and limited socio-cultural space.
- **Challenges to Labor Organizing:** GCC states do not permit labour organising or unionisation, preventing workers from challenging the status quo.

### What is the Kafala System?

- It is prevalent in Gulf Cooperation Council (GCC) countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) as well as Jordan and Lebanon.
- Under this system, the state grants local individuals or companies sponsorship permits to employ foreign labourers.
  - In Bahrain, however, a government agency acts as the worker's sponsor rather than the employer.
- It was initially created to provide cheap and abundant labour during periods of rapid economic growth, with proponents arguing that it benefits local businesses and drives development.
- **Responsibilities and Living Conditions:** Sponsors are responsible for covering travel expenses and providing housing, often in dormitory-like accommodations or, for domestic workers, in the sponsor's home.
  - Sometimes, sponsors use private recruitment agencies in the workers' countries of origin to find labourers and facilitate their entry into the host country.
- **Legal and Protective Gaps:** The system falls under the jurisdiction of interior ministries rather than labour ministries, leaving workers without protection under host country labour laws.

- This vulnerability denies workers rights such as the ability to enter labour disputes or join unions.
- Employment and residency visas are linked, with only sponsors able to renew or terminate them, giving private citizens control over workers' legal statuses and creating a power imbalance ripe for exploitation.
- **Restrictions and Consequences:** Workers usually need their sponsor's permission to transfer jobs, end employment, or enter and exit the host country.
- Leaving the workplace without permission results in the termination of the worker's legal status and can lead to imprisonment or deportation, even if the worker is fleeing abuse.
- Workers have limited recourse against exploitation, leading many experts to argue that the system facilitates modern slavery.

### Conclusion

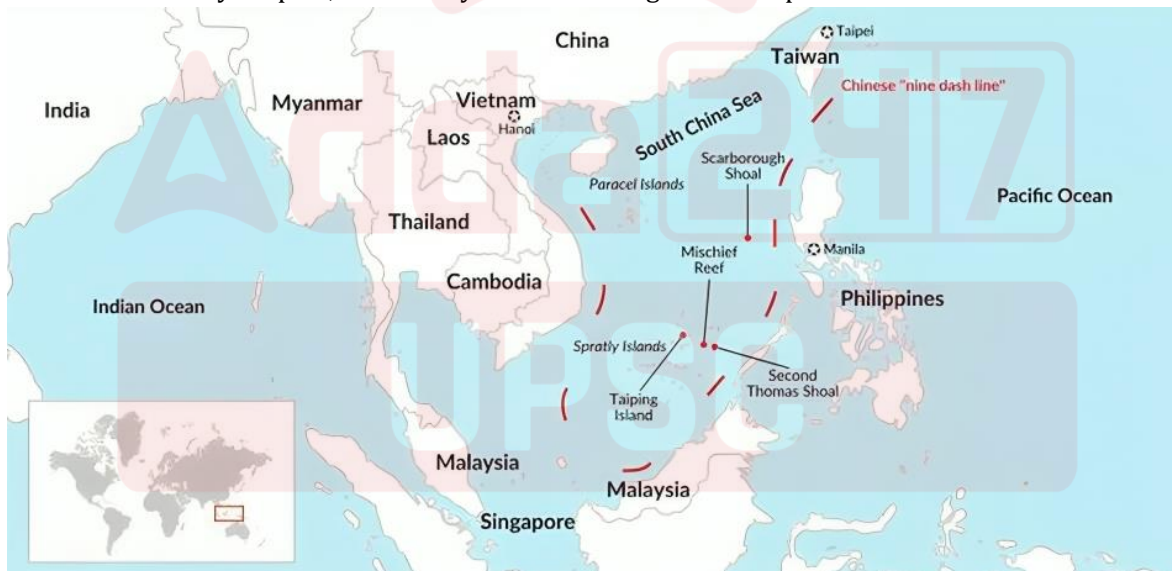
- Better safety checks, higher living standards, and worker organisation could have potentially prevented the tragedy.
- In the aftermath of incidents, Kuwaiti officials may promise stricter penalties but are likely to rely on policing rather than implementing systemic changes that empower workers to voice grievances.

### Second Thomas Shoal

**Context:** China and the Philippines traded accusations over a collision in the South China Sea near Second Thomas Shoal.

#### Mapping- Second Thomas Shoal

- **Location:** Submerged reef in the Spratly Islands, South China Sea.
- **Characteristics:** A low-tide elevation within the exclusive economic zone (EEZ) of the Philippines.
- **Philippines' Presence:** The Philippines took possession of Second Thomas Shoal in the late 1990s, using the BRP Sierra Madre as a military outpost, manned by a small contingent of troops.



### Shoal

A shoal is a natural underwater ridge or sandbank that is typically visible at low tide but submerged at high tide. Shoals can pose navigational hazards but also provide habitats for marine life.

#### Geographic and Political Context

- Approximately 108 nautical miles (200 km) from the Philippine island of Palawan.
- **Chinese Claims:** China claims most of the South China Sea, including the Second Thomas Shoal, based on the Nine-dash line, which overlaps with the EEZs of Vietnam, the Philippines, Malaysia, Brunei, and Indonesia.
- **Legal Dispute:** In 2013, the Philippines filed a case against China with the Permanent Court of Arbitration in The Hague, challenging China's claims and activities in the South China Sea, including Second Thomas Shoal.
  - The court ruled in favour of the Philippines in 2016, but China rejected the judgement.

## Examples, Case Studies and Data

- **Environment (GS-3):** The Union Jal Shakti Ministry launched an **Environmental Flow (e-flow)** ecological monitoring system for **real-time tracking of river quality, aiding project planning and monitoring.**
  - Developed by the **National Mission for Clean Ganga** ( Namami Gange, under the Ministry of Jal Shakti), it monitors the water quality of the Ganga, Yamuna, and tributaries, along with Namami Gange program activities.
  - The E-flow Monitoring System marks a significant step towards **ensuring the continuous and sustainable flow of the Ganga River.**
  - The system utilises data from Central Water Commission reports to track key parameters like in-flow, out-flow, and mandated E-flow across 11 projects along the Ganga Mainstream.

## UN Resolution on Gaza for Ceasefire between Israel and Hamas

**Context:** The UN Security Council approved its first resolution endorsing a ceasefire aimed at ending the eight-month conflict between Israel and Hamas in the Gaza Strip.

### More In News

- The resolution was overwhelmingly supported with 14 out of the 15 Security Council members voting in favour, while Russia abstained.
- The resolution demands that both Israel and Hamas fully implement the terms of the ceasefire immediately and unconditionally.

### Background

- The UN Security Council for the first time has called for an immediate ceasefire in Gaza during Ramadan.
- The resolution was put forward by the 10 elected council members and is backed by Russia and China and the 22-nation Arab Group at the United Nations.
- The United States abstained on the resolution, which also demanded the release of all hostages taken captive during Hamas' Oct. 7 surprise attack in southern Israel.

## About Gaza Strip

- **Location:** Eastern Mediterranean basin,
- **Borders:** Egypt in the southwest
  - Israel to the north and east.
  - To the west, it is bounded by the Mediterranean Sea.

[caption id="attachment\_201710" align="alignnone" width="514"]



Image Credit: Britannica[/caption]

## United Nations Security Council (UNSC)

- **Established in:** 1945
- **Role:** One of the United Nations' five principal organs, responsible for maintaining international peace and security.
- **Composition:** 15 member states ( 5 permanent members (P5) with veto power + 10 non-permanent members).
  - The 5 permanent members are the United States, the Russian Federation, France, China and the United Kingdom.
  - The 10 non-permanent members are elected for two-year terms by the UNGA (United Nations General Assembly).
- These 10 seats are distributed among the regions of the world:
  - five seats for African and Asian countries;
  - one for Eastern European countries;
  - two for Latin American and Caribbean countries; and
  - two for Western Europe and Other Countries.



### Principal Organs of the UN

#### Powers and Functions of UNSC

- The UN Security Council's primary function is to maintain international peace and security. It takes the lead in determining whether a threat to peace or an act of aggression exists.
- Aside from maintaining peace, the Security Council has the authority to send UN peacekeeping missions and impose sanctions on states.
- If necessary, the UN Security Council can also sever diplomatic relations, impose financial restrictions and penalties, blockades, and even collective military action.

#### Election Process

- The non-permanent members are elected by the 193 members of the United Nations.
- Elections are conducted through a secret ballot during which the nominees from various regional groupings are voted upon.
- The results of these elections are generally close to unanimous.

#### About the Veto Power of P5 Members

- The 5 permanent members have the power of veto.
- Under Article 27 of the UN Charter, Security Council decisions on all substantive matters require the affirmative votes of three-fifths (i.e., 9) of the members.

- A negative vote or a “veto” by a permanent member prevents the adoption of a proposal, even if it has received the required votes.
- Abstention is not regarded as a veto in most cases, though all five permanent members must vote for adopting any amendment of the UN Charter or any recommendation for the admission of a new UN member state.
- The decisions of the UNSC (known as resolutions) are binding on all members of the UN.

### 50th G7 Summit 2024 in Italy, Theme, India's Role and Agenda

The 50th G7 Summit, held from June 13 to 15, 2024, in Fasano, Apulia, Italy, convenes amidst a backdrop of global challenges requiring urgent attention and collaborative action. Prime Minister Narendra Modi of India, participating as an Outreach Country representative, emphasized the summit's aim to address critical issues and foster international cooperation. His presence underscores India's strategic role and the importance of dialogue between G7 nations and emerging economies.

#### 50th G7 Summit in Italy

The 50th G7 Summit, hosted in Italy's Apulia region at Borgo Egnazia from June 13-15, 2024, gathers leaders from Canada, France, Germany, Italy, Japan, the UK, and the US. Joined by EU representatives, discussions focus on global issues including Ukraine's conflict, Middle East tensions, climate change, and AI ethics. Guests from nations like India and organizations like the African Union enhance dialogue on international cooperation and strategic partnerships.

<b>Event</b>	<b>50th G7 Summit</b>
<b>Host Country</b>	Italy
<b>Dates</b>	June 13-15, 2024
<b>Venue</b>	Borgo Egnazia, Apulia, Italy
<b>Host</b>	Prime Minister Giorgia Meloni
<b>Participants</b>	Canada, France, Germany, Italy, Japan, UK, US, EU
<b>Invited Guests</b>	India, Saudi Arabia, Jordan, Brazil, Argentina, Turkey, UAE, Kenya, Algeria, Tunisia, Mauritania (AU), Vatican City
<b>Key Topics</b>	Ukraine conflict, Middle East issues, climate change, AI
<b>Special Sessions</b>	Outreach on AI, energy, Africa, Mediterranean
<b>Bilateral Meetings</b>	PM Modi with Italian PM Meloni, among others
<b>Expected Outcomes</b>	Joint statements, policy agreements, strategic partnerships

### Agenda for the 2024 G7 Summit

- **Defending Rules-Based International System:** The summit will address Russia's aggression towards Ukraine.
- **Middle East Conflict:** Discussions will cover the ongoing conflict in the Middle East.
- **Partnerships with Developing Nations:** Strengthening ties, particularly with African countries, is a key focus.
- **Key Priorities:**
  - Migration
  - Climate change
  - Food security
  - Implications of artificial intelligence (AI)

### Prime Minister Narendra Modi's Participation

India, represented by Prime Minister Narendra Modi, is participating as an Outreach Country. PM Modi aims to tackle global challenges through fruitful discussions with world leaders, focusing on promoting international cooperation. This marks India's 11th participation in the G7 and PM Modi's fifth consecutive attendance.

