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A still life composition of historical artifacts. In the foreground, a large, cylindrical object, possibly a telescope or a container, stands vertically on the left. A rolled-up scroll lies horizontally in the middle ground. Below the scroll, a map or document with a grid pattern is spread out. Various pieces of jewelry, including a ring and a chain, are scattered on the map. The background is a textured, patterned surface. The overall color palette is warm and earthy, dominated by browns and golds.

# HISTORY- ARTS AND CULTURE



**THE CHAUSATH YOGINI TEMPLE**

**75TH ANNIVERSARY OF OPERATION POLO  
AND 'POLICE ACTION' IN HYDERABAD**

**LONDON'S INDIA CLUB**

**WEST BENGAL: STATEHOOD DAY AND  
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**HOYSALA TEMPLES ON UNESCO  
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**DISCUSSION ON THE OFFICIAL NAME  
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## THE CHAUSATH YOGINI TEMPLE

**CONTEXT:** Starting on September 19, the special parliamentary session transitioned to the recently inaugurated Parliament building, while the former Parliament structure is set to undergo transformation into a museum. The iconic circular and column-adorned Parliament building has served as a prominent emblem of India's democratic system. Interestingly, a comparable circular structure with pillars predates the Parliament by many centuries, the Chausath Yogini temple in Mitaoli.

**BACKGROUND:** The Chausath Yogini temple



The magnificent Chausath Yogini temple is situated on a hill in Mitaoli, approximately 40 kilometers away from Gwalior, within Madhya Pradesh's Morena district.

Built circa 1323, this temple was commissioned by King Devapala from the Kachchhapaghata dynasty.

This architectural marvel is dedicated to the 64 yoginis (chaunsath in Hindi) and differentiates itself from temples focused on a single deity. The 64 yoginis are revered as powerful warriors and sorceresses. In a mythological context, there is a tale involving a demon named Raktabija who possessed a virtually indestructible boon - each drop of his spilled blood would spawn numerous offspring. To defeat him, Goddess Durga summoned an army of 64 yoginis, who swiftly consumed his blood before it could reach the ground, ultimately leading to Raktabija's demise.

The Mitaoli temple boasts a circular design with 64 chambers, each dedicated to one of the yoginis, along with a central shrine venerating Shiva. Unlike many Hindu temples characterized by a projecting dome (shikhara), the Mitaoli temple, akin to other Chausath Yogini temples, is hypaethral, signifying its lack of a roof. Inside the stone temple complex, Parliament-like pillars adorn the structure. The central shrine features a perforated slab, allowing excess rainwater to drain away. According to information on the Madhya Pradesh government's tourism portal, the temple boasts a 125-foot diameter. While the idols and carvings that once graced the 64 chambers have disappeared over time, the temple's historical purpose possibly included the study of astrology (jyotish) and mathematics.

## 75TH ANNIVERSARY OF OPERATION POLO AND 'POLICE ACTION' IN HYDERABAD

**CONTEXT:** The 75th commemoration of Operation Polo, which occurred on September 13, 1948, denotes the military operation initiated by the Indian Army with the objective of incorporating the princely state of Hyderabad. Following India's independence on August 15, 1947, the Nizam of Hyderabad had been hesitant to join the Indian Union. This military campaign within Hyderabad state was referred to as the 'Police Action' during that period, a term used by the then Home Minister, Sardar Vallabhbhai Patel. It culminated with the surrender of the Nizam's forces to the Indian Army by September 18.



**BACKGROUND:** What led to the initiation of Operation Polo?

The Nizam of Hyderabad, Mir Osman Ali Shah, expressed his desire to maintain Hyderabad as an independent state following India's independence, refraining from joining either India or Pakistan. The Nizam seized the opportunity presented by India's engagement in the Kashmir conflict shortly after gaining independence, diverting all attention and resources towards addressing the Pakistani threat to Jammu and Kashmir.

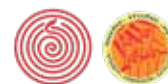
In November 1947, the Nizam signed a standstill agreement with India, establishing a temporary status quo between the Indian dominion and Hyderabad until a resolution could be reached. This agreement stipulated that for one year, the Indian government would not exercise authority over Hyderabad, and existing conditions would persist.

**What prompted the launch of Operation Polo on September 13, 1948?**

Hyderabad, located in the Deccan region, was among the most populous and wealthiest princely states, consisting of 17 districts, including Aurangabad (now in Maharashtra) and Gulbarga (now in Karnataka). Although it was landlocked and primarily populated by Hindus, the state's administration was predominantly controlled by its Muslim rulers. Despite having no common border with Pakistan, the Nizam aimed to establish amicable relations







with that country.

Taking advantage of the standstill agreement with India, the Nizam's administration in Hyderabad expanded its irregular force, known as the Razakars, led by Maj Gen SA El Edroos, the Arab commander in chief of the Hyderabad state forces. The aggressive actions of the Razakars against the predominantly Hindu population, their cross-border raids, overtures to Pakistan, and the intention to establish an independent nation within India prompted the Indian government to take action against Hyderabad and eliminate the secession threat.

#### How did the Nizam's forces compare to the Indian Army?

The Hyderabad state forces numbered just under 25,000, with only a fraction receiving proper training. Roughly estimated, they amounted to less than two brigades of opposition. While there was a significant number of Razakars in the state, these poorly trained volunteers posed more of a nuisance than a significant military threat.

The Prime Minister of Hyderabad, Mir Laik Ali, had boasted of having a force of 100,000 troops ready to confront the Indian Army if necessary. However, this claim proved hollow, and the Hyderabad opposition crumbled within the first two days of the offensive. Maj Gen Jayanto Nath Chaudhuri, the General Officer Commanding of 1 Armoured Division, led the Indian forces, later becoming the Chief of Army Staff.

#### When did the Hyderabad forces surrender?

A ceasefire was announced by the Nizam of Hyderabad on September 17. On September 18, Maj Gen Chaudhuri entered Hyderabad city with his forces, and Maj Gen El Edroos surrendered to him. Maj Gen Chaudhuri was subsequently appointed the Military Governor of Hyderabad. Havildar Bachhitar Singh of 2 Sikh posthumously received the first Ashoka Chakra of Independent India for his role in Operation Polo. He sacrificed his life on September 13, 1948, while advancing towards Naldurg, which was then part of Hyderabad state but is now in Maharashtra.

## LONDON'S INDIA CLUB

**CONTEXT:** *The India Club in London, which served as a meeting point for Indians in the United Kingdom during the independence movement, has been grappling with the possibility of temporarily closing its doors due to a combination of factors.*

#### BACKGROUND

The India Club, situated within London's Strand Continental Hotel along a bustling street, was established in 1951 under the initiative of the India League. Initially, the India League was a British organization advocating for Indian independence and self-rule (swaraj) and counted members from the British elite among its ranks. Over time, its objectives evolved to foster Indo-British friendship in the post-independence era. The club soon transformed into a hub for various groups, including the league, serving the Asian community.

Distinguished visitors to the India Club included Dr. Rajendra Prasad, independent India's first President, and Lord Mountbatten, the last Viceroy of India. The club's walls are adorned with portraits of notable Indian and British



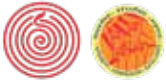
figures who frequented its premises, featuring individuals such as former Indian Prime Minister Jawaharlal Nehru, the pioneering British Indian MP Dadabhai Naoroji, philosopher Bertrand Russell, and renowned artist MF Hussain. VK Krishna Menon, a diplomat and former Indian Defence Minister, played a significant role in the club's founding, serving as one of its secretaries



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## WEST BENGAL: STATEHOOD DAY AND RABINDRANATH TAGORE'S "BANGLAR MATI, BANGLAR JOL"

**CONTEXT:** The West Bengal Assembly approved a resolution designating Poila Baishakh, which falls on April 15 and marks the beginning of the Bengali calendar, as the statehood day. Additionally, it declared Rabindranath Tagore's "Banglar mati, Banglar jol" as the official state anthem.

**BACKGROUND:** George Nathaniel Curzon, who served as Viceroy of India from 1899 to 1905, is best known for his controversial decision to partition Bengal in 1905. While Curzon was a staunch imperialist, the idea to divide Bengal was not entirely his own, as concerns about the size of the Bengal Presidency had existed within the British administration since the 1860s. Bengal, at that time, was the epicenter of India's growing nationalist movement.

Curzon's motive behind the partition was to create division and discord among the diverse Bengali-speaking population, a strategy known as "divide and rule." In a 1904 speech in Dhaka (Dacca), Curzon offered the Muslims of East Bengal the prospect of unity, hoping to exploit existing religious differences.

However, instead of achieving division, the partition of Bengal led to widespread outrage and unanimous criticism from nationalist leaders. It gave rise to the Swadeshi Movement, which marked the first mass movement in India's struggle for independence. This movement involved street protests, demonstrations, boycotts of British goods, and symbolic acts of resistance.

Rabindranath Tagore, a vocal opponent of the partition, wrote "Banglar mati, Banglar jol" during this tumultuous period. This song served as a prayer for unity and harmony among Bengalis and became an important part of the anti-colonial struggle.



## LORD SHIVA AS NATARAJA

**CONTEXT:** Standing before Bharat Mandapam in New Delhi's Pragati Maidan to welcome G20 leaders was an impressive 27-foot tall statue of Lord Shiva in his dancing form, known as Nataraja. This remarkable statue, the tallest of its kind globally, is a masterpiece crafted from an eight-metal alloy known as ashtadhatu. It was skillfully created by artisans hailing from Swamimalai in Tamil Nadu's Thanjavur district and boasts a substantial weight of approximately 18 tonnes. The statue's design takes inspiration from three revered Nataraja idols, including the Thillai Nataraja Temple in Chidambaram, the Uma Maheswarar Temple in Konerirajapuram, and the iconic Brihadeeswara Temple in Thanjavur, a UNESCO World Heritage Site.



### BACKGROUND

#### NATARAJA STATUE

The inspiration behind the Bharat Mandapam Nataraja statue lies in three ancient temples initially constructed by the Cholas, a prominent dynasty that held sway over much of peninsular India during the 9th-11th centuries AD. These Cholas were fervent supporters of art and high culture, particularly in their devotion to Shaivism, which led them to erect grand Shiva temples, including the renowned one in Thanjavur.

The Chola dynasty significantly influenced the portrayal of Shiva as Nataraja, the Lord of Dance, with its present world-famous form evolving under their patronage. While

Shiva's representation as Nataraja in sculpture dates back to the fifth century AD, it was the Cholas who brought this form to cultural prominence, particularly through exquisite bronze sculptures.

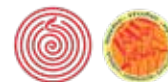
Shiva, a multifaceted deity, encompasses various aspects, serving as both the destroyer and the patron of ascetics. His Nataraja form symbolizes his role as the Lord of Dance, showcasing his ability to perform 108 different dances, ranging from serene and gentle to fierce and tumultuous. In this iconic portrayal, Nataraja is encircled by a flaming halo, symbolizing the world he both encompasses and transcends. His long dreadlocks flare energetically as he strikes a rhythmic pose with his four arms, holding a hand drum (damru) in his upper right hand and fire (agni) in his upper left. Beneath one of his feet lies a dwarf-like figure symbolizing illusion, which he crushes.

Amidst these potent symbols of destruction, Nataraja also offers reassurance and protection. With his front right hand, he makes the 'abhayamudra,' a gesture allaying fear, while with his front left arm, he points to his raised feet, inviting devotees to seek refuge. Interestingly, Nataraja is almost always depicted with a gentle smile.

#### 'LOST-WAX' CASTING METHOD

The sculptors responsible for the colossal 27-foot-tall Bharat Mandapam Nataraja statue can trace their lineage back 34 generations to the Cholas. They employed





the traditional 'lost-wax' casting method, a technique indigenous to the Chola era and dating back over 6,000 years. This method involves crafting a detailed wax model, covering it with alluvial soil paste, and exposing it to high heat to burn away the wax, leaving behind a meticulously carved mould that is then filled with molten metal to create the final sculpture. This ancient technique was used to produce elaborate metallic sculptures, and the Cholas mastered it to perfection.

## HOYSALA TEMPLES ON UNESCO HERITAGE LIST

**CONTEXT:** The UNESCO World Heritage List recently welcomed three temples from the Hoysala era in Karnataka as part of the collective entry named 'Sacred Ensembles of the Hoysalas.'

**BACKGROUND:** Hoysala temples are renowned for their exceptional wall sculptures, often described as "stone art that applies the techniques of ivory workers or goldsmiths." This UNESCO World Heritage designation encompasses three temples: the Chennakeshava temple in Belur, the Hoysaleswara Temple in Halebidu, and the Keshava Temple in Somanathapura. The Hoysala dynasty ruled over Karnataka from the 10th to the 14th century, originally as provincial governors under the Western Chalukyas.



Two of these temples are located in cities that served as the Hoysala dynasty's capitals: Belur and Halebidu. The Chennakeshava temple, dedicated to Lord Vishnu, was consecrated around 1117 AD by King Vishnuvardhana. The Kesava temple in Somanathapura, another Vaishnava shrine, was constructed around 1260 by Somanatha, a general of Hoysala King Narasimha III. The Hoysaleswara temple in Halebidu, dated to the 12th century, is believed to be the largest Shiva temple built by the Hoysalas.

A distinctive feature of Hoysala architecture is the use of soapstone, an easily carved stone, allowing intricate sculptures on temple walls. These sculptures depict animals, daily life scenes, and stories from epics and Puranas, offering insights into the society of that era. Hoysala architecture is a fusion of three styles: mainstream Dravidian architecture (Pallava and Chola temples), Vesara style (Chalukya and Rashtrakuta temples), and North Indian Nagara style.

These temples, constructed on star-shaped platforms, house multiple structures within the complex. The walls and pillars are adorned with intricate sculptures featuring rich narratives. An interesting aspect is that the names of sculptors and masons are often inscribed on

these temples. Additionally, these Vaishnava and Shaivya temples were built during a period when Jainism was prevalent in the region, marking a shift towards Hinduism. The Kesava temple in Somanathapura, shaped like a 16-point star, contains shrines dedicated to Keshava, Janardhana, and Venugopala, although the Keshava statue is currently missing.

## DISCUSSION ON THE OFFICIAL NAME CHANGE OF THE COUNTRY

**CONTEXT:** There is speculation about a potential official name change of the country from India to Bharat, despite Article 1 of the Constitution using both names interchangeably: "India, that is Bharat, shall be a Union of States."

**BACKGROUND:** The historical roots of "Bharat," "Bharata," or "Bharatvarsha" can be traced back to Puranic literature and the epic Mahabharata. According to the Puranas, Bharata is described as the land situated between the southern sea and the northern abode of snow. It's also associated with the legendary ancient king Bharata, who was the ancestor of the Rig Vedic Bharatas, considered the progenitors of the subcontinent's people. The term "Hindustan" likely originated from "Hindu," the Persian form of the Sanskrit "Sindhu" (Indus). It gained prominence during the Achaemenid Persian conquest of the Indus valley in the 6th century BC. The Achaemenids used it to refer to the lower Indus basin, and later, "stan" was added to form "Hindustan." The Greeks, influenced by the Achaemenids, transliterated it as "Indus." By the time of Alexander, the Great's invasion in the 3rd century BC, "India" was associated with the region beyond the Indus. During the early Mughal period (16th century), "Hindustan" described the entire Indo-Gangetic plain. In the late 18th century, British maps began using "India," gradually diminishing "Hindustan's" association with South Asia. The term "India" had appeal due to its Graeco-Roman heritage, long history in Europe, and adoption by scientific and bureaucratic organizations like the Survey of India.

However, when naming India in the Constitution, "Hindustan" was dropped, and both "Bharat" and "India" were retained.

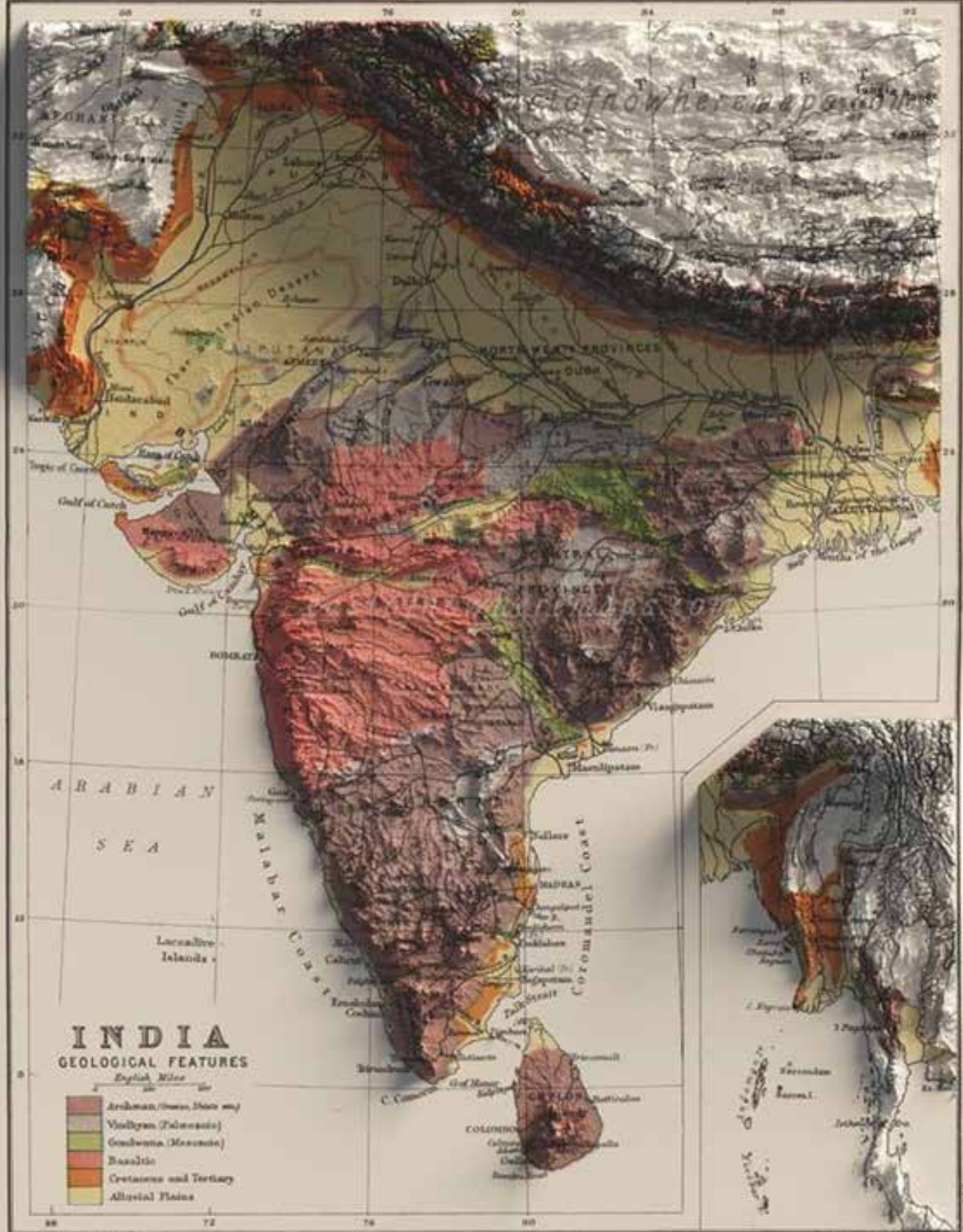






Constable's Hand Atlas of India

PLATE 5

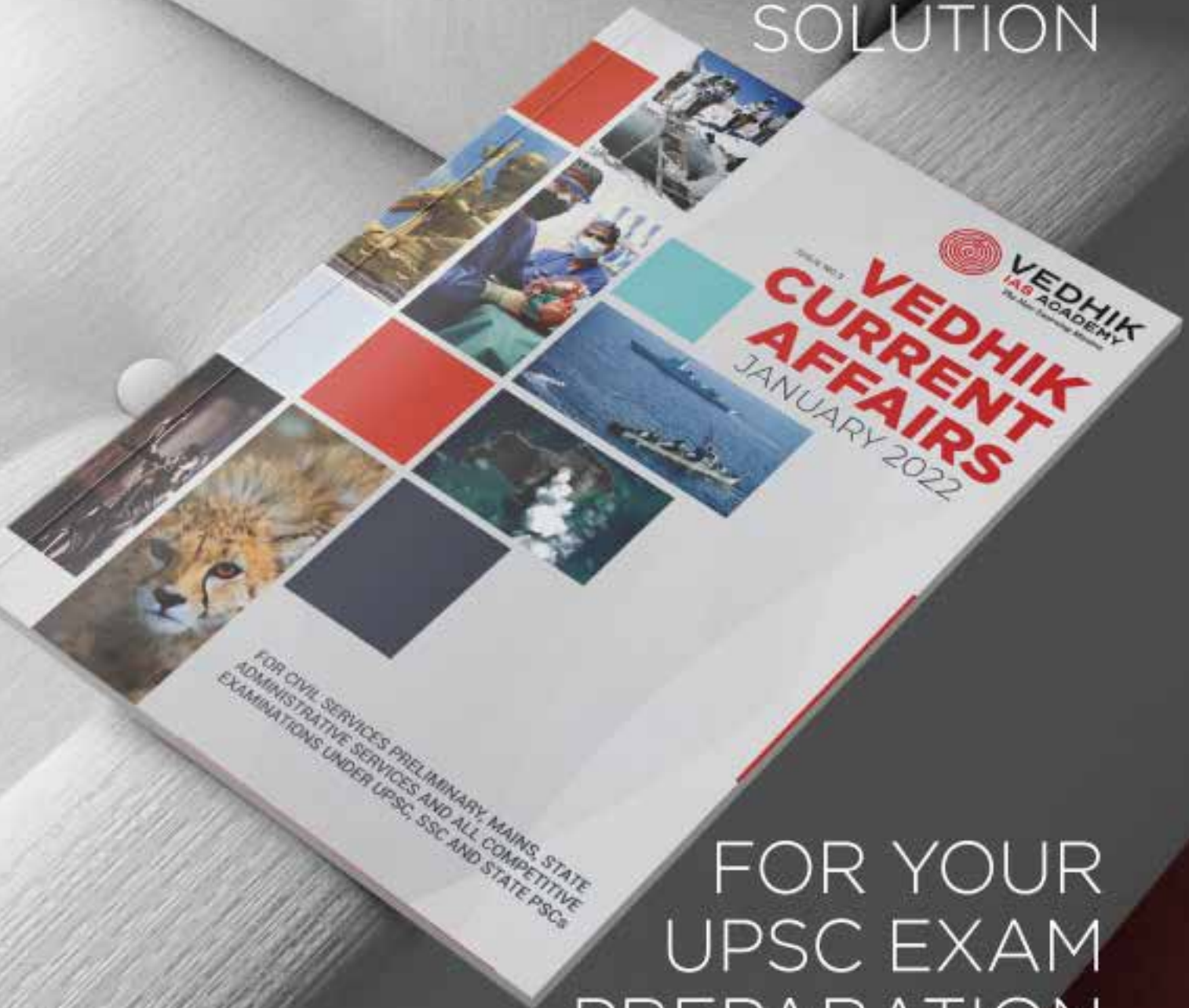


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# GEOGRAPHY





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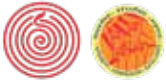
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**FLASH FLOODS IN LIBYA**

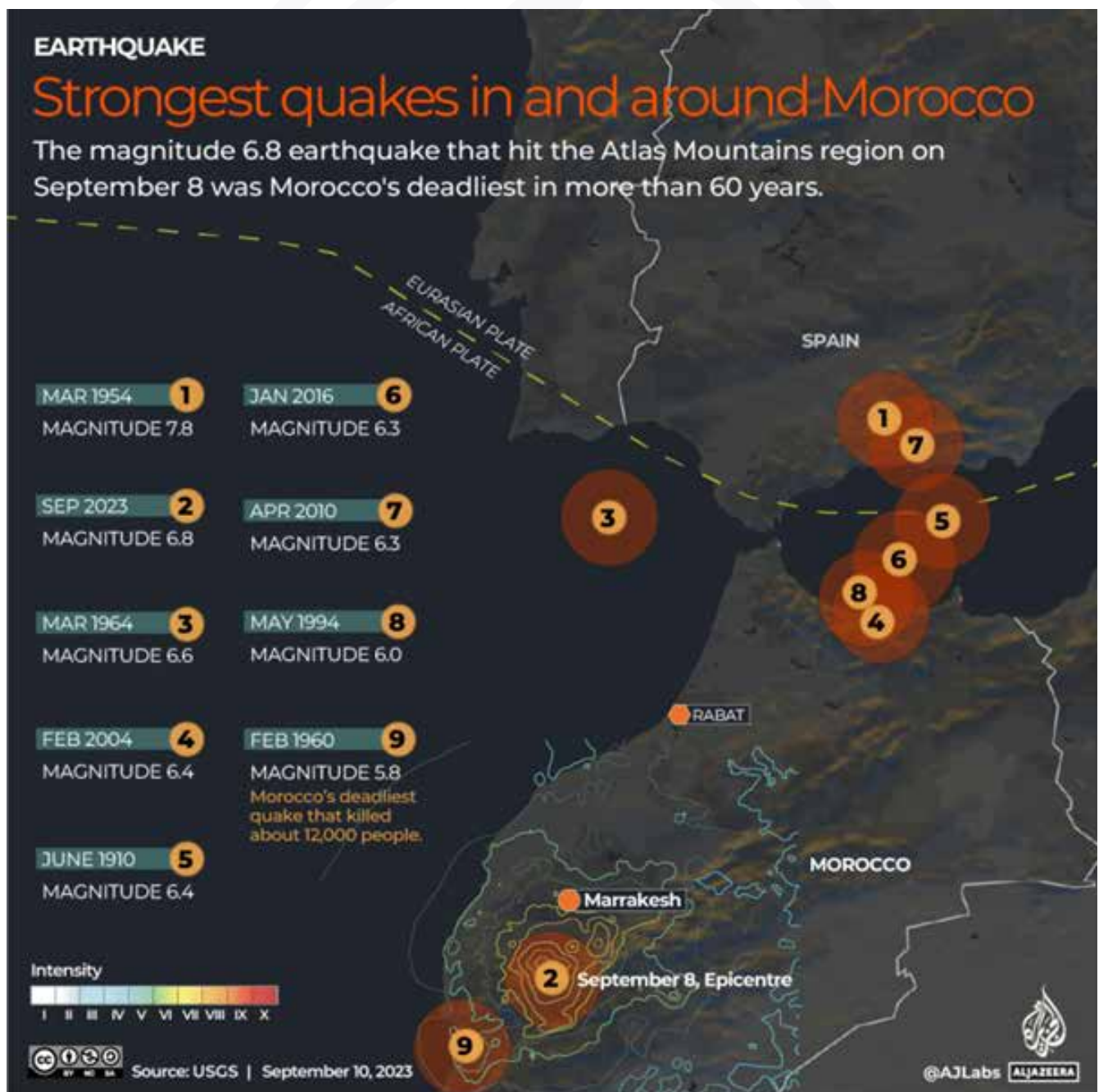


## MOROCCO EARTHQUAKE

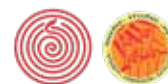
**CONTEXT:** On 8 September, a deadly earthquake struck Morocco.

### Details of the Morocco Earthquake

- The catastrophic earthquake took place to the north of the western Atlas mountains, south of Marrakesh. According to estimates by Morocco's National Institute of Geophysics and the US geological survey, the **depth of the earthquake (Focus) was between 8km and 26km.**
- The earthquake's epicentre was the Ighil area, about 70 km south of Marrakech (or Marrakesh).
- The US Geological Survey (USGS) said the quake had a preliminary magnitude of 6.8. The agency reported an aftershock of 4.9 magnitude 19 minutes later.
- It was the deadliest the country has experienced in more than 60 years. More than 2800 people were killed and more than 2,501 injured.
- According to the Associated Press, **it was the county's strongest in over a century.** It was so strong that tremors were felt as far away as Portugal and Algeria.



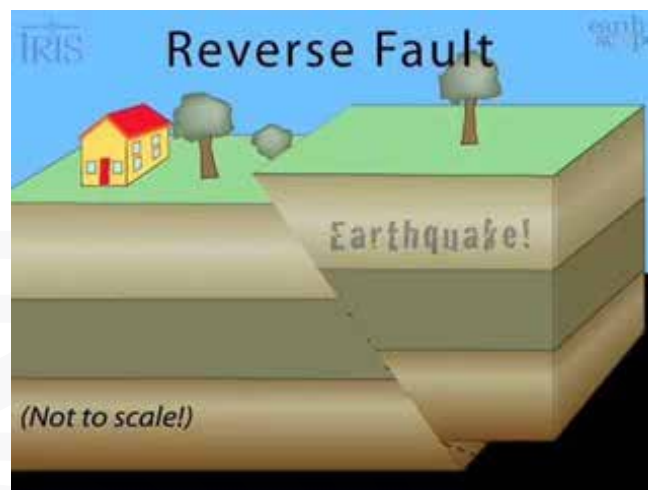




- While seismicity rates are indeed lower in the region, making earthquakes rarer, they are not completely unheard of. The 1960 quake, known as the Agadir earthquake, took place in coastal western Morocco. Not only this, earthquakes in the magnitude 6 range are more common in the “northern part of Morocco near the Mediterranean Sea,” according to the USGS. For example, a magnitude 6.4 earthquake struck in February 2004 and a magnitude 6.3 in January 2016 rocked the region.

### What caused the earthquake?

- The quake happened when a reverse fault – where the edge of the rock on one side of a fault slips under the other – occurred between the Morocco and Iberia microplates, which are both part of the larger African plate.
- The reverse tectonic faults lay to the north of the Atlas Mountains and dipped towards them at one point.
- During the earthquake, the edge that lies towards the mountains slid over the other, pushing the mountainside up, a knock-on consequence of built-up tension between the African and Eurasia plates over time.
- The faults can only hold the stress so much, and occasionally, an earthquake happens as a mechanism to release the built-up stress.
- The movement in the Earth's crust was on two levels, one closer to the surface and one deeper down. The resulting slipping and folding are known as decollement (French for “to detach or peel from”).
- Given the depth of the earthquake, it was most likely that the decollements started at the deeper level and moved towards the surface.



### Why was the quake so deadly?

Multiple factors have contributed, according to seismologists and disaster risk-reduction specialists.

The first was magnitude. At 6.8, the earthquake was not huge – the one that devastated parts of Turkey and Syria in February, for example, was magnitude 7.8. But it was unusually large for Morocco. It's exceptional for the region.

Second, it was a fairly shallow quake. According to experts, such quakes are generally more dangerous as they carry more energy when they emerge to the surface when compared to quakes that occur deeper underneath the surface. While deeper quakes do indeed spread farther as seismic waves move radially upwards to the surface, they lose energy while travelling greater distances.

Thirdly, also, earthquakes are not very common in North Africa, with seismicity – the occurrence or frequency of quakes in a region – rates comparatively low along the northern margin of the African continent. This means that unlike regions which frequently face such quakes, Morocco was not prepared for such a calamity. Buildings in Morocco are often designed to control for extremes of temperature, which are an ever-present risk, whereas earthquake resilience has taken a back seat, in part because they are rarer.

The Atlas Mountains are a fascinating range in north-west Africa, spanning Morocco, Algeria and Tunisia. They're situated south of the main Eurasia and Africa (Nubia) tectonic plate boundary.

The steep slopes of the mountains and the straight lines where the Earth's crust has cracked suggest that there has been recent movement in the Earth beneath this area. It's surprising that there aren't more earthquakes here.

This area doesn't usually have a lot of earthquakes compared to other places near the edges of tectonic plates, where the movements of plates will cause intense seismic activity. But in 1960 the Agadir earthquake caused a lot of damage and loss of life.



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## THE FUJIWHARA EFFECT

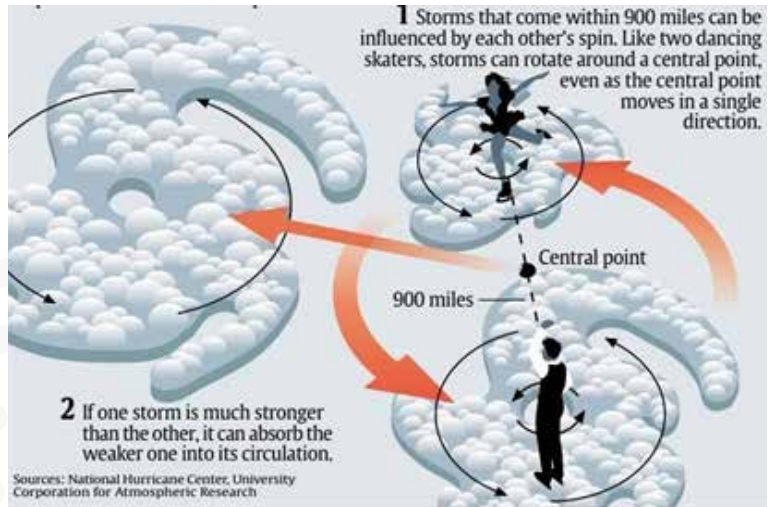
**CONTEXT:** In the last week of August 2023, the simultaneous development of Hurricane Idalia and Hurricane Franklin in the Atlantic Ocean gave rise to concerns of their collision and merger.

### The Fujiwhara Effect

According to the National Weather Service (NWS) of the US, when two hurricanes (or cyclones, depending on your location) rotate in the same direction and come close to each other, they engage in an intense 'rotational dance' around a shared centre. This phenomenon, where two cyclones interact, is known as the Fujiwhara effect.

For the Fujiwhara effect to take place, the eyes or centres of both storms should be at a distance of less than 1400 km from each other.

Sakuhei Fujiwhara, a Japanese meteorologist, identified this phenomenon, which was first described in a paper published in 1921. Many years later, the occurrence was observed in the western Pacific Ocean when typhoons Marie and Kathy merged in 1964.



### Five Possibilities under Fujiwhara Effect

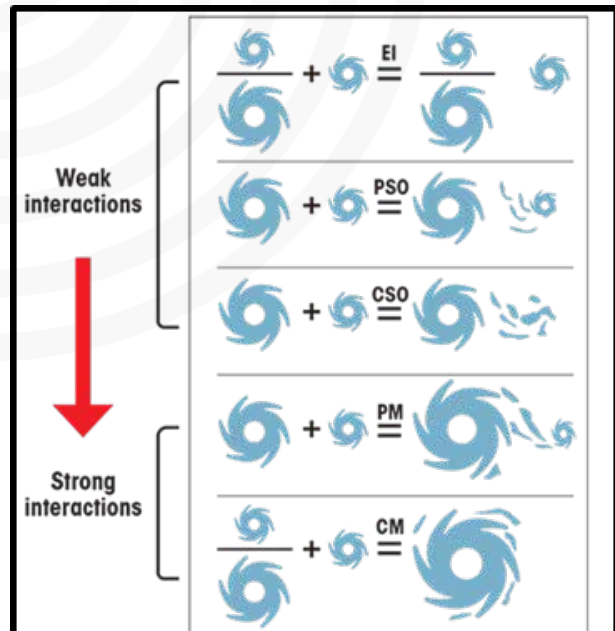
- First possibility: If one hurricane is stronger than the other, the smaller one will orbit around the larger one and eventually collide with its centre, leading to absorption.
- Second possibility: If two storms of almost equal strength pass near each other, they might be drawn towards a shared centre, potentially merging or simply swirling around each other temporarily before following separate paths.
- Third possibility: In rare cases, if the two cyclones are sufficiently powerful, they can combine, resulting in the formation of a supercyclone capable of causing significant destruction along coastlines.
- Fourth possibility: Partial straining out happens, in which a part of the smaller storm is lost to the atmosphere.
- Fifth possibility: Complete straining out takes place, in which the smaller storm is completely lost to the atmosphere. The straining out does not happen for storms of equal strength.

### Why Fujiwhara Effect is dangerous?

- The occurrence of the Fujiwhara Effect induces greater unpredictability in cyclones due to their rapid intensification, increased rainfall, and novel patterns of movement over warming oceans. This complexity arises from the distinct nature of interactions between two storm systems.
- In 2009, when Typhoons Parma and Melor emerged, the Fujiwhara Effect created significant challenges for meteorologists attempting to predict the trajectories and strengths of these storms.
- This interaction led to widespread devastation in the Philippines, as the weaker Typhoon Parma unexpectedly gained strength, altered its path, and lingered over the Luzon region due to its interaction with the more powerful Typhoon Melor.
- In April 2021, a similar incident occurred in the Indian Ocean, as Cyclone Seroja and Cyclone Odette

interacted just off the coast of Western Australia. This interaction caused Seroja to intensify and adopt unprecedented trajectories.

- Also, the lack of research and historical data about the Fujiwhara Effect makes things difficult for weather agencies and observers. Thus, evaluating Fujiwhara Effect instances over extended time frames still remains challenging.



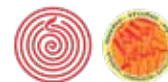
**Elastic Interaction (EI):** Interaction of vortices (storms) of same or different sizes, resulting in changes only in the direction of motion. This is the most commonly seen interaction

**Partial Straining-Out (PSO):** Interaction of vortices of unequal sizes. Part of the smaller vortex lost to the atmosphere.

**Complete Straining-Out (CSO):** Interaction of vortices of unequal sizes. The smaller vortex completely lost to the atmosphere

**Partial Merger (PM):** Interaction of vortices of unequal sizes. Part of the smaller vortex merged to the bigger vortex

**Complete Merger (CM):** Interaction of vortices of same or different sizes, resulting in complete merger of both the storms



## SUPER BLUE MOON 2023

**CONTEXT:** On August 30, 2023, the night sky was illuminated by a rare phenomenon: a super blue moon. However, despite its name, this full moon was neither blue in color nor super in size.

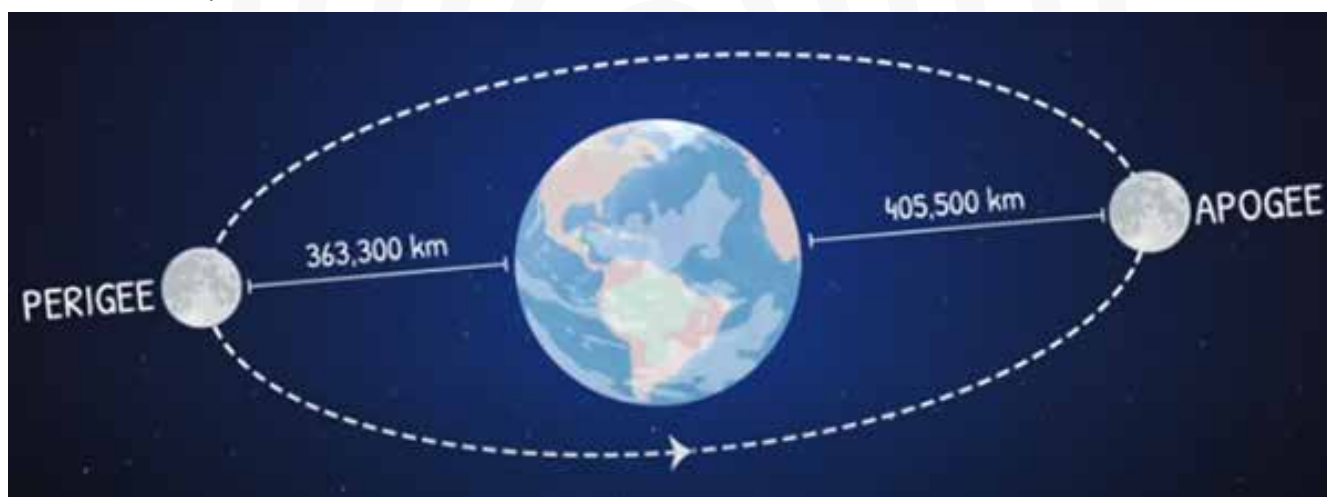
### More Details

- This full Moon was the second full Moon in August, making it a Blue Moon by the definition introduced by Sky & Telescope magazine in 1946.
- The first full moon of August 2023 occurred on August 1. That was also a super moon, but the super moon of August 30-31 was bigger because the moon was now closer to the perigee.
- A full moon occurs when the moon is directly opposite the sun (as seen from earth), and therefore, has its entire day side lit up.
- The full moon appears as a brilliant circle in the sky that rises around sunset and sets around sunrise. The moon appears 'full' not just on Purnima, but also on the night before and after the full moon night.

### What is a supermoon?

- The Moon travels around our planet in an elliptical orbit, or an elongated circle, with Earth closer to one side of the ellipse.

- Each month, the Moon passes through the point closest to Earth (perigee) and the point farthest from Earth (apogee).
- When the Moon is at or near its closest point to Earth at the same time as it is full, it is called a "supermoon."
- During this event, because the full moon is a little bit closer to us than usual, it appears especially large and bright in the sky.
- Because the Moon's orbit wobbles and differs depending on where the Sun and Earth are in their orbits, the exact distance of these closest and furthest points varies.
- According to NASA, a full moon at perigee (super moon) is about 14% bigger and 30% brighter than a full moon at apogee (called a "micro moon").
- The term supermoon was first coined in 1979 by Richard Nolle, while the official name for this phenomenon is 'perigee-syzygy'.

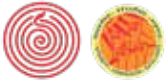


### What is a blue moon?

A blue moon is the term for when we see the full moon twice in a single month.

- The Moon's cycle is 29.5 days, so just a bit shorter than the average length of a calendar month. Eventually that gap results in a full moon happening at the beginning of a month with enough days still remaining for another full cycle - so a second full moon in the same month.
- In other words, a full moon that happens on the 1st or 2nd of a month will probably be followed by a second full moon on the 30th or 31st. This happens every two to three years.
- People sometimes refer to two types of blue moons: monthly and seasonal. This blue moon (on 30 August) is a monthly blue moon. Seasonal blue moons occur when there are four full moons in a single season (spring, summer, fall and winter) instead of the usual three.





### Will the Moon be blue?

No, that's just the term for two full moons in a month.

### Is the Moon ever blue?

On rare occasions, tiny particles in the air - typically of smoke or dust - can scatter away red wavelengths of light, causing the Moon to appear blue.

### Do blue moons and supermoons always occur together?

- No. The term "supermoon" is used to describe a full Moon that occurs within a day or so of perigee, so they happen three to four times a year.
- About 25 percent of all full moons are supermoons, but only 3 percent of full moons are blue moons.
- The time between super blue moons is quite irregular - it can be as much as 20 years - but in general, 10 years is the average.
- The next super blue moons will occur in a pair, in January and March 2037.

## GLOBAL FLOODPLAINS FACE UNPRECEDENTED HUMAN DESTRUCTION

**CONTEXT:** A groundbreaking study, led by a hydrologist from the University of Texas at Arlington, has unveiled the devastating extent of human-induced alterations to vital floodplains worldwide.

### Key Findings of the Study

- The comprehensive research, published in the prestigious journal *Scientific Data*, provides a dire assessment of the loss and highlights the urgent need for informed strategies to restore and conserve these essential ecosystems.
- The researchers employed cutting-edge satellite remote sensing data and geospatial analytics to examine 520 major river basins globally. Their landmark study uncovers previously unknown spatial patterns and alarming trends of human impact on floodplains.
- The study reveals that between 1992 and 2019, the world witnessed the alarming loss of approximately 600,000 square kilometers of floodplains due to human disturbances.
- These disturbances include infrastructure development, industrial expansion, and the encroachment of agriculture.
- Such alterations pose a significant threat not only to wildlife but also to clean water supplies and the safety of communities vulnerable to flooding.
- One of the study's grim findings is that wetland habitats, crucial to the overall health of floodplains, are particularly at risk. The research shows that one-third of the global loss of floodplain wetlands occurred in North America, underscoring the magnitude of the threat faced by these ecosystems.
- By analyzing satellite images spanning nearly three decades, the team observed both positive developments, such as the planting of trees and the

creation of parks, as well as troubling outcomes, including the extensive construction of buildings and inadequate stormwater runoff management, such as the proliferation of parking lots.

### Floodplains:

Floodplains are areas that are prone to being inundated by floodwaters during times of heavy rain, snowmelt, or high tides.

### Benefits

Floodplains are dynamic natural systems characterized by processes such as periodic flooding, erosion, and deposition. They provide a wide range of benefits to our local communities, including:

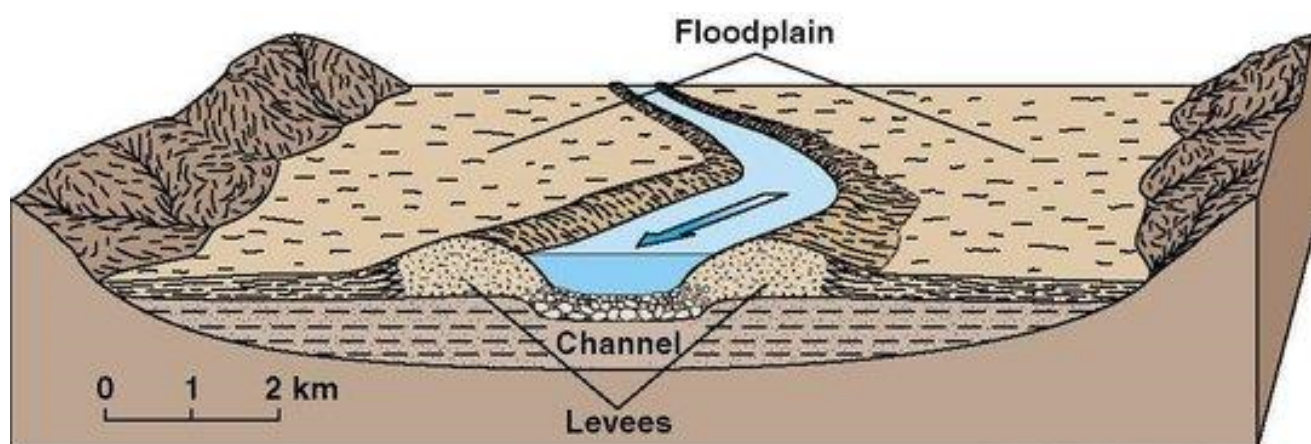
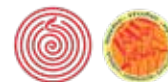
- Natural flood and erosion control—reducing flood velocities, peak flows and erosion potential; providing flood storage and conveyance.
- Water quality benefits—filtering polluted runoff and moderating temperature fluctuations.
- Groundwater recharge—promoting infiltration and aquifer recharge; reducing frequency and duration of low surface flows.
- Biological productivity—offering fertile, productive soils for agriculture and forestry.
- Fish and wildlife habitat—creating habitat for many species, including waterfowl and endangered species.
- Open space and scenic beauty—offering opportunities for recreation and tourism; contributing to quality of life and the economy.

*"Be not afraid of greatness. Some are born great, some achieve greatness, and others have greatness thrust upon them."*

- WILLIAM SHAKESPEARE







### How do floodplains form?

- Floodplains are the flat areas of land on either side of a river channel, which will be covered in water in times of flooding.
- The river carries with it large quantities of suspended load. Floodplains form as a result of deposition of the river's load.
- When the river floods onto the flood plain, the water is shallow and there is greater friction. As a result, the river's velocity (speed) falls, and it loses energy. Consequently, the river's load is deposited onto the flood plain as alluvium.
- Over many thousands of years those deposits build up into great thickness of alluvium. Alluvium is very fertile and explains why large amounts of floodplains are used for farming.
- Floodplains are widened by meander migration.

## CORRELATION BETWEEN THUNDERSTORMS AND CIRRUS CLOUDS

**CONTEXT:** A new study has found a significant statistical correlation between thunderstorms occurring around the world and the formation of wispy cirrus clouds—which might increase global warming.

### About the study

- We know that cirrus clouds can contribute to global warming. However, it is very difficult to track these clouds and obtain accurate data about them.
- Being so wispy, they can be invisible to the human eye and even to satellites, plus they form in the upper atmosphere, far from the monitoring stations operating on the ground.
- To address this challenge the researchers explored the possibility of predicting the quantity of cirrus clouds on the basis of readily available data about thunderstorms and lightning activity.
- They explain that the brilliant flash of lightning is formed when a huge electric field is discharged instantaneously, generating a very high temperature of up to 30,000 degrees Centigrade in the lightning channel.
- The light waves and radio waves emitted by the lightning discharge can be detected even thousands of kilometers away, enabling long-term monitoring and mapping of thunderstorms.
- Findings indicate a statistically significant correlation, with the quantity of cirrus clouds increasing with the number of thunderstorms. According to the researchers, this means that thunderstorms, which are easy to detect and measure, can in fact be used as a reliable indicator for the amount of cirrus clouds in the atmosphere, today and in the future.
- Researchers discovered that thunderstorms are a major mechanism in the formation of cirrus clouds, and that lightning activity can account for over 70% of the changes in the quantity of cirrus clouds in the world.
- Thunderstorms act as an enormous "vacuum cleaner," lifting moisture from the surface of the planet, especially above oceans and forests, to higher levels of the atmosphere. There, at an altitude of about 10km, this moisture turns into ice crystals that form the cirrus clouds.

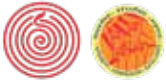
### Cirrus Clouds

All high clouds are a type of cirrus, a common cloud that can be seen at any time of the year.

- Height of base: 20,000 - 40,000 ft
- Shape: layered, tufty or patchy
- Latin: cirrus - lock or tuft of hair
- Precipitation: none

Cirrus clouds form higher in the atmosphere than almost any other type of cloud – tens of thousands of feet above the ground.





They take shape when water vapor gets pushed up toward the stratosphere by the rise of warm, dry air and then freezes due to the low temperatures.

The results are thin, feathery clouds made up of thousands to millions of ice crystals. These ice crystals – and their many different structures, shapes, and sizes – influence how cirrus clouds both reflect incoming sunlight and trap outgoing heat from the Earth, also known as the cloud radiative effect.

Cirrus clouds form from the ascent of dry air, making the small quantity of water vapour in the air undergo deposition into ice (to change from a gas directly into a solid). Cirrus is made up completely of ice crystals, which provides their white colour and form in a wide range of shapes and sizes.

Cirrus clouds can also form through contrails, the vapour trails left by planes as they fly through a dry upper troposphere. These streaks can spread out and become cirrus, cirrostratus and cirrocumulus.

### What weather is associated with cirrus clouds?

- They often form in advance of a warm front, where the air masses meet at high levels, indicating a change in the weather is on the way.
- Technically these clouds produce precipitation but it never reaches the ground. Instead, it re-evaporates, creating virga clouds.

## FLASH FLOODS IN LIBYA

**CONTEXT:** The torrential rains from Storm Daniel in Libya led two dams close to the port city of Derna to burst, causing the flash floods in the city.

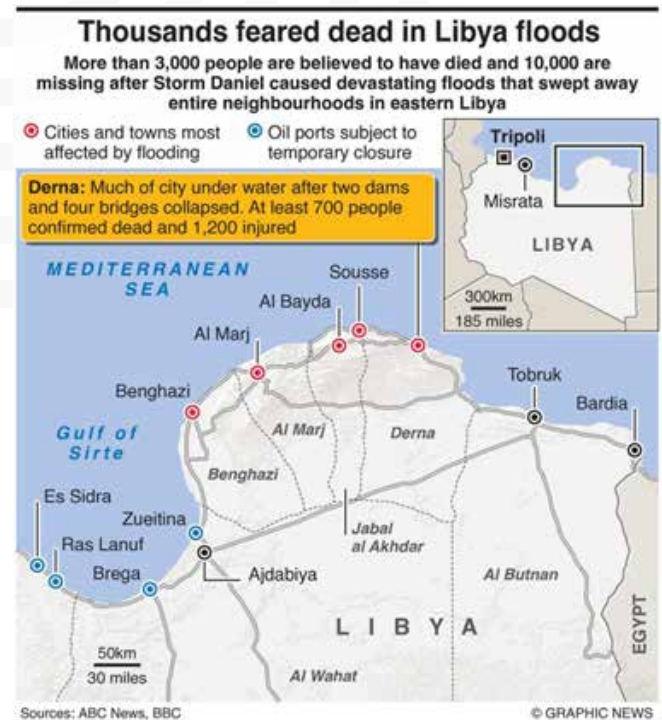
What brought the flash floods?

