



# DHEERAN IAS ACADEMY®

(Institute for UPSC,SSC,TNPSC, Banking Exams)

Coimbatore | Erode

## *Monthly Magazine*

### **CURRENT AFFAIRS**

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## TOPIC: HISTORY

### YAOSHANG FESTIVAL

#### In News:

The five-day-long Yaoshang festival, Manipur's version of Holi, has begun.

#### Analysis of Background:

- The festival is celebrated every year on the full moon of Lamta (February-March) of the Meitei lunar calendar.
- Yaoshang begins just after sunset followed by Yaosang Mei thaba, also known as Burning of the Straw Hut.
- Children visit neighbours to ask for monetary donations, called nakatheng.
- Yaoshang, unlike Holi, is celebrated with a traditional twist in Manipur.
- During these five days Manipur comes alive with sporting events during the day and traditional "thabal chongba" dance in the night.
  - The thabal chongba is a traditional dance of the Meitei, where boys and girls gathered in an open ground and dance in a circle.
  - But these days thabal chongba is performed throughout the month of Lamta.
  - Business activities and public transportation come to a grinding halt during Yaoshang. All educational institutions, both private and government, will also remain shut.
- Yaosang is indigenous traditions of the Meitei people. It is considered the most important festival in Manipur.
- About Meitei:
  - The Meitei people also known as the Manipuri people, are the predominant ethnic group of Manipur in Northeast India.
  - They speak Meitei language (officially called Manipuri), one of the 22 official languages of the Indian Republic and the sole official language of Manipur.
  - The Meiteis primarily settled in the Imphal Valley region in modern-day Manipur, though a sizable population has settled in the other Indian states of Assam, Tripura, Nagaland, Meghalaya, and Mizoram.
  - There is also a notable presence of Meitei in the neighboring countries of Myanmar and Bangladesh.
  - The Meitei ethnic group represents about 53% of Manipur's population

## BOBBILI VEENA

### In News:

The famous Bobbili Veena is likely to get global attention as the Andhra Pradesh government is preparing to present its replicas as part of cultural exchange to the delegates of G-20 conference.

### Analysis of Background:

- The State government has ordered at least 200 replicas of Bobbili Veena to Sarwasiddi family, which is famous for making the musical instrument.
- The G20 Infrastructure Working Group (IWG) conference being held in Visakhapatnam will focus on issues concerning future-ready urban infrastructure, financing future infra, increasing private financing and participation among others.

### About Bobbili Veena:

- Bobbili Veena, popularly known as Saraswati Veena, a large plucked string instrument is used in Carnatic music.
- The making of the veena began in the 17th century during the reign of Pedda Rayudu, the king of Bobbili Samsthanam who was a great patron of music.
- It has earned a GI tag in 2012 for its unique design and high-quality craftsmanship. However, it is gasping for its survival due to lack of artisans.
- Only 40 families of Sarwasiddi artisans from Gollapalli and Vadada are into the business.
- Bobbili Veena is carved from a single piece of jackwood by Sarwasiddi community artisans of Gollapalli under Bobbili Samsthanam.
- The artisans of Gollapalli have made the veenas by using elephant tusks, stag horns and strings to get 'Sapta Swaras' during Bobbili Raja's regime.

## SISUPALGARH: ANCIENT CITY IN ODISHA

### In News:

The nationally protected 2,700yearold Sisupalgarh, a fort city on the outskirts of Bhubaneswar, is being bulldozed by the land mafia, even as official notifications are ignored, and the State government and ASI point a lazy finger at each other.

## **Analysis of Background:**

### **About Sisupalgarh:**

- This is the only fortified site in India having eight gateways. The ASI archaeologist lamented that people were not aware of further land acquisition for the protection of
- The excavation of the Sisupalgarh site was first taken up in 1948, when it was declared a Centrally Protected Monument under the provisions of the Ancient Monuments Preservation Act, 1904, involving an area measuring 562.681 acres and covering five villages, including Sisupalgarh, BadadhanpuLingipur, Raghunathpur and Mahabhoisan, in 1950.
- Sisupalgarh, believed to have been built around the 7th to 6th century BCE, served as the capital of the Kalinga kingdom, and was an important centre of trade and commerce during ancient times.
- The fortification was carried out in the 4th to 3rd century BCE, when King Kharavela took up the repair of the city 2,100 years ago.
- It is identified with Kalinganagara of Kharavela and Tosali of Ashoka.

### **Features of the City**

- It was designed and constructed in a complete square shape that was surrounded by defensive walls.
- Each side spreads for over half a mile, and the interior is full of stone ruins and
- The walls of the fortification are a little over nine meters (30 feet) tall.
- The urban centre had an area of 1.2 km by 1 km, and it was surrounded by a moat.
- The gateways were connected by streets in a grid-like arrangement with the palace in the center.
- The gates were elaborate structures made of brick and stone.
- There is evidence of stone-lined reservoirs that were likely used for harvesting rainwater.
- Intelligent traffic management, pedestrian-friendly pathways, grand gateways with guard houses, wide roads, and a vast open space were some of the key features of this ancient city.
- The water management system of the city was unique.

### **About Kalinga:**

- Kalinga is a historical region of India.
- It is generally defined as the eastern coastal region between the Mahanadi and the Godavari rivers, although its boundaries have fluctuated with the territory of its rulers.

- The core territory of Kalinga now encompasses a large part of Odisha and northeastern part of Andhra Pradesh.
- At its widest extent, the Kalinga region also included parts of present-day Chhattisgarh, extending up to Amarkantak in the west.
- The Kalingas have been mentioned as a major tribe in the legendary text Mahabharata.
- In the 3rd century BCE, the region came under Mauryan control as a result of the Kalinga War.
- It was subsequently ruled by several regional dynasties whose rulers bore the title Kalingādhipati (“Lord of Kalinga”); these dynasties included Mahameghavahana, Vasishtha, Mathara, Pitrbhakta, Shailodbhava, Somavamshi, and Eastern Ganga.
- The medieval era rulers to rule over the Kalinga region were the SuryavamsaGajapatis, Bhoi dynasty, ParalakhemundiGangas and the zamindaris of Ganjam and Vizagapatam.

## VAIKOM SATYAGRAHA

### In News:

Tamil Nadu Chief Minister announced that the government was planning year-long events to commemorate the Vaikom Satyagraha that was launched to end caste discrimination in a local temple a century ago.

### Analysis of Background:

#### Vaikom Award:

- The award would be given to eminent personalities or organisations that worked for the welfare of oppressed sections beyond the State borders.
- It would be awarded on Periyar E.V. Ramasamy’s birth anniversary on September 17, which is also being observed as Day of Social Justice by Tamil Nadu.
- Periyar was among the leaders who took part in the movement and went on to earn the title ‘Vaikom Veerar’.

#### About Periyar:

- Erode Venkatappa Ramasamy, revered as Periyar was an Indian social activist and politician who started the Self-Respect Movement and Dravidar Kazhagam.
- He is known as the 'Father of the Dravidian movement'.
- He rebelled against gender and caste inequality in Tamil Nadu.
- Since 2021, the Indian state of Tamil Nadu celebrates his birth anniversary as 'Social Justice Day'.

### **Role in national movement and social welfare:**

- Ramasamy joined the Indian National Congress in 1919, but resigned in 1925 when he felt that the party was only serving the interests of Brahmins.
- In 1924, Ramasamy participated in non-violent agitation (satyagraha) in Vaikom, Travancore.
- In 1939, Ramasamy became the head of the Justice Party, and in 1944, he changed its name to Dravidar Kazhagam.
- The party later split with one group led by C. N. Annadurai forming the Dravida Munnetra Kazhagam (DMK) in 1949.
- While continuing the Self-Respect Movement, he advocated for an independent Dravida Nadu.
- Ramasamy promoted the principles of rationalism, self-respect, women's rights and eradication of caste.
- He opposed the exploitation and marginalisation of the non-Brahmin Dravidian people of South India and the imposition of what he considered "Indo-Aryan India".

### **About Vaikom Satyagraha:**

- Vaikom Satyagraha, from 30 March 1924 to 23 November 1925, was a nonviolent agitation for access to the prohibited public environs of the Vaikom Temple in the Kingdom of Travancore.

### **Causes**

- Kingdom of Travancore was known for its rigid and oppressive caste system and hence Swami Vivekananda called Travancore a "lunatic asylum".
- The campaign, led by Congress leaders T. K. Madhavan, K. Kelappan and K. P. Kesava Menon, was noted for the active support and participation offered by different communities and a variety of activists.
- Most of the great temples in the princely state of Travancore had for years forbidden lower castes (untouchables) not just from entering, but also from walking on the surrounding roads.

### **The movement**

- The agitation was conceived by the Ezhava Congress leader and a follower of Sri Narayana Guru, T. K. Madhavan.
- It demanded the right of the Ezhavas and 'untouchables' to use roads around the Vaikom Temple.
- Mahatma Gandhi himself visited Vaikom in March, 1925.



### **Reach of the movement**

- The movement was backed by Gandhiji, Chattampi Swamikal, and Sree Narayana Guru.
- The campaign gained popularity throughout India, and supporters arrived from around the country.
- Punjab's Akalis helped by establishing kitchens to feed the Satyagrahis.
- Even Muslim and Christian authorities backed the initiative.

### **Impact**

- Travancore government eventually constructed new roads near the temple for the use of lower castes.
- The roads, however, kept the lower castes adequately away from the near environs of the Vaikom Temple and the temple remained closed to the lower castes.
- After the intervention of Mahatma Gandhi, the agitation was given up and a compromise reached with Regent Sethu Lakshmi Bayi who released all those arrested and opened the north, south and west public roads leading to Vaikom Mahadeva Temple to all castes.
- Only in 1936, after the Temple Entry Proclamation, was access to the eastern road and entry into the temple allowed to the lower castes.
- Vaikom Satyagraha markedly brought the method of nonviolent public protest to Kerala.
- This was the first time in Kerala that an organised effort for the fundamental rights of untouchables and other backward castes was carried out on such a large scale.
- It became India's principal human rights campaign.
- The Satyagraha movement became a trial ground for significant methodologies such as Satyagraha.

## TOPIC: GEOGRAPHY

### MACQUARIE ISLAND

#### In News:

Macquarie Island is the only piece of land on the planet formed completely from the ocean floor.

#### Analysis of Background:

- Macquarie Island is an island in the southwestern Pacific Ocean, about halfway between New Zealand and Antarctica.
- Regionally part of Oceania and politically a part of Tasmania, Australia, since 1900, it became a Tasmanian State Reserve in 1978 and was inscribed as a UNESCO World Heritage Site in 1997.
- The island is home to the entire royal penguin population during their annual nesting season. Ecologically, the island is part of the Antipodes Subantarctic Islands tundra ecoregion.
- Macquarie Island is an exposed portion of the Macquarie Ridge and is located where the Australian Plate meets the Pacific Plate. The island lies close to the edge of the submerged continent of Zealandia but is not regarded as a part of it, because the Macquarie Ridge is oceanic crust rather than continental crust.
- It is the only place on Earth where rocks from the Earth's mantle(6 km below the ocean floor) are being actively exposed above sea-level. These unique exposures include excellent examples of pillow basalts and other extrusive rocks. It also is the only oceanic environment with an exposed ophiolite Due to these unique geological exposures, it was made a UNESCO World Heritage Site.



## **MOUNT MERAPI**

### **In News:**

Indonesia's Mount Merapi erupted with avalanches of searing gas clouds and lava, forcing authorities to halt tourism and mining activities on the slopes of the country's most active volcano.

### **Analysis of Background:**

#### **About Mount Merapi:**

- Mount Merapi (Mountain of Fire) is one of the world's most active volcanos located in
- It rises to 9,551 feet and has steep slopes with dense vegetation on its lower flanks.

#### **Why do more volcanoes occur in Indonesia?**

- Indonesia is located on the Ring of Fire, a vast area around the Pacific Ocean.
- It consists of over 17,000 islands and islets — and nearly 130 active volcanoes.
- The Ring of Fire also referred to as the Circum-Pacific Belt, is a path along the Pacific Ocean characterized by active volcanoes and frequent earthquakes.
- The abundance of volcanoes and earthquakes along the Ring of Fire is caused by the amount of movement of tectonic plates in the area.
- Along much of the Ring of Fire, plates overlap at convergent boundaries called subduction zones. That is, the plate that is underneath is pushed down, or subducted, by the plate above. As rock is subducted, it melts and becomes magma.
- The abundance of magma so near to Earth's surface gives rise to conditions ripe for volcanic activity.
- A significant exception is a border between the Pacific and North American Plates. This stretch of the Ring of Fire is a transform boundary, where plates move sideways past one another.
- This type of boundary generates a large number of earthquakes as tension in Earth's crust builds up and is released.

## **TROPICAL CYCLONE FREDDY**

### **In News:**

Tropical cyclone Freddy is on track to set a record as the longest-lasting tropical cyclone on record according to the World Meteorological Organisation.

### **Analysis of Background:**

- Very Intense Tropical Cyclone Freddy is the longest-lived tropical cyclone on record, surpassing Hurricane John's record of 31 days in 1994.
- It also has the highest accumulated cyclone energy (ACE) of any tropical cyclone, surpassing Hurricane Ioke's record of 82.
- Freddy, which was once a powerful cyclone that affected the Mascarene Islands, Madagascar, and Mozambique in February 2023, is currently weakening after making its second landfall in Mozambique.
- The Australian Bureau of Meteorology, which acts as a WMO regional centre, named the cyclone as- Freddy.

## **DAYLIGHT SAVING TIME**

### **In News:**

Lebanon was in mass confusion after its government at the last minute delayed the start of daylight saving time by a month.

### **Analysis of Background:**

#### **What is Daylight Saving Time?**

- Daylight saving time (DST) is the practice of setting the clocks forward one hour from the standard time during the summer and back again in the autumn.
- As a result, there is one 23-hour day in early spring and one 25-hour day in the middle of autumn.
- This is done to make better use of natural daylight.
- The idea of aligning waking hours to daylight hours to conserve candles was first proposed in 1784 by U.S. polymath Benjamin Franklin.
- Franklin suggested that waking up earlier in the summer would economize on candle usage; and calculated considerable savings.
- The goal of Daylight Saving Time is to make better use of daylight by prolonging the amount of time we can spend outside during daylight hours.

#### **Do we gain or lose an hour during Daylight Saving Time?**

- When Daylight Saving Time begins, we "spring forward" and set our clocks ahead by one hour, which results in a loss of an hour of sleep as the day becomes 23 hours long.
- The extra hour of daylight is essentially moved from the morning to the evening. Standard time will not be reinstated until Sunday, November 5, 2023.

### How many nations follow Daylight Saving Time?

- Over 70 nations globally follow Daylight Saving Time, known as Summer Time in some countries such as the United Kingdom and Europe. However, the exact amount of energy saved globally each year due to Daylight Saving Time is uncertain.
- India does not follow daylight saving time as countries near the Equator do not experience high variations in daytime hours between seasons.

### What was the purpose behind the creation of Daylight Saving Time?

- The main reason behind Daylight Saving Time is to conserve energy. The idea behind it is that with the later sunset, people are more likely to spend more time outdoors and less time indoors, leading to reduced electricity usage for lighting and household appliances.

### Lebanon

- Lebanon is a country in Western Asia.
- It is located between Syria to the north and east and Israel to the south, while Cyprus lies to its west across the Mediterranean Sea; its location at the crossroads of the Mediterranean Basin and the Arabian hinterland has contributed to its rich history and shaped a cultural identity of religious diversity.
- It is part of the Levant region of the Middle East.
- Its land straddles the "northwest of the Arabian plate".
- The border with the Israeli-occupied Golan Heights is disputed by Lebanon in a small area called Shebaa Farms.
- Its highest peak is in Mount Hermon at 2,814 metres.
- Lebanon is divided into four distinct physiographic regions: the coastal plain, the Lebanon mountain range, the Beqaa valley and the Anti-Lebanon Mountains.



## ZOJILA PASS

### In News:

The Border Roads Organisation (BRO) reopened the strategic Zojila Pass that acts as a gateway between union territories of Ladakh and Jammu and Kashmir. The pass, located at an altitude of 11,650 feet in the greater Himalayan range, was closed for traffic on January 7.

### Analysis of Background:

#### About Zojila Pass

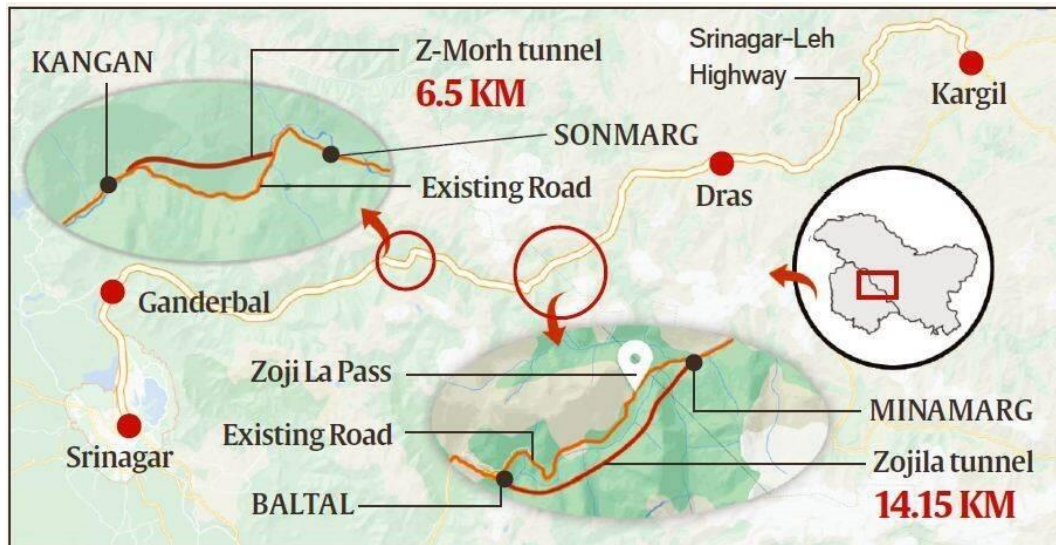
- Zoji La Pass is a high mountain pass in the Himalayas. It is in the Indian Union Territory of Ladakh, Kargil district, Kashmir.
- Located in the Drassubdivision, the pass connects the Kashmir Valley to its west with the Dras and Suru valleys to its northeast and the Indus valley further east. It provides a vital link between Ladakh and the Kashmir Valley.
- National Highway #1 between Srinagar and Leh in the western section of the Himalayan mountain range, traverses the pass.
- An all-weather Zoji-la Tunnel is under construction to mitigate seasonal road blockages due to heavy snowfall.

#### Zoji La Tunnel:

- Zoji La Tunnel would be a 14.2 km long road tunnel under Zoji La pass in NH-1 in the Himalayas.
- The tunnel will connect Srinagar and Leh through Dras and Kargil.
- The passage will begin at Sonmarg in the Union Territory of Jammu and Kashmir, and terminate at Minamarg, in the Union Territory of Ladakh.
- Zojila tunnel will be India's longest road tunnel and Asia's longest bi-directional tunnel.
- An approach road will be added to the head of the tunnel, connecting it with the end of the Z-Morh tunnel, which leads to Kargil.

#### Importance

- The tunnel, at a height of more than 11,500 feet, will provide all-weather, perennial connectivity between Srinagar (Kashmir) and Ladakh.
- The travel time on Zojila Pass is about three hours, but the journey through the tunnel can be completed within just 15 minutes.
- The distance from Baltal to Minamarg will come down to 13 km from the present 40 km.
- The project is expected to lead to the integrated development of both Jammu and Kashmir and Ladakh.



Presently, the Zojila Pass that connects Kashmir's capital city Srinagar to Ladakh is motorable only for six months only as the accumulation of snow makes it inaccessible during winters. It creates inconveniences for civilians in Ladakh who have to stockpile the ration before winter sets in.

- The tunnel, which is covered from the top, will provide a passage safe from avalanches in the winter months.
- The construction of Zojila Tunnel shall bring about all round economic and socio-cultural integration of these regions which remains cut-off from rest of the country during winters due to heavy snowfall for about six months.
- The project is expected to generate employment opportunities for locals.
- Better transportation networks will boost the tourism sector in the region.

### **Strategic significance**

- Need for the Zojila tunnel was first felt during the 1999 Kargil war.
- And now authorities are on an overdrive to build a strategic Zojila tunnel in Kashmir to reduce travel time to Ladakh where China's People's Liberation Army (PLA) is aggressively pushing its territorial claims along the Line of Actual Control (LAC).
- It will ensure safer travel for defence and military vehicles, which are active in the border territory.
- The tunnel will provide logistics flexibility and operational mobility to the Indian Army as it will reduce the travel time on Zojila Pass from 3.5 hours to 15 minutes.

## LANDSLIDE ATLAS OF INDIA

### In News:

With a steady rise in the number of extreme weather events, especially heavy rainfall capable of triggering landslides and floods, the Indian Space Research Organisation (ISRO) recently released the Landslide Atlas of India, a detailed guide identifying landslide hotspots in the country.

### Analysis of Background:

#### What causes landslides?

- Landslides are natural disasters occurring mainly in mountainous terrains where there are conducive conditions of soil, rock, geology and slope.
- A sudden movement of rock, boulders, earth or debris down a slope is termed as a landslide.
- Natural causes that trigger it include heavy rainfall, earthquakes, snow-melting and undercutting of slopes due to flooding. Landslides can also be caused by anthropogenic activities such as excavation, cutting of hills and trees, excessive infrastructure development, and overgrazing by cattle.
- Considered among the most frequent natural disasters, landslides are extremely hazardous, posing a threat to human and animal lives, damaging property, roads and bridges, disrupting communication lines and snapping power lines.
- Some of the main factors that influence landslides are lithology, geological structures like faults, hill slopes, drainage, geomorphology, land use and land cover, soil texture and depth, and weathering of rocks. All these are factored in when a landslide susceptibility zone is earmarked for planning and making predictions.
- In India, rainfall-induced landslide events are more common.

#### How are landslides classified and mapped?

- Landslides are broadly classified based on the type of materials involved (rock, debris, soil, loose mud), type of movement of the material (fall, topple, slide, rotational slide or translational slide), and type of flow of the material. Another category is of landslides that spread laterally. Landslides mapped in the ISRO atlas are mainly event-based and season-based.
- ISRO's National Remote Sensing Centre (NRSC), Hyderabad, has created a database of landslide-prone regions of India based on events during 1998 – 2022, primarily along the Himalayas and the Western Ghats. In addition to aerial images, high-resolution satellite images captured using cameras Indian Remote Sensing (IRS-1D) PAN + LISS-III, satellites ResourceSat-1 and 2, etc., were used to study the landslides over the past 25



years. The pan-India landslide database classifies landslides into – seasonal (2014, 2017 monsoon seasons), event-based and route-based (2000 – 2017).

### **How prone is India to landslides?**

- India is considered among the top five landslide-prone countries globally, where at least one death per 100 sq km is reported in a year due to a landslide event. Rainfall variability pattern is the single biggest cause for landslides in the country, with the Himalayas and the Western Ghats remaining highly vulnerable.
- Excluding snow covered areas, approximately 6 per cent of the country's geographical land area (0.42 million sq km) is prone to landslides. As many as 66.5 per cent of the landslides are reported from the North-western Himalayas, about 18.8 per cent from the North-eastern Himalayas, and about 14.7 per cent from the Western Ghats.
- Nearly half of the country's landslide-prone area (0.18 sq km) is located in the states of Assam, Arunachal Pradesh, Sikkim, Meghalaya, Mizoram, Manipur, Tripura and Nagaland. Uttarakhand, Himachal Pradesh, Jammu and Kashmir cover 0.14 million sq km of the total landslide-prone areas, whereas Maharashtra, Goa, Karnataka, Kerala, and Tamil Nadu account for 0.09 million sq km. A relatively small area (0.01 million sq km) of the Araku region in Andhra Pradesh along the Eastern Ghats, too, reports landslide events.
- In the Western Ghats, despite fewer events, landslides were found to be making inhabitants significantly vulnerable to fatalities, especially in Kerala.

### **What does the landslide atlas suggest?**

- Uttarakhand, Kerala, Jammu and Kashmir, Mizoram, Tripura, Nagaland and Arunachal Pradesh reported the highest number of landslides during 1998 – 2022.
- Mizoram topped the list, recording 12,385 landslide events in the past 25 years, of which 8,926 were recorded in 2017 alone. Likewise, 2,071 events of the total 2,132 landslides reported in Nagaland during this period occurred during the 2017 monsoon season. Manipur, too, showed a similar trend, wherein 4,559 out of 5,494 landslide events were experienced during the rainy season of 2017. Of the total 690, Tamil Nadu suffered 603 landslide events in 2018 alone.
- Among all these states, an alarming situation is emerging from Uttarakhand and Kerala.
- While Uttarakhand's fragility was recently exposed during the land subsidence events reported from Joshimath since January, this Himalayan state has experienced the second highest number (11,219) of landslides since 1998, all events since occurring

post 2000. The year-wise number of landslide events in the state is: 2003 (32), 2010 (307), 2012 (473), 2013 (6,610), 2017 (1), 2021 (329) and 2022 (1).

- The number of districts with the maximum landslide exposure are in Arunachal Pradesh (16), Kerala (14), Uttarakhand and Jammu and Kashmir (13 each), Himachal Pradesh, Assam and Maharashtra (11 each), Mizoram (8) and Nagaland (7).
- Kerala has been consistently reporting massive landslides since it suffered the century's worst floods in 2018. The year-wise landslide events here are 2018 (5,191), 2019 (756), 2020 (9) and 2021 (29).
- From the events and images obtained, the NRSC ranked Rudraprayag in Uttarakhand at the top of 147 vulnerable districts. It has the highest landslide density in the country, along with having the highest exposure to total population and number of houses.