### PM Modi's Schedule and Agenda

- **Bilateral Meetings:** PM Modi has a hectic schedule of bilateral meetings with leaders such as French President Emmanuel Macron, UK Prime Minister Rishi Sunak, Japanese Prime Minister Fumio Kishida, German Chancellor Olaf Scholz, and Italian Prime Minister Giorgia Meloni. He is also likely to meet Ukrainian President Volodymyr Zelenskyy.
- **Outreach Session Address:** PM Modi will address the outreach session, focusing on AI, energy, Africa, and the Mediterranean. This session aims to share perspectives between G7 and outreach countries.
- **India-Italy Strategic Partnership:** Modi emphasized the commitment to consolidate the strategic partnership with Italy and bolster cooperation in the Indo-Pacific and Mediterranean regions.

### G7 Summit 2024 Theme

The theme for the G7 Summit 2024 is "**Building a Resilient and Inclusive Global Economy.**" This theme underscores the summit's focus on fostering economic recovery post-pandemic, promoting inclusive growth, addressing climate change, and enhancing international cooperation. Leaders from [G7 Countries](#) and invited guests will discuss strategies to strengthen resilience against future global challenges while ensuring that economic benefits are shared equitably among nations and communities worldwide.



### Why Does the G7 Need India?

#### Economic Significance

- **GDP:** \$2.66 trillion, larger than France, Italy, and Canada.
- **Growth:** Projected to grow by 5.9% in 2023-2024.
- **Investment Appeal:** Market potential, low manufacturing costs, business reforms, and favorable industrial climate.

#### Demographic Advantage

- **Population:** Recently surpassed China as the most populous country.
- **Workforce:** 68% in the working-age group (15-64 years); 65% under 35 years.
- **Labor Pool:** Young, skilled, and semi-skilled workforce driving economic growth.

### Strategic Importance in Indo-Pacific

- **Geopolitical Shifts:** Increasing focus on Indo-Pacific region by global powers.
- **Western Strategies:** UK, France, and Germany have developed Indo-Pacific strategies; Italy showing interest.
- **Regional Stability:** Key ally in countering China, especially in the Indian Ocean.

### Role in Global Energy Security

- **Energy Crisis:** Russia-Ukraine war disrupted European energy supplies.
- **Oil Imports:** Increased purchases of discounted Russian oil.
- **Indirect Benefits:** Refined Russian crude oil from India reaching Europe, stabilizing energy flows.

### Diplomatic Balance

- **Relations:** Maintains cordial ties with both Russia and the West.
- **Mediation Potential:** Unique position to facilitate dialogue in conflicts like the Ukraine war.
- **Global Stability:** Potential to contribute to peace and stability, easing economic and political tensions.

### Contributions to Global Governance

- **Inclusive Frameworks:** Enhances legitimacy and representativeness in global governance.
- **Broader Challenges:** Addresses issues like climate change, global health, and economic development.

## Saudi Arabia Hajj Death Toll Crosses 1300 in Mecca

**Context:** Thousands of Hajj pilgrims died in the oppressive heat of Saudi Arabia this year, with temperatures in Mecca reaching above 51 degrees Celsius.

### Hajj Pilgrimage and Its Importance

- **Definition and Pillar of Islam:** Hajj, meaning "to set out for a place," is one of the five pillars of Islam. Every Muslim is expected to undertake this pilgrimage at least once in their lifetime.
- **Historical Background:** The practice dates back to the time of Prophet Ibrahim (Abraham) around 4000 years ago.
- **Rituals:** Hajj involves multiple rituals over five to six days in and around Mecca, including circumambulations of the Kaaba, traverses between Safa and Marwa, praying at Mount Arafat, and the symbolic stoning of the devil in Mina.
- **Timing:** It occurs from the 8th to the 13th of Dhu al-Hijjah, the last month of the Islamic calendar. This year, it took place from June 14 to 19.

### Hajj Quotas and Logistical Challenges

- **Saudi Ministry's Role:** The Ministry of Hajj and Umrah manages the pilgrimage logistics.
- **Infrastructure Investments:** Saudi Arabia has invested billions to improve infrastructure due to the rising number of pilgrims.
- **Country-wise Quotas:** Each year, the Saudi government allocates quotas based on the Muslim population of each country. This year, 1.75 lakh Indians were allowed, with 1.4 lakh through the Haj Committee of India and the rest via private operators. Worldwide, 1.8 million slots were distributed.

### Pilgrim Deaths in 2023

- **Overall Deaths:** Hundreds of pilgrims died, with temperatures in Mecca exceeding 51 degrees Celsius. The majority, 530 according to Reuters, were from Egypt.
- **Conditions for Illegal Pilgrims:** Many Egyptian pilgrims came on tourist visas, which are illegal for Hajj and do not provide access to official facilities like air-conditioned tents, making them more vulnerable to heat.

### Indian Pilgrims and Government Response

- **Indian Death Toll:** 98 Indians died during Hajj this year, compared to 187 last year. Deaths were mainly due to natural causes, chronic illnesses, and the extreme heat.
- **Arafat Day Heatwave:** Six Indian pilgrims died on the day of Arafat due to the heatwave.
- **Government Measures:** The Indian government has a dedicated Hajj mission in Jeddah, including medical missions, hospitals, and ambulances. This year, nearly 40,000 pilgrims over the age of 60 participated. A live portal was developed for real-time medical data and service tracking.

## Handling of Deceased Pilgrims

- **Procedure:** When a pilgrim dies, local hospitals or mortuaries inform the country's representatives. The consulate confirms the identity and gets a No Objection Certificate (NOC) from the family for burial in Saudi Arabia.
- **Burial:** Most families agree to burial in Saudi Arabia, where properly marked graves are provided.

## Economy

### SEBI's Proposed Framework for Mutual Funds

**Context:** The Securities and Exchange Board of India (SEBI) released a consultation paper proposing a framework for facilitating investments by domestic Mutual Funds (MFs) in their overseas counterparts, or Unit Trusts (UTs) that invest a certain portion of their assets in Indian securities.

#### Purpose of the Framework

- The initiative seeks to leverage India's strong economic growth and the attractiveness of Indian securities to foreign investors.
- SEBI highlighted the substantial exposure of international indices like the MSCI Emerging Markets Index to Indian securities, which stands at 18.08%.
- The proposal addresses the current hesitation among domestic MFs caused by ambiguities about investing in overseas instruments that include Indian assets.

#### Proposed Regulations

- **Investment Cap:** SEBI has proposed that overseas instruments should not hold more than 20% of their net assets in Indian securities.
  - This cap is intended to maintain a balance, allowing Indian funds to invest abroad while limiting excessive exposure to domestic securities.
  - **Consequences of Breaching the Cap:** if an overseas instrument **exceeds the 20% investment cap** in Indian securities, the Indian mutual fund investing in **it will enter a six-month observation** period during which the overseas fund **must rebalance its portfolio to comply with the cap**.
    - Failure to adjust within this period will compel the **Indian MF to liquidate its investment in the overseas instrument**.
- **Investment Pooling:** The framework requires that contributions from all investors in an overseas MF/UT be pooled into a single vehicle to ensure equitable distribution of gains, without any preference.
- **Autonomous Management:** Investments should be managed autonomously by the managers of the overseas instruments without influence from investors or undisclosed parties.
- **Transparency and Disclosures:** SEBI mandates periodic public disclosures of the portfolios of overseas MF/UTs to maintain transparency.
- **Advisory Relationships:** The proposal strictly prohibits any advisory agreements between Indian MFs and overseas MF/UTs to avoid conflicts of interest and ensure fair play.

#### Other Considerations

- The RBI's current limit on overseas investments by mutual funds remains unchanged.
- This means that the proposed changes may not have an immediate practical impact, as the overall industry limit is already exhausted.
- However, industry experts believe that such investments can provide valuable diversification opportunities for Indian investors in the future.

#### What are Mutual Funds?

- A mutual fund is an investment vehicle that pools **money from multiple investors to purchase a diversified portfolio** of stocks, bonds, government securities, and other financial instruments.



- The pooled funds are managed by professional fund managers who allocate the fund's investments in order to achieve the objectives specified in the fund's prospectus.
- The **returns generated** from these investments **are distributed to the investors**, minus any applicable fees and expenses.
- The performance of a mutual fund is tracked and measured by its **Net Asset Value (NAV)**, which is the **total value of the fund's assets minus its liabilities, divided by the number of issued units**.
- In India, mutual funds are **established as trusts under the Indian Trust Act, 1882** and are **regulated by the Securities and Exchange Board of India (SEBI) under the SEBI (Mutual Funds) Regulations, 1996**.
- Mutual funds charge management fees and other expenses for the operation of the fund, which are regulated by SEBI and are subject to specified limits.

#### How a Mutual Fund Works

- **Investment Process:** Investors buy units of a mutual fund at the current NAV.
  - These units represent a proportional share of ownership in the fund's portfolio.
- **Returns on Investment:** Returns to investors may include dividends, interest, and capital gains earned by the fund's investments.
  - Investors can also realise capital gains or losses by selling their units at a higher or lower price than their purchase price.
- **Investment Horizon:** Investors are advised to maintain patience and allow a reasonable time frame, typically between 18 to 24 months, to evaluate an actively-managed equity mutual fund's performance, rather than reacting to short-term market fluctuations.

### Digital Payments Intelligence Platform

**Context:** The Reserve Bank of India (RBI) is set to establish a Digital Payments Intelligence Platform.

#### About the Initiative

- **Aim:** Enhancing security across the digital payments ecosystem by enabling network-level data sharing and intelligence.
- **Formation of a Review Committee:** A committee chaired by A.P. Hot has been formed by the RBI to investigate the various aspects of creating this digital public infrastructure.
  - The committee is expected to provide its recommendations within two months.

- **Scope:** This new initiative will involve a detailed examination of the potential features and impacts of implementing such a platform within the existing payments infrastructure.
- **Recurring payments: Fastags, NCMC, UPI Lite**
  - The RBI has announced the inclusion of auto replenishment facility for Fastag, National Common Mobility Card (NCMC), and Unified Payments Interface (UPI) Lite wallets, under the e-mandate framework.
    - This will be activated when balances in Fastag or NCMC drop below a customer-set threshold.
    - The RBI plans to remove the requirement for a pre-debit notification 24 hours before an actual debit for automatic replenishments.
    - UPI Lite will be included in the e-mandate framework, allowing automatic wallet reloads when the balance falls below a set threshold. This is aimed at facilitating smaller transactions without additional authentication.
  - **Bulk Deposits Limit Adjustment:** The RBI proposes to redefine bulk deposits as single rupee term deposits of Rs 3 crore and above, up from Rs 2 crore, for commercial banks and small finance banks.
    - The definition for local area banks will be aligned with that for regional rural banks (RRBs) at Rs 1 crore and above.
  - **Interest Rate Flexibility on Bulk Deposits:** Banks are given the discretion to offer different interest rates on bulk deposits based on their Asset-Liability Management (ALM) needs.
  - **Revising Export and Import Guidelines:** The RBI intends to update and simplify the guidelines governing the export and import of goods and services to better align with the evolving global trade dynamics and enhance ease of business operations.

#### Facts

- Domestic payment frauds have surged by 70.64% to Rs 2,604 crore in the six months ending March 2024, up from Rs 1,526 crore in the previous year.
- The number of fraud cases also increased to 15.51 lakh from 11.5 lakh.

#### India to Remain Fastest Growing Economy

**Context:** Moody's Ratings reported that India will continue to be the fastest-growing economy in the Asia-Pacific region in 2024, maintaining its domestically driven momentum from the previous year.

#### More In News

- In the report titled "Credit Conditions – Asia-Pacific H2 2024 Credit Outlook," Moody's highlighted that India, along with Indonesia and the Philippines, led growth in the first half of 2024.
- These countries are expected to outperform pre-COVID growth levels due to rising exports, local demand, and government spending on infrastructure.
- India's growth is driven by increased exports, strong domestic demand, and significant government infrastructure spending.
- The report anticipates continued policy stability post-general election and a sustained focus on infrastructure development and encouraging private sector investment.
- The continuation of domestically driven growth momentum is expected, with a particular emphasis on infrastructure and private sector investments supporting this trend.