- The extreme rainfall that hit Libya was brought by a system called Storm Daniel.
- After sweeping Greece, Turkey and Bulgaria, it formed into a “medicane” over the Mediterranean – a relatively rare type of storm with similar characteristics to hurricanes and typhoons.
- The medicane strengthened as it crossed the unusually warm waters of the Mediterranean before dumping torrential rain on Libya.
- It brought more than 16 inches (414 mm) of rainfall in 24 hours to Al-Bayda, a city west of Derna, a new record.
- Similarly in Derna, where average monthly rainfall in the whole of September is under 1.5 mm, rainfall exceeded 150 mm in about two days. The rains were accompanied by strong winds of up to 80 kmph.
- Derna is prone to flooding, and its dam reservoirs have caused at least five deadly floods since 1942, the latest of which was in 2011.
- The two dams that burst in this episode were built around half a century ago, between 1973 and 1977. Those dams haven’t undergone maintenance since 2002. Hence, the dams in Derna had a “high potential for flood risk”.
- One reason behind the city’s widespread damage is its location. It is situated at the end of a valley and bisected by the Wadi Derna, a seasonal river that flows from mountains to the south (towards the sea) and is normally protected from flooding by dams.

### How do we categorise cirrus clouds?

Cirrus clouds have five defined 'species' -

1. Cirrus fibratus - Thin and fibrous, cirrus fibratus are often aligned with the high altitude wind direction, making for white parallel stripes which streak across the sky. These are the most common type of cirrus cloud.
2. Cirrus uncinus - With its trademark hook shape, cirrus uncinus is famous for looking like a horse's tail. These wispy streaks of cirrus cannot be seen without a characteristic 'flick' at the end of its tail.
3. Cirrus spissatus - These clouds sit right at the top of the troposphere. A thick, dense cirrus layer that dominates much of the sky above, often formed by passing warm fronts or the remnants of a cumulonimbus incus.
4. Cirrus floccus - Ragged cirrus patches which are much larger than cirrocumulus floccus. These have a more cotton wool-like appearance than the rest of the cirrus family.
5. Cirrus castellanus - More vertically developed than cirrus floccus, cirrus castellanus have turret-like tops and are taller than they are wide.

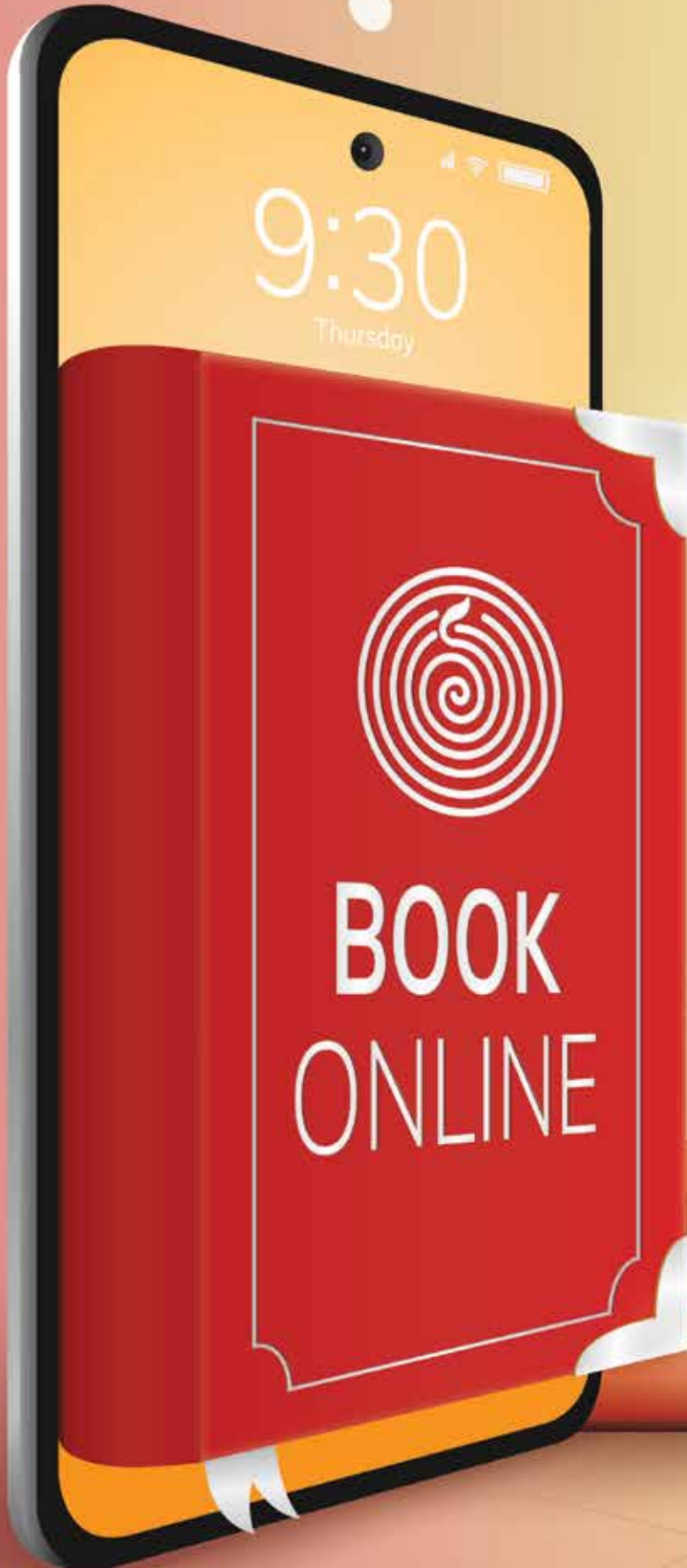


### What is Flash Flooding?

Flooding that begins within 6 hours, and often within 3 hours, of the heavy rainfall (or other cause). Flash Floods can be caused by a number of things but is most often due to extremely heavy rainfall from thunderstorms.



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# POLITY AND GOVERNANCE





**AN OVERHAUL, THE CRIMINAL LAW BILLS, THE BIG PICTURE**

**CHANGING THE WAY THE POSTMAN KNOCKS**

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**J & K BIFURCATION: AN INTEGRATION WITHOUT INTEGRITY**

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## AN OVERHAUL, THE CRIMINAL LAW BILLS, THE BIG PICTURE

**CONTEXT:** The central government has introduced three bills in Parliament: *Bharatiya Nyaya Sanhita (BNS)*, 2023; *Bharatiya Nagarik Suraksha Sanhita (BNSS)*, 2023; and *Bharatiya Sakshya (BS) Bill*, 2023. These bills aim to replace the existing Indian Penal Code, Code of Criminal Procedure, and Indian Evidence Act.

### THE KEY POINTS AND IMPLICATIONS:

#### Bharatiya Nagarik Suraksha Sanhita (BNSS):

BNSS includes a provision for the registration of a cognizable offense in any police station, regardless of the location of the crime. This formalizes the practice of recording a First Information Report (FIR) at Zero, making it easier for complainants to get their cases registered.

It introduces a clause that restricts arrests without the prior permission of the Deputy Superintendent of Police for individuals aged over 60 or infirm, in cases punishable with less than three years of imprisonment.

**Handcuffing:** The bill allows handcuffing for certain serious offenses, but the criteria for handcuffing remain unchanged from previous legislation, emphasizing that it should only be used as necessary to prevent escape.

**Crime Scene Investigations:** The BNSS mandates a forensic expert's visit and the collection of forensic evidence for offenses punishable with over seven years of imprisonment. However, this provision may be delayed for up to five years due to limited forensic infrastructure.

**Audio-Video Means:** It encourages the use of audio-video means in recording investigations, but practical implementation may be challenging, especially with smartphone limitations.

**Two-Finger Test:** The bill doesn't explicitly ban the two-finger test in rape cases, despite its scientific invalidity

and violation of victim/survivor dignity. The opportunity to align with the Union Ministry of Health and Family Welfare's guidelines was missed.

**Disclosure of Victim/Survivor Identity:** The provision allowing the next of kin to authorize the disclosure of the identity of a minor victim/survivor may be omitted, as the Protection of Children from Sexual Offences Act addresses this issue differently.

**Police Custody:** The bill permits an extension of police custody beyond 15 days, subject to sufficient grounds, but only after the initial 40 or 60 days, depending on the offense's punishment. Default bail remains an option, and the judiciary retains discretion in permitting additional police custody.

**Suspicious Deaths:** The scope of judicial inquiry into suspicious deaths is expanded to include dowry deaths. However, there is a relaxation in recording statements for women and males aged below 15 or above 60 at their residence.

**CONCLUSION:** The proposed changes in these bills have both advantages and drawbacks. While some changes align with progressive legal principles, they may not be considered radical reforms. The bigger issue at hand is the need for comprehensive police reform, addressing challenges like understaffing, inadequate infrastructure, and training facilities. Effective reform should go beyond legal amendments and encompass broader institutional changes.

## CHANGING THE WAY THE POSTMAN KNOCKS

**CONTEXT:** The new *Post Office Bill (2023)* aims to modernize the functioning of post offices, replacing the outdated *Indian Post Office Act (1898)*. It recognizes the changing role of post offices, which now serve as a platform for providing various citizen-centric services beyond traditional mail delivery.

### KEY CHANGES IN THE BILL:

**Flexibility in Pricing:** The bill grants the Director General of Postal Services the authority to set charges for services offered by post offices without the need for parliamentary approval. This flexibility allows the postal department to respond quickly to market demands and remain competitive.

**Security Measures:** The central government is empowered to intercept, open, or detain postal items in the interest of national security, foreign relations, public order, emergencies, or public safety. This provision is essential to prevent smuggling and the illegal transportation of drugs and contraband goods through postal parcels.

**Digital Addressing:** The bill introduces standards for addressing, address identifiers, and the usage of post codes. This provision opens the door for the use of digital

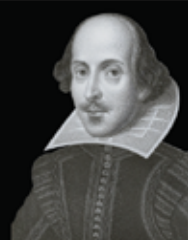
codes and geo-spatial coordinates to identify specific locations, potentially enabling more efficient sorting and accurate delivery of mail and parcels. It may also pave the way for future delivery methods like drones.

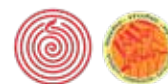
**Exclusive Privilege Removed:** The bill eliminates the provision that gave the central government exclusive rights to convey letters by post and perform related services. This change reflects the reality of a competitive courier industry and removes the legal debates over what constitutes a "letter."

**SIGNIFICANCE:** Post Office Bill 2023 modernizes the postal system, provides flexibility in pricing, enhances security measures, introduces digital addressing, and acknowledges the evolving communication landscape by removing the exclusive privilege of the central government in letter delivery.

*"Be not afraid of greatness. Some are born great, some achieve greatness, and others have greatness thrust upon them."*

- WILLIAM SHAKESPEARE





## GOVERNMENT PUSHES REGULATORY MECHANISMS FOR OTT SERVICES

**CONTEXT:** On July 7, the Telecom Regulatory Authority of India (TRAI) invited responses to a consultation paper it released on a regulatory mechanism for over-the-top (OTT) communication services. The paper also mentions selective banning of these services.

**BACKGROUND:** The discussion on the selective banning of OTT services came after a Parliamentary Standing Committee issued a notice to the Department of Telecom (DoT) to explore this option due to the unrest caused by these platforms which have mass reach and impact.

It is important to note that only OTT communication services like WhatsApp, Signal, Meta, Google Meet, Zoom, X, etc. were discussed in the consultation paper and not the 'content' OTTs such as Netflix, Amazon Prime etc.

Content regulation is an altogether different subject and it comes under the ambit of the Ministry of Information and Broadcasting (MIB) and not the TRAI.

The TRAI has also asked stake holders to define OTT, and a proposal on cost-sharing mechanisms between Telecom Service Providers (TSPs) and OTT services.

### WHAT IS THE CONFLICT BETWEEN TSPS AND OTTS?

Telecom Service Providers are of the opinion that OTTs should be regulated and charged because they use and thrive on the infrastructure built by operators over the years. Currently, they aren't.

OTT communications services have led to erosion of revenues for the telcos. These platforms offer users an array of services, sending Multimedia Messaging Services (MMS), instant messaging to voice and video calls, delivered over the internet. This circumvents the need for traditional telecom services, particularly voice calls and text messages, leading to a significant reduction in the revenue streams of telecom companies.

### WHAT IS THE DEMAND?

There should be a policy framework to enable fair share contribution from large OTT service providers to telecommunication network operators based on assessable criteria like number of subscribers or data usage. To ensure fairness and compensate for the increased data demands, it is justifiable for OTTs to pay a fair and reasonable fair share charge to TSPs.

Similarly, according to the Internet Service Providers Association of India, if OTT services are a substitutable service offered by licenced service providers, then such OTT services should be considered as the same services offered under the telecom licence granted by the Government.

That is, all such OTT services should be governed by the same set of rules irrespective of whether they are provided by an operator on its own network or through the internet.

### WHAT IS THE ARGUMENT FOR BANNING OTT SERVICES?

Broadband India Forum (BIF) firmly opposed any selective ban on OTT services as they are adequately regulated under the existing IT Act, 2000, Consumer Protection Act, 2019, and other associated Acts and Rules.

**CONCLUSION:** The debate over regulating and potentially banning OTT communication services in India highlights the complex interplay between technology, telecom companies, and government oversight. The outcome remains a work in progress.

## INDIA: PERSONAL DATA TRANSFER UNDER UN TREATY TO FOLLOW DOMESTIC LAWS

**CONTEXT:** India has made suggestions at the international forum that transfer of "personal data" under the convention will be done in accordance with the country's domestic laws and no other applicable international laws.

**BACKGROUND:** The Union Home Ministry recently reviewed the draft of the UN Cyber Crime Convention to discuss the necessary changes in the existing systems if this convention is signed and ratified by India. The convention, which has been at the negotiating table for the past three years, is expected to be ratified at the UN General Assembly in 2024.

**THE STORY SO FAR:** The Parliament of India enacted the Digital Personal Data Protection Act in August mandating that personal data can be processed "in the interest of sovereignty and integrity of India or security of the state" for "fulfilling any obligation under law". The Act that came into force on August 12 after receiving assent from the President of India requires firms to disclose to users the identity of other firms to which their data would be entrusted for processing, but they are explicitly exempted

from disclosing or sharing of such data in the case of lawful interception of data.

At the sixth session of the "Ad Hoc Committee to Elaborate a Comprehensive International Convention on Countering the Use of Information and Communications Technologies for Criminal Purposes", India asked for the deletion of a clause encouraging state parties to "establish multilateral arrangements" to transfer personal data.

India also agreed to the clause that state parties may transfer personal data to a third country only with the prior written authorisation of the original transferring state party.

**CONCLUSION:** India asserts control over personal data transfer under the UN Cyber Crime Convention, aligning it with domestic laws.



**INDIA'S LARGEST ONLINE IAS COACHING ACADEMY**





## 'INDIA' AND 'BHARAT' RETAINED TO ALIGN VARIED VIEWS IN CONSTITUENT ASSEMBLY

**CONTEXT:** Debates have erupted across the country after President Draupadi Murmu had used the name Bharat to send invitations to G20 nations.

**BACK GROUND:** Constituent assembly debates highlight that the names India and Bharat were retained to align contrasting voices. The debates happened while discussing article (1) of the Constitution. For some members, the name India, retained a sense of familiarity and continuity, especially among foreign nations.

### UNION OF INDIA

B.R. Ambedkar, the head of the committee drafting India's Constitution, opposed an amendment to Article 1(1) that proposed renaming the country as the 'Union of India.' He argued that 'India' had been the country's name historically and during its tenure as a member of the United Nations, and all international agreements had been signed under this name.

However, there were others who believed that adopting the name 'Bharat' would not hinder the country's progress. Member Seth Govind Das clarified that supporting the name 'Bharat' did not signify a backward-looking approach, contrary to the beliefs of Prime Minister Jawaharlal Nehru and some other members.

### BEFITTING OUR HISTORY

During the Constituent Assembly debates, proponents of renaming India as 'Bharat' argued that it would align with the

nation's rich history and culture. They believed this change wouldn't hinder progress or scientific advancements and noted that even the Chinese traveller Hiuen-Tsang had referred to the country as 'Bharat' in his writings.

### VARIED AMENDMENTS

In the Constituent Assembly debates, Member Shibban Lal Saxena proposed an amendment to change the name of the Union to 'Bharat' and make Hindi in the Devanagari script the national language of 'Bharat.' The debates concluded with the addition of 'Bharat' to Article 1(1), which now reads 'India that is Bharat, shall be a Union of States.' This decision led to a controversy when a G-20 dinner invitation used the name 'President of Bharat.' Some members had also suggested replacing 'States' in Article 1 with 'Pradesh,' but Pandit Nehru opposed this, stating that 'Pradesh' lacked a clear definition and 'State' was a more precise and well-understood term, both domestically and internationally.

**CONCLUSION:** The retention of both 'India' and 'Bharat' in the Constitution's Article 1(1) symbolises a delicate balance struck during the Constituent Assembly debates. It reflects the diverse historical, cultural, and linguistic identities of the nation while emphasizing continuity on the international stage. This historical decision continues to evoke discussions and debates, as evident in recent events.

## ON THE CRIME OF 'FALSE PROMISE TO MARRY'

**CONTEXT:** Section 69 of the proposed Bharatiya Nyaya Sanhita (BNS), 2023 identifies 'sexual intercourse of 'consensual' nature based on false promise of marriage' as an offence

### What does Section 69 say?

Chapter 5 of the Bharatiya Nyaya Sanhita (BNS), 2023 Bill, titled "Offences against woman and children" describes 'sexual intercourse by employing deceitful means etc. attracting a penalty of up to ten years of imprisonment'. Section 69 cites 2 grounds -

1. Deceitful means - false promise of employment or promotion, inducement or marrying after suppressing identity.
2. False promise to marry a woman for the purpose of getting her consent and sexually exploiting her, with the intention of breaking it.

### How has the IPC dealt with cases of 'false promise to marry'?

In 2016, a quarter of the total rape cases registered in Delhi pertained to sex under 'false promise of marriage', as per Delhi Police data. The National Crime Records Bureau in the same year recorded 10,068 similar cases of rape by "known persons on a promise to marry the victim" (the number was 7,655 in 2015).

BNS penalises those coercing women into sexual relationships. Coercing a woman into sexual relations were dealt under Sections 375 and 90 of the IPC. Section 375

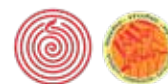
defines consent as "an unequivocal voluntary agreement when the woman by words, gestures or any form of verbal or non-verbal communication, communicates a willingness to participate in the specific sexual act." Section 90 says consent, given under "fear of injury" or "misconception of fact," cannot be considered as consent.

### Difference between 'false promise' and 'breach of promise'

The Courts have distinguished between a 'false promise' and a 'breach of promise' on the basis of proving if the man intended to marry at the time of engaging in sex. The SC observed that a false promise is "given on the understanding by its maker that it will be broken," but a breach of promise is "made in good faith but subsequently not fulfilled."

A Supreme Court Bench ruled against rape in Uday versus State of Karnataka (2003), citing lack of intention, since the victim had to be 'clearly conscious' of the 'stiff opposition' the relationship would face since the parties belonged to 'different castes'.

**SIGNIFICANCE:** In the evolving legal landscape, Section 69 of the Bharatiya Nyaya Sanhita addresses a critical issue, distinguishing 'false promise' cases from 'breach of promise,' offering clarity in sexual offense cases.



## ONE NATION ONE ELECTION

**CONTEXT:** The formation of a committee led by former President Ram Nath Kovind has been initiated by the Government of India to investigate the feasibility of implementing the concept of "one nation, one election". This entails the simultaneous conduct of Lok Sabha (Parliament) and state assembly elections.

### WHAT IS ONE NATION ONE ELECTION?

"One nation, one election" (ONOE) is a proposed electoral reform that advocates for the synchronization of elections for the Lok Sabha (Parliament) and State Legislative Assemblies across India. This would involve conducting these elections simultaneously at regular intervals, typically once every five years.

The objective behind ONOE is to streamline the electoral process, reduce the frequency of elections, and potentially enhance governance efficiency by ensuring that both state and national elections occur concurrently. This concept aims to minimize the disruption caused by frequent election cycles and promote a more cohesive and synchronized democratic system in the country.

**BACKGROUND:** Historically, India conducted simultaneous elections in the initial two decades following its independence until the year 1967. However, this practice faced a significant disruption due to the dissolution of specific State Legislative Assemblies in 1968 and 1969, coupled with the dissolution of the Lok Sabha during the same period.

These developments led to a departure from the tradition of simultaneous elections, resulting in a more staggered electoral process across the country.

### CHALLENGES OF IMPLEMENTING "ONE NATION, ONE ELECTION":

#### 1) Constitutional and Legal Hurdles:

India's federal structure mandates staggered elections for states, and any attempt to synchronize them would require a constitutional amendment.

This endeavour necessitates constitutional amendments, which demand consensus among various political parties and states. This process is intricate and time-consuming, requiring widespread agreement to modify the existing electoral framework.

For instance, it would require amendments to crucial constitutional articles such as 82, 85, 172, and 174, as well as modifications to the Representation of the People Act, 1951, and the Rules of Procedure governing the Lok Sabha and State Legislative Assemblies.

#### 2) Anti-federal Implications:

Assembly elections traditionally revolve around local and regional issues. Integrating them with general elections may risk overshadowing these regional narratives, potentially undermining the federal structure of the country.

#### 3) Diminishment of Local Priorities:

One potential drawback associated with the concept of simultaneous elections is the risk that local concerns and issues may be eclipsed by broader national or state-level agendas. It's essential to recognize that local governments play a pivotal role in addressing grassroots problems, and therefore there should not be any act which will result in diminishing their significance in the electoral process.

#### 4) Logistical Challenges:

Coordinating and conducting all elections simultaneously poses significant logistical hurdles. This includes managing security deployments, maintaining accurate voter rolls, and efficiently managing polling booths, leading to administrative complexities.

The requirement for approximately 30 lakh electronic voting machines (EVMs) and voter-verified paper audit trail (VVPAT) machines further intensifies logistical demands. It will require about twice as many electronic voting machines and Voter Verifiable Paper Audit Trail machines.

#### 5) Possibility of Domination by National Parties:

Simultaneous elections may tilt the advantage toward national parties with greater resources and a broader reach. This could marginalize regional parties and their specific issues, potentially reducing the diversity of representation in governance.

#### 6) Threat to Political Diversity:

Synchronization of elections could potentially result in a dominant party system, where the party emerging victorious in national elections also secures a majority in state elections. This scenario might curtail political diversity and diminish the essential system of checks and balances required for a robust and thriving democracy.

#### 7) Impact on Democracy:

Combining all elections into one event may overwhelm voters with multiple issues to consider simultaneously. This might result in uninformed choices and hinder the democratic process, as voters may struggle to engage effectively with the breadth of issues at stake.

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## **BENEFITS OF SIMULTANEOUS ELECTIONS FOR A STRONGER DEMOCRACY AND GOVERNANCE:**

Simultaneous elections offer several advantages that can enhance the effectiveness of democratic processes and governance in India.

#### 1) Reducing Election Expenditure:

Conducting all elections concurrently minimizes expenses associated with logistics, security, and campaign efforts. This cost-saving measure allows for more resources to be channelled towards vital development and welfare programs. For instance, a study by the National Institute of Public Finance and Policy estimates potential government savings of up to Rs. 50,000 crore through simultaneous elections.

#### 2) Enhanced Governance Continuity:

Frequent elections at various levels often disrupt governance as elected representatives and bureaucrats shift their attention to campaigning. Aligning elections can

mitigate such disruptions, enabling officials to concentrate on policy implementation and developmental initiatives.

#### 3) Improved Policy Cohesion:

The existence of varying political ideologies and priorities among different governments can hinder the efficient execution of policies. Simultaneous elections could lead to a more coherent approach to governance, promoting policies that complement one another. A notable example is the successful implementation of government initiatives like the Swachh Bharat Mission.

#### 4) Reduced Political Polarization:

Frequent elections tend to exacerbate political polarization and identity-based politics. Simultaneous elections might encourage political parties to focus on broader national and state-level issues rather than divisive local concerns, fostering a more inclusive and unifying political discourse.

#### 5) Enhanced Voter Participation:

Continuous electoral cycles can lead to voter fatigue and lower turnout in various elections. Simultaneous elections can combat this issue by promoting higher voter participation. Studies have shown that states that have held simultaneous elections in the past experienced a greater voter turnout, with 70.5% compared to 65.5% in states without such synchronization.

#### 6) Reduced Security Concerns:

Simultaneous elections mitigate security concerns by allowing for a unified and strengthened security apparatus across the nation. This synchronicity enhances the overall security setup during the electoral process.

#### 7) Fairness and Transparency:

By ensuring that all parties and candidates operate within the same electoral timeframe, simultaneous elections create a level playing field. This promotes fairness and transparency, vital elements in upholding the integrity of the electoral process.

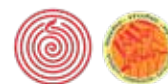
#### 8) Minimized Impact on Education:

The synchronization of elections reduces the educational sector's disruptions as fewer teachers are required to be engaged in the electoral process. This is also important in the context that many schools and college buildings also serve as polling and counting stations too. This minimizes the adverse effects on the education system, allowing it to function more smoothly.

## **THE PATH AHEAD**

To navigate the challenges and harness the benefits of synchronized elections, several key strategies and international examples offer guidance:

1. **Parliamentary Standing Committee Recommendation:** Implement a two-phase election schedule that considers the term expiration of legislative assemblies. For those ending within six months to one year before or after the Lok Sabha elections, hold elections during the midterm of Lok Sabha. For other states, align their elections with the general Lok Sabha elections.
2. **Exploring "One Year, One Election":** Consider the concept of "One Year, One Election" as a viable alternative to "One Nation, One Election" (ONOE).



While achieving similar benefits, it may present a more feasible and pragmatic approach.

3. **International Examples:** Draw inspiration from international success stories like South Africa and Sweden, where simultaneous elections at various levels, including national, provincial, and local, have proven effective. Studying their models can provide valuable insights and best practices for implementation in the Indian context.

### CONCLUSION:

The concept of "One Nation, One Election" presents both challenges and benefits that are pivotal to the future of India's democratic landscape. While it

offers potential advantages like cost savings, enhanced governance continuity, and reduced polarization, it must be approached with caution. The constitutional hurdles, the risk of overshadowing local priorities, and the potential for political domination by national parties require thoughtful consideration.

Ultimately, the success of simultaneous elections hinges on a delicate balance between streamlining the electoral process and preserving the diversity and integrity of Indian democracy. It is a complex issue that warrants thorough deliberation and consensus-building among political stakeholders to ensure that any potential implementation aligns with the democratic ideals upon which India was founded.

## SIGNIFICANCE OF PARLIAMENT IN INDIAN DEMOCRACY

**CONTEXT:** Amidst the transition to a new Parliament building, the Speaker of the Lok Sabha has provided a comprehensive analysis of Parliament's pivotal role in our democracy.

India, the world's largest democracy, has embraced parliamentary democracy since gaining independence in 1947. Parliament, as the embodiment of the people's sovereign will, has played a crucial role in shaping the nation's political landscape. Nonetheless, this parliamentary democracy confronts various challenges, including diminished attendance, the misuse of money bills for legislation, limited scrutiny of bills, and the absence of a Deputy Speaker.

### BACK GROUND: HISTORICAL LEGACY AND INDIA AS THE "MOTHER OF DEMOCRACY"

India's parliamentary legacy is deeply rooted in its historical and cultural heritage, reflecting millennia of participatory governance. Ancient texts mention institutions and political systems that encouraged discussions and deliberations, underscoring the nation's commitment to democratic principles. Moreover, India's diverse communities, including those with tribal traditions, have demonstrated resilient local self-governance, reinforcing the democratic ethos.

### VISION OF THE CONSTITUENT ASSEMBLY MEMBERS

The visionary founding leaders of India exhibited unwavering faith in the political judgment and wisdom of the common people. This faith led to the adoption of an exceptionally enlightened Constitution at independence, setting the stage for a robust democratic system. Despite widespread doubts about democracy's viability in post-independence India, these leaders remained resolute in their commitment to democratic values.

### THE ROLE OF PARLIAMENT IN STRENGTHENING DEMOCRACY

Parliament has played a central role in shaping India's democratic journey. It has been a catalyst for managing conflicts, cherishing diversity, and guiding the nation toward development and prosperity. Parliament's dedication to the welfare of weaker sections of society and its respect for diversity underscore its significance as a representative institution.

**DIVERSE REPRESENTATION:** One of the remarkable strengths of Indian democracy is its ability to represent diverse communities, languages, religions, and cultures. This inclusivity is critical in a nation as heterogeneous as India. Of the organs of the Government, Parliament has been the most representative and inclusive of India's diversity in its ability to represent diverse communities, languages, religions and cultures.

### VOICE OF THE PEOPLE: PROMOTING SOCIO-ECONOMIC CHANGE

Parliament serves as a vital platform for citizens to voice their concerns, champion socio-economic change through legislation and informed debates, and hold the government accountable. Real-world examples, such as discussions on crises like the Manipur issue, exemplify Parliament's responsiveness to pressing national matters.

### LIVING INSTITUTION: THE VIBRANT WILL OF A BILLION

Parliament stands as a living institution, embodying the collective will of over a billion Indians. It is dedicated to the welfare of citizens and the unity of the nation. Its unwavering commitment to national progress is evident through its consistent legislative work and deliberations.

### SYMPHONY OF DEMOCRACY: UPHOLDING CONSTITUTIONAL VALUES

Despite occasional disagreements, Parliament has successfully created an elegant symphony of democracy, resolutely upholding constitutional values and national interests. This is not withstanding the fact Parliamentary debates sometimes do reduce into a shouting match, cacophony and unparliamentary behaviours exemplified through cash for question scam etc, has sullied the image of the temple of Indian democracy in the collective psyche of Indians. This ability to function effectively amidst diversity and dissent underscores its enduring significance. More than 4000 laws passed by the Parliament since its inception is a testimony to its efforts.

**Rule of Law:** India's commitment to the rule of law is evident in the number of laws passed and its continuous efforts to improve the quality of life for its citizens. Ever since its establishment, the Parliament of India has played a determined and purposive role in bringing about positive socio-economic change in a society as diverse as India, through progressive legislation and debates on matters of contemporary national interest that have gone a long way in informing the public about the nuances and varied





dimensions of the issues at hand. So far, our Parliament has passed more than 4,000 laws since Independence.

### WATCHDOG OF PUBLIC EXCHEQUER

One of Parliament's pivotal functions is oversight of public finances, including budget approval and ensuring the Executive's accountability. It serves as the final guardian of the public exchequer, monitoring expenditure and approving fund allocations.

### ROLE OF PARLIAMENTARY COMMITTEES AND PARLIAMENTARY PRIVILEGES

Parliamentary committees, often considered miniature parliaments, have a significant role in scrutinizing bills, budget proposals, and government ministries. They enhance parliamentary oversight and accountability by developing their own approaches and seeking public input. Furthermore, parliamentary privileges, including immunity from legal action for statements made within Parliament, protect members' autonomy and free expression.

**Accountability:** The Parliamentary system's design fosters accountability. The Executive is directly accountable to the legislature, ensuring checks and balances that are essential for a healthy democracy. However, challenges exist in ensuring effective accountability.

### IMPACT ON DEMOCRACY AND CHALLENGES FACED

Despite its vital role, Parliament faces numerous challenges that impact India's democracy:

**Reduced Attendance of Parliamentarians:** A growing concern is the reduced attendance of elected representatives, which affects the quality of parliamentary debates and decision-making.

**Use of Money Bill Route:** The use of the money bill route to pass non-financial bills limits meaningful debate and scrutiny, undermining the democratic process.

**Limited Bill Scrutiny:** The absence of comprehensive bill scrutiny deprives Parliament of its vital role in examining proposed legislation.

**Absence of Deputy Speaker:** The absence of a Deputy Speaker weakens parliamentary proceedings, affecting the balance of power and accountability.

**Compromised Law Making:** The compromise in the legislative process hampers the formulation of effective laws. The right to question and dissent is integral to democracy and should be protected at all costs. This right should not become a licence to foment disruption and disorder in the House when disapproval can be more eloquently expressed through informed debate, wit and humour.

The net result of disruptive obstructionism is lower productivity of the House, passing of important legislation without detailed debates, frittering away of the opportunity to demand answers from the government to searching questions and raise parliamentary constituency-related

issues during Zero Hour.

It is not only Members of Parliament but also, citizens who should seriously introspect as to how the pre-eminence of Parliament among the organs of the state can be restored as a responsible body that is uniquely competent to finding solutions to the most intractable problems before the nation through well-informed, methodical and open deliberation.

Less People's Participation: Decreased participation of citizens in the legislative process weakens the democratic structure.

### THE WAY FORWARD

To strengthen India's parliamentary democracy, several steps should be considered:

**Committee Referrals:** Increasing the referral of bills to committees for thorough examination can ensure comprehensive scrutiny.

**Regular Monitoring:** Continuous monitoring of parliamentary proceedings can improve attendance and participation.

**Increased Sittings:** Expanding the number of parliamentary sittings can enhance the legislative process.

**Research Support:** Providing research support to parliamentarians can facilitate informed decision-making.

**Responsible Opposition:** Encouraging responsible opposition can lead to more constructive debates.

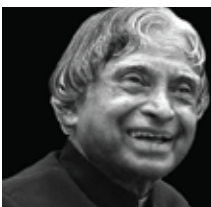
**High People's Participation:** Encouraging greater citizen participation in the democratic process can strengthen accountability.

### Embracing Technology and Transformation

Embracing technology is crucial for the transformation of India's parliamentary system. Recent efforts, such as the introduction of information technology and the development of the Digital Sansad app, demonstrate Parliament's commitment to leveraging technology for efficiency and transparency. Additionally, upgrading social media coverage to engage with the youth can enhance the reach and impact of parliamentary activities.

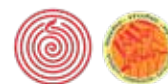
### CONCLUSION

In conclusion, Parliament holds a pivotal role in India's democratic framework, reflecting a rich historical legacy and the visionary ideals of its founding leaders. Despite its significance, it faces challenges that affect its efficacy and the overall health of Indian democracy. To overcome these challenges and strengthen the democratic process, India should focus on enhanced parliamentary scrutiny, increased citizen participation, and the responsible use of technology. By embracing these reforms, India can ensure that its parliamentary democracy continues to serve as a beacon of democratic values, unity, and progress for the nation.



*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM



## J & K BIFURCATION: AN INTEGRATION WITHOUT INTEGRITY

**CONTEXT:** A 5 Judge Constitutional bench of the Supreme Court led by Chief Justice D.Y. Chandrachud had been deliberating a series of petitions that contest the revocation of special status from the former state of Jammu and Kashmir.

### MAJOR HIGHLIGHTS

#### Pivotal distinction between Constituent Assembly and Legislative assembly

There is this profound distinction between the Constituent Assembly's power to create and authorise governance versus the Legislative Assembly's governance authority. It underscores that these roles aren't interchangeable.

#### Judicial Scrutiny of Power Transfer from elected Government to President's Rule

On June 20, 2018, under Article 92 of the Constitution of J&K, the State was placed under Governor's Rule after the Bharatiya Janata Party (BJP) withdrew support to its alliance partnership with the PDP. Six months later, in December 2018, Governor's Rule got converted into President's Rule (Article 356 of the Indian Constitution).

Critics argue that it implies that all the powers of the Government of the State are now vested in the Governor under the superintendence of Prime Minister Narendra Modi. Given conditions of severe democratic deficit, the government wrote up an order scrapping Article 370, sent it to itself for "concurrence", and had it signed by the President.

The petitions challenge an executive order issued by the Ministry of Law and Justice that supersedes the 1954 Order and voids Article 370. It questions the legality and moral legitimacy of such an order, positing the uniqueness of passing orders to amend a constitution.

The petitions also challenge the interpretation of Article 370 (3) which equates the Legislative Assembly of the J & K state to the Constituent Assembly as mandated by the Historical context and the legislative intent behind

the clauses.

#### CONSTITUENT POWER AND DEMOCRATIC CONSENT

The core of the matter is the principle of democratic consent which tends to give legitimacy to Constitutional changes. The idea of the petitions is based on this issue of perceived lack of the democratic consent behind the government's actions.

#### Divergence in Terms: Integrity vs. Integration

The issue draws parallels to Salman Rushdie's parody of "integrity," which resonates with the preservation of a nation's essence. It underscores the ethical conflict in redefining constitutional terms. The multifaceted implications of the Jammu and Kashmir bifurcation, raises questions about the path to national unity and the integrity of democratic ideals.

In the context of Jammu and Kashmir's bifurcation, the parody of 'integrity' by Salman Rushdie takes on significance. The government emphasizes unity ('integrity') but critics say it resembles forced 'integration,' possibly neglecting the region's diversity. This contrast highlights the ethical complexities of maintaining a unified nation while preserving individual identities.

**CONCLUSION:** The ongoing legal deliberations surrounding the bifurcation of Jammu and Kashmir exemplify a broader debate about the delicate balance between integration and integrity in the context of democratic principles. The distinction between democratic consent and constitutional changes underscores the need for thoughtful reflection on the path to national unity, respecting diverse identities while upholding the essence of a nation. The final decision by the Supreme Court will undoubtedly shape the future of Jammu and Kashmir and have far-reaching implications for the larger democratic fabric of India.

## THE NARRATIVE OF DEVELOPMENT AND POPULISM

**CONTEXT:** On September 14, the Prime Minister laid the foundation stone of projects worth over ₹50,700 crore in the election-bound State of Madhya Pradesh, including a petrochemical complex and 10 new industrial projects

### BACKGROUND

On September 18, a major Opposition party announced a monthly financial assistance of ₹2,500 to women, gas cylinders at ₹500, free travel for women in State transport buses, schemes promising an annual financial assistance of ₹15,000 for farmers, a housing scheme with a piece of land and ₹5 lakh for construction of house for homeless poor, 200 units of free electricity to each poor household, health insurance cover of up to ₹10 lakh and ₹5 lakh financial assistance to students from a poor background to pursue higher education.

### STORY SO FAR

The most common narrative is that development is the long-term ideal and populism is dubbed as myopic, with development-retarding effects. There are no two arguments on the need to achieve higher and better development outcomes. However, there exists a need to assess its trajectory and inclusivity to understand the implications for welfare and sustainability.

Equating development to visible mega-infrastructure could, over time, become a dangerous obsession for two reasons. First, the suitability of such projects for the specific geographic location or users is often overstated without realistically assessing long-term environmental consequences and its implications on the livelihoods of present and future generations. Second, the mechanisms of financing mega-infrastructure are often on the assumption of exaggerated revenue accruals from multiplier effects and flattened costs without any time and cost over-run. The fiscal burden of such financing modes would start surfacing in the medium term, and addressing it imposes additional costs. Two examples would clarify the above.

First, during the period June 24 to July 10, 2023, over 41 landslides, 29 flash floods, and one cloud burst occurred in Himachal Pradesh amid relentless rain. One could call these as events of 'climate crises'. But Himachal Pradesh is an active participant in the race to 'development' through the construction of several highway roads connecting various tourist locations, thereby making the mountain regions fragile and unleashing unplanned





urbanisation. Uttarakhand faced a big disaster in 2013. Rather than learning from it, the government went on to 'rebuild' the State, which was a rebranding of the State with many highway projects. The 'Char Dham Yatra' is hyped as road connectivity that brings millions of people as religious tourists despite the fact that most places have infrastructure for only a few thousand people.

The total debt of the National Highways Authority of India (NHAI), the apex body for the construction and management of national highways in the country stood at ₹ 3,42,801 crore as on March, 2023, up from ₹23,797 crore in 2014. The bulk of the debt, i.e., ₹ 3.27 trillion, was contracted between 2017-18 and 2021-22. The NHAI's debt servicing cost will cross ₹ 50,000 crore in FY28 as the money was raised through bonds in 112 tranches; the last of those will mature in 2050. Apart from debt, the NHAI also has contingent liabilities, most of which are from disputed claims that have been filed by contractors and developers. The fiscal implications of financing development lingers in the system, imposing long-term constraints.

Conventional models of economic growth did not attach much importance to distribution as it was expected to be an inbuilt consequence of growth. These models assumed that the benefits of growth would percolate through the 'trickle-down effect', that is, growth is characterised as a 'high tide that lifts all boats'. In this scheme of things, populist re-distributive policies do not find a place. However, cross-country growth experience shows that the benefits of growth do not trickle down that easily and some sections of the population become 'outliers' in the growth process. Government-led redistribution is needed to reduce the size of such outliers and spread the benefits of growth more evenly. The rationale for economic populism arises in this context.

While economic populism imposes fiscal costs, inappropriate physical infrastructure-led development imposes additional costs, especially environmental costs. These costs might work as a binding constraint on subsequent governments. Poor resilience coupled with an injection of fragility to the environment results in a situation of costs of such 'infrastructure led development' remaining in the system for long. In contrast to narrowly defined and prominently visible megaprojects-led development, not all economic populism hurts. At times it might be the only way to forestall the dangerous obsession with physical infrastructure-led development.

## CONSEQUENCES OF POPULISM

Populism often emerges as a response to the grievances of ordinary citizens when their concerns are dismissed by the political elite. While it may appear as a remedy for legitimate issues, populism carries a set of consequences that can seriously jeopardize democracy and a nation's broader interests. This essay delves into the detrimental effects of populism, drawing from provided information and relevant insights.

### I. Undermining Representative Institutions:

Populist movements, in their pursuit of challenging established political structures, frequently turn against representative democracy itself. They tend to reject the authority of elected representatives and question the legitimacy of existing institutions. This rejection can

undermine the core of a functioning democratic system, leading to instability and political polarization.

### II. Threatening Pluralism and Unity in Diversity:

Pluralism, a vital democratic foundation, allows diverse voices and opinions to coexist. Populism, however, often dismisses pluralism by positioning itself as the sole representative of "the people." This rejection undermines the essence of democracy, which thrives on inclusivity and accommodating diverse perspectives. Consequently, populism can sow divisions and threaten the unity essential for national stability.

### III. Encouraging Authoritarianism and Charismatic Leaders:

Populist movements often feature charismatic leaders who galvanize the masses. Once in power, these leaders may centralize authority, evade checks and balances, and foster personality cults. This concentration of power can easily lead to authoritarianism, as leaders become less accountable to democratic norms and institutions. The erosion of internal democracy within populist movements exacerbates this risk.

### IV. Eroding Democratic Defences:

Populism can weaken democratic defences and checks crucial for government accountability by granting the state a moral standing it may lack. Populist leaders can exploit this perception to undermine democratic institutions and consolidate their power.

### V. Suppression of Opposition and Rational Discourse:

Populist movements often claim moral superiority and monopolize the truth, rejecting the legitimacy of political opponents. This undermines respect for political rivals and stifles the culture of reasoned debates essential for vibrant democracies.

### VI. Majoritarian Nationalism and Minority Rights:

Right-wing populism, in particular, may embrace majoritarian nationalism, side-lining minority rights. Suppressing minority voices and denying their fundamental rights can lead to social divisions and conflicts, undermining the principles of equality and justice.

### VII. Corruption and Abuse of Power:

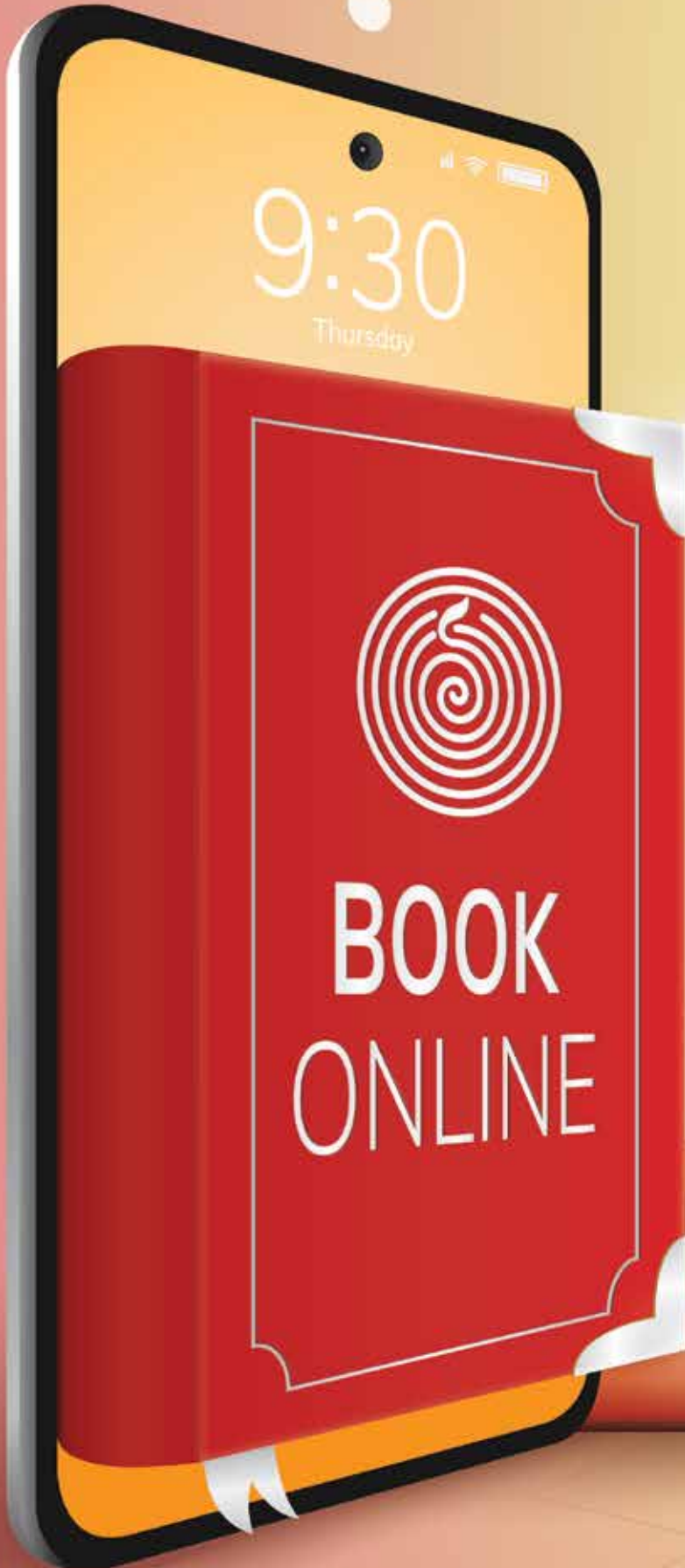
Populism can contribute to a decline in rational political discourse and raise the risk of corruption and power abuse. Populist leaders may prioritize personal interests over national concerns, as their moral standing is perceived as unassailable, making them less accountable for their actions.

## CONCLUSION:

Populist movements may initially emerge to address genuine public concerns, but it is crucial to recognize and address their adverse consequences. These threats to democracy, unity, and the rule of law should serve as a cautionary tale for societies worldwide. Balancing the legitimate concerns of the people with the preservation of democratic values and institutions remains a daunting challenge in the face of populism. Societies must remain vigilant in safeguarding democratic principles and the interests of all citizens.



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# **INTERNATIONAL RELATIONS**





**ASEAN A KEY PILLAR OF 'ACT EAST'  
POLICY: MODI**

**'AT G-20, JAPAN BACKS INDIA, NOT CHINA,  
AS BRIDGE TO GLOBAL SOUTH'**

**AVOID A 'NEW COLD WAR', CHINA TELLS  
NATIONS AT ASEAN MEET**

**EASTERN HEDGE**

**FINDING SEOUL IN THE INDO-PACIFIC**

**INDIA-MIDDLE EAST-EUROPE ECONOMIC  
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**MEMORABLE PRESIDENCY**

**MODI BIDEN WELCOMES PROGRESS IN  
DEFENSE TIES**

**RESTORING ORDER**

**ROLE OF THE INDIAN DIASPORA AS AN  
AMBASSADOR OF INDIA**

**IAF CHIEF TAKES DELIVERY OF FIRST  
C-295 TRANSPORT AIRCRAFT IN SPAIN**





## ASEAN A KEY PILLAR OF 'ACT EAST' POLICY: MODI

**CONTEXT:** The Association of Southeast Asian Nations (ASEAN) is an "important pillar" of India's Act East policy, said Prime Minister Narendra Modi. He commented this just before he left for the 20th ASEAN – India Summit and the 18th East Asia Summit (EAS) in Jakarta.

### THE STORY SO FAR

During the visit, Modi is set to meet with leaders from the 10 ASEAN countries and engage in discussions at the EAS summit, involving leaders from ASEAN nations, Australia, China, India, Japan, New Zealand, South Korea, Russia, and the U.S. He aims to discuss various regional issues, including food and energy security, environment, health, and digital transformation, highlighting the Comprehensive Strategic Partnership formed last year. After the summits, Modi will promptly return to Delhi in preparation for the G-20 Summit.

India thanked Indonesia for accommodating both events in one morning to facilitate Modi's participation. Meanwhile, India's External Affairs Minister S. Jaishankar met with Russian Foreign Minister Sergey Lavrov in Jakarta, discussing East Asia Summit and G20 matters, notably the disagreement over Ukraine in the Leaders' declaration.

**SIGNIFICANCE:** Prime Minister Narendra Modi, had attending both ASEAN summit and East Asia Summit, while both US President and Chinese President are giving a miss to the event. This is important in the context that all the three powers, US, China and India are vying for influence in the Indo – Pacific.

## 'AT G-20, JAPAN BACKS INDIA, NOT CHINA, AS BRIDGE TO GLOBAL SOUTH'

**CONTEXT:** Japan perceives a competition for leadership between India and China in the Global South. Japan views that it is in its interest and that of G7 that India assumes a prominent role in the "Global South", rather than China.

**BACK GROUND:** Amidst the G-20 Summit in Delhi, Japan has actively supported India as a bridge to the "Global South" in contrast to China. Tokyo sees a competition for leadership in this region between India and China.

Tokyo emphasizes India's role as more aligned with the interests of Japan and the G-7. They are keen on fostering closer ties with India to address global challenges and bridge divides with the G-11 countries in the G-20.

This strategic approach seeks common ground on issues like transparency, sustainable investments, debt crises, and climate financing while highlighting the growing divide between India and China in multilateral forums.

**STORY SO FAR:** The recent G-20 Summit held in India has highlighted Japan's strategic support for India as a bridge to the "Global South," positioning India as a key player in the region compared to China. Japan perceives a rivalry for leadership in the "Global South" between India and China and believes that India's role aligns better with the interests of Japan and the G-7 countries. Prime Minister Fumio Kishida of Japan had even invited Prime Minister Narendra Modi to the G-7 meeting earlier in the year, emphasizing the importance of collaboration between India and the G-7 to address various global issues.

Japan's approach is to foster cooperation based on shared interests and common ground rather than

dividing on values. Key focus areas include transparency and sustainability in investments, addressing debt crises, and climate financing, all of which are expected to influence G-20 outcomes.

Notably, the lead-up to the G-20 Summit highlighted a growing divide between India and China on multilateral and global matters. This divergence coincided with deteriorating relations between the two countries, particularly concerning the ongoing Line of Actual Control (LAC) conflict. Issues such as climate change, which were once areas of cooperation between India and China, have now faded from their bilateral agenda. Additionally, India has increasingly pointed to China's lending practices under the Belt and Road Initiative as a contributing factor to debt crises in the developing world.

