



# DHEERAN IAS ACADEMY®

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

Coimbatore | Erode

## *Monthly Magazine*

## **CURRENT AFFAIRS**

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## TOPIC: HISTORY

### BHIMBETKA

#### In News:

Fossils of an extinct species of animal that scientists reported in a sensational discovery from India's Bhimbetka Rock Shelters in 2021 have been found to be belied hopes.

#### Analysis of Background:

- In 2021, researchers spotted by chance what looked like a 44-cm-wide fossil of Dickinsonia, an animal that lived at least 538 million years ago, in a cave.
- Dickinsonia fossils in other parts of the world have indicated it was circular or oval in shape, somewhat flat, with rib-like structures radiating from a central column.
- In 2022, researchers were able to conclude that "the impression resulted from decay of a modern beehive which was attached to a fractured rock surface".

#### About Dickinsonia:

- It is an extinct genus of basal animal that lived during the late Ediacaran period in what is now Australia, Russia and Ukraine.
- These creatures arose in a world devoid of predators, and had no need for hard protective carapaces or skeletons.
- The discovery of cholesterol molecules in fossils of Dickinsonia lends support to the idea that Dickinsonia was an animal.

#### Bhimbetka:

- The Bhimbetka rock shelters are an archaeological site in central India that spans the Paleolithic and Mesolithic periods, as well as the historic period.
- It exhibits the earliest traces of human life in India and evidence of Stone Age starting at the site in Acheulian times.
- It is located in the Raisen District in the Indian state of Madhya Pradesh
- It is a UNESCO World Heritage Site that consists of seven hills and over 750 rock shelters distributed over 10 km
- At least some of the shelters were inhabited more than 100,000 years ago.
- The Bhimbetka site has the oldest-known rock art in India, as well as is one of the largest prehistoric complexes.

- Bhimbetka meaning "Bhima's resting place" or "Bhima's lounge", is compound word made of Bhima (second brother among the five Pandavas of Mahabharata) and Baithaka (seat or lounge). According to the native belief, Bhima during his exile used to rest here to interact with the locals.

## **KHALISTAN**

### **In News:**

Hundreds of followers of Amritpal Singh, a radical preacher and pro-Khalistan leader, clashed violently with police outside Ajnala police station near Amritsar, demanding the release of one of their colleagues who had been taken into custody in an alleged kidnapping case.

### **Analysis of Background:**

#### **What is the Khalistan movement?**

- The Khalistan movement is a fight for a separate, sovereign Sikh state in present day Punjab (both India and Pakistan).
- Over the years, it has survived in various forms, in various places and amongst different populations.
- The movement was crushed in India following Operation Blue Star (1984) and Operation Black Thunder (1986 and 1988), but it continues to evoke sympathy and support among sections of the Sikh population, especially in the Sikh diaspora in countries such as Canada, the UK, and Australia.

#### **History of the movement:**

- The origins of the movement have been traced back to India's independence and subsequent Partition along religious lines.
- The Punjab province, which was divided between India and Pakistan, saw some of the worst communal violence and generated millions of refugees: Sikhs and Hindus stranded on the west (in Pakistan) rushed to the east, whereas Muslims in the east fled westward.
- Lahore, the capital of Maharaja Ranjit Singh's great Sikh Empire, went to Pakistan, as did holy Sikh sites including Nankana Sahib, the birthplace of Guru Nanak, the founder of Sikhism. While most Sikhs found themselves in India, they were a small minority in the country, making up around 2 per cent of the population.

- The political struggle for greater autonomy began around the time of Independence, with the Punjabi Suba Movement for the creation of a Punjabi-speaking state.
- The States Reorganisation Commission, in its 1955 report, rejected this demand, but in 1966, after years of protest, the state of Punjab was reorganised to reflect the Punjabi Suba demand.
- The erstwhile Punjab state was trifurcated into the Hindi-speaking, Hindu-majority states of Himachal Pradesh and Haryana, and the Punjabi-speaking, Sikh-majority Punjab.

### **Anandpur Sahib Resolution:**

- The Punjabi Suba movement had galvanised the Akali Dal which became a major force in the new Sikh-majority Punjab, and gave the Congress hard fights in the Legislative Assembly elections of 1967 and 1969.
- But in 1972, in the aftermath of Indira Gandhi's resounding victory in the 1971 Lok Sabha elections, the Akali Dal's performance in the state was underwhelming.
- The party met at the sacred town of Anandpur Sahib, the birthplace of the Khalsa, in 1973, and released a list of demands that would guide the political path of the Akali Dal. Among other things, the Anandpur Sahib Resolution demanded autonomy for the state of Punjab, identified regions that would be part of a separate state, and sought the right to frame its own internal constitution.
- The Akali Dal was trying to cash in on the growing demand for an autonomous state which had emerged alongside the Punjabi Suba movement and had gone global by 1971 — when an advertisement appeared on The New York Times proclaiming the birth of Khalistan.
- While the Akalis themselves repeatedly made it clear that they were not demanding secession from India, for the Indian state, the Anandpur Sahib Resolution was of grave concern.

### **Jarnail Singh Bhindranwale:**

- Many in Punjab sought to go beyond just a demand for greater autonomy.
- One such man was Jarnail Singh Bhindranwale, a charismatic preacher who soon positioned himself as "the authentic voice of the Sikhs, in contrast to the Akali Dal's lukewarm, vacillating leadership
- Some accounts claim that Bhindranwale was propped up by Sanjay Gandhi, Indira's son, to stand against the Akalis for Congress's political benefit.

- However, by the 1980s, the appeal of Bhindranwale had grown so much that he started to become a problem for the government.
- He found a captive audience in the state's youth, especially those in the lower rungs of the social ladder, and massed a massive following. He and his followers were also getting increasingly violent.
- In the summer of 1982, Bhindranwale, with support from the Akali Dal's leadership, launched a civil disobedience movement called the Dharam Yudh Morcha. He took up residence inside the Golden Temple, directing demonstrations and clashes with the police.
- The movement was geared towards the demands first articulated in the Anandpur Sahib Resolution, especially the socio-economic demands, which addressed concerns of the state's rural Sikh population.
- However, amidst growing religious polarisation, sectarian violence, and Bhindranwale's own harsh rhetoric against Hindus, Indira Gandhi's government declared the movement tantamount to secession.

#### **Operation Blue Star:**

- By 1984, the situation in Punjab had become increasingly untenable for the government.
- Bhindranwale had given a call to arms, and instances of violence against Hindus as well as government officers had become common.
- Indira Gandhi took the fateful decision to order the Indian Army to flush out militants from the Golden Temple and neutralise Bhindranwale.
- Operation Blue Star began on June 1, 1984, but due to fierce resistance from Bhindranwale and his heavily armed supporters, the Army's operation became larger and more violent than had been originally intended, with the use of tanks and air support.
- The image of Indian Army tanks shelling the holiest shrine of Sikhism was traumatic, and the very large number of civilian casualties that occurred during the operation added to the trauma.
- According to the government, 83 Indian Army soldiers were killed and 249 were injured in the operation. A total 493 militants and civilians were killed in the operation.

### **More on Details:**

- While the operation was ostensibly successful in its aims — Bhindranwale was killed and the Golden Temple was freed of militants — it gravely wounded the Sikh community around the world.
- It also galvanised the demand for Khalistan.
- On October 31, 1984, Prime Minister Indira Gandhi was assassinated by two Sikh bodyguards.
- This triggered the worst communal violence since Partition — even according to conservative estimates, over 8,000 Sikhs were massacred in massive anti-Sikh street violence.
- A year later, Sikh nationalists based in Canada blew up an Air India flight killing 329 people. They claimed that the attack was to “avenge Bhindranwale’s killing”.
- Punjab saw the worst violence, becoming the hub of a long drawn out insurgency that lasted till 1995.

### **What is the status of the Khalistan movement today?**

- Punjab has long been peaceful, but the movement lives among some Sikh communities overseas.
- The diaspora is composed predominantly of people who don’t want to live in India.
- The deep rooted anger over Operation Blue Star and the desecration of the Golden Temple continues to resonate with some in the newer generations of Sikhs.
- However, even as Bhindranwale is viewed as a martyr by many and the 1980s remembered as dark times, this has not manifested into tangible political support for the Khalistan cause.
- There is a small minority that is clinging to the past, and that small minority remains significant not because of popular support, but rather because they are trying to keep up their political influence with various political parties both from the left and the right.

## SANT RAVI DAS

### In News:

The President of India, Smt. Droupadi Murmu has greeted fellow-citizens on the eve of birthday of Sant Guru Ravidas.

### Analysis of Background:

#### Sant Ravidas:

- Ravidas was an Indian mystic poet-saint of the Bhakti movement during the 15th to 16th century CE.
- Venerated as a guru (teacher) in the modern regions of Uttar Pradesh, Bihar, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh, Punjab, and Haryana, he was a poet, social reformer and spiritual figure.
- Scholars believe he was born in 1450 CE.
- He taught removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedom.
- Ravidas's devotional verses were included in the Sikh scriptures known as Guru Granth Sahib.
- The Panch Vani text of the Dadu Panthi tradition within Hinduism also includes numerous poems of Ravidas.
- He is also the central figure within the Ravidassia religious movement.

#### Literary works:

- The Adi Granth and the Panchvani of the Hindu warrior-ascetic group Dadupanthi are the two oldest attested sources of the literary works of Ravidas.
- In the Adi Granth, forty one of Ravidas's poems are included, and he is one of thirty six contributors to this foremost canonical scripture of Sikhism.