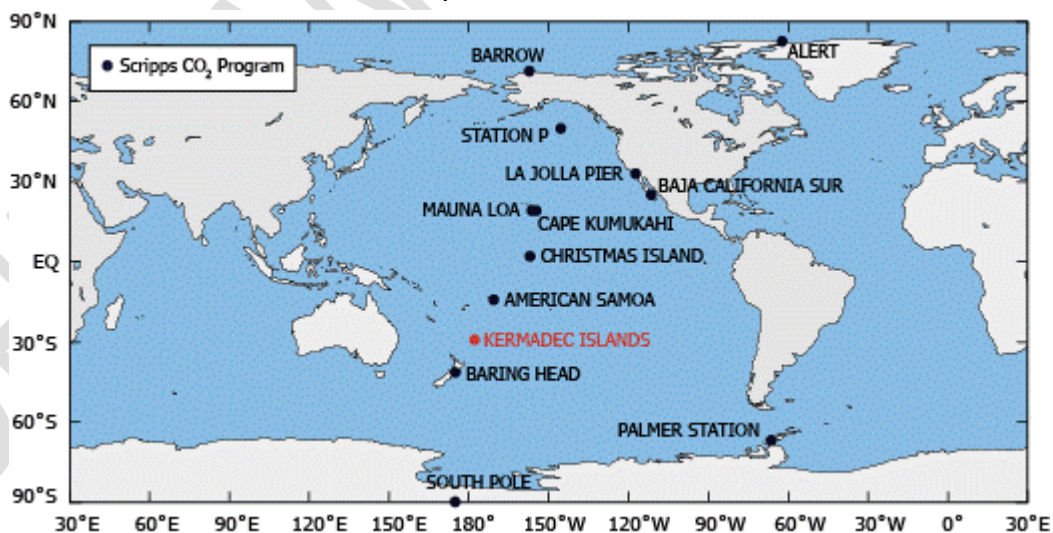
## KERMADEC ISLANDS

### In News:

An earthquake of magnitude 6.9 struck the Kermadec Islands region in New Zealand.

### Analysis of Background:

- The Kermadec Islands are a subtropical island arc in the South Pacific Ocean 800–1,000 km northeast of New Zealand's North Island, and a similar distance southwest of Tonga.
- The islands are part of New Zealand.
- The climate of the islands is subtropical.



## **BORNEO**

### **In News:**

Indonesia is moving its capital from Jakarta to Borneo.

### **Analysis of Background:**

#### **Why is Indonesia moving its capital?**

- Jakarta is home to about 10 million people and three times that number in the greater metropolitan area.
- It has been described as the world's most rapidly sinking city, and at the current rate, it is estimated that one-third of the city could be submerged by 2050.
- The main cause is uncontrolled ground water extraction, but it has been exacerbated by the rising Java Sea due to climate change.
- Its air and groundwater are heavily polluted, it floods regularly and its streets are so clogged that it's estimated congestion costs the economy \$4.5 billion a year.
- President Joko Widodo envisions the construction of a new capital as a nostrum for the problems plaguing Jakarta, reducing its population while allowing the country to start fresh with a "sustainable city."

#### **Why are environmentalists concerned?**

- Skeptics worry, however, about the environmental impact of building a sprawling 256,000-hectare (990-square-mile) city down in Borneo's East Kalimantan province, which is home to orangutans, leopards and a wide array of other wildlife.
- How are indigenous communities impacted?
- At least five villages with more than 100 Indigenous Balik people are relocating because of the construction, with more villages expected to be uprooted as the building site expands.

#### **Borneo:**

- Borneo is the third-largest island in the world and the largest in Asia.
- At the geographic centre of Maritime Southeast Asia, in relation to major Indonesian islands, it is located north of Java, west of Sulawesi, and east of Sumatra.
- The island is politically divided among three countries: Malaysia and Brunei in the north, and Indonesia to the south.
- Approximately 73% of the island is Indonesian territory. In the north, the East Malaysian states of Sabah and Sarawak make up about 26% of the island.

## Island of Borneo



### TOPIC: POLITY

#### SELF-INCRIMINATION

##### In News:

The Supreme Court refused to hear a plea by Delhi Deputy Chief Minister seeking bail in the excise policy case after a Delhi court remanded him in CBI custody.

##### Analysis of Background:

- A special CBI judge had granted custody of the Delhi Deputy Chief Minister because he had “failed to provide satisfactory answers” during the investigation. The court had rejected Sisodia’s arguments that he had a right against self-incrimination.
- The Supreme Court disapproved his approach to the court directly under Article 32 of the Constitution when the remedy of moving the High Court under Section 482 of the CrPC was available to him.

##### Individual’s right against self-incrimination

- The Indian Constitution states in Article 20(3) that "No person accused of any offence will be required to be a witness against himself."
- The features of Article 20(3) concerning the right against self-incrimination are as follows:
  - A suspect in any crime would be presumed innocent until proven guilty.
  - The prosecution is responsible for proving the accused is guilty.

- The accused is not needed to make any statement against his own will.
- The reasoning for this right to self-incrimination comes from the reality that if the mandatory examination were allowed, authorities would frequently employ force to pressure an accused person for admitting. So, this right upholds both human privacy and the moral standards of the criminal justice system.
- Judiciary on the right against self-incrimination
- The Supreme Court ruled in the State of Bombay vs. Kathi Kalu Oghad (1961) case that Article 20(3) only protects individuals who are accused of committing a crime; it does not apply to those who are questioned as witnesses. The court further declares that requesting fingerprints, handwriting, etc. does not violate Article 20(3).
  - According to the court, the protection provided by Article 20(3) only applies when the accused provides information that is based on his knowledge.
  - It states that telling an accused person to stand up and reveal his face for identification is not regarded to violate Article 20(3). Similarly, mandatory blood and urine testing would not be protected by this law.
- In Nandini Satpathy v. P.L. Dani (1978), the Supreme Court ruled that Pre-trial proceedings are not necessarily covered by Clause 3 of Article 20.
- The number of interrogation methods that the police use has increased as a result of advances in science and technology. Some of these new techniques include the Narco test and the BEEP test. The constitutionality of such tests was challenged in several High Courts, and the validity of these tests was upheld by all. However, the Supreme Court in the Selvi vs State of Karnataka (2010) case ruled that such interrogation techniques are against Article 21 of the constitution.
- In the Mohammed Ajmal Mohammad Amir Kasab v State of Maharashtra (2012) case, the Supreme Court laid down that the right against self-incrimination under Article 20(3) does not exclude any voluntary statements made in the exercise of free will and volition.
- In the Ritesh Sinha vs the State of Uttar Pradesh (2019) case, the Supreme Court broadened the parameters of handwriting samples to include voice samples, adding that this would not violate the right against self-incrimination.

## ANTI-DEFECTION LAW

### In News:

The Supreme Court of India ruled that the anti-defection law remains in effect even if a faction splits off from a political party and succeeds to win a majority inside the party.

### Analysis of Background:

- The Supreme Court in the political dispute between former Maharashtra Chief Minister Uddhav Thackeray and incumbent Eknath Shinde declared that the anti-defection law remains in force even if a political party group breaks out and manages to gain control of a majority of the party.

### Defection

- Defection by legislators occurs in many democracies. It can be argued that they can undermine the stability of the government, which is dependent on the support of the majority party's own elected legislators and/or a coalition of those elected to represent other parties.
- The argument follows that such instability can amount to a betrayal of the people's mandate as voiced at the most recent prior election.
- Almost 50% of the 4,000 legislators elected to central and federal parliaments in the 1967 and 1971 general elections subsequently defected, leading to political turmoil in the country.
- A law was sought to limit such frequent defections in India. In 1985, the Tenth Schedule of the 52nd amendment to the Constitution of India was passed by the Parliament to achieve this.

### Anti-Defection Law under Indian Constitution

- The anti-defection law aims to punish legislative members (MPs/MLAs) for changing political parties.
- The 52nd Amendment Act of 1985 added the 10th Schedule to the Constitution. This act is commonly referred to as the 'anti-defection law'.
- The 52nd Amendment Act provided for the disqualification of the members of Parliament and the state legislatures on the ground of defection from one political party to another.
- However, it also allowed mergers with another political party without inviting the penalty for defection.
- The 91st Amendment Act of 2003 made one change in the provisions of the 10th Schedule.

- As per the 1985 Act, a 'defection' by one-third of the elected members of a political party was considered a 'merger'.
- But the 91st Constitutional Amendment Act, 2003, amended this and now at least two-thirds of the members of a party have to be in favour of a "merger" to bypass the anti-defection act.

### **Provision of the Anti-defection Act**

- **Disqualification of Members of Political Parties:** A member of a House belonging to any political party becomes disqualified for being a member of the House;
  - If he voluntarily gives up his membership in such a political party.
  - If he votes or abstains from voting in contrary to any direction issued by his political party without obtaining prior permission from the party.
  - From the above provision, it is clear that a member elected on a party ticket should continue in the party and obey the party's directions.
- **Independent Members:** An independent member of a House (elected without being set up as a candidate by any political party) becomes disqualified if he joins any political party after such an election.
- **Nominated Members:** A nominated member of a House becomes disqualified from being a member of the House if he joins any political party after the expiry of six months from joining the house.
- This means that he may join any political party within six months of taking his seat in the House without inviting this disqualification.
- **Exceptions:** The above disqualification on the ground of defection does not apply in the following two cases:
  - If a member goes out of his party as a result of a merger of the party with another party. A merger takes place when 2/3rd of the members of the party have agreed to such a merger.
  - If a member, after being elected as the presiding officer of the House, voluntarily gives up the membership of his party or rejoins it. This exemption has been provided because of the dignity and impartiality of this office.
- **Deciding Authority:** Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.
  - Originally, the act provided that the decision of the presiding officer is final and cannot be questioned in any court.
  - However, in the Kihoto Hollohan case (1993), the Supreme Court declared the above provision unconstitutional and said that the decision of the presiding officer is subject to judicial review on the grounds of mala fides, perversity, etc.

- Rule-Making Power: The presiding officer of a House is empowered to make rules to give effect to the provisions of the 10th Schedule.
  - All such rules must be placed before the House for 30 days. The House may approve or modify or disapprove them.
  - According to the rules, the presiding officer can take up a defection case only when he receives a complaint from a member of the House. Before making the final decision, he must give the member (against whom the complaint has been made) a chance to submit his explanation.
  - He may also refer the matter to the committee of privileges for inquiry.

### **Anti-defection Provisions under the 91st Amendment Act of 2003**

- The total number of ministers, including the Prime Minister, in the Central Council of Ministers, shall not exceed 15% of the total strength of the Lok Sabha.
- A member of either House of Parliament belonging to any political party who is disqualified on the ground of defection shall also be disqualified to be appointed as a minister.
- The total number of ministers, including the Chief Minister, in the Council of Ministers in a state shall not exceed 15 % of the total strength of the Legislative Assembly of that state. But, the number of ministers, including the Chief Minister, in a state shall not be less than 12.
- A member of either House of a state legislature belonging to any political party who is disqualified on the ground of defection shall also be disqualified to be appointed as a minister.
- A member of either the House of Parliament or the House of a State Legislature belonging to any political party who is disqualified on the ground of defection shall also be disqualified to hold any remunerative political post.
- The provision of the 10th Schedule (anti-defection law) regarding exemption from disqualification in case of a split by one-third of members of the party has been deleted. It means that the defectors have no more protection on grounds of splits.

### **Significance of the Anti-defection law under the 10th Schedule**

- It provides greater stability in the Parliament and state legislature by checking the tendency of legislators to change parties.
- It Curbs Political corruption, which is a necessary first step for addressing other forms of corruption in the country.
- It Strengthens democracy by bringing stability to politics, ensuring legislative programmes of the Government are not affected by a defecting Member.



- It makes members of parliaments more responsible and loyal to the parties with whom they were aligned at the time of their election, as many believe that party allegiance plays a key role in their election success.
- It gives, for the first time, a clear-cut constitutional recognition of the existence of political parties.

### Concerns

- Experience shows that the Anti-defection law has failed to prevent defections.
- It does not make a differentiation between disagreement and defection. It curbs the legislator's right to dissent and freedom of conscience in the name of party discipline.
- Its distinction between individual defection and group defection is irrational.
- Its discrimination between an independent member and a nominated member is illogical. If the former joins a party, he is disqualified while the latter is allowed to do the same.
- Its Decision-making authority in the presiding officer is criticized on two grounds;
  - He may not exercise this authority impartially and objectively due to political reasons.
  - Lack of legal knowledge and experience to decide upon the cases.
- It promotes the horse-trading of legislators which goes against the values of a democratic setup.

## WHIP

### In News:

The Supreme Court said that the "whip" binds Members of a House, and if any MLAs within a political party that is part of a ruling coalition indicate they do not wish to support the alliance, the MLAs will be disqualified.

### Analysis of Background:

#### Whip

- The office of 'whip' is mentioned neither in the Indian Constitution nor in the Rules of the House nor in a Parliamentary Statute.
  - It is based on the conventions of the parliamentary government.
- Every political party, whether ruling or Opposition has its whip in the Parliament.
  - He is appointed by the political party to serve as an assistant floor leader.

- He is charged with the responsibility of ensuring the attendance of his party members in large numbers and securing their support in favour of or against a particular issue.
  - He regulates and monitors their behaviour in the Parliament.
  - The members are supposed to follow the directives given by the whip. Otherwise, disciplinary action can be taken.

### **Types of Whips**

- The One-line whip is issued to inform the members about a vote. It allows a member to abstain in case they decide not to follow the party line.
- The Two-line whip is issued to direct the members to be present in the House at the time of voting. No special instructions are given on the pattern of voting.
- The Three-line whip is issued to members directing them to vote as per the party line. It is the strictest of all the whips.

### **Functions of Whip**

- He maintains order among party representatives in the House.
- He is tasked with making sure that his party's members show up in big numbers and win their support for or opposition to a certain cause.
- He observes the indications of discontent among Parliamentarians and alerts the appropriate party leaders.
- He serves as the party's unifying force and is in charge of preserving the internal party structure in the Parliament.
- He is essential to the effective and efficient running of the business on the House floor.

### **Violation of whip**

- If an MP violates his party's whip, he faces dismissal from the House under the Anti-Defection Act.

## FOREIGN CONTRIBUTION REGULATION ACT (FCRA)

### In News:

The Center for Policy Research's Foreign Contribution Regulation Act (FCRA) licence has been suspended by the Union Government (CPR).

### Analysis of Background:

#### Foreign Contribution Regulation Act

- The FCRA was enacted in 1976 to regulate foreign money into the country through independent organizations.
- The Foreign Contribution Regulation Act was amended by the Indian Parliament in 2010.
  - To effectively regulate the foreign contribution by individuals or associations or companies.
- The Union Minister of Home Affairs introduced the Foreign Contribution (Regulation) Amendment Bill in 2020, which made several changes.

#### Foreign Contribution (Regulation) Amendment Act, 2020

- The Act regulates the acceptance and utilization of foreign contributions by individuals, associations and companies.
  - Foreign contribution is the donation or transfer of any currency, security or article (of beyond a specified value) by a foreign source.
- Prohibition to accept foreign Contributions: Certain persons are prohibited to accept any foreign contribution. These include;
  - Election candidates, editors or publishers of a newspaper, judges, government servants, members of any legislature, and political parties, among others.
  - The Bill adds public servants (as defined under the Indian Penal Code) to this list. A public servant includes any person who is in service or paid by the government or remunerated by the government for the performance of any public duty.
- Transfer of foreign Contributions
  - Foreign contributions cannot be transferred to any other person unless such person is also registered to accept foreign contributions (or has obtained prior permission under the Act to obtain foreign contributions).
  - The Act prohibited the transfer of foreign contributions to any other person. The term 'person' under the Act includes an individual, an association, or a registered company.
- Aadhar for registration

- Any person seeking registration (or renewal of such registration) or prior permission for receiving a foreign contribution must make an application to the central government in the prescribed manner.
- The Act adds that any person seeking prior permission, registration or renewal of registration must provide the Aadhar number of all its office bearers, directors or key functionaries, as an identification document.
- In the case of a foreigner, they must provide a copy of their passport or the Overseas Citizen of India card for identification.
- FCRA Account
  - Foreign contributions must be received only in an account designated by the bank as an “FCRA account” in such a branch of the State Bank of India, New Delhi, as notified by the central government.
  - No funds other than the foreign contribution should be received or deposited in this account.
  - The person may open another FCRA account in any scheduled bank of their choice for keeping or utilizing the received contribution.
- Restriction in the utilization of foreign contributions
  - The Government may restrict the usage of unutilized foreign contributions for persons who have been granted prior permission to receive such contributions.
- Renewal of licence
  - Every person who has been given a certificate of registration must renew the certificate within 6 months of expiration.
  - The Act provides that the government may conduct an inquiry before renewing the certificate.
- Reduction in the use of foreign contributions for administrative purposes
  - A person who receives a foreign contribution must use it only for the purpose for which the contribution is received.
  - They must not use more than 20% of the contribution for meeting administrative expenses (earlier it was 50%).
- Suspension of Registration
  - Earlier governments may suspend the registration of a person for a period not exceeding 180 days.
  - The Act adds that such suspension may be extended up to an additional 180 days.
- The Union government reserves the right to cancel the FCRA registration of any NGO if it finds it to violate the Act.
- Registration of the NGO can be cancelled for a range of reasons. Once the registration is cancelled, it is not eligible for re-registration for three years.

- All orders of the government can be challenged in the High Court.

## RIGHT TO HEALTH

### In News:

The Rajasthan Assembly's recently completed budget session restarted discussion about the Right to Health Bill.

### Analysis of Background:

- If the bill is approved, hospitals, clinics, and laboratories that are both publicly and privately operated must offer free and reasonably priced medical services.
- The Bill is opposed by private hospital doctors who claim it was quickly drafted, ignores practical considerations, and could tighten standards in an industry that is already overly regulated.

### Key points of the Bill

- The Right to Healthcare Bill, 2022 was introduced to the State Legislature by the Rajasthan State government in September 2022. Patients and healthcare professionals are given rights under the Bill, which also obliges the government to uphold these legal rights and requires the establishment of grievance redressal systems.
- Residents of Rajasthan will be entitled to free examinations, medications, diagnostics, emergency transport, and care at all public health facilities, as well as reasonably priced surgeries. The Bill views healthcare as a public good rather than as a means of profit.
- 20 rights are outlined in clause 3 of the bill, including the right to informed consent, the right to information (in the form of medical records and documentation) regarding diagnosis and treatment, and the right to treatment free from caste, class, age, gender, and other discrimination.
- The obligation for providing adequate medical services is transferred to the government under Section 4 of the Bill. The government is "obligated" to allocate funding, establish institutions, and create grievance redressal procedures.
- The government must create a human resource policy for the health sector under section 4, which calls for a fair distribution of physicians, nurses, and other healthcare professionals throughout all levels of the system.

## **Concern**

- Due to the lack of clarity over who will be responsible for paying for the required free emergency treatment, private healthcare providers have been the most vocal opponents of the Bill.
- After protests, the government decided to establish a fund to pay for any emergency medical services provided by the private sector.
- Critics claim that it is an attempt to surrender the State's duty to provide health protection and increases the burden of patients on the private sector.
- Many believe that the Bill is unnecessary and highly restrictive.
- The Bill contains the word "guarantee" just in passing, and there is no mention of a deadline for formulating the guidelines, which leaves room for interpretation over when an Act will be put into effect.

## **State of India's healthcare sector**

- India had 7 physicians per 1,00,000 people in 2017 (in contrast to 98 in Pakistan, 100 in Sri Lanka and 241 in Japan).
- 53 beds per 1,00,000 people (in contrast to 63 in Pakistan, 79.5 in Bangladesh, 415 in Sri Lanka and 1,298 in Japan).
- 7 nurses and midwives per 1,00,000 people (in contrast to 220 in Sri Lanka, 40 in Bangladesh, 70 in Pakistan, and 1,220 in Japan).
- India has among the highest out-of-pocket (OOP) expenditures of all countries in the world- 62% of the total health expenditure in India is OOP.

## **How much does India spend on healthcare?**

- In 2020-21, India spent 1.8% of its gross domestic product (GDP) on healthcare.
- With 'health and well-being one of the six pillars of the Union Budget 2021-22, the government has committed approximately 2.5-3% of GDP now.
- Data shows that India has 1.4 beds per 1,000 people, 1 doctor per 1,445 people, and 1.7 nurses per 1,000 people.
- According to the World Health Organization (WHO), India ranks 184 out of 191 countries in health spending.
- The US spends over 16% of its total GDP on healthcare, while Japan, Canada, Germany etc. spend over 10% of their GDP on healthcare.

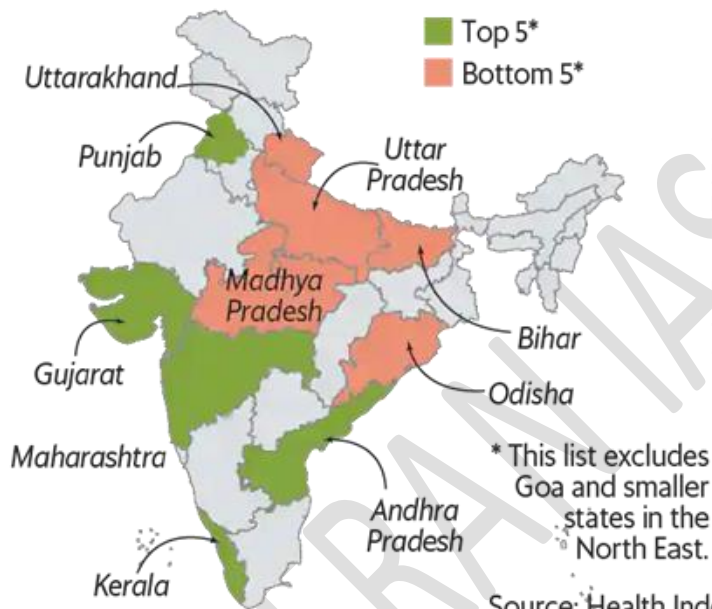
## How do states rank on the health index?

- The Health Index for States developed by Niti Aayog in consultation with the health ministry and the World Bank has rankings for large states, smaller states and Union territories.
- It is based on 23 health parameters ranging from mortality rate and sex ratio to functioning cardiac care units.
- In 2019, Kerala was the top performer followed by Andhra Pradesh and Maharashtra.
- The index results indicated that states even with a lower economic output are performing better on health and well-being.

## The performance report

In 2019, Kerala was the top performer followed by AP and Maharashtra. The best incremental change was seen in Haryana, Rajasthan, Jharkhand, AP and Assam.

### State-wise health index score - 2019



### How states improved their scores on healthcare

Change in scores between 2015-16 and 2017-18

#### ► Not improved\*\*

Madhya Pradesh, Odisha, Uttarakhand, Uttar Pradesh, Bihar, West Bengal, Kerala, Punjab, Tamil Nadu

#### ► Least/moderately improved\*\*

Chhattisgarh, Gujarat, Himachal Pradesh, Maharashtra, Jammu & Kashmir, Karnataka, Telangana

#### ► Most improved

Rajasthan, Haryana, Jharkhand, Assam, Andhra Pradesh

\*\* Some states may not have shown much improvement but were already in the NITI Aayog's "front runners" list (high scores).

Source: Health Index developed by Niti Aayog in collaboration with MoHFW

## Problems with Health Care Infrastructure of India:

### Shortage of Staff and Equipment

- The government Rural Health Survey reveals that only 55.6% of CHCs have functional X-ray machines while only 18% of the specialists required are in place.
- Overall there was a shortfall of 86.5% surgeons; 74.1% obstetricians & gynaecologists; 84.6% general physicians and 81% paediatricians at CHCs in the country.
- According to Rural Health Statistics 2018 only 8% of subcentres, 12% PHCs and 13% CHCs met Indian Public Health Standards.
- Healthcare infrastructure is heavily skewed in favour of urban areas

- The evidence shows that the private healthcare market occupies a large share of hospitals (75%), hospital beds (50.7%) and medical institutions (54.3%) largely located in urban areas.
- Almost half (48%) of the large private hospitals and two-thirds of corporate hospitals are located in five million plus cities in India.
- Around 80% work in urban areas while 69% of rural India is heavily dependent on the public health system where the allopathic doctor population ratio is 1:11,082 while the World Health Organization recommends a ratio of 1:1000.

#### **Inter-State and Intra-state variations**

- In a few states such as Kerala, Tamil Nadu and Delhi public health facilities play their intended role of being the first point of care and proactively delivering essential services while in some states like Uttar Pradesh, Bihar, and Jharkhand primary health care is not available to masses and they are highly dependent on the private sector with their expenditure.
- While the private facility is highly urban-centric covering a few districts of India, there is a dearth of both public and private health care facilities in many of the districts and there are many parts/areas/districts where no one is to serve people.

#### **No proper regulatory mechanism and monitoring**

- According to a WHO report published in 2016, Only one in five doctors in rural India is qualified to practice medicine.
- The report said that 31.4% of those calling themselves allopathic doctors were educated only up to class 12 and 57.3% of doctors did not have a medical qualification.
- Due to poor regulatory mechanisms and monitoring, private health care services and doctors are following unethical, greedy practices treating medical services as a business and hospitalisation as a source of profit, writing unnecessary diagnostic tests, high-rate medicines instead of generic ones, organ theft (kidney racket) etc. even denying treatment to poor people though getting land from the government on a subsidised rate.