#### Examples, Data and Case Studies

- **Agriculture (GS 3):** India which is one of the largest importers of urea, plans to be self-sufficient by 2025.
  - The government reports that urea imports decreased from 91.36 lakh tonnes to 75.8 lakh tonnes in 2022–2023.
  - The fertiliser subsidy skyrocketed to Rs 2.55 lakh crore in 2022–2023.
- **Related Information:**
  - The 'PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth' (PM-PRANAM) initiative was also introduced by the government to encourage states and Union Territories (UTs) to use chemical fertilisers sparingly and to encourage the use of alternative fertilisers.

## Global Unemployment Rate Drop Slightly in 2024: ILO

**Context:** The International Labour Organization (ILO) has indicated that the global unemployment rate is projected to decrease marginally from 5.0% in 2023 to 4.9% this year, despite ongoing disparities in labour markets.

### Highlights of Global Unemployment

#### Regional Insights

- **United States:** The reduction in unemployment is notably more significant in the United States compared to the rest of the world in the initial months of 2024.

#### Economic Factors Influencing Unemployment

- **Economic Growth:** Global economic growth has been marginally better than expected, aiding in the reduction of unemployment.
- **Interest Rates:** The report highlighted the lagged effects of higher interest rates which slowed down some sectors such as corporate borrowing but locked in lower rates for households which are less sensitive to Federal Reserve's tightening compared to previous times.

#### International Monetary Fund (IMF) Outlook

- **Economic Growth Forecast:** The **International Monetary Fund** (IMF) anticipates a global growth rate of 3.2 per cent for the year 2024.
- **US Specific Forecast:** The growth forecast for the US is somewhat subdued due to various economic adjustments.

#### ILO's Perspective on Labor Market

- **Market Outlook:** While there is a slight improvement, the **International Labour Organization** (ILO) remains cautious about the labour market's future due to uncertainties and the potential need for policy adjustments.
- **Long-term Trend:** Despite the improvement in 2024, the unemployment trend is expected to worsen slightly in 2025.

### International Labour Organisation

**Founded:** The ILO was established on April 11, 1919 by the Treaty of Versailles.

It's a specialised agency of the **United Nations**.

**Members:** Has 187 member states, including 186 UN member states plus the Cook Islands.

**Headquarters:** Located in Geneva, Switzerland.

**Fundamental Principles:** Focuses on freedom of association, elimination of forced labour, abolition of child labour, and non-discrimination at work.

**Nobel Peace Prize:** Awarded in 1969 for its efforts to promote peace and justice for workers.

**Director-General:** Gilbert Houngbo, elected in 2022.

**Mission:** To advance social and economic justice through setting international labour standards.

### Stock Market Records Single Biggest Fall in Over 4 Years

The stock market suffered its worst intraday percentage drop in four years, with the Sensex crashing 6.1% and Nifty tumbling 6.2%, wiping out around Rs 45 lakh crore. Exit poll expectations of a strong BJP majority led to heavy selling across sectors, particularly banking (-7.8%), realty (-9.1%), and infrastructure (-10.5%). Analysts fear continued volatility until clarity emerges on government formation and policies.

### Stock Market Records Single Biggest Fall in Over 4 Years

In an unprecedented market crash, the Sensex plunged 6.1% to 71,900 points, while the Nifty fell 6.2% to 21,824 points on June 4 2024. This dramatic downturn marked the largest single-day percentage drop since March 2020, leading to a massive loss of approximately Rs 45 lakh crore in the total market value of companies.

**Market Plunge:** Sensex and Nifty plummeted over 6%, marking the largest single-day percentage drop since March 2020.

**Massive Loss:** Around Rs 45 lakh crore wiped out from the total market value of companies.

**Election Uncertainty:** Early vote counting trends dashed hopes of a landslide victory for the ruling BJP alliance.

**Heightened Volatility:** Index surged to 29.79 points, the highest level since March 2022.

**Sector-wide Impact:** Banking (-7.8%), realty (-9.1%), and infrastructure (-10.5%) shares bore the brunt.

**Adani Group Hit:** Adani Enterprises and Adani Ports plunged 19% each, with other Adani stocks dropping 9-19%.

**Expert Analysis:** Market reacted to exit polls' inflated expectations, leading to fear and disappointment among investors.

**Future Outlook:** Expectations of continued volatility until there's clarity on government formation and policies.

## Reasons Behind Recent Fall in Stock Market

The recent fall in the Indian stock market can be attributed to several factors:

**Election Uncertainty:** The tighter-than-expected Lok Sabha race has injected uncertainty into the market. Concerns about the potential outcome of the election and its impact on government policies have led to investor caution.

**Government Policy Concerns:** There are fears that a third term for the current government might not be as decisive as initially anticipated. This has raised concerns about the continuity and effectiveness of pro-business and pro-industrial policies, which have been key drivers of market growth.

**Profit Booking:** Ahead of the election results, investors are engaging in profit booking, taking gains off the table to reduce risk exposure in the face of uncertainty.

**Foreign Investor Selling:** Foreign institutional investors (FIIs) have been offloading equities, adding to the selling pressure in the market. This could be due to global factors, domestic concerns, or portfolio rebalancing.

**Lower Voter Turnout:** A dip in voter turnout in some regions has raised questions about potential electoral outcomes, adding to market jitters.

**Global Cues:** While there may not be major negative global cues, global market conditions can influence investor sentiment in the Indian market.

**Technical Factors:** India VIX, which reflects market volatility and sentiment, has hit a fresh 52-week high, indicating heightened uncertainty among traders and investors.

**Corporate Earnings:** Concerns about corporate earnings performance and future forecasts may also be contributing to the market's downward trend.

**Valuation Concerns:** Some analysts believe that the market may have been trading at relatively high valuations, leading to a correction as investors reassess risk-return dynamics.

## Srinagar Recognised as World Craft City

**Context:** Srinagar has become the fourth Indian city to be recognized as a 'World Craft City' by the World Craft Council (WCC), three years after it was designated as part of the UNESCO Creative City Network (UCCN) for crafts and folk arts.

### Srinagar Recognised as World Craft City

Srinagar was recently recognized as a World Craft City by the World Crafts Council (WCC). This is a significant achievement for the city, highlighting its rich heritage and skilled artisans.

- **Date:** Officially recognized in June 2024
- **Milestone:** Srinagar becomes the fourth Indian city to receive this recognition, joining Jaipur, Malappuram, and Mysore.
- **Importance:**
  - **International Recognition:** Elevates Srinagar's status as a global centre for handcrafted goods.
  - **Economic Benefits:** Potentially attracts tourists, investors, and buyers interested in authentic crafts, boosting the local economy.
  - **Cultural Preservation:** Highlights the city's dedication to preserving traditional crafts and ensuring their survival for future generations.

## World Craft Council International

- It is a Kuwait-based organisation dedicated to the recognition and preservation of traditional crafts globally.
- **Establishment:** Established by Aileen Osborn Vanderbilt Webb, Margaret M. Patch, and Kamaladevi Chattopadhyay at the first World Crafts Council General Assembly in New York on June 12, 1964.
- **Objective:** To enhance the role of crafts in both cultural and economic spheres.

- **Functions:**
  - Promotes fellowship among craftspersons by providing encouragement, assistance, and advice.
  - Facilitates cultural exchange through conferences, international visits, research studies, lectures, workshops, exhibitions, and other activities.
- **Affiliation:** Affiliated with UNESCO under Consultative Status since its inception.

### About World Craft City (WCC) Designation

- **Overview:** The WCC initiative was launched in 2014 by the World Crafts Council AISBL (WCC-International).
- **Purpose:** Recognizes the crucial role of local authorities, craftspeople, and communities in driving cultural, economic, and social development globally.
- **Indian Cities with WCC Designation:**
  - **Jaipur:** Known for Kundan Jadai (gem setting), Meenakari jewellery, Lac-based crafts, and Gotta Patti work.
  - **Mysuru:** Famous for Kinnal paintings, Sandalwood carvings, and Rosewood inlay work.
  - **Mamallapuram:** Renowned for stone carving, a tradition dating back to the Pallava dynasty (275 CE to 897 CE).

## Science and Tech

### Sickle Cell Disease

**Context:** The Indian Council of Medical Research (ICMR) seeks partners to collaborate on developing and commercialising a low dose or paediatric oral formulation of **hydroxyurea**, aimed at treating sickle cell disease in India.

### Sickle Cell Disease in India

- SCD is an **inherited haemoglobin disorder**.
- Sickle cell disease (SCD) results from a mutation in haemoglobin (the protein responsible for carrying oxygen within red blood cells).
- This altered haemoglobin, known as haemoglobin S, causes red blood cells to become rigid and sticky when passing through tiny blood vessels.

### First EV Battery Passport

**Context:** Volvo Cars is introducing the world's first Electric Vehicle (EV) battery passport for its new EX90 SUV.

### About the EV Battery Passport

- **Purpose:** The passport includes information about the composition of batteries, origin of materials, carbon footprint, and recycled content.
- **Developed:** Developed in partnership with UK startup Circular.
  - Circular's system tracks battery materials from mining to the finished car and monitors energy sources used in production.
- **Technology:** The blockchain technology to track supply chain details.
- **Battery Health Monitoring:** Provides up-to-date information on the battery's health for 15 years, aiding in assessing used EV values.
- **Accessibility:** Owners can access a simplified version of the passport via a QR code, while a complete version will be submitted to regulators.
- **Regulatory Compliance:** Aligns with upcoming EU regulations making battery passports mandatory for all EVs from February 2027.



- Red blood cells (RBCs) become crescent or sickle-shaped due to a genetic mutation.
- These RBCs block blood flow, depriving various body parts of essential oxygen which often leads to anaemia, organ damage, severe and episodic pain, and premature death.
- **Symptoms and Signs:** Early signs and symptoms of sickle cell disease (SCD) in infants typically appear around 5-6 months old and may include:
  - **Yellowing of the skin and whites of the eyes** (jaundice)
  - **Fatigue or fussiness** due to anaemia (low red blood cell count)
  - **Painful swelling of the hands and feet** (dactylitis)
- **Treatment:** Lifelong condition requiring ongoing care.
  - **Bone marrow transplant:** Traditionally the only cure.
  - In 2023, The U.S. Food and Drug Administration approved two new therapies to treat the disease.
    - One adds a therapeutic gene.
    - Another modifies an existing gene.
  - **Other treatments:** Focus on symptom reduction and life extension.

### Current Status Of Sickle Cell Disease

- **SCD Prevalence:** India ranks **third globally in SCD births** (after Nigeria and the Democratic Republic of the Congo) , with regional studies indicating **15,000-25,000 SCD-affected births** annually, predominantly in tribal populations.
- **National Screening Data:** Screening across various states found 8.75% positivity for SCD out of 1.13 crore people tested.
- **Recognition as a Disability:** SCD is listed as **one of the 21 disabilities under the Rights of Persons with Disabilities Act 2016**.

### A Bacteria That Writes New Genes

**Context:** Recent research suggested that *Klebsiella pneumoniae* bacteria use reverse transcriptase in defence against bacteriophages.