**SIGNIFICANCE:** Overall, Japan's backing of India as a bridge to the "Global South" reflects a broader geopolitical shift, with Asian countries seeking to enhance their influence in global governance, including within the G-20, which has traditionally been Western-dominated. Despite challenges and broken communication channels between India and China, the competition for influence in the "Global South" remains a critical aspect of international relations. The Chinese President staying away from Delhi G20 Summit is also an indicator of this interplay in international relations.

## AVOID A 'NEW COLD WAR', CHINA TELLS NATIONS AT ASEAN MEET

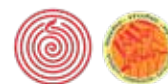
**CONTEXT:** China has advised ASEAN nations to avoid a new cold war. Chinese Premier Li Qiang has urged major powers, indirectly referring to the United States, to control their differences and avoid triggering a new Cold War. Li made these remarks during an ASEAN-plus-three meeting with Japan and South Korea in Jakarta.

**BACK GROUND:** China is concerned about the formation of U.S.-backed blocs in its vicinity and ongoing disputes in the region, notably in the South China Sea. He emphasized the need to oppose taking sides, bloc confrontations, and a new Cold War to manage disagreements arising from misperceptions, divergent interests, or external influences.

**SIGNIFICANCE:** The ASEAN summit has provided a platform for major powers to engage with the bloc and navigate their rivalries. Notably, U.S. Vice President Kamala Harris attended in place of President Joe Biden, while Li represented President Xi Jinping.

These comments align with China's previous warnings against NATO-like alliances in the Asia-Pacific region, advocating for inclusive cooperation instead of exclusive cliques. It also highlights China's insecurities about its clout in the emerging new world order in Asia and Indo Pacific.

Interestingly India was represented by Prime Minister Shri Narendra Modi highlighting the importance of ASEAN to India's Act east Policy.



## EASTERN HEDGE

**CONTEXT:** Prime Minister Narendra Modi's brief visit to Jakarta, the capital of Indonesia, earlier this week had a primary focus on strengthening India's involvement with the economically important association of ten Southeast Asian nations.

**BACKGROUND:** Prime Minister Narendra Modi's recent visit to Jakarta aimed to strengthen India's ties with ASEAN nations, emphasizing economic cooperation and strategic alliances amid global uncertainties.

**STORY SO FAR:** Prime Minister Narendra Modi's recent visit to Jakarta aimed to strengthen India's ties with the economically significant ASEAN group of Southeast Asian nations. This visit was strategically timed, occurring just before India hosted the G-20 summit as the bloc's current president, presenting an opportunity to reinforce traditional relationships with neighbouring Asian economies amid global trade uncertainties.

The backdrop for this engagement is a pessimistic global trade outlook for the second half of 2023 due to downgraded economic forecasts, persistent inflation, financial vulnerabilities, and geopolitical tensions. The joint leaders' statement during the ASEAN-India summit highlighted shared concerns about heightened global food insecurity, worsened by the Ukraine conflict, climate

change, and inflation responses. India's recent restrictions on rice exports have raised concerns about rising regional staple prices.

Prime Minister Modi emphasized a rules-based post-COVID-19 world order and a free and open Indo-Pacific, appealing to ASEAN members uneasy about China's assertiveness. India positioned itself as a reliable long-term partner without territorial ambitions, amplifying the Global South's concerns. India's trade ties with ASEAN have grown, but with a trade deficit and concerns about Chinese goods benefiting from lower tariffs. A review of the free trade agreement is planned, emphasizing India's need for continued ASEAN engagement as a trade hedge and strategic ally in the changing global landscape.

**CONCLUSION:** Prime Minister Modi's visit to Jakarta underscores India's commitment to strengthening ties with ASEAN nations amid global uncertainties, reflecting a strategic partnership for economic cooperation and stability.

## FINDING SEOUL IN THE INDO-PACIFIC

**CONTEXT:** In an Historic Camp David Summit in August this year the leaders of the United States, Japan and South Korea began a new strategic partnership among three traditional allies. The outcome of the South Korea-Japan-U.S. trilateral meeting gives New Delhi and Seoul a unique opportunity to enhance their strategic partnership.

**BACKGROUND:** The Camp David summit in August, featuring the United States, Japan, and South Korea (ROK), marked a significant development in their strategic partnership. India and ROK, celebrating 50 years of diplomatic ties, have an opportunity to enhance their relations within the Indo-Pacific framework, capitalising on ROK's evolving strategic stance and regional geopolitical dynamics.

### SIGNIFICANCE OF CAMP DAVID MEET.

The Camp David summit involving South Korea, Japan, and the U.S. holds immense regional significance:

**Repaired Relations:** It signifies a vital repair in South Korea-Japan relations, driven by a recognition of evolving regional security dynamics. This could contribute to a strengthened U.S.-led alliance structure in East Asia, aligning with AUKUS, the Quad, and CHIP 4 Alliance.

**New Indo-Pacific Direction:** The summit offers the potential for South Korea to chart a fresh strategic course in the Indo-Pacific, fostering improved ties with Tokyo, aligning with the American perspective on China, and enhancing engagement in the Indo-Pacific region.

**Changing China Approach:** South Korea's shift from avoiding offence to China indicates a strategic reevaluation. This new perspective acknowledges that economic ties with China shouldn't inhibit responses to China's growing military presence in the region.

**Desire to Join the Quad:** South Korea's eagerness to join the Quad highlights its interest in active participation in regional security initiatives. The Camp David summit may pave the way for South Korea's potential application for Quad Plus membership.

**Foreign Policy Enthusiasm:** Under President Yoon Suk

Yeol's leadership, South Korea aims to become a "global pivotal state," emphasising engagement with the U.S. and Japan, support for Ukraine, recognition of the China challenge, and a larger role in the Indo-Pacific.

This geopolitical context offers a unique opportunity for India and South Korea to strengthen their strategic partnership in their 50th year of diplomatic relations. Both nations share concerns about China's rise and unilateral actions, making South Korea an essential Indo-Pacific ally for India, especially as India deepens its ties

### DEFENCE AND NUCLEAR REACTORS AS FOCUS AREAS.

India and South Korea can enhance their strategic partnership in several key areas. Diplomatically, they should establish an annual summit at the Foreign Ministers' level and initiate a 2+2 dialogue. Reciprocal visits by Prime Minister Narendra Modi and President Yoon Suk Yeol would further strengthen ties. Both nations could ambitiously explore a South Korea-Japan-India-U.S. initiative on Critical and Emerging Technology (iCET), similar to the India-U.S. iCET agreement. Defence cooperation holds potential, with South Korea's willingness to align with India's 'Make in India' program. Examples include the K9 Vajra self-propelled howitzer and co-production of South Korean K2 Black Panther tanks in India. Additionally, collaboration on Korean-built civilian nuclear reactors could address India's clean energy needs, provided Seoul is open to working within India's liability law and assurances.

### CONCLUSION

South Korea, alongside the U.S., Japan, and Australia, can play a unique role in supporting India's Indo-Pacific interests with its evolving strategic outlook.

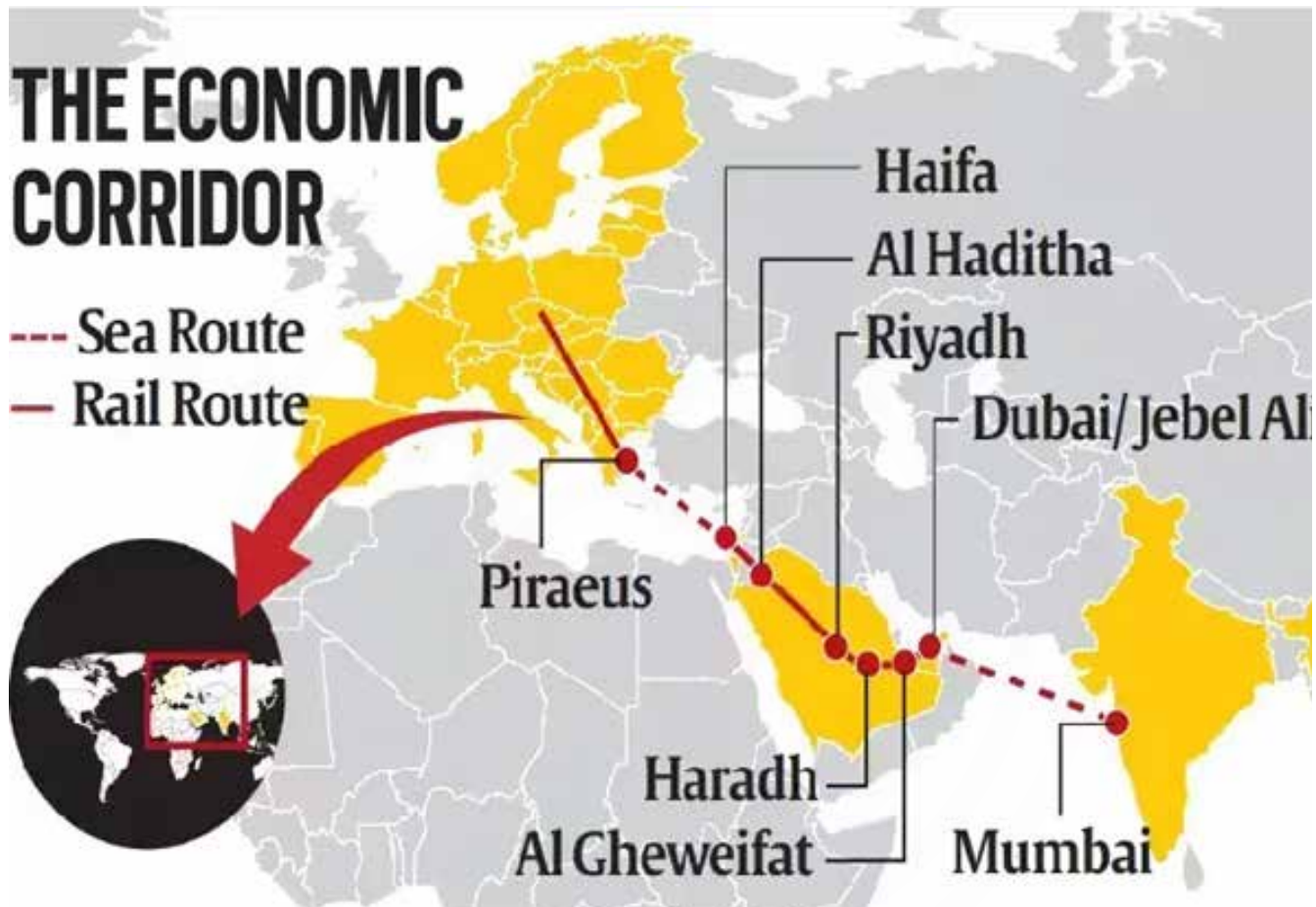




## INDIA-MIDDLE EAST-EUROPE ECONOMIC CORRIDOR IS LAUNCHED

**CONTEXT:** Indian Prime Minister on Saturday last week announced the launch of the India-Middle East-Europe mega economic corridor, an ambitious infrastructure project aimed to connect India to Europe via West Asia.

**BACKGROUND:** China is pushing ahead with belt road initiative and is compelling Saudi and other Middle Eastern nations to join it. India has opposed the initiative of China. This new initiative will offer a new trade route to Europe via land connecting India, Middle Eastern nations and Europe.



### DETAILS OF THE PROJECT:

- The project includes India, the UAE, Saudi Arabia, the European Union, France, Italy, Germany and the US.
- This will include a rail link as well as a high-speed data cable and an electricity cable and a clean hydrogen pipeline to promote clean energy trade between Asia, Middle East and Europe.
- The rail and shipping corridor is part of the Partnership for Global Infrastructure Investment (PGII) – a collaborative effort by G7 nations to fund infrastructure projects in developing nations. PGII is considered to be the bloc's counter to China's Belt and Road Initiative.
- It will be the most direct connection to date between India, the Arabian Gulf and Europe with a rail link that will make trade between India and Europe 40 per cent faster.
- Saudi Arabia announced participation with a contribution of \$20 billion.

### THREE MAJOR REASONS FOR DEVELOPING THE CORRIDOR

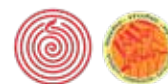
1. It would increase prosperity among the countries involved through an increased flow of energy and digital communications.
2. The project would help deal with the lack of infrastructure needed for growth in lower- and middle-income nations.
3. It could help tackle the “turbulence and insecurity” coming out of the Middle East.

### SIGNIFICANCE OF THE PROJECT

This will be an effective mode of economic integration between India, West Asia, and Europe.

This will provide a sustainable direction to connectivity and development in the entire world.

In addition to India and the US, leaders of the European Union, France, Germany, Japan, Italy, Mauritius, and World Bank flagged the corridor widely seen as a strong counter to China's Belt and Road initiative.



## MEMORABLE PRESIDENCY

**CONTEXT:** India's G20 Presidency has bestowed upon New Delhi a level of influence and significance rarely seen in contemporary history. While some critics may focus on minor details or cultural nuances, the bigger picture reveals India's strategic wisdom and shrewdness, all without compromising its identity.

**BACKGROUND:** The recent G20 Summit held in India has prompted discussions about India's role as a global leader, reminiscent of China's emergence following the 2008 Beijing Olympics. While the Chinese leadership may withhold judgment on India's international prominence, it is clear that the benefits of India's G20 Presidency far outweigh any drawbacks.

### KEY ACHIEVEMENTS AND IMPACT:

**Convening Power:** The G20 Summit highlighted India's ability to convene diverse nations and foster consensus on crucial global issues. Originally established to address financial crises, the G20 has evolved into a vital forum tackling the world's most pressing challenges.

**Notable Absences:** The absence of Chinese President Xi Jinping and Russian President Vladimir Putin did not overshadow the summit's success. India's nuanced organising overshadowed the absence and outcomes outshined and highlighted India's emergence as a nation with will and ability to drive change in the world.

**Win – win consensus:** India managed to secure a consensus communique that found approval from all 20 member nations, even on contentious topics like the Ukraine war, climate change, gender equality, and more. India did not allow politically divisive issues to wreck the summit.

**Cultural Showcase:** The summit, along with its 200-plus associated meetings across India, showcased the nation's vibrant diversity, creativity, and confidence on the global stage. India's soft power, often underestimated, became a significant asset during the event.

**Alternative to China:** The announcement of an economic corridor connecting Europe, the Middle East, and India via rail and sea routes signaled India's emergence as an alternative to China's Belt and Road Initiative, gaining recognition from the rest of the world.

**Core Values and Vision:** India managed to retain its core values and conscience, as evident in the theme of its presidency, "Vasudhaiva Kutumbakam," emphasizing harmony with the ecosystem and commitment to global challenges.

**Global South Voice:** India's presidency established it as a prominent voice for an alternative vision. Initiatives like the Indian Stack, open APIs, and digital public goods have the potential to transform economies worldwide. India also emphasized the inclusion of the African Union in what is now known as the G21.

**New Delhi Leaders Declaration:** Country leaders have signed the New Delhi Leaders Declaration, focusing on the

promotion of inclusive growth.

**India-Middle East-Europe-USA Corridor:** Leaders from these countries have proposed and approved the establishment of the India-Middle East-Europe-USA Corridor, a significant economic initiative.

**Global Biofuel Alliance:** Member countries have come together to form the Global Biofuel Alliance, with a primary goal of maximizing the use of biofuels. On the side lines, India, USA and Brazil have been able to come together for a new partnership on bio fuels.

**Climate change:** Moreover, during the G20 summit, world leaders made substantial commitments regarding climate change, including the ambitious goal of tripling global renewable energy capacity by 2030, aligning with efforts to limit global warming to 1.5 degrees Celsius. They also stressed the necessity for substantial climate financing.

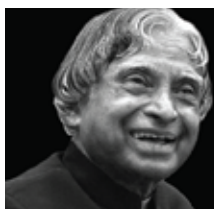
**Agriculture:** In the sphere of agriculture, G20 leaders expressed their dedication to promoting transparent and equitable trade, eradicating hunger and malnutrition, and extending support to initiatives such as the Black Sea grain initiative and the Millet initiative.

**Other areas :** The summit encompassed a wide array of topics, including small arms control, healthcare system resilience, and collaborative research, underlining the importance of building robust healthcare systems and adopting a comprehensive one-health approach.

**Global financial reforms:** Concerning financial matters, G20 leaders deliberated on the regulation of crypto currencies and acknowledged the imperative need for strengthened Multilateral Development Banks (MDBs) to address the demands of global development.

**India U.S.A. bilateral:** Furthermore, India and the United States bolstered their technological partnership, with a specific focus on semiconductor supply chains and telecommunications infrastructure. Notably, a significant milestone in defense cooperation was reached with the agreement between General Electric Aerospace and Hindustan Aeronautics Ltd. (HAL) to manufacture jet engines in India.

**SIGNIFICANCE:** India's G20 Presidency marked a turning point in its global stature. Through strategic wisdom and effective leadership, India convened diverse nations, achieved consensus on critical issues, showcased its cultural richness, and emerged as an alternative to China. With commitments on climate change, agriculture, healthcare, and financial reforms, India's influence and contributions on the world stage have been resoundingly affirmed.



*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM





## MODI BIDEN WELCOMES PROGRESS IN DEFENSE TIES

**CONTEXT:** Prime Minister Narendra Modi and U.S. President Joe Biden expressed happiness about a notification process completed in the U.S. Congress on August 29. This process pertained to a commercial agreement between General Electric Aerospace and Hindustan Aeronautics Ltd. (HAL) for the manufacturing of GE F-414 jet engines in India. Negotiations for this agreement have also begun.

The leaders lauded the settlement of the seventh and last outstanding World Trade Organization (WTO) dispute between the two countries.

**BACKGROUND:** Mr Biden had arrived in New Delhi to attend the G-20 Summit and went straight to Prime Minister Narendra Modi's official residence for a bilateral meeting. The summit will be held on Saturday and Sunday. The deals had been the cornerstone of Modi Biden summit in July and were touchstones of the relationship between two largest democracies.

**THE STORY SO FAR:** Indian Prime Minister Narendra Modi and U.S. President Joe Biden celebrated the progress made during their bilateral meeting in New Delhi. They praised the completion of a notification process in the U.S. Congress on August 29, allowing General Electric Aerospace and Hindustan Aeronautics Ltd. (HAL) to produce GE F-414 jet engines in India and the initiation of negotiations. The leaders also commended the resolution of the last outstanding World Trade Organization (WTO) dispute between their countries.

During their discussions, President Biden welcomed India's request to procure 31 General Atomics MQ-9B remotely piloted aircraft, enhancing India's defence capabilities. Both leaders affirmed their commitment to the G-20 and expressed confidence in its outcomes, focusing on sustainable development and multilateral cooperation.

The joint statement highlighted agreements in defence and space cooperation, with a focus on maintenance and repair of U.S. Navy assets in India. Additionally, they discussed collaborations in commercial space endeavours and joint efforts to reach the International Space Station in 2024.

President Biden's visit marks his first to India as President, with plans for another visit in January. There's ongoing discussion about inviting Quad leaders for India's Republic Day parade. Trade disputes have seen progress, with the potential for India's participation in the Indo-Pacific Economic Forum's "Trade" pillar.

Lastly, high-tech cooperation is set for a midterm review in September 2023 as part of the Initiative on Critical and Emerging Technology (iCET). This collaboration aims to drive technological advancements between the two nations.

**SIGNIFICANCE:** In the absence of the Chinese president choosing to skip the G-20 Summit, the meeting of Narendra Modi and Joe Biden assumes significance for both US and India.

## RESTORING ORDER

**CONTEXT:** The 10 member ASEAN nations have finally asked the Military rulers in Myanmar to end the ongoing violence inside the country and implement the Five Point Consensus that was reached between the two sides aimed at addressing the post-coup crisis in the country.

**BACKGROUND:** Myanmar has experienced security and economic challenges since the military's coup in February 2021. This has led to a civil war and widespread humanitarian crises. The 10 member ASEAN's recent condemnation of the junta's ongoing violence and the failure to implement the Five-Point Consensus reflects international concerns over the situation, as well as Myanmar's isolation on the global stage.

**STORY SO FAR:** ASEAN has taken a commendable step by condemning Myanmar's junta for ongoing violence and failure to implement the Five-Point Consensus. Since the coup in February 2021, Myanmar has experienced security and economic turmoil. While ASEAN initially treaded carefully, its recent statement, issued after the

Jakarta summit, demonstrates a tougher stance. It strongly condemned violence, urged an end to attacks on civilians, and denied Myanmar the 2026 chairmanship. The military, under growing pressure, now faces a challenge from a National Unity Government aligned with ethnic separatist groups. Despite war crimes allegations and humanitarian crises, a legitimate regime restoration remains the only viable solution.

**CONCLUSION :** ASEAN's firm stance against Myanmar's junta marks a significant shift, emphasizing the urgency of ending violence and implementing consensus. The path towards restoration of order remains challenging yet imperative.

## ROLE OF THE INDIAN DIASPORA AS AN AMBASSADOR OF INDIA

**CONTEXT:** : The Indian diaspora, exemplified by figures such as Vivek Ramaswamy, Rishi Sunak is making significant strides in a wide range of domains, including technology and politics.

**BACKGROUND:** Diaspora refers to individuals residing outside their native land for various reasons. Therefore, the concept of the Indian Diaspora encompasses those living outside India, whether temporarily or permanently, and those who can trace their ancestry back to India. India has the second largest diaspora in the world.

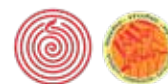
### PRESENT STATUS OF INDIA DIASPORA

The Indian Diaspora stands as one of the world's largest, comprising an estimated 32 million individuals of Indian

descent residing abroad.

**Prominent Host Countries:** United States, Saudi Arabia, United Arab Emirates, Malaysia, Myanmar, United Kingdom, Sri Lanka, South Africa, and Canada each have Indian diasporic populations of at least one million.

**Global Migration Report 2020:** India is the largest country of origin for international migrants, with a diaspora of 17.5 million worldwide.



Remittances in 2021: India received an astonishing \$87 billion in remittances, as per a World Bank Report.

Leading Source of Remittances: The United States contributed over 20% of these funds, highlighting its significance in bolstering India's economy through remittances.

### HOW IS INDIAN DIASPORA CLASSIFIED?

The Indian Diaspora encompasses individuals who have migrated from regions that currently fall within the borders of the Republic of India and have settled in various parts of the world. This diverse group includes the following categories:

- 1. Non-Resident Indians (NRIs):** NRIs are Indian citizens who reside outside India for at least 182 days in a financial year while maintaining strong connections to their home country.
- 2. Overseas Citizenship of India (OCI):** OCI is a type of permanent residency status offered to individuals of Indian origin and their spouses, granting them the privilege of living and working in India without time limitations.
- 3. People of Indian Origin (PIOs):** PIOs are individuals of Indian birth or ancestry who hold citizenship in countries other than India. In 2015, the Indian government integrated PIOs into the OCI program.

### DISTINCTIVE CHARACTERISTICS OF INDIAN DIASPORA

#### The Indian Diaspora's Remarkable Success

The Indian Diaspora is more than just a large community; it stands out due to its exceptional achievements. Many of its members boast high levels of education and have carved out notable careers in business and entrepreneurship. Their impact is not confined to personal success; they often hold influential positions in their host countries, contributing significantly to their adopted nations' economic well-being.

#### Cultural Continuity

**Preserving Heritage Abroad:** Despite dwelling in distant lands, the Indian Diaspora maintains a deep and unwavering connection to its cultural heritage. This commitment to preserving their roots is evident through their wholehearted embrace and celebration of the customs and traditions that define their distinct identity. It's a testament to the enduring cultural ties that bind them.

#### Engagement across Borders

**Political and Advocacy Involvement:** The engagement of the Indian Diaspora extends beyond cultural preservation. Many individuals actively participate in politics and advocacy efforts, both within their host countries and in India. Their involvement is driven by a profound sense of responsibility to shape the societies they inhabit and contribute to the development of their country of origin.

#### Family Values

**Strengthening Bonds Across Oceans:** Family is a cornerstone of Indian culture, and this cherished value remains resolute among members of the Diaspora. Despite geographical distances, they diligently maintain close-knit bonds with their families in India. For them, family remains an integral and cherished part of their lives.

#### Unwavering Identity

**Pride in Heritage Across Borders:** What unites this diverse group is an unwavering sense of identity. While their backgrounds may encompass a wide spectrum of diversity, members of the Indian Diaspora often share a profound and unshakeable connection to their Indian heritage. This deep-rooted pride in their culture and roots serves as a unifying force that transcends geographical boundaries.

### WHY THERE IS A LARGE INDIAN DIASPORA ABROAD?

#### 1. Centuries of British Rule

Historical factors have played a pivotal role in shaping the vast Indian Diaspora. India's subjugation under British colonial rule for more than two hundred years led to the migration of numerous Indians to various corners of the globe. Many were taken as indentured laborers to British colonies, including Mauritius, South Africa, Fiji, and the Caribbean, where they toiled on sugarcane plantations, leaving an indelible mark on these regions.

#### 2. Economic reasons

Rapid Growth, Limited Opportunities: Economic factors have also been instrumental in propelling the Indian Diaspora. India has witnessed significant economic growth in recent years, yet this expansion has not kept pace with the burgeoning population. Consequently, a substantial number of Indians have sought employment opportunities beyond their homeland's borders.

#### 3. The Power of Social Networks

India's renowned tradition of strong family ties and robust support networks has facilitated the success of many of its expatriates. These familial connections have enabled Indians to establish themselves in various corners of the world, fostering thriving businesses and careers.

#### 4. Cultural Dissemination

Additionally, cultural factors have contributed to the widespread Indian Diaspora. India's rich cultural heritage and traditions have been disseminated to diverse parts of the world through this Diaspora. Indian cuisine, music, dance, and spirituality have all found enthusiastic acceptance among global communities, enriching the cultural tapestry of nations far from India's shores.

### ROLE OF THE DIASPORA AS THE CULTURAL DIPLOMATS AND SOFT POWER AMBASSADORS

#### 1) Promoting India's Rich Culture

- Spreading the practice of Yoga, advocating Ayurveda, and fostering awareness of Indian spiritualism.
- Exporting Bollywood's cinematic charm and globally recognized Indian cuisine.
- Celebrating Indian festivals and introducing host countries to traditional Indian music and dance.

#### 2) Economic Enablers and Investment Catalysts

- Demonstrating prowess in business, entrepreneurship, technology, and academia.
- Pioneering contributions to Silicon Valley's technology sector and venture capital endeavours.

#### 3) Political Activists and Advocates





- Actively participating in political processes and engaging in advocacy efforts.
- An exemplary illustration is the Congressional Caucus on India and Indian Americans in the United States.

#### 4) Knowledge Nurturers and Academic Enrichers

- Bringing valuable technical expertise to domestic start-ups and acting as angel investors.
- Diaspora Indian faculty abroad elevating the quality of education in Indian institutions.

#### 5) Making a Difference

- Engaging fervently in philanthropic activities and supporting initiatives for social development.
- Providing vital aid during crises, such as mobilizing funds and supplying essential medical equipment during pandemics.

#### 6) Strengthening Bilateral Relationships

- Occupying prominent positions in the high offices of their host nations.
- Facilitating substantial agreements like the Indo-US Nuclear deal.

### GOVERNMENT INITIATIVES FOR ENGAGING WITH THE INDIAN DIASPORA

#### 1) Pravasi Bhartiya Diwas

- Flagship program acknowledging the overseas Indian community's contributions to India's development.

#### 2) Immigration and Customs Clearance

- Streamlined immigration and customs procedures with welcoming service for Diaspora members returning to India.

#### 3) Tracing the Roots

- Ministry of External Affairs' initiative helping People of Indian Origin (PIOs) trace their Indian heritage.

#### 4) Know India Programme

- A three-week orientation program for Diaspora youth, promoting awareness of life in India and its progress.

#### 5) Pravasi Bharatiya Samman Award

- Award recognizing the Indian Diaspora's contributions in promoting India, supporting its causes, and aiding local communities.

#### 6) Sewa International

- Facilitates Diaspora engagement in humanitarian causes, including disaster relief efforts in India and abroad.

These initiatives aim to strengthen connections, celebrate contributions, and facilitate engagement between the Indian Diaspora and their homeland.

**SIGNIFICANCE:** The Indian Diaspora serves as a remarkable ambassador of India, bridging cultures, fostering economic growth, and contributing to the nation's soft power on a global scale.

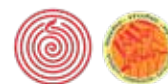
With their unwavering commitment to preserving their heritage and their outstanding achievements, the Indian diaspora continues to play a pivotal role in shaping India's image and influence on the world stage. Government initiatives further enhance this vital connection, recognizing the diaspora's invaluable contributions and reinforcing the bonds that unite them with their homeland.

Together, they exemplify the enduring strength of Indian identity and the power of diaspora diplomacy.



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CRASH COURSE FOR  
**CIVIL SERVICE MAINS  
EXAMINATION 2022**



## IAF CHIEF TAKES DELIVERY OF FIRST C-295 TRANSPORT AIRCRAFT IN SPAIN

**CONTEXT:** The Indian Air Force on Wednesday received the first C-295MW transport aircraft from Airbus marking a major revamp of its transport fleet. IAF chief Air Chief Marshal V.R. Chaudhari formally received symbolic keys to the first aircraft at the Airbus facility in Seville, Spain. The 56 C-295 aircraft will replace the ageing Avro aircraft

**BACKGROUND:** The C-295, with a carrying capacity of 9 tonnes, can carry up to 71 troops or 50 paratroopers, air-drop cargo, be used for medical evacuation and take off and land on short and unpaved runways. The C-295 aircraft comes in transport configuration, equipped with an Indian electronic warfare suite, and will replace the Indian Air Force's ageing Avro-748 fleet.

**STORY SO FAR:** In September 2021, the Defence Ministry signed a ₹22,000-crore deal with Airbus and Space S.A., Spain for procurement of 56 C-295MW transport aircraft to replace the Avro aircraft in service with the IAF. The first 16 C295s of the 56 aircraft on order will be assembled at the San Pablo Sur site in Seville, Spain, with the second aircraft due to be delivered in May 2024 and the next 14 rolled out at a rate of one per month until August 2025.

Production of components for the aircraft to be made in India has already started in the Main Constituent Assembly (MCA) facility in Hyderabad and these parts will be shipped to Vadovara FAL, which is expected to be operational by November 2024. The 56th and final aircraft is expected to be delivered to the IAF by August 2031.

The first IAF squadron to be equipped with the aircraft, No. 11 Squadron, also named The Rhinos, is based in Vadodara.

### JOINT VENTURE

Under the contract, 16 aircraft will come in fly-away condition from Seville while 40 will be manufactured by Airbus jointly with Tata Advanced Systems Ltd. (TASL). Work is under way to set up the final assembly line (FAL) at Vadodara in Gujarat and the first aircraft manufactured in India will be delivered in September 2026.

Indigenous radar warning receiver and missile approach warning systems made by Bharat Electronics Ltd. (BEL) and counter measure dispensing system made by Bharat Dynamics Ltd. (BDL) have been certified and installed on the first aircraft.

The aircraft will be manufactured under the first-ever 'Make in India' Aerospace programme in the private sector. For the longest time, Hindustan Aeronautics Limited (HAL) has had a monopoly over the manufacture of military aircraft in India.

**CONCLUSION:** The induction of the C-295MW transport aircraft into the Indian Air Force represents a significant modernization milestone, enhancing India's transport capabilities and strengthening its 'Make in India' initiative in the aerospace sector.

## INDIA CHINA MAP ISSUE

**CONTEXT:** Amidst China's unveiling of its 2023 "standard map," which incorporates disputed territories and reaffirms claims to Arunachal Pradesh and Aksai Chin, India has registered a "vigorous objection" via diplomatic channels. India has asserted that such actions only serve to "further complicate the resolution of border issues."



### OVERVIEW AND THE STORY SO FAR

India and China have a history of over 2,000 years of cultural and economic ties, with the Silk Road facilitating trade and the spread of Buddhism. However, before the 1950s, their relationship was mainly centered on pilgrimage and limited trade. Significant changes occurred with India's independence in 1947 and China's Communist Revolution in 1949, marking a new chapter in their relations.

#### Communist revolution in China

The Chinese Communist Revolution, led by Mao Zedong, culminated in the People's Republic of China's establishment on October 1, 1949, addressing societal inequalities.

Areas added to China since communist revolution.

### MODERN INDIA CHINA RELATION

The modern relationship was setting in motion in the 1950s when India became one of the first countries to end formal ties with the Republic of China (Taiwan) and recognize the People's Republic of China (PRC) as the legitimate government of mainland China.

Also, Tibet had acted as a buffer between India and China for thousands of years. It is only after the 1950s that the two countries are sharing a common border after China invaded and occupied Tibet.





## THE CHINESE ANNEXATION OF TIBET AND THE PANCHSHEEL AGREEMENT

In 1950, China established diplomatic ties with India but resented Indian concerns over Tibet. China forcefully took control of Tibet, leading to its suzerainty under China. In 1954, India and China signed the Panchsheel Agreement, emphasizing peaceful coexistence. This treaty later played a role in China's claims on Arunachal Pradesh as Southern Tibet.

### Five principles of Panchsheel Agreement:

- Mutual respect for each other's territorial integrity and sovereignty;
- Mutual non-aggression;
- Mutual non-interference in each other's internal affairs;
- Equality and mutual benefit;
- Peaceful co-existence.

On signing this treaty, India and China had an agreement of peace and non-interference. Effectively, this meant that India formally recognized China's control over Tibet.

**Diplomatic tensions escalated as China secretly built a highway through Tibet, including parts of India's Aksai Chin. India only learned of it in 1957, leading to heightened tensions.**

### INDIA'S FORWARDS POLICY AND INDO CHINA WAR OF 1962

Jawaharlal Nehru's "Forward Policy" aimed to strengthen India's position in disputed border areas. However, it led to clashes with China. In 1962, the Sino-Indian War erupted over territorial disputes in the Himalayan region. India suffered a defeat, resulting in China gaining control of Aksai Chin. This conflict had lasting implications for bilateral relations and border disputes between the two nations.

### ROOT CAUSE FOR INDIA CHINA DISPUTE

The root cause of the India-China border dispute lies in the undefined and contested boundaries in several regions. The primary contentious areas include Aksai Chin, controlled by China but claimed by India as part of Ladakh, and Arunachal Pradesh, which China asserts as "South Tibet." These disputes originate from historical ambiguities, differing interpretations of past treaties, and competing territorial claims. Additionally, India's granting of asylum to the Dalai Lama in 1959 further strained relations. Despite efforts to resolve the issues through negotiations, both nations have yet to reach a comprehensive agreement, resulting in ongoing tensions along their border.



The 1962 war also helped us see the Salami Slicing techniques used by China.

### WHAT IS SALAMI SLICING?

Salami slicing is China's strategy of gradual territorial expansion through small, stealthy military operations in border regions, accumulating territory over time without triggering war. It exploits poor infrastructure in Indian border areas, while China builds extensive infrastructure in Tibet. This expansionist approach has been used in both territorial and maritime domains, including Tibet, Aksai Chin, and the Paracel Islands.

### MAJOR INCIDENTS ALONG INDO CHINA BORDER SINCE 1962 WAR TILL 1993 PACT.

Since the 1962 Sino-Indian War, several incidents have marked India's resolve in the face of Chinese aggression. In the Nathu La conflict of 1967, India firmly repelled Chinese troops from Sikkim, resulting in a significant Chinese loss. Similarly, the Cho La conflict in the same year saw China intrude into Sikkim but ultimately lose, with a high toll on Indian personnel. In 1987, tensions flared over Arunachal Pradesh, and the Indian Army's Operation Falcon pushed back Chinese forces. The Sumdorong Chu standoff nearly led to war, prompting the 1993 pact to maintain peace along the Line of Actual Control (LAC).

### 1993 AGREEMENT AND BREACH OF THE AGREEMENT BY CHINA

The 1993 and 1996 agreements between India and China established the Line of Actual Control (LAC) and imposed limitations on troop levels and military equipment. However, China breached these pacts multiple times in the past few decades. Incidents in Depsang (2013), Chumar (2014), and Doklam (2017) demonstrated China's disregard for these agreements. In Depsang, China established permanent camps, leading to negotiations and Indian concessions. Chumar saw a standoff over a Chinese highway in Indian territory, resolved when China halted construction and India dismantled a watch station. These breaches have strained bilateral relations and raised tensions along the border.

### DOKLAM (2017)

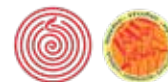
Doklam is plateau land in Bhutan and extremely strategic to both countries. It protects the vulnerable Siliguri Corridor (also called Chicken's Neck), the only connection of Indian mainland to the northeast.



### 2020 INDO CHINA SKIRMISH

The 2020 China-India skirmishes involve ongoing military





confrontations along their border since May 2020, notably at Pangong Tso Lake, Sikkim, and eastern Ladakh. The Galwan incident in June 2020 marked the first military casualties in 45 years, with 20 Indian soldiers killed. Tensions stem from both countries' military infrastructure expansion along the Line of Actual Control. India's construction of a strategic road connecting Galwan Valley to Daulat Beg Oldi triggered Chinese concerns. The valley's significance lies in its proximity to a crucial road to DBO military airbase and access to Aksai-Chin, along with the Tibet-Xinjiang highway.

### INDIA'S EVOLVING BORDER STRATEGY

India's evolving border strategy includes significant infrastructure development, particularly the Darbuk-Shyok-DBO (DSDBO) road, connecting Leh to DBO military base near the Karakoram Pass. This road reduces travel time and enhances mobility, running parallel to the Line of Actual Control (LAC). The feeder road construction is part of this strategy. Control of Galwan Valley is crucial for both countries; China views it as a vantage point over the road to DBO, while India seeks access to Aksai Chin and the Xinjiang-Tibet highway passing through the region. This infrastructure plays a pivotal role in their border dynamics.



### CHINA'S GROWING INSECURITY

China's insecurity in the region west of Daulat Begh Oldi, particularly in Gilgit-Baltistan, stems from its concerns about India's strategic presence in the area, which could potentially impact the China Pakistan Economic Corridor (CPEC) - a critical part of the Belt and Road Initiative (BRI). This anxiety is exacerbated by India's historical claims to Aksai Chin, which China occupied after the 1962 war. China employs a 'nibble and negotiate policy' to prevent India from building infrastructure along the Line of Actual Control (LAC) and altering the status quo in Ladakh. Indian Union Minister Amit Shah's 2019 remarks, asserting Indian sovereignty over Aksai Chin, further heightened China's geopolitical and nationalistic insecurity in the region.

**CONCLUSION:** The India-China border dispute has deep historical roots, marked by conflicts and diplomatic efforts. Recent incidents like the 2020 skirmish and China's provocative map release continue to challenge the region's stability. Both nations must find a peaceful resolution to ensure long-term peace and cooperation along their shared border.

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A photograph of a soldier in a trench during a sunset. The soldier is on the right side of the frame, wearing a yellow jacket and holding a rifle. The background is a bright, hazy sunset over a field. A semi-transparent target graphic is overlaid in the center of the image. The text 'INTERNAL SECURITY' is written in large, bold, yellow capital letters at the bottom of the image.

# INTERNAL SECURITY





**AIRBUS C 295 INDUCTED TO IAF**

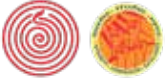
**ARMY TO INDUCT 114 DHANUSH GUNS BY  
2026**

**DAC GIVES NOD TO BUY 12 SU-30 MKI  
JETS**

**DEFENCE BOARD DISCUSSES PLAN FOR  
A THIRD AIRCRAFT CARRIER**

**PINAKA MULTI-ROCKET LAUNCH  
SYSTEMS (MRLS)**





## AIRBUS C 295 INDUCTED TO IAF

**CONTEXT:** The Indian Air Force received the first C-295MW transport aircraft set to replace the ageing Avro aircraft from the Airbus facility in Seville, Spain marking a major revamp of its transport fleet.



Powered by two Pratt & Whitney turboprop engines, the C295 can cruise at altitudes of up to 30,000 feet and can swiftly take off from and land on unpaved, soft, sandy, or grassy airstrips. 295 can transport up to 9 tonnes of payload or accommodate a maximum of 71 personnel, achieving a maximum cruise speed of 260 knots. Notably, it is equipped for air-to-air refuelling and is compatible with fixed-wing aircraft and helicopters

In September 2021, the Union Defence Ministry signed a ₹ 22,000-crore deal with Airbus and Space S.A., Spain for procurement of 56 C-295MW transport aircraft to replace the Avro aircraft in service with the IAF. The first 16 C295s of the 56 aircraft on order will be assembled at the San Pablo Sur site in Seville, Spain, while 40 will be manufactured by Airbus jointly with Tata Advanced Systems Ltd. (TASL). Work is under way to set up the final assembly line (FAL) at Vadodara in Gujarat and the first aircraft manufactured in India will be delivered in September 2026. The delivery of the first 16 C295s of the 56 aircraft will be completed at a rate of one per month until August 2025.

Production of components for the aircraft to be made in India has already started in the Main Constituent Assembly (MCA) facility in Hyderabad and these parts will be shipped to Vadodara FAL, which is expected to be operational by November 2024. The 56th and final aircraft is expected to be delivered to the IAF by August 2031

Indigenous radar warning receiver and missile approach warning systems made by Bharat Electronics Ltd. (BEL) and counter measure dispensing system made by Bharat Dynamics Ltd. (BDL) have been certified and installed on the first aircraft.

### ROLES

- Carrying troops and cargo
- Maritime patrol
- Airborne warning
- Surveillance & reconnaissance
- Armed close air support
- Medical evacuation
- VIP transport
- Airborne firefighting

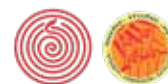


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## ARMY TO INDUCT 114 DHANUSH GUNS BY 2026



**CONTEXT:** The Army which has ordered 114 Dhanush artillery guns, and has one regiment operational already, is expecting to receive all the guns by 2026.

Dhanush is a 155 mm towed howitzer manufactured by Advanced Weapons and Equipment India Limited, previously a part of Ordnance Factory Board. The Dhanush project was started by Ordnance Factory Board (OFB) to replace the older 105 mm Indian Field Gun, 105 mm Light Field Gun and the Russian 122 mm guns with a modern 155 mm artillery gun. The Dhanush gun is manufactured by the OFB at its Gun Carriage Factory Jabalpur. The gun was approved for service in 2019 and has been inducted into the Indian Army.

Upgrade: Advanced Weapons and Equipment India upgraded 155 mm/45 calibre into 155 mm/52 calibre gun which can now fire upto 42 km. Dhanush weighs less than 14 tons. The newly upgraded gun has double baffle muzzle brake and retractable barrel.

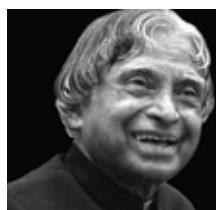
Ramjet Propelled Artillery Shell: IIT Madras along with IIT Kanpur, Armament Research and Development Establishment (ARDE) and Research Centre Imarat (RCI) are working on redesigning an existing 155 mm shell using ramjet propulsion with 60 km+ range that will be compatible with Dhanush. It will use precision guidance kit for trajectory correction.

## DAC GIVES NOD TO BUY 12 SU-30 MKI JETS

**CONTEXT:** The Defence Acquisition Council approved procurement of 12 Su-30MKI jets for the Indian Air Force (IAF). These will be licence-manufactured by Hindustan Aeronautics Ltd. (HAL) and cost under ₹ 11,000 Cr. The IAF has been pushing for additional Sukhois as well 21 MiG-29s. India had contracted 272 Su-30s from Russia in batches, majority of which were assembled in India by HAL and around 11 jets were lost over the years.

The DAC cleared Acceptance of Necessity (AoN) for nine capital acquisition proposals of the armed forces worth ₹ 45,000 crore. The Union Defence Ministry has been aiming for a minimum 60 to 65 % indigenous content rather than a threshold of 50 % indigenous content for Indian-Indigenously Designed Developed and Manufactured projects.

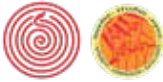
The DAC accorded AoN for procurement of Light Armoured Multipurpose Vehicles and Integrated Surveillance and Targeting System as well High Mobility Vehicle Gun Towing Vehicles for swift mobilisation and deployment of Artillery Guns and Radars to enhance protection, mobility, attack capability, and increased survivability of mechanised forces.



*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM





**Israeli Elbit Su 967 Bi-cubic phase Conjugated Holographic HUD**

**Wingspan: 14.7 m**

**Height: 6.36 m**

**PERFORMANCE**  
 Maximum speed: 2,120 km/h / Mach 2.0  
 Range: 3,000 km at high altitude  
 Ferry range: 8,000 km with two in-flight refueling  
 Service ceiling: 17,300 m  
 g limits: +9  
 Rate of climb: 300 m/s +  
 Wing loading: 401 kg/m<sup>2</sup>

**Lyulka-Saturn AL-31FP Turbofans (12,500 kgf (27,550 lbf))**

**NIIP N011M Bars Passive electronically scanned array radar.**

## DEFENCE BOARD DISCUSSES PLAN FOR A THIRD AIRCRAFT CARRIER

**WHEN FULLY OPERATIONAL, INS VIKRANT WILL BE CAPABLE OF OPERATING AN AIR WING CONSISTING OF 30 AIRCRAFT**

|   |  |  |   |  |
|---|--|--|---|--|
|   |  |  |   |  |
| <b>MIG-29K FIGHTERS</b><br>Russian-origin multirole carrier-capable warjets | <b>KAMOV-31 HELICOPTER</b><br>Russian-origin chopper in early warning control role | <b>MH-60R</b><br>US-origin MH-60R multi-role helicopters | <b>ALH</b><br>Indigenous Advanced Light Helicopters | <b>LCA</b><br>Naval version of the Light Combat Aircraft |

**POWER**  
 THE SHIP IS POWERED BY FOUR GAS TURBINES  
 TOTALING 88 MW POWER

**PERFORMANCE**  
 TOP SPEED | CRUISING SPEED  
 28 KNOTS | 18 KNOTS  
 ENDURANCE 7,500 NAUTICAL MILES

**SPACE**  
 OVER 2,400 COMPARTMENTS  
 DESIGNED FOR a crew of around 1,600 including 200 officers, the 18-floor vessel has special cabins for women Naval officers and sailors

**STOBAR**

USING AN aircraft-operation mode known as Short Take Off But Arrested Recovery (STOBAR), INS Vikrant is equipped with a ski-jump for launching aircraft, and a set of three 'arrestorwires' for their recovery on board.

**APPROX COST ₹20,000 CRORE**

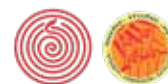
**LENGTH 262 METRES**

**BREADTH 62 METRES**

**DISPLACEMENT 43,000 TONNES**

**INDIGENOUS ACHIEVEMENT**  
 THE NAVY has said Vikrant has around 76% indigenous content, and around 80-85% of the ship's cost has been ploughed back into the Indian economy. Some 2,000 CSL personnel have got jobs, and another 13,000 have been employed indirectly





**CONTEXT:** The Defence Procurement Board (DPB) discussed the Navy's proposal for acquiring a second Vikrant-like aircraft carrier, according to defence sources.

The Standing Committee on Defence noted that three Aircraft Carriers as an "unavoidable requirement" to meet any eventualities and stated that taking into account the long coastline and hostile adversities on both sides of Indian peninsula, an aircraft carrier on both sides of coast was "quintessential" to uphold operational requirements.

India's first Indigenous Aircraft Carrier (IAC) INS Vikrant was commissioned in September 2022 at an estimated to cost around ₹ 40,000 Cr. The keel of Vikrant was laid in 2009. It was launched into water in 2013 and commissioned in 2022. The 262-metre-long, 62-metre-wide INS Vikrant, displacing 44,800 tonnes, is powered by four General Electric LM2500 engines, which give it a maximum speed of 28 knots and an endurance of 7,500 nautical miles. The ship uses an aircraft-operation mode known as Short Take Off But Arrested Recovery (STOBAR) for which it is equipped with a ski-jump for launching aircraft, and a set of three "arrestor wires" for their recovery onboard.

The Indian Navy operates the 44,500-tonne carrier INS Vikramaditya, which also employs the STOBAR mechanism, procured from Russia under a \$2.3-billion deal and inducted in November 2013.

The Navy, which has for long based its force structure centred on three carriers, had envisaged an IAC-2 with a displacement of 65,000 tonnes and a Catapult Assisted Take Off But Arrested Recovery (CATOBAR) system for launching aircraft as well as full-electric propulsion. A much bigger carrier with newer technologies would mean much higher cost and build time due to which the Navy has settled for a repeat of a Vikrant-sized carrier.

## PINAKA MULTI-ROCKET LAUNCH SYSTEMS (MRLS)



The Army is also looking at vastly increasing the range of the Pinaka Multi-Rocket Launch Systems (MRLS) with focus on long-range and augmented firepower. The Army currently has four Pinaka regiments and six more on order. The range of the original Pinaka rockets was 37 km which was enhanced to 45 km with the upgraded Mk-1, while the guided Pinaka has a range of 75 km which the Defence Acquisition Council has already cleared for procurement. A Pinaka Area Denial Munition rocket system has also been developed. Pinaka with a range of 120 km is under development.



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# ECONOMICS

The background features a complex economic data visualization. It includes a candlestick chart with vertical bars and wicks, overlaid with a dashed trend line and a dotted arc. A solid line graph with circular markers trends upwards from the bottom left. A bar chart with vertical bars is visible at the bottom left. The entire scene is set against a blurred cityscape with buildings and a bright sun in the upper right corner. A grid of vertical and horizontal dotted lines with small crosshair markers is overlaid on the image.

February + March + April + May + June + July + August + September + October + November + December



**BATTERY ENERGY STORAGE SYSTEM (BESS)**

**RBI ISSUES NEW LENDING GUIDELINES**

**RBI TO DISCONTINUE I-CRR IN A PHASED MANNER**

**STATE OF FERTILISER IN INDIA**

**CENTRE SOFTENS ANGEL TAX RULES**

**INDIA-CANADA BILATERAL TRADE**

**MEDIATION ACT, 2023**

**STATE OF HUNGER INDEX, 2022**

**STATE OF INDIAN ECONOMY – SEPTEMBER UPDATES**

**JPMORGAN'S INDIA BOND INDEX INCLUSION**

**REVIVAL IN TEXTILE EXPORTS**

**MILLETS AND NUTRITIONAL VALUE**





## BATTERY ENERGY STORAGE SYSTEM (BESS)

The Union Cabinet approved Viability Gap Funding (VGF) with an initial outlay of ₹ 9,400 Cr., including a budgetary support of ₹ 3,760 Cr. for the development of Battery Energy Storage Systems (BESS), aiming to boost the adoption of renewable energy sources. The scheme would support battery-energy storage capacity of 4,000 Mega Watt Hours (MWh) to be developed by 2030-31.

**VIABILITY GAP FUNDING (VGF):** Financial mechanism typically employed in projects that are considered economically unviable or financially unattractive for private investors due to various reasons, such as high capital costs, low revenue potential, or long gestation periods used by governments to bridge the gap between the cost of infrastructure projects and their economic viability.