#### **Lack of Affordability:**

- The contribution of the private sector to healthcare expenditure in India is around 80 per cent while the rest 20 per cent is contributed by the Public Sector.
- The private sector also provides for 58 per cent of the hospitals and 81 per cent of the doctors in India.



## **NATIONAL COMMISSION FOR PROTECTION OF CHILD RIGHTS (NCPCR)**

### **In News:**

The National Commission for Protection of Child Rights (NCPCR) celebrated its 18th Foundation Day on 2nd March 2023.

### **Analysis of Background:**

- The Union Minister for Women and Child Development and Minority Affairs, Smt. Smriti Zubin Irani was the Chief Guest of the event.
- The Minister also launched the “Child Rights Champions World” a dedicated feature on NCPCR’s website on child rights literacy.

### **National Commission for Protection of Child Rights**

- The National Commission for Protection of Child Rights (NCPCR) is a statutory body established under the Commission for Protection of Child Rights (CPCR) Act, 2005.
- It is under the administrative control of the Ministry of Women and Child Development.
- Under the act, a Child is defined as a person in the 0 to 18 years age group.
- It aims to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in harmony with the Child Rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child.
- Composition: This commission has a chairperson and six members of which at least two should be women.
  - All of them are appointed by the Central Government for 3 years.
  - The maximum age to serve in the commission is 65 years for Chairman and 60 years for members.
- The salary and allowances payable to, and other terms and conditions of service of, the Chairperson and Members, shall be such as may be prescribed by the Central Government.

### **Functions of the National Commission for Protection of Child Rights;**

- Examine and review the safeguards provided for the protection of child rights and recommend measures for their effective implementation.
- Inquire into child rights violations and recommend initiating proceedings in such cases.
- Examine all factors that curb the enjoyment of rights of children affected by terrorism, communal violence, riots, natural disaster, domestic violence, HIV/AIDS, trafficking,

maltreatment, torture and exploitation, pornography and prostitution and recommend appropriate remedial measures.

- Look into the matters relating to the children in need of special care and protection including children in distress, marginalized and disadvantaged children, children without families and children of prisoners and recommend appropriate remedial measures.
- Study treaties and other international instruments and undertake periodical reviews of existing policies, programmes and other activities on child rights and make recommendations for their effective implementation in the best interest of children.
- Undertake and promote research in the field of child rights.
- Spread child rights literacy among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means.
- Inspect or cause to be inspected any juvenile's custodial home, or any other place of residence or institution meant for children, under the control of the Central Government or any State Government or any other authority.
- Inquire into complaints and take suo moto notice of matters relating to:
  - Deprivation and violation of child rights.
  - Non-implementation of laws providing for the protection and development of children.
  - Non-compliance with policy decisions, guidelines or instructions aimed at mitigating hardships and ensuring the welfare of the children and providing relief to such children.
- Such other functions may consider necessary for the promotion of Child Rights.
- The Commission shall not enquire into any matter pending before a State Commission or any other Commission duly constituted under any law for the time being in force.
- Present an annual report to the Central Government and at such other intervals as the Commission may deem fit.
- Compile and analyze data on children.

## PMLA

### In News:

The Delhi High Court has directed the Union government to expedite steps for appointing a chairperson and other members of the Appellate Authority under the Prevention of Money Laundering Act, 2002 (PMLA). The court gave 8 weeks to the Centre.

### Analysis of Background:

- The Court stated that there is a "dire necessity" for establishing several Benches because of the large number of pending cases under the PMLA.
- The court further stated that Section 6(2) of the PMLA calls for the existence of a chairperson and other members. Separate Benches may also be formed, according to the Act.
- Prevention of Money Laundering Act, 2002
- Prevention of Money Laundering Act, 2002 was passed by the Indian parliament to prevent money laundering and to provide for the confiscation of property derived from money laundering. PMLA came into effect on 1st July 2005.
- The PMLA was passed by the Parliament as a result of a global commitment to address the issue of money laundering, which affects financial institutions around the world and has international consequences.
- The Act prescribes that any person found guilty of money laundering shall be jailed from 3 years to 7 years; the maximum punishment may extend to 10 years instead of 7 years.
- The Director or officer above the Deputy Director ranks with the Director's authority can attach property believed to be "proceeds of crime" for 180 days.
- The Adjudicating Authority is the authority appointed by the central government to exercise jurisdiction, powers and authority conferred under PMLA.
- The Adjudicating Authority shall not be bound by the procedure laid down by the Code of Civil Procedure, 1908. Still, it shall be guided by the principles of natural justice and subject to the other provisions of PMLA.
- A person, who is accused of having committed the offence of money laundering, has to prove that the alleged proceeds of crime are lawful property.
- An Appellate Tribunal is a body appointed by Union Government. It has the power to hear appeals against the orders of the Adjudicating Authority and any other authority under the Act.
- objectives:
  - To prevent and control money laundering.

- To confiscate and seize the property obtained from the laundered money.
- To deal with any other issue connected with money laundering in India.

### **Concern**

- **Enforcement Directorate:** The Act allows the government and the Enforcement Directorate (ED) practically infinite authority to issue arrest warrants, make arrests and conduct raids. The ED is not considered to be a "police agency," despite having investigatory powers. The ED's decision to choose which instances to look into is also not entirely clear.
- **The burden of Proof:** The Act makes getting out on bail nearly impossible and puts the burden of proving one's innocence on the accused rather than the government. The Court made it very clear that the State has a compelling interest in placing severe bail restrictions on those accused of economic crimes.
- **Low Conviction rate:** Everyone who has gone through a trial claim that the trial itself is punishment, and that any assets you have can be seized while the case is pending. The conviction rate under this law is very low, less than 5%.
- **The protections against property attachment** are strong in theory, but in practice, they are ineffective and do not permit even reasonable exceptions that would be required to maintain your dignity or carry on with your business or livelihood.

**Topic: IR/ IO**

### **IMF BAILOUT**

#### **In News:**

The International Monetary Fund (IMF) confirmed a \$3 billion bailout plan for Sri Lanka's struggling economy. Negotiations are also being held with Pakistan for a \$1.1 billion bailout plan.

#### **Analysis of Background:**

##### **Need for IMF bailout:**

- Countries seek help from the IMF usually when their economies face a major macroeconomic risk, mostly in the form of a currency crisis.
- **Conditions in Pakistan and Sri Lanka:**
- Both countries have witnessed domestic prices rise rapidly and the exchange value of their currencies drop steeply against the U.S. dollar.

**Reasons:**

- Such currency crises are generally the result of gross mismanagement of the nation's currency by its central bank, often under the covert influence of the ruling government.
- Central banks may be forced by governments to create fresh money out of thin air to fund populist spending.
- Such spending eventually results in a rapid rise of the overall money supply, which in turn causes prices to rise across the economy and the exchange value of the currency to drop.
- A country's domestic economic policies can also have an adverse impact on its currency's exchange rate and foreign exchange reserves. For example, economic policy that imperils productivity can affect a country's ability to attract the necessary foreign exchange for its survival.
- Bad luck can also contribute to a crisis. In the case of Sri Lanka, a decrease in foreign tourists visiting the country led to a steep fall in the flow of U.S. dollars into the nation.

**Impact:**

- A rapid, unpredictable fall in the value of a currency can destroy confidence in said currency and affect economic activity as people may turn hesitant to accept the currency in exchange for goods and services.
- Foreigners may also be unwilling to invest in the economy where the value of its currency gyrates in an unpredictable manner.
- In such a scenario, many countries are forced to seek help from the IMF to meet their external debt and other obligations, to purchase essential imports, and also to prop up the exchange value of their currencies.
- How does the IMF help countries?
- The IMF basically lends money, often in the form of special drawing rights (SDRs), to troubled economies that seek the lender's assistance
- The IMF carries out its lending to troubled economies through a number of lending programs such as:
  - the extended credit facility,
  - the flexible credit line,
  - the stand-by agreement, etc.
- Countries receiving the bailout can use the SDRs for various purposes depending on their individual circumstances. any money that they receive from the IMF is likely to go towards addressing these urgent issues.

### **Conditions attached to an IMF bailout:**

- A country may have to agree to implement certain structural reforms as a condition to receive IMF loans.
- The IMF's conditional lending has been controversial as many believe that these reforms are too tough on the public.
- Some have also accused the IMF's lending decisions, which are taken by officials appointed by the governments of various countries, to be influenced by international politics.
- Supporters of the IMF's lending policies, however, have argued that conditions are essential for the success of IMF lending. For one, countries that seek an IMF bailout are usually in a crisis due to certain policies adopted by their governments that turned out to be inimical to economic growth and stability.
- Corruption is another issue. The IMF lending to troubled economies, may turn out to be a wasted effort because these economies have poor institutions and suffer from high corruption.

### **INTERPOL RED NOTICE**

#### **In News:**

Interpol has removed its red notice against fugitive Mehul Choksi.

#### **Analysis of Background:**

##### **About INTERPOL:**

- The International Criminal Police Organization is an international organization that enables worldwide police cooperation and crime control.
- With 194 member states, it is the largest police organization in the world.
- India is also a member state. India hosted Interpol's 91st General Assembly in 2022.
- Contrary to popular belief, INTERPOL itself is not a law enforcement agency.

##### **Functions:**

It Provides investigative support, expertise and training to law enforcement agencies worldwide focusing on the following key areas

- transnational crime
- terrorism
- Cybercrime
- organized crime
- crimes against humanity
- child pornography

- drug trafficking and production
- political corruption
- infringement of intellectual property rights and
- white-collar crime.

#### **INTERPOL Notice:**

- These are international requests for cooperation or alerts allowing police in member countries to share critical information related to criminal activity.
- Notifications may also be used by the United Nations, International Criminal Tribunals and the International Criminal Court to locate persons wanted for crimes within their jurisdiction, particularly genocide, war crimes and crimes against humanity.

#### **Notification types:**

- Red: Search location and arrest wanted persons wanted for prosecution or execution of sentence.
- Yellow: Helps locate missing persons, often minors, or helps identify persons who cannot identify themselves.
- Blue: Collecting additional information about a person's identity, location, or activities in connection with a crime.
- Black: To search for information on unidentified bodies.
- Green: A warning about the criminal activities of a person when that person is considered a possible threat to public safety.
- Orange: Warning of an event, person, object, or process posing a serious and immediate threat to public safety.
- Purple: Seeking or providing information on the modus operandi, objects, devices and concealment methods used by criminals.
- UN Security Council INTERPOL Special Notification: Issued for groups and individuals targeted by UN Security Council sanctions committees.

### **AUKUS DEAL**

#### **In News:**

Australia has unveiled plans to buy up to five U.S. nuclear-powered submarines, then build a new model with U.S. and British technology under an ambitious plan to bulk up Western muscle across the Asia-Pacific in the face of a rising China.

### **Analysis of Background:**

- The announcement came at an event at a San Diego, California, naval base where U.S. President Joe Biden hosted Australian Prime Minister Anthony Albanese and British Prime Minister Rishi Sunak.
- US said it had “safeguarded stability in the Indo-Pacific for decades” and that the submarine alliance would bolster “the prospect of peace for decades to come.”
- US President stressed, Australia, which joined a newly formed alliance known as AUKUS with Washington and London 18 months ago, will not be getting nuclear weapons.
- However, acquiring stealthy submarines powered by nuclear reactors puts Australia in an elite club and at the forefront of U.S.-led efforts to push back against Chinese military expansion.
- IAEA, UN nuclear watchdog, said it has to ensure that “no proliferation risks” will come from the deal.

### **AUKUS:**

- It is a new trilateral security partnership called AUKUS (Australia-U.K.-U.S.).
- AUKUS aim: to “update and enhance shared ability to take on the threats of the 21st century.
- What are the terms of the grouping?
- Intent for AUKUS is to preserve a free and open Indo-Pacific in the long term.
- It drew a sharp response from China, whose territorial ambitions across the Indo-Pacific may well have been a key factor behind the formation of this group.
- Beijing’s consternation that AUKUS will “undermine” regional peace and “intensify” an arms race.
- Cornerstone of AUKUS: U.S. and the U.K. will transfer technology to build a fleet of nuclear-powered submarines for Australia within 18 months.
- It is the first agreement on the technology to be publicly signed since the three countries (Australia, U.K. and U.S) announced the formation of a defence alliance, AUKUS, to confront strategic tensions in the Pacific where China-US rivalry is growing
- Under the AUKUS deal, Australia would obtain eight state-of-the-art, nuclear-powered but conventionally armed submarines capable of stealthy, long-range missions.



## The Benefits of a Nuclear Submarine Fleet in Australia

An Australian submarine fleet would need to defend shipping lanes from the Persian Gulf to the North Pacific Ocean. Nuclear submarines can travel at faster speeds (about 20 knots, on average) compared to conventional submarines (6.5 knots) and stay on station for significantly longer periods of time.



**NOTE:** Calculations for times on station are based on 6.5 knots and 50 days of endurance for conventional subs, and 20 knots and 90 days of endurance for nuclear subs.  
**SOURCE:** "Figure 3: Comparison of Submarine Time on Station at Critical ChokePoints," in Center for Strategic and Budgetary Assessments, "Gateway to the Indo-Pacific: Australian Defense Strategy and the Future of the Australia-U.S. Alliance," 2013, p. 33, [https://csbaonline.org/uploads/documents/Gateway\\_to\\_IndoPacific1.pdf](https://csbaonline.org/uploads/documents/Gateway_to_IndoPacific1.pdf) (accessed September 28, 2021).

## Will AUKUS be a game changer?

It is unlikely and the reasons are

- US, as a leading global military power, already has a strong presence in the Indo-Pacific, especially in a grouping that includes Australia, India, and Japan—the Quadrilateral Security Dialogue, or Quad.
- US, the U.K., Australia, Canada, and New Zealand are members of Five Eyes, an intelligence-sharing alliance, which also has regional security implications.
- AUKUS will not likely deter Beijing's strategic calculus across the region, particularly relating to its maritime ambitions and territorial expansionism.
- AUKUS that has potential to cause a recalibration of China's plans in this realm is the nuclear-powered submarines.
- It will raise the stakes over strategic flashpoints such as the South China Sea and Taiwan.

## Does India stand to gain from this development?

- New Delhi may derive secondary benefits from having three advanced nations with arguably the most sophisticated military know-how in the world coming together to support a free and open Indo-Pacific.

- Given the inroads that Beijing has made in recent decades with its Belt and Road Initiative, including through projects or proposals for infrastructure development in Southeast Asia, Sri Lanka, the Maldives, and beyond into Central Asia, fears in South Block over 'encirclement' by China may be partially mitigated by AUKUS.
- India will work with the transnational institutional arrangements in place, roping in like-minded nations into symbiotic partnerships, and calibrate future alliance plans to evolving security situations across one of the most complex strategic ecosystems in the world.

## LEAST DEVELOPED COUNTRY STATUS

### In News:

Bhutan, the mountainous, landlocked country that is consistently ranked one of the happiest in the world, will on December 13th of this year, become the seventh nation to graduate from the United Nations' (UN) list of Least Developed Countries (LDC.)

### Analysis of Background:

#### What is a Least Developed Country (LDC)?

- They are developing countries listed by the UN that exhibit the lowest indicators of socioeconomic development.
- The concept first originated in the late 1960s and was codified under UN resolution 2768 passed in November 1971.
- According to the UN, an LDC is defined as "a country that exhibits the lowest indicators of socioeconomic development, with low levels of income, human capital and economic diversification, high levels of economic vulnerability, and a population that is disproportionately reliant on agriculture, natural resources, and primary commodities."
- The UN identifies three criteria for a country to be classified as an LDC:
  - It must have a gross national income (GNI) per capita below the threshold of USD 1,230 over a three-year average.
  - It must perform poorly on a composite human assets index based on indicators including nutrition, health and education.
  - The country must demonstrate economic vulnerability such as being prone to natural disasters and possessing structural economic constraints.
- Countries must meet a selection from all three criteria simultaneously and are reviewed on a three-year basis by the UN.
- Currently, the UN lists 46 countries that qualify as LDCs. Of those, 33 are from Africa, nine from Asia, three from the Pacific and one from the Caribbean.

### **How does a country get off the LDC list?**

- At the UN 2021 triennial review of LDC countries, the organisation recommended that Bangladesh, Laos, and Nepal be removed from the list.
- To graduate from the LDC list, a country must meet certain criteria in the three areas stated before namely, income, human assets, and economic vulnerability.
- A nation must have a GNI per capita of at least USD 1,242 for two consecutive triennial reviews in order to meet the income requirement.
- The nation must also show that this level of income can be sustained over the long term.
- By using measures like education, health, and nutrition, a nation must show that it has improved its human capital in order to achieve the human assets requirement. This entails expanding literacy rates, lowering malnutrition rates, and enhancing access to healthcare and education.
- A nation also must show that it has improved its ability to withstand external economic shocks like natural catastrophes or shifts in commodity prices in order to pass the economic vulnerability test. Diversifying the economy, investing in infrastructure, and raising the standard of institutions and governance are all ways to do this.

### **Advantages of being an LDC:**

- Being an LDC confers certain economic benefits to the listed country.
- LDCs also enjoy duty-free and quota-free (DFQF) access to the markets of developed countries.
  - This means that LDCs are not restricted by trade restrictions or tariffs when exporting their goods to wealthier nations.
  - For LDCs, this is a significant advantage because it enables them to expand their exports and get access to new markets, which can boost their economic development.
- LDCs are also eligible for loans with special terms for development, which include loans with a lower interest rate and a longer repayment time than those given to other nations.
  - The term “Official Development Assistance” (ODA) or “aid” is frequently used to describe this form of support.
  - This money is intended to aid LDCs in their initiatives to meet their fundamental requirements, promote sustainable economic growth and development, and fight poverty.

## INDIA'S WHEAT EXPORTS TO AFGHANISTAN

### In News:

India will send its next consignment of wheat as aid to Afghanistan under the Taliban regime via Chabahar, the MEA announced

### Analysis of Background:

- While India had sent about 40,000 metric tonnes (MT) of 50,000 MT promised last year after an agreement with the previous PM Imran Khan government, the shipments had to be called off after floods in Pakistan, and the time period allowed by Pakistan ran out.
- India has used the Chabahar route in the past, prior to 2021, to send shipments of wheat to Afghanistan

### JWG:

- The decision, that was announced at the first meeting of the India-Central Asia Joint Working Group (JWG) on Afghanistan in Delhi, came after the agreement with Pakistan to extend for sending the wheat over the land route expired, and talks on extending the time have failed to proceed.
- The JWG meeting comes more than a year after the India-Central Asia summit in January 2022, where the decision to hold a special contact group on Afghanistan was announced.
- At the JWG, India also agreed to offer “customised capacity building courses” for UNODC (United Nations Office on Drugs and Crime) officials and stakeholders and cooperate on initiatives to counter drug trafficking and rehabilitation efforts for Afghan drug users, especially women.
- According to UNODC reports, opium production is up by nearly a third in the past year, especially after the Taliban took control of Kabul.
- More than 80% of the world’s opium and heroin is smuggled out of Afghanistan, where an estimated 3 million people, or nearly one tenth of the population is addicted.
- The issues of drugs, the export of terrorism and radicalism, and refugees has been at the top of concerns for neighbouring countries in Central Asia.
- However, the release did not specify if the training courses would be provided through the Indian Mission in Kabul, that has a ‘technical team’ posted there, or whether the government would extend visas for Afghans to travel to India for the training.
- At present, India has cancelled all visas issued to Afghans prior to August 2021, when the Taliban took control of Afghanistan, and has not issued new visas for Afghan students or others wishing to travel here.

- The JWG also emphasised the “importance of formation of a truly inclusive and representative political structure that respects the rights of all Afghans and ensures equal rights of women, girls and members of minority groups, including access to education

### **More on Details:**

- India and Afghanistan have a strong relationship based on historical and cultural links. Afghanistan has been suffering wars and civil strife for decades, and remains one of the poorest countries in the world.
- India has played a significant role in the reconstruction and rehabilitation of Afghanistan.
- We believe that democracy and development are the key instruments to ensure that Afghanistan becomes a source of regional stability.
- This has been reflected in the Strategic Partnership Agreement, signed between Afghanistan and India during Afghan President Hamid Karzai's visit to India in October 2011
- The commitment is also reflected in our extensive developmental assistance programme, which now stands at around US \$2 billion, making India the 5th largest bilateral donor in Afghanistan after the US, UK, Japan and Germany. This, by any reckoning, is a substantial amount for a non-traditional donor like India.

### **Why relations with Afghanistan matters?**

#### **Geostrategic and geopolitical location**

- Afghanistan has been a key player in Asian geopolitics owing to its geostrategic and geopolitical location.
- Being situated at the crossroads of the Middle East, Central Asia and the Indian subcontinent, it has been a transit and transport hub since the ancient Silk route.
- It has borders with six other nations including Iran, Pakistan, China, Turkmenistan have made it a hot-bed for conflict and cooperation.

#### **Regional organisation**

- It is also perhaps the only SAARC nation whose people have much affection for India.
- After a break between 1996 and 2001, when India joined the world in shunning the previous Taliban regime, one way New Delhi re-established ties with the country was to pour in development assistance.

### **Historical background:**

- India and Afghanistan have a strong relationship based on historical and cultural links.
- The relationship has its foundations in the historical contacts and exchanges between the people.
- In recent past, India-Afghanistan relations have been further strengthened by the Strategic Partnership Agreement, which was signed between the two countries in October 2011.

### **Afghanistan is important to India for the following reasons:**

- **Security:** A stable Afghanistan is crucial for regional and domestic security and stability for India.
- **Connectivity:** The most important role of Afghanistan is always considered as India's gateway to Central Asia.
- **Energy ambitions:** Peaceful Afghan is essential to address the energy needs of India.
- **Regional Balance of Power:** Afghanistan is tied to India's vision of being a regional leader and a great power, coupled with its competition with China over resources and its need to counter Pakistani influence.
- **Natural Resources:** The country is home to resource deposits worth one trillion dollars, according to the US Geological Survey.

### **India's major projects in Afghanistan:**

**SALMA DAM:** The hydropower and irrigation project, completed against many odds and inaugurated in 2016, is known as the Afghan-India Friendship Dam. The Taliban claim the area around the dam is now under their control.

**ZARANJ-DELARAM HIGHWAY:** The other high-profile project was the 218-km Zaranj-Delaram highway built by the Border Roads Organisation. Zaranj is located close to Afghanistan's border with Iran. With Pakistan denying India overland access for trade with Afghanistan, the highway is of strategic importance to New Delhi, as it provides an alternative route into landlocked Afghanistan through Iran's Chabahar port.

**PARLIAMENT:** The Afghan Parliament in Kabul was built by India at \$90 million. A block in the building is named after former PM AB Vajpayee.

**STOR PALACE:** In 2016, Afghan President Ashraf Ghani and Prime Minister Modi inaugurated the restored Stor Palace in Kabul, originally built in the late 19th century. In 2009, India,

Afghanistan, and the Aga Khan Development Network signed a tripartite agreement for its restoration. The Aga Khan Trust for Culture completed the project between 2013 and 2016.

**POWER INFRA:** Other Indian projects in Afghanistan include the rebuilding of power infrastructure such as the 220kV DC transmission line from Pul-e-Khumri, capital of Baghlan province to the north of Kabul, to beef up electricity supply to the capital. Indian contractors and workers also restored telecommunications infrastructure in many provinces.

**HEALTH INFRA:** India has reconstructed a children's hospital it had helped build in Kabul in 1972 — named Indira Gandhi Institute for Child Health in 1985 — that was in a shambles after the war. 'Indian Medical Missions' have held free consultation camps in several areas. Thousands who lost their limbs after stepping on mines left over from the war have been fitted with the Jaipur Foot. India has also built clinics in the border provinces of Badakhshan, Balkh, Kandahar, Khost, Kunar, Nangarhar, Nimruz, Nooristan, Paktia and Paktika.

**TRANSPORTATION:** India gifted 400 buses and 200 mini-buses for urban transportation, 105 utility vehicles for municipalities, 285 military vehicles for the Afghan National Army, and 10 ambulances for public hospitals in five cities. It also gave three Air India aircraft to Ariana, the Afghan national carrier, when it was restarting operations.

**OTHER PROJECTS:** India has contributed desks and benches for schools, and built solar panels in remote villages, and Sulabh toilet blocks in Kabul. New Delhi has also played a role in building capacity, with vocational training institutes, scholarships to Afghan students, mentoring programmes in the civil service, and training for doctors and others.

**ONGOING PROJECTS:**

- India had concluded with Afghanistan an agreement for the construction of the Shatoot Dam in Kabul district, which would provide safe drinking water to 2 million residents.
- India pledged \$1 million for another Aga Khan heritage project, the restoration of the Bala Hissar Fort south of Kabul, whose origins go back to the 6th century.
- Bala Hissar went on to become a significant Mughal fort, parts of it were rebuilt by Jahangir, and it was used as a residence by Shah Jahan.

**Political relations:**

- Prime Minister of India visited Herat in 2016 and inaugurated the Afghan-India Friendship Dam, earlier known as Salma Dam.

- Prime Minister along with a high level delegation paid a visit on 25 December 2016 to inaugurate the newly built Afghan Parliament with approx INR 970 crore; announced new 500 scholarships for the children of the martyrs of Afghan Security Forces and gifted four Mi-25 Attack helicopters to the Afghan Air Force.
- President Ghani paid a working visit to India in 2018 and expressed satisfaction at the increase in bilateral trade that had crossed the US \$ 1 billion. He expressed determination to strengthen connectivity between the two countries, including through Chabahar port and Air-Freight Corridor.
- It was agreed to deepen the 'New Development Partnership in the areas of high impact projects in this field of infrastructure, human resources development and other capacity building projects in Afghanistan.