#### Philosophy:

- The songs of Ravidas discuss Nirguna-Saguna themes, as well as ideas that are at the foundation of Nath Yoga philosophy of Hinduism.
- He frequently mentions the term Sahaj, a mystical state where there is a union of the truths of the many and the one.
- Ravidas's poetry is imbued with themes of boundless loving devotion to God, wherein this divine is envisioned as Nirguna.



- In the Sikh tradition, the themes of Nanak's poetry are very broadly similar to the Nirgun bhakti ideas of Ravidas and other leading north Indian saint-poets.

## **VISWA BHARTI UNIVERSITY**

### **In News:**

Founded by Rabindranath Tagore in 1921, Visva-Bharati University will soon get the 'heritage' tag from UNESCO to take the distinction of world's first living heritage university.

### **Analysis of Background:**

#### **Visva Bharti University:**

- When founded in 1921 on 1,130 acres of land, it was named after Nobel Laureate Rabindranath Tagore until Visva-Bharati Society was registered as an organisation in May 1922.
- Rabindranath donated some of his property, including land and a bungalow, to the society.
- Until Independence, it was a college and the institution was given the status of Central University in 1951 through a central Act.
- Its first vice-chancellor was Rathindranath Tagore, the son of Rabindranath Tagore, and the second vice-chancellor was grandfather of another Nobel Laureate economist Amartya Sen.
- Rabindranath believed in open-air education and introduced that system at the university, which prevails to date.
- According to UNESCO website: "In 1922, Visva-Bharati was inaugurated as a Centre for Culture with exploration into the arts, language, humanities, music and these are reflected in diverse institutes that continue in their educational programmes, which are based on the founding principles of excellence in culture and culture studies.
- As originally intended, these serve as institutes for Hindi studies (Hindi Bhavan), Sino-Asian studies (Cheena Bhavan), centre for humanities (Vidya Bhavan), institute of fine arts (Kala Bhavan), and music (Sangit Bhavan)."
- Visva-Bharati was declared to be a Central University and an institution of national importance by an Act of Parliament in 1951.
- The President of India is the Paridarsaka (Visitor) of the University, the Governor of West Bengal is the Pradhana (Rector), and the Prime Minister of India acts as the Acharya (Chancellor).

- The President of India appoints the Upacharya (Vice-chancellor) of the University.

### **What are World Heritage Sites?**

- It is a landmark or area with legal protection by an international convention administered by the United Nations Educational, Scientific and Cultural Organisation (UNESCO).
- World Heritage Sites are designated by UNESCO for having cultural, historical, scientific or other forms of significance.
- As per the 'Convention concerning the Protection of the World Cultural and Natural Heritage' 1972, UNESCO seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.
- As of July 2021, a total of 1,154 World Heritage Sites (897 cultural, 218 natural, and 39 mixed properties) exist across 167 countries. With 58 selected areas, Italy is the country with the most sites on the list.
- Categories: A World Heritage Site can be either cultural or natural areas objects which are inscribed on UNESCO's World Heritage List for having "outstanding universal value".
- These sites are usually considered to have cultural significance to all the people in the world, including future generations.

### **How are they selected?**

- According to The Operational Guidelines for the Implementation of the World Heritage Convention, a country must first list its significant cultural and natural sites into a document known as the Tentative List.
- The sites selected from that list move onto the Nomination File, which is then evaluated by the International Council on Monuments and Sites and the World Conservation Union.
- Any site that wasn't first included in the Tentative List cannot be nominated.
- The two bodies then make their recommendations to the World Heritage Committee, which consists of diplomatic representatives from 21 countries.
- The committee meets each year to decide whether a nominated property can be inscribed on the World Heritage List.

- The committee makes the final decision if a site meets at least one of the ten selection criteria.

### **How many World Heritage Sites are in India?**

- There are currently 32 cultural, seven natural and one mixed World Heritage Sites in India.
- Oldest sites: Agra Fort, Ajanta Caves, Ellora Caves, and Taj Mahal made it to the list in 1983.
- Latest sites: The latest sites to be added to the list Dholavira in Gujarat, Kakatiya Rudreshwara (Ramappa) Temple in Telangana in 2021.
- There are 46 sites in the Tentative List including a group of monuments at Mandu and the historic ensemble of Orchha in Madhya Pradesh, Satpura tiger reserve, temples of Kanchipuram, temples at Bishnupur in West Bengal, and Sri Harimandir Sahib in Amritsar, Punjab.

### **Indian Properties inscribed on the World Heritage List (40)**

#### **Cultural (32)**

- Agra Fort (1983)
- Ajanta Caves (1983)
- Archaeological Site of Nalanda Mahavihara at Nalanda, Bihar (2016)
- Buddhist Monuments at Sanchi (1989)
- Champaner-Pavagadh Archaeological Park (2004)
- Chhatrapati Shivaji Terminus (formerly Victoria Terminus) (2004)
- Churches and Convents of Goa (1986)
- Dholavira: a Harappan City (2021)
- Elephanta Caves (1987)
- Ellora Caves (1983)
- Fatehpur Sikri (1986)
- Great Living Chola Temples (1987,2004)
- Group of Monuments at Hampi (1986)
- Group of Monuments at Mahabalipuram (1984)
- Group of Monuments at Pattadakal (1987)
- Hill Forts of Rajasthan (2013)
- Historic City of Ahmadabad (2017)

- Humayun's Tomb, Delhi (1993)
- Jaipur City, Rajasthan (2019)
- Kakatiya Rudreshwara (Ramappa) Temple, Telangana (2021)
- Khajuraho Group of Monuments (1986)
- Mahabodhi Temple Complex at Bodh Gaya (2002)
- Mountain Railways of India (1999,2005,2008)
- Qutb Minar and its Monuments, Delhi (1993)
- Rani-ki-Vav (the Queen's Stepwell) at Patan, Gujarat (2014)
- Red Fort Complex (2007)
- Rock Shelters of Bhimbetka (2003)
- Sun Temple, Konârak (1984)
- Taj Mahal (1983)
- The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement (2016)
- The Jantar Mantar, Jaipur (2010)
- Victorian Gothic and Art Deco Ensembles of Mumbai (2018)

#### **Natural (7)**

- Great Himalayan National Park Conservation Area (2014)
- Kaziranga National Park (1985)
- Keoladeo National Park (1985)
- Manas Wildlife Sanctuary (1985)
- Nanda Devi and Valley of Flowers National Parks (1988,2005)
- Sundarbans National Park (1987)
- Western Ghats (2012)

#### **Mixed (1)**

- Khangchendzonga National Park (2016)

## TOPIC: GEOGRAPHY

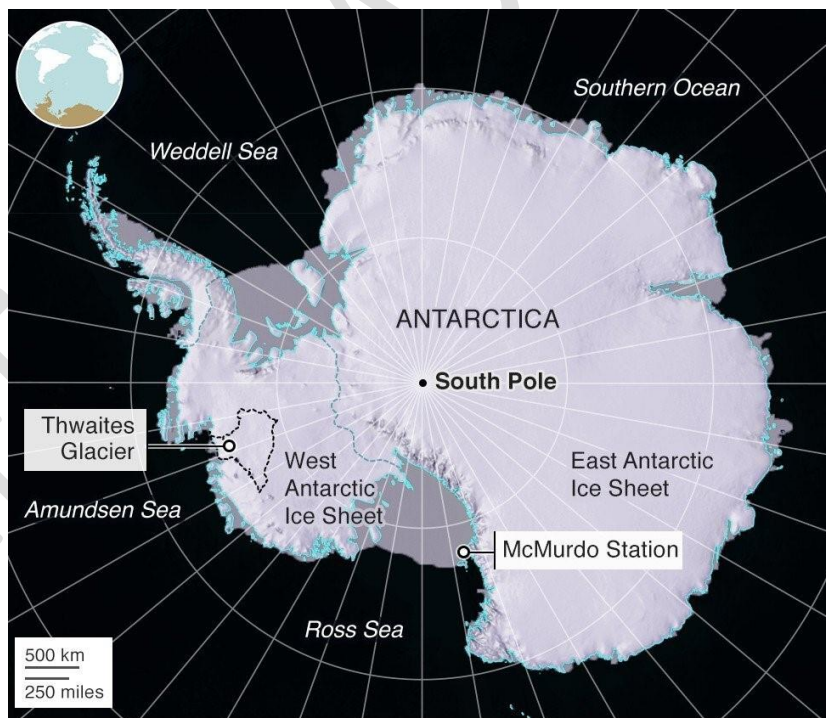
### DOOMSDAY GLACIER

#### In News:

Antarctica's "Doomsday Glacier" – nicknamed because its collapse could drive catastrophic sea level rise – is melting rapidly in unexpected ways, according to new research published in the journal Nature.

#### Analysis of Background:

- **Thwaites Glacier**, nicknamed the **Doomsday Glacier**, is an unusually broad and vast Antarctic glacier.
- It flows into Pine Island Bay, part of the Amundsen Sea, east of Mount Murphy, on the Walgreen Coast of Marie Byrd Land.
- Thwaites Glacier is closely monitored for its potential to raise sea levels. Along with the Pine Island Glacier, it has been described as part of the "weak underbelly" of the West Antarctic Ice Sheet, because of its apparent vulnerability to significant retreat.



#### Importance of Doomsday Glacier and Concerns:

- Thwaites is a frozen river of ice approximately the size of Great Britain. It already contributes around 4% of the global sea-level rise.