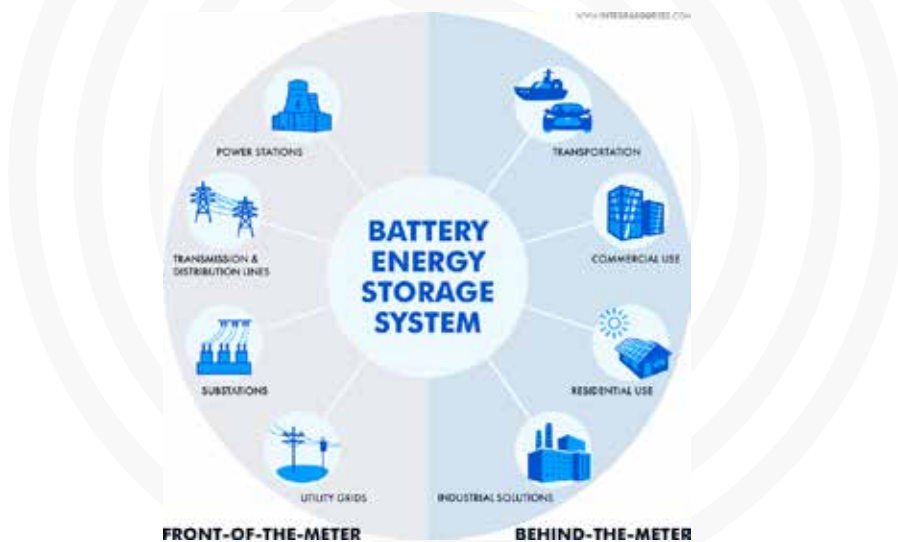
### OBJECTIVE:

- Facilitate the development of 4,000 Mega Watt Hour (MWh) of BESS projects by 2030-31.
- Achieve a Levelized Cost of Storage (LCoS) ranging from ₹ 5.50-6.60 per kilowatt-hour (kWh).

### STRATEGY:

- Provide financial support of up to 40 % of the capital cost as budgetary support through Viability Gap Funding (VGF) to substantially reduce the cost of battery storage systems.
- Provide financial support of up to 85 % of the of the Battery Energy Storage Systems (BESS) project capacity will be made available to Distribution Companies.

Battery storage devices enable energy from renewable sources, like solar and wind, to be stored and then released when the power is needed most. The BESS Scheme represents a significant step towards achieving this vision by harnessing renewable energy and promoting the adoption of battery storage. This initiative aims to create a brighter and greener future for all citizens, aligning with global sustainability goals. This cost-effectiveness makes stored renewable energy a practical choice for managing peak power demand nationwide.



## RBI ISSUES NEW LENDING GUIDELINES

On August 18, 2023 the Reserve Bank of India (RBI) issued guidelines that allows a borrower to transition from a floating interest rate-based loan to one with a fixed interest rate. The new guidelines would address grievances of borrowers regarding the elongation of loan tenure and/or an increase in the EMI amount in the event of an increase in the benchmark interest rate.

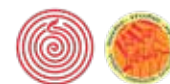
### Guidelines:

- Allow the borrowers to migrate from a floating rate system to a fixed rate system with the option to choose between enhancement of the EMI or elongation of the tenure or a combination of both.
- Lender must transparently communicate all relevant charges alongside service charges or administrative costs associated with the transition to the borrower.
- Makes the lender responsible to communicate the impact emanating from the change in regime (floating to fixed), such as the change in EMI and/or tenure of the loan or both at the time of loan sanction.

- Lending entities needs to provide a statement at the end of each quarter enumerating the relevant information\* for the entire tenure of the loan to borrowers through appropriate channels.

Principal and interest recovered till date, EMI amount, number of EMIs left and annualised rate of interest/ Annual Percentage Rate (APR).

**Difference between a fixed and floating interest rate:** Fixed interest rates do not change during the tenure of the loan, unlike risk-based floating interest rates that are subject to market dynamics and the base rate. A fixed rate-based regime endows a borrower with greater certainty and security that helps in better planning and structuring of individual budgets. Lenders prefer floating rate-based regime better suited for the evolving market dynamics. The benefits from a fall in benchmark rates are accrued to the savings pool of the borrower. Lenders argue that even if the floating interest rate were to rise by up to 2.5 %, the borrower would be able to save more money when it is below the fixed rate.



## RBI TO DISCONTINUE I-CRR IN A PHASED MANNER

The Reserve Bank of India (RBI) has decided to discontinue the Incremental Cash Reserve Ratio (I-CRR) intended to absorb surplus liquidity generated by various factors, including the return of ₹ 2000 notes to the banking system in a phased manner.

**INCREMENTAL CASH RESERVE RATIO (I-CRR):** Additional cash balance, banks have to maintain with the Reserve Bank of India (RBI) over and above the Cash Reserve Ratio (CRR) for a specific period. The Incremental Cash Reserve Ratio (I-CRR) is a temporary measure that requires banks to maintain a 10 % reserve on the increase in their Net Demand and Time Liabilities (NDTL) between May 19 and July 28. The RBI introduced the I-CRR on August 12, 2023, as part of its strategy to absorb excess liquidity from the banking system. The RBI has decided to release the amounts impounded under the I-CRR in stages so that system liquidity is not subjected to sudden shocks and money markets function in an orderly manner.

### TIMELINE:

- August 12: The RBI introduced the Incremental Cash Reserve Ratio (I-CRR).

- September 09: Release almost 25 % of the Incremental Cash Reserve Ratio (I-CRR).
- September 23: Release another 25 % of the Incremental Cash Reserve Ratio (I-CRR).
- October 07: Release the balance of the Incremental Cash Reserve Ratio (I-CRR).

### OBJECTIVES:

- Absorb a part of the large increase in liquidity in the system following the withdrawal of the legal tender status of ₹ 500 and ₹ 1,000 denomination bank notes.
- Absorb a part of the surplus liquidity arising from the return of SBNs to the banking system.
- Leave adequate liquidity with banks to meet the credit needs of the productive sectors of the economy.

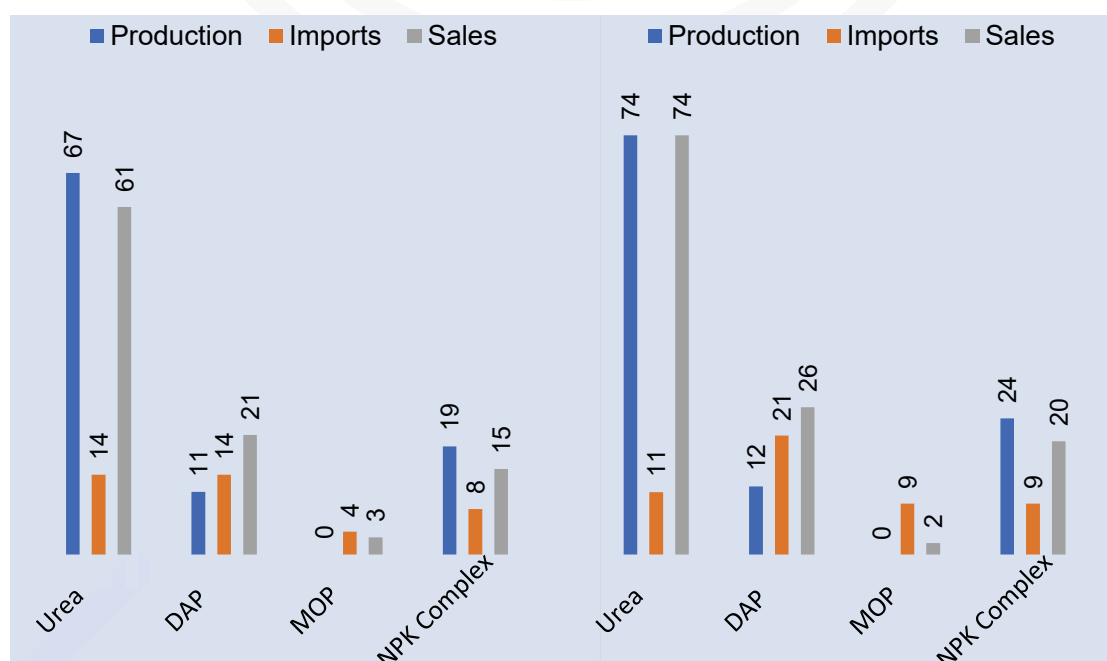
The I-CRR would be a temporary measure to manage the liquidity overhang and that it would be reviewed on September 8, 2023, or earlier, aiming to returning the impounded funds to the banking system ahead of the festival season.

## STATE OF FERTILISER IN INDIA

Russian companies have ceased offering discounts for fertiliser such as Di-Ammonium Phosphate (DAP) to India. India imported a record 4.35 million tons of fertiliser from Russia in the 2022-23 as Russian suppliers gave discounts to the global market price for DAP, urea and NPK fertilisers. Russia's aggressive selling last year eroded the market share of other fertiliser exporters including China, Egypt, Jordan, and the United Arab Emirates (UAE).

Russian companies offering fertilisers at market prices could increase India's import costs and subsidy burden amid a rally in global prices, as top exporter, China, tries to curtail overseas sales. Around half a million metric

tons of urea are held up at Chinese ports after the country curbed exports following a price surge. CNAMPGC Holding Ltd., one of China's top fertiliser exporters would proactively decrease exports and "make every effort" citing to ensure domestic supply and price stability. State-owned China National Offshore Oil Company (CNOOC) has also urged its subsidiaries to prioritise urea supply to the domestic market ahead of the autumn sowing season. These curbs have triggered fears of a rise in global prices and spending by Indian companies, as India imports about 30 % of urea needed annually and China was its second-largest supplier last year.



**FIGURE:** (L) Column chart representation of the production, import and sales of fertilisers in lakh tonnes (April, 2022-June, 2022). (R) Column chart representation of the production, import and sales of fertilisers in lakh tonnes (April, 2023-June, 2023).





The current price of Russian DAP is approximately \$ 570 per ton on a cost and freight (CFR) basis for Indian buyers, which is the same price offered to other Asian buyers. In July, global suppliers were offering urea at approximately \$300 per ton on a CFR basis, but are now quoting \$ 400 per ton, he said. DAP prices were about \$ 440 per ton in July. Global fertiliser prices have been surging over the past two months, making it challenging for Indian companies to accumulate stocks for the upcoming winter season when demand for DAP rises for the wheat crop.

## CENTRE SOFTENS ANGEL TAX RULES

**CONTEXT:** *The government has eased some of the provisions of the angel tax introduced in this year's Budget on investments into start-ups by non-resident investors at a premium over their fair market value.*

*"High net worth individuals who invest their personal income in business start-ups or small and medium scale companies."*

- ANGEL INVESTORS

### TIMELINE:

**2012:** Levied Angel Taxes (formally known as Section 56(2) (vii b) of the Income Tax Act, 1961) upon Angel Investors on investments in start-ups exceeding their fair market value to check money laundering practices and catch bogus start-ups.

**2022:** The Department of Income Taxes issued notices to over 2,000 domestic start-ups to pay dues in the Angel Taxes with penalties based on fair market value of start-ups calculated by the Assessing Officer (AO) based upon the 'cash discounted flow' method.

**2023:** The Finance Bill 2023 proposed an amendment to Section 56(2) VII B of the Income Tax Act, 1961 making equity investments from Angel Investors – both residents foreign investors for the issuance of shares at a price above their Face Value are treated as income for unlisted businesses like start-ups.

**SIGNIFICANCE:** Angel investors finance small start-ups, providing funds at early stages in exchange or convertible debt or equity ownership, where such start-ups find it difficult to obtain funds from traditional sources of finance such as banks, financial institutions, etc. Foreign investors are a key source of funding for start-ups and have played a big role in increasing the valuation. For instance, Tiger Global has invested in over a third of the start-ups that have turned unicorns. Angel investors provide mentoring to entrepreneurs as well as access to their own business networks, bringing both experience and capital to new ventures. Research shows that angel investors' supported start-ups are more likely to have substantial growth and give a higher rate of return. Angel investors often choose to get an accredited investor status (as per the SEBI AIF Regulations – an individual with a net worth of ₹ 7.5 Cr. / whose annual income is ₹ 2 Cr.).

### NEW RULES:

- Recognised an eligible start-up as registered entity with the government, incorporated for less than 10 years, and with a turnover having not exceeded ₹ 100 Cr. over that period.

- Increased the exemption for start-ups from angel tax with a cumulative turnover from ₹ 25 Cr. to ₹ 100 Cr.

- Fully exempted tax on investments made by Non-Resident Indians (NRIs) listed start-ups with a net worth of at least ₹ 100 Cr. or a total turnover of at least ₹ 250 Cr. with retrospective effect.

- Established mechanism of e-verification to resolve the issue of establishing the identity of the investor and source of his funds that would help waive start-ups requiring any kind of scrutiny from the Income Tax Department.

- Start-ups will not be required to present the fair market value of their shares issued to certain investors including Category-I Alternative Investment Funds (AIF).

### ANALYSIS:

**REGULATORY CHOLESTROL:** Companies need to be registered with the government as start-ups to make use of the latest exemption. A company has to prove certain conditions such as that it hasn't invested in vehicles worth more than ₹10 lakh, in land unrelated to the business, or in jewellery. Such conditions, probably intended to prevent money-laundering, can lead to a lot of bureaucratic delays as well as rent-seeking.

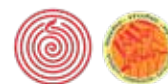
**TAX EXEMPTIONS:** The exemptions for NRIs would encourage wealthy individuals to invest in start-ups. The tax exemptions with retrospective effect would relieve start-ups which received notices from the Income Tax Department in the past.

**FAIR MARKET VALUE:** Angel taxes levied upon market value of a start-up angel based upon 'cash discounted flow' method can choke the flow of funds necessary for bootstrapped start-ups for scaling up. Taxes due are calculated based on the sale price of unlisted shares of a start-up not openly traded in the market can infuse arbitrariness in calculating the fair value of the start-ups. The funding for India's start-ups dropped by 33% to US \$ 24 billion in 2022 as compared to the previous year (PwC India report). The proposed amendment will accelerate flipping overseas, as foreign investors may not want to deal with additional tax liability.

**RECENT HAPPENING:** As per a notification issued by the Central Board of Direct Taxes, Rule 11UA under the Income Tax Act has been amended to introduce five different valuation methods for shares and offered a 10 % tolerance for deviations from the accepted share valuations. The introduction of five alternative valuation methods for the valuation of equity shares, which so far could only be valued based on NAV and Discounted Free Cash Flow methods, should provide more flexibility to merchant bankers for the valuation of a company. The option to value equity shares by any of these five methods is not available to resident investors.

Indian companies and investors were facing severe practical difficulties in executing a simple transaction involving infusion of capital on account of lack of clarity on these rules. The amended rule brings in more clarity for both investor and investee, basis which an appropriate valuation method can be adopted, reducing the chances of any future litigation.

The Centre has eased rules governing investment in start-ups by non-resident investors at a premium over fair market value. The new rules notified by the Centre provide



more flexibility to merchant banker for the valuation of a company. Until now, the valuation of the equity share could only be based in NAV and discounted cash flow methods. The new policy is expected to address practical difficulties faced by investors and firms due the lack of clarity on rules.

## INDIA-CANADA BILATERAL TRADE

The New Delhi-Ottawa diplomatic row over the killing of a Sikh leader in British Columbia is unlikely to affect the flow of Canadian investments into India. Bilateral ties between the two nations hit a low after Canadian Prime Minister Justin Trudeau alleged India's involvement in the killing of pro-Khalistan leader Hardeep Singh Nijjar. This was followed by tit-for-tat expulsions of diplomats by both nations. Canada is the 17th largest foreign investor, with overall investment of about \$ 3.3 billion from April 2000 to March 2023. During the period, Canadian investments represented about 0.5 % of total FDI flows into the country.

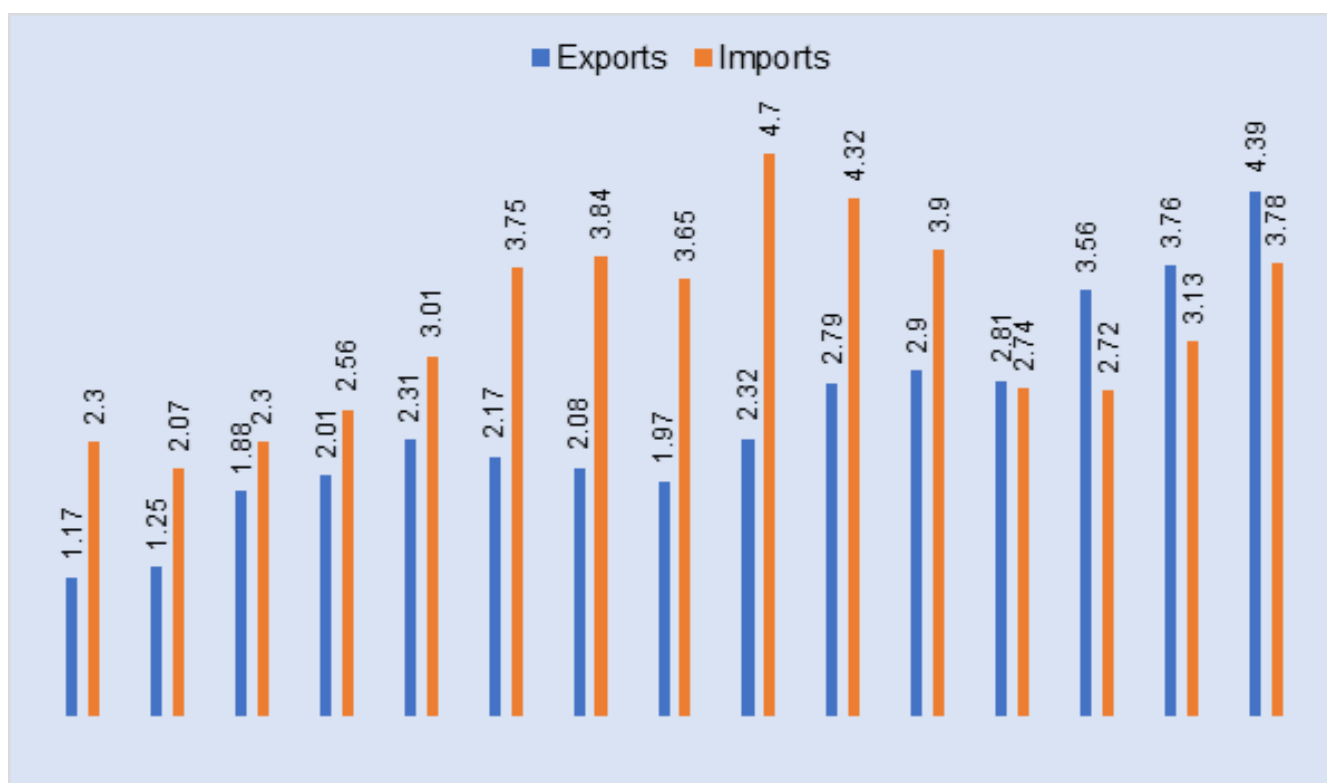


FIGURE: Bar chart representation of the trans-border trade between India and Canada.

## MEDIATION ACT, 2023

**CONTEXT:** Both Houses of the Parliament of India passed The Mediation Bill, 2023 in its recent monsoon session of Parliament and referred to as the Mediation Act, 2023. Alternative Dispute Resolution (ADR) refers to a bouquet of mechanisms that enables disputing parties to resolve their differences amicably, without the intervention of courts.

### Mediation Bill, 2023

#### Key Features

- **Pre-litigation Mediation:** Parties must attempt to settle civil or commercial disputes by mediation before approaching any court or tribunal. The litigation proceedings in the court or tribunal can be suspended at any stage referring the parties to mediation on request for the same.
- **Disputes not fit for Mediation:** List disputes, that can be amended by the Centre, that are not fit for mediation.
  1. Claims against minors or persons of unsound mind
  2. Criminal prosecution
  3. Affecting the rights of third parties
- **Applicability:** The Bill will apply to mediations

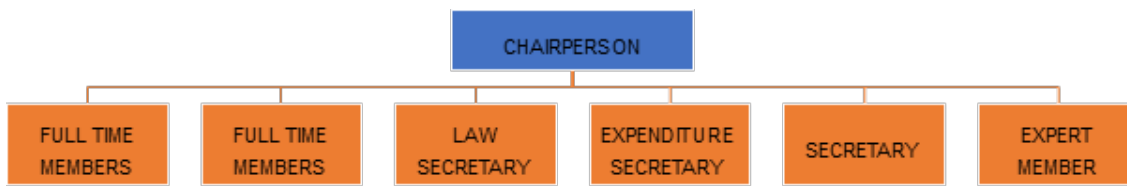
conducted in India on:

1. Civil disputes involving only domestic parties,
  2. Commercial disputes involving at least one foreign party
  3. Existence of a Mediation Agreement, stating mediation as per the Bill.
  4. Disputant is Central or State Government involving Commercial disputes and Other notified disputes.
- **Mediation Process:** Proceedings must be completed within 180 days, that can be extended by 180 days by the parties. A party may withdraw from mediation after two sessions. Court annexed mediation must be conducted as per the rules framed by the Supreme Court or High Courts.
  - **Mediators:** Mediators may be appointed by:





1. Parties by agreement
  2. Mediation service provider\*, an institution administering mediation.
- Mediation Council of India: The central government will establish the Mediation Council of India.



**FIGURE:** The Council will consist of a CHAIRPERSON, 2 Full-Time Members (with experience in mediation or ADR), 3 ex-officio members (including the Law Secretary, and the Expenditure Secretary), and a part-time member from an industry body.

- Functions
  1. Registration of mediators
  2. Recognising Mediation Service Providers (MSPs)
  3. Recognising Mediation Institutes - train, educate, and certify mediators.
- Mediated Settlement Agreement: Agreements resulting from mediation (other than community mediation) will be final, binding, and enforceable in the same manner as court judgments.
- Grounds for challenging the Agreement:
  1. Fraud
  2. Corruption
  3. Impersonation
  4. Disputes not fit for mediation.
- Community Mediation: A panel of THREE mediators (may include persons of standing in the community, and representatives of resident welfare associations) can attempt to resolve disputes likely to affect the peace and harmony amongst residents of a locality.
- Analysis:
  1. Reduce the filing of frivolous claims before Indian courts with a time bound mediation process.
  2. Confidentiality of a mediation mitigate the risk of deterioration of the parties' relationship due to a publicly fought dispute.
  3. Require the mediation to ordinarily be conducted by an empanelled mediator, who must always be neutral and have uncompromising expertise.
  4. Envisages "mediation service providers - Arbitration Institutions" to provide not only the services of a mediator but also all the facilities, secretarial assistance, and infrastructure for the efficient conduct of mediation.

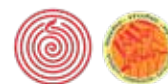
The Indian legal framework already encourages courts to refer the disputing parties to ADR procedures, including mediation, if there were elements of settlement which the parties may accept. The Act will take this encouragement a step forward. Irrespective of a prior mediation agreement, it will obligate each party to take steps to settle their dispute through pre-litigation mediation before approaching an Indian court. To facilitate this process, the Act will also require courts and relevant institutions to maintain a panel of mediators.

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## STATE OF HUNGER INDEX, 2022

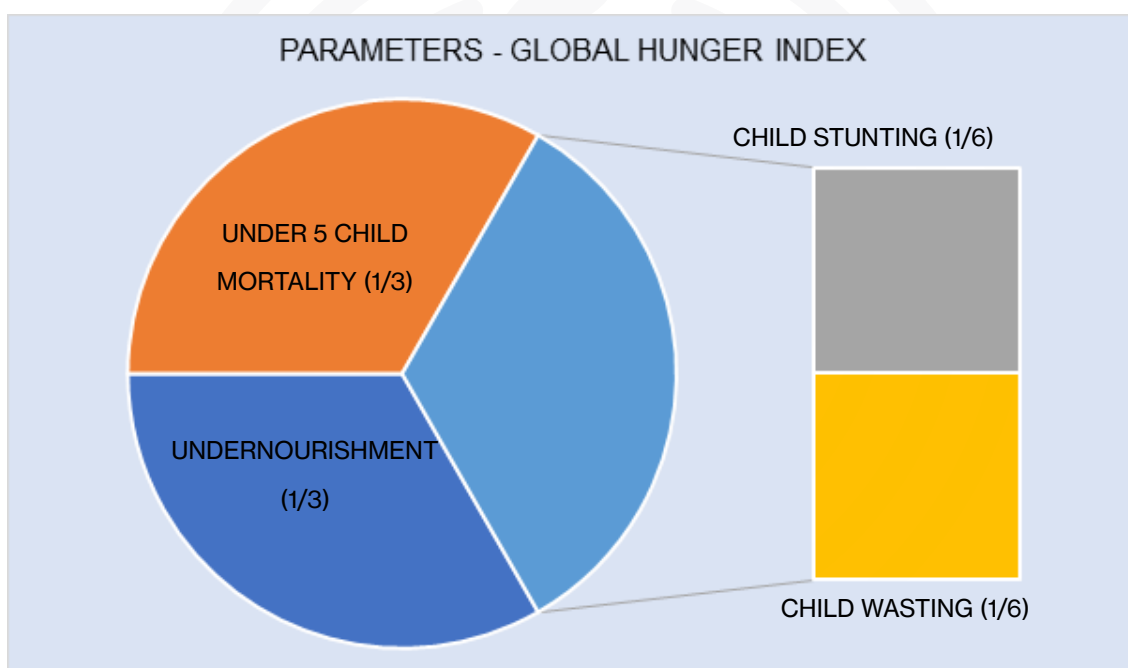
**CONTEXT:** India has been ranked 107 among 121 countries, behind Nigeria (103) and Pakistan (99) in the Global Hunger Index (GHI), 2022. The GHI provides a composite measurement and tracks undernourishment and hunger at the national level across three dimensions: calorie undernourishment, child malnutrition, and under-five mortality. The GHI is computed using four indicators - the prevalence of calorie undernourishment; and of stunting, wasting, and mortality among children below the age of five; and under-five mortality rate.

### GLOBAL HUNGER INDEX SCORE

The GHI score is calculated on a 100-point scale reflecting the severity of hunger. Zero is the best score (no hunger) and 100 is the worst. Each set of GHI scores uses data from a 5-year period. The 2022 GHI scores are calculated using data from 2017 through 2021.

### INITIATIVES FOR REDUCING HUNGER

- Eat Right India Movement
- POSHAN Abhiyan
- Pradhan Mantri Matru Vandana Yojana
- Food Fortification
- National Food Security Act, 2013
- Mission Indradhanush
- ICDS Scheme



**FIGURE:** Pie chart representation of the weights of parameters of Global Hunger Index.

### HOW THE GHI IS CALCULATED

Each country's GHI score is calculated based on a formula that combines 4 indicators that together capture the multidimensional nature of hunger:



**UNDERNOURISHMENT:** Share of the population with insufficient caloric intake.



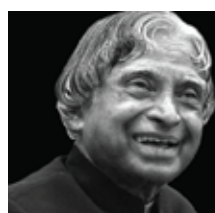
**CHILD WASTING:** Share of children under age five who have low weight for their height, reflecting acute undernutrition.



**CHILD STUNTING:** Share of children under age five who have low height for their age, reflecting chronic undernutrition.



**CHILD MORTALITY:** Share of children who die before their fifth birthday, partly reflecting the fatal mix of inadequate nutrition and unhealthy environments.



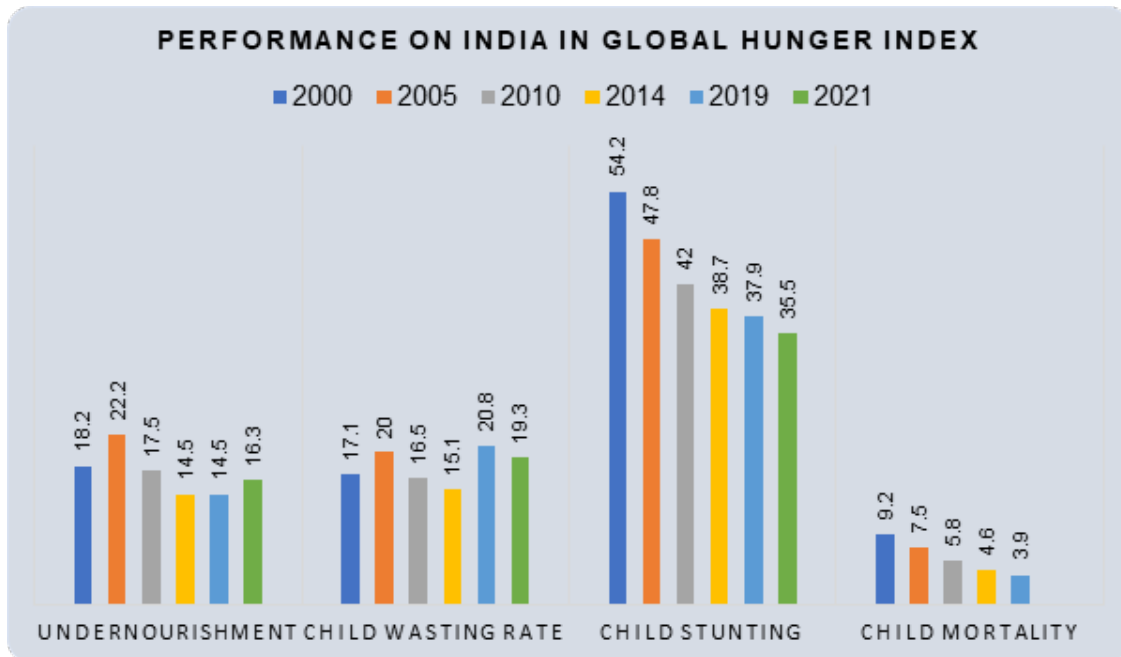
*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM

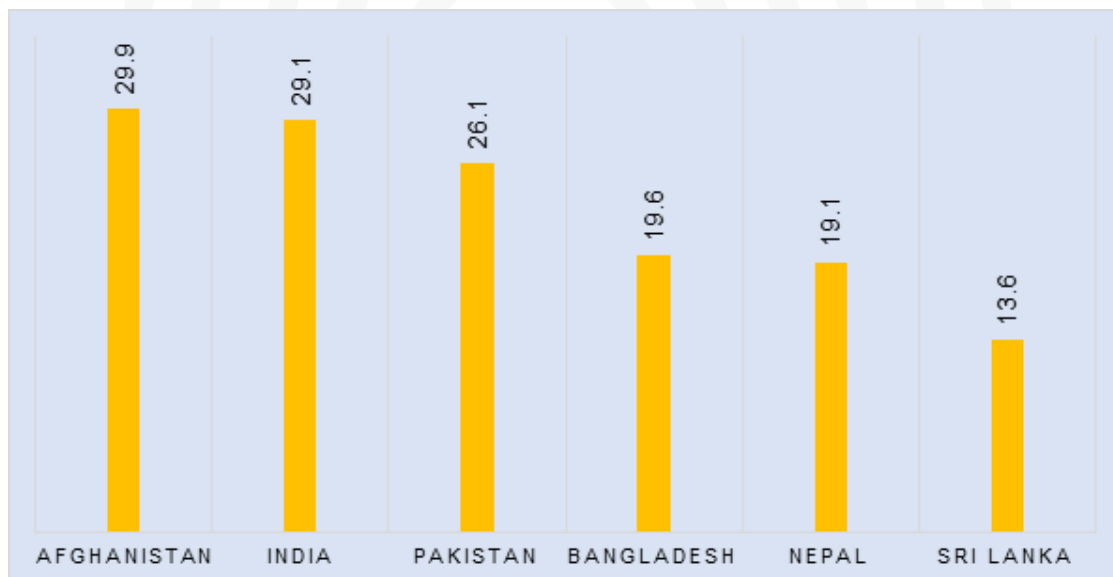




**PERFORMANCE OF INDIA**



**FIGURE:** Bar chart representation of performance on India in the Global Hunger Index



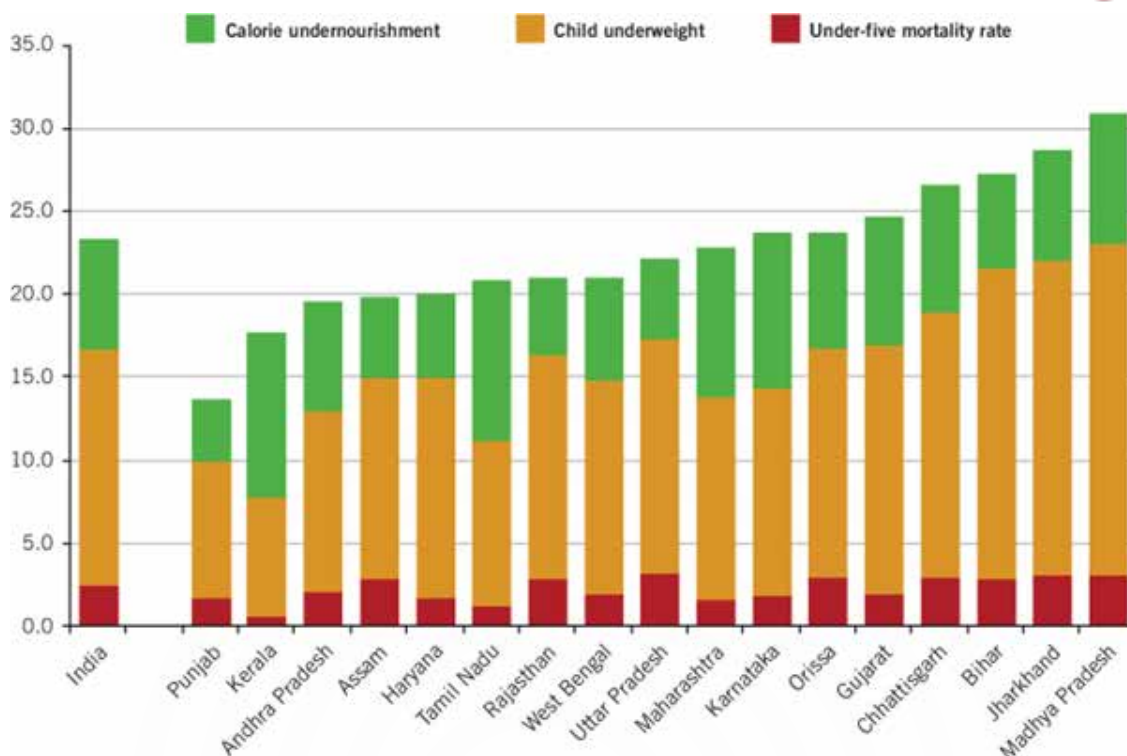
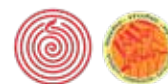
**FIGURE:** Column chart representation of performance of countries in the Global Hunger Index

According to the State of Food Security and Nutrition in the World report of 2022, India is home to 22.43 Crore undernourished people. Disparities are evident among States.

**The State Hunger Index:** The State Hunger Index (SHI) provides a composite measurement and tracks undernourishment and hunger at the national level across three dimensions: body mass index (BMI) undernourishment among the working-age population, child malnutrition, and under-five mortality. The SHI is computed using four indicators – the prevalence of body mass index (BMI) undernourishment among the working-age population; and of stunting, wasting, and mortality among children below the age of five; and under-five mortality rate. The SHI scores range between 0 and 100, with higher scores indicating more hunger. Scores below 10 signify low hunger, 10-20 moderate, 20-30 serious, 30-40 alarming, and 50 or above extremely alarming.

Data for stunting, wasting, and mortality among children below the age of five are sourced from the fifth round of the National Family Health Survey (NFHS-5), while the prevalence of BMI undernourishment is computed using NFHS-5 (2019-21) and Wave 1 of the Longitudinal Ageing Study in India (2017-18). The calculation of the SHI score involves combining the normalised values of the four indicators using the techniques recommended by the GHI.

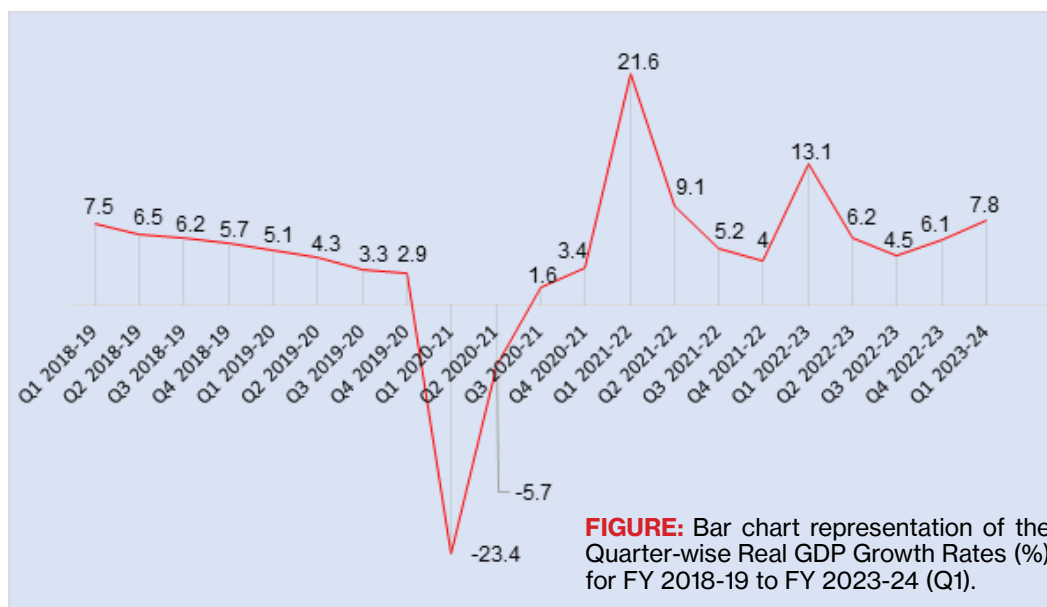
India's GHI score has deteriorated over the last half a decade, primarily due to the increasing prevalence of calorie undernourishment. According to the Food and Agriculture Organization, the proportion of calorie undernourishment in India has been escalating since 2017, reaching 16.3 % in 2020, equivalent to the 2009 statistic.



Among the 17 States they assessed, Punjab led the list, with Kerala and Andhra Pradesh following closely as top performers. On the other hand, Madhya Pradesh, Jharkhand, Bihar, and Chhattisgarh were ranked as the least-performing States. In the SHI, Bihar, Jharkhand, and Chhattisgarh scored 35, which places them in the 'alarming' category. Gujarat, Uttar Pradesh, Assam, Odisha, Madhya Pradesh, Tripura, Maharashtra, and West Bengal all scored above the national average (29). The performance of these States resembles that of African nations such as Haiti, Niger, Liberia, and Sierra Leone. On the other hand, Chandigarh scored 12, and Sikkim, Puducherry, and Kerala all scored below 16. These States, along with Manipur, Mizoram, Punjab, Delhi, Arunachal Pradesh, Andaman and Nicobar Islands, and Tamil Nadu, fall under the 'moderate hunger' category. All the other States, which scored below the national average and above 20, have a problem of 'serious hunger'. No State falls under the 'low hunger' category.

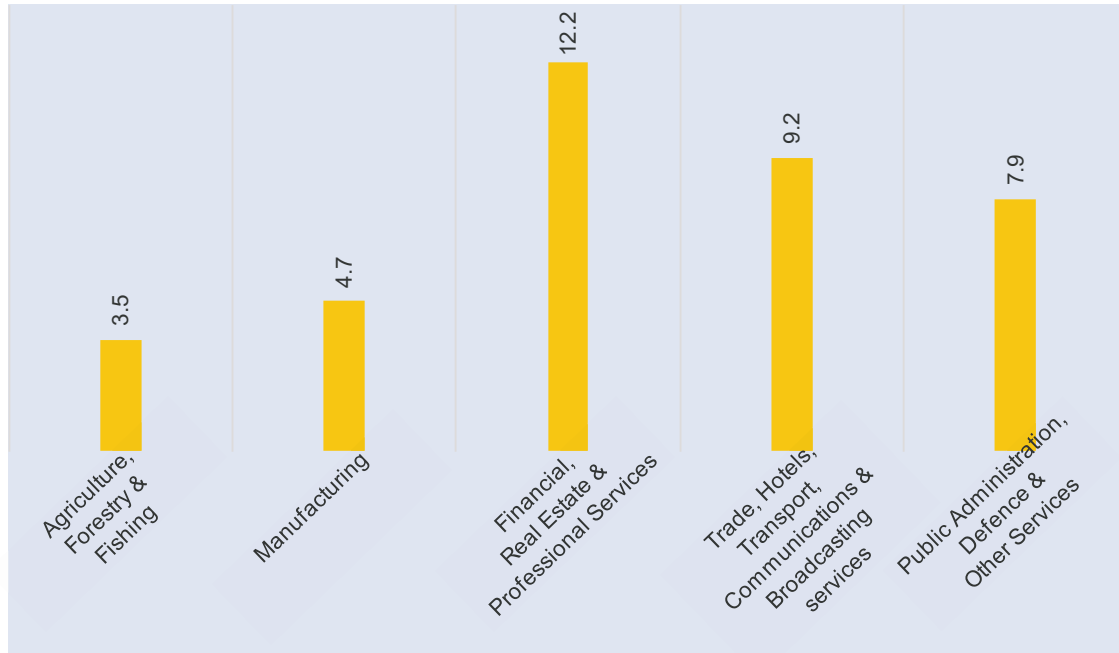
## STATE OF INDIAN ECONOMY – SEPTEMBER UPDATES

India's Gross Domestic Product (GDP) registered a four-quarter high of 7.8 % in the first quarter of current financial year (FY 2023-24). India has retained its status as the world's fastest growing major economy by a comfortable margin, with China recording a 6.3 % rise in the same quarter and facing a fresh slowdown. The Reserve Bank of India (RBI) estimates a growth rate of 6.5 % for 2023-24, forecasting a slowdown in each of the subsequent quarters of this year, with a growth rate of 5.7 % in the last quarter.



**FIGURE:** Bar chart representation of the Quarter-wise Real GDP Growth Rates (%) for FY 2018-19 to FY 2023-24 (Q1).

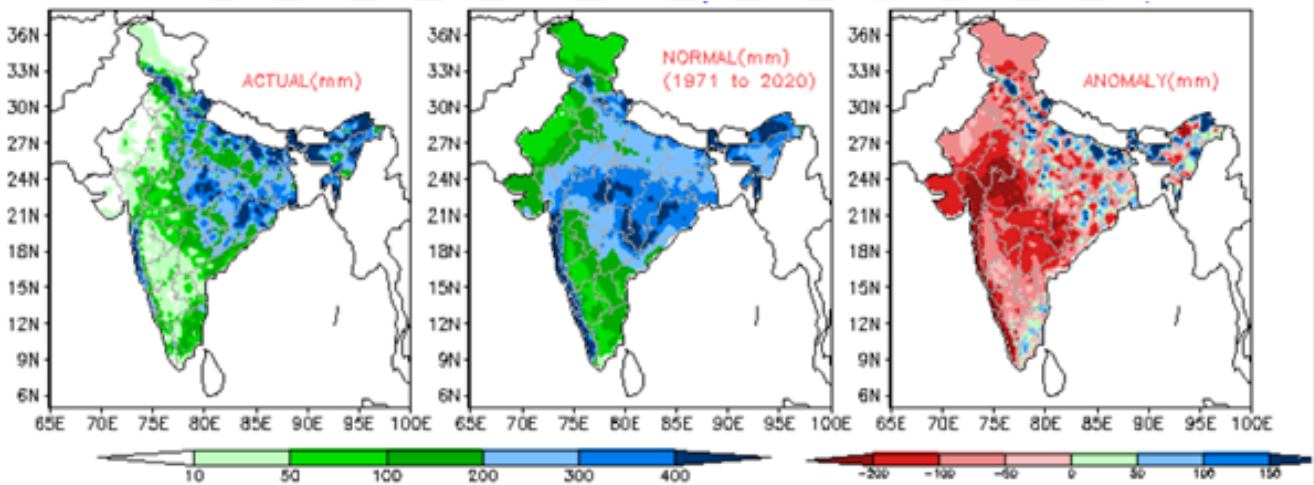




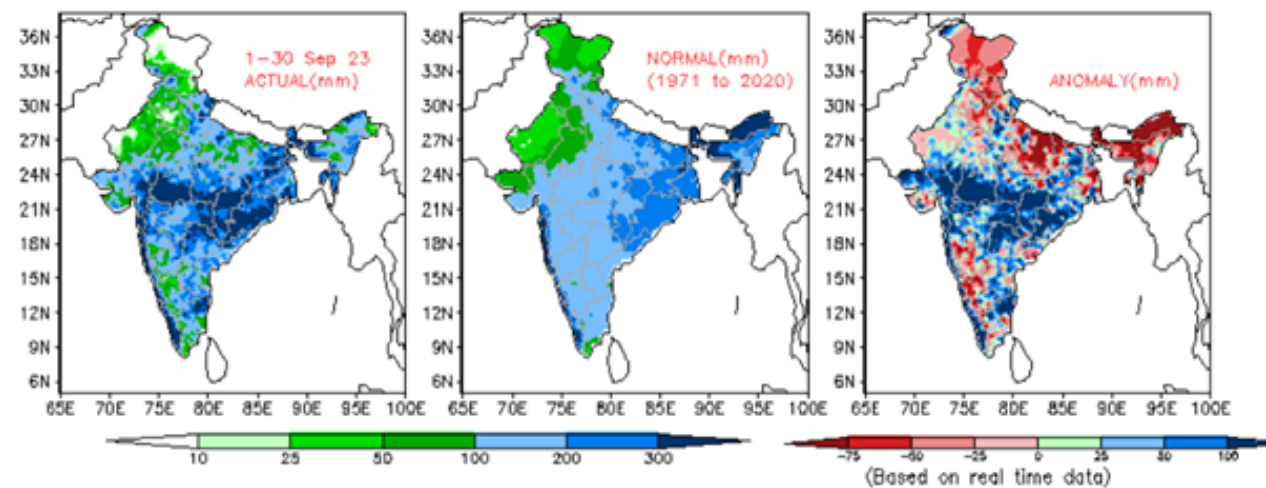
**FIGURE:** Bar chart representation of the sectorial growth rates for the Quarter I, FY 2023-24.

The weak monsoon and lower reservoir levels may taper the farm sector growth in coming quarters. The employment-intensive trade, hotels and transport segment grew 9.2 % during the first quarter, still 1.9 % below pre-COVID-19 levels in absolute terms.

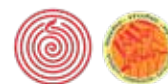
**Deficient Monsoon**



**FIGURE:** Map representation of the (a) Actual (b) Normal (c) Anomaly in monsoon patterns during August, 2023.



**FIGURE:** Map representation of the (a) Actual (b) Normal (c) Anomaly in monsoon patterns during September, 2023.

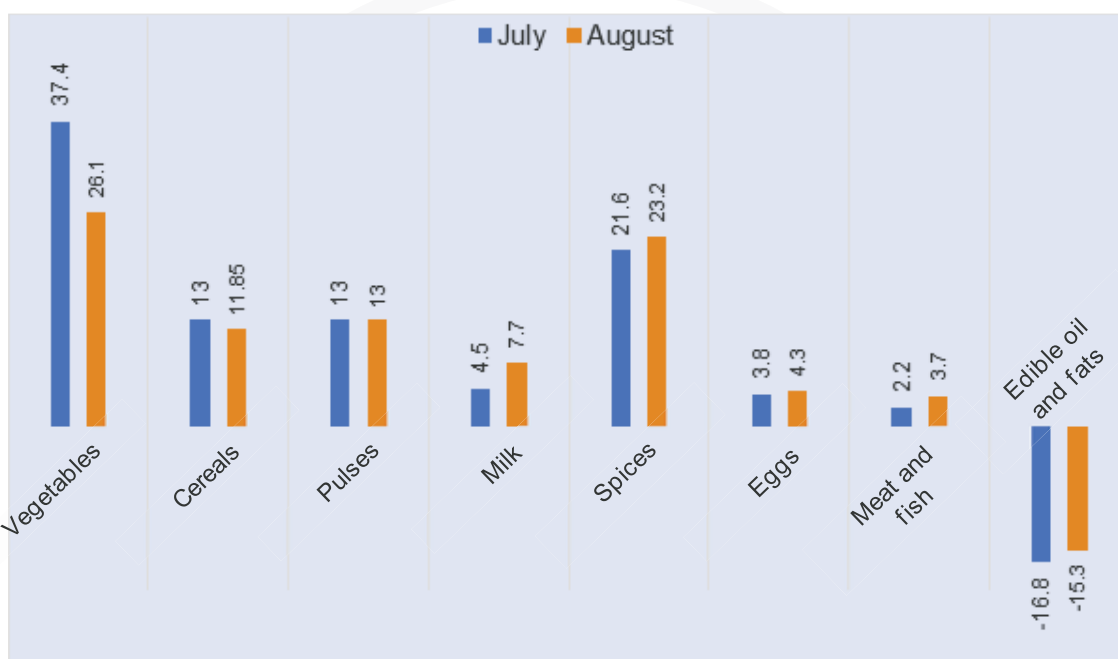


India received 25.4 cm rainfall during August, 2023, the most amount of rainfall after July with 28 cm. August rainfall that recorded a deficit of 36 % than Long Period Average (LPA), the lowest in over a century has been markedly deficient in most of India, except in north-eastern India, the Himalayan States, and parts of Tamil Nadu. Rainfall in August has brought the overall national deficit to 10 %, with the regional deficits being 17 % in east and northeast India, 10 % in central India, and 17 % in southern India. The last time India recorded such severe deficits in August was in 2005, when the shortfall was about 25 % of the normal, and in 2009, when India saw its biggest drought in half a century and August rainfall was 24% less than normal. The Indian Meteorological Department (IMD) on July 31 indicated

that August rainfall would be “below normal”, with the strengthening of the El Nino and unfavourable conditions in the Arabian Sea and the Bay of Bengal. Monsoon rainfall in September, the last of the four monsoon months, is likely to be within a 10% window of the 16.7 cm that is usual for the month.