### **Commercial Relations:**

- Given the geographical proximity and historical linkages, India has been a natural trading partner for Afghanistan and is the largest market in South Asia for its products.
- The total bilateral trade between India and Afghanistan for CY 2019-20 was at US\$ 5 billion.
- Difficulties in transit via Pakistan was a major hurdle in expanding the trade ties.
- In order to expand trade to India, the Afghan government in collaboration with Government of India launched a dedicated Air Freight Corridor on 19 June 2017.
- Operationalization of the Chabahar Port in December 2017, followed by commercial agreement to manage port operations in February 2018, clearly demonstrate the feasibility of Chabahar Port as a transit point for Afghanistan and eventually to Central Asia.

### **Afghanistan-India Culture Relations:**

- Afghanistan has been an important trading and craft centre for over 2000 years connecting the civilizations of Persia, Central Asia with India.
- However, over 3 decades of war have undermined Afghanistan's unique traditions of art and architecture.
- Today, the biggest challenge for Afghanistan is to rediscover and sustain its ancient art and architectural knowledge.
- India and Afghanistan share centuries old cultural heritage with deep-rooted linkages in the field of music, arts, architecture, language and cuisine
- There have been several exchanges of artistes and music troupes over the past few years.



- In addition to the above people to people exchanges, the two Governments came together to establish an India- Afghanistan Foundation (IAF) in 2007. IAF is a trust fund which finances projects aimed at fostering India-Afghanistan relations through enhancement of economic, scientific, educational, technical as well as cultural cooperation.

#### **Sports Cooperation:**

- India and Afghanistan have robust relations in the field of sports.
- Since 2011, Afghanistan Under-14 & Under-17 Boys' and Under-17 Girls' football teams have been participating in the Subroto Cup International Tournament organised every year by the India Air Force.
- Cricket has been a major factor in promoting people-to-people ties between the two countries. Afghanistan Cricket Board (ACB) has been allotted three cricket home grounds in India (Noida, Dehradun and Lucknow).
- India is also involved in construction cricket stadiums and grounds in various provinces of Afghanistan.

#### **High Impact Community Development Projects (HICDP):**

- Since 2005, India and Afghanistan have partnered in the area of community development through the HICDP program.
- Under this scheme, US\$ 120 mn has been committed till date to various small to medium scale projects in areas such as education, health, water management, government buildings, sport facilities, agriculture and irrigation, etc.
- Around 433 High Impact Community Development Projects have been completed with Indian financial support in all 34 provinces of Afghanistan so far and around 110 projects are ongoing in various provinces of Afghanistan.
- During FY 2019-20, 37 projects were completed in various provinces of Afghanistan under the High Impact Community Development Project (HICDP) scheme of Government of India.
- **Human Resource Development and Capacity Building:**
- Human resource development and capacity building initiatives constitute an important segment of India's assistance in Afghanistan.
- On an average, more than 3,500 Afghan nationals undergo training/education in India every year.
- More than 15,000 Afghan students pursue education in India on self-financing basis.

- India's assistance in human resource development has helped to create a large pool of trained manpower that has been an asset to both the public and private sectors in Afghanistan.

#### **Indian Diaspora in Afghanistan:**

- Presently, there are estimated to be about 1710 Indians in the country.
- Most of the Indians in Afghanistan are engaged as professionals in Banks, IT firms, construction companies, hospitals, NGOs, telecom companies, security companies, universities, Govt. of India sponsored projects, Govt. of Afghanistan and UN Missions.

#### **Chabahar Port:**

- It is located in the Indian Ocean in the Sistan province of Iran.
- The Chabahar port is considered a gateway to golden opportunities for trade by India, Iran and Afghanistan with central Asian countries.
- The port, which is easily accessible from India's western coast, is increasingly seen as a counter to Pakistan's Gwadar Port which is being developed with Chinese investment.
- Chabahar Port provides an option of alternate supply route to everyone, thus reducing the importance of Pakistan with respect to trade.
- It is located on the Gulf of Oman and is only 72 km away from the Gwadar port in Pakistan which has been developed by China.
- China is aggressively pursuing its own Belt and Road Initiative (BRI) under the One Belt One Road (OBOR) project.
- In future, the Chabahar project and the International North South Transport Corridor (INSTC) will complement each other by optimising Indian connectivity with Russia and Eurasia.
- Also, it gives India direct access to Afghanistan and other Central Asian Republics.

## **G-20 FOREIGN MINISTERS' MEETING**

### **In News:**

Deep divisions between the United States-led Western countries and the Russia-China combine upended India's attempt to forge a consensus at the G-20 Foreign Ministers' Meeting.

### **Analysis of Background:**

#### **PM's Appeal:**

- The meeting in Delhi, which brought together the world's 20 most-developed economies, saw sharp words exchanged by U.S. Secretary of State Antony Blinken, Russian Foreign Minister Sergey Lavrov and a number of other Foreign Ministers, despite an appeal from Prime Minister Narendra Modi at the start of the meeting to "rise above differences".
- Prime Minister in a reference to the divide over the Ukraine war, hoped that the meeting "in the land of Gandhi and the Buddha" would inspire the G-20 delegates to "focus not on what divides us, but on what unites us".

#### **No consensus like Bali declaration:**

- The task was not an easy one given the state of polarisation in the world as done in Bali.
- Russia said, "The Bali Declaration took place half a year ago. A lot of events took place since then," indicating the Ukrainian President's announcement that he no longer would adhere to the Minsk Agreements with Russia, and pointing to the explosions on the Nord stream energy pipelines that Russia blames the U.S. carried out.
- S. said that the lack of a joint communique at the Foreign Ministers' Meeting or going forward at the G-20 leaders summit was not an "issue" if there was consensus between most countries.

#### **Chair's Summary and Outcome Document:**

- India named Russia and China as the reason the two paragraphs (three and four from G-20 Bali Document of 2022) pertaining to the war in Ukraine could not be reconciled.
- Highlights:
- G20 Foreign Ministers met in New Delhi at a time when the world faces multi-dimensional challenges ranging from insufficient progress towards Sustainable Development Goals (SDGs), climate change, pollution and biodiversity loss, to economic slowdown, debt distress, uneven pandemic recovery, growing poverty and inequality, food and energy insecurity and global supply chain disruptions, aggravated by geo-political tensions and conflicts.

- Meeting under India's G20 Presidency, with the theme 'Vasudhaiva Kutumbakam' - 'One Earth. One Family. One Future', the G20 Foreign Ministers deliberated upon current global challenges.
- They brought focus on strengthening multilateralism, food and energy security, ambitious climate and environmental action, deepening cooperation on sustainable development, counter-terrorism, counter-narcotics, global health, global talent pool, humanitarian assistance and disaster risk reduction, as well as gender equality and women's empowerment.
- The war in Ukraine has further adversely impacted the global economy. There was a discussion on the issue. Countries reiterated their national positions as expressed in other fora, including the UN Security Council and the UN General Assembly, which deplores in the strongest terms the aggression by the Russian Federation against Ukraine and demands its complete and unconditional withdrawal from the territory of Ukraine. (this point not agreed by Russia and China)
- It is essential to uphold international law and the multilateral system that safeguards peace and stability. This includes defending all the Purposes and Principles enshrined in the Charter of the United Nations and adhering to international humanitarian law, including the protection of civilians and infrastructure in armed conflicts. The use or threat of use of nuclear weapons is inadmissible. The peaceful resolution of conflicts, efforts to address crises, as well as diplomacy and dialogue, are vital. Today's era must not be of war. (this point not agreed by Russia and China)

**India, China discuss LAC situation:**

- External Affairs Minister S. Jaishankar said he had discussed the "abnormal" current state of relations with China and the situation along the Line of Actual Control (LAC), as he held bilateral talks with visiting Chinese Foreign Minister Qin Gang.
- The meeting — a first between the two Ministers, with Mr. Qin having been appointed in December 2022 — was focused on addressing "challenges in the bilateral relationship" and specifically the peace and tranquillity on the border.
- The two sides last week held their first in-person high-level border talks in more than three years

## SILICON VALLEY BANK COLLAPSE

### In News:

Silicon Valley Bank, experienced one of the oldest problems in banking — a bank run — which led to its failure recently.

### Analysis of Background:

#### About Silicon Valley

- Silicon Valley Bank (SVB) was a commercial bank headquartered in Santa Clara, California.
- SVB was the 16th-largest bank in the United States at the time of its failure on March 10, 2023, and was the largest bank by deposits in Silicon Valley.
- As a state-chartered bank, it was regulated by the California Department of Financial Protection and Innovation (DFPI) and was a member of the Federal Reserve System. The bank operated from offices in 13 countries and regions.

#### Why did Silicon Valley Bank fail?

- Silicon Valley Bank was hit hard by the downturn in technology stocks over the past year as well as the Federal Reserve's aggressive plan to increase interest rates to combat inflation.
- The bank bought billions of dollars' worth of bonds over the past couple of years, using customers' deposits as a typical bank would normally operate. These investments are typically safe, but the value of those investments fell because they paid lower interest rates than what a comparable bond would pay if issued in today's higher interest rate environment.
- Typically, that's not an issue, because banks hold onto those for a long time — unless they have to sell them in an emergency.
- But Silicon Valley's customers were largely startups and other tech-centric companies that started becoming more needy for cash over the past year. Venture capital funding was drying up, companies were not able to get additional rounds of funding for unprofitable businesses, and therefore had to tap their existing funds — often deposited with Silicon Valley Bank, which sat in the center of the tech startup universe.
- So, Silicon Valley customers started withdrawing their deposits. Initially that wasn't a huge issue, but the withdrawals started requiring the bank to start selling its own assets to meet customer withdrawal requests. Because Silicon Valley customers were largely businesses and the wealthy, they likely were more fearful of a bank failure since

their deposits were over \$250,000, which is the government-imposed limit on deposit insurance.

- That required selling typically safe bonds at a loss, and those losses added up to the point that Silicon Valley Bank became effectively insolvent. The bank tried to raise additional capital through outside investors, but was unable to find them.
- Bank regulators had no other choice but to seize Silicon Valley Bank's assets to protect the assets and deposits still remaining at the bank.

## **KANGRA TEA**

### **In News:**

- Himachal Pradesh's Kangra Tea got a European Union Geographical Indication Tag (GI tag).

### **Analysis of Background:**

#### **Kangra Tea**

- 'Kangra tea' is a type of tea derived from the leaves, buds and tender stems of the *Camellia sinensis* species as cultivated in the Kangra valley of Himachal Pradesh.

#### **Characteristics**

- 'Kangra tea' leaves' main characteristics are: a multi-stemmed frame, and narrow leaves.
- 'Kangra tea' is planted from seed stock raised in the Kangra valley and other selected varieties for the region.
- 'Kangra tea' has distinctive nutty, winter-green, woody floral aromas in its flavour profile.
- The 'Kangra tea' imparts a sweet aftertaste. 'Kangra tea' has a light colour and high body in liquor.
- 'Kangra tea' leaves contain up to 13 per cent catechins and up to 3 per cent caffeine and amino acids such as theanine, glutamine, and tryptophan.

#### **Significance of Kangra Tea GI Tag:**

- The tag will help Kangra tea to get an opportunity to enter the European market. Kangra tea received the Indian GI tag in 2005.

#### **Types**

- The teas produced in the Kangra Valley are green, oolong, white and orthodox black types.

- 'Kangra tea' is produced using high efficiency whole leaf-orthodox manufacture which means that 'Kangra tea' is made up of whole leaf and flavour-enriched leaves with the highest content of polyphenols (catechins).

### **Area of Production**

- 'Kangra tea' is produced in several areas located on the slopes of the Dhauladhar mountain ranges of the Western Himalayas.
- These areas are Palampur, Baijnath, Kangra, and Dharmshala in the district of Kangra; Jogindernagar in the district of Mandi, and Bhatiyat in the district of Chamba.
- Favourable conditions in Kangra Valley
- Altitude is one very specific feature of the area as all the tea plantations are set within the altitude range of 900 to 1400 m in the mountain ranges.
- The Kangra area also yearly receives high amounts of rainfall.
- The city of Dharmshala and its surrounding areas are indeed recorded to be the second highest rain-receiving areas after Mawsynram of Meghalaya state in India. The average rainfall at Dharmshala ranges between 270-350 cm per year.

### **Medicinal Properties of Kangra Tea**

- Recently, Kangra green tea has attracted everyone's attention after a few research paper's release in which the result came out to be that Kangra green tea has extracts that are more helpful to cure covid-19 than the actual medicines.
- Breast cancer, colorectal cancer and prostate cancer risk seems to have been reduced more as compared to other cancers by consuming the special Kangra valley green tea.
- The catechin that is found in green tea extracts is highly effective in preventing cell damage and in providing other benefits because it is a natural antioxidant. Along with that it helps the brain function in place and increases fat burning in the body.
- The Kangra green tea is rich in so many health benefits, from brain to metabolism, from oral health to cancer prevention it has incredible special medicinal properties.

### **Tea Tourism in India and its significance**

- Tea tourism is slowly beginning to gain ground in and around Kangra.
- Tea tourism in India has become increasingly popular in recent years.
- Tea tourism typically involves visiting tea estates, learning about the tea production process, and sampling different varieties of tea. Many tea estates offer guided tours, where travellers can see the tea plucking, processing, and packaging. Some tea estates also offer activities such as tea-tasting sessions, tea-making workshops, and nature walks through the tea gardens.

- India is the best place for tea tourism because of its diverse landscape, which creates a unique tea culture. From the lush hills of Darjeeling and Assam to the picturesque Nilgiris in the south, each region produces distinct varieties of tea with their own flavours and aromas.
- Darjeeling, West Bengal – Darjeeling, known as the “Queen of the Hills”, is one of the most popular destinations for tea tourism in India. The region’s tea is known for its Darjeeling tea, which is produced in the high altitude tea gardens. Known as the “Champagne of Teas,” Darjeeling tea is famous for its unique flavor and aroma.
- Assam – Assam is one of the major tea-producing regions in India, and therefore a significant destination for tea tourism.
- Munnar – Munnar, located in the state of Kerala, is a popular destination for tea tourism.
- Nilgiris– The Nilgiris, located in Tamil Nadu, is a beautiful region famous for its tea estates. People know Nilgiri Tea for its unique flavor and aroma, and tea tourism is a popular activity in the region.
- Kangra Valley– Kangra Valley, located in Himachal Pradesh, is an emerging destination for tea tourism. Kangra tea growers produce high-quality tea in the region at an altitude of 1,000 to 1,800 meters above sea level. Moreover, Kangra Valley offers a unique blend of tea tourism with wellness tourism.
- Tea tourism has the potential to completely transform the tea-drinking experience by assisting us in intellectually understanding the origins, processing, and terroir of tea.
- Tea tourism in India has the potential to contribute to domestic tourism by attracting tourists from other parts of the country to visit tea-growing regions.
- Overall, tea tourism in India offers visitors the opportunity to learn about and experience the country's rich tea culture, while also enjoying the beautiful landscapes and natural beauty of the tea-growing regions.
- The importance of tea tourism in India is immense as it has a dual impact by creating a regional tea market and securing jobs for tea labour.
- Therefore, proper guidance for the tea tourists is essential regarding the tea tourism destinations by addressing the issues, challenges, and opportunities in promoting local culture.
- Through the public-private partnership, tea tourism should be included in the mainstream tour packages, and local tea customs can be conveyed through a variety of activities promoting sightseeing and other forms of entertainment and tourism experiences.
- A proper planning is required for making tea tourism more attractive and developed in India.



- Development of tea tourism sustaining the environment and preserving the heritage and culture will benefit the Indian regions by creating employment opportunities and boosting the rural economy and thereby alleviate the insurgency and other socio-economic problems.
- It is expected to contribute to the literature on tourist guiding and the promotion of tea tourism and the tourist guides within tea garden boundaries in India.

## URBAN INFRASTRUCTURE DEVELOPMENT FUND

### In News:

Guidelines have been released for operationalizing the UIDF scheme.

### Analysis of Background:

#### Urban Infrastructure Development Fund;

- In Budget 2023-24 Smt. Sitharaman mentioned that an Urban Infrastructure Development Fund (UIDF) will be established through use of priority sector lending shortfall. Annual allocation - ₹10,000 crore.
- This will be managed by the National Housing Bank and will be used by public agencies to create urban infrastructure in Tier 2 and Tier 3 cities.
- While Tier II cities are those which have a population range of 50,000 to 100,000, Tier III cities are classified as those with a population of 20,000 to 50,000.



## **Making Cities Ready for Municipal Bonds**

- The cities will be incentivized to improve their creditworthiness for municipal bonds.
- This will be done through property tax governance reforms and ring-fencing user charges on urban infrastructure.

## **Urban Sanitation**

- All cities and towns will be enabled for 100 per cent mechanical desludging of septic tanks and sewers to transition from manhole to machine-hole mode. Enhanced focus will be provided for scientific management of dry and wet waste.

## **Guidelines issued**

- The Urban Infrastructure Development Fund, created for the growth of Tier II and Tier III cities, should focus on the ongoing projects for the effective utilisation of funds; must provide for basic services; and encourage projects with lower carbon footprints.
- The guidelines envisage keeping funding for administrative expenses and maintenance out of the purview of the UIDF, and asking States to adopt appropriate service charges while accessing the UIDF.
- States may also consider prioritizing lower-cost high-impact urban projects, for wider coverage under the Fund.
- The States would be encouraged to leverage resources from the grants of the 15th Finance Commission, as well as existing schemes, to adopt appropriate user charges, while accessing the UIDF.
- The guidelines say that the Urban Local Bodies may be encouraged to apply appropriate user charges to make the UIDF project self-sustainable.
- The municipal bodies should look at innovative modes of raising funds such as Pooled Funds and Infrastructure Investment Trusts to be explored. They also advise the pooling of resources for smaller Urban Local Bodies.
- The 2023-24 Budget document envisaged making cities ready for municipal bonds. It said cities would be incentivized to improve their creditworthiness for municipal bonds through property tax governance reforms and ring-fencing user charges on urban infrastructure.

## **LIBERALISED REMITTANCE SCHEME**

### **In news:**

Funds sent abroad by students under the Reserve Bank of India's Liberalised Remittance Scheme (LRS) declined by over 42 per cent to \$2.57 billion during the nine

months ended December 2022 of the current fiscal (2022-23). This amount was \$ 4.4 billion in the same period of 2021.

### **Analysis of Background:**

#### **Liberalised Remittance Scheme (LRS):**

- Liberalised Remittance Scheme (LRS) was brought out by the RBI in 2004.
- It allows resident individuals to remit a certain amount of money during a financial year to another country for investment and expenditure.
- According to the prevailing regulations, resident individuals may remit up to \$250,000 per financial year.

#### **Background:**

- Resident Indians or people resident in India are allowed to transfer foreign currency under the foreign exchange regulations.
  - The transfer of foreign currency outside India is governed by the Foreign Exchange Management Act, 1999 (FEMA).
- Hence, to regulate transferring of funds within a specified limit, RBI brought the LRS.

#### **Allowed transactions under the LRS**

- Apart from the areas highlighted in the above diagram, the remitted amount can also be invested in shares, debt instruments, and be used to buy immovable properties in overseas market.
- Individuals can also open, maintain and hold foreign currency accounts with banks outside India for carrying out transactions permitted under the scheme.

#### **Restrictions under LRS**

- **LRS restricts**
  - buying and selling of foreign exchange abroad, or purchase of lottery tickets or sweep stakes, proscribed magazines and so on,
  - or any items that are restricted under Schedule II of Foreign Exchange Management (Current Account Transactions) Rules, 2000.
  - Also, one cannot make remittances directly or indirectly to countries identified by the Financial Action Task Force as non-co-operative countries and territories.

## **Liberalised Remittance Scheme**

- Overall remittances by resident individuals under LRS have shot up by 40 per cent to \$19.35 billion during the nine months ended December 2022 from \$13.79 billion a year ago.
- Remittances in 2022-23 are expected to exceed \$19.61 billion registered in fiscal 2021-22.
- However, funds sent abroad by students under LRS declined by over 42 per cent in first nine months of FY 23.
- The fall in outward student remittances is due to difficulty in getting visas and uncertainty over job scenarios amid the slowdown in major developed economies triggered by rising inflation and interest rates.
- The rising cost of education due to the falling rupee also makes it difficult for students to pursue higher studies.
- Among other countries, students from India also go to Russia and Ukraine for studies. After the Russia-Ukraine war, students are not going to these countries.
- The biggest jump in remittances was in overseas travel by Indians who took out \$ 9.94 billion during the nine months ended December 2022 as air travel opened up after the pandemic.
- Travel remittances were \$ 6.90 billion during the previous fiscal 2020-21.

## **HINDU RATE OF GROWTH:**

### **In News:**

Former RBI Governor Raghuram Rajan has warned that India is “dangerously close to the Hindu rate of growth”.

### **Analysis of Background:**

#### **What is Hindu Rate of Growth?**

- The “Hindu Rate of Growth” is a term used to describe the slow growth rate of the Indian economy between the 1950s and the 1980s.
- It was coined by the Indian economist Raj Krishna in the 1970s.
- During this period, the Indian economy grew at an average rate of around 3.5% per year, which was much lower than other developing countries like South Korea, Taiwan, and Hong Kong.
- The term is considered controversial as it suggests that the slow growth rate was a result of cultural or religious factors rather than economic policies and structural issues.

- However, the term is still used in academic and policy discussions to refer to the slow growth of the Indian economy during this period.

### **Features of Hindu Rate of Growth**

The then features which led to the coining of this term were-

- **Low GDP growth rate:** The term refers to the period from the 1950s to the 1980s when India's economy grew at an average rate of around 3.5% per year, which was much lower than other developing countries.
- **Slow Industrialization:** The industrial sector was dominated by a few public sector companies, and the private sector was heavily regulated.
- **Stagnant Agriculture:** There was little investment in agriculture, and the sector was not given much priority in government policies.
- **License Raj:** India had a socialist economic model with heavy government regulation. The License Raj system required permits and licenses for businesses, creating a bureaucratic and corrupt system that hindered innovation and entrepreneurship.
- **Import Substitution:** India followed a policy of import substitution, where the government tried to develop domestic industries by protecting them from foreign competition. This led to a lack of competition, low quality of products, and high prices.
- **Inefficient Public Sector:** The public sector dominated the economy, but it was inefficient, unproductive, and plagued by corruption. Public sector companies were often overstaffed and poorly managed, resulting in low productivity.
- **Lack of Foreign Investment:** India was not attractive to foreign investors during this period, and there was little foreign investment in the economy. The government imposed strict controls on foreign investment, and the regulatory environment was not conducive to foreign investment.

### **Concerns flagged by Rajan**

Rajan noted that India's economic growth rate had been declining even before the COVID-19 pandemic hit the country.

#### **(a) Decline in GDP growth rate**

- India's economic growth rate had fallen to 4.5% in the September quarter of 2019, before the pandemic hit in early 2020.
- During the pandemic, the Indian economy contracted sharply, with GDP falling by 7.7% in the 2020-21 fiscal year.

- The economy has rebounded somewhat, with the IMF forecasting GDP growth of 9.5% for the current fiscal year.

(b) Lower growth potential than hyped

- However, Rajan noted that India's potential growth rate is likely to be lower than in the past, due to factors such as an aging population, a decline in the working-age population, and sluggish investment.
- He also cited the country's poor performance on human development indicators, such as education and health, as a constraint on growth.

**Key suggestions**

- Rajan called for measures to address the structural factors that are holding back growth, such as investment in infrastructure and education, and improving the ease of doing business in India.
- He also emphasized the importance of macroeconomic stability and maintaining fiscal discipline, to avoid inflation and currency depreciation.
- He also called for measures to address inequality, such as better targeting of subsidies to those who need them most.

**TOPIC: SCIENCE AND TECH**

**SUPERCONDUCTIVITY**

**In News:**

Researchers at the University of Rochester have created a superconducting material at temperatures and pressures low enough for practical applications.

**Analysis of Background:**

**Superconductivity**

- Superconductivity is a set of physical properties observed in certain materials where electrical resistance vanishes and magnetic flux fields are expelled from the material.
- In this, materials to conduct direct current (DC) electricity without energy loss when they are cooled below a critical temperature (referred to as  $T_c$ ). These materials also expel magnetic fields as they transition to the superconducting state.
- This capacity produces interesting and potentially useful effects. Superconductivity was first observed in 1911 by H. K. Onnes, a Dutch physicist.
- Superconductors have been employed in, or proposed for use in, an enormous variety of applications. Examples include high-speed magnetic-levitation trains, magnetic-resonance-imaging (MRI) equipment, ultra-high-speed computer chips, high-capacity

digital memory chips, alternative energy storage systems, radio-frequency (RF) filters, radio-frequency amplifiers, sensitive visible-light and infrared detectors, miniaturized wireless transmitting antennas, systems to detect submarines and underwater mines, and gyroscopes for earth-orbiting satellites.

### **Recent Research**

- The researchers describe a nitrogen-doped lutetium hydride (NDLH) that exhibits superconductivity at 69 degrees Fahrenheit and 10 kilobars (1,45,000 pounds per square inch, or psi) of pressure.
- That is about 10 times the pressure that is exerted at the bottom of the ocean's deepest trenches.