- Since 2000, the glacier has had a net loss of more than 1000 billion tons of ice and this has increased steadily over the last three decades. The speed of its flow has doubled in 30 years, meaning twice as much ice is being spewed into the ocean as in the 1990s.
- Thwaites glacier, the widest in the world at 80 miles wide, is held back by a floating platform of ice called an ice shelf, which restrains the glacier and makes it flow less quickly. But scientists have just confirmed that this ice shelf is becoming rapidly destabilised. The eastern ice shelf now has cracks criss-crossing its surface, **and** could collapse within ten years, according to Oregon State University.
- There is a development of cracks and crevasses on the Thwaites ice shelf. These indicate that it is being structurally weakened. This damage can have a reinforcing feedback effect because cracking and fracturing can promote further weakening, priming the ice shelf for disintegration.
- Without its ice shelf, Thwaites glacier would discharge all its ice into the ocean over the following decades to centuries.

### Implications

- The massive Thwaites glacier in West Antarctica contains enough ice to raise global sea levels by 65cm if it were to completely collapse. And, worryingly, recent research suggests that its long-term stability is doubtful as the glacier haemorrhages more and more ice.
- Adding 65cm to global sea levels would be coastline-changing amounts. For context, there's been around 20cm of sea-level rise since 1900, an amount that is already forcing coastal communities out of their homes and exacerbating environmental problems such as flooding, saltwater contamination and habitat loss.
- Thwaites, is sometimes called the "doomsday glacier" because of its keystone role in the region.
- Were it to empty into the ocean, it could trigger a regional chain reaction and drag other nearby glaciers in with it, which would mean several metres of sea-level rise. That's because the glaciers in West Antarctica are thought to be vulnerable to a mechanism called Marine Ice Cliff Instability or MICI, where retreating ice exposes increasingly tall, unstable ice cliffs that collapse into the ocean.
- A sea level rise of several metres would inundate many of the world's major cities—including Shanghai, New York, Miami, Tokyo and Mumbai. It would also cover huge

swathes of land in coastal regions and largely swallow up low-lying island nations like Kiribati, Tuvalu and the Maldives.

## EARTHQUAKES

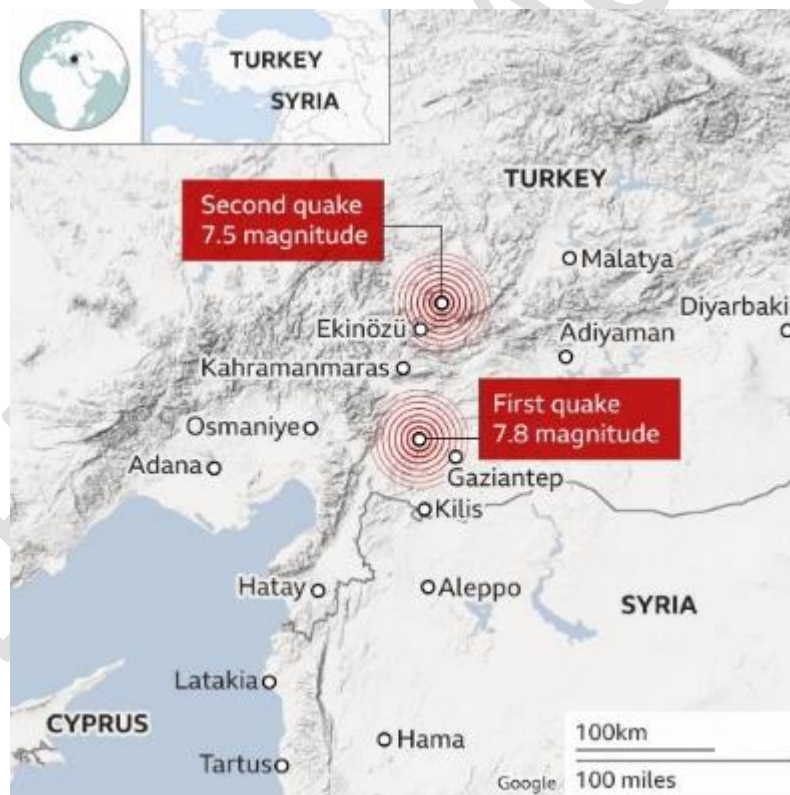
### In News:

Turkey has been getting hammered by a series of powerful earthquakes.

### Analysis of Background:

#### Earthquake:

- An earthquake is the shaking of the Earth when two blocks of the earth suddenly slip past one another.
- The surface where they slip is called the fault or fault plane.
- The location below the earth's surface where the earthquake starts is called the hypocenter, and the location directly above it on the surface of the earth is called the epicenter.



### Types of Earthquakes:

- **Tectonic:** A tectonic earthquake is one that occurs when the earth's crust breaks due to geological forces on rocks and adjoining plates that cause physical and chemical changes.

- **Volcanic:** A volcanic earthquake is any earthquake that results from tectonic forces which occur in conjunction with volcanic activity.
- **Collapse:** A collapse earthquake are small earthquakes in underground caverns and mines that are caused by seismic waves produced from the explosion of rock on the surface.
- **Explosion:** An explosion earthquake is an earthquake that is the result of the detonation of a nuclear and/or chemical device.
- **Reservoir induced Earthquakes:** These occur in the areas of huge reservoirs like dams.

#### **Seismic Zones of India:**

- Seismic zones in Indian subcontinent is divided into four seismic zones (II, III, IV, and V) based on
  - scientific inputs relating to seismicity,
  - earthquakes occurred in the past and
  - tectonic setup of the region.
- The **Bureau of Indian Standards** is the official agency for publishing the seismic hazard maps and codes.
- It has brought out versions of seismic zoning map: a six zone map in 1962, a seven zone map in 1966, and a five zone map 1970/1984

#### **Seismic Active Zones:**

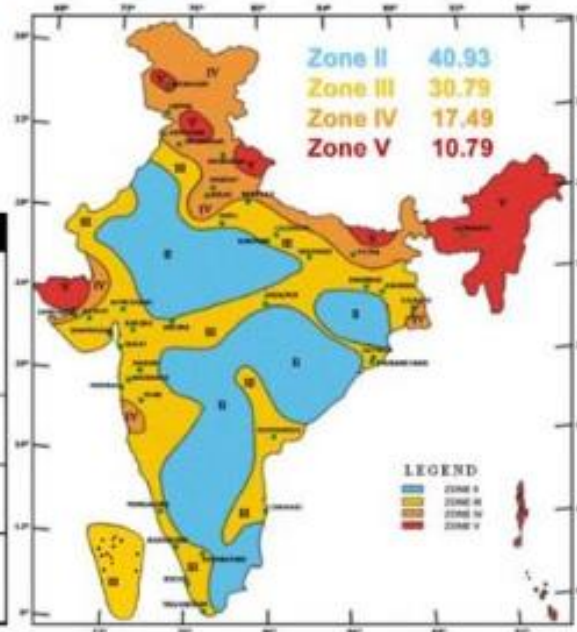
- Seismic Zone II
- Seismic Zone III
- Seismic Zone IV
- Seismic Zone V



### Seismic Zone Map of India: -2002

About **59 percent** of the land area of India is liable to seismic hazard damage

Zone	Intensity
Zone V	Very High Risk Zone Area liable to shaking Intensity IX (and above)
Zone IV	High Risk Zone Intensity VIII
Zone III	Moderate Risk Zone Intensity VII
Zone II	Low Risk Zone VI (and lower)



### Types of Seismic Waves:

#### 1. BODY WAVES

- Traveling through the interior of the earth, body waves arrive before the surface waves emitted by an earthquake. These waves are of a higher frequency than surface waves.
- Body waves are of two types: Primary waves (also called P-waves, or pressure waves) and Secondary waves (S-waves, or shear waves).

P-Waves	S-Waves
Recorded first on the seismograph.	Recorded last on Seismic Waves
Longitudinal waves: Shake the medium in the direction in which they are propagating	Transverse waves: Shake the medium in the direction perpendicular to which they are moving
Compressional waves	Sheer waves
Least destructive	Slightly higher destructive power
Can travel in all mediums; Solid, Liquid and Gas	Can only move through solids
Velocity: 5 to 8 km/s.	60% the speed of P waves
Faster than the S-waves.	Slower

Shadow Zone: 103° and 142° away from the epicentre	Zone beyond 103° does not receive S-waves
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## 2. SURFACE WAVES

- Travelling only through the crust, surface waves are of a lower frequency than body waves. Though they arrive after body waves, it is surface waves that are almost entirely responsible for the damage and destruction associated with earthquakes.
- The two types of surface waves are named Love waves and Rayleigh waves.

### TOPIC: SOCIAL ISSUES

## WOMEN'S PARTICIPATION IN THE WORKFORCE

### In News:

- During the 31st Foundation Day celebration of the National Commission for Women (NCW), the President of India highlighted that the low participation of women in the workforce has been a major hindrance to the overall development of the country.
- The President stated that 'India is the 5th largest economy in the world and now moving towards the goal of becoming a five trillion dollar economy. A more active role of women would help achieve this goal'.
- The President mentioned that women's empowerment is not just about ensuring social justice but is also important for economic development.
- While expressing concern over the uneven gender ratio in many parts of the country, the President said that it is the responsibility of both government and society to change this situation.

### Analysis of Background:

#### Women in Workforce in India:

- The participation of women in the workforce in India has remained low.
  - In 2019, 21% of women were either working or looking for work, compared to 32% in 2005.
- India's female labour force participation (FLFP) rate is the lowest among the BRICS countries and is also lower than some of its neighbours in South Asia such as Sri Lanka and Bangladesh.
  - Increasing FLFP in India is crucial not just to achieve economic growth but also to promote inclusive growth and achieve Sustainable Development Goals.
- India's population is among the youngest in the world. In 2020, the median age in India was about 29. Women and girls form a significant part of India's demographic dividend.