#### About Reverse Transcriptase (RT)

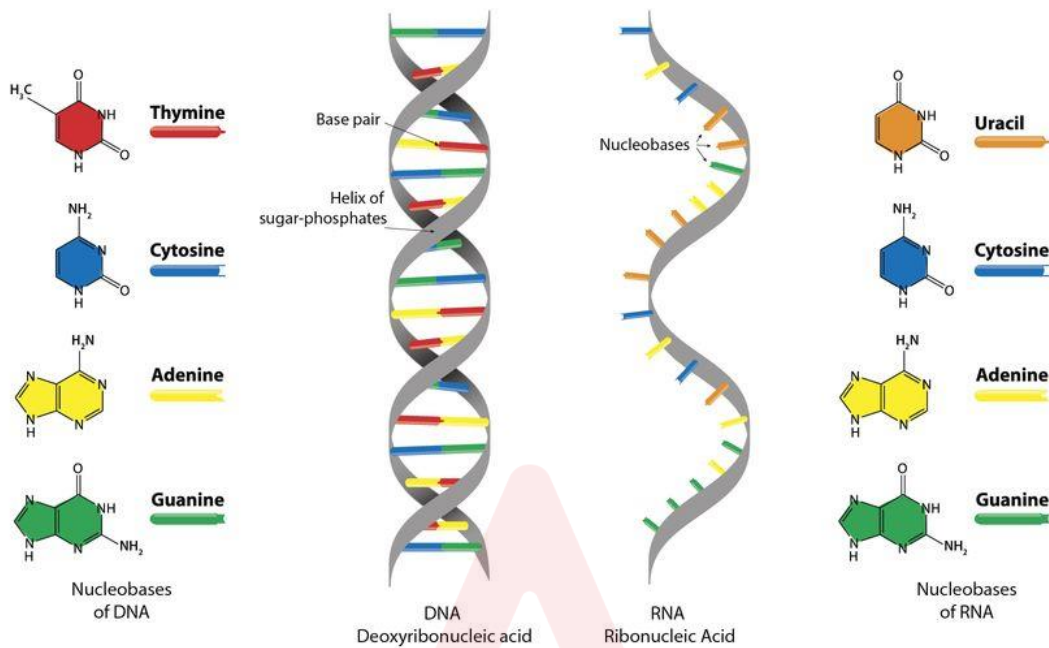
- **Discovery:** Discovered in 1970 by Howard Temin and David Baltimore.
- **Function:** RT catalyses the transcription of RNA into DNA, a process known as reverse transcription.
  - This is the opposite of the usual transcription process where DNA serves as a template for RNA.
- **Structure:** The enzyme typically has two subunits, which include an RNA-dependent DNA polymerase activity, ribonuclease H (RNase H), and DNA-dependent DNA polymerase activity.
  - These activities collectively enable RT to convert single-stranded RNA into double-stranded DNA.
- **Role in Viruses:** Viruses such as HIV and hepatitis B use RT to replicate their genomes.
  - After infecting a host cell, the viral RNA is reverse-transcribed into DNA, which can then integrate into the host's genome and direct the production of new viral particles.
- **Applications:** RT is used in molecular biology for various applications, including reverse transcription-polymerase chain reaction (RT-PCR), which is a technique used to amplify and study specific DNA sequences from an RNA template.
  - It's also used in research for cloning, RNA sequencing, and genome analysis.

#### Klebsiella Pneumoniae

- *Klebsiella pneumoniae* is a type of bacteria that is commonly found in the human intestines, where it is generally harmless.
- However, if it spreads to other parts of the body, it can cause serious infections.
- **Classification:** It is a Gram-negative, encapsulated, non-motile bacterium.
- **Infections:** It can lead to various infections, including pneumonia, urinary tract infections (UTIs), bloodstream infections, and meningitis.
- **Antibiotic Resistance:** *Klebsiella pneumoniae* has a high tendency to become antibiotic-resistant, making infections difficult to treat.
- **Symptoms:** Symptoms vary depending on the infection site but may include fever, chills, cough with yellow or bloody mucus, shortness of breath, and chest pain for pneumonia; and typical UTI symptoms for urinary infections.
- **Risk Factors:** People with weakened immune systems, chronic illnesses, or those who are in healthcare facilities have a higher risk of infection.
- **Transmission:** The bacteria are not airborne and require direct contact to spread. Transmission often occurs in healthcare settings through contaminated hands or medical devices.

#### About DNA (Deoxyribonucleic Acid)

- **Definition and Composition:**
  - DNA, or deoxyribonucleic acid, is a nucleic acid containing the sugar deoxyribose.
  - It contains four nitrogenous bases: Adenine, Guanine, Cytosine, and Thymine.
- **Structural Features:**
  - DNA is structured as a **double-stranded helix**.
  - The strands are **connected by hydrogen bonds** between nitrogenous bases.



- **Stability and Replication:**
  - The DNA backbone is resistant to cleavage.
  - It stores biological information which is replicated when the two strands separate during DNA replication.
- **Chromosomal Organization:**
  - Within cells, DNA is organised into chromosomes.
  - During cell division, chromosomes are duplicated to ensure each new cell receives a complete set.
- **Storage Locations:**
  - In eukaryotic organisms (like animals, plants, fungi, and protists), DNA is primarily stored in the cell nucleus and partly in organelles such as mitochondria or chloroplasts.
  - Prokaryotes (bacteria and archaea) store their DNA in the cytoplasm.
- **Biological Functions:**
  - DNA serves as the chemical basis of heredity and is considered the reservoir of genetic information.
  - It maintains the identity of different species over millions of years.
  - DNA is capable of self-duplication, ensuring identical DNA strands are transferred to daughter cells.

## Milgromian Dynamics/Modified Newtonian Dynamics (MOND)

### Context

- Astrophysicists face a puzzling mystery: galaxies rotate much faster than predicted by Newton's laws of gravity.
- To explain this discrepancy, the concept of dark matter, an invisible substance, was proposed. However, despite decades of searching, dark matter remains elusive.
- An alternative explanation, Modified Newtonian Dynamics (MOND), suggests that Newton's laws break down at low accelerations.
- Recent research, however, revealed significant challenges to the MOND theory.

### Milgromian Dynamics/Modified Newtonian Dynamics (MOND) Theory

- It is a theoretical framework proposed by physicist Mordehai Milgrom in 1983 as an alternative to the standard Newtonian dynamics and general relativity.
- MOND suggests that Newton's laws of gravity do not hold at very low accelerations, below a certain threshold.
- According to Newtonian mechanics, the force of gravity between two masses decreases with the square of the distance between them.

- However, observations of galaxy rotation speeds show that stars in the outer regions of galaxies move at similar speeds to those near the centre, contrary to what would be expected if only visible matter were exerting gravitational force.
- **Predictive Success:**
  - MOND has been successful in explaining the flat rotation curves of many spiral galaxies, where the speed of stars at varying distances from the galactic centre remains approximately constant rather than decreasing as expected in a purely Newtonian framework.
  - It also provides a good fit for the dynamics of some dwarf spheroidal galaxies without requiring additional unseen mass.

### Challenges to MOND on Small Scales

- **Cassini Mission:** The Cassini spacecraft, which orbited Saturn, provided data to test MOND by measuring deviations in Saturn's orbit due to galactic gravitational effects predicted by MOND.
  - MOND predicts subtle deviations in Saturn's orbit at 10 AU from the Sun due to the gravitational influence of the galaxy.
  - No such deviations were found in Saturn's orbit as predicted by MOND. This strongly supports the validity of Newton's laws in the outer Solar System.
- **Wide Binary Stars:** The orbital speeds of wide binary stars, pairs of stars orbiting each other at large distances, do not exhibit the 20% faster orbits predicted by MOND. This casts further doubt on the theory's accuracy on small scales.
- **Outer Solar System Bodies:** Observations of comets and other small bodies in the outer Solar System show distributions of energy and orbital inclinations that do not match MOND's predictions.

### Challenges to MOND on Large Scales

**Galaxy Clusters:** MOND struggles to explain the motions within galaxy clusters.

- While it fails to provide enough gravity in the central regions, it overestimates gravity in the outskirts.
- Dark matter, with five times the mass of normal matter, offers a better fit to the observed data.

## New Alzheimer's Drug

**Context:** Donanemab developed by Eli Lilly represents a potentially significant advancement in Alzheimer's treatment.

### About Donanemab

- Donanemab is a monoclonal antibody therapy developed by Eli Lilly that targets amyloid beta protein depositions in the brain, a hallmark of Alzheimer's disease.
- **How does it work?** Donanemab works by clearing amyloid beta plaques in the brain, slowing cognitive decline in early Alzheimer's patients.
- **How effective is it?** Donanemab is designed for patients in the **early stages of Alzheimer's disease**, such as those with **mild cognitive impairment or mild dementia**.
  - It significantly slows the progression of the disease, allowing patients to retain their functions longer.
  - The phase 3 study of 1,736 participants, where 860 received donanemab every four weeks until amyloid plaques were cleared, showed a **1% slowdown in cognitive decline at 76 weeks**.
- **What are the risks?** The main adverse effects reported were **swelling or bleeding in the brain**; 24% of participants experienced brain swelling and 19.7% had **brain bleeds**.
  - There were **three treatment-related deaths during the study**.
  - Most amyloid-related imaging abnormalities (ARIA) events were non-serious and resolved after discontinuation of therapy.
- **Why is this breakthrough important?** With an estimated 5.3 million people currently living with dementia in India and a projected increase to 14 million by 2050, an effective treatment for Alzheimer's is crucial.
- **How does it compare to other Alzheimer's drugs?** Donanemab differs from the two previously approved therapies (aducanumab and lecanemab) because of **limited dosing protocol**.

- Treatment with donanemab is discontinued once a **predetermined level of amyloid plaque clearance is achieved.**
- This approach is based on the hypothesis that continued treatment beyond the point of significant plaque reduction might not provide additional benefits and could increase risks.
- This dosing strategy is distinct from other drugs that may require ongoing treatment without a specific endpoint based on plaque levels.
- **Why was approval delayed?** The FDA requested further data on the therapy's limited dosing protocol and potential implications.
  - Additionally, there was increased scrutiny following **concerns about the approval process for the first Alzheimer's drug, aducanumab.**
    - Aducanumab faced scrutiny and controversy over its approval due to mixed clinical trial results and concerns about its efficacy.
    - Lecanemab, similar to donanemab, has been met with cautious optimism but still presents challenges concerning side effects and the degree of clinical benefit.

## SpaceX Starship

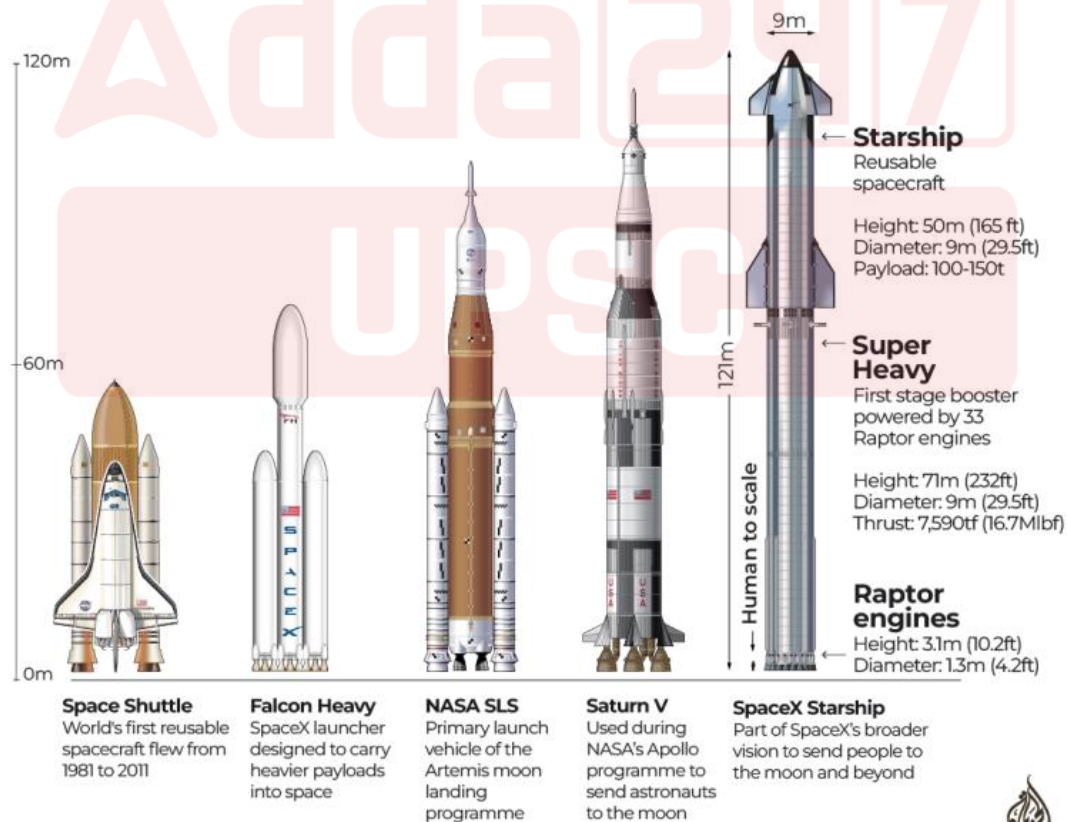
**Context:** SpaceX's Starship rocket achieved its first fully successful test flight.