### **Why is it important?**

- It is important because the superconductors can now work at room temperature. Although superconductors have existed for nearly a century, their use was only feasible at unearthly, ultracold temperatures with limited applications if not negligible.
- For decades, scientists have sought superconductors that work at room temperature, and their hunt appears to have achieved fruition.
- If the breakthrough is confirmed in subsequent tests, it would help create devices that do not waste energy on heat when producing a current and could be used to create more efficient computers; superior X-ray technology; and even more powerful nuclear reactors.
- Scientists have been pursuing this breakthrough in condensed matter physics for more than a century. Superconducting materials have two key properties: electrical resistance vanishes, and the magnetic fields that are expelled pass around the superconducting material. Such materials could enable:
  - Power grids that transmit electricity without the loss of up to 200 million megawatt hours (MWh) of energy that now occurs due to resistance in the wires.
  - More affordable medical imaging and scanning techniques such as MRI and magnetocardiography.
  - Faster, more efficient electronics for digital logic and memory device technology.
  - Tokamak machines use magnetic fields to confine plasmas to achieve fusion as a source of unlimited power.

## DART MISSION

### In News:

The Hubble Space Telescope has captured a series of images from before, and after the Double Asteroid Redirection Test or the (DART) mission.

### Analysis of Background:

#### DART Mission:

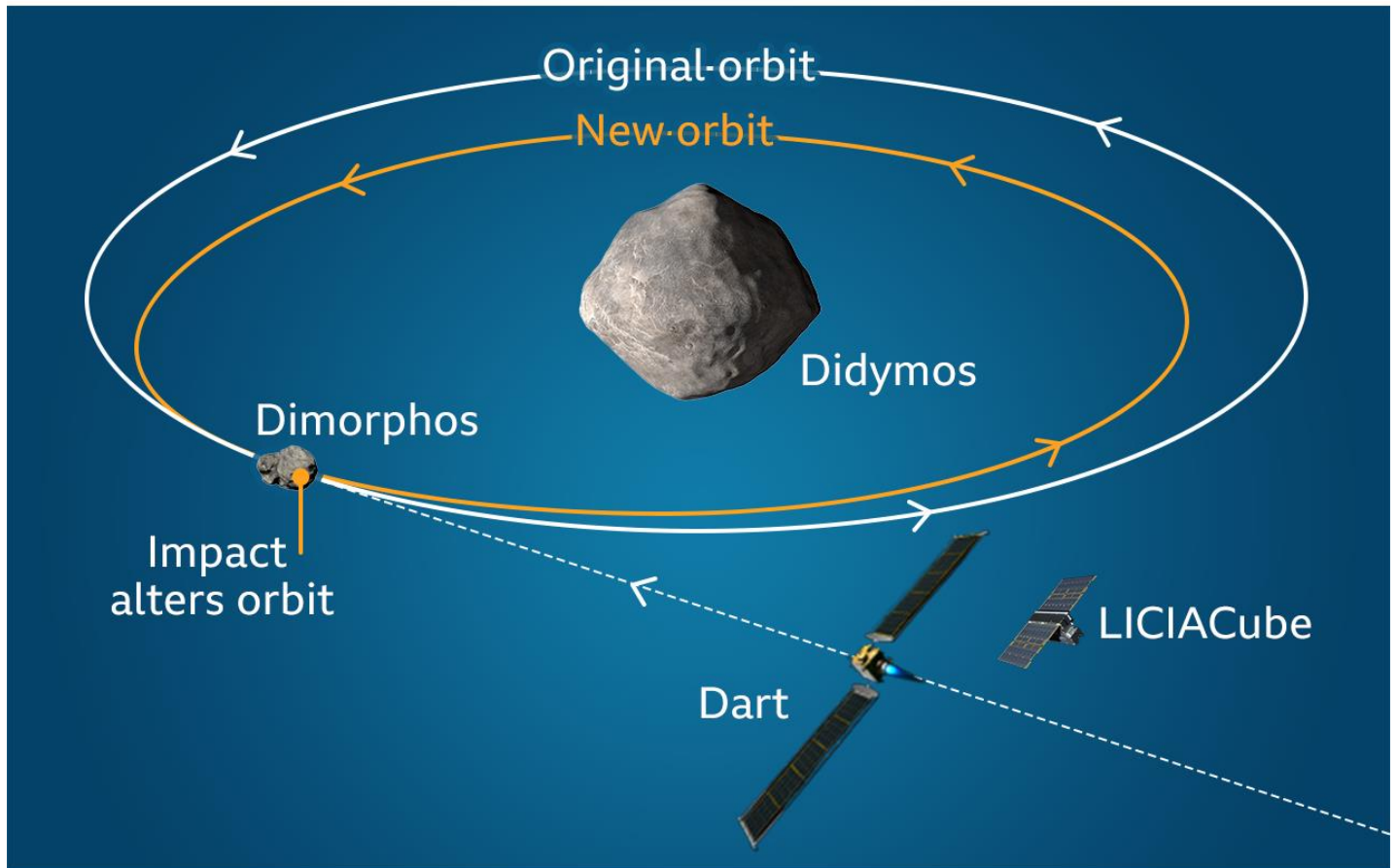
- DART is a spacecraft designed to impact an asteroid as a test of technology.
- DART is a planetary defense-driven test of technologies for preventing an impact of Earth by a hazardous asteroid.
- DART will be the first demonstration of the kinetic impactor technique to change the motion of an asteroid in space.
- The binary near-Earth asteroid (65803) Didymos is the target for the DART demonstration.

Note: Didymos is the twin-asteroid system Didymos is a binary near-Earth asteroid.

- The DART spacecraft will achieve the kinetic impact deflection by deliberately crashing itself into the moonlet at a speed of approximately 6.6 km/s, with the aid of an onboard camera (named DRACO) and sophisticated autonomous navigation software.
- The collision will change the speed of the moonlet in its orbit around the main body by a fraction of one percent, but this will change the orbital period of the moonlet by several minutes - enough to be observed and measured using telescopes on Earth.
- Once launched, DART will deploy Roll Out Solar Arrays (ROSA) to provide the solar power needed for DART's electric propulsion system.
- The DART spacecraft will demonstrate the NASA Evolutionary Xenon Thruster – Commercial (NEXT-C) solar electric propulsion system as part of its in-space propulsion.
- NEXT-C is a next-generation system based on the Dawn spacecraft propulsion system, and was developed by NASA.
- By utilizing electric propulsion, DART could benefit from significant flexibility to the mission timeline while demonstrating the next generation of ion engine technology, with applications to potential future NASA missions.



# Nasa spacecraft will crash into asteroid's moon



## Hera

- Hera will arrive at the Didymos system in 2027 to measure the impact crater produced by the DART collision and study the change in the asteroid's orbital trajectory.

## CHANDRAYAAN-3 MISSION

### In News:

ISRO has successfully conducted the flight acceptance hot test of the CE-20 cryogenic engine that will power the Cryogenic Upper Stage of the LVM3 launch vehicle for the Chandrayaan-3 mission.

### Analysis of Background:

#### Chandrayaan 3

- Chandrayaan-3 is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface. It consists of Lander and Rover configuration. It will be launched by GSLV MkIII from SDSC, Sriharikota. The propulsion module will carry the lander and rover configuration till 100km lunar orbit.

The propulsion module has Spectro-polarimetry of HAbitable Planet Earth (SHAPE) payload to study the spectral and polarimetric measurements of Earth from the lunar orbit.

- Lander payloads:Chandra's Surface Thermophysical Experiment (ChaSTE) to measure the thermal conductivity and temperature; Instrument for Lunar Seismic Activity (ILSA) for measuring the seismicity around the landing site; Langmuir Probe (LP) to estimate the plasma density and its variations. A passive Laser Retroreflector Array from NASA is accommodated for lunar laser ranging studies.
- Rover payloads:Alpha Particle X-ray Spectrometer (APXS) and Laser Induced Breakdown Spectroscopy (LIBS) for deriving the elemental composition in the vicinity of landing site.

### **Further Details**

- It will demonstrate India's capability of soft landing on a celestial body, with the rover.
- It will then communicate with Earth via the existing orbiter from Chandrayaan-2 and take images 100 km from Moon's orbit. The orbiter has an estimated lifespan of seven years.
- The unique exploration of Chandrayaan-3 aims at studying not just one area of the Moon but all the areas combining the exosphere, the surface as well as the sub-surface in a single mission.
- With Chandrayaan-1, ISRO achieved immense success as the 'Moon Impact Probe' by Chandrayaan-1 lunar remote sensing orbiter detected water in vapor form in trace amounts.
- With Chandrayaan-3, India aims to further the study of the lunar surface, focussing on the South Pole or dark side of the Moon that has not seen sunlight in billions of years, which is believed to have ice and vast mineral reserves.

### **Why exploring the Moon is imperative?**

- The Moon is the closest cosmic body at which space discovery can be attempted and documented.
- Further, Moon is a promising testbed to showcase technologies required for deep-space missions.
- Exploring the Moon will enhance our understanding of the celestial body clearly, stimulating the advancement of technology, promoting global alliances and inspiring future generations of explorers and scientists.

### **Why Lunar South Pole of the Moon is targeted for exploration?**

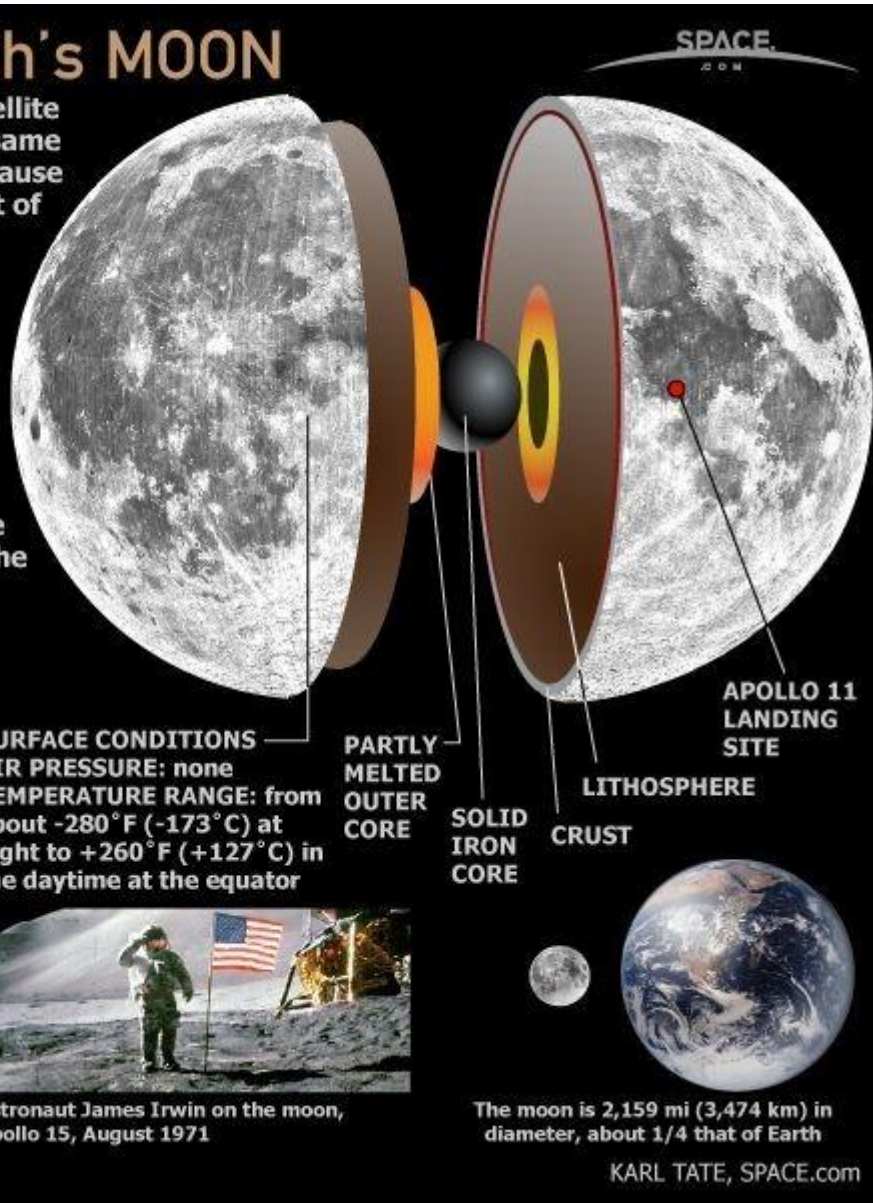
- The Moon provides the best linkage to Earth's early history and civilization.
- The exploration will offer an undisturbed historical record of the inner Solar system environment.
- The Lunar South pole is especially interesting because the lunar surface area that remains in shadow is much larger than that at the North Pole.
- Further, there could be a possibility of the presence of water in permanently shadowed areas around it.
- In addition, the South Pole region has craters that are cold traps and contain a fossil record of the early Solar System.

### **Launch Vehicle Mark 3 (LVM3)**

- The Launch Vehicle Mark 3 (LVM3) is ISRO's newest medium-heavy lift launch vehicle, the heaviest rocket currently in use by India. Formerly called the Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk III), the rocket is designed to mainly launch satellites into geostationary orbit at 35,000km.
- The LVM3 is capable of lifting much heavier satellites than the GSLV Mk II with a bigger cryogenic upper stage and a larger first stage. Both GSLV Mk II and LVM3 are three-stage vehicles, while the PSLV, which launches to low earth polar orbits, is a four-stage vehicle.
- The GSLV Mk-II can place up to 2,500kg in geosynchronous orbits and up to 5,000kg to low earth orbit. By comparison, the LVM3 can lift 4,000kg to GTO and up to 8,000 kg to LEO. Currently, America's SpaceX's non-human rated Falcon Heavy, a super-heavy lift vehicle, is the heaviest rocket that is operational.
- The LVM3 also has the human-rated variant which will be used for Gaganyaan missions.

# Inside Earth's MOON

Our large natural satellite always presents the same face to the Earth, because it completes one orbit of Earth in about the same span of time it takes to complete one rotation. The dark plains on the side facing Earth are volcanic features called seas, or "maria." The first human landing on the moon took place on the Sea of Tranquility.



## HAYABUSA2

### In News:

Japan's explorer Hayabusa2 has made an exciting discovery on the asteroid Ryugu. Samples that the mission collected from here are rich in organic molecules, which could serve as the building blocks of life.

### Analysis of Background:

#### Hayabusa2

- Hayabusa2 is an asteroid sample-return mission operated by the Japanese state space agency JAXA. It is a successor to the Hayabusa mission, which returned asteroid samples for the first time in June 2010.

- Hayabusa2 was launched on 3 December 2014 and rendezvoused in space with near-Earth asteroid 162173 Ryugu on 27 June 2018.
- It surveyed the asteroid for a year and a half and took samples. It left the asteroid in November 2019 and returned the samples to Earth on 5 December 2020 UTC.
- Its mission has now been extended through at least 2031, when it will rendezvous with the small, rapidly-rotating asteroid 1998 KY26.
- Hayabusa2 carried multiple science payloads for remote sensing and sampling, and four small rovers to investigate the asteroid surface and analyze the environmental and geological context of the samples collected.

## **Asteroids**

- Asteroids are rocky objects that orbit the Sun, much smaller than planets. They are also called minor planets. According to NASA, there are 994,383 known asteroids, the remnants from the formation of the solar system over 4.6 billion years ago.
- Asteroids are divided into three classes. First are those found in the main asteroid belt between Mars and Jupiter, which is estimated to contain somewhere between 1.1-1.9 million asteroids.
- The second group is that of trojans, which are asteroids that share an orbit with a larger planet. NASA reports the presence of Jupiter, Neptune and Mars trojans. In 2011, they reported an Earth trojan as well.
- The third classification is Near-Earth Asteroids (NEA), which have orbits that pass close to the Earth. Those that cross the Earth's orbit are called Earth-crossers. More than 10,000 such asteroids are known, out of which over 1,400 are classified as potentially hazardous asteroids (PHAs).

## **Ryugu**

- Ryugu is also classified as a PHA and was discovered in 1999 and was given the name by the Minor Planet Center in 2015.
- It is 300 million kilometres from Earth and it took Hayabusa-2 over 42 months to reach it.
- Findings from the recently collected sample
- Collected in February 2019, the specimens reached Earth in December 2020.
- NASA found a large number of these "prebiotic organics" in just a 30-milligram sample.
- The team found that the specimens contained several such carbon-based compounds which can not only be formed without the involvement of living beings but are, in fact, essential to the development of life.

- These prebiotic organics include a variety of amino acids used by living things to build essential proteins. One theory suggests that these ingredients, necessary for the development of life, were delivered to the early Earth via meteorites and asteroids.
- The present findings add another layer of credibility to this theory. The finds from Ryugu are consistent with discoveries from carbon-rich meteorites.
- It presents interesting possibilities, too. Since these heavenly bodies are often travelling around in space, they could have delivered life-creating essentials not just to the Earth, but to other planets as well.

## **VAIBHAV Fellowships for Indian Diaspora**

### **In News:**

On the occasion of the "National Science Day India launched VAIBHAV Fellowship scheme for the Indian Diaspora abroad.

### **Analysis of Background:**

#### **The Fellowship Features**

- The fellowship offers NRI researchers an opportunity to work for a minimum of one month to a maximum of two months a year with a research institution or an academic institution in India.
- The duration of the fellowship is three years with the government offering the researchers an amount of up to Rs 37 lakh for the entire period.

### **Aim**

- The Fellowship aims to improve the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations with the best institutions in the world through mobility of researchers from overseas institutions to India.

### **Eligibility**

- Researchers from institutions featuring in the top 500 QS World University Rankings will be eligible for the fellowship.

### **Significance**

- Due to this Scheme best of Diaspora minds will collaborate with domestic Minds to deliver world class projects and products.

## TOPIC: ENVIRONMENT

### KHARAI CAMEL

#### In News:

CAG has asked the Gujarat government to save the 'Kharai' breed of camels – popularly known as 'swimming camels' – from extinction in a report tabled in Gujarat Assembly.

#### Analysis of Background:

#### Highlights of the report

- Observing that the swimming camels that live in a dual ecosystem of land and coast are found only in Gujarat, the CAG in its "Performance Audit of Conservation and Management of Coastal Ecosystems" report stated that the Deendayal Port Trust (DPT) was asked to carry out compulsory afforestation to compensate for the destruction of the mangroves.
- Mangroves are a lifeline for this distinct breed and destruction of mangroves can threaten its existence.
- The State Government may take appropriate action to preserve Mangroves to save the 'Kharai' breed of camels from extinction.
- Kutch Camel Breeders Association (KCBA), Bhuj had complained regarding the large-scale destruction of mangroves in Nani-Chirai and Moti-Chirai areas of Bhachau taluka by salt pan lessees way back in February 2018.
- The NGT in 2019, passed an order directing the forest and environment department to restore the mangroves within six months.
- Audit analysis conducted by the CAG revealed that neither the forest department nor the GCZMA took any action on the orders of the NGT including restoration of the mangroves and removal of the bunds.

**UNDER THREAT**

- The Kharai camel is endangered species
- There are around 6,000 camels and maximum are in Kutch
- Around 600 camels in Jamnagar district
- They mainly feed on mangroves and live near the sea
- This camel specie can survive on dry land and sea
- It can swim for hours in sea in search of mangroves



## **About Kharai Camel**

- This particular breed of camels in Kutch, the desert region in Gujarat, has the unique ability to swim in the sea, giving a whole new meaning to the phrase “ship of the desert”.

## **Breeds in Kutch**

- Kutch, a coastal region of Gujarat, which is also a large desert land, has two camel breeds.
- One is the popular Kutchi breed and the other, the Kharai breed, native to the region.
- The Kharai breed has the special ability to survive on both, dry land and in the sea, making it an ecotonal breed.
- Recognised as a separate breed a few years ago by the National Bureau of Animal Genetic Resources, the Kharai camel is probably the only domesticated breed of camel that lives in dual ecosystems.
- It is the ninth recognised camel breed of India.

## **Unique abilities**

- Kharai camels have a special ability to swim in seawater and feed on saline plants and mangroves, which is how they get their name, Kharai (‘salty’ in Gujarati).
- They are also known as dariyataru (meaning sea-swimmer).
- Due to their unique diet, these camels swim to islands near the shore in search of food. They have adapted to the extreme climate of the desert, shallow or deep-sea waters, and high salinity.
- Kharai camel breeders follow the natural grazing pattern of the camels, which varies seasonally. In fact, the breeders do not build a permanent shelter for these camels because the latter are always on the move.
- The Kharai breeders have been breeding these camels for years, but it was only in 2010 that other people came to know about these swimming camels.

## **Facing threats**

- Industries in Kutch—salt, thermal power, cement and shipyards, among others—pose a huge threat to the dwindling mangroves.
- Most of these industries require constructing jetties in the sea, which results in the cutting down of mangroves that are fodder for the Kharai camels.
- The increase in salinity throughout the region and the growth of industrial activities has minimised the availability of camel food and water sources.



- Therefore, protecting the mangroves is key to protecting these unique animals.
- The only source of income of the Kharai breeders is the sale of young camels, which is declining; the breeders usually consume the camel milk and wool themselves, as those items don't have a market.

## GEOHERITAGE SITES

### In News:

With 40 UNESCO World Heritage Sites, India's cultural sites are recognized globally. Many of these celebrate the human history, but what about landscapes?

### Analysis of Background:

#### Significance of the landscapes:

- Landscapes in the Indian subcontinent record many geological events, from the evolution of life to mass extinction cycles preserved in the fossil record.
- These events include meteorite collisions, volcanic eruptions that formed the Deccan Traps, continental collisions that formed the Himalayas, Lakshadweep coral atolls, creating fertile rivers and river valleys, giant deltas, and the largest mangrove forests.
- They form the rise and fall of civilizations and empires; affect the organization of wealth and political power in modern society.

### What is geoheritage?

- Geodiversity refers to the variety of rocks, sediments, minerals and natural processes that make up our landscape, geoheritage provides insight into the evolution of the earth and can be used for research, exploration and awareness.
- The Geological Survey of India has recognized several geo-heritage sites within the country, but there are many more that deserve recognition.

### Steps undertaken to draw attention:

- The Society of Earth Scientists (SES), a group of independent researchers bridging the gap between earth science and society, is organizing a national program on International Geoscience Day in October 2022, followed by three workshops to explore potential sites in India.
- The first seminar was on dinosaur fossils in Bagh, Madhya Pradesh, and the second was on prehistoric life and tectonic features in the Kachchh region of Gujarat.
- For the third workshop, representatives gathered to explore the fossil park in Jhamarkotra and metallurgical fossil in Zavar.

### **Jhamarkotra:**

- This is a stromatolite fossil park: dating back 1.8 billion years, it contains stromatolites of various textures and sizes.
- Stromatolites are layered sedimentary rocks formed by microorganisms.
- As such, stromatolite fossils preserve records of cyanobacteria, commonly known as blue-green algae—the earliest life on the planet.
- This organism has developed the ability to photosynthesize and produce its own food. In doing so, they released large amounts of oxygen into the early Earth's atmosphere, allowing most of the other planets to grow and develop.
- Stromatolites are sometimes called "crocodile skin rocks" because of their unusual texture.
- Cyanobacteria live in deep water; the search for sunlight causes the sediment to be trapped and deposited as a lens layer for photosynthesis.
- It allowed the stromatolite colony produced to expand and develop almost like a microbial coral.
- Jhamarkotra sediments are rich in phosphates because the trapped sediments are mainly phosphate minerals.
- Phosphate is mined to be used as agricultural fertilizer. But unregulated mining could damage or destroy this record of our geological past.

### **Zawar:**

- Udaipur: Zawar is the oldest zinc smelter in the world.
- It has archaeological and metallurgical importance.
- Before the advent of high pressure technology, extracting zinc was a difficult task.
- Zinc has a low boiling and melting point, so it forms steam when heated and easily oxidizes on contact with the atmosphere.
- However, Zawar extracted zinc through a distillation process that required the use of a retort and an external condenser.
- Therefore, the metallurgical process used to obtain zinc in all metal extraction methods shows the height of metallurgy. The process of melting Zawar zinc has been going on for 2,000 years.

### **Protection:**

- Apart from its World Heritage list, UNESCO also has criteria for 'Global Geoparks': sites with geological heritage of international value.
- Both Jhamarkotra and Zawar may qualify if they meet a few other conditions as well.

## INTERNATIONAL BIG CAT ALLIANCE

### In News:

India has proposed to launch a mega global alliance under its leadership to protect big cats and assured support over five years with guaranteed funding of \$100 million (over Rs 800 crore).

### Analysis of Background:

- The proposed International Big Cat Alliance (IBCA) will work towards the protection and conservation of the seven major big cats — tiger, lion, leopard, snow leopard, puma, jaguar and cheetah.
- Membership to the alliance will be open to 97 “range” countries, which contain the natural habitat of these big cats, as well as other interested nations, international organisations, etc.

### Purpose:

- Records show that the alliance’s purpose is to provide a platform for “dissemination of information on benchmarked practices, capacity building, resources repository, research and development, awareness creation”, etc., on the protection and conservation of big cats.
- Its major activities will include “advocacy, partnership, knowledge e-portal, capacity building, eco-tourism, partnerships between expert groups and finance tapping”.

### Structure:

- The IBCA’s governance structure will comprise a General Assembly consisting of all member countries, a council of at least seven but not more than 15 member countries elected by the General Assembly for a term of 5 years, and a Secretariat.
- Upon the recommendation of the Council, the General Assembly will appoint the IBCA Secretary General for a specific term.
- After the first five years, which will be supported by India’s “total grant assistance” of \$100 million, the IBCA is expected to sustain itself through membership fees, and contributions from bilateral and multilateral institutions and the private sector.