- However, their inability to stay employed or, at times, takes up employment due to economic and social factors at both the household and macro level has been a challenge for the labour market and economy.
- More women in rural areas in the labour force Compared to Urban areas.
- Gender wage gaps remain in every employment.
- The migration of women for employment has increased in recent years.
- According to United Nations Women estimates, women make up a significant proportion of all healthcare workers and more than 80% of nurses and midwives.
- Women also form a significant proportion of the workforce in the education sector in India, especially in primary education and early childhood care.
- The care service sector, which includes health, education, and other personal care services, is more labour-intensive than sectors such as manufacturing, construction or other service sectors where the employment potential gets affected due to factors such as the introduction of tools, technology and increased mechanization.

#### **Challenges faced by Women Workforce in India:**

- More women in the rural area in the labour force Compared to Urban areas.
- Gender wage gaps remain in every employment.
- The double burden on women: Balancing employment and domestic responsibilities (including household chores and caregiving).
- Safety concerns, Sexual harassment at workplace.
- Migration, Unfair Sex ratio, and Environmental degradation have added to women's vulnerability.
- India is a male-dominated Society in which the Economic, Political, Religious, Social and Cultural institutions are largely controlled by men.
- Control over women's livelihood Choices and Sexuality has existed and evolved over Centuries through various discriminatory Social Practices and Institutions.
- Despite laws, gender-based discrimination against women Continues in Indian Society.
- The structure of judicial remedies is still insufficient to serve the needs of women, Particularly Poor and marginalized women, in accessing justice.
- Development Programmes introduced to bring gender equality have produced mixed results.

- Legislative Changes have faced resistance in their implementation due to Social, Cultural and religious customs.
- There is no comprehensive policy support and there is a lack of effective implementation.
- There is a lack of match between the aspirations of more educated women and the quality and availability of jobs. Further, there is a lack of salaried opportunities available for women with moderate levels of education.
- Insufficient formal wages and poor job opportunities are other reasons for the decline.
- While social norms and family commitments are important issues, factors such as terms of employment, working conditions, mobility limitations, and hiring practices also make things difficult.
- Women's workforce participation is declining in rural India and is low and stagnant in urban India, primarily due to the shrinking of the agriculture sector.
- A large proportion of the women who left the labour market are married.
- Many women who join the workforce are unable to re-join after having a child.
- If women's perceived productivity at home is greater than their returns in the labour market, women are likely to withdraw from the labour force.
- Barriers to migration for women, Discrimination, and Sexual Harassment in the Workplace are other factors.
- Women's education has increased significantly over the last two decades, and fertility rates have fallen — both conditions that have historically and elsewhere in the world, contributed to increasing participation of women in the paid labour force, but not so in India.
- The Covid-19-induced economic slowdown has exacerbated the gender gap in paid work, while it has intensified the already high burden of domestic labour on women.

#### **Steps taken by Government:**

- To promote women's empowerment and safety to increase their participation in the workforce, the Government has approved a new and comprehensive Umbrella Scheme for the safety, security and empowerment of women under the name 'Mission Shakti'.
- The Mission Shakti includes the components such as;
  - National, State and District level Hubs for Empowerment of Women.
  - Women Hiplines, One Stop Centres.
  - Beti Bachao Beti Padhao, Sakhi Niwas (Working Women's Hostels).

- Palna (crèches for children of working women) etc.
- The schemes of One Stop Centres and Universalization of Women Helpline are implemented by the Ministry of Women and Child Development to support women facing violence or distress of any kind which may adversely affect their participation in the workforce.
- Working Women Hostels for ensuring safe accommodation for women working away from their place of residence.
- National Crèche Scheme to provide daycares facilities to children of the age group of 6 months to 6 years of working women who are employed.
- The Government, with the aim to provide a safe and secure work environment to women at their workplace and to increase their participation in the workforce, has also enacted 'the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013' (SH Act).
  - The Act covers all women, irrespective of their age or employment status and protects them from sexual harassment at all workplaces whether public or private, organized or unorganized.
  - The Act casts an obligation upon employers to provide a safe and secure working environment free from sexual harassment by constituting Internal Committees (ICs) for workplaces with ten or more workers and by displaying at conspicuous places the penal consequences of sexual harassment and the orders constituting ICs.
  - Local Committees (LCs) are to be constituted under the Act in districts to receive complaints in organisations having less than 10 workers or if complaints are against employers themselves.
  - Employers are also required to organise workshops and awareness programmes at regular intervals to sensitise the employees about the provisions of this legislation.
- To enhance the employability of female workers and ensure economic independence of women through skill development and vocational training, the Government has also introduced the Skill India Mission under which training is provided through a network of women's Industrial Training institutes, National Vocational Training Institutes and Regional Vocational Training Institutes.
- The National Skill Development Policy focuses on inclusive skill development, intending to increase women's participation for better economic productivity.

- There are schemes like Pradhan Mantri Mudra Yojana and Stand-up India, for helping women to set up their enterprises.
- The Labour Codes, viz. The Code on Wages 2019, the Industrial Relations Code, 2020, Occupational Safety, Health and Working Conditions Code, 2020 and the Code on Social Security, 2020, collectively include provisions to promote the participation of women in the workforce in a dignified manner and with adequate safety measures adopted by the employers.

## **TOPIC: POLITY AND GOVERNANCE**

### **COMMITTEE OF PRIVILEGES**

#### **In News:**

- The Chairman of the Rajya Sabha has asked a parliamentary committee to investigate the allegations of privilege breach against 12 MPs for repeatedly entering the well of the House, shouting slogans and obstructing the house proceedings.

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

- Some Members of the Rajya Sabha made complaints to the chairman that frequent disruptions by some members were a breach of their privilege.
- A Member can't directly make complaints to Privilege Committee, therefore the matter came to the Chairman, who as per rule referred it to Privilege Committee to examine, investigate and report.

#### **Parliamentary Privileges**

- Article 105 and Article 194 of the Indian Constitution mentioned certain privileges for the Member of Parliament and State Assembly respectively so that they can perform their duties without any obstruction.
- They are the special rights, immunities and exemptions enjoyed by the Members of Parliament/State Assembly, its committees and their members.
  - These privileges do not extend to the president who is also an integral part of the Parliament.
- These privileges are necessary to secure their independence in working.
- Without these privileges;
  - The Houses cannot maintain their authority, dignity and honour.

- The House cannot protect its members from any obstacle in the discharge of their parliamentary responsibilities.
- The Indian Constitution has also extended these privileges to the persons who are authorised to speak and take part in the Parliamentary procedures or any of its committees.
  - These include the attorney general of India and Union ministers.
- These Privileges can be classified into two broad categories:
  - Collective Privileges - Those that are collectively enjoyed by the each House of Parliament.
  - Individual Privileges - Those that are individually enjoyed by the members.

### **Collective Privileges**

- Parliament/State Assembly has the right to publish its reports, debates and proceedings and also the right to prohibit others from publishing the same.
  - The 44th Amendment Act of 1978 restored the freedom of the press to publish true reports of parliamentary proceedings without prior permission of the House.
  - But this is not applicable in the case of a secret sitting of the House.
- It can exclude strangers from its proceedings and hold secret sittings to discuss some important matters.
- It can make rules to regulate its procedure and the conduct of its business.
- It can punish members as well as outsiders for breach of its privileges.
- It has the right to receive immediate information about the arrest, detention, conviction, imprisonment and release of a member.
- The courts are prohibited to inquire into the proceedings of a House or its committees.
- No person (either a member or outsider) can be arrested, and no legal process (civil or criminal) can be served within the House without the permission of the presiding officer.

### **Individual Privileges**

- Members of Parliament/State Assembly cannot be arrested during the session of Parliament and 40 days before the beginning and 40 days after the end of a session.
  - This privilege is available only in civil cases and not in criminal cases or preventive detention cases.

- They have freedom of speech in Parliament. No member is liable to any proceedings in any court for anything said or any vote given by him in Parliament or its committees.
- They are exempted from jury service. They can refuse to give evidence and appear as a witness in a case pending in a court when Parliament is in session.
- Committee of Privileges
- Each House of Parliament and its Committees collectively and members of each House individually enjoy certain rights, privileges and immunities without which they cannot perform their functions efficiently and effectively.
  - The object of parliamentary privilege is to safeguard the freedom, authority and dignity of Parliament.
- The Committee consists of 15 members (10 members in the case of Rajya Sabha) nominated by the Speaker (Chairman in the case of Rajya Sabha).
  - In the Lok Sabha, the Speaker nominates the head of the committee of privileges.
  - In the Rajya Sabha, the deputy chairperson heads the committee of privileges.
- Its function is to examine every question involving a breach of privilege of the House or the members of any Committee.
  - It determines concerning the facts and makes suitable recommendations in its report.

### **Privilege Motion**

- All Members of Parliament (MPs) enjoy rights and immunities, individually and collectively, so that they can discharge their duties and functions effectively.
- Any instance when these rights and immunities are disregarded by any member of Lok Sabha or Rajya Sabha is an offence, called 'breach of privilege', which is punishable under the Laws of Parliament.
- Any member from either house can move a notice in the form of a motion against the member who he/she thinks is guilty of the breach of privilege.
- Both Houses of Parliament reserve the right to punish any act of contempt (not necessarily a breach of privilege) which is against its authority and dignity, as per the laws.

### **Rules concerning the privilege Motion:**

- The rules governing the privilege are mentioned in Rule No 222 in Chapter 20 of the Lok Sabha Rule Book and Rule 187 in Chapter 16 of the Rajya Sabha



- The rules explain that any member of the House may, with the consent of the Speaker or the Chairperson, raise a question involving an incident that he or she considers a breach of privilege either of a member or of the House or a committee.

### **Role of Speaker and Chairperson:**

- The speaker of Lok Sabha and the Chairperson of Rajya Sabha are the first levels of scrutiny of a privilege motion in the two Houses of Parliament.
- They can either decide on the privilege motion or can also refer it to the privileges committee of Parliament.