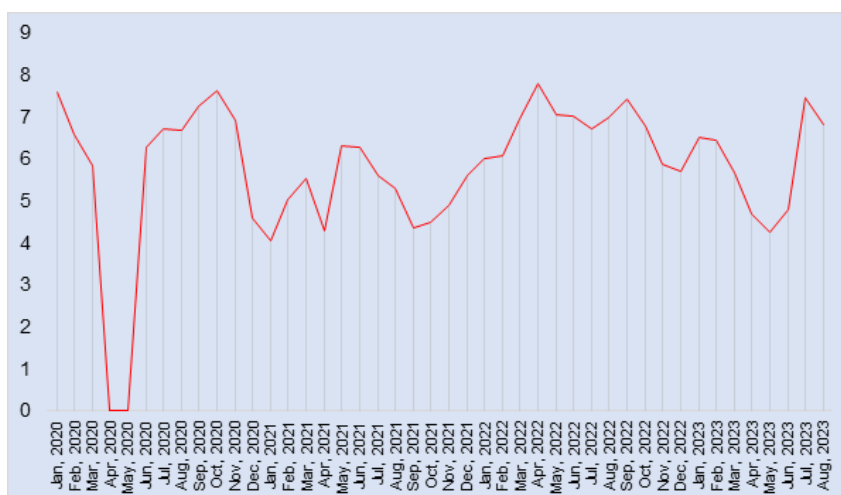
The near-term inflation outlook is uncertain with distinct overall deficit in monsoon rainfall by 10 %. The sharp regional and temporal anomalies in rain distribution have impacted the sowing or the quality of produce of several farm items. Kharif sowing of pulses had, as on September 8, recorded an 8.6 % shortfall compared with the year-earlier period

### HEADLINE CONSUMER FOOD PRICE INDEX (FPI) INFLATION

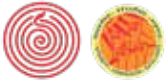


**FIGURE:** Bar chart representation of the Consumer Price Index based inflation.

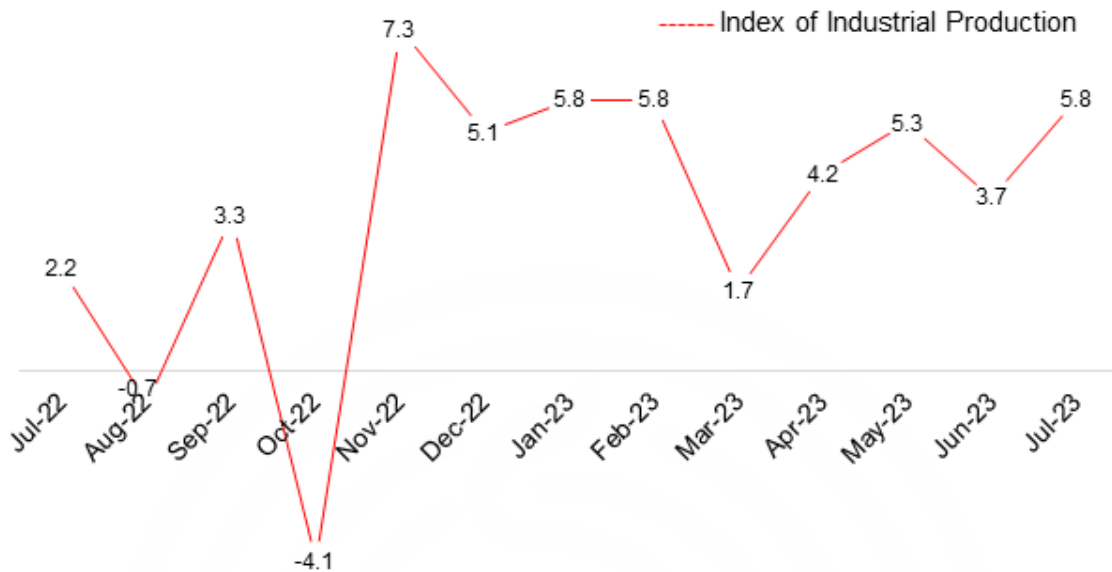
The Headline Consumer Food Price Index (FPI) inflation eased slightly from the 15-month high of 7.44 % in July to 6.83 % in August. Prices of 11 of the 12 items on the food and beverages group to measure Consumer Food Price Index increased. Oils and fats, the sole item that recorded a year-on-year decline in prices, posted its first sequential increase in nine months. Vegetables prices moderated with tomato prices recording an appreciable month-on-month deflation of 5.88 % in the 19-member basket. Potatoes and onions were among the seven items that continued to log sequential inflation. As many as 12 States recorded higher inflation than the national average of 6.83 %. Food prices remain elevated at around 10 % and rural consumers continued to face over 7 % inflation.



**FIGURE:** Line chart representation of the Consumer Price Index based inflation.



The manufacturing GVA grew for the second successive quarter after six months of contraction, but only accelerated slightly from 4.5 % to 4.7 % supported by heavy public capital spendings. All eight core sectors, including crude oil production registered a growth during September, 2023 constituting 40.3 % of the Index of Industrial Production (IIP).



**FIGURE:** Line chart representation of the core sector growth rates (on Y-o-Y basis in per cent).

The production of consumer durables contracted for the seventh time in eight months, though the extent of shrinkage dropped from 6.9 % in June to 2.7 % in July. The demand for non-durable consumer goods appeared to be strengthening, with an uptick of 7.4 % in their output compared with just 1.2 % in June. For the first four months of 2023-24, this is the only use-based segment of industry with negative growth, down 2.7 % from a year earlier.

Capital goods output, a reflection of planned investment activity, rose 4.6 % YoY in July, recovering from an eight-month low of 2.2 % in June. However, in absolute terms, the output levels were at a three-month low and 4.6 % below June's production. Nine manufacturing industries witnessed negative growth including electronics, which is disappointing given that it is part of the production-linked incentive schemes, and textiles continue to underperform due to the hard hit on exports.

The sustenance of this industrial growth will depend on consumer goods reviving, and can only be ascertained by data for the next three months. High inflation as well as dilution of pent-up demand will dampen future growth

**RBI Data on Household Finances**

The net household financial savings slid from 7.2 % in 2021-22 to 5.1 % of GDP in 2022-23, the lowest since 1976-77. The households' financial liabilities increased from 3.8 % of GDP in 2021-22 to 5.8 %. Household Gross Financial Assets went up by 37.6 %, and Household Gross Financial Liabilities went up by 42.6 % between June 2020 and March 2023. Households added Net Financial Assets of ₹22.8 lakh crore in FY21, nearly ₹17 lakh crore in FY22 and ₹13.8 lakh crore in FY23. Vehicle loans have been growing at double digits since April 2022 and more than 20 % since September 2022. The overall household savings [current prices] – which includes financial, physical and jewellery – has grown at a CAGR of 9.2 % between 2013-14 and 2021-22. Nominal GDP has grown at a CAGR of 9.65% during the same period. This showed that the ratio of household savings to nominal GDP had remained constant around 20% to 19% as of 2021-22. The Union Finance Ministry noted higher disbursement of loans among Indian households to buy real assets such as homes and vehicles not as a sign of distress but of confidence in their future employment and income prospects.

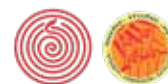
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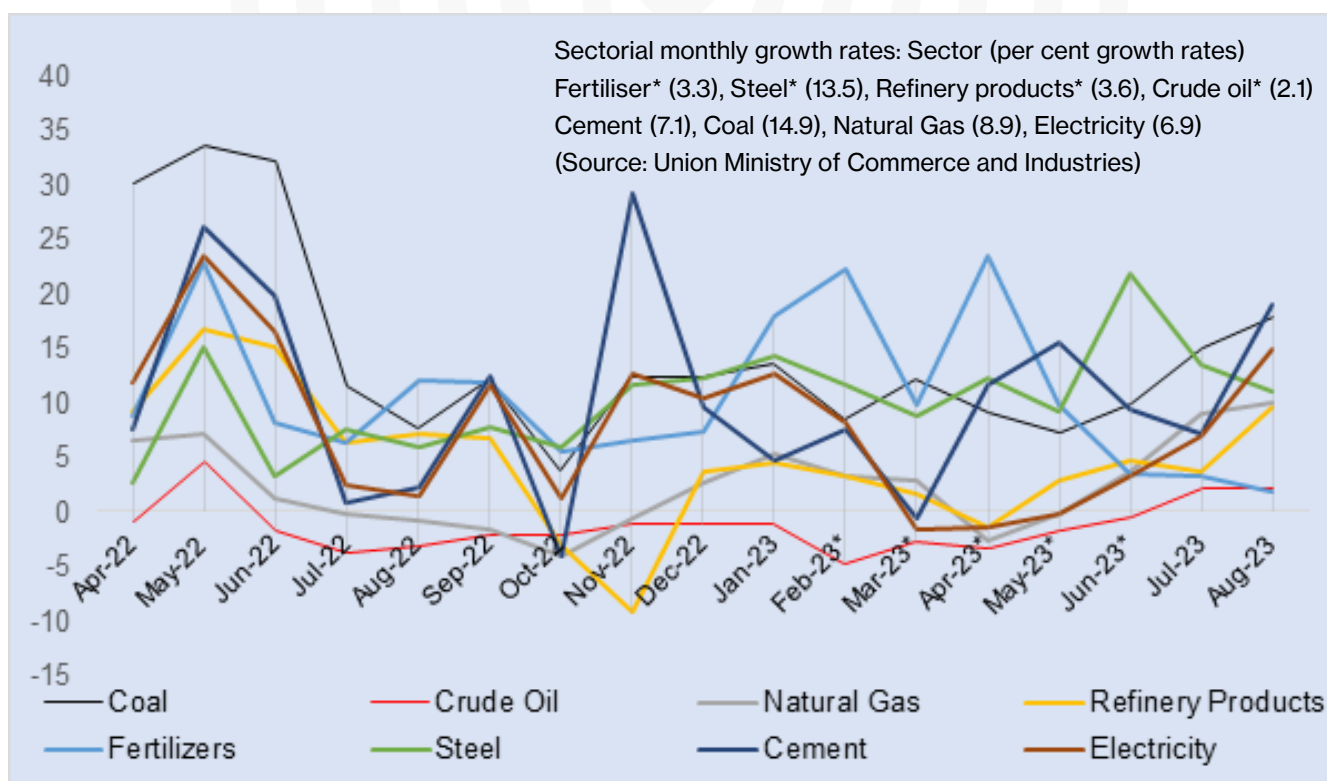
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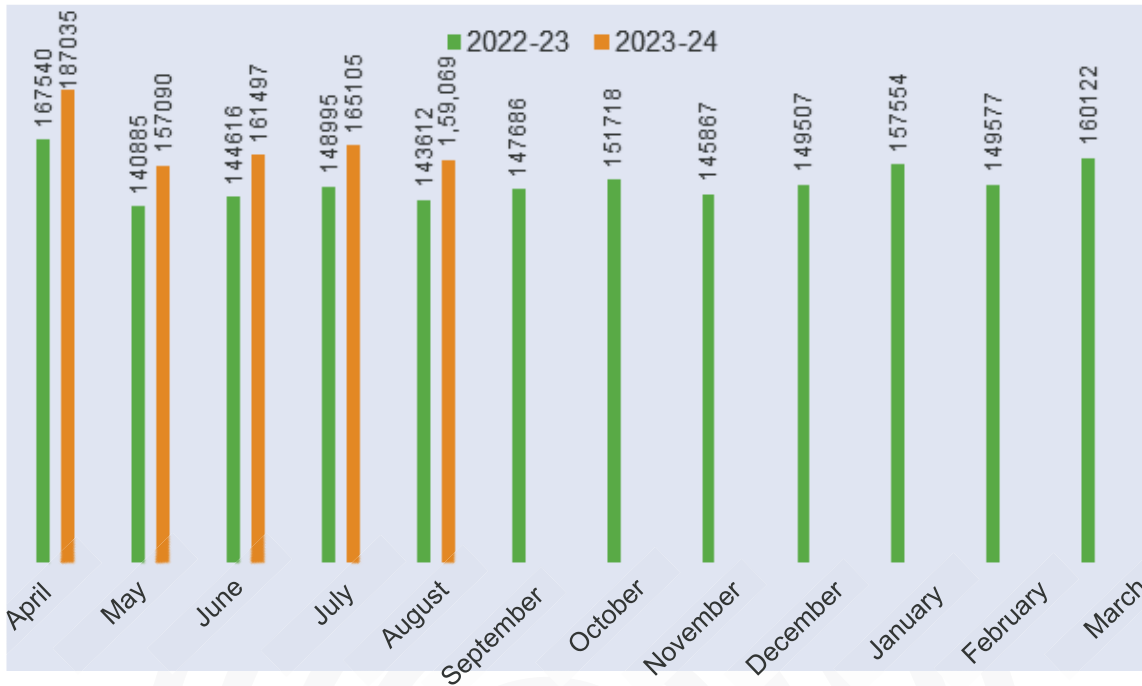
**FIGURE:** Line chart representation of the core sector growth rates (on Y-o-Y basis in per cent)



**FIGURE:** Line chart representation of the sub-sectorial growth rates (on Y-o-Y basis in per cent) of core sector industries.

### TAX COLLECTIONS

The Central Board for Indirect Taxes & Customs recorded a gross GST revenue of ₹ 1,59,069 Cr, for August, 2023. The monthly Central GST (CGST) collections stood at ₹ 28,328 Cr., State GST collections at ₹ 35,794 Cr. and Integrated GST or IGST at ₹ 83,251 Cr. The revenue from domestic transactions and services imports rising 14 %, and goods imports yielding 3 % more taxes. August witnessed the first increase in revenue from goods imports in 3 months.



**FIGURE:** Column chart representation of Goods & Services Tax (GST) receipts (Cr.) (on Y-o-Y basis).



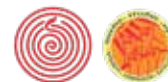
**FIGURE:** Line chart representation of growth rate of Goods & Services Tax (GST) receipts (Cr.) (on Y-o-Y basis).

**INDIA'S MONTHLY TRADE STATISTICS**

The goods exports from India during August 2023 shrank for the seventh consecutive time and the ninth time in 11 months. At \$ 58.6 billion, merchandise imports during August, 2023 shrank by 5.2 % compared to \$ 58.64 billion in August, 2022, but 10.85 % higher than July's \$ 52.9 billion import tally. The merchandise exports steeply fell by 6.9 %, while services exports shrank 0.4 % in August to \$ 26.39 billion, after growing at a sharp 26.7 % rate in 2022-23. However, a shrinking services exports imply restricted ability to bridge the steep goods trade deficits since last year, thus raising the possibility of wider current account deficits from this quarter.

India's current account deficit is likely to widen in this quarter (Q2) from the \$9.2 bn billion expected in Q1 with the monthly merchandise trade deficit averaging much higher during July-August vis-à-vis April-June 2023. The sharp sequential uptick in imports in August had widened the trade deficit to a 10-month high. India recorded a trade deficit of \$ 24.2 billion, 2.8 % below August 2022 numbers and almost 17 % over July's \$ 20.67 billion gap. The trade deficit for August, 2023 is the widest since October 2022.

Outbound shipments at a three-month high of \$ 34.5 billion shrank 6.86 % in August from double-digit contractions in recent months. Export volumes of as many as 13 major items rose between April and July, but their



### CAD widens to \$ 9.2 bn in Q 1

India's current account deficit (CAD) widened to \$ 9.2 billion (1.1 % of GDP) in the April-June quarter, from \$1.3 billion (0.2% of GDP) in the preceding three months, as exports of goods shrank even as imports rose and net receipts from services also declined sequentially.

The CAD was \$17.9 billion in the year-earlier quarter of fiscal 2022-23. The widening of CAD on a quarter-on-quarter basis was primarily on account of a higher trade deficit coupled with a lower surplus in net services and decline in private transfer receipts. Net services receipts fell sequentially, primarily due to a decline in exports of computer, travel and business services, though they remained higher on a year-on-year (y-o-y) basis. Private transfer receipts, mainly representing remittances by Indians employed overseas, moderated to \$27.1 billion in the last quarter, from \$28.6 billion in Q4 of FY23.

value had declined owing to lower prices. For example, the petroleum prices fell 27 %, despite volumes rising 6 % in the first four months of this fiscal. Nearly half of the decline in exports this year has been driven by the decline in petroleum prices. Engineering goods, which account for a quarter of India's exports, registered growth in August for the first time in August, with half of the 14 key segments of exports growing.

The pressure on the goods trade deficit is likely to escalate, especially as oil and gems and jewellery imports have fallen less than their exports so far in 2023-24. About half

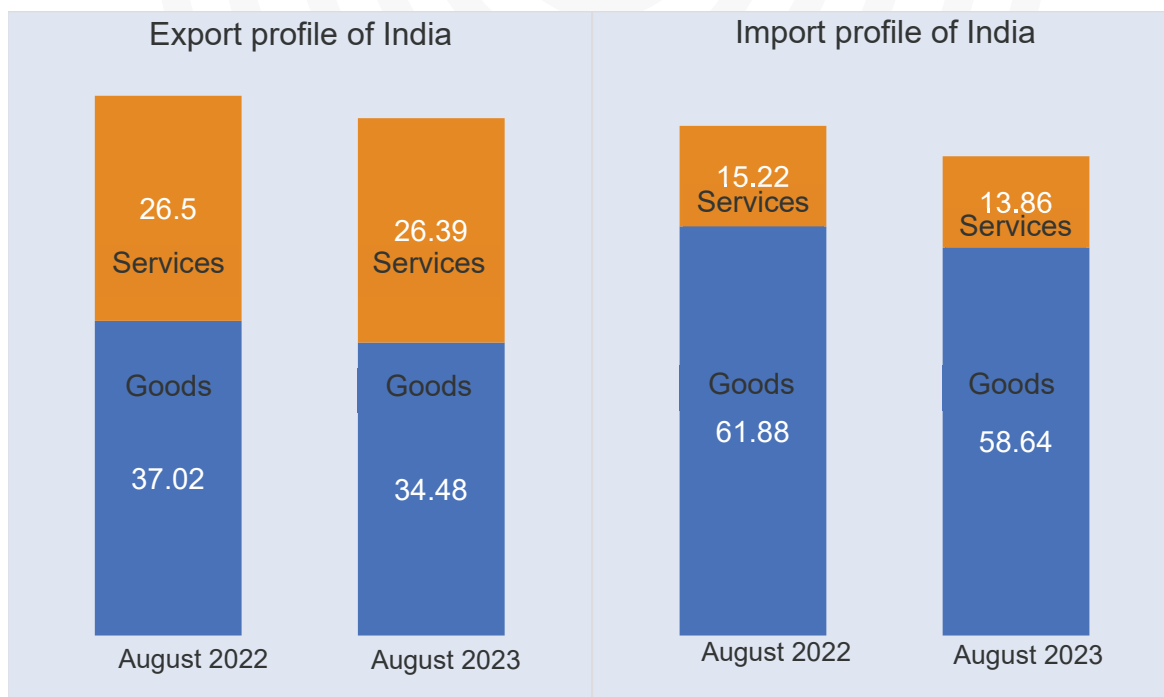
### REMISSION OF DUTIES AND TAXES ON EXPORTED PRODUCTS SCHEME

The Union Ministry of Finance stretched the applicability of the Remission of Duties and Taxes on Exported Products (RoDTEP) scheme for nine more months till June 30, 2024 to extend support to outbound shipments.

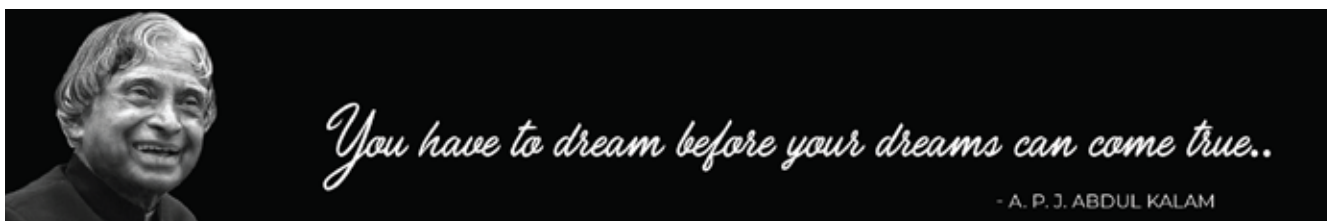
The merchandise exports have been declining for seven months in a row till August. The Department of Revenue Department reviewed the export incentive scheme which provides a mechanism to reimburse taxes, duties and levies (at the central, State and local level) that are incurred by exporters in the production and distribution process and are not refunded under any other mechanism.

the decline in outgoing shipments has been fuelled by petroleum. Goods exports are now down 11.9 % so far this year and imports have dropped 12.1 %.

The demand in the European Union markets is dampened with a persisting scenario of sticky inflation. However, inflation in the Euro Zone moderated to fall to its lowest level in two years in September, suggesting European Central Bank's steady diet of rate hikes succeeding in curbing runaway prices albeit at a growing cost for economic growth. Consumer prices rose by 4.3 % in September, the slowest pace since October 2021, from 5.2 % one month earlier. Inflation excluding food, energy, alcohol and tobacco fell to 4.5 % from 5.3 %, the biggest drop since August 2020. Inflation reheated in the United States last month, but not enough yet to dent festive demand that may lift order books in coming months.



**FIGURE:** Bar chart representation of the (a) Export profile of India (b) Import profile of India.







## ADB GROWTH PROJECTIONS

The Asian Development Bank (ADB) downgraded India's economic growth forecast for the current fiscal year from 6.4 % to 6.3 %. The Asian Development Bank citing declining exports and erratic rainfall patterns. The Asian Development Bank (ADB) slashed farm sector growth outlook for the current fiscal by almost 1 % due to El Niño based erratic weather patterns, including flooding in certain regions and deficient rains. The erratic rainfall patterns, particularly in August have resulted in damage to the rice crop in particular and lower sowing for pulses in the kharif season.

The Asian Development Bank (ADB) expect consumption-oriented growth propelled by big-ticket infrastructure projects that drove a 7.8 % growth in the first quarter of this fiscal year despite global uncertainties. States had also ramped up investments by 78 % supplementing capital expenditures (Capex) of the Centre. Banks registered a credit growth of 19 % in the first quarter with a decline in banks' non-performing loans, and an uptick in capacity utilisation rates in several industries.

The ADB's economists raised their inflation forecast for the year to 5.5 %, from its April estimates of 5 %. The ADB was upbeat on investment prospects in the economy, despite a decline in net foreign direct investment flows in the first quarter to \$ 5 billion from \$13.4 billion last year. ADB's economists retained their real GDP growth projection for 2024-25 at 6.7 %, on expectations that private investment and industrial output would increase.

## CRITICISM

The Finance Ministry challenged critics that cast doubts upon the credibility of India's GDP data and called out critics for ignoring high-frequency data like Purchasing Managers' Indices. The Union Ministry for Statistics and Programme Implementation (MoSPI) calculates quarterly GVA in real terms, and then use the deflator to calculate nominal values. India's GDP deflator used to adjust growth figures adjusting for inflation is dominated by the Wholesale Price Index (WPI) which peaked in the first quarter of 2022-23 due to the oil and food price increases in the wake of

the war in Ukraine and supply-side disruptions. Both deflation and base effect from the COVID-19 degrowth period continues to support India's growth figures resulting in the real growth been overstated. However, the statistical base effect disappears with prices moderating from August 2022 onwards.

India's real GDP growth was 7.8 % year-on-year in the first quarter of 2023-24 as per the Income or Production Approach. As per the expenditure approach, the headline growth is 4.5 % rather

than 7.8% which is a large discrepancy. The Union Finance Ministry has expressed confidence of statistical discrepancies moderating over a period of time.

India is a net importer, and its most significant import consists of crude petroleum, whose price seems to be rising due to Saudi's \$100 per barrel push and rupee depreciation. The domestic consumption of diesel, a proxy for economic activity in India, fell by 3 % in August, which, if sustained, does not paint a rosy growth picture for the coming quarters. The government's tax revenue from progressive direct taxes has weakened over the previous quarters while the regressive indirect tax revenue remaining strong indicate a K-shaped pattern. Growth of direct tax collections boosted by the services industry is a statistical discrepancy. Narrowing revenue streams indicate forced austerity measures, as the government intends to control the budget deficit, and hence the interest rate. Therefore, growth in FY24 stemming from government expenditure seems to be a pipe dream.

## GDP DEFLATOR AND WPI INFLATION (%)

Fig. 2: Decline in WPI inflation explains the recent decline in GDP deflator inflation

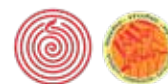


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## JPMORGAN'S INDIA BOND INDEX INCLUSION

India has been pushing for the inclusion of its sovereign debt on global bond indices for a decade. On September 22, JPMorgan announced the inclusion of Indian government bonds to its Government Bond Index-Emerging Markets (GBI-EM) Global Index Suite from June 2024. It has set off anticipation that foreign investors will pump in billions of dollars into India to buy its sovereign debt. According to economists, India could potentially become a part of even bigger global bond indices in 2025.

Chief Economic Advisor V. Anantha Nageswaran noted that JP Morgan's move to include Indian government bonds in its global emerging market bond indices could potentially lower the country's sovereign borrowing costs, help finance the current account deficit and free up liquidity for domestic financiers to deploy in more productive assets. In a September 21 note, JP Morgan conveyed India's inclusion into its emerging market bond indices from June 28, 2024, starting with a 1 % exposure to 23 "index eligible" bonds with a "combined notional value of \$ 330 billion".

The bonds' inclusion staggered over 10 months till March 2025 with the Indian securities expected to reach their maximum weight of 10 %.

- Foreign ownership in the Indian government bonds market, reckoned to be the third-largest among emerging markets at \$1.2 trillion, is less than 2 %, one of the lowest among its peers.
- Higher foreign ownership would "relieve" the Indian financial system from having to be these bonds' biggest buyers and thus be in a position to lend that money for more productive purposes.
- Trigger some appreciation of the rupee, which could prove a challenge as keeping it competitive is also important, and expose bond and currency markets to external turbulence, but on balance, the benefits outweigh such concerns.

**Quantum mechanics:** The of Indian Government Bonds to its Government Bond Index-Emerging Markets (GBI-EM) Global Index Suite will happen in 10 monthly increments of 1 percentage point each, starting June 28, 2024. Economists have pegged the quantum of inflows following this development at \$ 24 billion. India's presence will rise in not just in the GBI-EM Global Diversified index, but also other JPMorgan indices such as the JADE Global Diversified index and the JADE Broad Diversified index. Overweight/Underweight could potentially translate into higher/lower inflow.

**Demand over supply:** Greater foreign inflows next year will result in increased demand for Indian government bonds. At the same time, 2024-25 could also see the Centre borrow a smaller amount compared to ₹15.43 lakh Cr. this year as the fiscal deficit target could be around 5.5 % of GDP. This dual movement of increased demand for and possibly reduced supply of government bonds could result

'India G-secs to attract \$30 bn on entry into JPM's indices'

The inclusion of Indian government bonds in JP Morgan's bond indices could draw foreign fund inflows in the range of \$30-\$40 billion over the next 18 months. The inclusion could prompt passive inflows of about \$30 billion and at least another \$10 billion from other funds.

in the former exceeding the latter by as much as ₹ 90,000 Cr. Demand for G-sec (government securities) could now outstrip supply, unusual in domestic G-sec market, where supply has traditionally outstripped demand for G-sec. The natural consequence of the above is lower bond yields. According to Ghosh, the 10-year government bond – which closed at 7.15 % yield on September 25 – could fall to 7 % yield by the end of 2023-24 and affirmatively breach 7 percent next financial year. UBS, meanwhile, has lowered its 2024 forecast for 10-year yield to 6.75 % from 7 %.

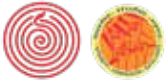
From rupee to CAD: Capital inflows should mean a stronger rupee. The US dollar's strength and rising crude oil prices will prove to be headwinds, at least in the short term. In a strong US dollar environment, the Reserve Bank of India (RBI) will continue to play a crucial role, and may also likely accumulate dollars passively to absorb any heavy flows, given its focus on ensuring a more stable currency on top of internationalisation efforts. Even though the RBI is expected to step in and keep the rupee from appreciating wildly, the external balance will nonetheless improve. According to HSBC economists, the large inflows will likely keep the Balance of Payments "in strong surplus" even though the current account deficit may widen. Sen Gupta of IDFC First Bank sees the current account deficit in 2024-25 at 2 % of GDP, unchanged from 2022-23.

Increased scrutiny: A key challenge would be outflows – and the associated financial market volatility – due to non-India developments. As India's G-sec market attracts more global flows, it could also become more dependent on global financial conditions, which could add volatility. Strong institutions-backed, rules-based policy making will become even more critical in such times. One rule that will certainly become more critical is the Finance Ministry's annual fiscal deficit target. The Centre aims to cut it down to 4.5 % of GDP by 2025-26 and the idea – at least to begin with – was to reach 3 %. With more eyes on India's fundamentals, annual fiscal slippages may not be tolerated to the extent they have been until now.

Indeed, India is eyeing a couple of other index providers, namely FTSE Russel and Bloomberg Global Aggregate Index. The FTSE Emerging Markets Government Bond Index-Capped oversaw total funds of \$1,477 billion as of end August, making it six times-plus larger than JPMorgan GBI-EM GM. If the inclusion process at JPMorgan GBI-EM materially stabilises, India can expect another bigger inclusion by mid-2025.

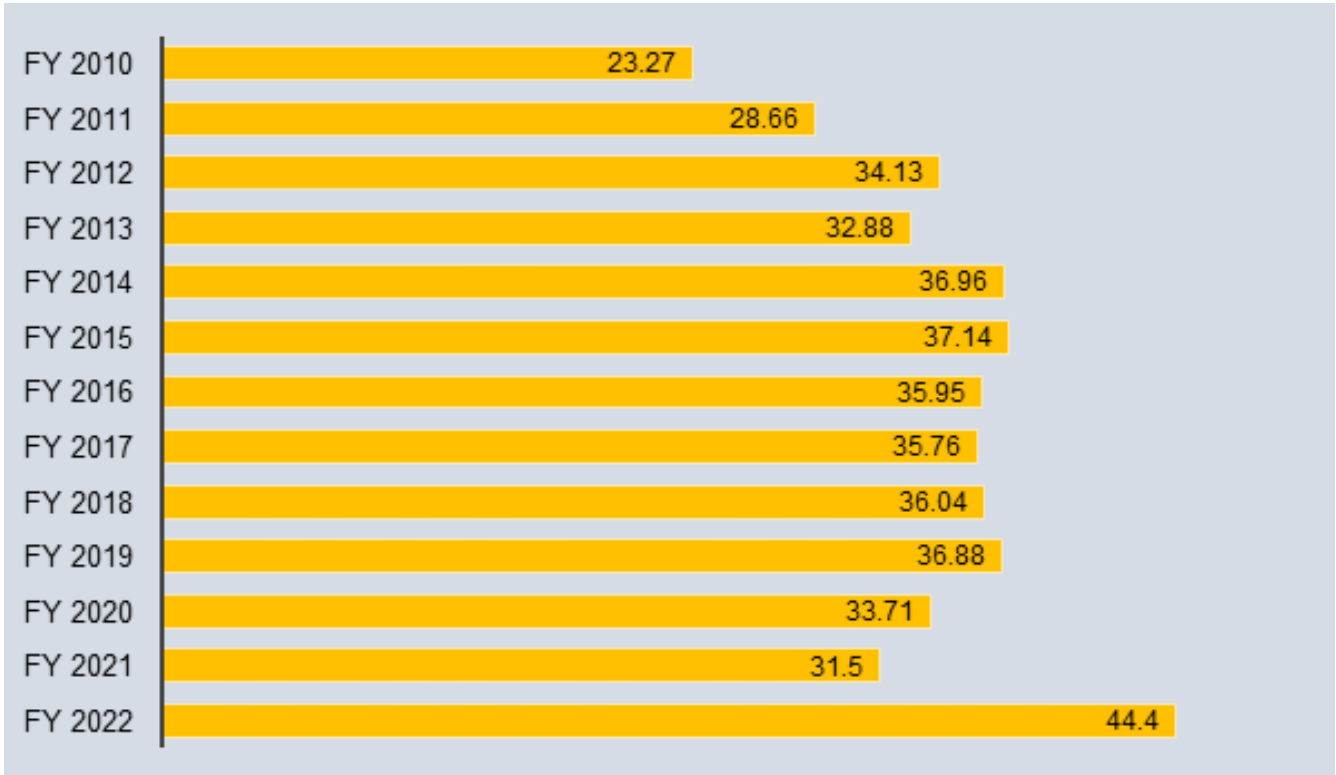


**INDIA'S LARGEST ONLINE IAS COACHING ACADEMY**



## REVIVAL IN TEXTILE EXPORTS

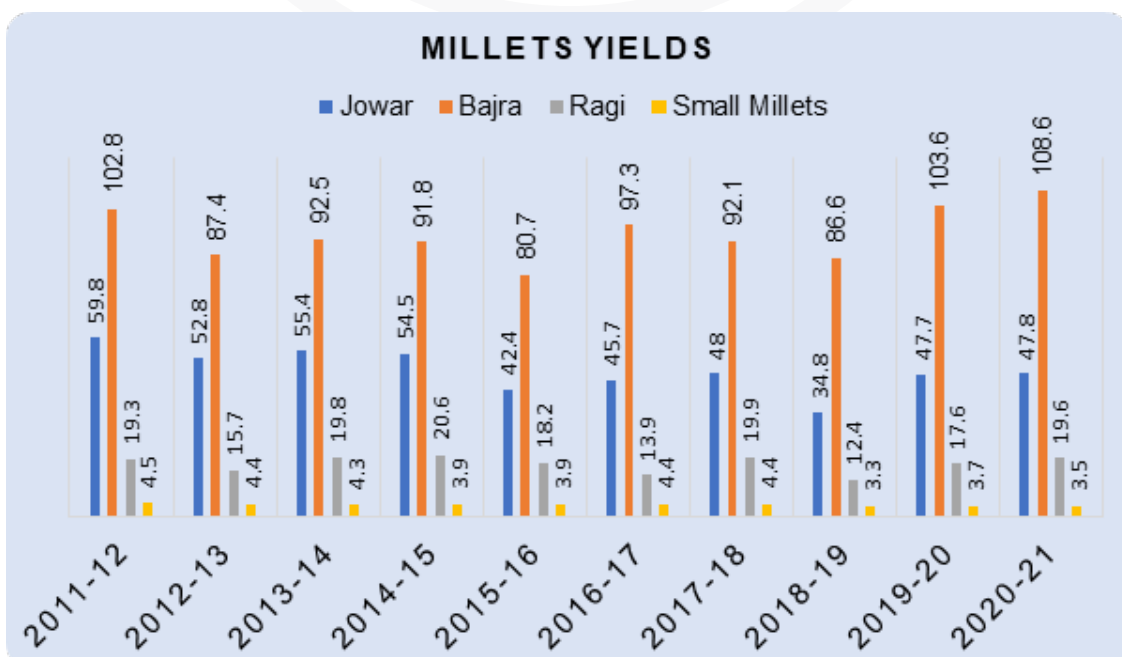
Textile and apparel exports turned positive last month after more than six months of contraction, as per data shared by the Confederation of Indian Textile Industry (CITI). With exports worth \$2,951.9 million in August 2023, the year-on-year (y-o-y) growth was 4.33 %. Textile exports increased 14 %, apparel exports declined 8.15 %. Cumulative exports of textiles and apparel for April-August, however, were 10.5% lower y-o-y.



**FIGURE:** Bar chart representation of the annual value of textile exports from India.

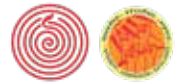
## MILLETS AND NUTRITIONAL VALUE

Millets are set to play a crucial role in India's nutritional and food security. Experts called for measures to incentivise farmers to grow millets, raising the issue of exempting millet products from GST to boost consumption. India's target was to produce 45 million tonne (mt) of millets by 2030, from the 17 mt now. India accounts for 41 % of global millet production. "Millets have a crucial role to play in the nutritional security of the country.



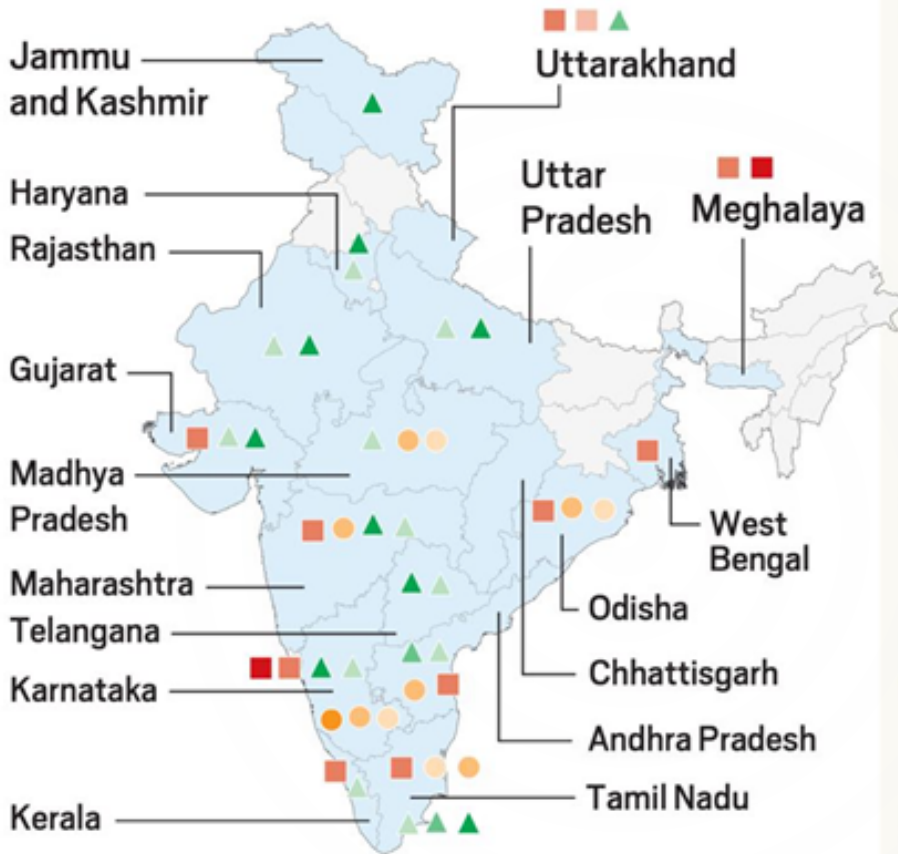
**FIGURE:** Bar chart representation of domestic millet yields.














# INDIA'S MILLETS MAP

Jowar is grown mainly in Maharashtra, Karnataka, Rajasthan, and Tamil Nadu; bajra mainly in Rajasthan, UP, Haryana, Gujarat



-  **Foxtail Millet**
-  **Finger Millet**
-  **Barnyard Millet**
-  **Browntop Millet**
-  **Little Millet**
-  **Kodo Millet**
-  **Pearl Millet**
-  **Proso Millet**
-  **Sorghum**

## JOWAR

4.24 mn ha area  
4.78 mn tonnes production

## BAJRA

7.75 mn ha area  
10.86 mn tonnes production  
(In 2020-21)

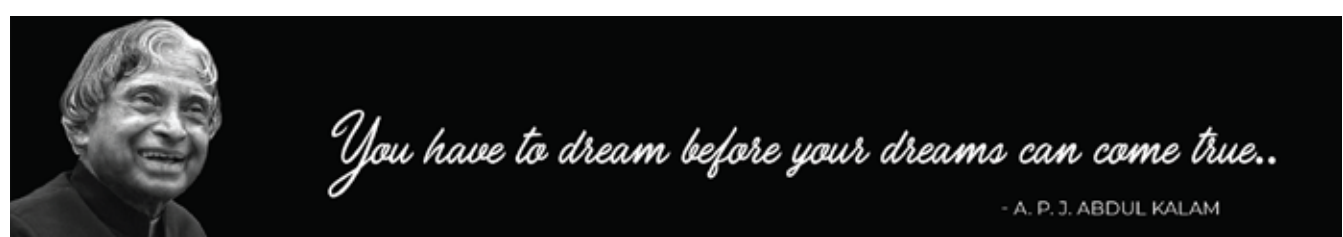
## MILLETS GROWN IN

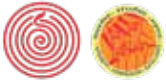
130 countries, traditional food for more than 500 million people

## 'NUTRI-CEREALS'

Govt has declared millets 'powerhouses of nutrition'.

Jowar is grown mainly in Maharashtra, Karnataka, Rajasthan and Tamil Nadu; Bajra is cultivated mainly in Rajasthan, UP, Haryana, Gujarat. Millets area grown in 130 countries, traditional food for more than 50 Cr. People.





## BENEFITS OF MILLETS

**NUTRITIONAL SECURITY:** Cheap and more nutritious. Millets are considered to be “powerhouses of nutrition”. Ragi has the highest calcium content and high iron content and can fight the high prevalence of anaemia.

**CLIMATE RESILIENT:** Hardy and drought-resistant crops. Millets require much less water than rice and wheat and are mainly grown in rainfed areas.

**COST EFFECTIVE:** Low investment for inputs. The farm cost inputs are relatively lesser with Millets require much less water than rice and wheat and are mainly grown in rainfed areas.

**HEALTHY CHOICE:** Gluten-free and low glycemic index with antiaging and antioxidant. Help in tackling lifestyle problems and health challenges such as obesity and diabetes.

Millets had lost sheen with the production of more rice and wheat after the green revolution. Global millets output was about 100 mt from almost 80 million hectares of land. India was aiming at shipping \$100- million millets by 2025. In FY2022-23, millet exports stood at \$ 75.43 million. Experts felt incentivising millet farmers, innovation in agronomics and focus on marketing were the key drivers to boost output and consumption. Branding would boost exports.

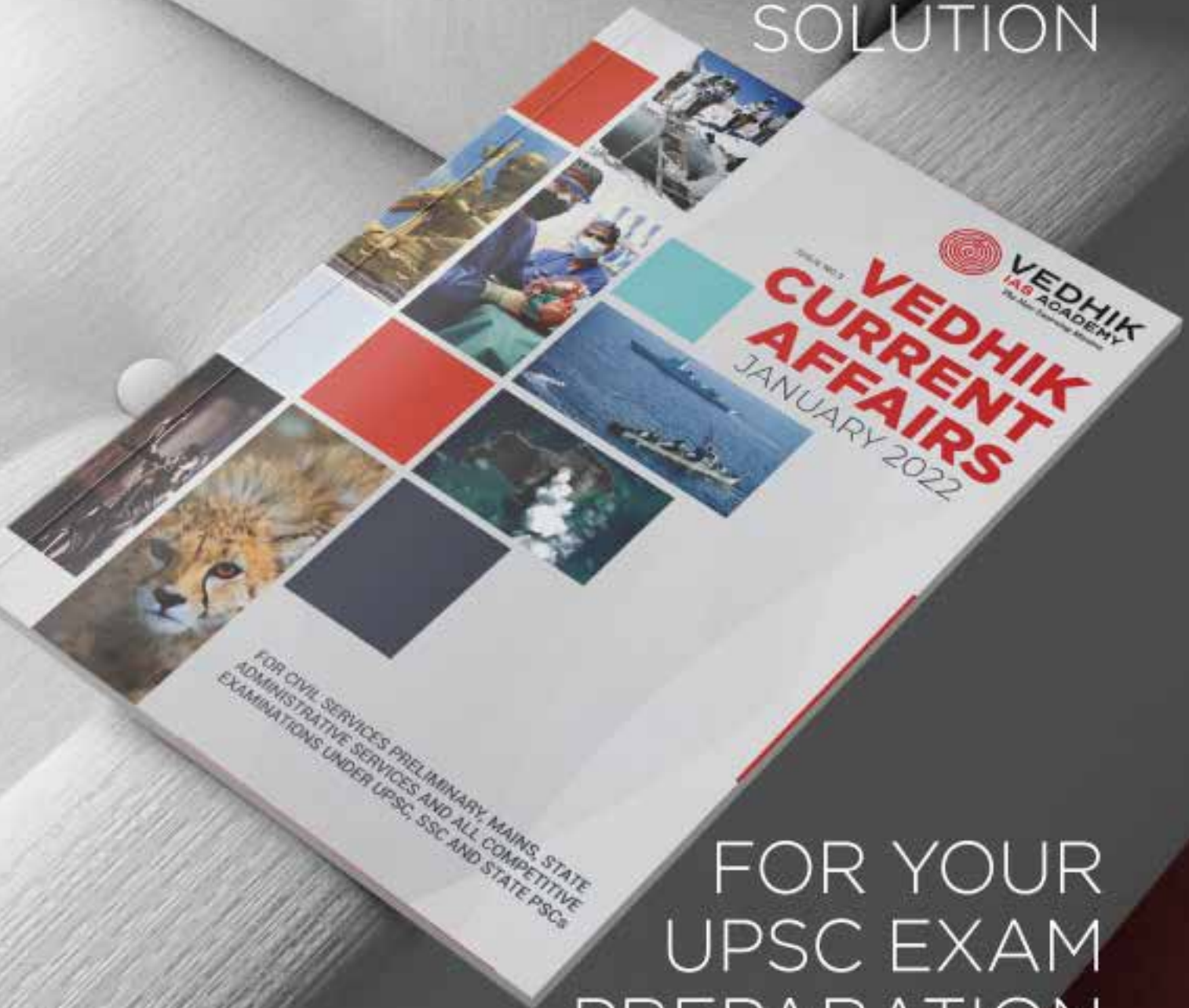
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# ECOLOGY





**RED SAND BOA**

**MISSION TO CLEAN THE GANGA**

**TECH PANEL EVALUATING HIMALAYAN STATES CAPACITY**

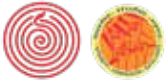
**LAWS GOVERNING FORESTS OF THE NORTHEAST**

**BIOFUEL SUSTAINABILITY**

**GLOBAL STOCKTAKE REPORT'S FINDINGS**

**2030 GLOBAL RENEWABLE ENERGY GOAL**

**PROJECT CHEETAH**



## RED SAND BOA

**CONTEXT:** WCS-India report reveals 172 instances of red sand boa seizures (2016-2021), highlighting rampant illegal trade in India.

**HIGHLIGHTS:** Red sand boa, classified as 'Near Threatened', faces illegal trade across India, notably in Maharashtra (59 cases) and Uttar Pradesh (33 cases), driven by pet demand and black magic use. WCS-India's report aims to raise awareness, prevent illegal trade, and safeguard the species against decreasing population trends.



The Red Sand Boa is a fascinating, rare snake species known for its unique appearance and traditional medicinal value. Conservation efforts are essential to protect its fragile populations.

## MISSION TO CLEAN THE GANGA

**CONTEXT:** : The National Mission for Clean Ganga has installed sewage treatment plants for only 20% of sewage generated along the river, with plans to reach 60% treatment capacity by 2026.

**BACKGROUND:** The Namami Ganga Programme, initiated in 2014 to rejuvenate the Ganges River, was extended until March 2026, with Rs.15, 517.02 crore allocated. A National Framework for Sediment Management was introduced in October 2022 to address sediment issues holistically, emphasizing integrated river basin management and facilitating stakeholder participation, especially state governments, in sediment management planning.

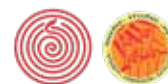
**HIGHLIGHTS:**

- The Namami Ganga Programme focuses on various

interventions, including wastewater treatment, solid waste management, and riverfront development, to rejuvenate the Ganges and its tributaries.

- Out of 442 projects undertaken at a cost of Rs.37,395.51 Crore, 254 have been completed, with a strong emphasis on sewage infrastructure to combat pollution.
- The program has created/rehabilitated 2664.05 MLD STP capacity and laid 4436.26 km of sewer network, addressing untreated wastewater as a major pollution source.





## PRESENT PROGRESS

- The Ministry of Jal Shakti introduced a "National Framework for Sediment Management" to address sediment issues through integrated river basin management.
- A National Workshop on Sediment Management was held in June 2023 to raise awareness about sedimentation challenges in rivers and reservoirs.
- Sediment dynamics in rivers are natural, with aggradation and degradation influenced by factors like flow, morphology, and sediment characteristics.
- The Namami Ganga mission primarily focuses on sewage infrastructure, accounting for 80% of the project's expenditure.
- As of July 2023, 2,665 MLD sewage treatment capacity is operational, marking significant progress compared to previous years.
- Challenges in land acquisition and project coordination were addressed, leading to improved progress in sewage treatment plant construction.

The Ministry of Jal Shakti's sediment management framework aims to address river sediment challenges holistically. The Namami Ganga mission has made substantial progress in sewage treatment, and coordination issues have been resolved for better project execution.

### National Mission for Clean Ganga (NMCG)

- National Mission for Clean Ganga (NMCG) formed in 2011 under the Societies Registration Act, aiding Ganga rejuvenation.
- NMCG implements goals of the National Ganga River Basin Authority (NGRBA) to control pollution and maintain river flow.
- The hierarchical structure includes the National Ganga Council, Empowered Task Force, NMCG, State Ganga Committees, and District Ganga Committees.
- NMCG's two-tier management consists of the Governing Council and Executive Committee, led by the Director General.
- Executive Committee has authority to approve projects up to Rs.1000 crore, ensuring efficient decision-making.
- State Programme Management Groups (SPMGs) align with State Ganga Committees for project implementation and holistic river restoration efforts.

## TECH PANEL EVALUATING HIMALAYAN STATES CAPACITY

**CONTEXT:** The Indian government plans to establish a 13-member committee to assess the "carrying capacity" of 13 Himalayan States amid concerns about landslides and urban load capacity.

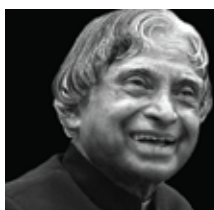
**BACKGROUND:** The Indian government had issued guidelines to 13 Himalayan states in January 2020 to assess the carrying capacity of their hill stations, cities, and eco-sensitive zones. It recently urged the states to submit action plans promptly. The government suggested forming committees, including experts from various fields, to evaluate the information and determine accurate carrying capacities, emphasizing the importance of this data.

### Land Slide Disaster in India

- Common Hazard: Landslides are frequent geological hazards in hilly regions globally, triggered primarily by rainfall.
- Rainfall Impact: Rainfall-induced landslides result

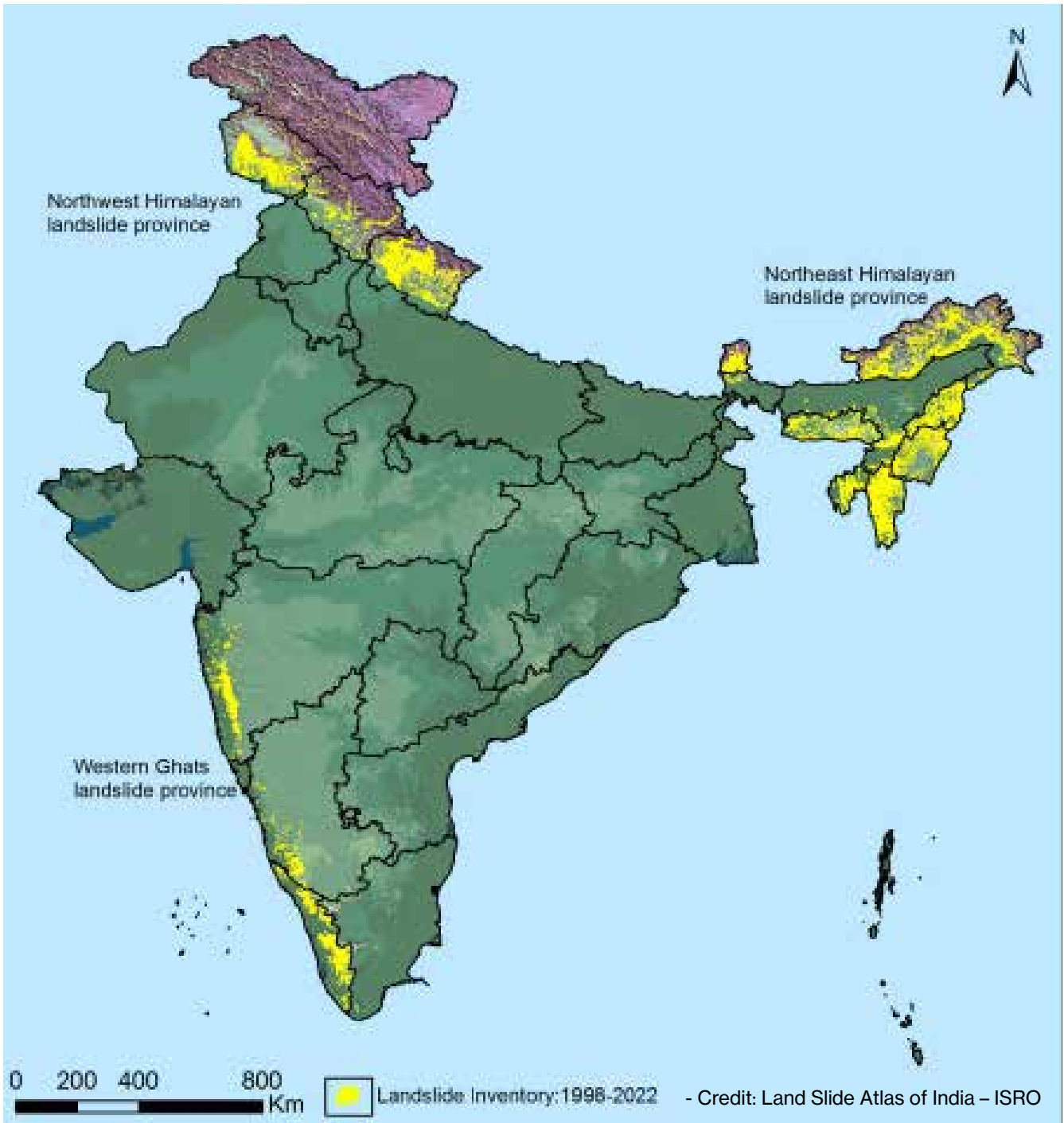
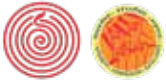
from water's interaction with terrain, geology, soil, and vegetation.