### About Starship Rocket

SPACE

## SpaceX's Starship mega-rocket

Starship – one of the most powerful launch vehicles ever constructed - is designed to carry astronauts and cargo to the moon and beyond.



Source: Graphic News, SpaceX | March 14, 2024

- **Overview:** Starship is a two-stage heavy lift-off vehicle designed to transport crew and cargo to Earth orbit, the Moon, Mars, and beyond.
- It is the largest rocket ever flown (120 metres tall), surpassing the Saturn V (111-metre), which took Neil Armstrong to the Moon.
  - For perspective, the Qutab Minar stands at 72.5 metres tall.
- **Super Heavy Booster:** The booster consists of 33 Raptor engines, generating 74 meganewtons of thrust.
  - In comparison, NASA's Space Launch System (SLS) produced 39 meganewtons of thrust, and Saturn V delivered about 35 meganewtons.
- **Engine Specifications:** The Raptor engines use a 3.6:1 ratio of liquid oxygen (oxidizer) to liquid methane (fuel).
- **Reusability:** SpaceX aims for the Super Heavy booster to be fully reusable, capable of re-entering Earth's atmosphere and landing back at the launch site.
  - The Starship spacecraft, equipped with six Raptor engines and four landing fins, is also designed to be fully reusable.

### How Can Starship Reduce the Cost of Space Travel?

- **High Payload Capacity:** Starship is expected to carry up to 150 tonnes to low-Earth orbit and at least 100 tonnes to the Moon and Mars, more than the total mass soft-landed on the Moon so far.
- **In-Orbit Refuelling:** SpaceX is developing the capability for Starship to be refuelled in Earth orbit by other Starships, allowing it to operate like an aeroplane with quick turnaround times.
- **Rapid Reusability:** Starship's design ensures that its principal hardware elements are not discarded but brought back to the ground for reuse.
  - This is in contrast to other systems like NASA's reusable Space Shuttle, which required extensive refurbishment.
- **Cost Efficiency:** Estimates suggest that Starship can deliver up to 100 tonnes to Mars for just \$50 million.
  - In comparison, the Space Shuttle, which was retired in 2011, cost \$1.5 billion per launch to carry a quarter of Starship's payload to low-Earth orbit.

### Benefits to Science

- **Heavy Payload Capacity:** Starship's ability to carry large payloads will enable the launch of bigger and more advanced space telescopes, and larger equipment for Moon and Mars missions.
- **Enhanced Scientific Capabilities:** Scientists can send full-sized drilling rigs and other large equipment, providing unprecedented access to the interior of the Moon and Mars.
- **Sample Return Missions:** Starship's reusability allows for the return of significant amounts of samples from the Moon and other planets, aiding scientific research on our solar system and the origin of life.
- **Support for NASA's Artemis Program:** Starship is central to NASA's Artemis program, which aims to return astronauts to the Moon by 2030 and to Mars before the end of the next decade.

### Challenges

- **Safety and Reliability:** SpaceX needs to demonstrate that Starship is safe and reliable while keeping costs low.
- **Historical Context:** The Space Shuttle program faced criticism for higher incremental costs of reusable shuttles compared to expendable rockets.
- **Development Hurdles:** Despite rapid development, progress has been slower than anticipated, and it has come with significant costs.

## Agnikul Cosmos Successfully Launched Agnibaan Rocket

In a groundbreaking achievement for the Indian space industry, startup Agnikul Cosmos has successfully launched its first sub-orbital test vehicle, Agnibaan SOrTeD (Sub-Orbital Technology Demonstrator), powered by the world's first single-piece 3D-printed rocket engine. This historic event took place on May 30, 2024, at 7.15 am from Agnikul's private launchpad at Sriharikota, marking several significant firsts for both the company and India's burgeoning private space sector.

### Fact

This Agnibaan Rocket launch follows Skyroot Aerospace's successful Vikram rocket launch in November 2022, which also received widespread recognition. Both companies are poised to offer commercial satellite launch services within a year.

## Agnikul Cosmos Successfully Launched Agnibaan Rocket

Agnikul Cosmos, an Indian space startup, achieved a milestone by successfully launching Agnibaan SOrTeD, a sub-orbital vehicle powered by the world's first single-piece 3D-printed rocket engine. Conducted from their private launchpad at Sriharikota, this marks India's first semi-cryogenic engine flight. The innovative engine, Agnilet, utilizes sub-cooled oxygen, reducing launch costs and assembly time. Agnikul aims to provide affordable launch services, planning their first orbital mission by year-end. Agnibaan rocket, marking a new chapter in India's space industry.

Company	Achievement	Launch Details	Engine Technology	Future Plans
Agnikul Cosmos	Successful sub-orbital launch of Agnibaan SOrTeD, world's first single-piece 3D-printed engine	Launched from private pad at Sriharikota, India's first semi-cryogenic engine flight	Agnilet engine, single-piece 3D-printed, uses sub-cooled oxygen	First orbital mission by year-end, affordable launch services

## Agnikul Cosmos Launch Details

### Agnibaan SOrTeD Mission

- Suborbital flight intended to reach a height of approximately 8 kilometers.
- Designed to splash down in the sea post-flight.
- Capable of carrying payloads ranging from 30 kg to 300 kg.

### Agnibaan Rocket Features Description

<b>Developer</b>	Developed by Agnikul Cosmos, represents a significant milestone in India's space industry.
<b>Type</b>	Sub-Orbital Test Vehicle
<b>Propulsion System</b>	Powered by the innovative Agnilet engine, the world's first single-piece 3D-printed rocket engine.
<b>Launch Platform</b>	Lifted off from Agnikul Cosmos' private launchpad at Sriharikota, India's primary spaceport.
<b>Payload Capacity</b>	Designed to carry payloads ranging from 30 kg to 300 kg, offering versatility in satellite deployment.
<b>Mission Objectives</b>	Initially serves as a sub-orbital technology demonstrator, setting the stage for Agnikul's future orbital missions.
<b>Affordability</b>	Aims to provide cost-effective launch services for small satellites, contributing to the democratization of space access.
<b>Environmental Impact</b>	Agnilet engine's efficient propulsion technology aligns with Agnikul's commitment to reducing the environmental impact of space launches.
<b>Recognition</b>	The successful launch of Agnibaan has garnered recognition from national space agencies like ISRO and positioned Agnikul Cosmos on the global stage of space exploration.
<b>Symbolism</b>	Represents India's prowess in space technology and innovation, paving the way for future advancements in the country's space sector.

## China's Chang'e-6 far side of the Moon probe begins Journey Back

**Context:** China's Chang'e-6 probe has lifted off from the far side of the moon to start its journey back towards Earth.

### Chang'e 6 Mission of China

- Chang'e 6 Mission was followed by the success of Chang'e-5.
- Chang'e-6 will collect lunar samples from the moon's far side, a first for China.
- Chang'e 6 aims to land on the northeastern side of the South Pole-Aitken Basin, the oldest known impact crater in the solar system. This region is considered highly valuable for lunar exploration.

- The goal of Chang'e-6 mission is to collect samples and return is expected to provide valuable insights into the early evolution of the moon and the inner solar system, enhancing our understanding of celestial dynamics.



- Due to the lack of direct line of sight with Earth, Chang'e-6 will depend on a relay satellite for communication during its 53-day mission.
- This mission includes the challenging task of ascending from the moon's hidden side.
- Chang'e-6 will carry scientific payloads from France, Italy, Sweden, and Pakistan.
- The mission features international partnerships, including contributions from the European Space Agency (ESA) and the French space agency CNES.
  - ESA is supplying a lunar surface ion tester, and CNES is providing devices to measure radon gas and its decay products.
  - Additionally, the mission includes an Italian laser corner reflector for calibrating radar instruments and Pakistan's ICUBE-Q CubeSat.

#### Facts

- The three key missions in this endeavour are: Chang'e 6 (2024), Chang'e-7(2026), Chang'e- 8 (2028).
  - The subsequent missions, Chang'e-7 in 2026 and Chang'e-8 in 2028, will focus on exploring the moon's south pole for water resources and constructing a basic outpost in collaboration with Russia.
  - These missions are supported by the same relay satellite. Chang'e-7 will also carry payloads from Russia, Switzerland, and Thailand.
- Since the Chang'e-1 mission (2007), China has made significant advancements in lunar exploration, narrowing the gap with the US.
- U.S. law prohibits NASA from any form of collaboration with China, either directly or indirectly.

### High Net-Worth Individuals (HNWIs)

**Context:** The number of high net-worth individuals (HNWIs) in India increased by 12.2% in 2023 compared to 2022, resulting in a total of 3.589 million HNWIs.

#### More In News

- The total financial wealth of India's HNWIs grew by 12.4% in 2023, reaching \$1,445.7 billion.
- A significant market upswing in 2023 contributed to a \$3.8 trillion increase in India's overall national wealth.

- India featured as one of the top performers in the Asia-Pacific (APAC) region, which saw an overall HNWI wealth growth of 12.2% and a 7.9% increase in HNWI population.
- The resilience of India's economy and the robust performance of its equity markets were key factors driving the wealth growth among HNWIs.
- India's market capitalization saw a substantial rise of 29% in 2023, following an increase of 22% in 2022.

#### About High Net-Worth Individuals (HNWIs)

- High net-worth individuals (HNIs) are part of the financial services sector and are defined as individuals with an **investible surplus of more than Rs 5 crore**. Those with lesser amounts are considered retail investors.
- **Net Worth:** It is calculated by the **excess of assets over liabilities**.
  - HNIs are specifically **identified by their investable assets** such as bonds and stocks that exceed a certain value threshold.
- **Exclusion of Certain Assets:** The classification of HNIs **does not include primary residences, durable goods, or collectibles** in the calculation of liquid assets.
- HNIs are highly sought after by private wealth managers due to the substantial work involved in preserving and managing their large asset bases.
- Wealth managers typically earn a commission based on the total assets they manage.
- **Investible Surplus:** It refers to the **additional money an individual has available for investment in assets expected to appreciate in value**.
  - This **does not include money put into real estate or assets not expected to yield returns**, such as personal use items like a primary residence, cars, or farmhouses.
  - **Example:** An individual with a house worth Rs 5 crore, bank fixed deposits worth Rs 1 crore, and a car worth Rs 50 lakh is not considered an HNI. Despite a total net worth exceeding Rs 6 crore, only the Rs 1 crore from fixed deposits is considered investible surplus.
- **Categories of HNIs:**
  - **High-net-worth individuals (HNWIs):** Those with liquid assets valued between Rs 5 lakh and Rs 5 crore.
  - **Very-high-net-worth individuals (VHNWIs):** Those with liquid assets valued between Rs 5 crore and Rs 25 crore.
  - **Ultra-high-net-worth individuals (UHNWIs):** Those owning more than Rs 25 crore in liquid assets.

#### Need for a third Aircraft Carrier

**Context:** Cochin Shipyard Limited (CSL) is set to begin construction on the Indigenous Aircraft Carrier-2 (IAC-2), a Vikrant-class 40,000-ton platform, updated with modifications and greater local content compared to IAC-1 Vikrant.