## **SECTION 69(A) OF IT ACT**

### **In News:**

- Under Section 69(A) of the Information Technology Act, 2000, the Union Ministry of Electronics and Information Technology (MeitY) recently issued orders to block 138 online betting platforms and 94 money lending apps on an “urgent” and “emergency” basis.

### **Analysis of Background:**

#### **Section 69A of the IT Act 2000:**

- Section 69A of the Information Technology (IT) Act empowers the government to restrict access to any online content to protect the interest of;
  - Sovereignty and Integrity of the Nation.
  - Security of the State.
  - Friendly relations with foreign states.
  - Public order.
- All orders to restrict information or content must be recorded in writing.
- Social media intermediaries failing to comply with the rules and regulations are liable to be monetarily penalized along with an imprisonment term which may extend up to 7 years.
- The procedures for executing the provisions of the act are mentioned in the Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009.
  - It mentioned that an officer along with an examination committee reviews the content in question within 48 hours of receiving the takedown request.
  - Provide an opportunity to the author or originator of the content for clarification.

- The recommendations are then sent to the Secretary of the Dept of Information Technology for approval and then a request is forwarded to the social media intermediary for restricting access.
- Emergency provisions specify that clarification is required within 48 hours after the content has been blocked for specified reasons.
- Blocking Orders can be revoked after review or examination.
- Rule 16 of the act states that strict confidentiality should be maintained on all requests and actions taken, but without compromising transparency and accountability.
- The Act complies with Article 19 of the Indian Constitution which guarantees freedom of speech and expression. However, Clause 2 of the article allows the state to impose reasonable restrictions for the same reasons as those for Section 69A.

### **Concern:**

- The Confidentiality Clause under the act is preventing legal challenges to content-blocking orders; it is difficult to understand the Government's reasoning.
- It doesn't come under the purview of the Right to Information (RTI), recently Bharat Sanchar Nigam Limited (BSNL) rejected many RTI requests that asked for the list of blocked websites.
- The lack of transparency, Clear guidelines and a monitoring mechanism under the act means that there are various forms of arbitrary behaviour involved.
- The concerns are raised mainly when the orders are aimed at blocking individual accounts and not the specific content.

## **E-SANJEEVANI**

### **In News:**

In his radio speech 'Mann Ki Baat', the Prime Minister claimed that the eSanjeevani programme had ensured access to medical care for citizens residing in remote regions of the nation.

### **Analysis of Background:**

#### **About e-Sanjeevani**

- The e-Sanjeevani is a flagship telemedicine platform of the Government, developed by the Centre for Development of Advance Computing (C-DAC), Mohali under the aegis of the Ministry of Health and Family Welfare (MoHFW).

- It aims to provide healthcare services to patients in their homes. Safe & structured video-based clinical consultations between a doctor in a hospital and a patient in the confines of his home are being enabled.
- It is a step towards digital health equity to achieve Universal Health Coverage (UHC). It facilitates quick and easy access to doctors and medical specialists from smartphones.
- One can also access quality health services remotely via eSanjeevani by visiting the nearest Ayushman Bharat Health & Wellness Centre.
- It is being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.
- Using the hub-and-spoke approach, it aims to link together all 1,50,000 HWCs. According to the model, a network will be created that consists of an anchor establishment, or hub, that provides a full range of services and will be complemented by secondary establishments, or spokes, that offer limited services and direct patients in need of more intensive services to the hub for treatment.

## ANDHRA PRADESH NEW CAPITAL

- The Chief Minister of Andhra Pradesh has announced that Visakhapatnam (also known as Vizag) will be the **new capital of the State**.
- The Chief Minister has highlighted that the state needs a new capital since Hyderabad, the capital of undivided Andhra Pradesh is now part of Telangana, and at present, the two states are sharing the capital temporarily.
  - On 2nd June 2014, some area from the northwestern part of Andhra Pradesh was separated to create 'Telangana' as the 29th state of India.
- Earlier the Chief Minister of Andhra Pradesh announced the development of 3 capitals for the state;
  - Amaravati as the state legislative capital.
  - Visakhapatnam as the state executive capital.
  - Kurnool as the state judicial capital.
- The state legislative assembly also passed the Andhra Pradesh Decentralisation and Inclusive Development of All Regions Act, 2020, which provided for three different capitals for the state.
  - However, the state government's plan ran into difficulties because hundreds of farmers who had given up their land for the development of the capital city at

Amaravati have filed petitions in the Andhra Pradesh High Court, challenging the government's decentralization decision.

- Due to legal difficulties, the state government decided to scrap the decentralization law. However, the state government continues to promote the decentralization plan.

### **Visakhapatnam:**

- It is the largest and most populous city in Andhra Pradesh.
- It is located between the Eastern Ghats and the coast of the Bay of Bengal.
- It is the second-largest city on the east coast of India after Chennai.
- Visakhapatnam was an ancient Port city that had trade relations with the Middle East and Rome.
  - European powers established trade operations in the city, and by the end of the 18th century, it had come under French colonial rule. Control passed to the East India Company in 1804 and it remained under British colonial rule until Indian independence in 1947.
- Visakhapatnam serves as the headquarters for the Indian Navy's Eastern Naval Command.
- The city is also known as the "City of Destiny" and the "Jewel of the East Coast".

### **PM CARES FUND**

- The Union Government has informed the High court of Delhi that the PM CARES Fund was not created under the Constitution or any law made by the Parliament or the state legislature, It was set up as a public charitable trust.
- Recently a petition was made in the court to declare the PM-CARES fund a 'state' under Article 12 of the Constitution to ensure transparency in its functioning.
- **Arguments given by the petitioner;**
  - The Prime Minister of India and other Government Ministers have asked the general public for contributions to the PM-CARES fund.
  - Government symbols or a government website were utilized for the donation.
  - PMCARES "projects itself as the government of India" indicating that it operates on the domain name of the government of India and has the photograph of the Prime Minister as well as the Ashoka Pillar.

- Public announcements made by the government functionaries, arguing that such persons making the statements are “people of responsibility”
- The Union Government has said that PM-CARES is not a public authority under RTI and it accepts voluntary donations by individuals and institutions and any contributions flowing out of budgetary sources of government are not accepted.
  - The composition of the board of trustees consisting of holders of public office ex officio is merely for administrative convenience and smooth succession to the trusteeship and is not intended to be controlled by the government in any manner.

#### **PM-CARES Fund:**

- PM CARES Fund has been registered as a Public Charitable Trust under the Registration Act, of 1908.
- Prime Minister is the ex-officio Chairman of the PM CARES Fund and the Minister of Defence, Minister of Home Affairs and Minister of Finance, of the Government of India, are ex-officio Trustees of the Fund.
- The fund consists entirely of voluntary contributions from individuals/organizations and does not get any budgetary support.
- Donations to the Fund would qualify for 80G benefits for 100% exemption under the Income Tax Act, of 1961.
- Donations to the Fund will also qualify to be counted as Corporate Social Responsibility (CSR) expenditure under the Companies Act, 2013.
- It has also got an exemption under the Foreign Contribution Regulation Act (FCRA), which enables the PM CARES Fund to accept donations and contributions from individuals and organizations based in foreign countries.
- PM-CARES Fund is not a public authority under the Right to Information Act (RTI), 2005.
- The Comptroller and Auditor General’s (CAG) clarified that it wouldn’t audit the Fund as it is a charitable organization and is also based on donations from individuals and organizations.
- It would be audited by an independent auditor outside of the government.

**Eligibility criteria under PM CARE:**

- PM-CARE covers all children who have lost: Both parents Surviving parents or legal guardians/adoptive parents/single adoptive parents due to the COVID-19 pandemic, starting from 11th March 2020 the date on which WHO declared and characterized COVID-19 as a pandemic till 28th February 2022.
- To get benefits under this scheme, a child should not have completed 18 years of age on the date of death of their parents.

**Status of PM-CARE Fund:**

- The total donation received under the fund is nearly Rs 11,000 crore, while the expenditure made from the fund is about Rs 3,980 crore, according to the latest audited statement.
- Rs 1,000 crore was granted for migrant welfare
- The government has used a part of the fund to buy medical equipment, including ventilators, to support the fight against COVID-19 and has also provided relief to migrants.

**Controversy related to PM-CARE Fund:**

- Notices were issued by various government departments, “urging” employees to contribute their part of their salary.
- Indian Railway, Army, Navy and Air force, Defence PSUs and employees of the defence ministry have donated to the Fund. While a major portion of these contributions has been voluntary, it appears that many government employees weren’t given any choice.
- Donations are made from Public departments, and therefore the public has the right to know details of the fund and expenditure made under it, but the government made it clear that the fund is outside the preview of the RTI act, and CAG will not audit the fund.
- The PMO has also refused to make public any documents related to the PM CARES fund. Total lack of transparency about the use of the funds.
- The PM CARES Fund is exempt from scrutiny and monitoring of all foreign donations.

## NATIONAL COMMISSION FOR WOMEN

### In News:

- The President of India addressed the 31st Foundation Day of the National Commission for Women on 31st January 2023 in Delhi. The theme of the programme was 'Sashakt Nari Sashakt Bharat'.

### Analysis of Background:

#### National Commission for Women (NCW):

- In 1992, the National Commission for Women was set up as a statutory body under the National Commission for Women Act, of 1990.

#### The commission was set up to;

- Review the Constitutional and legal safeguards available for women.
- Recommend remedial legislative measures.
- Facilitate redressal of grievances.
- Advise the Government on all policy matters affecting women.
- The Commission comprises a Chairperson, a Member Secretary and five other members that are nominated by the Union Government.
- At least one member belongs to the Scheduled Castes and Scheduled Tribes respectively.