### criticism:

- Without the political will to do what we know should be done, building yet another platform will not help conservation.
- The funding commitment (for IBCA) is more than what India can apparently afford to spend for 22 species at the brink of extinction.

- Several key landscapes and species recovery programmes are languishing due to inadequate funding.

## SEA SLUGS

### In News:

A citizen science project documents unique sea slugs from Visakhapatnam coast.

### Analysis of Background:

#### What are slugs?

- Sea slugs belong to Phylum Mollusca and Class Gastropoda.
- They look like naked snails, i.e., without shells.
- Sea slugs are of course those found in the sea. There are also slugs that live on land

#### Types:

- Sea slugs may be generally differentiated into two main groups.
- Members of one group breathe with lungs. These include pulmonate sea slugs such as the Onch slugs of the Family Onchidiidae.
- Members of another group breathe with gills. These include the Opisthobranchs or just plain sea slugs.

#### Where seen?

- Onch slugs can be found among the rocks near the high water mark, while other slugs are found further down where it is almost always covered in water.
- Some are burrowing and many are found on or near their food.
- Some sea slugs are stunningly beautiful, among them, nudibranchs.

#### Features:

- Sea slugs range from large sea hares of 10cm to tiny nudibranchs 1cm or less.
- Sea slugs generally lack large external shells.
- Some many have external shells but cannot fully retract their bodies into these shells like other 'regular' snails do. Other sea slugs may have internal shells.
- Most sea slugs don't have any shells at all.
- Although they lack shells, slugs are not helpless. Some taste bad, others release toxic or irritating substances.
- Yet others incorporate stingers of sea anemones, hydroids and other cnidarians that they feed on and use these to protect themselves.

### **What do they eat?**

- As a group, sea slugs eat a wide variety of plants and animals.
- But each species usually specialises in one kind of food.

### **Threats:**

- Some slugs may release highly toxic substances when stressed.
- Like other creatures of the intertidal zone, they are affected by human activities such as reclamation and pollution.
- Trampling by careless visitors and over-collection can also have an impact on local populations.

## **BIBHUTIBHUSAN WILDLIFE SANCTUARY**

### **In News:**

As many as 90 spotted deer have been brought to Sundarban Tiger Reserve from Bibhutibhusan Wildlife Sanctuary (formerly Parmadan forest). This comes as a part of the state forest department's bid to decongest smaller wildlife sanctuaries.

### **Analysis of Background:**

- Since sanctuaries like Parmadan are smaller, they reach their carrying capacity fast. Hence, there is a need to shift some deer to bigger national parks.
- Parmadan is spread over 68 hectares and it's not possible to keep many deer there.

### **About the sanctuary:**

- Bibhutibhusan Wildlife Sanctuary (formerly Parmadan Forest) is an animal sanctuary in North 24 Parganas district in the Indian state of West Bengal.
- The forest is located about 100 km from Kolkata and 25 km from Bongaon.
- Situated on the banks of the Ichamati River covering an area of 0.68 km<sup>2</sup> it has more than 200 deer, birds, rabbit and many langurs.

### **History:**

- The sanctuary began in 1964 when 14 chital were released in the forest.
- In 1980, it was named "Parmadan" when it was declared a wildlife sanctuary.
- In 1995 it acquired its present name after the famous Bengali author Bibhutibhusan Bandyopadhyay who was a great nature lover.

**About Spotted Deer:**

- The chital, also known as spotted deer, chital deer, and axis deer, is a deer species native to the Indian subcontinent.
- It was first described and given a binomial name by German naturalist Johann Christian Polycarp Erxleben in 1777.
- A moderate-sized deer.
- It is sexually dimorphic; males are larger than females, and antlers are present only on males.
- The upper parts are golden to rufous, completely covered in white spots. The abdomen, rump, throat, insides of legs, ears, and tail are all white.
- The antlers, three-pronged, are nearly 1 m long.

**Distribution:**

- Most of the Axis deer population is concentrated in the forests of India.
- The major area of their distribution is Sri Lanka and India, though they are introduced to USA and Australia as well.
- They live in dense forests, forested valleys and also prefer open grasslands, savannas, and plantations.

**Habits:**

- Axis deer are highly sociable animals.
- Their herds can contain 6-30 individuals, two or three of them being stags.
- Axis deer are vocal animals and give out bellows and alarm barks.

**Population threats:**

- One of the major threats to the Axis deer population is natural predators such as leopards and wild dogs.
- On the other hand, deforestation and subsequent loss of habitat also lead to the decline of the population.

**Population number:**

- According to IUCN, the Axis deer is widespread throughout its range but no overall population estimate is available. However, in the IUCN Red List, the Axis deer is classified as Least Concern (LC).

**Ecological niche:**

- These animals are important consumers in the ecosystem of their habitat.

- Moreover, due to being herbivores, they can even be considered primary consumers.
- On the other hand, they themselves become food for predators of the area.
- Since the Axis deer feed upon plants, in some forests, green plants are held in check by these animals.
- Without the deer in the ecosystem, some plants might overpopulate while the population of certain animal species, which mainly feed on the deer, would decrease without a key source of food.

## INTERNATIONAL DAY OF ZERO WASTE

### In News:

As part of India's observance of the International Day of Zero Waste on 30th march 2023, the Minister for Housing and Urban Affairs organised the "Swachhotsav - 2023: Rally for Trash Free Cities" in New Delhi.

### Analysis of Background:

### Highlights of the "Swachhotsav - 2023: Rally for Trash Free Cities"

#### Garbage free cities

- Over 350 participants, including mayors, commissioners, mission directors, business and technology experts, women and youth leading the sanitation industry, technical institutions, and development partners, participated in the event, which featured discussions on best practices in circularity in garbage-free cities.

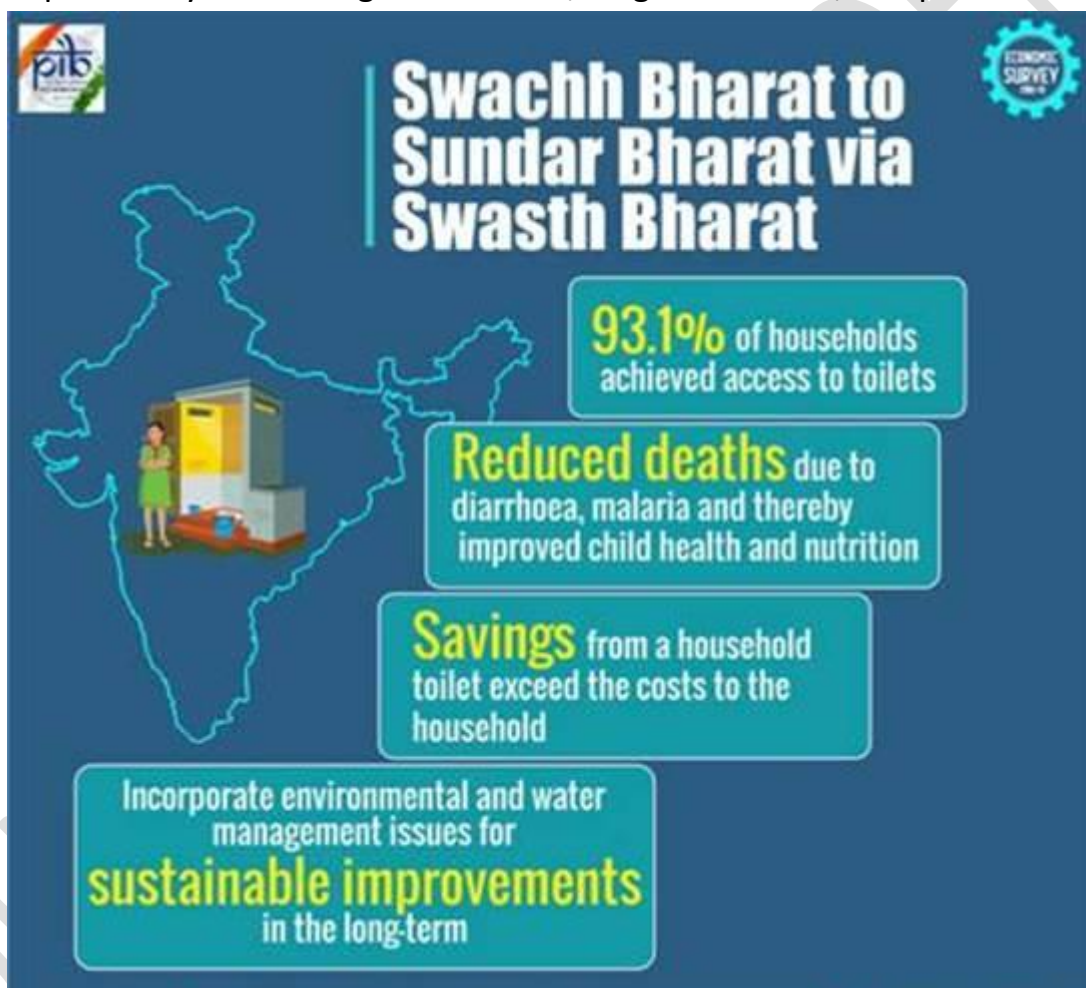


## Swachhata

- According to the Minister, Swachhata has evolved into a fundamental principle in every government programme as well as in the way of life of citizens, and since 2014, India has seen a shift in sanitation and waste management.

## Swachh Bharat Mission – Urban (SBM-U)

- The Swachh Bharat Mission-Urban (SBM-U) was the first significant initiative to implement the Jan Bhagidari principle.
- People's leadership of the SBM-U transformed a government programme into a people's programme. It became a Jan Andolan, wherein lakhs of citizens have taken on the responsibility of cleaning their streets, neighbourhoods, and parks.



## Open Defecation Free (ODF)

- The Minister stated that urban India had become completely Open Defecation Free (ODF), that 3,547 Urban Local Bodies (ULBs) were ODF+ with the functional and hygienic community and public restrooms, and that 1,191 ULBs were ODF++ with full faecal sludge management.



- ODF status: A city or ward is designated as an open defecation-free zone (ODF) if, at any given time of the day, no one is observed urinating in public.
- ODF+ status: If "at any point of the day, not a single person is seen defecating and/or urinating in the open, and all communal and public toilets are functioning and well-maintained."
- ODF++ status: If "Faecal sludge/septage and sewage must be safely handled and treated; no untreated faecal sludge/septage and sewage may be discharged or dumped in drains, aquatic bodies, or open spaces".

	Elimination of OD practices	Access to toilets	Conveyance and treatment of faecal waste
ODF City	<ul style="list-style-type: none"> <li>• Not a single person found defecating in the open</li> <li>• No traces of faeces are visible in the city at any time of the day.</li> </ul>	<ul style="list-style-type: none"> <li>• All the properties in the city have access to either own toilet or functional community/ public toilet</li> <li>• Floating population in the city has an access to sufficient and functional public toilets</li> </ul>	<ul style="list-style-type: none"> <li>• All toilets are connected to a disposal system</li> </ul>
ODF+ City	<ul style="list-style-type: none"> <li>• Not a single person found defecating in the open</li> <li>• No traces of faeces are visible in the city at any time of the day.</li> </ul>	<ul style="list-style-type: none"> <li>• At least <b>80%</b> of residential properties in the city have access to own toilets</li> <li>• Remaining properties and floating population in the city have access to functional community/ public toilets</li> </ul>	<ul style="list-style-type: none"> <li>• All toilets are connected to a disposal system</li> <li>• Regular and safe <b>collection, conveyance and treatment of all the faecal matter</b></li> </ul>
ODF++ City	<ul style="list-style-type: none"> <li>• Not a single person found defecating in the open</li> <li>• No traces of faeces are visible in the city at any time of the day.</li> </ul>	<ul style="list-style-type: none"> <li>• At least <b>95%</b> of residential properties in the city have access to own toilets</li> <li>• Remaining properties and floating population in the city have access to functional community/public toilets</li> </ul>	<ul style="list-style-type: none"> <li>• All toilets are connected to safe disposal system</li> <li>• Regular <b>safe collection, conveyance and treatment of all faecal matter and waste water</b> including septic tank effluent and grey water</li> </ul>

### ‘Stories of Change’ Compendium

- The minister revealed the "Stories of Change" Compendium, which highlights some of the incredible local achievements.
- He stated that more than 300 women from Self-Help Groups had travelled to other places to learn about different waste management strategies.

### Swachhata Doots

- Many of the "Swachhata Doots" are first-time travellers, and the minister praised them for being change agents and providing a platform for them to observe, connect, and learn.

- In India's urban areas, 4 lakh women are directly employed in the sanitation and waste management industries. The government has given women a sense of dignity through the Swachh Bharat campaign, as well as livelihood options.

#### **INTERNATIONAL DAY OF ZERO WASTE:**

- The first International Day of Zero Waste is celebrated on March 30, 2023, by the United Nations Environment Programme (UNEP) and UN-Habitat.

#### **Objectives:**

- The objective is to increase public understanding of how effectively managing urban trash, practising responsible consumption and production, and reaching zero waste all contribute to sustainable development.
- It strives to advance environmentally friendly patterns of production and consumption, encourages society's transition to circularity, and increases understanding of how zero-waste programmes advance the 2030 Agenda for Sustainable Development.

#### **Significance**

- The waste industry makes a considerable contribution to the triple planetary issue of pollution, biodiversity loss, and climate change.
- Just 55% of the 2.24 billion tonnes of municipal solid garbage that humanity produces each year is managed in facilities under supervision.
- Up to 14 million tonnes of plastic garbage enter aquatic environments each year, and approximately 931 million tonnes of food are lost or wasted.
- Initiatives aimed at reducing waste and preventing it together can help address the triple planetary problem, save the environment, increase food security, and boost human health and well-being.

#### **Zero-waste approach:**

- A zero-waste strategy involves ethically producing, using, and discarding things in a closed, circular system. This implies that we reduce pollution to the air, land, and water and reuse or recover resources as much as we can.

#### **Action at every level is necessary to achieve zero waste**

- **Producer:** Items should be built to last and use minimal, low-impact materials. Manufacturers may further reduce pollution and waste by using less resource-intensive production and delivery techniques.

- Zero waste throughout a product's life cycle may also be made possible through advertising and carefully controlling demand.
- Consumer: By adopting new behaviours, reusing, and repairing things as much as they can before properly discarding them, consumers may also play a significant part in ensuring zero waste.
- Combined effort: Boosting waste management and enhancing recovery systems via financing and legislation is becoming more and more important as governments, communities, companies, and other stakeholders become more and more aware of the possibilities of zero-waste projects. This transformation can be aided by the Global Strategy for Sustainable Consumption and Production.

## **SOLAR PV WASTE IN INDIA**

### **In News:**

- There has in the last few years been a concerted push from policymakers in India to transition to a circular economy and to, among other things, enable effective waste management.
- But waste management in the solar photovoltaic (PV) sector still lacks clear directives.

### **Solar PV in India**

#### **Status of Solar PV in India**

- Globally, India has the world's fourth-highest solar PV deployment.
- The installed solar capacity was nearly 62GW in November 2022.
- India is expected to become one of the top five leading photovoltaic waste producers worldwide by 2050.

#### **Status of PV waste in India**

- According to a 2016 report by the International Renewable Energy Agency, India could generate 50,000-3,25,000 tonnes of PV waste by 2030 and more than four million tonnes by 2050.

#### **Solar PV Technology in India**

- India's solar PV installations are dominated by crystalline silicon (c-Si) technology.
- A typical PV panel is made of c-Si modules (93%) and cadmium telluride thin-film modules (7%).
- A c-Si module mainly consists of a glass sheet, an aluminium frame, an encapsulant, a backsheet, copper wires, and silicon wafers. Silver, tin, and lead are used to make c-Si modules.

- The thin-film module is made of glass, encapsulant, and compound semiconductors.

### **Recycling of PV waste in India**

- Some portions of the frame are extracted and sold as scrap.
- Junctions and cables are recycled according to e-waste guidelines.
- The glass laminate is partly recycled; and the rest is disposed of as general waste.
- Silicon and silver can be extracted by burning the module in cement furnaces.
- According to a 2021 report, approximately 50% of the total materials can be recovered.

### **Challenges**

- India's challenge is the growing informal handling of PV waste.
- Only about 20% of the waste is recovered in general; the rest is treated informally.
- As a result, the waste often accumulates at landfills, which pollute the surroundings.
- Incinerating the encapsulant also releases sulphur dioxide, hydrogen fluoride, and hydrogen cyanide into the atmosphere.
- India needs to surmount significant collection, storage, recycling, and repurposing challenges.
- The market to repurpose or reuse recycled PV waste is minuscule in India due to a lack of suitable incentives and schemes in which businesses can invest.

### **Solutions**

- India should formulate and implement provisions specific to PV waste treatment within the ambit of the e-waste guidelines.
- Central insurance or a regulatory body should be set up to protect against financial losses incurred in waste collection and treatment.
- Pan-India sensitisation drives and awareness programmes on PV waste management will be beneficial.
- Considering that India's local solar PV-panel manufacturing is limited, we need to pay more attention to domestic R&D efforts.

## WILD ASS SANCTUARY

### In News:

A division bench of the Gujarat High Court Wednesday issued a notice to the state government and sought a report from it on the licences and permissions it has granted for mining activities within Wild Ass Sanctuary in the Little Rann of Kutch. The Court issued the notice while hearing a public interest litigation (PIL) on 'illegal' salt mining and mineral mining activities in the sanctuary.

### Analysis of Background:

#### Rann of Kachchh:

- The people of western India call desert as "the Rann" which means barren land with no productivity or the remnants of a destroyed land.
- The Rann of Kachchh is "a desolate area, sun baked and saline clay desert shimmering with the image of perpetual mirage".
- The Rann of Kachchh is divided into two parts known as Great Rann of Kachchh (GRK) and Little Rann of Kachchh (LRK).

#### About the sanctuary:

- Located in an area called Little Run of Kutch, the Wild Ass Sanctuary in Kutch is the only home to wild ass in India.
- The sanctuary was set up in 1973 with a purpose to protect the endangered Indian wild ass.
- Sprawling over an area of 5000 square kilometers of the Little Rann and covering a minor portion of the cities like Sundernagar, Rajkot, Patan, Banaskantha and Kutch district, the wild ass sanctuary is the largest wildlife sanctuary in Gujarat.
- Also, the sanctuary is home to a sizeable population of Rabari and Bharwad tribes.

#### About Wild Ass:

- Indian Wild Ass (*Equus hemionus khur*), commonly known as the ghudkhar, still exists in this sanctuary.
- Akin to the Tibetan kiang, the ghudkhar are distinguished by a dark stripe along its back.
- Known for its speed, the wild ass lives in herds led by stallions and survives by migrating between the grassy 'bets' through the season, in search of food.
- There are around 3000 wild asses in the sanctuary and can be best seen in and around October and November.

- The Indian wild ass is considered as a flagship species in LRK to conserve the biodiversity of the landscape.
- IUCN gave Indian Wild Ass Endangered status and it is protected as Schedule-I species under Wildlife Protection Act (1972).
- The Indian Wild Ass is a strong and majestic animal whose range once extended from Southern India towards southern Pakistan (i.e. provinces of Sindh and Baluchistan), Afghanistan and south-eastern Iran.
- Now, we have world's last population of Indian Wild Ass restricted within their last refuge of Indian desert called Rann of Kachchh.
- Indian Wild Ass is a generalist grazer which predominantly feeds on grasses but during summer when grasses are scanty and dried they used to feed on Prosopis pods and leaves.

#### **Worldwide species:**

- There are three species of wild ass, one in Africa and two in Asia (Equus hemionus and E. kiangs).
- Two species of Asian wild asses are further classified into eight surviving subspecies i.e. five of E. hemionus and three of E. kiangs.
- Ten surviving subspecies of wild asses (eight Asian and two African) are in different stages of endangerment.

#### **Ecological Importance:**

- The population trend of Indian wild ass is significant to know the condition of its habitat.
- Indian wild ass is predominantly a grassland species which mainly feeds on grasses.
- To maintain a healthy population we need to ensure its habitat in prosperous condition. It's a measure which could help us in protecting other grassland species like rodents, small birds, etc. The uniqueness of LRK is surprising to witness during monsoon.
- This is the time when the entire Rann area stays inundated for 2 to 3 months and the highlands inside the vast mud flat terrain become the breeding ground for Indian wild ass.
- And these highlands which are called "beyt" are ecologically very important towards the breeding population of Indian wild ass and migratory birds and many other species which take shelter in those beyts. Thus we can call Indian wild ass as the "Guardian of the Rann".

## POINT CALIMERE WILDLIFE SANCTUARY

### In News:

As many as 69 species of terrestrial birds were observed during the Synchronised Bird Census 2023 conducted by the Tamil Nadu Forest Department at Point Calimere Wildlife Sanctuary in Nagapattinam district

### Analysis of Background:

#### About Point Calimere Wildlife Sanctuary:

- Point Calimere Wildlife and Bird Sanctuary (PCWBS) is a 21.47-square-kilometre protected area in Tamil Nadu, South India along the Palk Strait where it meets the Bay of Bengal at Point Calimere at the southeastern tip of Nagapattinam District.
- The sanctuary was created in 1967 for conservation of the least concern blackbuck antelope, an endemic mammal species of India.
- It is famous for large congregations of waterbirds, especially greater flamingos.
- The 7-square-kilometre core area of this sanctuary has been proposed as a National Park

## PARAMBIKULAM TIGER RESERVE

### In News:

A faunal survey conducted in the Parambikulam Tiger Reserve spread across Palakkad and Thrissur has recorded over 500 species, many of which were hitherto unseen in the protected area.

### Analysis of Background:

#### About Parambikulam Tiger Reserve:

- Parambikulam Tiger Reserve, which also includes the erstwhile Parambikulam Wildlife Sanctuary, is a 66 square kilometres protected area lying in Palakkad district and Thrissur district of Kerala state, South India.
- The Wildlife Sanctuary, which had an area of 285 square kilometres was established in part in 1973 and 1984.
- It is in the Sungam range of hills between the Anaimalai Hills and Nelliampathy Hills
- Parambikulam Wildlife Sanctuary was declared as part of the Parambikulam Tiger Reserve in 2010.
- The Western Ghats, Anamalai Sub-Cluster, including all of Parambikulam Wildlife Sanctuary, has been declared by the UNESCO World Heritage Committee as a World Heritage Site.
- The Tiger Reserve is the home of four different tribes of indigenous peoples including the Kadar, Malasar, Muduvar and Mala Malasar settled in six colonies.

- Parambikulam Tiger Reserve is among the top-ten best managed Tiger Reserve in India.

## **GHG TRACKER MECHANISM**

### **In News:**

The U.N.'s World Meteorological Organisation has come up with a new Global Greenhouse Gas Monitoring Infrastructure that aims to provide better ways of measuring planet-warming pollution and help inform policy choices.

### **Analysis of Background:**

- The three major greenhouse gases are carbon dioxide, methane and nitrous oxide. Of those, CO<sub>2</sub> accounts for around 66% of the warming effect on the climate.
- The increase in CO<sub>2</sub> levels from 2020 to 2021 was higher than the average growth rate over the past decade, and methane saw the biggest year-on-year jump since measurements started.
- The 2015 Paris Agreement on climate change saw countries agree to cap global warming at "well below" two degrees Celsius above levels measured between 1850 and 1900 – and 1.5C if possible.

### **Need:**

- The WMO said there needed to be stronger scientific underpinnings of climate change mitigation actions taken under the agreement.
- There are still uncertainties, especially regarding the role in the carbon cycle of the ocean, the land biosphere and the permafrost areas.
- We therefore need to undertake greenhouse gas monitoring within an integrated framework in order to be able to account for natural sources and sinks.

### **Impact:**

- The WMO's new platform will integrate space-based and surface-based observing systems, and seek to clarify uncertainties about where greenhouse gas emissions end up
- It should result in much faster and sharper data on how the planet's atmosphere is changing.
- World Meteorological Organization (WMO):
- It is an intergovernmental organization with a membership of 193 Member States and Territories.
- It was established by the ratification of the WMO Convention in 1950.



- WMO became the specialised agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences a year later.
- The UN Economic and Social Council is the parent organization of WMO.
- WMO is headquartered at Geneva.
- WMO is dedicated to international cooperation and coordination on
  - the state and behaviour of the Earth's atmosphere, its interaction with the land and oceans,
  - the weather and climate it produces, and
  - the resulting distribution of water resources.
- It facilitates and promotes
  - the establishment of an integrated Earth System observation network to provide weather, climate and water-related data
  - the creation of standards for observation and monitoring
  - the provision of weather, climate and water-related services - to reduce disaster risks and contribute to climate change adaptation etc.
  - the coordination of research and training in meteorology and related fields
- Major reports published by the WMO are - Status of World Climate; Greenhouse Gas Bulletin.

## HOT LIGHTNING

### In News:

Climate change might lead to more wildfire-inducing 'hot lightning' strikes: a new study says

### Analysis of Background:

- Soaring global temperatures could lead to more "hot lightning" strikes in many parts of the world, a new study has found.
- It added that this type of lightning is more likely to ignite wildfires than typical lightning.
- According to the researchers, lightning is a major cause of triggering wildfires and is responsible for producing the largest wildfires in some regions, including the Western United States.
- Lightning-caused wildfires are dangerous as they spread rapidly before a strong response can be implemented and release substantial amounts of carbon, nitrogen oxides and other trace gases into the atmosphere.