#### Reason for New Carrier

- To maintain CSL's carrier-building expertise and avoid a repeat of the 'lost decade' from 1995-2005, when submarine building expertise at Mazagaon Dock Shipbuilder's (MDL) diminished following a corruption scandal involving German HDW submarines.
- Post-scandal, submarine facilities at MDL deteriorated and were only revived in 2005 to build six French Scorpene submarines, five of which have been commissioned, with the sixth expected by year-end.
- Current naval fleet includes INS Vikramaditya (46,000-ton refurbished Russian Kiev-class vessel) and IAC-1 Vikrant (40,262-ton STOBAR carrier), aiming to keep one carrier for each of India's two seaboard with a third in reserve.
- The Navy seeks to fulfil its requirement for two carriers, one for each seaboard, with a third in reserve.

#### Concerns and Challenges

- **Cost:** The estimated cost of IAC-2 is \$5-6 billion, raising financial concerns amidst competing demands for defence resources.
- **Operational Efficacy:** The effectiveness of carriers in the face of growing anti-access/area denial (A2/AD) capabilities by China and Pakistan is questioned.
- **Alternative Strategies:** Debates exist within the Navy between pursuing a "sea denial" strategy with submarines or a "sea control" approach with carrier battle groups.

- **Resource Allocation:** Critics argue that investing in submarines or other critical assets like corvettes and helicopters could be more beneficial than a costly carrier.
- **Indian Air Force's Perspective:** The IAF views an aircraft carrier as a vulnerable and costly indulgence, proposing alternatives like upgrading fighter jets with maritime strike capabilities.
- **Financial Constraints and Revised Goals:** Due to financial limitations, the Indian Navy has revised its goal of operating 200 warships by 2027, reducing the planned procurement of mine countermeasures vessels and Boeing P-8I aircraft.
  - The Navy's budget faces competition from the Army and Air Force, who also require funds for fighter jets, helicopters, and other equipment.

### Upgrading Capabilities and Exploring Alternatives

- The IAF is enhancing the maritime strike capability of its Jaguar IM and Sukhoi Su-30MKI fighter jets with advanced missiles and radar systems.
- The commissioning of a BrahMos-A(Air) equipped Su-30MKI squadron at Thanjavur aims to strengthen maritime surveillance and strike capabilities.
- Some navalists advocate for upgrading the military capabilities of the Andaman and Nicobar Islands to create an A2/AD "exclusive zone" to deter potential threats, notably from China. This approach is considered cheaper and potentially more effective than deploying new carriers.

### Examples, Case Studies and Data

- **Consumption Inequality (GS 3):** The Household Consumption Expenditure Survey (HCES) analysed consumption inequality changes in India between 2011-12 and 2022-23.
  - **National Trend:**
    - Despite regional increases, national consumption inequality has generally declined.
    - The Gini coefficient at the all-India level decreased to 0.266 in rural areas and to 0.314 in urban areas in 2022-23 from higher levels in 2011-12.

### What is the Gini Coefficient?

- The Gini Coefficient, also known as the Gini Index or Gini Ratio, quantifies income or wealth inequality within a specific population, region, or country.
- **Scale:** The Gini coefficient, ranging from 0 to 1
  - A value of 0 indicates perfect equality, where everyone has identical income or wealth.
  - A value of 1 indicates perfect inequality, where all income or wealth is concentrated with one person or household while others have none.
- **Data Organization:** To calculate the Gini Coefficient, data on income or wealth is organised in ascending order, from the poorest to the richest.
- **Lorenz Curve:** A Lorenz curve is plotted to provide a graphical representation of the actual distribution of income or wealth. It shows the cumulative income or wealth of the population against the cumulative share of the population.
- **Calculation:**
  - The Gini Coefficient is calculated by measuring the area between the Lorenz curve and the line of perfect equality.
  - The area measured is then divided by the total area under the line of perfect equality to derive the Gini Coefficient.
- **Rural Consumption Inequality:**
  - Inequality in rural areas rose in 11 of the 25 states analysed.
  - States with increased Gini coefficients in rural areas include Bihar, Chhattisgarh, Jharkhand, Maharashtra, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Himachal Pradesh, and Rajasthan.
- **Data Gaps:**
  - No comparable data was available for Telangana, Goa, and Arunachal Pradesh.
  - Notable Increases in Gini Coefficients:
  - Significant rises were observed in Nagaland (0.244 from 0.192), Jharkhand (0.255 from 0.206), Maharashtra (0.291 from 0.253), Rajasthan (0.283 from 0.248), Meghalaya (0.223 from 0.19), and Chhattisgarh (0.266 from 0.234).

- **Urban Consumption Inequality:**

- Gini coefficients also increased in urban areas of three states: Meghalaya (0.266 from 0.226), Himachal Pradesh (0.311 from 0.29), and Manipur (0.221 from 0.209).

## Kavli Prize

**Context:** The 2024 Kavli Prize winners have been awarded to eight individuals for their significant contributions in the fields of astrophysics, neuroscience, and nanoscience.

### Origins and Purpose of the Kavli Prize

- **Founder:** The Kavli Prize was established in honour of Norwegian-American businessman and philanthropist Fred Kavli (1927-2013).
- **Background:** Born in Eresfjord, Norway, Kavli moved to California in 1956 after earning an engineering degree.
  - He worked for a company building high-tech sensors for missiles and became its chief engineer within a year.
- **Entrepreneurship:** In 1958, Kavli founded his own company, Kavlico, which became a leading manufacturer of pressure sensors used across various industries.
  - He sold the company in 2000 for \$340 million and established the Kavli Foundation to support basic research globally.

### The Kavli Foundation and Prizes

- **Fields:** The Kavli Prizes are awarded in astrophysics, neuroscience, and nanoscience, reflecting the largest, smallest, and most complex phenomena, respectively.
- **First Award:** The inaugural Kavli Prize was awarded in 2008 to seven scientists. Since then, 73 scientists from 19 countries have been honoured, with ten later receiving the Nobel Prize.
- **Award Components:** Each prize includes \$1 million, a scroll, and a medal.
- **Ceremony:** The award ceremony is held in Oslo, with the Norwegian Royal Family presenting the prizes.

### Selection and Administration

- **Collaborating Organisations:** The Kavli Prize is administered by the US-based Kavli Foundation in partnership with the Norwegian Academy of Science and Letters and the Norwegian Ministry of Education and Research.
- **Selection Committees:** Three independent committees, each with five members nominated by global scientific institutes, review the entries and present recommendations.

### 2024 Kavli Prize Winners

- **Total Awardees:** Eight scientists from leading American universities were awarded for their contributions in astrophysics, neuroscience, and nanoscience.
- **Astrophysics: David Charbonneau (Harvard University) and Sara Seager (MIT)**
  - Recognized for their pioneering work in discovering exoplanets and characterising their atmospheres. Their methods included detecting atomic species in planetary atmospheres and measuring thermal infrared emission.
- **Nanoscience:**
  - **Robert Langer (MIT):** Awarded for developing nano-engineered materials for controlled drug delivery systems, aiding in the treatment of diseases like aggressive brain cancer.
  - **Armand Paul Alivisatos (University of Chicago):** Recognized for his work on semiconductor crystals or "quantum dots" used in diagnostic imaging and fundamental medicine research.
  - **Chad Mirkin (Northwestern University):** Honoured for introducing spherical nucleic acids (SNAs), which have applications in gene regulation, intracellular detection, and immunotherapy.
- **Neuroscience:** Nancy Kanwisher (MIT), Winrich Freiwald (Rockefeller University), and Doris Tsao (UC Berkeley):
  - The trio were awarded for mapping the brain's facial recognition centre and further exploring its neural architecture through functional imaging and individual brain cell recordings.

## Tarang Shakti- 2024

**Context:** The Indian Air Force (IAF) is set to conduct its first-ever multinational exercise named Tarang Shakti.

### About Tarang Shakti- 2024

- **Host:** Indian Air Force (IAF)
- **Event:** First-ever multinational air exercise of India.
- **Venue:** Jodhpur, Rajasthan
- **Participants:** Ten countries, including the US, UK, Australia, France, Germany, Japan, Singapore, and the UAE.
- **Objective:** Joint training, knowledge exchange, and enhancement of operational coordination.
- **Aim:** To improve mutual understanding and compatibility among air forces, promoting regional stability and security.
- **Significance:** It represents a unique opportunity for these nations to collaborate and enhance their tactical and operational capabilities.
- **Features:** A variety of aircraft, including fighter jets, military transport aircraft, mid-air refuelers, and AWACS.

### Other Combat Exercises Involving IAF

- **Exercise Garuda:** Indo-French air combat training.
- **Exercise Cope India:** Indo-US bilateral exercise.
- **Exercise Desert Knight:** Indo-French joint air exercise.
- **Exercise Pitch Black:** Multinational air combat exercise in Australia.
- **Exercise Red Flag:** Multinational advanced aerial combat training exercise in U.S.
- **Exercise Orion:** Multinational exercise hosted by the French government.

## Polity

### RTI on Presidential Assent

**Context:** The Central Information Commission (CIC) has upheld the Rashtrapati Bhavan's response to a Right to Information (RTI) Act query on the number of times former President Ram Nath Kovind returned any decision taken by the Prime Minister/Union Council of Ministers for reconsideration.

### More in News

- The President's Secretariat had responded that no information was available on record.
- Petitioner argued that providing information regarding the legislative actions of the President is **important in the light of promoting transparency and accountability in the working of the public authority.**
- The stand of the Chief Public Information Officer/Deputy Secretary, Rashtrapati Bhavan, was that the appellant was already informed that "no such information was available".

### About Right To Information (RTI) Act

- **Introduced:** October 12, 2005
- RTI stems from the constitutional **right to freedom of speech and expression** under Article 19.
- It ensures that citizens have the information necessary to form informed opinions on government operations.
- **Aim:** To foster transparency and accountability in government workings.
- **Procedural Framework:** The Act specifies procedures for requesting information, the time frame for its delivery, the method of dissemination, application fees, and information exemptions.
- **Information Commissions:** The RTI Act establishes the Central Information Commission and State Information Commissions.
- **Public Information Officers:** PIOs are tasked with providing information to individuals requesting it under the RTI Act.

### Fact

- **Section 4 of the Act:** It calls for **proactive disclosure** of information by all authorities so that the public have minimum resort to the use of this Act to obtain information.

- **Exemptions: Section 8(1):** National security, sovereignty, national eco interest, relation with foreign states, cabinet and other decision-making documents, trade secrets, personal privacy, law enforcement etc.
- **Section 24 of the RTI Act:** It lists agencies that are exempt, which mainly include intelligence and security organisations.
  - However, even these organisations must provide information pertaining to allegations of corruption and human rights violations, subject to approval from the Central Information Commission.

#### **Article 111 - President's assent to bills**

- This power is vested in the President by Article 111 of the Indian Constitution.
- The President can request that the Parliament reconsider the bill, particularly if there are concerns about its constitutionality or implications.
- If the bill is passed again by Parliament with or without amendments and presented to the President, it must be signed into law.

#### **Assent to Constitutional Amendment Bill**

- The President must offer his or her assent.
- He is unable to return or withhold the bill (unlike ordinary bills).
- After that, the bill becomes a Constitutional Amendment Act, which amends the Constitution in accordance with its provisions.

### **10 Years of Andhra Pradesh's Bifurcation Completed in 2024**

#### **Context**

- Ten years after Andhra Pradesh was split into two states—Andhra Pradesh and Telangana—the strong emotions from the split have calmed down.
- While the initial acrimony has subsided, the division has raised fundamental questions about the organising principles of India's political geography and the potential ramifications for the nation's future.

#### **Background Of Andhra- Telangana Ties**

##### **Pre-Modern Era**

- Historically, the regions that now constitute Andhra Pradesh and Telangana shared a common linguistic and cultural heritage, with Telugu as the predominant language.
- This linguistic unity contributed to a shared cultural identity, including similar traditions in literature, arts, and cuisine.
- Before the arrival of European colonial powers, both regions were part of various Hindu kingdoms, such as the Satavahanas, the Chalukyas, and later the Kakatiyas.
  - The capital of the Kakatiya dynasty was in Warangal, now in Telangana, which highlights the integrated nature of the regions during that era.