The commission aims to support women to achieve equality and equal participation in all spheres of life by;

- Securing her due rights and entitlements through suitable policy formulation.
- Legislative measures.
- Effective enforcement of laws.
- Implementation of schemes/policies.
  - Designing strategies for solutions to specific problems/situations arising out of discrimination and atrocities against women.
- Rekha Sharma is the current chairperson of the National Commission for Women.

## NEW START TREATY

### In News:

Days before the first anniversary of the beginning of the war in Ukraine, President Vladimir Putin announced in an address to his nation that Russia is suspending its participation in the New START, the last remaining major military agreement with the United States.

### Analysis of Background:

Putin said the fact that the US wants to inspect Russia's military facilities — a requirement under the treaty — while at the same time saying openly that its goal is Russia's strategic defeat, was the "theatre of the absurd".

### What is the New START?

- The name START comes from the original "Strategic Arms Reduction Treaty", known as START-I, which was signed between the US and the erstwhile USSR in 1991, and came into force in 1994.
- START-I, which capped the numbers of nuclear warheads and intercontinental ballistic missiles (ICBMs) that each side could deploy at 6,000 and 1,600 respectively, lapsed in 2009, and was replaced first by the Strategic Offensive Reductions Treaty (SORT, also known as the Treaty of Moscow), and then by the New START treaty.
- The New START, officially, the "Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms", entered into force on February 5, 2011, and placed new verifiable limits on intercontinental-range nuclear weapons.
- The two countries had to meet the treaty's central limits on strategic offensive arms by February 5, 2018, and to then stay within those limits for the period the treaty remained in force.
- The US and Russia subsequently agreed to extend the treaty through February 4, 2026.

### What limits did the New START impose on the two countries?

- 700 deployed intercontinental ballistic missiles (ICBMs), deployed submarine-launched ballistic missiles (SLBMs), and deployed heavy bombers equipped for nuclear armaments;



- 1,550 nuclear warheads on deployed ICBMs, deployed SLBMs, and deployed heavy bombers equipped for nuclear armaments (each such heavy bomber is counted as one warhead toward this limit);
- 800 deployed and non-deployed ICBM launchers, SLBM launchers, and heavy bombers equipped for nuclear armaments.

**Compliance:**

- Detailed procedures for the implementation and verification of the central limits, and all treaty obligations, are part of the treaty terms.
- The treaty provides for 18 on-site inspections per year for US and Russian inspection teams.
- Type One inspections focus on sites with deployed and non-deployed strategic systems (up to 10 per year), and Type Two inspections focus on sites with only non-deployed strategic systems (up to 8 per year).
- Since the New START Treaty's entry into force, as of February 1, 2023, the two parties have conducted 328 on-site inspections, exchanged 25,311 notifications, held 19 meetings of the Bilateral Consultative Commission, and held 42 biannual data exchanges on strategic offensive arms subject to the treaty.

**Status of compliance:**

- US said that Russia was not complying with the New START, only remaining nuclear arms control treaty between the two countries, jeopardizing a source of stability in their relationship.
- Russia's refusal to facilitate inspection activities prevents the United States from exercising important rights under the treaty.
- Russia has also failed to comply with the New START treaty obligation to convene a session of the bilateral consultative commission in accordance with the treaty-mandated timeline.

## MALABAR EXERCISE

### In News:

Australia will host the Malabar multilateral naval exercise, consisting of India, Australia, Japan and the U.S., for the first time this year.

### Analysis of Background:

- The high tempo of bilateral engagement between the two countries will continue with Australian Prime Minister Anthony Albanese and Foreign Minister Penny Wong scheduled to visit India early March during which officials said some major defence initiatives could be announced.
- The Quad Foreign Ministers are scheduled to hold a meeting a day after the G-20 meeting. Australia is scheduled to host the Quad summit later this year.
- Malabar, which began as a bilateral exercise, is now one of the cornerstones of military interoperability of the Quad forces.

### What is Malabar?

- It is a **multilateral war-gaming naval exercise that was** started in 1992.
- It began as a **bilateral exercise between the navies of India and the United States**.
- Navies of the four member nations of the Quadrilateral Security Dialogue, or the Quad — India, the United States, Japan, and Australia — are participating in the **25th edition of the Malabar Exercise**
- From 2002 onward, the exercise has been conducted every year.
- **Japan and Australia first participated in 2007**, and since 2014, India, the US and Japan have participated in the exercise every year.

### How did it the exercise expand from a bilateral exercise?

- Japan joined the naval exercise in 2015 as a permanent member, and Malabar became a trilateral exercise.
- Last year, for the first time in over a decade, the exercise saw the participation of all four Quad members.
- It was the second time that Australia participated in the Malabar series of Naval exercises.

### **Why did Australia return, and why is its participation important?**

- As a grouping of four powerful navies in the Indo-Pacific region, the Quad has irked China, which is flexing its military power globally.
- Earlier, it was due to the possibility of riling China that India had not expanded Malabar and, to an extent, why Australia had pulled out after 2007.
- But with China's relations vexed with all four participating nations — and with an ongoing military standoff in eastern Ladakh for more than 15 months — the Malabar sends a strong message.

## **U20 SUMMIT**

### **In News:**

The inception meeting of the sixth U20 cycle is the City Sherpa meeting, which was inaugurated in Ahmedabad. Ahmedabad is the chair city for U20.

### **Analysis of Background:**

- Urban 20 (U20) is an Engagement Group under the G20, which brings together city sherpas, mayors and representatives from cities in G20 countries, to collectively deliberate key urban challenges and inform the G20 negotiations.

### **Following are the key takeaways of the U20 City Sherpa Meeting:**

- The U20 Inception meeting was attended by more than 200 participants from across the world.
- The City Sherpa Meeting was attended by representatives and Sherpas from 42 cities, which is the largest recorded participation from U20 participating and observer cities since the inception of the U20 Engagement Group.
- The City Sherpa of Ahmedabad presented six priority areas proposed by the Chair city and also discussed the zero-draft communique. He acknowledged the work done under previous U20 cycles and stressed on the need to move from 'intention to action' during the 6<sup>th</sup> cycle.
- The priority areas are (i) Encouraging environmentally responsible behaviors, (ii) Ensuring water security, (iii) Accelerating climate finance, (iv) Championing 'local' identity, (v) Reinventing frameworks for urban governance and planning, and (vi) Catalysing digital urban futures.

**Need for U20:**

- More than half the world lives in urban areas presently, and cities will be home to about two thirds of the world population by 2050.
- As primary engines of growth across the globe, the influence cities can exert on the global development agenda is obvious.
- However, with millions of people living in dense urban areas, cities are also most vulnerable to impacts of climate change, disasters, environmental degradation, resources depletion, chaotic growth and socio-economic inequality.
- It is therefore the right time to utilize the potential of urbanisation as a catalyst to drive the 'right' kind of growth that is sustainable, inclusive and equitable.

**U 20:**

- U20 is a group of cities from the G20 countries and was first convened in Buenos Aires in 2018.
- Previous U20 cycles have brought forth the unique perspective of cities to the G20 and foregrounded vital urban issues through their purpose-driven Communiqués drafted collectively by the participating cities.
- The past Communiqués have explicitly underscored the urgency with which the cities have to act to ensure sustainable environments, healthy communities and social cohesion. The most recent Jakarta Communiqué called for stronger post-pandemic recovery that is sustainable, resilient and just. The present U20 cycle will build upon the legacy created by the preceding presidencies.

## SPY BALLOON

### In News:

The United States shot down a Chinese surveillance balloon that had floated over American airspace for several days, triggering the latest diplomatic crisis amid already worsening relations between the world's two biggest powers.

### Analysis of Background:

- Beijing reacted angrily to the shooting down of what the U.S. called a “surveillance balloon” but Chinese authorities maintained that it was a civilian airship used for meteorological purposes that had drifted off course.
- Chinese military said that it now “reserve[s] the right” to take the same measures if a similar situation arose.
- The appearance of the balloon in the skies over the western U.S. State of Montana sparked an unexpected diplomatic row at a time both sides were looking to stabilise increasingly tense relations.

### Implications:

- S. Secretary of State Antony Blinken called off a visit to China. Had the visit happened, it would have been the first by a top U.S. diplomat since 2018.
- Beijing has dismissed Washington's accusations of surveillance and international airspace violation as an attempt to “attack and smear China.”
- Chinese side has verified it and communicated it to the US side that it is a civilian airship used for research, mainly meteorological, purposes. Affected by the Westerlies and with limited self-steering capability, the airship deviated far from its planned course. This is entirely an unexpected situation caused by force majeure and the facts are very clear

### Escalating tensions between the US, China:

- The relationship between the US and China have been tense in recent times, with issues ranging from Taiwan and the South China Sea, to human rights in China's western Xinjiang region and the clampdown on democracy activists in Hong Kong.
- Taiwan specifically has been at the centre of US- China animosity, ever since former House Speaker Nancy Pelosi visited the island nation claimed by China as its own.

- Taiwan scrambled fighter jets, put its navy on alert and activated missile systems in response to nearby operations by 34 Chinese military aircraft and nine warships.
- Blinken's visit this weekend was meant to thaw relationships and find common ground. Only time will tell whether it will achieve its goals or indeed take place.