### **What are the findings of the latest study?**

- The researchers analysed lightning-ignited fires based on satellite images of US wildfires and found that approximately 90 per cent of them might have started by “hot lightning” strikes. Also known as long continuing current (LCC), this type of lightning strike can last from around 40 milliseconds to nearly a third of a second.
- Lightning with continuing currents can transport more energy from cloud to ground than typical lightning.
- When lightning with continuing currents attach to ground or vegetation, they produce more Joule heating and higher temperature than typical lightning, increasing the probability of ignition.
- According to the study, the areas that might witness a significant increase in wildfires triggered by the LCC strikes are Southeast Asia, South America, Africa, Australia, North America and Europe.

### **What is lightning and how does it occur?**

- Lightning is a rapid and massive electrical discharge that takes place between storm clouds and the ground, or within the clouds themselves.
- Scientists believe that for lightning to occur, positive and negative charges must separate within a cloud.
- This happens, when the water droplets in the bottom part of the cloud are moved upwards, where the much colder atmosphere freezes them into small ice crystals.
- As these small ice crystals continue to go up, they gain more mass and eventually become so heavy that they start to fall down to Earth.
- This causes a system in which ice crystals going down collides with the water vapours coming up, leading to the accumulation of positive charges on the top of the cloud and negative charges gathering at the base, while the atmosphere between them in the cloud acts as an insulator.
- When the positive and negative charges grow large enough, their strength overpowers the insulating properties of the properties.
- As a result, the two kinds of charges meet with each other and produce lightning.
- Although most of the lightning takes place within the clouds, sometimes it is directed towards Earth also.
- With the base of the cloud becoming negatively charged, positive charges start accumulating on tall objects, like trees, poles and buildings.
- A ‘stepped leader’ of negative charge descends from the cloud seeking out a path toward the ground. As the negative charge gets close to the ground, a positive charge,

called a streamer, reaches up to meet the negative charge. The channels connect and we see the lightning stroke.

## COMPENSATORY AFFORESTATION IN INDIA

### In News:

Unlike the two other commitments India has made — one related to improvement in emissions intensity and the other about the deployment of renewable energy — the forestry target is a relatively difficult one to achieve.

### Analysis of Background:

- Forests are under stress due to the need for rapid industrial and infrastructure development, and accompanying urbanisation.
- In the last 10 years, more than 1,611 square km of forest land, a little more than the area of Delhi, has been cleared for infrastructure or industrial projects. Nearly a third of this — 529 sq km — has been cleared in the last three years itself.
- But government data also shows that total forest cover had increased by 1,540 square km in the two years between 2019 and 2021.
- A number of tree plantation, afforestation and reforestation programmes are being implemented to increase India's forest and tree cover.
- These include the Green India Mission, national afforestation programme, and the tree plantation exercises along the highways and railways. Other flagship government programmes like the national rural employment guarantee scheme (MGNREGS) and Namami Gange also have significant afforestation components.

### What is Compensatory Afforestation?

- The showpiece effort for extending India's forest cover has been its compensatory afforestation programme that seeks to ensure that forest lands getting 'diverted' for non-forest purposes, like industrial or infrastructure development, is mandatorily accompanied by afforestation effort on at least an equal area of land.
- While the plantation exercise on new lands cannot be compared with the fully grown forests getting diverted, compensatory afforestation — made a legal requirement through the Compensatory Afforestation Fund Act of 2016 — does ensure that newer parcels of land are earmarked for developing them as forests.
- The law also acknowledges the fact that newly afforested land cannot be expected to immediately start delivering the range of goods and services — timber, bamboo, fuelwood, carbon sequestration, soil conservation, water recharge, and seed dispersal — that the diverted forests were providing.

- As a result, project developers are also asked to pay for the Net Present Value (NPV) of the forests being cleared, based on a calculation decided by an expert committee.
- According to the recently revised calculations, companies have to pay NPV at rates ranging between Rs 9.5 lakh and Rs 16 lakh per hectare, depending on the quality of forests getting diverted.

### **Background of CAMPA:**

- The compensatory afforestation law came into being only in 2016, but the concept has existed since the 1980s, as an offshoot of the Forest Conservation Act of 1980, which made it mandatory for project developers to seek 'clearance' of the Environment Ministry for any diversion of forest land.
- The practice got institutionalised through the Supreme Court orders and observations during the hearings of the famous Godavarman case in the 1990s and 2000s.
- But due to other litigation, the money collected for compensatory afforestation before 2016 had remained largely unutilised. Serious work on compensatory afforestation has begun only after the 2016 Act.
- With the initial experience of the States regarding under-utilisation of the money collected towards compensatory afforestation, Hon'ble Supreme Court of India ordered for establishment of Compensatory Afforestation Fund and Compensatory Afforestation Fund Management and Planning Authority (CAMPA) in 2001.
- In 2006, separate bank accounts were opened in which the compensatory levies were deposited and adhoc CAMPA was established for the management of Compensatory afforestation fund.
- In 2009, Hon'ble Supreme Court permitted release of Rs.1000 crore every year to States/UTs for compensatory afforestation and other activities.
- In 2014, Hon'ble Supreme Court permitted release of 10% of total deposit of states in the fund from interest accrued on the deposits.
- This Act has provisioned that CAMPA funds shall be kept in interest bearing non-lapsable Public Account.
- After detailed deliberations with CAG and Ministry of Finance and deliberations with other Stakeholders, the fund flow mechanism could be finalized and the CAF Rules were finally put in place in 2018.
- After notification of CAF Rules, with approval of the Supreme Court on 28 Jan 2019, an amount of Rs.54,685 Crore from Ad-hoc CAMPA has been brought under the control of Government of India. So far 27 States/UTs have created accounts for receiving the Funds from Union Government and today funds to the tune of Rs.47,436 crore have been transferred to those States.

### **The Compensatory Afforestation Fund Act, 2016:**

- It establishes the National Compensatory Afforestation Fund under the Public Account of India, and a State Compensatory Afforestation Fund under the Public Account of each state.
- These Funds will receive payments for: (i) compensatory afforestation, (ii) net present value of forest (NPV), and (iii) other project specific payments.
- The National Fund will receive 10% of these funds, and the State Funds will receive the remaining 90%.
- These Funds will be primarily spent on afforestation to compensate for loss of forest cover, regeneration of forest ecosystem, wildlife protection and infrastructure development.
- The Bill also establishes the National and State Compensatory Afforestation Fund Management and Planning Authorities to manage the National and State Funds.
- Huge money for Compensatory Afforestation:
- All the money is meant to be spent solely on increasing, or improving the quality of, forest cover in the country, or on works that help this objective.
- The money is parked in special funds created for this purpose at the Central and state levels.
- The money is first deposited in the Central fund, from where it gets disbursed to states where the projects are located.
- Critics say compensatory afforestation had legitimised clearing of forests, and see it as an example of 'greenwashing'.
- The contrary view is that since the clearing of forests for one or the other purpose cannot be entirely eliminated, compensatory afforestation is a good mechanism for attempting to make up for these losses to some extent.
- More than Rs 66,000 crore has been realised in the Central fund through different levies prescribed in that law. A substantial part of this — nearly Rs 55,000 crore — has already been sent to the state governments. But much of this money remains locked in state government funds.
- Government records show that annual plans of operations by the state governments have not made full utilisation of the funds at their disposal, and even the money approved for this APOs has not been entirely spent.
- Sporadically, there have also been allegations of misutilisation or diversion of these funds, and in some cases investigations have been ordered

## CITES

### In News:

March 3 is known as World Wildlife Day (WWD), marked annually to draw attention to issues of conservation of flora and fauna. This year, the theme is 'Partnerships for Wildlife Conservation'.

### Analysis of Background:

#### Why is World Wildlife Day marked?

- In 2013, the United Nations General Assembly (UNGA) proclaimed March 3 as the UN World Wildlife Day to celebrate and raise awareness of protecting the world's wild animals and plants.
- This was as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) was signed in 1973 on this day.
- March 3 marks the 50th anniversary of CITES' establishment.
- CITES is considered a landmark agreement on conservation that focuses on ensuring the sustainability of endangered species.

#### What is the CITES?

- CITES is an international agreement between governments.
- Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species.
- It accords varying degrees of protection to more than 37,000 species of animals and plants, ranging from live animals and plants to wildlife products derived from them, including food products, exotic leather goods, medicines, etc.
- Currently, there are 184 parties to the convention, including India.
- The CITES Secretariat is administered by UNEP (The United Nations Environment Programme) and is located in Geneva, Switzerland.
- The Conference of the Parties to CITES is the supreme consensus-based decision-making body of the Convention and comprises all its parties

#### WCCB:

- In India, apart from the Union Ministry of Environment, Forests and Climate Change, the Wildlife Crime Control Bureau is a statutory body under the Ministry that is especially meant to combat organised wildlife crime in the country.
- It assists and advises the customs authorities in the inspection of the consignments of flora and fauna as per the provisions of the Wild Life Protection Act of 1972, CITES and the export and import policy governing items.

### **How does CITES work?**

- The species covered under CITES are listed in three Appendices, according to the degree of protection they need.
- Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted rarely, only in “exceptional circumstances”, such as gorillas, and lions from India.
- Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled to ensure their survival. For example, certain kinds of foxes and Hippopotamuses.
- Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade, like the Bengal fox or the Golden Jackal from India.
- Different procedures are given category-wise to engage in the trade of species in each of the lists.

### **Criticism of CITES:**

- One argument says having wildlife allowed to be traded further legitimises their movement and increases the possibility of their illegal trade.
- 2019 analysis in the journal Science that found in nearly two-thirds of cases, CITES protections lag after a species is determined to be threatened by international trade.
- Also, many animals that are in the wildlife trade are not protected by CITES.
- Voluntary nature of CITES membership means nobody is strictly bound to follow its direction.
- Its laxity has been questioned, on matters such as the ivory trade being allowed at times despite the convention banning it in 1989.
- Critics claimed there were sharp spikes in elephant poaching globally after one-off sales were allowed by the CITES in 1999 and 2008, of recovered ivory or from elephant deaths due to natural causes.

## FOREST CONSERVATION RULES, 2022 VS FOREST RIGHTS ACT, 2006

### In News:

In the middle of a face-off with the Environment Ministry over the new Forest Conservation Rules (2022) potentially diluting the Forest Rights Act, 2006, the National Commission for Scheduled Tribes has now secured FRA implementation reports of all States and Union Territories by invoking its Constitutional powers to approach the Supreme Court directly.

### Analysis of Background:

#### Issue:

- After the Union government introduced the new FCR, the panel wrote to the Environment Ministry in September, asking that they be put on hold because they would violate provisions of the FRA.
- In response, Environment Minister Bhupendra Yadav insisted that the rules were framed under the Forest (Conservation) Act, 1980 and that the panel's apprehension was "not legally tenable".
- The commission in February wrote to the Supreme Court Registrar, invoking powers under Clause 8d of Article 338A.
- Commission was looking to review the overall implementation of the FRA at the ground level, examine rejection of titles and encroachments on forest land. It will propose recommendations to further secure the rights of tribespeople, under its Constitutional mandate.
- This will be part of the report sent to the Office of the President, which will then be tabled in Parliament

### More on Details:

- The new Forest Conservation Rules — notified by the Ministry on June 28 — do not mention the earlier requirement of attaining a gram sabha NOC before diverting forest land for a project.
- They also allow forest rights to be settled after the final approval for forest clearances has been granted by the Centre, a point flagged by critics.
- The settling of forest rights now needs to be carried out by the state government instead of the Centre, as was the case earlier. The state governments will be under even greater pressure from the Centre to accelerate the process of diversion of forest land, critics say.



- The government said that the Forest (Conservation) Rules, 2022, are reformative with an objective to streamline the process of approvals under the Act, and enable the parallel processing under other Acts and Rules including FRA, 2006.
- The Forest Conservation Act of 1980, brought the diversion of forest land for non-forestry purposes under the purview of the central government— prior to this the states were solely in charge of clearing projects and diverting forest land.
- The Forest Conservation Act, laid down the process by which forest diversion could be carried out for projects such as mines or dams.
- But the Forest Conservation Act, and the Forest Advisory Committee, which would decide on the cases of forest diversion, would earlier only look at issues of forest health, protection of wildlife species, major harm to biodiversity, the land required for compensatory afforestation in lieu of the forest diversion etc.
- It was only when the Forest Rights Act, 2006 was enacted that the government mandated that the rights of forest dwelling communities need to be recognised, and that they needed to be consulted before the project was sanctioned.

**About the news rules:**

- It constituted an Advisory Committee, a regional empowered committee at each of the integrated regional offices and a screening committee at State/Union Territory (UT) government-level. The role of the Advisory Committee is restricted to advise or recommend with regards to grant of approval .
- The MoEFCC has directed the constitution of a project screening committee in each state/UT for an initial review of proposals involving diversion of forest land. The five-member committee will meet at least twice every month and will advise the state governments on projects in a time bound manner.
- All non-mining projects between 5-40 hectares must be reviewed within a period of 60 days and all such mining projects must be reviewed within 75 days. For projects involving a larger area, the committee gets some more time — 120 days for non-mining projects involving more than 100 hectares and 150 days for mining projects.
- All linear projects (roads, highways, etc), projects involving forest land up to 40 hectares and those that have projected a use of forest land having a canopy density up to 0.7 shall be examined in the Integrated Regional Office.
- The applicants for diverting forest land in a hilly or mountainous state with green cover covering more than two-thirds of its geographical area, or in a state/UT with forest cover covering more than one-third of its geographical area, will be able to take up compensatory afforestation in other states/UTs where the cover is less than 20%.

- Scheduled Tribes And Other Traditional Forest Dwellers (Recognition Of Forest Rights) Act, 2006:
- The Forest Rights Act (FRA), 2006 recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.
- The Act encompasses Rights of Self-cultivation and Habitation which are usually regarded as Individual rights; and Community Rights as Grazing, Fishing and access to Water bodies in forests, Habitat Rights for PVTGs etc.
- It also provides rights to allocation of forest land for developmental purposes to fulfil basic infrastructural needs of the community.
- In conjunction with the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Settlement Act, 2013 FRA protects the tribal population from eviction without rehabilitation and settlement.
- The Act further enjoins upon the Gram Sabha and rights holders the responsibility of conservation and protection of bio-diversity, wildlife, forests, adjoining catchment areas, water sources and other ecologically sensitive areas.
- The Gram Sabha is also a highly empowered body under the Act, enabling the tribal population to have a decisive say in the determination of local policies and schemes impacting them.
- Thus, the Act empowers the forest dwellers to access and use the forest resources in the manner that they were traditionally accustomed, to protect, conserve and manage forests, protect forest dwellers from unlawful evictions and also provides for basic development facilities for the community of forest dwellers to access facilities of education, health, nutrition, infrastructure etc.

**Objective:**

- To undo the historical injustice occurred to the forest dwelling communities
- To ensure land tenure, livelihood and food security of the forest dwelling Scheduled Tribes and other traditional forest dwellers
- To strengthen the conservation regime of the forests by including the responsibilities and authority on Forest Rights holders for sustainable use, conservation of biodiversity and maintenance of ecological balance.

## NANO UREA

### In News:

The Prime Minister, Shri Narendra Modi has lauded the benefits of Nano Urea in bringing long-term positive changes in the lives of Indian farmers.

### Analysis of Background:

- Nano Urea is a nanotechnology based revolutionary Agri-input which provides nitrogen to plants.
- When compared to conventional urea prill, it has a desirable particle size of about 20-50 nm and more surface area (10,000 times over 1 mm urea prill) and number of particles (55,000 nitrogen particles over 1 mm urea prill).
- Nano Urea Liquid can curtail the requirement of the same by at least 50%.
- It contains 40,000 ppm of nitrogen in a 500 ml bottle which is equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea.
- Nano nitrogen (Nano Urea) can enhance farmer's crop yields beside nitrogen saving to the extent of 50%.
- IFFCO Nano Urea (liquid) is world's first Nanofertilizers which has been notified by Fertilizer Control Order (FCO, 1985), Government of India. Nano Urea contains 4.0 % total nitrogen (w/v).

### Significance

- The excess conventional urea causes environmental pollution, harms soil health, and makes plants more susceptible to disease & insect infestation, delayed maturity of the crop & production loss.
- Nano Urea Liquid makes the crops stronger, and healthy and protects them from the lodging effect.
- It will lead to a reduction in Global Warming.
- It will improve the quality of underground water by polluting it less.
- It will cut down post-harvesting costs and increase farmers' income.
- Increased availability to crop by more than 80% resulting in higher Nutrient Use efficiency.
- Its application to crops as foliar fertilization enhances crop productivity to the tune of 8% with commensurate benefits in terms of better soil, air and water, and farmers profitability.

## TOPIC: DEFENSE AND SECURITY

### SIPRI REPORT

#### In News:

India remained the world's largest arms importer for the five-year period between 2018 and 2022 even though its arms imports dropped by 11% between 2013-2017 and 2018-2022, according to the Swedish think tank Stockholm International Peace Research Institute (SIPRI).

#### Analysis of Background:

#### Report Findings:

- Russia was the largest supplier of arms to India from 2013 to 2022, but its share of total imports fell from 64% to 45% while France is the second largest supplier.

#### India specific:

- As per latest SIPRI data, among the top 10 arms exporters for the period 2018 to 2022, India was the biggest arms export market to three countries — Russia, France and Israel — and the second largest export market to South Korea.
- India was also the third largest market for South Africa, which was ranked 21 in the list of arms exporters.
- For the same period, India remained the largest arms importer followed by Saudi Arabia.
- Russia accounted for 45% of India's imports followed by France (29%) and the U.S. (11%).
- Also, India was the third largest arms supplier to Myanmar after Russia and China accounting for 14% of its imports.
- India's tensions with Pakistan and China largely drive its demand for arms imports.
- With an 11% share of total global arms imports, India was the world's biggest importer of major arms in 2018 to 2022, a position it has held for the period 1993 to 2022.
- It retained this position even though its arms imports dropped by 11% between 2013 to 2017 and 2018 to 2022.
- The decrease can be attributed to several factors including India's slow and complex arms procurement process, efforts to diversify its arms suppliers, and attempts to replace imports with major arms that are designed and produced domestically.
- About Stockholm International Peace Research Institute:
- SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament.

- Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

## TROPEX

### In News:

Indian Navy's major Operational level exercise TROPEX for the year 2023, conducted across the expanse of IOR over a duration of four months from Nov 22 - Mar 23, culminated this week in the Arabian Sea.

### Analysis of Background:

- The overall exercise construct included Coastal Defence exercise Sea Vigil and the Amphibious Exercise AMPHEX.
- Together, these exercises also witnessed significant participation from the Indian Army, the Indian Air Force and the Coast Guard.

### About TROPEX:

- Theatre Level Operational Readiness Exercise (TROPEX) is an inter-service military exercise involving the participation of the Indian Army, Air Force, Navy and the Coast Guard.
- The exercise generally commences at the beginning of each year and lasts a month.
- It is generally carried out in three phases: independent workup phase, joint workup phase and tactical phase.
- The exercise is designed to test the combat readiness of the Indian naval units, as well as the Indian Air Force, Indian Army and the Indian Coast Guard.
- It also seeks to strengthen interoperability and joint operations in a complex environment.
- Beginning in 2005, the exercise has been held annually, with the exception of 2016 and 2018.

## EXERCISE COBRA WARRIOR

### In News:

An Indian Air Force contingent comprising 145 Air Warriors has departed from Air Force Station Jamnagar to participate in Exercise Cobra Warrior at the Waddington Air Force Base of the Royal Air Force in the United Kingdom.

## **Analysis of Background:**

### **About the exercise:**

- The Exercise Cobra Warrior is a multilateral Air exercise in which Air Forces from Finland, Sweden, South Africa, the United States of America and Singapore would also be participating.
- Importance of the exercise:
- The exercise aims to participate in fighter aircraft engagements and learn from the best practices of various Air Forces.
- The IAF will be participating in the exercise with five Mirage 2000 fighters, two C-17 Globemaster III and an IL-78 mid-air refueller aircraft.

## **ALH DHRUV**

### **In News:**

In the wake of the accident off the Mumbai coast, the defence forces have halted the operations of the ALH Dhruv helicopters till the time investigators find the reason for the incident and precautionary checks are carried out.

## **Analysis of Background:**

### **About Dhruv:**

- The ALH choppers are operated by all three defence forces including the Army, Navy and Air Force along with the Indian Coast Guard.
- Advanced Light Helicopter or ALH-DHRUV is an indigenously developed utility aircraft by Hindustan Aeronautics Limited (HAL) with a twin-engine.
- It has a multi-role, multi-mission dimension to it.
- Even though its development was started in 1984, and was initially designed with Germany's assistance Messerschmitt-Bolkow-Blohm (MBB), the helicopter was first flown in 1992 but entered service after certification in 2002.
- According to HAL, the aircraft is "type –Certified" for military operations by the Centre for Military Airworthiness Certification and civil operations by the Directorate General of Civil Aviation.
- The major variants of Dhruv are classified as Dhruv Mk-I, Mk-II, Mk-III & Mk-IV.

### **Role of ALH:**

1. Commuter role
2. VIP travel
3. Casualty evacuation
4. Underslung load

5. Rapid deployment of forces
6. Logistic support
7. Search and rescue
8. Training purpose

**Weapon Fitment:**

1. 20 mm Turret Gun
2. 70 mm Rocket
3. Air to Air Missile

**INS TRIKAND****In News:**

INS Trikand is participating in the International Maritime Exercise/ Cutlass Express 2023 (IMX/CE-23) being held in the Gulf region from 26 Feb to 16 Mar 23.

**Analysis of Background:**

- She will exercise with participants from over 50 nations and international maritime agencies with the common aim of enhancing maritime security and keeping sea lanes in the region safe for maritime commerce.

**About the exercise:**

- IMX/CE-23 is one of the largest multinational maritime exercises in the world.
- IMX 23 is a U.S. Naval Forces Central Command (NAVCENT)-led maritime exercise held across territorial and international waters across the Middle East, and Cutlass Express is an annual U.S. Naval Forces Europe-Africa (NAVEUR-NAVAF) exercise that includes East African and West Indian Ocean partner nations.
- This year, the two events will be combined. IMX/Cutlass Express is designed to demonstrate global resolve to preserve the rules-based international order, offer a unique chance to collaborate with like-minded participants and illustrate the importance of those relationships
- While this is Indian Navy's maiden IMX participation, it also marks the second occasion where an Indian Naval ship is participating in an exercise conducted by the CMF.

**Importance:**

- Earlier, in Nov 22, INS Trikand had participated in the CMF led Operation Sea Sword 2.

- Participation in exercises like Sea Sword 2 and IMX/CE-23 enables the Indian Navy in strengthening relationships and enhancing interoperability and collective maritime capability with maritime partners in the IOR.
- It also enables the Navy contribute constructively to regional stability and security.

#### **About INS Trikand:**

- It is a frontline frigate, is equipped with a versatile range of weapons and sensors.
- The ship is a part of the Indian Navy's Western Fleet, based at Mumbai.

### **HTT-40**

#### **In News:**

Union Cabinet has approved procurement of 70 HTT-40 Basic Trainer Aircraft from Hindustan Aeronautics Limited (HAL) for the Indian Air Force at a cost of Rs 6,828.36 crore. The aircraft will be supplied over a period of six years.

#### **Analysis of Background:**

##### **About HTT-40:**

- The HTT-40 is a turbo prop aircraft and is designed to have good low speed handling qualities and provide better training effectiveness.
- This fully aerobatic tandem seat turbo trainer has air-conditioned cockpit, modern avionics, hot re-fueling, running change over and zero-zero ejection seats.
- The aircraft will meet the shortage of basic trainer aircraft of IAF for training of newly inducted pilots. The procurement will include associated equipment and training aids including simulators.
- Being an indigenous solution, the Aircraft is configurable for upgrades to incorporate the futuristic requirements of the Indian Armed Forces.
- The HTT-40 contains approx. 56% indigenous content which will progressively increase to over 60% through indigenisation of major components and subsystems.
- The HAL would engage Indian private industry, including MSMEs, in its supply chain.
- The acquisition of the HTT-40 provides fillip to the Indian Aerospace Defence ecosystem and boosts efforts towards 'Aatmanirbhar Bharat'.

### **S-400**

#### **In News:**

Deliveries of five regiments of S-400 air defence systems under a \$5.43-billion deal with Russia are expected to be completed by year-end or early 2024.



## **Analysis of Background:**

### **Issues:**

- Issues of delayed payments as well as insurance and reinsurance remain major stumbling blocks delaying deals in the pipeline.
- Delivery of the third S-400 regiment has been completed which leaves the deliveries of two more regiments.
- The second and third regiments saw delays of a few months.
- There have been delays in “milestone payments”.
- The three regiments are deployed along the Northern, Eastern and western borders, sources said.

### **Background:**

- India has contracted five S-400 regiments under a \$5.43 billion or ₹40,291 crore deal as per a conversion rate of ₹74.2 against the dollar at the time, signed in October 2018.
- The deal has been delayed from the start over payment issues.
- With the looming threat of U.S. sanctions under CAATSA (Countering America’s Adversaries Through Sanctions Act), the two sides had worked out payments through the rupee-rouble exchange.
- The payments troubles compounded after Russia was shut out of the global SWIFT system for money transfers.
- India and Russia have agreed to conduct payments through the rupee-rouble arrangement after trying payments in euros as well.

### **What is S-400?**

- The S-400 Triumf is a mobile, surface-to-air missile (SAM) system developed in the 1990s by Russia as an upgrade to the S-300 family. The evolved version of the S-400 system is the S-500 Prometheus, which entered service in 2021.
- S-400 (NATO name SA-21 Growler) is considered one of the world’s most advanced air defence systems that can simultaneously track and neutralise a range of incoming objects spanning aircraft, missiles and Unmanned Aerial Vehicles (UAVs) over very long ranges.
- It is especially suited to take down strategic aerial platforms like bombers, mid-air refuellers, reconnaissance aircraft and Advanced Early Warning and Control Systems (AWACS).