##### **Nizam and Colonial Influence**

- During the 18th and 19th centuries, the Nizam of Hyderabad ruled over a large territory that included modern-day Telangana and parts of what is now Andhra Pradesh.
- While the Nizam directly controlled Telangana, the Andhra regions were part of the Madras Presidency under British colonial rule but also had historical ties as they were intermittently under the influence or direct control of the Nizams.
- Although administratively divided during the Nizam's rule and under the British, the regions shared economic and social ties.
- The city of Hyderabad, established by the Nizam, served as a focal point and later became a central element in the cultural and economic life of both regions.

##### **Post-Independence**

- In 1953, the Andhra State was formed from the Telugu-speaking areas of the Madras Presidency.
- This was the first state in India to be created on a purely linguistic basis, setting a precedent for the later reorganisation of states in India.

- Following the States Reorganisation Act of 1956, the Andhra State was merged with the Telugu-speaking areas of the Hyderabad State (Telangana) to form Andhra Pradesh.
- This merger was intended to create a linguistic and cultural unity but also led to the integration of diverse administrative and cultural histories.
- Over the decades, disparities in development and issues of resource distribution (especially water and revenue from Hyderabad) contributed to extensive debates, negotiations, and protests, ultimately leading to the bifurcation of Andhra Pradesh in 2014.

## All Eyes On Reasi Terrorists Attack in Jammu and Kashmir

**Context:** Terrorists opened fire at the 53-seater bus carrying pilgrims when it was en route from the Shiv Khori temple to the Mata Vaishno Devi shrine in Katra in Reasi district.

### Reasi Terror Attack Background

- Reasi, along with Rajouri and Poonch districts, was a centre of militancy in the 1990s but saw relative peace in recent years until this incident.
- Former Home Minister of India highlighted a 66% decrease in terrorist incidents in Jammu and Kashmir since the abrogation of Article 370.
- The last terrorist activity in Reasi occurred in May 2022, which involved a bomb attack that killed four Vaishno Devi pilgrims.

Seven people were killed and 25 injured after a bus carrying pilgrims skidded off the road and rolled down into a gorge at the Tangli morh in the Choki Chora belt of Jammu district



### Shift in Terrorist Activities in J&K

- **Geographical Shifts:** There has been a notable shift in terrorist activities to the Jammu districts, possibly due to the strengthened counter-infiltration measures in the Kashmir Valley.
  - Reasi, despite being away from the Line of Control (LoC), has seen renewed terrorist activities.
- **Security Dynamics:** The terrorists are possibly exploiting the challenging terrain of the Pir Panjal range, which provides cover and movement advantages.
  - The recent attack involved militants using forest cover to ambush the pilgrims' bus.
- **Proxy Operations:** Due to international pressure, particularly from the FATF, groups like Lashkar-e-Taiba (LeT) have resorted to using proxies like The Resistance Front (TRF) to carry out their activities.

**Community and Response on Reasi Attack**

- In July 2022, Reasi residents managed to overpower and capture LeT militants, handing them over to security forces, showcasing local opposition to militancy.
- Following the Reasi attack, there is a heightened call for the government to increase vigilance and security measures.
- Additionally, there is a push to advance the political process, including holding assembly elections and restoring statehood to J&K.

**Ramnath Kovind Panel Report on Simultaneous Elections**

**Context:** Former President Ram Nath Kovind's led panel report on 'One Nation, One Election' or simultaneous elections, could be placed before the Union Cabinet as part of the 100-day agenda of the Ministry of Law and Justice.

**Recommendations of the Ramnath Kovind Panel Report**

**Two-step approach:** The committee recommended a two-step approach to holding simultaneous elections.

- As a first step, hold simultaneous elections for the Lok Sabha (the lower house of India's Parliament) and State Assemblies.
- Within 100 days of the general election, conduct polls for municipal and panchayat bodies in the next phase.

**What are Simultaneous Elections?**

- Simultaneous elections, also known as synchronized elections or one-nation-one-elections, refer to the practice of holding multiple elections for various levels of government (such as national and state) at the same time or on a synchronized schedule.
- This would mean that the voters will cast their vote for electing members of the LS and the state assemblies on a single day, at the same time (or in a phased manner as the case may be).

**History of Simultaneous Elections in India**

- The concept of simultaneous elections is not new to the country.
- Post-adoption of the Constitution of India, the First General Elections to the Lok Sabha (House of the People) and all Vidhan Sabhas (State Legislative Assemblies) were held simultaneously in 1951-52.
- This practice continued in three subsequent General Elections held in the years 1957, 1962 and 1967.
- However, due to the premature dissolution of some State Legislative Assemblies in 1968 and 1969, the cycle of synchronized elections got disrupted. In 1970, the Lok Sabha itself was dissolved prematurely and fresh elections were held in 1971.
- Thus, since the 1967 elections, the practice of simultaneous elections to the Lok Sabha and the Vidhan Sabhas could not be maintained and the elections have still not been realigned.

**Arguments for and Against Simultaneous Elections****Arguments in Favour**

- **Cost Reduction:** Simultaneous elections would reduce these costs by eliminating the need for separate election cycles.
- **Increased Voter Turnout:** Because voters would only need to participate in elections once every few years, reducing voter fatigue.
- **Efficient Use of Security Forces:** Frequent elections require the deployment of security forces, which could be better utilized for other internal security purposes if elections were synchronized.
- **Focus on Long-Term Governance:** Frequent elections can encourage politicians to prioritize short-term electoral gains over long-term policy and governance. Simultaneous elections might lead to more stable and strategic policymaking.

**Arguments Against**

- **Difficult to Synchronize:** Maintaining synchronized elections in a diverse democracy like India could be challenging, especially if governments lose confidence in their assemblies.
- **Impact on Voter Behavior:** Simultaneous elections might lead to voters confusing national and state issues, potentially undermining the distinctiveness of state elections.
- **Impact on Regional Parties:** Simultaneous elections might favor large national parties, potentially disadvantaging regional parties.
- **Accountability:** Regular elections force governments to stay responsive to the will of the people. Fixed terms without the fear of recall could

- **Level Playing Field:** Smaller parties often struggle to compete with larger parties with more resources during frequent elections. Simultaneous elections could level the playing field by reducing overall election expenses.
- **Constitutional and Federalism Concerns:** Implementing simultaneous elections may require changes to the constitution and could potentially infringe on the federal nature of the Indian political system.

### The committee has made the following recommendations:

#### Amending the Constitution

The Constitution should be amended to enable simultaneous elections in two steps.

- In the first step, **simultaneous elections will be held to Lok Sabha and State Assemblies**. For this, no ratification by the states will be required for the constitutional amendment.
- In the second step, elections to municipalities and the panchayats will be synchronised with elections to Lok Sabha and state Assemblies in such a way that local body elections are held within 100 days of the elections to Lok Sabha and state Assemblies. This will require ratification by not less than one-half of the states.

#### Single Electoral Roll and Election ID

- For the purpose of preparing a single electoral roll and electoral photo identity cards for use in elections to all the three tiers of government, the Constitution should be amended, so that the Election Commission of India can prepare a single electoral roll and election ID in consultation with the State Election Commissions.
- These amendments will require ratification by not less than one-half of the states.

#### In the case of a Hung Assembly/House

In the event of a hung House, a no-confidence motion, or any such event, fresh elections should be held to constitute the new Lok Sabha or state Assembly for the unexpired term of the House.

### Kanchanjunga Express Collides with Goods Train in Bengal

Train accidents in India have been a persistent concern due to various factors ranging from infrastructure challenges to human errors and operational failures. These incidents not only result in loss of lives but also raise questions about safety protocols, maintenance practices, and the overall management of the extensive railway network.

#### Train Accidents in India

Train accidents in India are often caused by mechanical failures, human errors such as signal failures and overspeeding, infrastructure deficiencies like poorly maintained tracks, adverse weather conditions, and occasionally, acts of sabotage. Notable incidents include the Gorakhdham Express derailment in 2014 and the Balasore triple-train collision in 2023. Measures to mitigate risks include technological upgrades, enhanced training, infrastructure modernization, and regulatory reforms to ensure safer railway operations nationwide.

#### Kanchanjunga Express Collision 2024

- **Date:** June 17, 2024
- **Location:** Near Rangapani railway station, West Bengal
- **Casualties:** 9 killed, 25 injured
- **Details:** A collision between Kanchanjunga Express and a goods train resulted in derailment and casualties. The cause is under investigation, highlighting ongoing safety challenges despite previous incidents prompting scrutiny.

#### Causes of Train Accidents in India

Train accidents in India can be attributed to several factors:

- **Mechanical Failures:** Such as defects in locomotives, brake failures, or axle issues leading to derailments.
- **Human Errors:** Including errors in signaling, improper switching of tracks, or train operation mistakes.
- **Infrastructure Issues:** Poor maintenance of tracks, bridges, and other infrastructure components that can lead to accidents.
- **Weather Conditions:** Adverse weather like heavy rains, fog, or extreme temperatures affecting visibility or track conditions.
- **Sabotage:** Deliberate acts of sabotage or vandalism on railway tracks or infrastructure.

## Recent Train Accidents in India

In the past decade, several major train accidents have occurred in India, highlighting persistent safety concerns within the railway network:

Year	Train Accident	Location	Cause	Casualties
2014	Gorakhdham Express	Chureb, Uttar Pradesh	Fracture in track (Failure of Equipment)	Multiple fatalities and injuries
2015	Janata Express	Bachhrawan, Uttar Pradesh	Signal overshoot, braking failure	Significant casualties
2016	Indore-Patna Express	Pukhrayan, Dehat district, Kanpur	Mechanical failure initially suspected as sabotage	152 fatalities
2017	Hirakhand Express	Kuneru, Andhra Pradesh	Derailment, suspected explosive sabotage ruled out	Fatalities and injuries
2018	Amritsar Train Tragedy	Amritsar, Punjab	Ran over Dussehra celebrants on tracks	Over 60 casualties
2019	Seemanchal Express	Vaishali, Bihar	Rail fracture due to maintenance issues	Deaths and injuries
2020	Aurangabad Migrant Workers Tragedy	Maharashtra	Workers sleeping on tracks struck by train	16 fatalities due to exhaustion
2022	Bikaner-Guwahati Express	Jalpaiguri, West Bengal	Equipment failure (Failure of Equipment)	Fatalities and injuries
2023	Balasore Triple-Train Collision	Balasore, Odisha	Multiple train collision due to operational lapses	High death toll, extensive investigations

## Prevention of Train Accidents in India

Preventing train accidents in India requires a comprehensive approach addressing various factors contributing to such incidents. Here are key strategies and measures that can help mitigate the risks:

- **Infrastructure Modernization:**
  - Upgrade and maintain railway tracks, bridges, and signaling systems to ensure they meet safety standards.
  - Implement advanced technologies like automatic signaling, train protection warning systems, and anti-collision devices.
- **Maintenance and Inspection:**
  - Regularly inspect and maintain rolling stock (trains), tracks, and other railway infrastructure to prevent mechanical failures.
  - Conduct thorough checks for wear and tear, corrosion, and other potential hazards.
- **Safety Protocols and Training:**
  - Train railway personnel, including drivers, signalmen, and maintenance staff, on safety procedures and emergency response.
  - Enforce strict adherence to operating procedures, speed limits, and signaling protocols.
- **Technological Advancements:**
  - Introduce and utilize advanced technologies such as GPS-based train tracking and communication systems to enhance operational safety.
  - Implement predictive maintenance systems to detect potential failures before they cause accidents.
- **Public Awareness and Education:**
  - Educate passengers and the public about safety measures and the dangers of trespassing on railway tracks.
  - Promote awareness campaigns on railway safety and responsible behavior near railway lines and stations.