### **The spy balloon:**

- Around a decade-and-a-half after the first ever hot air balloon took flight with humans, balloons were already being used for military purposes.
- During the French Revolutionary Wars in the late 18th century, balloons were used to provide a bird's eye view of the battlefield, with there being documented evidence of their use in the Battle of Fleurus in 1794.
- Since then, balloons have been in use in all kinds of conflict, from the American Civil War to World War I.
- For well over a century, before aircraft technology really took off during the Great War, balloons were the primary mode of big-picture reconnaissance, providing perspective on enemy positions and movements simply impossible to obtain from the ground.
- During World War II, as technologies evolved and balloons could be pushed to higher altitudes, their use evolved as well. For instance, the Japanese military tried to loft incendiary bombs into US territory using balloons designed to float in jet stream air currents.
- After the war, the US military started exploring the use of high-altitude spy balloons, which led to a large-scale series of missions called Project Genet. The project flew photographic balloons over Soviet bloc territory in the 1950s – a time before the sheer ubiquitousness of surveillance satellites we see today.

### **How relevant are high-altitude balloons today?**

- While satellites and improved aeroplane and drone technologies have reduced the salience of high-altitude balloons in the military, they still occupy an important niche.
- Unlike satellites which can cost millions of dollars to create, and require sophisticated technology to launch, high-altitude balloons are cheap and easy to launch and control.
- While balloons cannot directly be steered, they can be roughly guided to a target area by changing altitudes to catch different wind currents
- Moreover, unlike satellites which are at much higher altitudes and moving at incredible speeds, spy balloons have the advantage of being able to hover around at lower

heights, thus providing better quality images as well as more time to gather intelligence in a particular area.

## UNSC

### In News:

THE UN Security Council does not reflect today's realities, is paralysed and unable to discharge its basic function of maintaining international peace and security when one of its permanent members has attacked its neighbour, UN General Assembly (UNGA) President Csaba Korosi has said.

### Analysis of Background:

- Korosi, a Hungarian diplomat currently serving as President of the 77th UNGA, said there is a push from a growing number of member nations to reform the powerful UN organ.

### United Nations Security Council (UNSC):

- The United Nations Security Council (UNSC) is one of the six principal organs of the United Nations (UN) and is charged with ensuring international peace and security, recommending the admission of new UN members to the General Assembly, and approving any changes to the UN Charter.
- The UNSC is the only UN body with the authority to issue binding resolutions on member states.

### Composition of UN Security Council:

The UN Security Council is composed of:

- **15** members, including five permanent member states - China, France, Russian Federation, the United States, and the United Kingdom - and
- 10 non-permanent member states elected by the United Nations General Assembly (UNGA).
- Each non-permanent member gets the opportunity to work as UNSC president.

- Ten non-permanent members are elected to the UNSC every year for a two-year term. India's current term began on January 1 of this year and will last until December 31, 2023.
- The 10 non-permanent seats are distributed among the regions of the world: five seats for African and Asian countries (three are for Africa and two for Asia), one for Eastern European countries, two for Latin American and Caribbean countries, and the remaining two for Western European and other countries.
- The Africa and Asia Pacific group takes turns every two years to put up an Arab candidate.

#### **Veto power of UNSC member states:**

- The UN defines 'veto' as a "special voting power", which provides that "if any one of the five permanent members cast a negative vote in (UNSC), the resolution or decision would not be approved".
- However, the "veto power" is restricted to P5 member states of the UN Security Council. Non-permanent members of the UNSC do not enjoy this privilege.
- Article 27 of the UN Charter says each member of the UNSC shall have one vote and that decisions on "procedural matters" shall require no more than the affirmative vote of nine out of the 15 members.
- Decisions on any other matter need not only an affirmative vote of nine members but also the concurring votes of the permanent members.

#### **Call for reforming UNSC:**

- New Delhi has been advocating for the need to expand the P5 for some time now. Over the years, other countries have also been pushing for India to be included in a reformed, expanded UN Security Council.
- The argument of many critics of the United Nations Security Council is that it isn't effective and that it needs to be fundamentally reformed. The loudest calls for reform come from those who believe that the inclusion of a host of new permanent members is the answer to the effectiveness deficit. Others argue that it is folly to suggest that the addition of new permanent members would amount to meaningful reform.
- Since the end of the cold war, these reform debates, contorted by politics, have circled endlessly without any prospect of conclusion. With the creation of the 'Open-ended Working Group on the Question of the Equitable Representation on and Increase in the



Membership of the Security Council and Other Matters Related to the Security Council' (the UN committee with the longest title), the debate became formalized and plans for reform subsequently proliferated.

## TOPIC: ECONOMY

### WINDFALL TAX

#### In News:

The Finance Ministry has lowered Windfall Profit Tax levied on domestically-produced crude oil as well as on the export of diesel and ATF, in line with softening international oil prices.

#### Analysis of Background:

- The government levies a windfall tax on business entities due to abnormal gains from financial windfalls.
- The main objective of such a tax is reallocating abnormal profits favourably in one sector for social causes.
- Taxes on winnings from game shows and horse racing lottery tax, gambling or betting are examples of the same.

#### What is a Windfall Tax?

- A windfall tax refers to the tax levied against certain industries by the government when economic conditions permit those industries to experience significantly above-average profits.
- Such economic conditions come from a sudden windfall gain to a certain business or industry, typically as a result of a geopolitical disruption, natural disaster, or war that causes unusual spikes in demand or supply interruptions. A good example is a confrontation between Russia and Ukraine.
- A tax imposed on such an unexpected rise in profits is called a windfall tax. They are usually imposed when there is a sudden increase in profits in a particular sector. They are also imposed if there is an acute need for a temporary spurt in public spending at the same time.

### **When did India introduce a windfall tax?**

- In July 2022, the government of India enacted windfall taxes amid domestic crude producers making exceptional gains due to the global impact of the Russia-Ukraine war. Domestic players gained tremendous profit by selling crude to refiners at internationally bench-marked pricing.
- Also, due to the confrontation between Russia and Ukraine the central excise charge was reduced, and there were additional expenditures on food and fertilizer. These factors led to an increase in government spending. In order to close the shortfall, the government levied a windfall tax on the oil industry.
- While ₹6/litre was added to petrol and ATF (aviation turbine fuel), ₹13/litre was imposed on diesel.

### **Why are countries levying windfall taxes now?**

- Petrol, crude oil, gas and coal prices have seen major increases since late last year and the increase has been exacerbated by COVID-19 and the Ukraine-Russia conflict (and the subsequent sanctions on Russia).
- As a result, energy companies have made windfall gains at the cost of customers who have had to pay much higher prices for their energy consumption.
- Therefore, the UN Secretary General urged countries to impose windfall taxes on such companies that have profited massively from rise in fossil fuel prices. Therefore, not just India, but many other countries such as the UK, Germany etc. are contemplating imposition of windfall taxes.

### **Reasons for Implementing Windfall Tax**

- India's record-high trade deficit and a depreciating rupee have raised the value of imports, which is the economic justification for implementing windfall taxes.
  - Additionally, the government's spending increased as a result of the recent reduction in Central Excise Duty and increased spending on fertilizers and food. In order to close this imbalance, it subsequently decided to impose a windfall tax on the oil industry, which increases the government's revenue.
- **Call from International Organisation:** Restitution of these in excessive profits was demanded by the IMF, World Bank, and UN Secretary-General.

- **Conflict between Russia-Ukraine:** Oil prices are now fluctuating due to the fighting, and Russian oil is now less expensive.
- **Raise the trade surplus:** These actions can reduce the trade deficit that the nation now experiences as a result of its high oil import costs.
- **Benefits distribution:** The general public should receive a portion of the company's revenues.
- **Protect people from inflation:** The nation will protect its inhabitants from global inflation by enacting taxes.
- **Social welfare program funding:** The profits can be put toward a social welfare program.
- **Increase the revenue:** The government's revenue will rise as a direct result of these taxes.

### **Benefits of Windfall Tax**

- One of the most crucial benefits of this tax is its ability to boost the government's revenue by helping it substantially provide public services to the citizens of the country, like building civil infrastructure, health facilities, sanitation, and building the nation's military strength.
- The additional funds raised through windfall tax can service the debts by the countries to various global financial institutions and may bolster the national economy.

### **Drawbacks of Windfall Tax:**

- The economic impact of such taxation might lead to its immediate rejection because it is an arbitrary taxation system that would increase the risks of investing resulting, the investors demanding a higher return on their investments or choosing to stop investing altogether.
- A reduction in the number of profits left over for corporate reinvestment. The government may decrease the amount of investment made by businesses by eliminating this easy source of funding.
- Windfall taxes make the tax system unpredictable. Businesses may have legitimate suspicions that the tax will be reimposed in the future. That might deter them from making capital expenditures (investments to increase their output and earnings) because they might be worried that the government might tax some of the potential returns away. As a result, economic growth may be slowed, and the government may face a loss of business from better-established multinational companies.

- Another issue is the idea that retrospective windfall taxes are unfair; in other words, businesses should be informed in advance of the tax laws so they may make decisions about how to behave rather than having their lawfully obtained earnings confiscated.
- Lack of definition – It is hard to give an objective rationale on how much to tax, on what extent of excess income to impose the tax upon, which sectors to tax etc. Hence, it may create discontent among companies, especially smaller companies who could not charge as high an amount during supply shortages, who think that the tax is unfair. Moreover, not all companies may understand the windfall tax definition and may think that it is a tax that is here to stay or it is going to be imposed from time to time for any small increase in the firm's individual profits.
- Due to these taxes, there can be a reduction in the dividend payout to investors investing in oil-producing companies. These companies are not owned by cash-rich investors but by pension funds and insurance companies.
- Finally, it would reduce the funds available for investment in sources of fuel, consequently spiking energy costs.

## VOSTRO ACCOUNT

### In News:

Government officials have informed that 20 Russian banks, including Rosbank, Tinkoff Bank, Centro Credit Bank and Credit Bank of Moscow have opened Special Rupee Vostro Accounts (SRVA) with partner banks in India.