- Environmental Impact: Landslides cause environmental damage, including soil erosion and loss of human lives.
- Indian Vulnerability: India faces landslide risks due to diverse geography and climate, with 12.6% of land area prone to landslides.
- Affected Regions: Vulnerable areas include North East Himalaya, North West Himalaya, Western Ghats, Konkan hills, and Eastern Ghats.
- Monsoon Season: Landslides predominantly occur during India's monsoon season, especially in the Himalayas and Western Ghats.



*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM



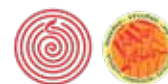
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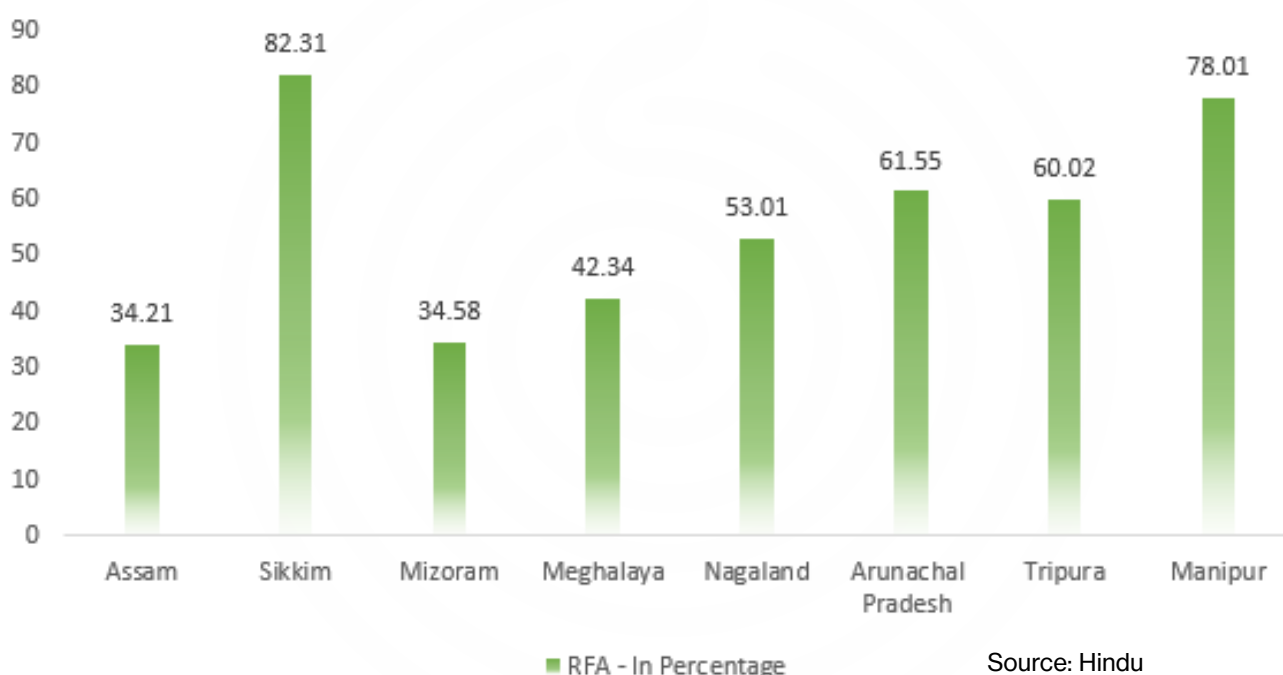
## LAWS GOVERNING FORESTS OF THE NORTHEAST

**CONTEXT:** Mizoram and other northeastern states oppose the Forest (Conservation) Amendment Act, 2023, particularly the 100-km exemption near international borders.

**BACKGROUND:** The Mizoram Assembly unanimously passed a resolution opposing the Forest (Conservation) Amendment Act, 2023, to safeguard the rights and interests of Mizoram's people. Special constitutional provisions like Article 371G protect Mizoram from laws that encroach upon its customary law, land ownership, and resources. A Supreme Court decision in 1996 broadened the definition of "forest land," extending the Forest (Conservation) Act to unclassified forests.

**Recorded Forest Area (RFA):** The Forest (Conservation) Act (FCA) in India has diverted over a million hectares of forestland since 1980. In 1996, the Supreme Court expanded the definition of "forest land" in the FCA to include areas recorded as forests in government records, extending the act to unclassified forests. These unclassified forests constitute a significant portion of Northeastern states, controlled by individuals, clans, or communities and governed by customary laws.

### RECORDED FOREST AREA IN NORTH EAST



#### Is FCA applicable to the Northeast?

- Special Constitutional Protections: Article 371A (Nagaland) and 371G (Mizoram) safeguard Naga and Mizo customary law, land ownership, and resources.
- Legislative Assembly Decision: Laws from Parliament can apply to these states only if their Legislative Assemblies pass resolutions.
- Nagaland's FCA Issue: Nagaland extended the Forest Conservation Act (FCA) but faced conflicting decisions on its applicability.
- Mizoram's FCA Application: Mizoram's Article 371G extends Central Acts, including FCA. Autonomous District Councils have limited powers over reserved forests.

- FCA in Northeast: FCA applies in other Northeastern states like Meghalaya, Tripura, Arunachal Pradesh, Sikkim, Manipur, and Assam.
- Arunachal Leads in FCA Clearance: Arunachal Pradesh had the highest FCA clearance, followed by Tripura, Assam, Manipur, Sikkim, and Meghalaya.
- Diverse Application: The passage of Article 371A and 371G reflects the unique constitutional provisions governing land, resources, and laws in these regions.

Several northeastern states, including Mizoram, are resisting the Forest (Conservation) Amendment Act, 2023, over concerns about the 100-km exemption clause near international borders, raising significant opposition to the legislation.



**INDIA'S LARGEST ONLINE IAS COACHING ACADEMY**





## BIOFUEL SUSTAINABILITY

**CONTEXT:** As electric vehicles gain popularity, there's growing awareness that decarbonisation strategies involve trade-offs, and sustainable biofuels offer advantages.

**BACKGROUND:** As electric vehicles (EVs) become more popular, it's clear that decarbonisation strategies involve trade-offs. Transitioning to EVs requires costly infrastructure changes and mineral imports, while biofuels can be used in existing infrastructure. However, distinguishing between sustainable and unsustainable biofuels is crucial for effective decarbonisation.

### The challenges in India

- India aims for 20% ethanol blending with petrol by 2025, primarily using first-generation ethanol from food crops.
- Growing food crops for ethanol production poses food security risks and may strain limited resources.
- Groundwater depletion and stagnant crop yields require prioritizing food production over fuel.
- The agriculture sector's direct greenhouse gas emissions make increasing them for fuel production counterproductive.

- Promoting sustainable biofuels from crop residues and waste is a more environmentally friendly approach, supported by global cooperation.

### Bio-fuels and Bio refineries

India, during its G20 Presidency, emphasizes international collaboration for energy security and the development of biofuels and hydrogen. It has notified the use of hydrogen as automotive fuel and promotes 2G ethanol production through the JI-VAN Yojana. Oil CPSEs are establishing 2G ethanol bio-refineries in various locations.

- Public Sector Oil Marketing Companies blended 433.6 crore liters of ethanol in petrol in the Ethanol Supply Year 2021-22.
- They also procured 5.83 crore liters of bio-diesel for blending with diesel in the financial year 2022-23.
- Oil and Gas Marketing Companies issued 3694 Letters of Intent for Compressed Bio Gas procurement up to October 31, 2022.

## GLOBAL STOCKTAKE REPORT'S FINDINGS

**CONTEXT:** : The United Nations climate secretariat released a 'synthesis report' on countries' progress toward Paris Agreement goals ahead of the G-20 summit in New Delhi.

**STORY SO FAR:** A 45-page UN report highlights 17 key findings indicating the world is off track to meet Paris Agreement targets. It emphasizes the need for transitioning away from fossil fuels and strengthening efforts. The Delhi Declaration at the G-20 summit recognizes the significant financial requirements for a renewable energy transition.

### 'Global Stocktake' Report

The 'global stocktake' is a key part of the Paris Agreement, occurring every five years to assess countries' progress in reducing greenhouse gases and transitioning to renewables. The first stocktake in 2023 will impact discussions at the 28th UN climate COP in November and may encourage countries to set more ambitious targets before the next NDCs in 2025.

### Major Findings of the Report

- The report, spanning 45 pages, reveals 17 key findings indicating the world's failure to meet Paris Agreement goals.
- Despite minor updates, the report reiterates the insufficiency of countries' NDCs from the 2022 UN synthesis report.
- Current pledges fall far short of required CO2

reductions, leaving a massive emissions gap of 20 billion tonnes.

- The Paris Agreement spurred goal-setting and climate urgency, demanding a transition from fossil fuels while ensuring an equitable economic shift.
- Ambitious emissions reductions of 43% by 2030, 60% by 2035, and global net-zero CO2 by 2050 are imperative.
- Scaling up renewable energy is essential, along with rapid elimination of unabated fossil fuels.
- Halting deforestation, promoting emission-reducing agricultural practices, and equitable global adaptation efforts are crucial.
- Enhanced climate finance access, trillions of dollars, and climate-resilient development support are vital for meeting global climate goals.

The report's influence extends to the G20 Leaders Declaration, recognizing the substantial financial needs, including USD 5.8-5.9 trillion for developing countries pre-2030 and USD 4 trillion annually for clean energy technologies by 2030.

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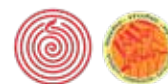
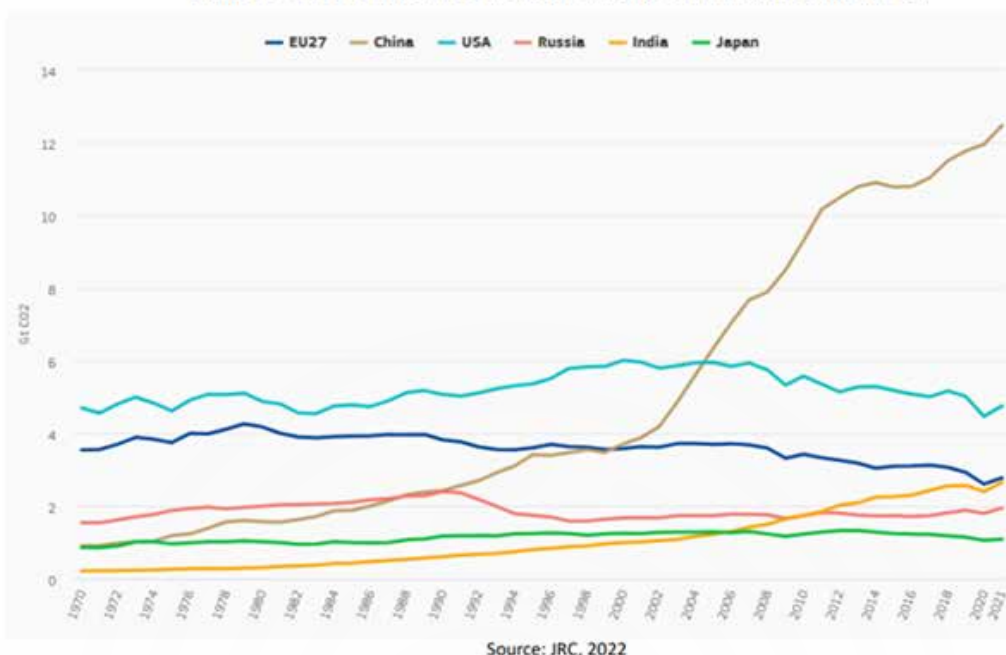


Figure 1. Fossil CO<sub>2</sub> emissions of the major emitting economies, 1970-2021 (in Gt)



Source: JRC, 2022

## 2030 GLOBAL RENEWABLE ENERGY GOAL

**CONTEXT:** COP28 presidency seeks global agreement to triple renewable energy capacity by 2030, but challenges warrant caution.

### DEVELOPMENT SO FAR:-

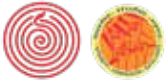
- In 2021, global renewable energy capacity reached 3026 GW, making up 39% of total capacity but only contributing 28% to electricity generation.
- Tripling renewable capacity by 2030 to 9000 GW is a challenging goal, requiring the addition of 6000 GW.
- Solar and wind energy are expected to drive this growth, given shorter construction times compared to hydropower.
- Assuming a 25% capacity utilization factor for solar and wind, meeting the target would yield 13,000 TWh of renewable electricity.
- Achieving this target would mean that 38% of global electricity production comes from renewables, assuming a 2.6% annual growth in demand.

### Mysterious Origin of Global RE Goal

- COP28's call for a global renewable energy (RE) target lacks transparency in its origin.
- It draws inspiration from an IRENA report, aiming to triple RE capacity to over 11 TW by 2030, similar to an inequitable scenario discussed.
- The IRENA analysis shows that non-RE capacity growth is concentrated in developing regions, with Sub-Saharan Africa and India facing substantial RE capacity demands.
- The approach of projecting installed capacity without considering energy demand growth is criticized, as it risks supply instability and requires substantial non-RE capacity.
- Meeting such ambitious targets also raises concerns about financing, grid infrastructure, and storage options in developing countries.

### Year- End Review 2022- Ministry of New and Renewable Energy

- India stands 4th globally in Renewable Energy Installed Capacity (including Large Hydro), 4th in Wind Power capacity & 4th in Solar Power capacity
- A total of 172.72 GW of capacity from non-fossil fuel sources installed in the country as on 31.10.2022, including 119.09 GW RE, 46.85 GW Large Hydro and 6.78 GW Nuclear Power capacity
- Generation from non-fossil fuel sources is 42.26% of total installed generation capacity in the country
- A total of 14.21 GW of Renewable Energy (RE) capacity added during the period Jan to Oct. 2022 as compared to capacity of 11.9 GM' added during the period January to October 2021
- As on 31-10-2022, 56 Solar Parks sanctioned with a cumulative capacity of 39.28 GW in 14 states
- As on 31.10.2022, cumulatively over 1.52 lakh stand-alone solar pumps installed under the Component-B and 73.45 MW cumulative capacity solar power plants installed under Component-A



## PROJECT CHEETAH

**CONTEXT:** Project Cheetah marks one year since the arrival of Namibian cheetahs, heralding India's reintroduction program

**BACKGROUND:** The African cheetah reintroduction project in India seeks to create self-sustaining cheetah populations within expansive, unfenced wildlife reserves, linked by wildlife corridors, promoting their role as top predators and aiding global conservation.

### Current Status of the Project

- Twenty African cheetahs were imported to India, with births in captivity bringing the total to 24.
- Cheetahs underwent prolonged quarantine, delaying their release into the wild at Kuno National Park.
- Six cheetahs have died, and 14 adults and one cub are currently in captivity.
- Project authorities plan to release them with radio collars once winter arrives, and consider additional release sites in the future.
- There are discussions about importing more cheetahs from Africa for the project.



### Death of Cheetah

- Several factors contributed to the deaths of six adult and three cub African cheetahs in India.
- Concerns include susceptibility to local insects and parasites, as well as the decision to bring sick cheetahs to India.
- The rushed captive mating process and heatwave conditions also raised questions about the deaths of cubs.
- Despite constant monitoring, definitive causes for the deaths remain undisclosed to the public.
- Authorities should reassess their approach to prevent further deaths and consider the impact of long-term captivity on cheetah fitness for release.

Project Cheetah represents a research effort aimed at developing advanced robotics and AI technologies, inspired by the cheetah's speed and agility, with potential applications in fields like mobility, search and rescue, and more.



**INDIA'S LARGEST ONLINE IAS  
COACHING ACADEMY**

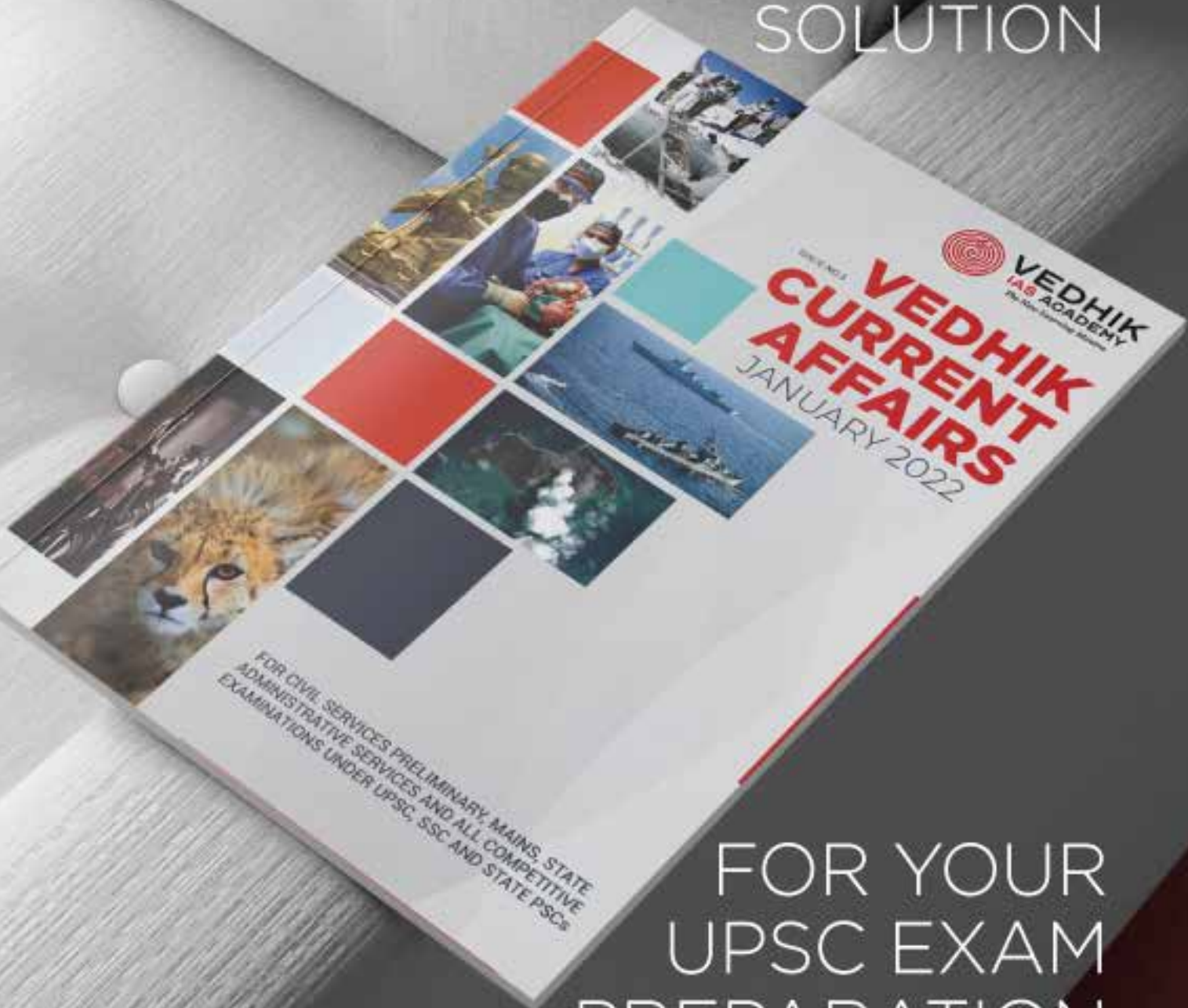




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# SCIENCE AND TECHNOLOGY





**SUPREME COURT WARNS OF FAKE WEBSITE, PHISHING ATTACK**

**FORECASTING PREECLAMPSIA WITH BIOMARKER EARLY**

**AI BOOSTS TB DETECTION IN X-RAYS**

**DIKSHA E-EDUCATION PLATFORM TO OFFER AI**

**ADITYA-L1 MISSION**

**STEALTH FRIGATE MAHENDRAGIRI**

**SHORT-LIVED NUCLEI**

**DARK PATTERNS**

**VIKRAM LANDER SOFT-LANDING ON MOON**

**GLOBAL BIOFUELS ALLIANCE (GBA)**

**ORPHAN DISEASES**

**MOSQUITO CONTROL GETS GENETIC ENGINEERING BOOST**

**IISC PIONEERS INNOVATIVE METHOD FOR CANCER DETECTION AND ERADICATION**

**CRYPTOGRAPHIC KEY**

**KERALA FACES RENEWED NIPAH VIRUS OUTBREAK**

**SHANTI SWARUP BHATNAGAR (SSB) PRIZES**

**NEURAL NETWORK**

**UNIDENTIFIED ANOMALOUS PHENOMENA (UAP)**





## SUPREME COURT WARNS OF FAKE WEBSITE, PHISHING ATTACK

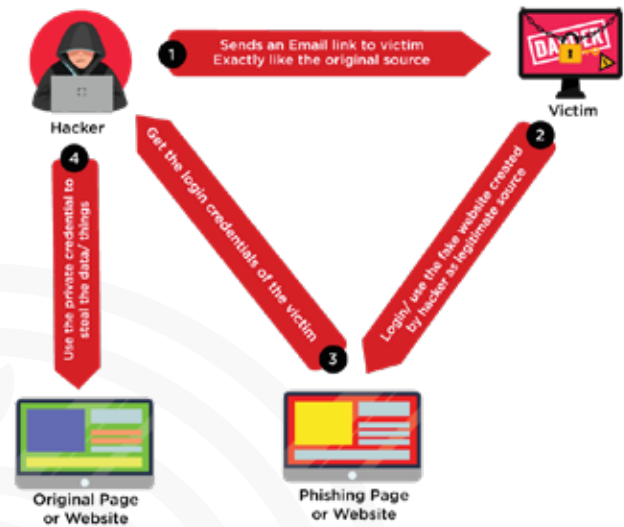
**CONTEXT:** Supreme Court alerts public to fake website posing as its own, attempting to trick users into revealing personal data (phishing).

**BACKGROUND:** A fraudulent website mimicking the Supreme Court's official site attempts to gather personal data. Visitors are warned against sharing confidential information and advised to verify links. The genuine Supreme Court website is [www.sci.gov.in](http://www.sci.gov.in). Authorities have been informed, and access to official sites crucial for ongoing cases is emphasized.

### What is a Phishing Attack?

A phishing attack is a deceptive cybercrime tactic in which attackers create fake websites or emails that mimic legitimate ones, aiming to trick users into revealing personal, financial, or confidential information.

- Deceptive Scheme: Phishing attack involves tricking individuals into divulging personal information through fake websites, emails, or messages.
- Impersonation: Attackers mimic trusted entities to appear legitimate and gain victims' trust for information theft.
- Data Theft: Victims are lured to share passwords, financial data, or sensitive information, which attackers exploit for fraud.
- Social Engineering: Psychological manipulation exploits human tendencies, encouraging recipients to take actions that compromise security.
- Awareness Needed: Users must be cautious, verify sources, and refrain from sharing sensitive data to thwart phishing attacks.



Phishing attacks are deceptive tactics used by cybercriminals to steal sensitive information. Vigilance, education, and strong security measures are crucial to protect against this pervasive online threat.

## FORECASTING PREECLAMPSIA WITH BIOMARKER EARLY

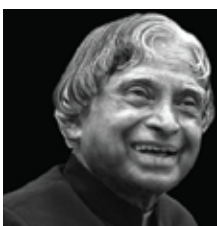
**CONTEXT:** A liquid biopsy measuring DNA-methylation in blood may enhance early detection of preeclampsia risk during pregnancy.

**BACKGROUND:** Preeclampsia, a significant gestational health issue, is particularly risky when it occurs early in pregnancy. Low-dose aspirin can mitigate the risk if administered before 16 weeks gestation, but early detection is crucial. Researchers are exploring liquid biopsy, a non-invasive diagnostic tool, by analyzing DNA methylation in blood samples from 498 pregnant women, aiming to improve early preeclampsia identification.

**HIGHLIGHTS:** Researchers identified DNA methylation differences in pregnancies with preeclampsia and developed a model for early risk assessment at around 12 weeks of gestation. When combined with clinical factors, this model correctly predicted 72% of early-onset preeclampsia cases. However, caution is advised as the study design may inflate the prevalence of preeclampsia.

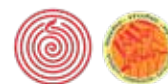
### Preeclampsia

- A pregnancy complication characterized by high blood pressure and damage to organs like the liver and kidneys.
- Symptoms: Include swelling, headaches, vision changes, and protein in urine.
- Risk Factors: Maternal age, first pregnancy, and certain medical conditions increase risk.
- Complications: Can lead to premature birth, low birth weight, and even life-threatening issues for both mother and baby.
- Management: Regular prenatal care, monitoring, and, in severe cases, early delivery are common approaches to manage preeclampsia



*You have to dream before your dreams can come true..*

- A. P. J. ABDUL KALAM



## AI BOOSTS TB DETECTION IN X-RAYS

**CONTEXT:** India uses AI-assisted chest X-rays with qXR algorithm by Qure.ai to screen for presumptive TB cases quickly and effectively.

**HIGHLIGHTS:** Systematic screening for tuberculosis (TB) using AI-assisted chest X-rays, such as qXR, is crucial for early diagnosis, aligning with India's "End TB" strategy. QXR meets WHO requirements with over 90% sensitivity and over 70% specificity in individuals over 15 years old. Successful implementation of AI-assisted X-ray screening is seen as a vital step in achieving India's goal of eliminating TB by 2025, as it can reduce TB prevalence and the need for molecular tests.

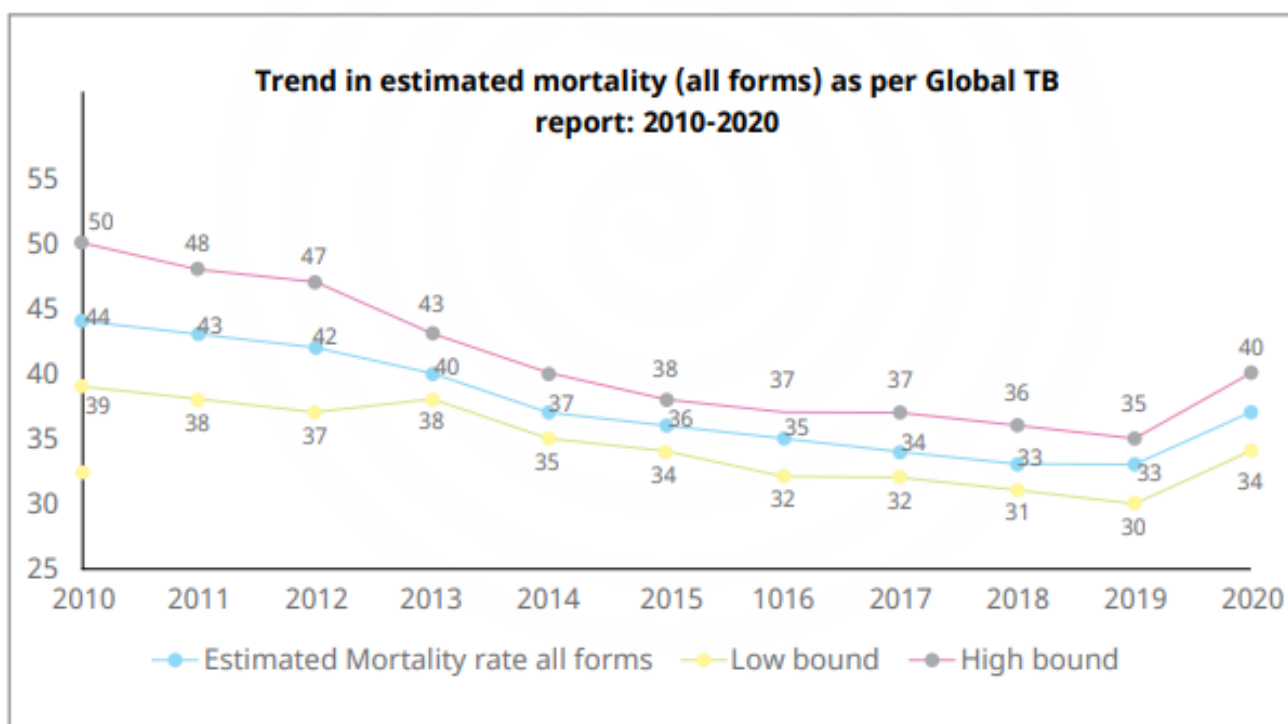
### Role of AI in TB Detection

AI aids TB detection through image analysis of chest X-rays, identifying patterns and anomalies faster, enabling early diagnosis, and improving healthcare access, especially in resource-constrained areas.

- Early Diagnosis: AI analyzes chest X-rays for subtle

signs, enabling early TB detection crucial for treatment and prevention.

- Efficient Screening: Automates the screening process, reducing the burden on healthcare professionals and increasing the speed of diagnosis.
- Improved Accuracy: AI algorithms enhance accuracy by minimizing human error in interpreting X-ray images, leading to more reliable results.
- Remote Healthcare: Facilitates remote TB diagnosis, particularly beneficial in underserved regions where access to healthcare is limited.
- Data Analysis: AI can analyze vast datasets to identify TB trends, aiding in public health interventions and resource allocation.



Source: INDIA TB REPORT 2022

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## DIKSHA E-EDUCATION PLATFORM TO OFFER AI

**CONTEXT:** The Ministry of Electronics and Information Technology plans to integrate Personalized Adaptive Learning (PAL) into the DIKSHA platform for personalized education.

**BACKGROUND:** DIKSHA, under the Education Ministry, offers e-content for schools with assistive technologies. It houses NCERT textbooks and contributions from academics. The National Council of Educational Research and Training (NCERT) seeks to integrate an AI-based Personalized Adaptive Learning (PAL) system into DIKSHA to enhance learning. Budget constraints have hindered its implementation in some states where private players are involved.

### RECENT DEVELOPMENT ACROSS STATES: -

- Andhra Pradesh EdTech Initiative: Andhra Pradesh partners with Reliance Jio's Embibe, ConveGenius, and Mindspark to train teachers and enhance IT-based education.
- Implementation Challenges: Assam discontinued a similar program due to funding issues, while Haryana found streaming costs prohibitive.
- Madhya Pradesh's Interest: Madhya Pradesh considers introducing a similar program on its education portal, CM-RISE.
- Voice Commands and AI: Ministry of Electronics and Information Technology (MeitY) explores adding voice commands and AI-enabled learning to DIKSHA 2.0.
- Long-Term Development: PAL's creation and rollout will take several years, with MeitY seeking partnerships with edtech companies for integration.



## ADITYA-L1 MISSION

**CONTEXT:** ISRO's Aditya-L1 Mission, India's inaugural solar mission, aimed at comprehending Sun's dynamics and space weather, set to launch on September 2.

**HIGHLIGHTS:** ISRO's Aditya-L1 solar mission, designed by Liquid Propulsion Systems Centre (LPSC), employs a LAM from Mars and moon missions. It'll enter a large halo orbit around Lagrange point (L1) after exit from Earth's gravitational influence, studying the Sun as India's first observatory-class solar mission. Launch to L1 takes about four months.

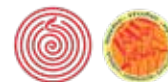
### ABOUT THE MISSION

- Aditya-L1: India's 1st solar mission to explore the Sun's dynamics. Positioned in halo orbit at L1 point.
- Advantage of continuous Sun observation from L1 without eclipses, yielding real-time space weather insights.
- Carries 7 payloads for photosphere, chromosphere, and corona studies using detectors.
- Aims to unravel coronal heating, mass ejections, flares, space weather drivers, magnetic field influence.
- Investigates solar upper atmosphere dynamics, CME origins, particle dynamics, plasma diagnostics, and more.

### What are Lagrange Points?

- Aditya-L1 aims for a halo orbit around Lagrange point (L1), 1.5 million km from Earth, conserving fuel due to its gravitational equilibrium. Lagrange points result from the balance of gravitational forces in two-body systems, with L1 located on the Sun-Earth line at 1% of the Earth-Sun distance.
- VISIBLE EMISSION LINE CORONAGRAPH (VELC): Aditya-L1's main payload, created by Indian Institute of Astrophysics, will capture 1,440 daily sun images from Lagrange Point 1, 1.5 million km away, studying the corona uninterrupted.





### Significance of the Mission

- **Solar Studies:** Aditya-L1 contributes to understanding the Sun's dynamics, helping predict solar storms and their impact on Earth's technology.
- **Space Weather Prediction:** Enhances space weather forecasts, crucial for satellite operations, communication, and power grids.
- **Climate Impact:** Studies solar irradiance's influence on Earth's climate, aiding climate change research and mitigation strategies.
- **Scientific Advancement:** Fuels scientific discoveries about the Sun's composition, magnetic fields, and solar phenomena.
- **National Pride:** Showcases India's space capabilities and bolsters its position in the global space community.

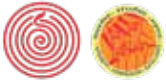
### Mission Challenges

- **Extreme Heat:** Aditya-L1 faces intense solar radiation and extreme temperatures, demanding robust thermal protection for spacecraft components.
- **Data Transmission:** Transmitting data from a distant orbit presents communication challenges, requiring efficient data relay systems.
- **Precision Orbits:** Maintaining a stable orbit near the Sun is difficult due to gravitational forces, necessitating precise navigation.
- **Space Weather Hazards:** The mission must account for potential damage from solar flares and coronal mass ejections.
- **Cost and Resources:** Developing and launching a specialized solar observatory involves substantial financial and technical resources.

### European agency to support Aditya-L1

- ESA provides crucial deep space communication support for India's Aditya-L1 mission, utilizing a global network of tracking stations.
- ESA serves as the primary ground station provider, supporting the mission from launch to its routine operations for two years.
- ESA and ISRO collaborated extensively in 2022 to evaluate and strategize the operation of the Aditya-L1 mission.





## STEALTH FRIGATE MAHENDRAGIRI

**CONTEXT:** The final stealth frigate of Project 17A, Mahendragiri, was launched at Mazagon Dock Shipbuilders Ltd. in Mumbai, enhancing India's maritime security capabilities.

**HIGHLIGHTS:** Mahendragiri, the seventh ship in the Project 17A Frigates series, represents India's commitment to naval advancement. These frigates, an evolution of the Project 17 Class (Shivalik Class), feature enhanced stealth, advanced weaponry, sensors, and platform management systems. The project includes four ships by MDL and three by GRSE, with six already launched between 2019 and 2023.

**BACKGROUND:** Mahendragiri, the final stealth frigate of Project 17A, marks a milestone in India's defense self-reliance efforts. Four warships are built by Mazagon Dock Shipbuilders Ltd., while the rest are constructed by GRSE, Kolkata. With changing power dynamics in the Indian Ocean Region, these frigates will strengthen India's naval capabilities, with delivery expected between 2024-26.



### About Project 17A

- Project 17A is a naval project for constructing advanced stealth frigates for the Indian Navy.
- It builds upon the capabilities of the Project 17 Class Frigates (Shivalik Class).
- These frigates feature enhanced stealth, advanced weaponry, sensors, and platform management systems.
- Four frigates are being built at Mazagon Dock Shipbuilders Limited, while three are constructed by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata.
- The first five frigates of Project 17A were launched between 2019-2022.
- All Project 17A frigates are expected to be delivered to the Indian Navy between 2024-26.

## SHORT-LIVED NUCLEI

**CONTEXT:** Researchers at RIKEN Nishina Center, Japan, have developed a method using electron scattering to study the structure of unstable nuclei, including those not found naturally.

**BACKGROUND:** Scientists at the RIKEN Nishina Center for Accelerator-Based Science in Japan have developed a setup that allows them to use electron scattering to probe the interiors of unstable nuclei, including those that don't occur naturally. This advancement builds on earlier experiments that used electron scattering to investigate the structure of stable atoms and their nuclei.

### Short-Lived Nuclei in an Atom

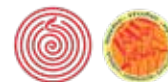
- **Definition:** Short-lived nuclei are radioactive atoms with unstable nuclei that spontaneously decay, transforming into other elements to achieve stability.
- **Instability:** They have excess energy or an imbalanced number of protons and neutrons, making them prone to decay.
- **Decay Modes:** Short-lived nuclei can decay through various processes, including alpha and beta decay, emitting particles or radiation.
- **Applications:** They play a crucial role in nuclear physics, radiometric dating, and medical imaging (e.g., PET scans).
- **Production:** Often created in particle accelerators or nuclear reactors, short-lived nuclei are essential for scientific research and practical applications.

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## DARK PATTERNS

**CONTEXT:** The Indian government aims to curb deceptive online practices like "dark patterns" by seeking public input on draft guidelines until October 5.



**BACKGROUND:** The Indian government is seeking public input on draft guidelines to prevent and regulate "dark patterns" on the internet, especially on e-commerce platforms. These dark patterns include deceptive practices like false urgency and subscription traps. Public comments are invited on these guidelines until October 5, following global efforts to curb such practices, as seen with Amazon's case in the European Union.

### What is a Dark Pattern?

A dark pattern is a deceptive design element or user interface trick used in websites or apps to manipulate and mislead users into taking unintended actions, often for the benefit of the designer or company.

- **Misleading Choices:** They often present misleading choices or obstacles to push users towards certain decisions or purchases.
- **Harmful Intent:** Dark patterns serve the interests of the designer or company, prioritizing profit over user well-being.
- **Examples:** Common dark patterns include hidden fees, aggressive pop-ups, and opt-out default settings.
- **Ethical Concerns:** Dark patterns raise ethical questions about user consent, transparency, and fair digital practices.

The Indian government is taking steps to combat deceptive online tactics known as "dark patterns" by soliciting public feedback on draft guidelines that address various misleading practices on internet platforms, including e-commerce websites.

## VIKRAM LANDER SOFT-LANDING ON MOON

**CONTEXT:** India's Chandrayaan-2 mission to the moon successfully reached lunar orbit but experienced a communication failure during the Vikram lander's descent, resulting in a crash landing.

**BACKGROUND:** India's Chandrayaan-2 mission to the moon in 2019 ended in a crash due to three crucial errors. The guidance system malfunctioned during the attitude-hold phase, causing full thrust instead of half. During the fine braking phase, the system struggled to correct large errors, but the control system couldn't provide sufficient corrections in time, resulting in the crash.

had added weight due to improvements, including extra fuel and stronger legs.

- **Chandrayaan-2 Failure Analysis:** Dr. Sivan, ISRO chairman, identifies three key errors that led to the Chandrayaan-2 lander's crash on the moon.
- **Errors in Thrust and Guidance:** The thrust and guidance system had flaws, causing excessive thrust and orientation problems.
- **Control System Limitations:** The control system had rate restrictions, preventing necessary orientation corrections.
- **Cumulative Errors:** All three mistakes combined to result in Chandrayaan-2's failure.
- **Chandrayaan-3 Improvements:** ISRO addressed these errors in Chandrayaan-3, ensuring no extra dispersion, fixing guidance, and removing rate restrictions.
- **Increased Weight:** Chandrayaan-3

- **Multiple Engines:** To accommodate the increased weight, two engines were used for landing instead of a single central engine.

**Learning from mistakes**  
Instead of a central engine, two engines were used for Vikram to soft-land on the Moon on August 23, 2023

**Mighty:** The Chandrayaan-3's Vikram lander is about 250 kg heavier than its predecessor

- There are four important phases before the touchdown on the Moon — the rough braking phase, the attitude-hold (orientation) phase, the fine braking phase, and the landing phase
- During the 2019 Chandrayaan-2 mission, the rough braking phase was executed perfectly. Problems with the touchdown began when the Vikram lander entered the second phase — the attitude-hold phase
- In the attitude-hold phase, the thrust had to be maintained at half the level. But the achieved thrust was more than half, which was the first mistake
- Not designed to handle a large change in thrust, the guidance system malfunctioned leading to full thrust being given to the lander. This was the second error
- The control system in the fine braking phase could not correct the error as it was not designed to produce large changes in velocity and altitude. This was the third mistake
- Changes in the system prevented the three errors from recurring in the latest Chandrayaan-3 mission
- Other improvements suggested by the failure analysis committee were also incorporated in the Chandrayaan-3 mission





## GLOBAL BIOFUELS ALLIANCE (GBA)

**CONTEXT:** : India's PM Modi launches Global Biofuels Alliance at G-20, urges 20% ethanol-petrol blend; global leaders support.

**BACKGROUND:** Indian Prime Minister Modi proposed the G-20 Satellite Mission for Environment and Climate Observation and the Green Credit Initiative at the G-20 Summit's "One Earth" session. He emphasized the importance of energy transition to combat climate change, highlighting the need for trillions of dollars and developed countries' commitment to provide \$100 billion for climate finance. The focus is on securing a sustainable and affordable supply of biofuels.

### About the Alliance

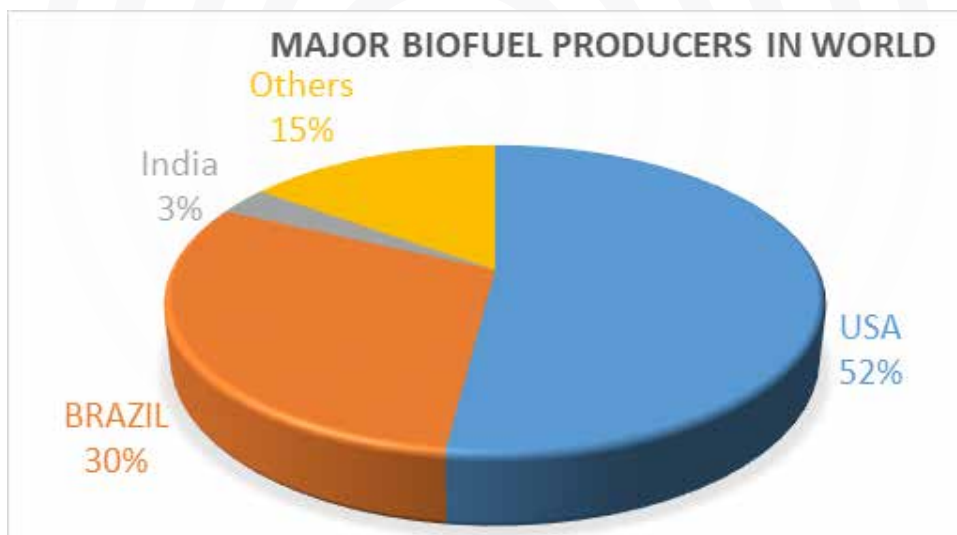
The Global Biofuels Alliance (GBA) is a multinational organization dedicated to advancing the production, affordability, and sustainability of biofuels on a global scale.

- Prime Minister Narendra Modi announced the Global Biofuels Alliance (GBA) at the G20 Summit.
- GBA, led by India, aims to unite governments, organizations, and industry for biofuel adoption.

- It seeks to position biofuels as vital for energy transition and economic growth.
- GBA will provide capacity-building, technical support, and promote policy sharing globally.
- The alliance will create a virtual marketplace to connect technology providers and users.
- It will establish international standards to encourage biofuel adoption and trade.
- GBA benefits India by enhancing its global standing, promoting collaboration, and supporting existing biofuel programs.

International organizations (12): World Bank, Asian Development Bank, World Economic Forum, World LPG Organization, UN Energy for All, UNIDO, Biofutures Platform, International Civil Aviation Organization, International Energy Agency, International Energy Forum, International Renewable Energy Agency, World Biogas Association.

### COUNTRIES AND ORGANIZATIONS WHICH HAVE ALREADY JOINED GBA



### ORPHAN DISEASES

**CONTEXT:** Common health concerns like diabetes dominate discussions, but rare ailments with severe consequences also demand attention.

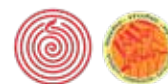
**BACKGROUND:** A rare disease, often called an orphan disease, typically has a prevalence rate of one case in 10,000 people. These conditions were hard to diagnose and lacked research and treatments due to their rarity. However, growing awareness and genomic technology have spurred interest in "orphan drugs," with high costs being a concern, particularly in India, ranging from 1 million to 20 million per year

### STATUS IN INDIA

- 9,675 patients enrolled since November, 2019 on National Registry for Rare and Other Inherited Disorders (NRROID) portal
- For FY 2023-24, Rs.92.84 Crore allocated for treatment of rare disease' patients in designated Centres of Excellence under National Policy for Rare Diseases (NPRD), 2021



**INDIA'S LARGEST ONLINE IAS COACHING ACADEMY**



### National Policy for Rare Diseases, 2021

- The policy aims to reduce rare disease incidence and prevalence through preventive measures, awareness, and counseling.
- Financial support up to Rs.20 lakhs is provided for one-time treatment of Group 1 rare diseases.
- States may assist with low-cost interventions for Group 2 rare diseases.
- A digital platform encourages voluntary donations for high-cost rare disease treatments (Group 3).
- Crowdfunding connects hospitals treating rare disease patients with prospective donors.
- Funds prioritize patient treatment costs, with potential for research use.
- The National Policy for Rare Diseases includes a research consortium led by the Department of Health Research (DHR) and involving the Indian Council of Medical Research (ICMR).

## MOSQUITO CONTROL GETS GENETIC ENGINEERING BOOST

**CONTEXT:** Urbanization drives mosquito-borne diseases like dengue; gene drive tech combats them through genetically modified mosquitoes.

**HIGHLIGHTS:** Rapid urbanization, climate change, and insecticide resistance have exacerbated mosquito-borne diseases worldwide. Traditional mosquito control methods are challenged. Advances in genome sequencing and editing, such as high-quality reference genomes for malaria-vector mosquitoes, provide new tools to combat these diseases, offering unprecedented opportunities for innovative approaches to mosquito control.

### FUNDAMENTAL IDEA BEHIND GENETIC MANIPULATION OF MOSQUITOES

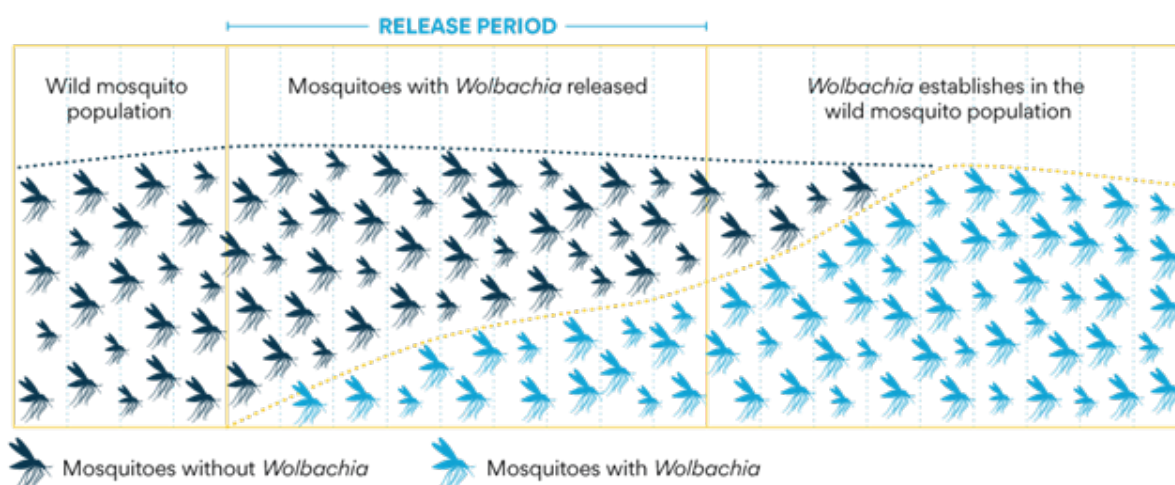
- Genetic manipulation of mosquitoes aims to control their populations by disrupting their reproduction.
- Gene-drive technology, conceived by Austin Burt, alters mosquito DNA to reduce reproductive capabilities or induce sterility.
- Researchers at Imperial College London enhanced a gene to make mosquitoes secrete antimicrobial substances, hindering the malaria parasite's development and reducing mosquito lifespan.
- This approach has the potential to disrupt malaria transmission, as suggested by computational modeling studies.

- The goal is to reduce the ability of mosquitoes to transmit malaria by genetically modifying them.

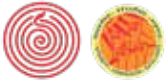
### WOLBACHIA METHOD

It involves infecting mosquitoes with the Wolbachia bacterium, which can inhibit the transmission of diseases like dengue and Zika by reducing the mosquitoes' ability to transmit these diseases.

- **Wolbachia Bacterium:** Wolbachia is a naturally occurring bacterium found in many insects, and it's introduced into mosquito populations through controlled releases.
- **Population Control:** Wolbachia-infected mosquitoes produce offspring with a reduced ability to carry disease, thus reducing disease transmission in the population.
- **Field Trials:** Field trials of the Wolbachia method have shown promising results in reducing the incidence of diseases like dengue in areas where these mosquitoes were released.
- **Non-GMO Approach:** Unlike genetic modification, the Wolbachia method doesn't involve altering the mosquito's DNA, making it a non-GMO approach to disease control.



Credit: World Mosquito Program



## IISC PIONEERS INNOVATIVE METHOD FOR CANCER DETECTION AND ERADICATION

**CONTEXT:** IISc scientists develop hybrid nanoparticles to detect and kill solid tumor cancer cells with heat and sound.

**HIGHLIGHTS:** Researchers at the Indian Institute of Science (IISc) have developed hybrid nanoparticles combining copper sulphide and gold, which possess photothermal and oxidative properties. When exposed to light, these nanoparticles generate heat and toxic singlet oxygen atoms to kill cancer cells. They can also enhance cancer detection through ultrasound waves, offering potential applications in diagnosis and treatment. The nanoparticles are small enough to potentially travel through tissues and reach tumors, but further safety studies are needed before clinical use.

### NANO-TECHNOLOGY IN CANCER TREATMENT

Nanotechnology in cancer treatment employs tiny particles (nanoparticles) to target and deliver drugs, improving precision, reducing side effects, and enhancing the efficacy of cancer therapies.

- Precision Targeting: Nanotechnology in cancer treatment enables precise drug delivery to tumor cells, minimizing damage to healthy tissue.

- Enhanced Drug Effectiveness: Nano-sized drug carriers can improve the solubility and bioavailability of anticancer drugs, enhancing their therapeutic effect.
- Early Detection: Nanoparticles can be engineered to detect cancer markers at early stages, enabling timely diagnosis and intervention.
- Personalized Medicine: Nanotechnology allows for tailored treatments by designing nanoparticles to respond to individual patient needs.
- Reduced Side Effects: Nano-based therapies can minimize side effects commonly associated with chemotherapy, improving the quality of life for cancer patients.

Innovative hybrid nanoparticles developed by the Indian Institute of Science offer promise in both cancer treatment and detection. Their ability to generate heat and enhance ultrasound-based imaging holds potential for more effective cancer therapies and diagnostics.

## CRYPTOGRAPHIC KEY

**CONTEXT:** China-based hacking group Storm-0558 breached U.S. government-linked email accounts, exploited Microsoft engineer's corporate account flaw.

**BACKGROUND:** In July, Microsoft disclosed that a China-based hacking group called Storm-0558 breached U.S. government-linked email accounts, including those of high-ranking officials like Commerce Secretary Gina Raimondo and U.S. Ambassador to China Nicholas Burns. The breach originated from a compromised Microsoft engineer's account but has since been resolved.

### About Storm-0558

Microsoft Threat Intelligence has assessed with moderate confidence that the China-based threat actor Storm-0558 conducts espionage activities. The group primarily targets U.S. and European diplomatic, economic, and legislative entities, as well as individuals linked to Taiwan and Uyghur interests. They gained access through phishing campaigns and exploiting vulnerabilities in public-facing applications.