- **Emergency Response and Preparedness:**
  - Ensure swift and effective emergency response capabilities, including medical assistance and rescue operations.
  - Conduct regular drills and simulations to prepare railway staff and emergency responders for various accident scenarios.
- **Regulatory Oversight and Accountability:**
  - Strengthen regulatory frameworks to enforce safety standards and protocols across the railway network.
  - Hold accountable those responsible for safety lapses or negligence leading to accidents.
- **Collaboration and Information Sharing:**
  - Foster collaboration between railway authorities, government agencies, and industry stakeholders to share best practices and lessons learned.
  - Establish mechanisms for continuous improvement based on data analysis and incident investigations.

## Patna HC Strikes Down Bihar's Reservation Quota Hike to 65%

### Context

- The Patna High Court set aside the Bihar government's notifications that increased reservations in government jobs and educational institutions from 50% to 65%.
- The court emphasised that while reservations for backward classes aim to break the dominance of a few, merit cannot be completely disregarded. The 50% limit on reservations was established to balance these principles.

## Patna HC Strikes Down Bihar's Reservation Quota Hike to 65%

The Nitish Kumar Government in Bihar on November 21 last year issued a gazette notification for raising the Reservation quota for deprived castes from 50 to 65%. On the Patna High Court on 20th June 2024 set aside the amendments passed by the Bihar legislature in 2023 to increase the reservation Backward Classes (BC), Extremely Backward Classes (EBC), Scheduled Caste (SC) and Scheduled Tribe (ST) from 50% to 65% in educational institutions and government jobs.

### History of the 50% Ceiling of Reservation Quota

#### Indra Sawhney Ruling (1992)

The Supreme Court introduced the 50% ceiling to ensure administrative efficiency.

- **Key Points:**
  - Criteria for reservation were defined as "social and educational backwardness."
  - The 50% limit on vertical quotas, previously established in *M R Balaji v State of Mysore* (1963) and *Devadasan v Union of India* (1964), was reiterated.
  - The limit could be exceeded only in "exceptional circumstances."
- Despite reaffirmations in subsequent cases, states like Bihar have attempted to breach the limit, gaining political traction.
  - For instance, during the Lok Sabha election campaign, Rahul Gandhi promised a caste census and reservations beyond 50%.

### Legal Challenge to the 50% Ceiling

- **Current Status:** The 50% limit is under challenge in the Supreme Court.
- **EWS Quota Exception (2019):**
  - In November 2022, a five-judge Bench upheld the 10% quota for Economically Weaker Sections (EWS) in a 3-2 verdict.
  - **Majority Opinion:** The 50% ceiling applied only to SC/ST and OBC quotas, not to the EWS quota, which operates outside the "backwardness" framework.
  - **Minority Opinion:** Cautioned against breaching the 50% rule, warning it could lead to further infractions.

### Arguments and Perspectives

- **Criticism of the 50% Ceiling:** Critics argue that the ceiling is an arbitrary judicial creation.
- **Support for the 50% Ceiling:** Proponents contend that exceeding 50% would violate the principle of equality, as reservations are exceptions to the rule.
- **Ambedkar's View:** Dr. B R Ambedkar cautioned that unchecked reservations could undermine equality.

- **Reservation as a Fundamental Right:** There is a view that reservations enhance the fundamental right to equality, supporting the idea of substantive equality.

### Reservation Quota in Other States

- **Tamil Nadu:** The 76th constitutional amendment (1994) inserted Tamil Nadu's reservation law, which exceeds the 50% limit, into the Ninth Schedule, providing it with judicial immunity.
- **Maharashtra:** In May 2021, the SC struck down Maharashtra's law providing reservations for the Maratha community, stating the quota could not exceed 50%. Implementation of the Maratha quota would have increased reservation to 68%.
- **Other States:** Similar cases include demands for reservations by Patels in Gujarat, Jats in Haryana, and Kapus in Andhra Pradesh.

### Bhartruhari Mahtab sworn as Pro-Tem Speaker of Lok Sabha

Bhartruhari Mahtab, a seven-term MP, has been sworn in as the pro tem Speaker of the Lok Sabha. The Opposition has raised objections to this appointment, arguing that it deviates from the customary practice of choosing the most senior member of the Lower House for the position. Mahtab convened the Lok Sabha session at 11 am in Parliament House. His first order of business was to call upon Prime Minister Narendra Modi, the Leader of the Lok Sabha, to take the oath as a member of the House.

### Bhartruhari Mahtab appointed Pro-Tem Speaker of Lok Sabha

President Droupadi Murmu was appointed Bhartruhari Mahtab who served as a seven-term MP from Cuttack, as the pro tem Speaker of the 18th Lok Sabha under Article 95(1) of the Constitution, Parliamentary Affairs Minister Kiren Rijiju confirmed on 20th June 2024.

Bhartruhari Mahtab, 66, had quit the Biju Janata Dal (BJD) party recently and got a ticket from the BJP in the recent 18th Lok Sabha elections from Cuttack in Odisha is a constituency he has represented six times for the BJD now for the 7th time for the BJP.

The speaker for the 18th Lok Sabha will be elected in its first session. Until this happens, a pro-tem Speaker will be chosen to swear in the new Members of Parliament.

### Who is Pro-Tem Speaker?

- The pro-tem Speaker is a temporary presiding officer in the Lok Sabha until the regular Speaker is elected. The term 'pro-tem' means 'for the time being' or 'temporarily'.
- The primary role of the pro-tem Speaker is to administer the oath to new Members of Parliament (MPs) and facilitate the election of the new Speaker.
- According to Article 95(1), a pro-tem speaker is appointed for a brief period to preside over the proceedings of the Lower House of Parliament (Lok Sabha) following the General Elections.

### Selection of Pro-Tem Speaker

- **Procedure:** The post of pro-tem Speaker is not explicitly mentioned in the Constitution but is outlined in the 'Handbook on the Working of the Ministry of Parliamentary Affairs'.
- When the Speaker's post is vacant before a new Lok Sabha session, the duties are performed by a Member of the House appointed by the President as Speaker pro-tem.

The Legislative Section of Parliament creates a list of the most seasoned Lok Sabha members following a general election and the establishment of a new administration. The Minister of Parliamentary Affairs receives the list and submits it together with a letter asking the President to approve the appointment of the interim Speaker.

The Pro-tem Speaker presides over the first meeting following the election during which the Speaker and Deputy Speaker are chosen by the members of the Parliament. The Deputy Speaker serves in the Speaker's absence, and in the event of their absence, a committee of six members chosen by the Speaker will take over as Speaker in accordance with their order of seniority.

### Pro-Tem Speaker Appointment

The President/Governor appoints the pro-tem speaker to preside over meetings of the freshly elected house. The most senior member of the house is typically the pro-tem speaker. Pro-Tem speakers play a crucial role in ensuring a smooth transition and the establishment of a new legislative body. Their neutrality and experience are essential for upholding decorum and conducting the initial proceedings efficiently.

## Pro-Tem Speaker Role and Responsibilities

The first Lok Sabha session is presided over by the Pro-tem Speaker, who also swears in the newly elected MPs. The pro tem speaker's responsibility is to oversee the speaker and deputy speaker elections. The pro tem speaker's position is abolished with the election of a new Speaker. Additionally, he conducts the floor test.

- **Presiding over Initial Sessions:** The pro-tem speaker oversees the first meeting of the newly elected house until a permanent speaker is elected.
- **Administering Oath of Office:** They administer the oath of office to newly elected members.
- **Conducting Speaker and Deputy Speaker Elections:** They facilitate the election process for the Speaker and Deputy Speaker.
- **Maintaining Order and Decorum:** Ensuring smooth proceedings and upholding decorum in the house during the initial session.
- **Additional Duties:** Depending on the specific rules and procedures of the legislative body, the pro-tem speaker may have additional responsibilities.

## Swearing-in Ceremony

- **Procedure:** Following the President's approval, the Ministry of Parliamentary Affairs informs the selected members about their appointments.
  - The President administers the oath to the pro-tem Speaker at the Rashtrapati Bhawan, while the pro-tem Speaker administers the oath to the other members in the Lok Sabha.
- **Timing:** The swearing-in of the pro-tem Speaker is typically scheduled at 9:30 am on the same day the Lok Sabha session starts at 11 am, subject to the President's convenience.

## Pro-Tem Speaker UPSC

The pro-tem speaker shares all of the Speaker's rights and privileges. Therefore, the experts argue that to avoid tarnishing the reputation of democracy, there needs to be more clarity regarding the choice of the pro-tem speaker. A speaker who is chosen on a temporary basis is known as a pro tem Speaker. Just prior to the first meeting of the newly elected house, the Lok Sabha's or legislative assembly's Speaker steps down, forcing the appointment of a pro-tem speaker.

## Om Birla elected Lok Sabha Speaker for Second Term

Om Birla, the BJP nominee, has been re-elected as the Speaker of the 18th Lok Sabha. He was up against Congress candidate K Suresh, who filed his nomination after the ruling party and the Opposition failed to reach a consensus the previous evening.

Following his victory, Om Birla was congratulated by both Prime Minister Narendra Modi and Congress leader Rahul Gandhi. They escorted him to the Speaker's chair. PM Modi highlighted that Birla's experience as Speaker in the previous term would be beneficial for guiding the country further.

The Speaker of the Lok Sabha serves as the presiding officer and the highest authority of the Lok Sabha, the lower house of India's Parliament. The Speaker is generally elected during the first meeting of the Lok Sabha following general elections and serves a term of five years. The Speaker of Lok Sabha is an important part of Indian Polity which is an important subject in UPSC Syllabus.

## Om Birla vs K Suresh

Om Birla of the BJP has been re-elected as the Speaker of the 18th Lok Sabha, defeating Congress candidate K Suresh. The NDA and the Opposition failed to reach a consensus, leading to the election. PM Modi and Rahul Gandhi congratulated Birla on his victory. Last-minute discussions between Defence Minister Rajnath Singh and Congress President Mallikarjun Kharge regarding the Deputy Speaker role did not yield an agreement before the nomination deadline.

## Is this the first Lok Sabha Speaker election since Independence?

No, this is not the first Lok Sabha Speaker election since Independence. The Lok Sabha, India's lower house of Parliament, has held numerous Speaker elections since its first session in 1952. The election of Om Birla as Speaker for the 18th Lok Sabha is part of a long-standing parliamentary tradition.

**Why did the NDA and Opposition fail to reach a consensus?**

On Monday night, Defence Minister Rajnath Singh engaged with Congress President and Leader of the Opposition in the Rajya Sabha, Mallikarjun Kharge, along with other opposition leaders, to seek consensus on Om Birla's nomination. Congress sources reported that Kharge raised the issue of the Deputy Speaker during their discussion and was informed it could be addressed on Tuesday morning.

However, just before the noon deadline for Speaker nominations on Tuesday, the ruling party requested signatures on Birla's nomination papers without committing to the Deputy Speaker issue.

**About Speaker of Lok Sabha**

The highest power in the Parliament's lower house is held by the Speaker of the Lok Sabha. The lower house of the Indian Parliament is known as Lok Sabha or the House of the People. In Article 93 of the Indian Constitution, the speaker of the Lok Sabha is referred to as the presiding officer of the Lok Sabha. Om Birla is the Lok Sabha's current speaker. Since 2021, he has served as the lower house's 17th speaker.

**About Speaker of Lok Sabha**

<b>Role</b>	Presiding officer of the Lok Sabha (House of the People), the lower house of India's Parliament
<b>Duties</b>	Maintains order during debates, decides on points of order, represents the House externally
<b>Appointment</b>	Elected by the members of the Lok Sabha from among themselves
<b>Term</b>	Holds office during the tenure of the Lok Sabha, unless they resign or are removed
<b>Authority</b>	Exercises administrative and disciplinary powers within the House
<b>Salary and Benefits</b>	Entitled to a salary, allowances, and other perks as determined by the government
<b>Political Neutrality</b>	Expected to renounce all party affiliations upon taking office