## Why is the S-400 so important to India?

- S-400 is very important for India's national security, especially as it faces new threats from China, Pakistan and Afghanistan, calling it a "game changer".
- The system will also offset the air defence capability gaps due to the IAF's dwindling fighter squadron strength.
- Buying the S-400 is a way for asserting India's 'strategic autonomy'.

**India inks S-400 Triumph deal with Russia**

India has signed a \$ 5.43 billion (about ₹ 40,000 crore) deal with Russia to procure five S-400 Triumph advanced air defence missile systems

**S-400 Triumph Features**

- Can engage all types of aerial targets including aircraft, unmanned aerial vehicles and all types of missiles
- Locates targets at 600 km and can destroy them at 400 km range, up to an altitude of 30 km
- The system can engage multiple targets simultaneously

**Integrates:**

- Multifunction radar
- Anti-aircraft missile systems
- Launchers
- Autonomous detection and targeting systems
- Command and control centre

**Range of missiles:**

Capable of firing different types of missiles to create a layered defence shield

- 40N6: 400 km
- 9M96E2: 120 km
- 48N6: 250 km
- 9M96E: 40 km

**Possible deployment options**

Map not to scale

KBK Infographics

## SASHASTRA SEEMA BAL

### In News:

Senior Indian Police Service (IPS) officer Rashmi Shukla has been appointed Director-General of the Sashastra Seema Bal (SSB).

### Analysis of Background:

#### About CAPF:

- The Central Armed Police Forces (CAPF) refers to seven security forces in India under the authority of the Ministry of Home Affairs.

**Assam Rifles (AR):**

- The Assam Rifles came into being in 1835, as a militia called the 'Cachar Levy', to primarily protect British Tea estates and their settlements against tribal raids.
- This Force significantly contributed to opening the region to administration and commerce and over time they came to be known as the "right arm of the civil and left arm of the military".

**Border Security Force (BSF):**

- BSF is a Border Guarding Force of India. Established on December 1, 1965, it is a paramilitary force charged with guarding India's land borders with Pakistan and Bangladesh.
- The BSF has an air wing, marine wing, an artillery regiment, and commando units. It currently stands as the world's largest border guarding force. BSF has been termed the First Line of Defence of Indian Territories.

**Central Industrial Security Force (CISF):**

- The CISF came into existence in 1969 with a modest beginning, having three battalions, to provide integrated security cover to the Public Sector Undertakings (PSUs).
- With globalization and liberalization of the economy, CISF is no longer a PSU-centric organization. Instead, it has become a premier multi-skilled security agency of the country, mandated to provide security to major critical infrastructure installations of the country in diverse areas.

**Central Reserve Police Force (CRPF):**

- The Central Reserve Police Force came into existence as Crown Representative's Police on 27th July 1939.
- It became the Central Reserve Police Force on the enactment of the CRPF Act on 28th December 1949.
- The mission of the Central Reserve Police Force is to enable the government to maintain the Rule of Law, Public Order and Internal Security effectively and efficiently, to Preserve National Integrity and Promote Social Harmony and Development by upholding the supremacy of the Constitution.

**Indo Tibetan Border Police (ITBP):**

- ITBP was raised on 24 Oct 1962.
- Presently, ITBP is deployed on border guarding duties from Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh covering 3488 km of Indo-China Border and

manning Border Outposts on altitudes ranging from 9000' to 18700' in the Western, Middle and Eastern sectors of the Indo-China Border.

- ITBP is a specialized mountain force and most of the officers and men are professionally trained mountaineers and skiers. Being the first responder to natural disasters, ITBP has been carrying out numerous rescue and relief operations across the country.

#### **National Security Guard (NSG):**

- The National Security Guard (NSG) is a counter-terrorism unit.
- It was raised in 1984, following Operation Blue Star and the assassination of Indira Gandhi, "for combating terrorist activities to protect states against internal disturbances.
- NSG formally came into being in 1986 by an act of parliament.

#### **Sashastra Seema Bal (SSB):**

- The Special Service Bureau (now Sashastra Seema Bal) was thus conceived in November 1962 and eventually created in March 1963.
- The sole objective of achieving 'Total security preparedness in the remote border areas for performing a 'stay-behind' role in the event of a war.

### **TOPIC: MISCELLANEOUS**

#### **ERYTHRITOL**

##### **In News:**

A new research by Cleveland Clinic, published in Nature Medicine, has shown that Erythritol, a popular artificial sweetener, is associated with an increased risk of heart attack and stroke.

##### **Analysis of Background:**

##### **Erythritol**

- Erythritol is a type of sugar alcohol that is commonly used as a sugar substitute in foods and beverages.
- Unlike traditional sugars, it has no calories and does not raise blood sugar levels.
- It is also believed to have a lower glycemic index than other sweeteners, meaning it may not have as strong an impact on insulin levels.
- Erythritol is 60–70% as sweet as sucrose (table sugar).
- Japanese companies pioneered the commercial development of erythritol as a sweetener in the 1990s.

## Natural Occurrence and Production

- Erythritol occurs naturally in some fruit and fermented foods.
- It also occurs in human body fluids such as eye lens tissue, serum, plasma, fetal fluid, and urine.
- At the industrial level, it is produced from glucose by fermentation with a yeast, *Moniliella pollinis*.

## Uses

- Beverage categories for its use are coffee and tea, liquid dietary supplements, juice blends, soft drinks, and flavored water product variations, with foods including confections, biscuits and cookies, tabletop sweeteners, and sugar-free chewing gum.

## Research Findings

- Researchers studied over 4,000 people in the US and Europe and found that those with higher blood Erythritol levels were at elevated risk of experiencing a major adverse cardiac event such as heart attack, stroke or death.
- They also examined the effects of adding Erythritol to either whole blood or isolated platelets, which are cell fragments that clump together to stop bleeding and contribute to blood clots. Results revealed that erythritol made platelets easier to get activated and form a clot. Pre-clinical studies confirmed ingestion of erythritol heightened clot formation.

## Dengue

### In News:

In a significant development in DNA vaccination research, India's first and only DNA vaccine candidate for dengue has shown promising results.

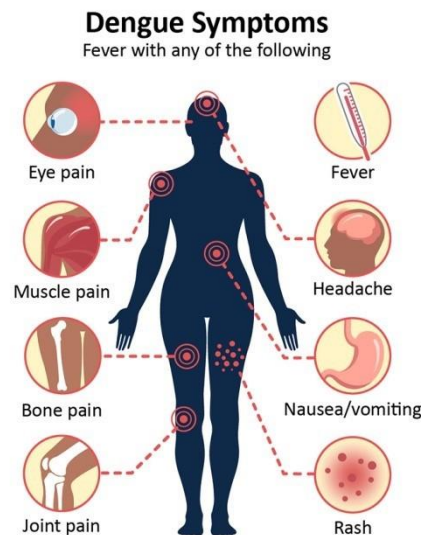
### Analysis of Background:

#### Dengue

- Dengue is a mosquito-borne viral infection, found in tropical and sub-tropical climates worldwide, mostly in urban and semi-urban areas.
- The virus responsible for causing dengue, is called dengue virus (DENV).
- There are four DENV serotypes, meaning that it is possible to be infected four times.

## Transmission and Symptoms

- Dengue is transmitted by several species of mosquitoes within the genus *Aedes*.
- Symptoms include fever, headache, muscle, and joint pain, and a characteristic skin rash that is similar to measles. There is a drop in platelets.
- There are four types of dengue strains, and type II and IV are considered to be more severe and normally require hospitalization.
- The *Aedes* mosquito breeds in clean stagnant water.



## Treatment

- There is no specific medicine to treat dengue.

## Platelets

- Platelets are pieces of very large cells in the bone marrow called megakaryocytes.
- They help form blood clots to slow or stop bleeding and to help wounds heal.
- Having too many or too few platelets or having platelets that don't work as they should can cause problems.

## Normal platelet count in a body

- In the normal human body, the platelet count in dengue ranges from 1.5 lakh to 4 lakh.
- Reasons behind drop in platelet count in Dengue
- Platelet count in dengue decreases as it suppresses bone marrow, which is the platelet-producing area.
- Platelet count in dengue decreases because of blood cells affected by the disease.
- Antibodies that are produced during this period lead to massive destruction of platelets in dengue.

## Impact of drop in platelet count in cases of dengue

Patient can be asymptomatic or may have bleeding manifestations, such as:

- Bleeding from gums or nose.
- Blood in urine, stools or vomit.
- Bleeding under the skin, which might look like bruising.
- Major internal organ bleeds in few cases.

### **Platelet transfusion**

- In cases where platelets drop to below 10,000, platelet transfusion is required but in case of bleeding manifestations, platelet transfusions can even be given at more than the cut-off value of 10,000 too.

### **Donor eligibility criteria**

- Donor eligibility criteria are the same for both platelet and whole blood donors.
- Any healthy adult who clears the screening process of the blood bank for platelet donation can donate the platelets.

### **Need for an effective Vaccine for Dengue**

- Developing an effective vaccine against dengue is tricky because it is caused by four closely related viruses—DEN-1, DEN-2, DEN-3 and DEN-4—called serotypes. Each one interacts differently with antibodies in human blood.
- A person infected with DEN-1 is then protected against it for life, but not against the other three serotypes.
- An ideal vaccine must target all serotypes.
- The world's first DNA vaccine—ZyCoV-D, developed by Ahmedabad-based pharmaceutical firm Zydus Cadila—was approved in 2021 for emergency use against COVID-19. Globally, DNA vaccines are being developed for diseases like tuberculosis and chikungunya. Some 19 DNA dengue vaccines are being evaluated, but yet to reach final clinical trials.

## **H3N2 virus**

### **In News:**

- India has recorded deaths of two people, one each in Karnataka and Haryana, due to the Influenza A subtype H3N2 virus.

### **What is the H3N2 virus?**

- Influenza viruses, which cause the infectious disease known as flu, are of four different types: A, B, C and D. Influenza A is further classified into different subtypes and one of them is the H3N2.

- H3N2v is a non-human influenza virus that normally circulates in pigs and that has infected humans - known as 'swine influenza viruses'. When these viruses infect humans, they are termed 'variant' viruses. The specific H3N2 variant virus was detected in 2011 in humans with genes from avian, swine, and human viruses and the 2009 H1N1 pandemic virus M gene.
- H3N2 caused the 1968 flu pandemic that led to the death of around one million people globally and about 100,000 in the US.
- A 2020 study, published in the journal Nature Communications, found that the strains of the virus have dramatically evolved in the past five decades as people born in the late 1960s and 1970s got infected by it as children.

### **What are the symptoms of H3N2?**

- Its symptoms are similar to that of any other flu. They include cough, fever, body ache and headache, sore throat, a runny or stuffy nose and extreme fatigue. Nausea, vomiting and diarrhoea have been seen in very few cases.
- An infection caused by H3N2 generally lasts for five to seven days and the fever starts going away after three days. However, the coughing can persist for up to three weeks.

### **Which age group is more vulnerable?**

- This virus usually preys on individuals below the age of 15 years or above 50 years of age.
- Children and those with co-morbidities like asthma, diabetes, heart disease, weakened immune systems and neurological or neurodevelopmental conditions are at a higher risk.

### **Transmission**

- H3N2 influenza is highly contagious and can spread from person to person through droplets generated when an infected person talks, coughs, or sneezes.
- It can also spread by touching a surface contaminated with the virus and then touching one's mouth or nose. People who are at high risk of complications from the flu include pregnant women, young children, older adults, and people with underlying medical conditions.

### **How to prevent it from spreading?**

- Self-hygiene is the best way to thwart the spread of H3N2.
- Washing hands before eating or touching your face, nose or mouth, carrying pocket sanitiser, and avoiding people already infected with the virus or any other seasonal flu



are some of the steps one can take to make sure they don't fall sick due to the H3N2 infection.

- Moreover, a healthy diet that includes plenty of fruits and vegetables can also play a significant role in improving immunity. The doctor added that drinking a lot of fluids, and eating home-cooked, low-spice and low-fat food can also help.

### **Treatment options**

- Taking proper rest, drinking lots of fluids and using over-the-counter painkillers like acetaminophen or ibuprofen to lower fever are all part of the H3N2 influenza treatment regimen. If a patient has severe symptoms or is at a high risk of problems, a doctor may also recommend antiviral drugs such as oseltamivir and zanamivir.
- WHO further says that in suspected and confirmed cases, neuraminidase inhibitors should be prescribed as soon as possible (ideally, within 48 hours following symptom onset) to maximize therapeutic benefits.
- To prevent H3N2 influenza, it is essential to take some measures such as receiving a flu vaccine annually.

## **NOBEL PEACE PRIZE**

### **In News:**

A court sentenced Nobel Peace Prize winner and human rights activist Ales Bialiatski to 10 years in prison for financing protests and other crimes, in a case that rights groups say was politically motivated.

### **Analysis of Background:**

#### **About Nobel Peace Prize:**

- The Nobel Peace Prize is one of the five Nobel Prizes established by the will of Swedish industrialist, inventor and armaments (military weapons and equipment) manufacturer Alfred Nobel, along with the prizes in Chemistry, Physics, Physiology or Medicine and Literature.
- Since March 1901, it has been awarded annually (with some exceptions) to those who have "done the most or the best work for fraternity between nations, for the abolition or reduction of standing armies and for the holding and promotion of peace congresses".
- In accordance with Alfred Nobel's will, the recipient is selected by the Norwegian Nobel Committee, a five-member committee appointed by the Parliament of Norway.

- Since 2020 the prize is awarded in the Atrium of the University of Oslo, where it was also awarded 1947–1989; the Abel Prize is also awarded in the building.
- The prize was previously awarded in Oslo City Hall (1990–2019), the Norwegian Nobel Institute (1905–1946), and the Parliament (1901–1904).

### **2022 Awards:**

- The most recent prize for 2022 was awarded to human rights advocate Ales Bialiatski from Belarus, the Russian human rights organisation Memorial and the Ukrainian human rights organisation Centre for Civil Liberties.
- The laureates represent civil society in their home countries, said the committee
- They have for many years promoted the right to criticise power and protect the fundamental rights of citizens.
- They have made an outstanding effort to document war crimes, human right abuses and the abuse of power. Together they demonstrate the significance of civil society for peace and democracy
- With the awardees being from Belarus, Ukraine, and Russia, an implicit message has been sent about the ongoing conflict between Russia and Ukraine.

### **Belarus's Ales Bialiatski**

- Ales Bialiatski was one of the initiators of the democracy movement that emerged in Belarus in the mid-1980s.
- Before 1991, when the former Soviet Union fell and independent countries emerged, many countries in Central Asia and Europe saw pro-independence movements.
- Bialiatski is also credited with founding the organisation Viasna (Spring) in 1996 in response to the controversial constitutional amendments that gave the president dictatorial powers.
- Over time, Viasna evolved into a “broad-based human rights organisation that documented and protested against the authorities’ use of torture against political prisoners”, said the committee.

### **Russian human rights organisation, Memorial**

- The committee said the organisation was established in 1987, “by human rights activists in the former Soviet Union who wanted to ensure that the victims of the communist regime’s oppression would never be forgotten.”
- Nobel Peace Prize laureate Andrei Sakharov, who won the prize in 1954, and human rights advocate Svetlana Gannushkina were among the organisation’s founders.
- “Memorial is based on the notion that confronting past crimes is essential in preventing new ones”, said the committee.

- It has been described as the largest human rights organisation in Russia, and in the present day, it helped in gathering information on “the political oppression and human rights violations in Russia”, as per the committee’s press release, which called it “the most authoritative source of information on political prisoners in Russian detention facilities”.

### **Ukrainian human rights organisation, Center for Civil Liberties**

- The Center for Civil Liberties was founded in Kyiv in 2007 “for the purpose of advancing human rights and democracy in Ukraine”, said the committee.
- Centre describes itself as “One of the leading actors in Ukraine, influencing the formation of public opinion and public policy, supporting the development of civic activism, and actively participating in international networks and solidarity actions to promote human rights”.
- After Russia’s invasion of Ukraine in February 2022, the Center for Civil Liberties has engaged in efforts to identify and document Russian “war crimes” against the Ukrainian civilian population, according to the committee.

## **INTERNATIONAL WOMEN’S DAY**

### **In News:**

International Women’s Day 2023 was observed on March 8 under the theme “DigitALL: Innovation and technology for gender equality”.

### **Analysis of Background:**

#### **About International Women's day**

- The idea for an International Women's day arose around the end of the 20th century out of a long-standing movement for women to participate equally in society.
- The first International Women's Day was observed on March 19, 1911, in Austria, Denmark, Germany and Switzerland. That day, more than one million women and men showed their support by participating in public events.
- Over time, International Women's Day has grown to become a global day of recognition and celebration.
- It was expanded by the United Nations in 1975 with the International Women's Year.
- In 1977, the United Nations adopted a resolution designating March 8 as International Women's Day.

## **Steps taken by the Indian Government to ensure gender equality**

- The Union Government is implementing several schemes/programs to ensure welfare, rehabilitation, empowerment, education and generating employment opportunities for women.
- SwadharGreh Scheme aims to provide shelter, food, clothing, counselling, training, clinical and legal, and rehabilitation in difficult circumstances; homeless due to family discord, crime, violence, mental stress, social ostracism or being forced into prostitution, etc.
- A Home for widows has been set up in Vrindavan, Uttar Pradesh to provide a safe place to stay, health services, nutritious food, and legal and counselling services.
- Beti Bachao Beti Padhao, to address the declining Child Sex Ratio.
- PM Matru Vandana Yojana (PMMVY) Providing Cash incentives for improved health and nutrition to pregnant and nursing mothers.
- Scheme for Adolescent Girls aims at girls in the age group 11-18, to empower and improve their social status through nutrition, life skills, home skills and vocational training
- Pradhan Mantri Mahila Shakti Kendra Scheme to promote community participation through the involvement of Student Volunteers for the empowerment of rural women
- National Creche Scheme to provide daycare facilities to children of the age group of 6 months to 6 years of working women who are employed.
- Rashtriya Mahila Kosh (RMK) to provide micro-credit to poor women for various livelihood support and income-generating activities at concessional terms.
- Ujjawala is a Comprehensive Scheme for the prevention of trafficking and rescue, rehabilitation, reintegration and repatriation of victims of trafficking for commercial sexual exploitation.
- Working Women Hostels for ensuring safe accommodation for women working away from their place of residence.
- One-Stop Centre (OSC) and Women Helpline (WH) are being implemented to facilitate access to an integrated range of services including medical aid, police assistance, legal aid/ case management, psychosocial counselling and temporary support services to women affected by violence.
- Gender Budgeting Scheme is being implemented as a tool for mainstreaming gender perspective at various stages of planning, budgeting, implementation, impact assessment and revisiting of policy/programme objectives and allocations.
- Panic Button on Mobile Phones.
- Emergency Response Support System Set up under Nirbhaya Fund.
- Mahila Police Volunteers, to report the incidences of violence against women.

- Inclusion of Acid Attack as a disability.
- Training for Women Heads of Panchayats.
- Extending Maternity Leave duration From 12 weeks to 26 weeks.
- Rashtriya Mahila Kosh, Providing micro-credit to Poor women through NGOs, SHGs.
- Mahila e-Haat, online digital marketing Platform for women.
- New Passport Rules, Submission of the father's name is not mandatory and Does not need to submit her/his marriage/divorce Certificates.
- Dowry Prohibition Act, of 1961, Penalizes Giving and taking.
- SABLA Scheme, Provides life Skills and Supplementary nutrition to out-of-school girls.
- Sexual Harassment electronic-Box (SHe-Box).
- The national database on Sexual offenders includes the name, addresses, photographs and fingerprint details of those Convicted in Sexual assault Cases.

## **SAME-SEX MARRIAGE**

### **In News:**

The Centre has briefed the Supreme Court that it is opposing petitions asking for the legal recognition of same-sex unions, arguing that the "legislative understanding of marriage in the Indian statutory and personal law regime" only refers to unions between biological men and women and that any interference "would cause a complete chaos with the delicate balance of personal laws in the country and in accepted social norms".

### **Analysis of Background:**

- The Centre argued that any "recognised deviation...can arise only before the authorized legislature," and urged the court to refer the matter to Parliament. Also, it stated that "the Petitioners cannot claim a basic right for same-sex marriage to be recognised under the laws of the country" despite the decriminalisation of Section 377 of the Indian Criminal Code (IPC).
- The affidavit was submitted by the Union Government before the Supreme Court in response to several petitions that asked for the legal recognition of same-sex unions. In November 2022 and in January 2023, the Supreme Court had given notifications regarding these petitions.

### **Same-Sex marriage around the Globe**

- Same-sex marriage is the marriage of two people of the same sex or gender.
- Same-sex unions were also known in Ancient Greece and Rome, ancient Mesopotamia, some regions of China, and at certain times in ancient European history.

- As of 2022, marriage between same-sex couples is legally performed and recognized in 33 countries including Argentina, Australia, Brazil, Canada, France, Germany, New Zealand, South Africa, Spain, Sweden, Switzerland, United Kingdom, United States, etc.
- Adoption rights are generally not covered, though most countries with same-sex marriage allow those couples to jointly adopt as other married couples can.
- 34 countries have definitions of marriage that prevent marriage between couples of the same sex.
- Some other countries have constitutionally mandated Islamic law, which is generally interpreted as prohibiting marriage between same-sex couples.
- In some countries, homosexuality itself is criminalized.
- The first law providing for marriage equality between same-sex and opposite-sex couples was passed by the Netherlands in 2000.
- Social science research indicates that the exclusion of same-sex couples from marriage stigmatizes and invites public discrimination against gay and lesbian people.
- Opposition to same-sex marriage is based on claims such as that homosexuality is unnatural and abnormal.

#### **Same-sex marriage: in the Indian context**

- The right to marry is a fundamental right under article 21.
- However, same-sex marriage is also not legalized in India.
- Section 377 in The Indian Penal Code: Unnatural offences; Whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animal, shall be punished with life imprisonment for life, or with imprisonment of either description for a term which may extend to 10 years, and shall also be liable to pay a fine.
- The adoption law prohibits the adoption of a child by same-sex couples.
- Under present law, one partner cannot inherit properties left behind by their same-sex partner.
- At Present Marriages between same-sex partners are not recognized in India, but this can be changed by inserting a provision in the Special Marriage Act.

#### **Special Marriage Act (SMA), 1954**

- The original Special Marriage Act was enacted in 1872, following a campaign launched in 1860 by Brahma Samaj for simpler marriage ceremonies.
- Its requirement of renouncing one's religion was not consistent with modern ideas of liberalism, individualism and autonomy of the individual.
- Therefore the 1954 law replaced the 1872 Act, and the requirement to renounce one's religion was removed.

- The law was the first step toward a Uniform Civil Code. The objective was that if we want a liberal, modern, secular and progressive law, we first start the experiment voluntarily.
  - Therefore, those going for an inter-faith marriage could register under the SMA.
  - Once your marriage is registered under SMA, your religion's laws won't apply.
- The provision under the law requires couples getting married to give notice to the Marriage Officer 30 days before the date of marriage.
  - The notice can be inspected by "any person and anyone can object to the marriage.
- Arguments in favour of same-sex marriage
- Homosexuality exists in nature, and whatever exists in nature is natural. We, humans, exist in nature, homosexuality is therefore not unnatural.
- Refusal to recognize same-sex marriage is a violation of the constitutional right of same-sex couples.
- Not allowing same-sex marriage penalizes children by depriving them of state benefits because the state disapproves of their parent's sexual orientation. Research shows that children adopted by gay parents thrive as well as other children.
- Indian Constitution's Articles 15 and 16 forbid discrimination on grounds only of religion, race, caste, sex, or place of birth.
- The right to express one's sexuality is guaranteed by Article 19 1 (a).
- The fact of the matter is that homosexuals want marriage in the purely legal form and religions do not have to approve of this.
- Courts have recognized that rights can be fundamental even if they were traditionally considered immoral or even criminal, as long as they have become "implicit in the concept of ordered liberty".

### **Arguments against Same-sex marriage**

- "Homosexuality" is unnatural therefore homosexuals ought not to be permitted to enter the natural institution of marriage.
- Same-sex marriage ruins the sanctity of marriage.
- The right to marry is fundamental but the right to marry someone of the same sex is not. Before a fundamental right can be recognized, a "deeply rooted tradition" must be found. Homosexuality is not a deeply rooted tradition.
- The legislature, not the courts should decide how to make profound social changes.
- Marriage is to encourage stable relationships because people in them are more likely to contribute to a stable society.
- Legalizing same-sex marriage could lead to the acceptance of polygamy and incest.

- Indian law authorizes marriages only between men and women.

### **Supreme Court on IPC 377, Homosexuality**

- The constitutional bench of the Court unanimously held that the criminalization of private consensual sexual contact between adults of the same sex under Section 377 of IPC was unconstitutional.
  - Article 14, Granting equality before the law.
  - Article 15, prohibits discrimination on Grounds of religion, race, Caste, Sex or place of birth.
  - Article 21 Guarantees the protection of life and personal liberty.
  - Equal Citizenship and equal protection of laws
- Key Points of the Judgement
  - Homosexuality is documented in 1500 species and is not unique to humans.
  - Majoritarian morality cannot dictate constitutionality morality and Human rights are more important than religious rights.
  - Social morality cannot be used to violate the fundamental rights of even a single individual.



## *Our Initiative For Current Affair Coverage:*

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