### What is Cryptographic Key?

A cryptographic key is a secret string of data used in encryption and decryption processes to secure information, ensuring confidentiality and data integrity in communication and data storage.

- Secure Communication: A cryptographic key is a vital component in ensuring secure communication and data protection in digital systems.
- Encryption and Decryption: Cryptographic keys are used to encrypt data for confidentiality and decrypt it for authorized access.
- Key Length: Longer keys provide higher security, as they increase the complexity of breaking encryption through brute force attacks.
- Public and Private Keys: Cryptographic systems often employ pairs of keys, including a public key for encryption and a private key for decryption.
- Key Management: Proper key management is crucial for maintaining the security of encrypted data, including secure storage and regular key rotation.

Cryptographic keys are vital tools in securing digital information. They facilitate encryption, ensuring data privacy and integrity. The strength and management of keys are crucial for effective cybersecurity.

## KERALA FACES RENEWED NIPAH VIRUS OUTBREAK

**CONTEXT:** Nipah virus resurfaces in Kerala with deaths, sparking concern over zoonotic transmission; prompt response crucial.

**BACKGROUND:** Deaths in Kerala were attributed to the Nipah virus, with a nine-year-old child and a relative under treatment. A Central team of experts is assisting the state government, and medical colleges have received guidelines and protective kits. Symptoms include fever, muscle pain, and respiratory issues. The health department issued an alert in the district.

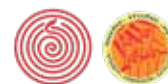
### ABOUT NIPAH VIRUS

Nipah virus: Zoonotic, spreads via animals and

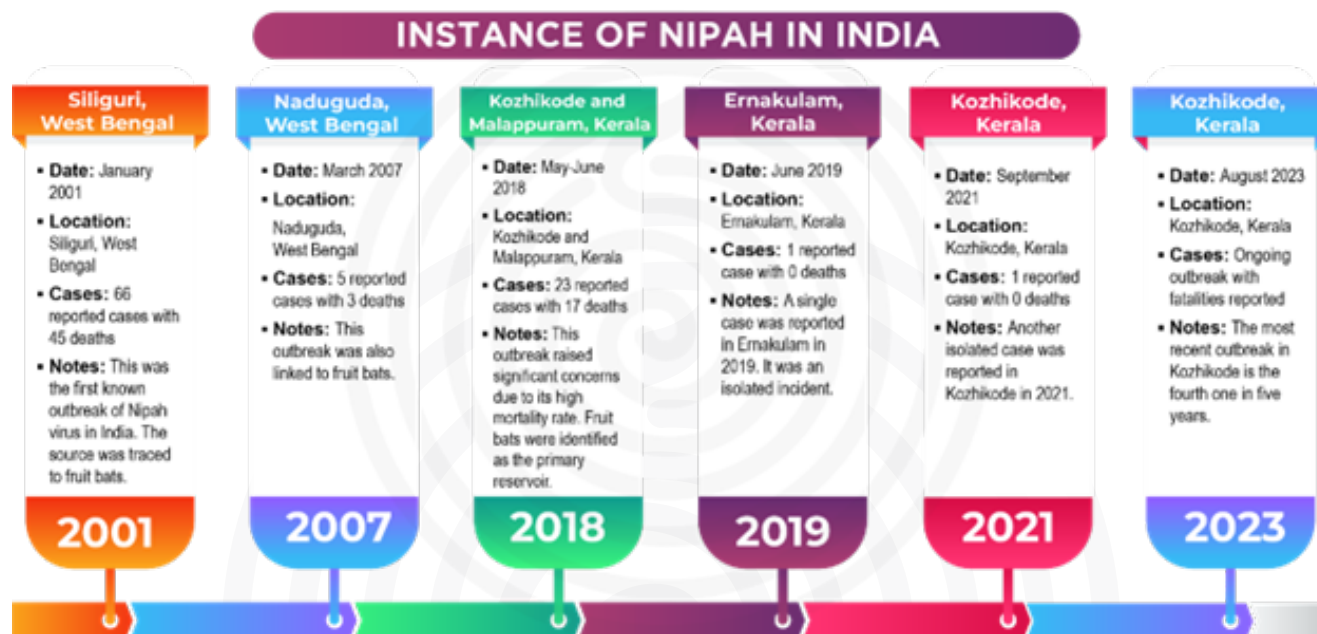
people; causes various illnesses, including fatal encephalitis; impacts animals and agriculture.

- Diverse Clinical Presentations: Nipah virus infection in humans ranges from asymptomatic to severe encephalitis, with a high case fatality rate (40%-75%) varying by local capabilities.
- Transmission Sources: It can spread from animals (like bats and pigs), contaminated foods, and human-to-human transmission.





- Natural Host: Fruit bats (Pteropodidae family) are the natural hosts of Nipah virus.
- No Treatment or Vaccine: Currently, there's no specific treatment or vaccine for Nipah virus, and supportive care is the primary approach.
- Urgent Research Need: The WHO's 2018 R&D Blueprint highlights the critical need for accelerated research and development to address the Nipah virus.



## TRANSMISSION, SIGNS AND SYMPTOMS

Nipah virus primarily spreads from animals to humans, with initial outbreaks in Malaysia and Singapore linked to contact with sick pigs or their tissues. In later outbreaks in Bangladesh and India, consumption of fruit products contaminated by infected fruit bats' urine or saliva became a likely source.

Human-to-human transmission has also occurred through close contact with secretions and excretions of infected individuals. Symptoms range from mild fever and respiratory issues to severe encephalitis, with a high case fatality rate of 40% to 75%. Survivors may experience long-term neurological consequences. The incubation period can vary but typically ranges from 4 to 14 days.

## DIAGNOSIS

Nipah virus infection is challenging to diagnose due to nonspecific initial symptoms, hindering timely detection and outbreak control. Diagnostic accuracy is influenced by the quality and timing of clinical sample collection.

Diagnosis relies on tests like real-time polymerase chain reaction (RT-PCR) from bodily fluids and antibody

detection via enzyme-linked immunosorbent assay (ELISA), with additional tests including PCR assay and virus isolation by cell culture.

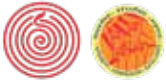
## NIPAH VIRUS OUTBREAKS and KERALA

- Kerala has experienced four Nipah virus outbreaks since 2018, with three occurring in Kozhikode district, and one in Ernakulam district in 2019.
- A 2021 study found Nipah virus in fruit bats across many districts in Kerala, raising concerns about undetected cases in other states.
- Kerala's robust healthcare system and proactive investigation of undiagnosed fever cases may explain the detection of Nipah cases.
- Limited Nipah testing facilities in India, with only Kerala routinely screening, may result in undetected cases elsewhere.
- Unique Nipah symptoms, clustering of cases, and proximity to previous outbreaks trigger suspicion and testing in Kerala, potentially leading to early detection.

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## SHANTI SWARUP BHATNAGAR (SSB) PRIZES

**CONTEXT:** The Council of Scientific and Industrial Research (CSIR) has finally announced the delayed Shanti Swarup Bhatnagar (SSB) Prizes for outstanding young scientists.

**BACKGROUND:** The Shanti Swarup Bhatnagar (SSB) Prizes, awarded annually to outstanding Indian scientists under 45, faced a delay due to the government's plan to reduce the number of prizes for scientists. Despite concerns about their discontinuation, the Ministry of Home Affairs ultimately retained the SSB prizes, known as the "Indian Nobel."

### ABOUT AWARD

- **Inception:** Shanti Swarup Bhatnagar Prizes were established in 1958 to honor outstanding contributions to science and technology in India.
- **Categories:** The awards are presented annually in various categories, including Physical Sciences, Chemical Sciences, Biological Sciences, and more.
- **Prestigious:** SSB Prizes are among India's most prestigious scientific awards, recognizing exceptional researchers for their pioneering work.
- **Named after:** Named after the eminent Indian scientist Shanti Swarup Bhatnagar, these awards celebrate his legacy in the field of science.
- **Impact:** The recognition and financial support provided by these awards have significantly boosted scientific research and innovation in India over the years.



## NEURAL NETWORK

**CONTEXT:** Autonomous drone races fueled by a groundbreaking neural network technology take flight, pushing limits.

**BACKGROUND:** In a groundbreaking development, autonomous drones, trained using reinforcement learning, outpaced human pilots, reaching speeds of 108 km/h on the same racetrack, highlighting the significance of adaptable control systems for agile flight.

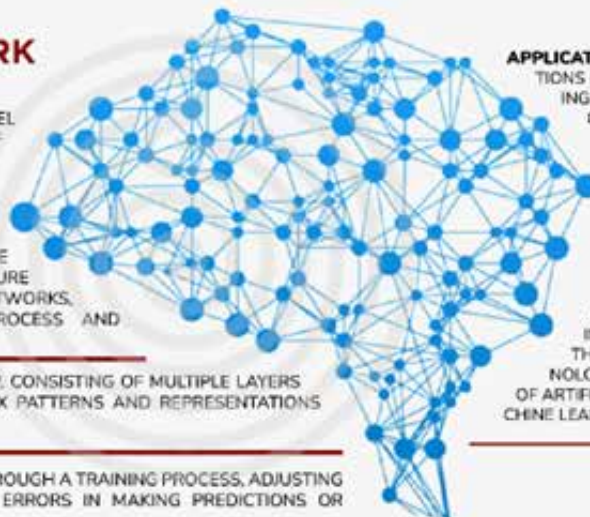
### ABOUT NEURAL NETWORK

A NEURAL NETWORK IS A COMPUTATIONAL MODEL INSPIRED BY THE HUMAN BRAIN, COMPOSED OF INTERCONNECTED ARTIFICIAL NEURONS THAT PROCESS DATA, ENABLING TASKS LIKE PATTERN RECOGNITION AND MACHINE LEARNING

**ARTIFICIAL NEURONS:** NEURAL NETWORKS ARE COMPUTATIONAL MODELS INSPIRED BY THE STRUCTURE AND FUNCTION OF BIOLOGICAL NEURAL NETWORKS, COMPOSED OF ARTIFICIAL NEURONS THAT PROCESS AND TRANSMIT INFORMATION.

**DEEP LEARNING:** NEURAL NETWORKS CAN BE DEEP, CONSISTING OF MULTIPLE LAYERS OF NEURONS, ENABLING THEM TO LEARN COMPLEX PATTERNS AND REPRESENTATIONS FROM DATA.

**TRAINING PROCESS:** NEURAL NETWORKS LEARN THROUGH A TRAINING PROCESS, ADJUSTING THEIR WEIGHTS AND PARAMETERS TO MINIMIZE ERRORS IN MAKING PREDICTIONS OR CLASSIFICATIONS.



**APPLICATIONS:** THEY FIND APPLICATIONS IN DIVERSE FIELDS, INCLUDING IMAGE AND SPEECH RECOGNITION, NATURAL LANGUAGE PROCESSING, AUTONOMOUS VEHICLES, AND RECOMMENDATION SYSTEMS.

**VERSATILITY:** NEURAL NETWORKS HAVE SHOWN REMARKABLE PERFORMANCE IN VARIOUS TASKS, MAKING THEM A FUNDAMENTAL TECHNOLOGY IN THE ADVANCEMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING.

Neural networks are a class of machine learning models inspired by the human brain. They consist of interconnected nodes that learn from data to perform tasks like classification and regression, enabling complex pattern recognition and decision-making.



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## UNIDENTIFIED ANOMALOUS PHENOMENA (UAP)

**CONTEXT:** NASA adopts a scientific approach to UFOs, while questionable claims of extraterrestrial evidence surface in Mexico

**BACKGROUND:** Lawmakers in the Mexican Congress recently heard testimonies on possible extraterrestrial existence, including claims of non-human mummies presented by José Jaime Maussan. Scientists dispute the claims, suggesting potential looting of graves.

### Developments So Far

- NASA recommends increased efforts to study Unidentified Anomalous Phenomena (UAP) in collaboration with the Pentagon.
- A year-long study finds no evidence of extraterrestrial origin in past UAP observations.
- Most UAP observations are coincidental, often misconstruing natural or human-made objects.
- The U.S. government has shifted toward scientific investigation of UAPs and debunking claims using trigonometry and research offices.
- Only a small fraction of UAP sightings remain unexplained, according to NASA's study.

### UNIDENTIFIED ANOMALOUS PHENOMENA (UAP)

- **Mysterious Sightings:** UAP refer to unexplained aerial objects or phenomena witnessed by pilots, astronauts, and civilians, defying conventional explanations.
- **Advanced Capabilities:** UAP often exhibit flight characteristics beyond known human technology, like extreme speed, agility, and maneuverability.
- **National Security Concerns:** UAP sightings near military facilities raise security questions, prompting investigations by governments worldwide.
- **Data Collection:** Scientists and agencies collect data on UAP to better understand their origins, potential threats, and implications for science and technology.
- **Potential Extraterrestrial Origins:** Some speculate that UAP could be evidence of extraterrestrial life or advanced civilizations, sparking both scientific and public fascination.



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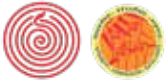


A close-up photograph of a person wearing a blue, textured shirt. Their hands are clasped together in front of them, with the fingers interlaced. The background is a solid, light blue color. The text 'CSAT' is overlaid in the center in a large, white, bold, sans-serif font.

**CSAT**



**READING COMPREHENSION**



## CALENDARS AND CLOCKS

### Basic Structure of a Calendar

- Ordinary year: Any year which 365 days is called an ordinary year. Ex: 1879, 2009, 2019, etc.
- Leap year: Any year which has 366 days is called a leap year. Ex: 2012, 2016 2020 etc. (if the year is divisible by 4, it is called leap year)
- The division of the number 365 by 7 gives the quotient 52 and remainder 1 which indicates that an ordinary year has 52 weeks and one extra day. This extra day is referred to as an “odd day” throughout the calendar topic.
- A leap year has 366 days, the division of the number 366 by 7 gives the quotient 52 and remainder 2. This indicates that a leap year has 52 weeks and 2 extra days. These two extra days are also referred to as “odd days”.
- An ordinary year has one odd day, whereas a leap year has two odd days.

### Concept of an Odd Day

#### Number of odd days in a month

- January has 31 days, irrespective of whether it's an ordinary year or leap year. The division of the number 31 by 7 provides the remainder 3 hence January has 3 odd days. On generalising, any month which has 31 days has 3 odd days and any month which has 30 days has 2 odd days.
- The only exception happens in the case of February. The February month of an ordinary year has 28 days, division of 28 by 7 provides zero as remainder. Hence, the number of odd days in February of an ordinary year will have 0 odd days and that of leap years will have 1 odd day as February in a leap year has 29 days.
- Refer to the following three tables for odd days:

**Table 1**

| Month     | Number of Odd Days |
|-----------|--------------------|
| January   | 3                  |
| February  | 0/1                |
| March     | 3                  |
| April     | 2                  |
| May       | 3                  |
| June      | 2                  |
| July      | 3                  |
| August    | 3                  |
| September | 2                  |
| October   | 3                  |
| November  | 2                  |
| December  | 3                  |

**Table 2**

| Day       | Code of the day |
|-----------|-----------------|
| Sunday    | 0               |
| Monday    | 1               |
| Tuesday   | 2               |
| Wednesday | 3               |
| Thursday  | 4               |
| Friday    | 5               |
| Saturday  | 6               |

**Table 3**

| Century | Number of odd days |
|---------|--------------------|
| 100     | 5                  |
| 200     | 3                  |
| 300     | 1                  |
| 400     | 0                  |

### CLOCK THEORY

In every hour

- Both the Hands coincide once. At this point the angle between them is  $0^\circ$ .
- The hands are straight (point in opposite directions) once. At this point the angles between them are  $180^\circ$ .
- The hands are twice perpendicular to each other. At this point the angle between them is  $90^\circ$ .
- (a) In 60 min the minute hand covers  $360^\circ$ .
- When the two hands are at right angles, they are 15min spaces apart.
- When the two hands are in opposite directions, they are 30 min spaces apart.

- In 60 min the minute hand gains 55 min on the hour hand.
- The minute hand moves 12 times as fast as the hour hand.
- Too Fast: If a clock indicates 7 : 15, when the correct time is 7, it is said to be 15 min too fast.
- Too Slow: If a clock indicates 7 : 30, when the correct time is 7: 45 , it is said to be 15 min too slow.

### Practice Questions

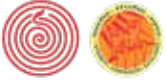
January 3, 2007 was Wednesday. What day of the week fell on January 3, 2008?

- Tuesday  
Friday  
Thursday





|  |  |
|--|--|
| Saturday   | 19   |
| If the third day of a month is Monday, then which day of the week will be the fifth day from the 21st of that month?                   | From January 1, 2021, the price of petrol (in Rupees per litre) on $m$ th day of the year is $80 + 0.1m$ , where $m = 1, 2, 3, \dots, 100$ and thereafter remains constant. On the other hand, the price of diesel (in Rupees per litre) on the $n$ th day of 2021 is $69 + 0.15n$ for any $n$ . On which date in the year 2021 are the prices of these two fuels equal? (UPSC 2021) |
| Tuesday  | 21st May   |
| Monday   | 20th May   |
| Wednesday  | 19th May   |
| Thursday   | 18th May   |
| If 5th January 1991 was a Saturday, what day of the week was 4th March 1992?   | Find the angle between the hour hand and the minute hand of a clock when the time is 5 : 35 pm.  |
| Monday   | 42.5 degrees   |
| Wednesday  | 167.5 degrees  |
| Friday   | 168 degrees  |
| Saturday   | 49 degrees   |
| 4th April, 1988 was Monday. What day of the week was it, on 6th November 1987?   | Seeta and Geeta go for a swim after a gap of every 2 days and every 3 days respectively. If on 1st January both of them went for a swim together, when will they go together next? (UPSC 2019)   |
| Tuesday  | 7th January  |
| Friday   | 8th January  |
| Sunday   | 12th January   |
| Saturday   | 13th January   |
| Find the day of the week on 26th January 1950.   | If the 3rd day of a month is Monday, which of the following will be the fifth day from 21st of the month? (UPSC 2014)  |
| Tuesday  | Monday   |
| Friday   | Tuesday  |
| Wednesday  | Wednesday  |
| Thursday   | Thursday   |
| Find the day of the week on 15th August 1947.  | Which year has the same calendar as that of 2009? (UPSC 2019)  |
| Tuesday  | 2018   |
| Wednesday  | 2017   |
| Friday   | 2016   |
| Thursday   | 2015   |
| Find the day of the week on 16th December, 1971.   | If in the particular year 12th January is a Sunday, then which one of the following is correct? (UPSC 2020)  |
| Tuesday  | 15th July is a Sunday if the year is a leap year.  |
| Sunday   | 15th July is a Sunday if the year is not a leap year.  |
| Thursday   | 12th July is Sunday if the year is a leap year.  |
| Friday   | 12th July is a not Sunday if the year is a leap year   |
| In a month of 31 days, the third Thursday falls on the 16th. What will be the last day of the month?                                   | If second and fourth Saturdays and all Sundays are taken as only holidays for an office, what would be the minimum number of possible working days of any month of any year? (UPSC 2017)   |
| 5th Friday   | 23   |
| 4th Saturday   | 22   |
| 5th Wednesday  | 21   |
| 5th Thursday   | 20   |
| What were the days of the week on 17th August, 2010?   |  |
| Sunday   |  |
| Wednesday  |  |
| Tuesday  |  |
| Friday   |  |
| If a month in a year starts with Monday, then the date of the fourth day after the second Saturday in that month, will be? (UPSC 2019) |  |
| 16   |  |
| 17   |  |
| 18   |  |



Which day is 10th October, 2027?

Sunday

Monday

Tuesday

Saturday

Which date of June 2099 among the following is Sunday?  
(UPSC 2022)

4

5

6

7

A watch which gains uniformly, is 5 min slow at 7 o'clock in the morning on Sunday and it is 5 min 48 s fast at 7 pm on following Sunday. Which day was it correct?

Friday

Saturday

Tuesday

Wednesday

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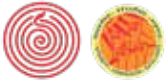




ETHICS S



# METAETHICS



## METAETHICS

Metaethics is a branch of ethics that focuses on the nature and foundational questions about ethics itself rather than on specific moral issues or theories. It seeks to understand the underlying concepts, principles, and language of ethics, as well as the nature of moral truth and the justification for moral judgments.

### Metaethics addresses questions such as:

**Moral Realism vs. Anti-Realism:** Metaethics explores whether there are objective moral facts and whether moral statements can be true or false in the same way that factual statements are. Moral realists argue that there are objective moral truths, while anti-realists claim that morality is subjective or dependent on individual or cultural perspectives.

**Moral Motivation:** Metaethics delves into the nature of moral motivation, asking whether moral facts or values can genuinely motivate people to act morally. This includes examining the relationship between moral beliefs and moral actions.

**Moral Language:** Metaethics investigates the semantics of moral language. It examines questions like whether moral terms have fixed meanings, how moral terms relate to natural language, and whether moral statements express propositions that can be evaluated for truth or falsity.

**Moral Epistemology:** This aspect of metaethics is concerned with how we come to know or justify our moral beliefs. It explores questions about the nature of moral knowledge, moral intuition, and moral reasoning.

**Moral Disagreement:** Metaethics explores the nature of moral disagreement and the implications it has for moral realism and anti-realism. For instance, if people from different cultures or backgrounds hold conflicting moral beliefs, does this undermine the idea of objective moral truths?

**Moral Skepticism:** Some metaethicists engage with questions of moral skepticism, which involve doubting the possibility of moral knowledge or the existence of moral facts altogether.

**Metaethical Theories:** Various metaethical theories attempt to provide an account of the nature of morality. Some prominent metaethical theories include moral realism, moral anti-realism, moral naturalism, moral non-naturalism, and moral relativism.

### Metaethics in Daily Life

Metaethics may seem like an abstract and philosophical concept, but its principles and ideas have practical implications for our daily lives. Here are some ways in which metaethics can impact and inform our everyday moral decision-making and interactions:

- **Understanding Moral Disagreements:** Metaethics helps us make sense of disagreements in our moral beliefs. When we encounter people with different moral views, understanding metaethical concepts like moral relativism or moral realism can shed light on why these differences exist. This understanding can lead to more constructive conversations and a greater appreciation for diverse perspectives.
- **Reflecting on Moral Motivation:** Metaethics delves

into the nature of moral motivation. It can help us reflect on our own motivations for acting morally. Are our actions guided by a belief in objective moral truths, a sense of duty, empathy, or other factors? Recognizing our motivations can enhance our moral self-awareness.

- **Evaluating Moral Claims:** In daily life, we often encounter moral claims and arguments in various contexts, including politics, religion, and personal relationships. Knowledge of metaethics allows us to critically evaluate these claims. Are they based on subjective opinions or objective moral facts? Are they grounded in a particular cultural perspective? Being able to assess the metaethical aspects of these claims can aid in making informed judgments.
- **Navigating Ethical Dilemmas:** When faced with ethical dilemmas, metaethics can provide a framework for decision-making. Understanding different metaethical theories, such as utilitarianism or deontology, can help individuals choose ethical principles that align with their own moral beliefs and values.
- **Engaging in Moral Reasoning:** Metaethics provides tools for moral reasoning. It encourages us to think deeply about the foundations of our ethical beliefs and to critically examine moral arguments. This can lead to more consistent and well-reasoned moral judgments.
- **Cultivating Moral Virtues:** Metaethics can inform our efforts to develop moral virtues and character. For example, if you subscribe to a particular moral theory like virtue ethics, metaethical considerations can guide your cultivation of virtues such as honesty, compassion, and courage.
- **Respecting Cultural Differences:** Understanding metaethics, particularly concepts like moral relativism, can help us appreciate and respect cultural differences in ethics. It can encourage tolerance and open-mindedness when encountering moral practices that differ from our own.
- **Engaging in Ethical Discussions:** Metaethics equips us to engage in meaningful ethical discussions with others. Whether discussing ethical dilemmas, societal issues, or personal moral choices, an understanding of metaethical concepts can enhance the quality of these conversations.

### Metaethics in Professional Life

Metaethics can have implications for your professional life in various ways, influencing your decision-making, ethical reasoning, and interactions with colleagues and clients. Here's how metaethics can be relevant in a professional context:

- **Ethical Decision-Making:** In your professional life, you may encounter complex ethical dilemmas. Metaethics provides a foundation for understanding the underlying principles that guide your ethical decisions. For example, if you subscribe to a deontological ethical framework, you may prioritize duties and principles when facing moral choices, while a consequentialist framework may lead you to consider the outcomes of your actions.
- **Moral Awareness:** Understanding metaethics can





enhance your moral awareness in professional settings. It can help you recognize your motivations and the ethical principles that inform your decisions. This self-awareness is valuable in maintaining your professional integrity.

- **Engaging with Ethical Codes and Regulations:** Many professions have ethical codes of conduct and regulations. An understanding of metaethics can help you interpret and assess these codes more deeply, enabling you to apply them effectively in your work.
- **Navigating Ethical Conflicts:** In professional environments, you may encounter ethical conflicts, whether it's conflicts of interest, disagreements with colleagues, or ethical challenges posed by clients or projects. Metaethics can provide a framework for analyzing and resolving these conflicts while maintaining your ethical integrity.
- **Client and Stakeholder Relations:** Metaethics can be essential in dealing with clients and stakeholders who may have differing moral perspectives. Understanding metaethical concepts like moral relativism can help you navigate these differences and find common ground in ethical discussions and negotiations.
- **Organizational Ethics:** Within organizations, metaethics can inform discussions about the ethical culture and values of the workplace. It can help employees and leaders critically assess the moral foundations of organizational policies, practices, and decision-making.
- **Whistleblowing and Ethics Reporting:** In cases where you encounter unethical behavior within your organization, metaethics can play a role in your decision to report such behavior. It can help you weigh the moral importance of transparency and accountability against potential risks to your career.
- **Professional Development:** A deeper understanding of metaethics can guide your professional development. It can encourage you to engage in ongoing ethical education and training to align your actions with your ethical beliefs.
- **Team Dynamics:** Metaethics can be relevant in managing and collaborating with teams. It can influence how you communicate and negotiate ethical concerns within a group, fostering a culture of ethical teamwork.
- **Leadership and Ethical Role Modelling:** For those in leadership positions, an understanding of metaethics can help you serve as an ethical role model. It can guide your decision-making and communication, setting a positive ethical tone for your team or organization.

### **Case Study: The Caste-Based Reservation Debate in India**

**Background:** In India, the caste system has historically been a deeply entrenched social structure, with certain caste groups facing systemic discrimination and disadvantages. To address historical injustices, the Indian government introduced a system of caste-based reservations in education and employment. This affirmative action policy sets aside a percentage of seats and jobs for individuals

from marginalized caste groups, known as Scheduled Castes (SC) and Scheduled Tribes (ST).

**Ethical Dilemma:** You are a policymaker in India, responsible for reviewing and potentially reforming the existing caste-based reservation policy. The policy has been a subject of debate for decades, and you are faced with a complex ethical dilemma:

**Scenario:** The debate over caste-based reservations centers on questions of justice, equality, and social progress. Some argue that these reservations are essential to rectify historical injustices and promote social equity, while others contend that they perpetuate discrimination and hinder meritocracy.

As a policymaker, you must grapple with the following metaethical questions:

- **Moral Realism vs. Moral Anti-Realism:** Are there objective moral facts that can guide your decision, or is morality culturally or individually subjective? Depending on your stance on metaethics, you might interpret the moral imperative of rectifying historical injustices differently.
- **Moral Relativism vs. Moral Universalism:** Is morality relative to specific cultural contexts, or are there universal moral principles that should guide policy decisions? Your position on this metaethical question will influence whether you believe caste-based reservations are justified in the Indian context.
- **Moral Motivation:** What motivates your stance on this policy? Is it a sense of duty to correct historical wrongs, a belief in the greater good, or political expediency? Metaethics can help you reflect on the moral motivations that underpin your policy decisions.
- **Moral Disagreement:** Given the deep moral disagreements within Indian society on this issue, how do you reconcile conflicting moral viewpoints? Do you view these disagreements as indicative of the subjective nature of morality, or do you believe there are objective moral truths that can resolve the debate?
- **Moral Justification:** How do you justify your position on the reservation policy to the diverse population you serve? Do you rely on metaethical concepts like moral objectivity, subjectivity, or cultural relativism to make your case?

This case study highlights how metaethics can underpin the ethical considerations and decision-making processes of policymakers when addressing complex and culturally specific moral dilemmas in India. The metaethical framework within which you operate will significantly influence the ethical direction you choose for the policy.

Metaethics is a fundamental area of study in ethics because it helps us understand the nature of morality itself, which, in turn, can inform our approach to normative ethics (the study of specific moral theories and principles) and applied ethics (the application of ethical theories to practical moral issues). It provides the philosophical foundation for discussions about what is right or wrong, good or bad, and how we should make moral judgments.

# TOPICS OF THE MONTH



**1 BILLION PEOPLE IN THE WORLD ARE CHRONICALLY HUNGRY. 1 BILLION PEOPLE ARE OVERWEIGHT.**

**HAS INCREASED ACCESS TO EMPLOYMENT OPPORTUNITIES, FINANCIAL INDEPENDENCE AND EDUCATIONAL ATTAINMENTS ENABLED WOMEN IN URBAN INDIA TO EXERCISE THEIR FREEDOM AND AGENCY?**

**- DR. Alexander Jacob IPS**

**DANCES IN INDIA**

**DRUG ADDICTION**

**-DR. Babu Sebastian**

**FUNCTIONS OF THE UNIVERSITIES IN INDIA**

**IRRELIGION IS OUR MALADY, RELIGION, THE ONLY CURE**

**-DR. G. Prasanna Kumar**

**IT IS BETTER TO BUILD CASTLES IN THE AIR THAN TO BUILD ON THE GROUND**

**-Mr.Solomon John**





## 1 BILLION PEOPLE IN THE WORLD ARE CHRONICALLY HUNGRY.

### 1 BILLION PEOPLE ARE OVERWEIGHT.

35 million people in the U.S. are hungry or don't know where their next meal is coming from, and 13 million of them are children. If another country were doing this to our children, we'd be at war. ~ Jeff Bridges

Human history is replete with the examples of distortionary developmental pattern. There has never been the case of ideally uniform type of societal development. Some sections have recklessly exploited the —global commons|| and some sections have not even availed the resources for basic needs fulfilment. And the developed gap of haves and have-nots has now reached all-time high.

Though this rich and poor divide is visible in almost all walks of human lives, the issue of hunger of a big population and at the same time the issue of overweight owing to overconsumption of another big population are the most prevalent. While a large population is struggling every day for availing two meals square a day, another big number is finding tough to shed their flabby muscular body. The tussle between these two sections are in perpetual mode fuelling the gap of scarcity-ridden section and abundant resourced section. Food is the basic need of human. One can't live without it. In fact, one can't do anything without a healthy body. Our entire effort throughout life goes for accessing better basic needs only. But suppose a section of society doesn't succeed in even availing this inevitable need then what would be social-mental status of this section. Obviously there would be vigorous internal agitation in them and their frustration would spill over in the form of social evils, inhumane incidents, crime and all maladies would follow then. Today a protracted population all over the world is passing through this inhumane, wretched and miserably hunger situations. They are fighting among themselves, committing crime and even getting trapped in perpetual civil wars. Sub-Saharan African countries, central African countries, eastern African countries, south Asian countries and sporadic aboriginal population are having a large population grappling with chronic hunger, malnutrition and many of its fallouts.

Somalia, Eritria, Ethiopia, Western Africa, central African Republic, Mali and Chad etc. are epitome of hunger situation. They have intense food shortage, no source of income to purchase food, hence trapped in complete vicious circle of chronic hunger. Even in case of south Asia the KBK region of Orissa in India, the tribal belt of Afghanistan and Pakistan are reeling under the unbearable hunger problem. These are some of indicative spatial locations but the situation of hunger is quite entrenched in almost all developing and under-developed countries. It is really inhumane situation to see a five-year child looking far older than his age. The life expectancy in these places have been too low (hovering around 30 year only). People become inhabitant of all diseases owing to low immunity. The situation of women is even more deplorable. Maternal mortality rate is too high and infant mortality rate is unimaginably higher. In fact, these are the poor who bear all the brunt of natural disaster, and vulnerable to all environmental degradation. They are victim of slave trade, human trafficking and many societal fallouts. They are pushed into naxalism, terrorism, sea-piracy and many humans induced crime.

For such a miserable situation of this sections various reasons can be attributed such as negligence on part of the state, colonial subvention of past, historical marginalization by their society, displacement due to industrialization, loses of their habitats to predatory minors and conspicuous consumption of other section creating shortage of food resources. Despite scarcity there are

others section who are living luxuriant, extravagant and expensive lives. They are gulping and swallowing the global riches reasoning that if they won't then someone else will, so why they should not do themselves (thanks to tragedy of commons). A culture of over consumption has given a sense of illusion- —man is made for eating only||. Even over-consuming people are also reeling under obesity and unmanageable body structure which is making their lives miserable. Many diseases have crept in their bodies still control over unrestrained consumption has not developed (thanks to culture of tongue slavery).

The consumerism culture of fast food, junk, over-processed high calorie contend foods costing many dollars have further aggravated the situation of overweight. The USA, European and some of east Asian countries have adopted such a life style that they have been using most of the resources of the world creating shortage for rest of the countries. In fact most of metros of even developing countries are also involved in such consuming pattern that they are stressed with load of myriad of food in their guzzling bellies and asking for even more (hail to ironic sequence of starter-main course-dessert). Further, the process of bizarre consumption doesn't end with just ingestion of costly food loaded with trans-fat and nutritional contents but the worry of shedding the central obesity, using high cost machinery and sky-rocketing charges for slim making courses, also ridicules the starving population. Besides, traumatic non-communicable diseases such as diabetes, cardiovascular strain, heart attack etc. also trouble them and eat away their fiscal saving.

The insensitive and complex life style at the cost of deprived sections` share make the already strained human relationship even grimmer. Their behaviour of unchecked consumption of foods create shortage of food in market and hence distort the market price causing ballooning inflation. In today`s world where wind of globalization has homogenized the market practices, where one`s error becomes other`s error, it has become impossible to be unscathed of one`s mistake and irresponsible behaviour. It is really irony that in the same world where on one hand one is garnering so much benefit of global resources that one is tired of using and misusing food and other stuffs and on other hand one is dying every day just for a two meals square a day. There is urgent need to arrest such distortion in food habit in particular and overconsumption of daily usage in general. We have limited resources on the planet Earth. If everyone follows same over-zealous food habit, then imagine how long we will sustain our lives here? Someone has very rightly observed that if India and China would adopt same consuming pattern as the USA has been carrying then perhaps even two more earth will not suffice their needs. Hence, entire world needs to adopt austerity measure a controlled life style in sync with available resources. In fact, the definition of Sustainable development would be guiding principle for human kind vis –a- vis usage of available resources. The world community need to be more humane because one can`t prosper in isolation in this globalized world. There is as well a pressing need to have global leadership to channelize world resources equitably. The UN must come forward, Food and Agricultural organization(FAO) must appeal world community to be more sensitive towards marginalized people. And countries like the USA, countries of European Union, China, India, Brazil, Japan, et. al. must take lead for distributive justice not in only their own countries but in whole world. Only a contend and stomach-filled human can have a peace of mind and become harbinger of a prosperous and habitable world.



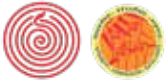
## Has Increased access to employment opportunities, financial independence and educational attainments enabled women in urban India to exercise their freedom and agency?

The empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself. In addition, it is essential for the achievement of sustainable development. The full participation and partnership of both women and men is required in productive and reproductive life, including shared responsibilities for the care and nurturing of children and maintenance of the household. In all parts of the world, women are facing threats to their lives, health and well-being as a result of being overburdened with work and of their lack of power and influence. In most regions of the world, women receive less formal education than men, and at the same time, women's own knowledge, abilities and coping mechanisms often go unrecognized. The power relations that impede women's attainment of healthy and fulfilling lives operate at many levels of society, from the most personal to the highly public. Achieving change requires policy and programme actions that will improve women's access to secure livelihoods and economic resources, alleviate their extreme responsibilities with regard to housework, remove legal impediments to their participation in public life, and raise social awareness through effective programmes of education and mass communication. In addition, improving the status of women also enhances their decision-making capacity at all levels in all spheres of life, especially in the area of sexuality and reproduction. This, in turn, is essential for the long-term success of population programmes. Experience shows that population and development programmes are most effective when steps have simultaneously been taken to improve the status of women.

Increased employment opportunities, financial independence and education attainment are the precipitation of the Urbanisation and Modernisation process culminating in India. Traditional barriers are weakening and today the status of women have grown tremendously. She has her own identity, unlike hitherto, being just recognised as a daughter, sister, wife, or mother of someone. The women have empowered in all fronts i.e. politically, economically and most importantly socially. They no longer remain dependent and subordinate to their families completely, owing to these factors. The demand of educated women has provided women, widespread employment opportunities. Today they are being recruited, even preferred over men for certain jobs. Many women have emerged as a role model in their respective fields showcasing the capabilities and heights a woman can achieve, whether it may be Kiran Bedi, Kiran Mazumdar Shaw, Chanda Kochar. Today women's role is not just confined to the drudgery of household chores. This enables her to exercise more freedom, gain more voice and partnership in decision making. Even they represent politically, whether in state or central legislature elections. In the rural areas, where the employment opportunities are only in agriculture and petty jobs, it does not provide women with any choices or freedom to select. On the contrary, Urban women, one due to liberal environment and second due to opportunities, has abundant options to choose as per her wish. For instance, she can become an engineer, doctor, architect, scientist, pilot, civil servant, chartered accountant, or even open her new venture as an entrepreneur. Financial independence attained by women has gone a long way in determining their status. They not only contribute to the family resource, rather also carry a voice in determining various matters of family. They no longer remain dependent and obliged to their family member for their financial needs. This has made them self sufficient, self reliant and self independent

too. They can even now spend as per their wish and fulfil their own wishes, which have been confined for a long time owing to their dependence. Consider a woman earning 30000 per month, she can contribute some money for her children's education, some money for family savings, family expenditures and even after that she can save money for her own wishes and needs. She can even give some money to her friend/mother in their need. She can join a new course, or may be pursue her hobbies. For fulfilling her children's wishes also, she need not wait for her husband's consent. Thus the application of mind has diversified and her being as a pillar of family's resources also has become a reality. Hence a financially independent woman not only debars from being a liability, rather commands the respect of an asset to the family. Thirdly, urban women, owing to liberalised ideas of families, adequate opportunities in urban areas and better conveyance are being able to attain much better education than their rural counterparts. Urban women, not only achieve higher education, but also attain intellectually. Their outlook changes, they no longer want to remain under the clutches of anyone and demand equal participation in the decisions of their lives. In the traditional families, or even today in rural families, Patriarchies enjoy the absolute rights for taking decisions, giving women the subordinate position to them. Education not only brings a sense of confidence in them and imbibe in them the capability to choose what is correct and wrong. Education is knowledge and knowledge is power. Hence education has made them powerful. They can question the wisdom of others now. Whether it may be the choice of career, choice of occupation, age of marriage, the choice of groom, even decisions in their married life, challenging ill attitude from in-laws etc have been asserted by Indian urban women. They no longer remain the sole instrument of sacrifice and compromise. Earlier, whenever there was a circumstance, where one needed to compromise for the family's welfare, it was the woman by default. This need not be the case now. They participate in discussions about various other things apart from family matters with everyone. In a way, education has made them enlightened. In helping out their children also, they need not depend on anyone now, they can freely advise them and give them quality mentorship in other fields also. Their literacy helps them attain better respect and even voice in family matters. Hence education has made them more confident, independent, more significant, more respectful apart from allowing to achieve greater freedom. These three features namely, employment, economic elevation and education are precisely inter connected to each other and cannot be segregated out rightly. These are manifestations of empowerment of women in different forms. Education helps them achieve employment and employment makes them financially independent which in turn bear fruits in face of freedom and voice. The words of Gandhiji, i.e. a woman should be a companion of man in all of his decisions and functions can only be achieved by empowering women. Even the government has been working in these directions and brought various reservations for women for different jobs have been provided. Various laws and commissions ensure their rights are not exploited. Violence against women has decreased significantly in urban areas, where women can take steps for assuring their protection. Hence in many ways urban women have been empowered and the list goes on.

Despite progress, there is still a long way to go in terms of women's empowerment. The government should put policies in place to improve women's understanding of



their potential in the areas of health, education, employment, and so on. It is essential to create public attitudes that support women's empowerment and increase society understanding. The influence of the mother-in-law over her daughter-in-law is only one example of how many women have adopted patriarchal norms to demonstrate their dominance over other women. Finally, women need to take the lead in achieving their goals of empowerment. Empowerment is the best tool for the advancement of women.

## DANCES IN INDIA

Art is directly linked to feeling and attitude. It offers a tangible illustration and visual support to arouse an emotion, forward discussion points, and elicit thinking and contemplation along with pleasure and beauty. Dance elicits the same feelings whether you are a performer or just observing. A dance may display emotions through body movements and persuade viewers to experience the dancer's emotional journey with them. Dance satisfies the standards to qualify as an art form through its use of facial expressions, gestures, movements, music, and engagement with the audience. You don't necessarily need to comprehend it to appreciate its beauty and enjoy it, like with other forms of art. If anything, this subjectivity is what draws people of all ages and walks of life to art.

Like all kinds of art, there must be some room for interpretation. Some types of art are unclear, while others are straightforward. The same is true of dance. You may interpret the body motions in a variety of ways. Various emotions are elicited in various people. Even though the dance's meaning is obvious, different people may perceive it differently. Dance is one of the few artistic genres that is well-liked all across the world because of its passion, desire, and capacity for communal expression. It doesn't matter if you have technical or language skills. Anybody may enjoy a narrative that is told via body movement.

" In India all forms of arts have a sacred origin and the inner experience of the souls finds its highest expression in music and dance. The Hindu attitude towards art has been an expression of the inner beauty or divine brought into close connection with religion". The origin of the dances in India can be traced back to the ancient times, that is even to the Vedic times. In the Rig Veda the dancers are described as persons kicking up dust while clasping each other in the dance. Apart from it the devotees also used to dance before their gods. Even the artists who were known as *Sailushal* (actor dancer) have been referred to in the religious books. There used to be even war dances and those dancers were "robed in garments fair as heaven". There used to be even some heavenly singers and musicians to entertain the patron Gods of arts, that is *Indira*. In the Vedas the dancing nymphs ( *Apsaras*) have been described as "broad hipped slender waisted and graceful as panthers". Similarly, there were other forms of dances in the ancient times. The oldest book available on drama is the *Natya Sastra* attributed to the second century A.D. The *Natya Sastra* defines drama as something comprising speech, dance and music. Similarly the *Ramayana* also refers to the dance in those days. In *Ramayana* and *Mahabharata* we find many passages which refer to music and dance. *Arjun* disguised himself as a dancing master and taught the art of dancing to Princess *Uttara*. *Kalidasa* has also given great importance to the arts in his dramas. In one of the plays the heroine Princess *Malavika* is a perfect dancer. Even in the temples the hero used to be a dancer. The cult of *Siva* gave new significance to the dances in India. So dances in India date back to the earliest possible times.

One of the classical forms of dances is *Tandava*. According to the Vedas this dance was composed by the stage directors and God called *Bharata*, the sage musician, and at that particular time they say *Brahma* created nymphs. *Tandava* classical dance takes its name

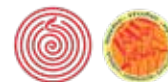
from *tandu*, the celestial attendant of *Siva*. Apart from it another dance *Karana* is a dance in which gestures, steps and attitudes are brought in harmony through the rhythmic movements. A sequence of six or more dances of this type constitute *Angaharas*. The records of these dances can be found in the temples in south India through the image of *Siva*. These classical forms of dances were very popular in those times. Through these dances there were given rhythmic expressions and mimicry. They used to give a good exposition of moods, sentiments and ideas by means of gestures, facial expressions and movements of the body. Generally, movements of the head and eyes indicated the mood and the movements of the hands the specific meaning and the gesture of the head gave many other pieces of information regarding emotions, and moods. The movement of the eyeballs as has been pointed out express permanent sentiments. In all there are eight movements of the eyeballs representing eight permanent sentiments known as *Rasas*. In these dances use of symbolism and gestures is made. Some of the writers have pointed out that gestures were first devised "to evoke spiritual moods through ceremonial acts, imaginative performance as rituals". Similarly, symbolism is to give some intellectual appeal to the spectators.

*Bharat Natyam* is the dance of the *Devadasis* who performed these dances during the days of *Pallava* and *Chola* kings. The performance of dance was considered a holy offering by them. It is said that the first dance performance of a *Devadasi* got her the title of *Talaikole* from the king in whose presence it was performed. This type of dance in its pure form interprets the language of rhythm and melody in curves, angles and other movements. The *Adavu* is the best unit of dance composition and a series of these constitute a dance pattern. Similarly, there are some movements and poses of the acts but the characteristic pose of this type of dance is the deep knee bend. The paces of timing in the dance is *Jwathi* and there are five kinds of *Jwathis* which are said to have emanated from the five faces of Lord *Siva*. There are three speeds and timings of dance. The beauty of the dance lies in the movement of the neck and the rhythmic inflexion of the breast.

There are very subtle movements of the different parts of the body. It may have different forms like *Vandana* and *Alarippu*. *Vandana* is almost an invocation to the Gods, the earth and the dance masters. *Alarippu* is a ritual dance. Then there is also *Sabada* which is a song of praise addressed to a deity or a king. *Tillana* is a joyous fantasy and is considered to be perhaps the most graceful and the lyrical of all the styles of *Bharat Natyam*. It also includes *Vama* gestures, songs and ritual dances. A special type of dress is worn for this dance. It has been pointed out that *Natya* is "a poem made visible". In this case the dramatic representation of all four kinds-gestures, arts, costume make-up and temperament play their role. The important role is played by the hands. because the ideas are conveyed through the movement of hands.

In *Andhra* and *Tamil Nadu* some dance dramas were popular. One of the types of dance dramas, was staged at night in *Kuchhipudi* and in some temples of the south. A critic has pointed out that the *Byruva* which is an entrance dance "not only announces the respective





characters but also delights the audience and establishes the emotional continuity". Then there are dances which render some mythological episodes. Another dramatic dance Mundukasabda is the dance legend. Mohini Avtar presents the legend of Amrita Manthana. The dance dramas of the south are dramatised stories of the Bhagwata Purana which Kuchhipudi has been presenting for many years. But modern India lost contact with the villages where these dances were performed. In Kerala there used to be devas in the temples. So various dramatic performances accompanied dances .

One of the most important dances practised by the Keralites is Kathakali dance. It is also a sort of dance drama in which the singers accompany the actors. The actors generally wear masks and the mask design are a combination of colours symbolise character type. The mask design transforms actor into symbolic character and these personages give colour and aesthetic dimensions to the dramatic presentation. In Kathakali the woman is portrayed as an ideal woman. The Kathakali songs are in the Sopana style because this is the only suitable type for Kathakali dance. It is one of the essential parts of the dance drama. The basic position of the limbs and feet and their movements are as exacting as is the case of some western dances. The knee bend at the feet are set apart and toes bend forward. There are some invocational dances which are generally performed behind the stage curtain. It contains all the varieties of foot work. The Kathakali gesture language is grammatically complete in symbols. The movements of the hands represent various things and the movements of the eyes express the eight sentiments.

Another type of dance drama which is popular in Kerala is Krishna Nattam. It owes its origin to Zamerin Raja of Kozhikode as it is mostly performed in very sanctified atmosphere, so it has retained its traditional form. It consists of eight phases covering Krishna's life from his birth time to the time of his return to heaven. Masks carved out of wood and attractively decorated are worn by the important characters. There are also some shrieks of the demon characters. Here also the music is in Sopana style. The play begins with an elaborate drum beating. Then the different eight phases dealing with the life of Lord Krishna are displayed.

Another dance which is known as Bhagwati Tirayattam is in devotion to the Goddess Bhagwati. The drums beat, the pipers play and the Goddess is invoked with songs and when Bhagwati returns to the temple she performs a ritual dance with measured steps and rhythmic gestures. We have also the music dance ritual of Travancore. Kolam Tullal is a ritualistic form of music dance performed at the Kali temples during the religious festivals. Various types of music are used. Moreover, there is Yakshagana form of south Indian dance drama. It is an open area dance drama. It is generally accompanied by bag pipe music and theatrical splendour. Most of them are performed at the night time. The head dress is given particular significance. The Yakshagana mode of dance is the swinging dance of the Yakshas. This dance is said to be the childhood dance of goddess Indira. The movements of these dances are full of vigour and grace.

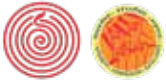
Some of the dances are popular in Orissa also. There were ritual dances of the Maharis. These dances retain the pure form of the ritual dances. The Dev Puja is a

beautiful ritual dance. Batunirtu combines pure dance and ritual offerings. The dance begins with a beautiful plastic attitude. There are more than sixteen ritual offerings and some interludes of the dances also. The plastic movements and gestures of the Orissa dance are of special significance because they are expressive and impressive. The people of Serakella perform another type of dance which has become quite popular and is known as Chhau. This also includes various types of dances like Siva Tandav Hara Parvati which is a very tender love duet of Siva's consort. Similarly, Mayura the peacock dance is a beautiful dance fantasy that depicts the happy mood of the peacock. There is Chhau solo dance and also the dance of Yaksha which are quite popular there.

Kathak dance is another important Indian dance. No doubt this dance received a setback during the Muslim invasion still it was very popular in India. The most important style of Kathak dance is Nritta dance with foot work. The beauty of this dance lies in harmony with plastic pattern of the arms and the curves of the body. Foot work is the basic element in the dance. No strings of bells are generally used. Drummists provide the accompaniment. The Kathak performance begins with Ganesh Vandana and Thali is the first dance movement. Formerly the dancers used to recite dance Bholas also but later on this was given up. Ghat Bhava one type of Kathak dance is meant to tell a story in an expressive form. The gestures of the Kathak interpret a theme. The Kathak dance was revived in 1930 in south India. Recently Kathak has been adopted to ballet. So an attempt has been made to revive the beauty of this dance with all its glory.

The last important dance of India is Manipuri dance. In this dance Kirtan songs with drums are sung. The rhythms of the dance are played in deep tone accents. The dance steps interpret the rhythm. The feet are not lifted and their movements are hardly visible. The knees are kept close and the gestures of the pure dance are adopted. These dances are performed during holidays and festival days. Manipuri dance was discovered by Rabindra Nath Tagore in 1920; the soft cadence and the movement of dance attracted him.

The primary emblem of the Indian folk dances is rhythm which is generally got from the beating of the drums. The folk dances of the peasants are generally meant for recreating themselves. There are so many folk dances in Rajasthan, Punjab, Maharashtra, Assam and other states. Among the folk dances Gujarat Ras Garba is one of the famous dances. Among the dances of the Rajasthan the most popular dance is Ghumar which is generally performed during the festivals. Panihari is another dance of women of Rajasthan. The Bhangra is a popular harvest dance of Punjabi farmers. Goph dance is a circular dance of Maharashtra. Another popular dance of Maharashtra is Deepak. Even the remote regions like Assam give us fine dances and one of the dance dramas called Satriya is well-known. Among the folk dances of Assam, Rangali Vichu is the dance of happiness. Among the Bengali folk dances dramatic dance Asuravadha is well-known. So clearly the cultural heritage of India is definitely contained in the dances which are popular. In order to bring this assemblage of the folk dancers, the Government has been inviting them on the Republic Day and the assembly of these folk dancers as Prime Minister Nehru said brings "richness of our cultural heritage and the unifying bond which holds us together".



## DRUG ADDICTION

The major cities of India are in the grip of the drug menace. This devastating vice finishes off the addicts by debilitating them physically and psychologically. A seminar on Drug Abuse held recently in Madras has painted a horrible picture of this social malady. The most disturbing fact is that the university campuses, college premises and school grounds nourish this evil more and more.

Drug addiction implies physical dependence upon a drug including the development of tolerance and withdrawal. An addict who develops tolerance requires more and more of the drug to transport him to the world of fantasies. If the addict is not allowed to take the drug he suffers from painful and uncontrollable convulsions, vomiting, depression and various other maladies.

Many drugs give the user a kick eradicating frustrations and adversities that life throws in his way. What they forget or do not understand is that the problems drowned in drugs come back with a vengeance to torment them once the effect wears off. The addicts' endeavour, is escapist and it is doomed to catastrophic failure ever before it begins.

Drugs used by the addicts, particularly in India may be categorised into narcotics, hallucinogens, stimulants and sedatives. Marijuana, opium, heroin, barbiturates and amphetamines are all habit-forming drugs. Marijuana is the Indian hemp, its tetrahydro-cannabinol content is the real drug content and its largest concentration is in the flowering top of the plant. The resin collected from the tops of potent cannabis sativa is called hashish. It is considered to be five times stronger than marijuana. Side-effects of this drug are greater and more injurious. Those drugs which are inhaled in smoke-rolled into cigarettes. But both marijuana and hashish can be added to food and drink. As soon as its smoke is inhaled eyes become red, heart beat increases and usually the smoker coughs. Hunger and drowsiness normally follow inhalations of smoke. The smoker gets distortions of visions and hearing. He loses all the sense of time though the smoker thinks that his thoughts have become clear and better. Hallucinations and delusions may also happen. Unfounded suspicion of anything accompanied by anxiety, uncontrolled laughter or weeping and irrational mental fixations also are noticed. Hallucinogens are drugs that provoke changes in sensation, thought process, self-awareness and emotion. Aberrations in the perceptions of time and space happen, illusion, delusion or hallucination may vary in intensity in accordance with the dosage inhaled. Marijuana smokers stand the danger of ceasing to become "high" on smoke and may have to take recourse to heavier drugs. And he results produced by the same amount of drug may vary in the same person depending upon circumstances.

LSD (Lysergic Acid) is the most powerful hallucinogen. Its intake dilates pupils of the eyes, flushes the face, raises body heat and heartbeat. Blood pressure shoots up and the person feels chilly. Convulsions occur but rarely. As the effect of the drug wears off the symptoms disappear. Vision is most markedly affected; perception of the objects is distorted. The subject experiences transferred emotions; he may consider music just a picture. It can also fill the person with horror. Thus, extreme euphoria or insufferable terror is the result. Consequences are unpredictable-the extreme being homicide or suicide. The most detrimental effect of LSD is flashback. Such flashbacks can cause extreme anxiety.

Amphetamines called stimulants are supposed to

increase alertness, increase vigour and reduce hunger. Medically it is used to reduce depression. Stimulant's known as 'appers' or 'pep pills' are taken in capsules or tablets. They are also taken through inhalations or through injections. Some inject massive doses intravenously from one to a dozen times a day. This type of user is called a speed freak. In ordinary quantities it provides a temporary sense of alertness and wellbeing. Hunger is reduced and the performance of an exhausted person improves. But intravenous intake in large quantities gives an ecstasy high for some time. Once it wears off, reinjection is needed. This goes on till the person breaks down physically followed by collapse and death. Social, familial and moral values erode.

Sedatives induce sleep and are capable of reducing tension taken in small doses. The largest group of sedatives is from barbiturates. Taken without medical supervision people may take over-doses and then become habituated. These drugs are called gold balls, sleepers and downers. Tranquilisers calm, relax and diminish anxiety. They may cause drowsiness also. A strong desire to take drugs develops. If a person takes a few barbiturate pills after drinking he may succumb to death. Barbiturates taken with narcotics, alcohol or tranquilisers can also prove fatal.

Narcotics relieve pain; opium and its active components such as morphine and heroin belong to this group. Morphine is bitter in taste. Opium has 10 percent morphine content. Dietyl morphine hydrochloride is prepared by the action of an antibrade on morphine. When mixed with sugar and other ingredients, this is called brown sugar. It is taken orally or by injecting intravenously. It is smoked in the Chinese way also. It accounts for about 90 per cent of the drug intake. It has no medicine value.

People in all kinds of pain take heroin for relief. Pure heroin if injected can kill within minutes. Unclean implements used for injections may lead to viral hepatitis, skin abscess, inflammation of veins and congestion of the lungs. The addict may become prone to Tuberculosis.

Drug addiction reduces sober time available to a person. The personality of the addict is destroyed and his emotions become intense and distorted. Fertility is reduced and children born may have serious illness and withdrawal symptoms. The Indian government is making an all-out effort to check this diabolic trafficking of the drug.

Additionally, drug addiction makes a person withdraw and have either strong or no appetites for food. They quit caring about their personal hygiene. Speech and hallucinations are both impacted by drug use. They speak quickly and are energetic, making it difficult for them to converse and communicate effectively. Addicts experience sharp mood fluctuations. They are quite secretive and have a swift swing from happiness to sadness. They start to become less interested in the things they used to enjoy. Addicts of substances have withdrawal symptoms as well. The symptoms that people experience after they cease using a substance are referred to as withdrawal symptoms. Among the withdrawal signs include tremors, tiredness, and nausea. They quit using and then resume using, continuing a potentially fatal cycle. If drug addiction is not promptly addressed, it can be lethal. In addition to overdosing, heart conditions, respiratory issues, liver and kidney damage, vomiting, lung conditions, and many other health issues, it can also result in brain damage and seizures.

Addiction to drugs may be treated, despite being chronic. Numerous methods are employed, including



behavioural therapy, medicines to address the addiction, and treatment for not only drug misuse but also several coexisting conditions including stress, anxiety, and depression. Many tools have been created to combat addiction. To assist people, there exist rehabilitation facilities. There are frequent follow-ups after therapy to make sure the cycle does not repeat. The most crucial factor is getting support from friends and family. It will

assist them in gaining self-assurance and overcoming their addiction.

On June 26th, the UN observes International Day Against Drug Abuse and Illicit Trafficking. Millions are impacted by drug addiction, which requires thorough treatment to stop additional damage to the person and enable them to live a healthier life.

## FUNCTIONS OF THE UNIVERSITIES IN INDIA

The universities are schools of education and schools of research. But the primary reason for their existence is not to be found in the mere knowledge conveyed to the students or in the mere opportunities for research afforded to the members of the faculty. Both of these functions could be performed at a cheaper rate; books are cheap and the system of apprenticeship is well understood and works satisfactorily. So far as the mere imparting of information is concerned no university has had any justification for existence since the popularisation of printing in the fifteenth century.

The justification for a university is that it preserves the connection between knowledge and zest for life by uniting the young and the old in the imaginative consideration of learning. The university imparts information but it imparts it imaginatively. A university which fails in this respect has no reason for existence. This atmosphere of excitement, arising from imaginative consideration transforms knowledge. A fact is no longer a bare fact, it is invested with all its possibilities. It is no longer a burden on the memory; it is energising as the poet of our dreams and as the architect of our purposes.

Imagination is not to be divorced from the facts: it adds lustre to the facts. It works by eliciting the general principles which apply to the facts, as they exist and then by an intellectual survey of alternative possibilities which are consistent with those principles, it enables men to construct an intellectual vision of a new world and it preserves the zest of life by the suggestion of satisfying purposes.

Youth is imaginative and if imagination be strengthened by discipline this energy of imagination can in a great measure be preserved through life. The tragedy of the world is that those who are imaginative have but slight experience and those who are experienced have feeble imagination. Fools act on imagination without knowledge; pedants act on knowledge without imagination. The task of a university is to weld together imagination and experience. The initial discipline of imagination in its period of youthful vigour requires that there be no responsibility for immediate action. The weight of responsibility curbs imagination and initiative fights shy of consequences. You must be free to think rightly and wrongly and free to appreciate the variousness of the universe undisturbed by its perils.

In the modern complex social organism, the adventure of life cannot be disjoined from intellectual adventure. Amid simpler circumstances the pioneer can follow the urge of his instinct, directed towards the scene of his vision from the mountain top. But in the complex organisations of modern society the intellectual adventure of analysis and of imaginative reconstruction must precede any successful reorganisation. In a simpler world, human relations were simpler, being based on the immediate contact of man with man and on immediate conformation with all relevant material circumstances. To-day human organisation requires an imaginative grasp of the psychologies of populations engaged in differing modes of

occupation; of population scattered through cities, through mountains, through plains; of populations on the ocean, and of populations in mines and of populations in forests. It requires an imaginative grasp of conditions in the tropics and of the conditions in temperate zones. It requires a grasp of the interlocking interests of great organisations and of the reactions of the whole complex to any change in one of its elements. It requires an imaginative understanding of the laws of political economy not merely in the abstract but also with the power to construe them in terms of the particular circumstances of a concrete social organisation.

Effective action in modern society requires that discipline of character which can say "yes" and "no" to other men not by reason of blind obstinacy but with firmness derived from a conscious evaluation of relevant alternatives.

In early mediaeval history the origin of universities was obscure and almost unnoticed. They were the result of a gradual and natural growth. But their existence is the reason for the sustained rapid progressiveness of European life in so many fields of activity. By their agency the adventure of action met the adventure of thought. It would not have been possible antecedent to have divined that such organisations would have been successful. Even now amid the imperfections of all things human it is sometimes difficult to understand how they succeeded in their work.

Of course there is much failure in the work of universities. But if we take a broad view of history their success has been remarkable and almost uniform. The cultural histories of Italy, of France, of Germany, of England and the USA bear witness to the influence of universities. The universities have to prepare the students for the battle of life where they have to take up their posts. The way in which a university should function in the preparation for such competent individuals is by promoting the imaginative consideration of the various general principles underlying various occupations. The students thus pass into their period of technical apprenticeship with their imagination already practised in connecting details with general principles. The routine thus receives its meaning and also illuminates the principles which give it that meaning. Hence instead of drudgery issuing in a blind rule of thumb the properly trained man has some hope of obtaining an imagination disciplined by detailed facts and by necessary habits.

Thus the proper function of a university is the imaginative acquisition of knowledge. Apart from this importance of the imagination everybody can get to know the facts bit by bit through practical experience. The only drawback of that method is that it gives less scope for personal initiative and imaginative thinking. A university is imaginative or nothing-at least nothing useful.

The combination of imagination and learning normally requires some leisure-freedom from restraint, freedom from harassing worry, some variety of experiences





and the stimulation of other minds, diverse in opinion and diverse in equipment. Also there is required the excitement of curiosity and the self-confidence derived from the pride in the achievements of the surrounding society in procuring the advance of knowledge.

For successful education there must always be a certain freshness in the knowledge dealt with. It must either be new in itself or it must be invested with some novelty of application to the new world of new times. The research worker keeps knowledge fresh and saves it from fossilisation. He discovers things so far lying obscure and throws fresh light on things already discovered. Thus the research worker is at the same time a preserver, a discoverer and an inventor. These are three activities that

### **IRRELIGION IS OUR MALADY, RELIGION, THE ONLY CURE**

"What religion needs today is not more flying with God, or leaping with God, or jumping up and down with God, or going into spasms and convulsions and epileptic fits with God. What religion needs today is more walking with God."

Religion, as bundle of myths and miracles, doctrines and beliefs has become outdated. The miracles and mysteries of magic and religion have yielded place to new ones of science. Belief is no longer a matter of faith, it is based on reason; intellectual faith has replaced emotional attachment. "Unless religion sheds its primitive cosmology, myths and miracles, it is likely to go down into the limbo of oblivion" [E. Hubbard]. Like all human institutions religion, during the course of time, had become too formal to serve any purpose. So it produced a religion of superstition, tyranny and barbarism. None can deny that "religion is the best armour in the world but the worst cloak" [John Newton].

Our world is strewn with the wreckage of many a venerable traditions built by unnumbered generations. Religion is like a modern Ozymandias battered by scientific knowledge and hollowed by its own weaknesses. Today it stands humbled amidst these ruins; it is an outcaste, a refugee in our civilisation. The Christian Europe has built an unchristian civilisation; in China and India it has lost its former hold and Pakistan considers Islam a lever to register political backing within and without. Religion has been condemned, criticised, challenged, and ridiculed by anybody and everybody. Marx considered it the opiate of the masses; Russell regarded it as a disease born of fear and a cause of untold misery to the human race. Some psychologists have explained away its value as a beneficial psychosis.

It is only the perverted version of religion that has stunted manhood and deformed spiritual growth. It supported bigotry, lent its authority to the oppressors and sanctified many pretence. It weakened man's social conscience and moral sensitivity. It engendered fatalism, intolerance and narrow mindedness; it fostered conceit, hatred and fear. It, undoubtedly played a shabby irreligious role. This was not true religion. "True religion," says the German writer Goethe "teaches us to reverence what is under us, to recognise humanity, poverty, suffering and death as things divine." That is why man tried to break with religion; he extolled science and glorified materialism. But man needs anchorage in life otherwise it becomes a meaningless drift. It did not take much time for man to realise that by divorcing religion he has lost the mooring in life. Man, despite the surfeit of ideas and ideologies which generate enough heat but no light, suffers from the sickness of the spirit. They have lost the sense of purpose and direction and there is nothing to elevate their

keep the intellect of a nation alive and progressive. The university provides an opportunity and a forum where the experience of the old and enthusiastic imagination of the young are united in a creative activity.

It is a pity that universities in India fall far below this ideal. Freedom of thinking, devotion to learning and zest for creation are things altogether unknown. Race through the course for passing the examination that guides one for a secure living is the only important activity. The tradition of learning has not been established so far and shall not be established so long as our teachers and students have to labour under the constant stare of blurred, gloomy, indistinct and undetermined future.

sense of suffering and sin. "Man is still groping for a more meaningful and synthetic view of life and human destiny", says Radhakrishnan. Unbelief is impossible for man and a modern man needs faith—a living faith, a new faith which may give spiritual happiness.

Religion does not come in clash with science, Science is a method and a set of explanations based upon proofs; religion is an experience, and adventure of the spirit based upon spiritual illumination. Science takes up the second cause but religion the first cause. We should not forget that scientific investigation affirms to strengthen faith, it kindles our sense of mystery and wonder. The deep sense and wonder which filled the heart of man when he first saw the glorious sunrise is, in no way, different from the one looking through the lenses of telescope myriads of rolling spheres in the universe. "Man's highest happiness", says Goethe "is to have fathomed and to bow in reverence before the unfathomable". Scientific researchers can perform this dual function—these can fathom the unfathomable. But this is a continuous process to discover the unfathomable. Tennyson's Ulysses correctly says, "Experience is an arch where through gleams the untraveled world". Max Planck has acknowledged that even the scientists have to wait for the "spark from heaven". If we subject everything to reason, religion will have nothing mysterious; if we violate the principles of reason our religion will be absurd and ridiculous. "Science cultivated to be utter neglect of religion would produce a reign of impiety and sensuality". [G.W. Shields). It is quite strange that the man in the street is losing faith whereas the man in the laboratory is gaining.

Our world is torn with rivalries: people belonging to different cultural patterns and racial groups are facing one another in hostile postures. We talk of nations living together but mere talks will not go a long way. The international forums of discussion have become forums of rivalries. International ethics based on agnostic positivism or ethical humanism will not do. Religion as a binding force is necessary for a world made by the developments of science. Moreover, there is a sense of insecurity; we fear our neighbours we fear our friends. The inner defences of man have cracked. He has lost his independence and self-assurance the civilising process has reduced his Godman to the state of a suckling cotton-wool baby sterilised and vitaminised. There is an acting sense of loneliness and unrelatedness. He must realise that he is macrocosm and microcosm. Science, technology, political, and economic security cannot retrieve his lost confidence. Man must become aware of his own divinity. His sense of insecurity and unrest would vanish if he comprehends the ultimate goal of life. Religion has the capacity to steel the soul of man.



Violence has disfigured the face of the civilized man. People fight for ideologies they fight for supremacy. But war is an organised violence and often breeds violence. Religion and spirituality serve as antidote to violence. We are living as sub-human beings perceive that they belong to an order of reality higher than brute nature, they will abjure violence.

Man is supposed to work for society though he is unaware of social purpose. The modern states demand obedience from its subjects and conformity with mass opinion. Man has been transformed into a herdsman. These mechanical methods cannot make man conscious of his social obligations; the willing cooperation of the individual is needed. Religion can generate and strengthen the spirit of social purpose. Progress of man lies in enlarging

### **IT IS BETTER TO BUILD CASTLES IN THE AIR THAN TO BUILD ON THE GROUND**

The monuments of architectural skill, the symbols of human ingenuity-the Taj in India, Pyramids of Egypt, Hanging Gardens of Babylon and the Leaning Tower of Pisa-are subject to decay. Either the inevitable and inexorable time writes their epitaphs or man, blinded by the halo of his glory or consumed by the fiery passion for power, spells doom for them. For them, there is an impending catastrophe, may be slow, smouldering and withering into Hades or may sweep like an avalanche, or molten lava to drag to the shores of Lethe. Building with stone is not enough if man becomes stony, no use fabricating steel structures if it goes into our heart. Till man learns, as Ruskin opines, to build well, not with stone but with flesh, not with cold white marble but with the warm and crimson blood, till he learns that temples are not made with bricks but are riveted with hearts, his magnificence will be meaningless. Are the 'castles in the air' eternal? Are such conceptions not deceptive, empty of content and meaning? will not one, while blundering in the smokescreen of vague visions, be lost? Moreover, if earthly castles are destroyed once in centuries, visions can be demolished any time.

Man struggles and strives not because he considers it his duty to struggle or his aim to strive. Generally, there are two motives behind man's effort that is personal and impersonal. As far as personal motivation is concerned one is generally guided by one's progress in life and one's personal gains. Impersonal motivation may fall beyond the pale of personal prejudices and emotions but they do guide the activities. Sometimes ideals persuade the people to make an effort, at other times some emotional reactions are released by external impersonal influences. Out of these are born ideals, which are tempting because they raise us higher from the earthly, narrow and mundane life. These haunt us and like divinity shape our ends. Ideals remove the fluffy, smothering haze of can't and catchwords. Declaration of Rights in America, Directive Principles of State Policy enshrined in Indian Constitution have been the political ideals whose influence on the course of history cannot be underestimated. Ideals in their budding state may be mere imaginative conceptions divorced from reality, but as man's thoughts gather round it ideals become the dynamo of human effort.

By building castles in the air one can give direction to one's thinking. It is wrong to think that imagination takes us beyond the orbit of reason. As man's mind works within the limitations of senses and physical existence it cannot be completely separated from the realities and the facts of life. Imaginative reality is purged of grossness, it does not cater to momentary wishes and transitory urgencies. Take the case of the artistic presentation of the tragic incidents of life. We may be depressed by the latter but are always elevated by a tragedy upon the stage. Tragedy in life has a

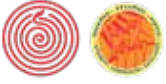
human sympathies and outlook. Man's inner self must be illuminated to colour his outer actions. The challenge to the modern civilisation can survive on the strength of material equipment and power acquired over Nature. Its sustaining power must come from within that is from spiritual values. In the earlier civilisation the challenges were from Nature and the forces of Nature but today we are to fight against spiritual paralysis. T.S. Eliot one of the greatest English poets of the 20th century recommends Daya, Daya-Dharam, and Damitri as the solution for the spiritual regeneration of the modern world. Religion can rehabilitate humanity. It contains the essential means of coping with evil which threatens the existence of the civilised world. It restores the best relationship between the individual and the eternal.

debilitating effect on thinking, may clog action but dramatic presentation makes us wiser and spiritually enlightened. It can cover the ordinary things with a celestial light.

When we build castles in the air our imagination works at white heat. Imagination is a purer form of mental activity. It needs detachment from personal emotions and personal prejudices. Imagination widens outlook and endows us with the faculty to judge correctly. Intuition is perhaps the purest form of imagination that is spiritual imagination. We can include even prophecy and spiritual enlightenment within its fold. They colour the feelings, which serve as the driving force in life. Visions, when they get relevance in the context of life, become thoughts and thoughts and feelings cannot recognise a common frontier-as one discovers no common frontier between an ugly, fashionable woman and the scent that she has used. These 'castles' help us in balancing intuition and reason into a technique by which we can evaluate the world of facts. A purely ideational culture like the Medieval European, threatened by a militant philosophy and Muslim religious feelings, produced an Aquinas who could combine the claims of reason and intuition. Modern man is tense, uncertain, adrift and needs the help of these 'castles' to reconcile with the innate desire to live. Utilitarianism has brought depravity in Man's nature; to us evil is nothing worse than simple bad cold, to us cruelty is nothing more than a cat's play with a rat. Our thinking will have to rise above the earthly level-imagination can help us.

Science is supposed to be at war with our dreams. It discounts the importance of imagination as it cannot be measured, it cannot be seen or grasped. Can we say that science does not build castles in the air? The very act of conceiving an idea is building castles. Coleridge's Kubla Khan conceived of "sunny domes" with 'caves of ice'; Organic Chemistry is the product of a dream. Einstein before giving his Theory of Relativity used to dream of harmony discoverable in the movements of the planets. We come to reality only through our dreams. No activity of human thought can be complete without the touch of imagination. Political theories, economic laws are based upon assumptions which make them nothing but castles. Ideals and ideologies are the synthetic fold of spirit. Though science is analytical, objective and exploratory yet without having some vague notions, science can neither be analytical nor exploratory.

Imagination is generally considered a help to escape the bitterness of life. Keats in one of his poems calls it a deceiving "ell". Still it cannot be called bad in any sense of the word. Many a time we want to be deceived because we are too weak to stand realities, we want to escape because life becomes dull and mechanical routine.



Imagination can make us to forget the worries of life and to smile at the crushing cares. It takes us into the regions where we feel comfortable, happy and satisfied. Getting happiness in life has been one of the greatest enigmas for the philosophers. The Buddha may recommend spiritual meditation for getting happiness. Stoics may think it necessary to kill all desires and passions whereas Epicure may ask you 'Drink and be merry'. When imagination can afford a solution for such an enigmatic problem, we should consider it one of the best activities of mind.

If we take purely fatalistic view we will have to say that there are some impersonal forces which are working against human beings. Man's hopes are frustrated and aspirations cheated. Happiness becomes an occasional

episode in the general drama of life. Man is hunted down by the hounds of fate. That is why Keats wanted to "fade far way, dissolve and quite forget" "the wearings, the fever and the fret" of this world. This is the world " where men sit and hear each other's groan", and "where but to think is to be full of sorrow." But we can blink over the worries of life through enchanting dreams and 'castles in the air". Man's intelligence has been probing mysteries of life since the dawn of human civilisation and he has come to the conclusion that life itself is as unsubstantial as 'castles in the air'. Life is "full of sound and fury, signifying nothing" but it is only imagination that gives significance and direction to life. If we are to live and live a better life, castles will have to be built, not on earth, but in air.

### SPACE FOR ROUGH WORK

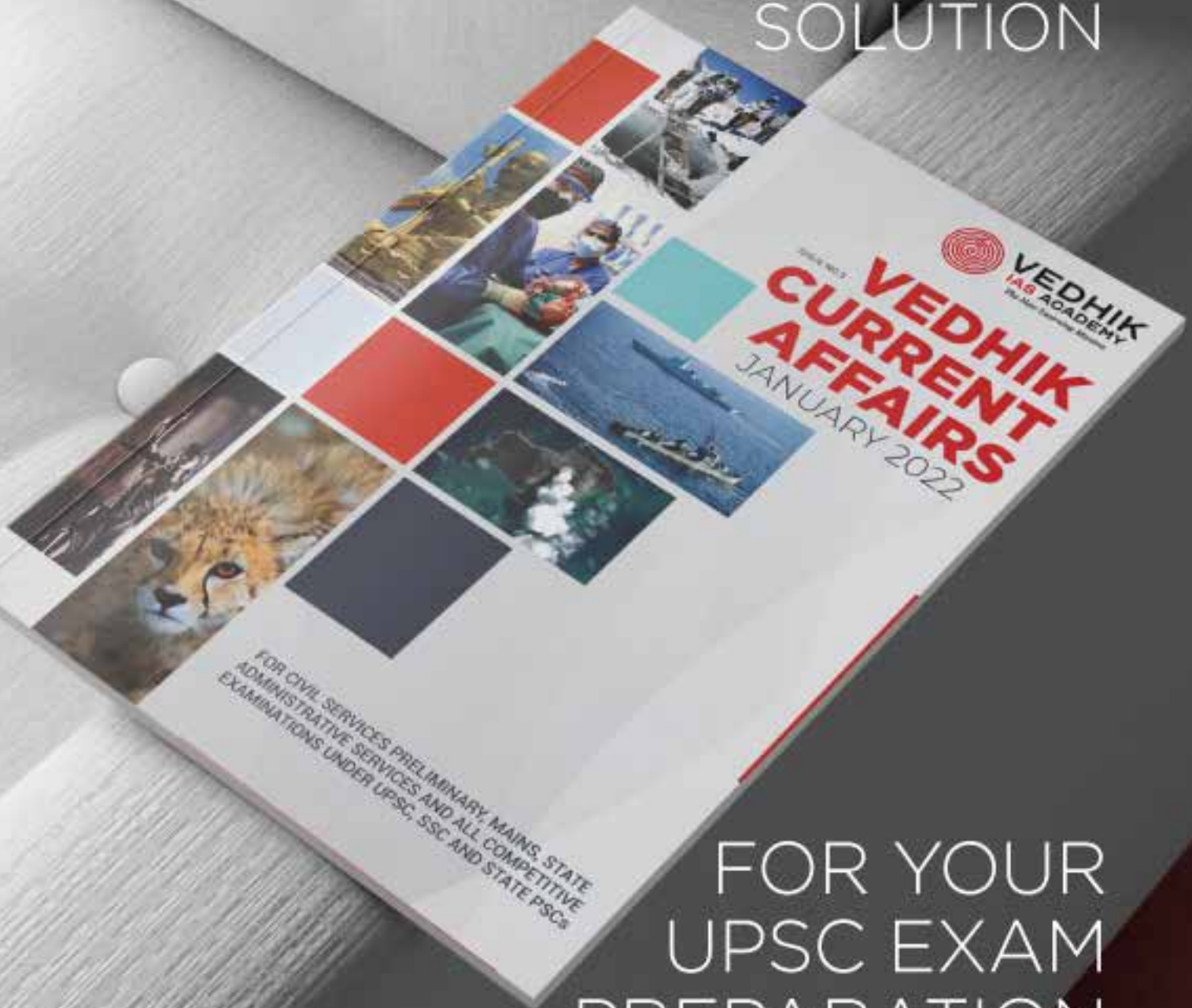






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# **MODEL QUESTION PAPER-MCQ**







1. With reference to the Debt-for-climate swap, consider the following statements:

1. Allows a country to reduce its debt burden by committing to undertake climate-related investments.
2. The United States made a US \$ 300 million debt waiver for Bolivia in 1991 under the world's first ever debt-for-climate swap.
3. Free up fiscal resources of the debtor Governments and improving their resilience without triggering a fiscal crisis or sacrificing spending on other development priorities.

Which among the above statement(s) is / are true?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

2. With reference to the neem-coated Urea, consider the following:

1. Cost effective.
2. Better nutrient absorption efficiency.
3. Reduce fertiliser subsidy bills.
4. Lower shelf-life.

Which among the above is / are benefits of neem-coated urea over conventional urea?

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

3. With reference to the National Ropeways Development Programme – PARVATMALA, consider the following statements:

1. Economical mode of transportation
2. Faster mode of transportation
3. Environmentally friendly
4. Last mile connectivity
5. Ideal for mountainous terrain

Which among the above statement(s) is / are true?

- a. 1, 2, 3 and 4 only
- b. 2, 3 and 4 only
- c. 3, 4 and 5 only
- d. All of the above

4. With reference to the Startup India Seed Fund Scheme, consider the following statements:

1. The Department for Promotion of Industry and Internal Trade (DPIIT), Union Ministry of Commerce and Industry created Startup India Seed Fund Scheme in 2021 to provide financial assistance to start-ups for proof of concept, prototype development, product trials, market entry, and commercialization.
2. Start-ups that create innovative solutions in sectors such as social impact, waste management, water management, etc. are given priority under the Startup India Seed Fund Scheme.

Which among the above statement(s) is / are true?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

5. With reference to the United Nations Industrial Development Organisation (UNIDO), consider the following statements:

1. The Department of Science and Technology in India has released the "National Manufacturing Innovation Survey (NMIS) 2021-22.

2. The UNIDO is a specialized agency of the UN to promote and accelerate industrial development.

3. India is one of the founding Members of United Nations Industrial Development Organisation (UNIDO)

Which among the above statement(s) is / are true?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

6. Consider the following statements: (UPSC2020)

1. The value of Indo-Sri Lanka trade has consistently increased in the last decade.

2. "Textile and textile articles" constitute an important item of trade between India and Bangladesh.

3. In the last five years, Nepal has been the largest trading partner of India in South Asia.

Which of the statements given above is/are correct?

- a. 1 and 2 only
- b. 2 only
- c. 3 only
- d. 1, 2 and 3

7. Pradhan Mantri Jan-Dhan Yojana' has been launched for

- a. providing housing loans to poor people at cheaper interest rates
- b. promoting women's Self-Help Groups in backward areas
- c. promoting financial inclusion in the country
- d. providing financial help to the marginalized communities

8. Which of the following is the most likely consequence of implementing the 'Unified Payments Interface (UPI)'?

- a. Mobile wallets will not be necessary for online payments.
- b. Digital currency will totally replace physical currency in about two decades.
- c. FDI inflows will drastically increase.
- d. Direct transfer of subsidies to poor people will become very effective.

9. If another global financial crisis happens in the near future, which of the following actions/policies are most likely to give some immunity to India?



1. Not depending on short-term foreign borrowings

2. Opening up to more foreign banks

3. Maintaining full capital account convertibility

Select the correct answer using the code given below:

a. 1 only

b. 1 and 2 only

c. 3 only

d. 1, 2 and 3

10. Which of the following best describes/ describes the aim of the 'Green India Mission' of the Government of India?

1. Incorporating environmental benefits and costs into the Union and State Budgets thereby implementing the 'green accounting'

2. Launching the second green revolution to enhance agricultural output so as to ensure food security to one and all in the future

3. Restoring and enhancing forest cover and responding to climate change by a combination of adaptation and mitigation measures

Select the correct answer using the code given below.

a. 1 only

b. 2 and 3 only

c. 3 only

d. 1, 2 and 3

11. Region often mentioned in the news: (UPSC 2022)

1. Anatolia - Turkey

2. Amhara - Ethiopia

3. Cabo Delgado - Spain

4. Catalonia - Italy

How many pairs given above are correctly matched?

a. Only one pair

b. Only two pairs

c. Only three pairs

d. All four pairs

12. 'Broad-based Trade and Investment Agreement (BTIA)' is sometimes seen in the news in the context of negotiations held between India and

a. European Union

b. Gulf Cooperation Council

c. Organization for Economic Cooperation and Development

d. Shanghai Cooperation Organization

13. With reference to the Parliament of India, which of the following Parliamentary Committees scrutinizes and reports to the House whether the powers to make regulations, rules, sub-rules, by-laws, etc., conferred by the Constitution or delegated by the Parliament are being properly exercised by the Executive within the scope of such delegation? (UPSC 2018)

a. Committee on Government Assurances

b. Committee on Subordinate Legislation

c. Rules Committee

d. Business Advisory Committee

14. Consider the following countries: (UPSC 2018)

1. Australia

2. Canada

3. China

4. India

5. Japan

6. USA

Which of the above are among the 'free-trade partners' of ASEAN?

a. 1, 2, 4 and 5

b. 3, 4, 5 and 6

c. 1, 3, 4 and 5

d. 2, 3, 4 and 6

15. India Government Bond Yields are influenced by which of the following? (UPSC 2021)

1. Actions of the United States Federal Reserve.

2. Actions of the Reserve Bank of India.

3. Inflation and short-term interest rates.

Select the correct answer using the code given below:

a. 1 and 2 only

b. 2 only

c. 3 only

d. 1, 2 and 3

16. With reference to Phishing Attack often seen in news, consider the following statements.

1. This attack involve tricking individuals into revealing sensitive information like passwords through deceptive emails or websites.

2. Cybercriminals often impersonate trusted entities, such as banks or social media platforms, to carry out these attacks.

3. Being cautious and aware of phishing threats has no effect on mitigating the risks of falling victim to such attacks.

Select the correct statement/s using the code given

A. Only one

B. Only Two

C. All the Three

D. None of the above

17. Consider the following pairs

(Solar Mission: Space Agency)

1. Aditya-L1: Indian Space Research Organisation

2. Solar Terrestrial Relations Observatory: Japan Aerospace Exploration Agency

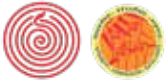
3. Parker Solar Probe: European Space Agency

Select the correctly matched pair/s using the code given

A. One pair only

B. Two pairs only

C. All the three pairs



D. None of the pairs

18. What is the primary objective of the Aditya-L1 Mission?

- A. To study the geological composition of the Moon's surface.
- B. To explore the potential for human settlement on Mars.
- C. To observe the Sun and study its outermost layer, the corona.
- D. To search for extraterrestrial life on distant exoplanets.

19. What is the main objective of Project 17A undertaken by the Indian Navy often seen in news?

- A. To develop advanced satellite technology for communication purposes.
- B. To enhance the infrastructure of naval bases along the Indian coastline.
- C. To construct a series of advanced stealth frigates for the Indian Navy.
- D. To establish a network of marine research centers for environmental conservation.

20. Consider the following statements regarding Short-Lived Nuclei in an Atom often mentioned in news.

- 1. These nuclei in an atom have unstable nuclei that undergo radioactive decay, emitting radiation in the process.
- 2. These nuclei have no relevance in nuclear physics, and they do not aid in understanding atomic behavior.

Which of the above statement/s is/ are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

21. What are "Dark Patterns" in the context of cybersecurity sometimes seen in news?

- A. They refer to patterns of behavior exhibited by hackers during cyberattacks.
- B. They are deceptive design elements used to manipulate or trick users into taking actions they didn't intend.
- C. They are advanced encryption techniques used to secure sensitive data.
- D. They describe the ethical guidelines followed by cybersecurity professionals.

22. Consider the following statements regarding the Wolbachia method sometimes seen in news.

- 1. The method involves introducing the bacterium into mosquito populations to reduce the transmission of diseases like dengue.
- 2. Wolbachia-infected mosquitoes can hinder the replication of disease-causing pathogens, reducing their prevalence in mosquito populations.
- 3. The method is a promising tool for vector control and disease prevention, with successful trials in various regions.

Which of the above statement/s is/ are correct?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

23. What is the primary purpose of a cryptographic key in cybersecurity?

- A. They are used to generate random numbers for password creation.
- B. They provide a secure way to authenticate users on social media platforms.
- C. They are essential for encrypting and decrypting data to ensure confidentiality and security.
- D. They are used to validate the integrity of software applications.

24. With reference to Nipah virus often seen in news, consider the following statements.

- 1. It is a zoonotic virus that can be transmitted from animals to humans, often through contaminated fruit bats.
- 2. There is a highly effective antiviral treatment for Nipah virus, making prevention measures unnecessary.

Identify the correct statement/s.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

25. What is a neural network in the context of artificial intelligence?

- A. It refers to a biological model of the human brain used in AI research.
- B. It is a type of computer processor used for graphic rendering and gaming.
- C. It is a computational model inspired by the human brain, composed of interconnected nodes for machine learning tasks.
- D. It is a specialized computer network used exclusively for internet security.

26. The species 'Red Sand Boa' often mentioned in news is a

- A. Bird
- B. Animal
- C. Snake
- D. Frog

27. With reference to National Mission to Clean the Ganga often seen in news, consider the following statements.

- 1. Namami Gange aims to reduce pollution, improve water quality, and conserve the Ganges ecosystem through various projects and activities.
- 2. The mission involves public participation, technological interventions, and the promotion of sustainable practices to clean and protect the Ganges.





Identify the NOT correct statement/s.

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

28. Which Indian states are part of the Himalayan mountain range?

- A. Rajasthan, Gujarat, and Haryana are Himalayan states.
- B. Uttar Pradesh, Bihar, and Jharkhand are Himalayan states.
- C. Himachal Pradesh, Uttarakhand, and Sikkim are Himalayan states.
- D. Tamil Nadu, Kerala, and Karnataka are Himalayan states.

29. Consider the following statements.

1. The Forest conservation act applies uniformly in Nagaland and Mizoram, and their Legislative Assemblies have no authority to make decisions regarding its applicability.

2. Article 371A and 371G provide special constitutional protections for land and resources in Nagaland and Mizoram, respectively.

3. Arunachal Pradesh has the lowest FCA clearance in the Northeast, with other states like Tripura and Assam leading in this regard.

Select the correct statement/s using the code given

- A. Only one
- B. Only Two
- C. All the Three
- D. None of the above

30. Which statement accurately describes the Asiatic Cheetah, an endangered big cat species?

- A. The Asiatic Cheetah is abundant in African savannas and is a thriving species.
- B. The Asiatic Cheetah is a critically endangered subspecies found in Asia, particularly in Iran.
- C. The Asiatic Cheetah is the largest of all cheetah species and is found across Asia.
- D. The Asiatic Cheetah is a common sight in North American forests and grasslands.

31. Consider the following statements

1. The Chausath Yogini temple is situated on a hill in Mitaoli in Uttar Pradesh

2. This temple was commissioned by King Devapala from the Kachchhapaghata dynasty.

Select the correct statements from the codes gives below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

32. What was the primary objective of Operation Polo, which occurred on September 13, 1948, in India?

- A) To secure the princely state of Jammu and Kashmir
- B) To annex the princely state of Hyderabad into the Indian Union
- C) To liberate Goa from Portuguese rule
- D) To protect the princely state of Manipur from external threats

33. The India Club in London was established in 1951 under the initiative of which organization?

- A) Indian National Congress
- B) Indian National Army
- C) India League
- D) The All-India Students' Federation

34. Which Indian state approved a resolution designating Poila Baishakh as its statehood day?

- A) Odisha
- B) West Bengal
- C) Assam
- D) Bihar

35. What significant contribution did the Chola dynasty make to the portrayal of Shiva as Nataraja, the Lord of Dance?

- A) They invented the concept of Shiva as Nataraja.
- B) They introduced Shiva's dance in the form of wall paintings.
- C) They promoted Nataraja through exquisite bronze sculptures.
- D) They wrote extensive texts on the mythology of Nataraja

36. Atlas mountains are located in

- A. Europe
- B. Africa
- C. Asia
- D. Australia

37. The Morocco earthquake that struck the country in September was caused due to

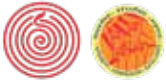
- A. Normal Fault
- B. Reverse fault
- C. Transverse fault
- D. Tensional Fault

38. The Fujiwhara Effect is associated with

- A. Merger of cyclones
- B. Merging of Blackholes
- C. Gravitational waves
- D. Sickle cell Anaemia

39. During the super blue moon,

- A. Moon appears blue in colour
- B. Moon is necessarily at perigee.



- C. Both a and b are correct
- D. Neither a nor b is correct.

40. Consider the following benefits of the floodplain -

1. Water retention
2. Water filtration
3. Flood control
4. Groundwater recharge

How many of these are correct?

- A. Only one
- B. Only two
- C. Only three
- D. All the four

41. Levees are the feature associated with

- A. Cyclone's eye
- B. River channels
- C. Earthquake
- D. Clouds

42. These clouds form higher in the atmosphere. They take shape when water vapor gets pushed up toward the stratosphere by the rise of warm, dry air and then freezes due to the low temperatures. These clouds are made up completely of ice crystals, which provides their white colour and form in a wide range of shapes and sizes. Technically these clouds produce precipitation, but it never reaches the ground.

The above description suits the best for which of the following?

- A. Stratus clouds
- B. Cumulonimbus clouds
- C. Cirrus clouds
- D. Nimbus clouds

43. Consider the following statements

1. When rain falls from a cloud but doesn't reach the ground it can create wispy tails from clouds known as virga.
2. Virga clouds can be created due to the cirrus clouds.

Choose the correct code

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

44. Mediane term often heard in news in context of

- A. Medical revolution during Covid
- B. Cyclones in Mediterranean Sea
- C. Grapes cultivation in Mediterranean region
- D. Space mission of Mediterranean countries

45. A flash flood occurred in Libya. What are the countries bordering Libya?

1. Tunisia
2. Tanzania
3. Egypt
4. Algeria

Choose the correct code

- A. Only 1 and 3
- B. Only 1, 3, 4
- C. Only 1 and 2
- D. 1, 2, 3 and 4

46. Consider the following statements regarding India-Middle East-Europe Economic Corridor (IMEE-EC).

1. The India-Middle East-Europe Economic Corridor (IMEE-EC) is an infrastructure development project that aims to create connectivity through rail and shipping networks.
2. India is a major stake holder in the project
3. USA and EU are the participating countries.
4. It is part of the Partnership for Rail and Shipping Corridors Global Infrastructure Investment (PGII).

How many of the above statements is/are correct?

- a) Only one
- b) Only two
- c) Only three
- d) All the statements are true

47. Consider the following statements regarding Partnership for Global Infrastructure Investment (PGII) initiative.

1. PGII is a collaborative effort by BRICS countries to fund infrastructure projects in developing nations.
2. It serves as an alternative to China's Belt and Road Initiative (BRI).
3. PGII emphasizes charity over loans, benefiting the receiving countries and donor countries

Which of the following is / are true with respect to above statements

- a) Only 1 and 2
- b) Only 2 and 3
- c) Only 1 and 3
- d) Only 3

48. Consider the following statements regarding Association of Southeast Asian Nations (ASEAN).

1. Adherence to the principles of the United Nations Charter is one of the core principles of ASEAN.
2. ASEAN recently condemned Myanmar for its lack of adherence to democracy.
3. India has signed a Free Trade Agreement with ASEAN.

How many of the above statements is/are false?

- a) Only one
- b) Only two
- c) All three
- d) None of the above statements

49. Which of the following countries is not part of the Forum for India-Pacific Islands Cooperation (FIPIC)?

- (a) Fiji
- (b) Papua New Guinea



- (c) Solomon Islands
- (d) Comoros

50. Chin-Kuki-Mizo Ethnic Communities' are associated with which country?

- a) China
- b) Russia
- c) Bangladesh
- d) Thailand

51. Nine-dash line, sometimes seen in news is associated with which of the following water body?

- a) Red Sea
- b) South China Sea
- c) Bay of Bengal
- d) Mediterranean Sea

52. Consider the following statements about Global Biofuels Alliance

1. India, Brazil and the US are the founding members of the alliance.

2. It was launched on the side-lines of the G-20 Summit at Delhi

Choose the correct statements:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

53. Consider the following statements about Morocco

1) It is a mountainous country of western North Africa that lies directly across the Strait of Gibraltar.

2) It is the only African country with coastal exposure to both the Atlantic Ocean and the Mediterranean Sea.

3) The major Atlantic Ocean port is Casablanca, is located in Morocco.

4) Morocco was the first country to recognize the United States as a country.

How many of the statements given above are correct?

- a) Only one
- b) Only two
- c) All four
- d) None of the above

54. Consider the following statements about India-Saudi Arabia Strategic Partnership Council

1) The council will be headed by the Prime Minister of India and Crown Prince Mohammed.

2) The council will meet twice in one year.

3) India is the fourth country with which Saudi Arabia has formed such a strategic partnership, after the UK, France and China.

4) The pact to establish the SPC was signed during Prime Minister Modi's visit to Saudi Arabia in October 2019.

How many of the statements given above are incorrect?

- a) Only one
- b) Only two
- c) All three
- d) None of the above

55. Consider the following statements about Five Eyes Alliance

1) It is a Secret agreement that allow secretive intelligence agencies in the alliance countries to spy on the world.

2) The United Kingdom-United States Communication Intelligence Act (UKUSA Agreement) is the foundation of the Five Eyes alliance.

3) In 1946, Five Eyes Alliance was formed between 5 Anglophone countries and their security agencies

4) USA, UK and France are the members of the Five Eyes Alliance.

How many of the statements given above are correct?

- a) Only one
- b) Only three
- c) All four
- d) None of the above

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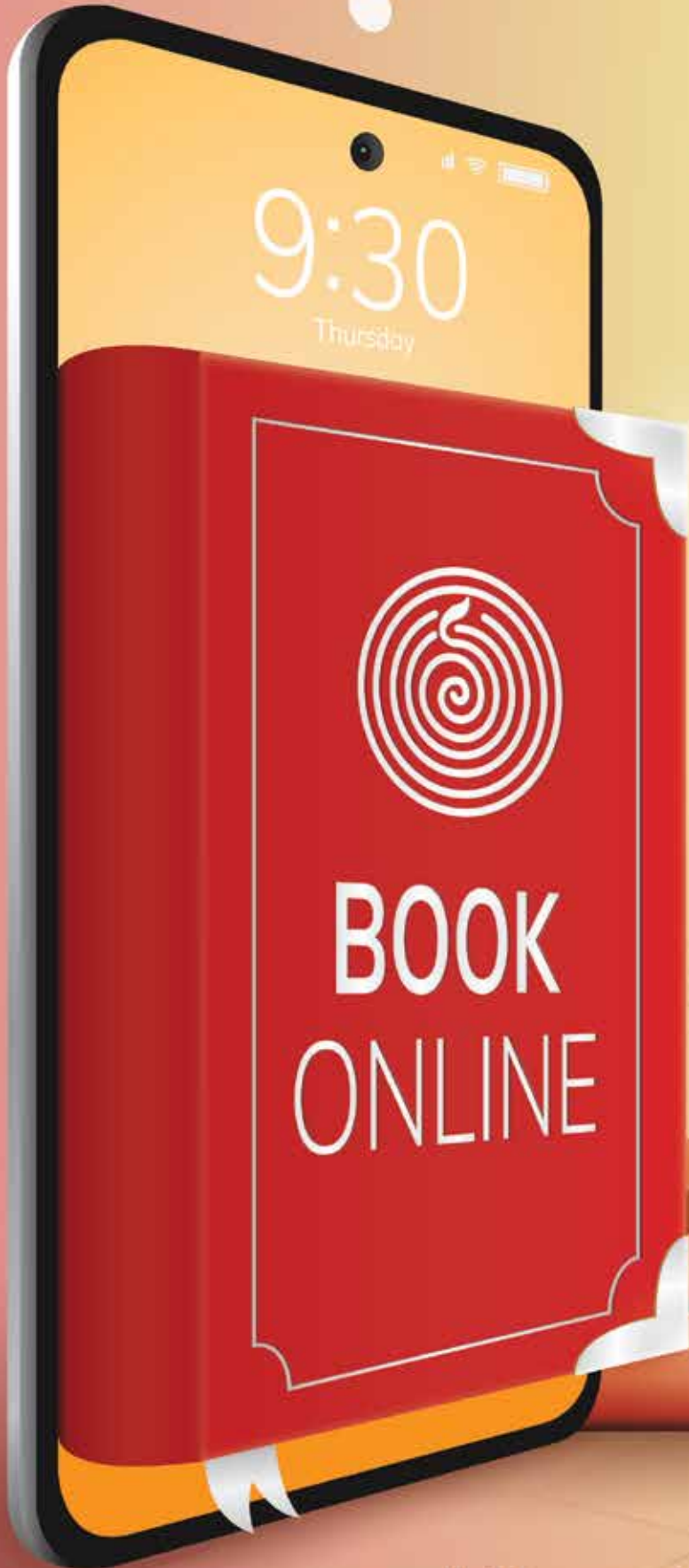
**OMR ANSWER SHEET**

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This sheet should not be folded or crushed.</li> <li>2. Use only blue/black ball point pen to fill the circles.</li> <li>3. Use of pencil is strictly prohibited.</li> <li>4. Circles should be darkened completely and properly.</li> <li>5. Cutting and erasing on this sheet is not allowed.</li> <li>6. Do not use any stray marks on the sheet.</li> <li>7. Do not use marker or white fluid to hide the mark.</li> </ol> <p style="font-size: small; margin: 0;"> <span style="margin-right: 20px;">WRONG METHODS</span> <span>CORRECT METHOD</span> </p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <br/> <br/>  </div> <div style="text-align: center;"> <br/>  </div> </div> </td> </tr> <tr> <td style="width: 50%; padding: 5px;"><b>Invigilator Sign</b></td> </tr> </table> | <b>Candidate Sign</b> | <p><b>INSTRUCTIONS FOR FILLING THE SHEET</b></p> <ol style="list-style-type: none"> <li>1. This sheet should not be folded or crushed.</li> <li>2. Use only blue/black ball point pen to fill the circles.</li> <li>3. Use of pencil is strictly prohibited.</li> <li>4. Circles should be darkened completely and properly.</li> <li>5. Cutting and erasing on this sheet is not allowed.</li> <li>6. Do not use any stray marks on the sheet.</li> <li>7. Do not use marker or white fluid to hide the mark.</li> </ol> <p style="font-size: small; margin: 0;"> <span style="margin-right: 20px;">WRONG METHODS</span> <span>CORRECT METHOD</span> </p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <br/> <br/>  </div> <div style="text-align: center;"> <br/>  </div> </div> | <b>Invigilator Sign</b> |
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| <b>Candidate Sign</b>   | <p><b>INSTRUCTIONS FOR FILLING THE SHEET</b></p> <ol style="list-style-type: none"> <li>1. This sheet should not be folded or crushed.</li> <li>2. Use only blue/black ball point pen to fill the circles.</li> <li>3. Use of pencil is strictly prohibited.</li> <li>4. Circles should be darkened completely and properly.</li> <li>5. Cutting and erasing on this sheet is not allowed.</li> <li>6. Do not use any stray marks on the sheet.</li> <li>7. Do not use marker or white fluid to hide the mark.</li> </ol> <p style="font-size: small; margin: 0;"> <span style="margin-right: 20px;">WRONG METHODS</span> <span>CORRECT METHOD</span> </p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <br/> <br/>  </div> <div style="text-align: center;"> <br/>  </div> </div> |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |                       |                       |                       |   |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |  |                       |   |                         |
| <b>Invigilator Sign</b>   |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |                       |                       |                       |   |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |   |                       |                       |                       |  |                       |   |                         |

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|----------------|----------------|----------------|----------------|----------------|
| <b>A B C D</b> | <b>A B C D</b> | <b>A B C D</b> | <b>A B C D</b> | <b>A B C D</b> |
| 1              | 21             | 41             | 61             | 81             |
| 2              | 22             | 42             | 62             | 82             |
| 3              | 23             | 43             | 63             | 83             |
| 4              | 24             | 44             | 64             | 84             |
| 5              | 25             | 45             | 65             | 85             |
|                |                |                |                |                |
| 6              | 26             | 46             | 66             | 86             |
| 7              | 27             | 47             | 67             | 87             |
| 8              | 28             | 48             | 68             | 88             |
| 9              | 29             | 49             | 69             | 89             |
| 10             | 30             | 50             | 70             | 90             |
|                |                |                |                |                |
| 11             | 31             | 51             | 71             | 91             |
| 12             | 32             | 52             | 72             | 92             |
| 13             | 33             | 53             | 73             | 93             |
| 14             | 34             | 54             | 74             | 94             |
| 15             | 35             | 55             | 75             | 95             |
|                |                |                |                |                |
| 16             | 36             | 56             | 76             | 96             |
| 17             | 37             | 57             | 77             | 97             |
| 18             | 38             | 58             | 78             | 98             |
| 19             | 39             | 59             | 79             | 99             |
| 20             | 40             | 60             | 80             | 100            |



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