### Analysis of Background:

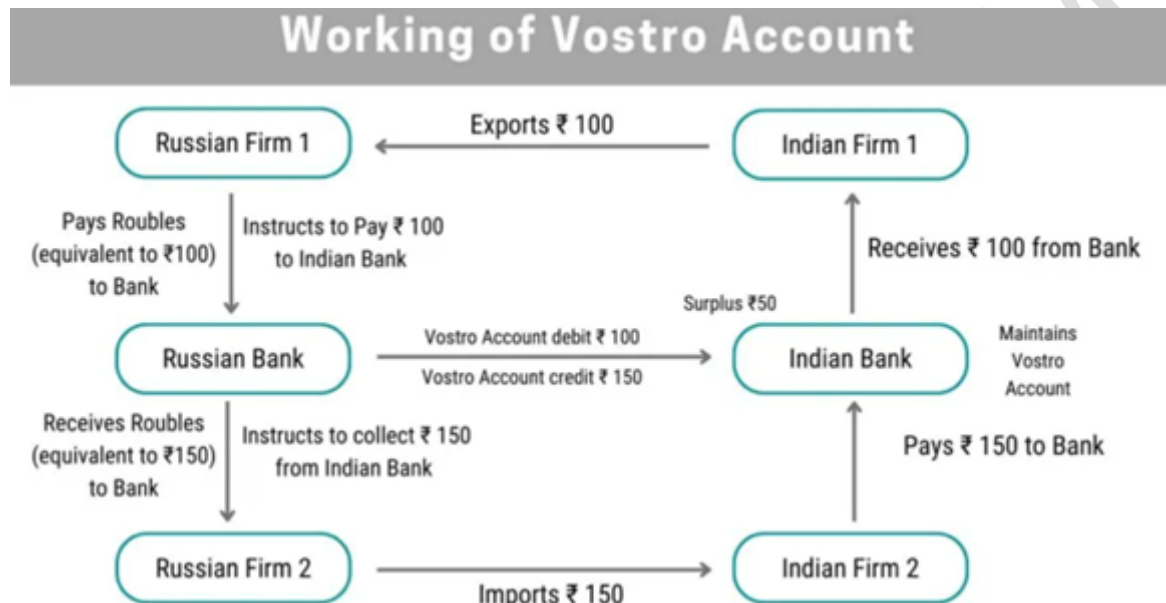
#### Vostro Account

- A vostro account is an account that domestic banks hold for foreign banks in the former's domestic currency, in this case, the rupee.

### Description:

- Rupee Vostro Accounts keep a foreign entity's holdings in the Indian bank, in Indian rupees.
- When an Indian importer wants to make a payment to a foreign trader in rupees, the amount will be credited to this Vostro account, and when an Indian exporter needs to be paid for supplying goods or services, this Vostro account will be deducted, and the amount will be credited to the exporter's account.

- **Note:** The bank of a partner country; e.g. German banks may approach an Authorised Dealer(AD) bank in India for the opening of Special Rupee Vostro account.
- The AD bank then will seek approval from the RBI with details of the arrangement and subsequent to the approval granted by the RBI, the Special Rupee Vostro account in the Indian AD bank by a German bank shall be opened.
- The trade settlement shall then start between the parties in INR. The exchange rate between the currencies of two trading partner countries may be market determined.



#### More on Details:

- Domestic banks use it to provide international banking services to their clients who have global banking needs.
- It is an integral offshoot of correspondent banking that entails a bank (or an intermediary) to facilitate wire transfer, conduct business transactions, accept deposits and gather documents on behalf of the other bank.
- It helps domestic banks gain wider access to foreign financial markets and serve international clients without having to be physically present abroad.
- Special Rupee Vostro Accounts (SRVA) Arrangement [Opened by Russia with Indian partner banks]
- The SRVA is an additional arrangement to the existing system that uses freely convertible currencies and works as a complimentary system.
- For perspective, freely convertible currencies refer to currencies permitted by rules and regulations of the concerned country to be converted to major reserve currencies

(like U.S. dollar or pound sterling). The existing systems thus require maintaining balances and position in such currencies.

### **How does it function?**

The framework entails three important components, namely, **invoicing, exchange rate and settlement.**

1. Invoicing entails that all exports and imports must be denominated and invoiced in INR.
  2. The exchange rate between the currencies of the trading partner countries would be market-determined.
  3. To conclude, the final settlement also takes place in Indian National Rupee (INR).
- The authorised domestic dealer banks (those authorised to deal in foreign currencies) are required to open SRVA accounts for correspondent banks of the partner trading country.
  - Domestic importers are required to make payment (in INR) into the SRVA account of the correspondent bank against the invoices for supply of goods or services from the overseas seller/supplier.
  - Similarly, domestic exporters are to be paid the export proceeds (in INR) from the balances in the designated account of the correspondent bank of the partner country.
  - As for availing an advance against exports, it would be the responsibility of the domestic bank to accord foremost priority to ensuring that the available funds are used to meet existing payment obligations [From the already executed export orders or export payments in the pipeline].
  - All reporting of cross-border transactions is to be done in accordance with the extant guidelines under the Foreign Exchange Management Act (FEMA), 1999.

### **What is the eligibility criteria for banks?**

- Banks from partner countries are required to approach an authorized domestic dealer bank for opening the SRVA.
- The domestic bank would then seek approval from the apex banking regulator providing details of the arrangement.

- It would be the responsibility of the domestic banks to ensure that the correspondent bank is not from a country mentioned in the updated Financial Action Task Force (FATF) Public Statement on High Risk & Non-Co-operative jurisdictions.
- Domestic banks must also put forth for perusal, financial parameters pertaining to the corresponding bank.
- Authorised banks can open multiple SRV accounts for different banks from the same country. Further, balances in the account can be repatriated in freely convertible currency and/or currency of the beneficiary partner country depending on the underlying transaction, that is, for which the account was credited.

### **What is its purpose?**

- The Economic Survey (2022-23) had argued that the framework could largely reduce the “net demand for foreign exchange, the U.S. dollar in particular, for the settlement of current account related trade flows”.
- It added that the framework would also reduce the need for holding foreign exchange reserves and dependence on foreign currencies, making the country less vulnerable to external shocks.
- Indian exporters could get advance payments in INR from overseas clients and in the long-term promote INR as an international currency once the rupee settlement mechanism gains traction, the survey argued.
- As per the Bureau International (BIS) Settlements’ Triennial Central Bank Survey 2022, the S. dollar was the most dominant vehicle currency accounting for 88% of all trades. The INR accounted for 1.6%.

## **SOCIAL STOCK EXCHANGE**

### **In News:**

The National Stock Exchange(NSE) has received final approval from the Securities and Exchange Board of India, to set up a Social Stock Exchange (SSE) as a separate segment of the NSE.

### **Analysis of Background:**

#### **What is an SSE?**

- An SSE allows the listing of non-profit or Non-Government Organisations (NGOs) on stock exchanges, providing them with an alternative fund-raising structure. It may be

listed on BSE or NSE. The idea of SSE was first floated by Finance Minister Nirmala Sitharaman in her 2019-20 Budget speech. Countries like the UK, Canada and Brazil have SSEs.

- The fund-raising is proposed through several instruments such as zero-coupon-zero-principal bonds, social venture funds and mutual funds.

### **What are the objectives of SSEs?**

- A Social Stock Exchange may be helpful in rebuilding the livelihoods of people as the investments will have a social impact.
- The SSEs will aim at unlocking large pools of social capital, and encourage blended finance structures, so that conventional capital can partner with social capital to address the urgent social issues.

### **Example**

- The Cancer Fund by HDFC Mutual Fund is one example. It operates as a standard mutual fund, with the exception that the returns generated are channelled towards the financing of Non-Profit Organizations. Its investors get their money back from HDFC MF, but any interest or gains that are made are donated to the NPO.

### **What instruments will NPOs offer on SSEs?**

- The SEBI working group report lays out several funding instruments such as zero-coupon-zero-principal bonds, social venture funds, and mutual funds, “providing a wide gamut of options to “donor” investors looking to invest with an objective to create a social impact. This initiative may also enable companies to be able to deploy CSR funding by connecting directly with social organisations.

### **Eligibility to participate in SSEs**

- Social enterprises eligible to participate in the SSE will be Not-for-Profit organisations (NPOs) as well as for-profit social enterprises.
- Social enterprises eligible to participate in the SSE will be entities - NPOs and for-profit social enterprises - having social intent and impact as their primary goal. Also, such an intent should be demonstrated through its focus on eligible social objectives for the underserved or less privileged populations or regions.
- The social enterprises will have to engage in a social activity out of 16 broad activities listed by the regulator- SEBI. Some of the eligible activities include:



- Eradicating hunger, poverty, malnutrition and inequality
- Promoting health care including mental healthcare, sanitation and making available safe drinking water
- Promoting education, employability and livelihoods
- Promoting gender equality, empowerment of women and LGBTQIA+ communities
- Promoting welfare of migrants and displaced persons.
- Promotion of financial inclusion
- Slum area development, affordable housing
- Protection of national heritage, art and culture
- Supporting incubators of Social Enterprises
- Disaster management, including relief, rehabilitation and reconstruction activities
- Further, the organisations will have to prove that over 67% of their business is related to activities like above to be recognised as a Social Enterprise.
- Corporate foundations, political, religious organisations, professional or trade associations, infrastructure and housing companies will not be eligible for listing on the SSEs. However, the affordable housing segment will be eligible for the same.
- With regard to minimum requirements to be met by a NPO, NPO needs to be registered as a charitable trust and should be registered for at least three years, must have spent at least Rs 50 lakh annually in the past financial year and should have received a funding of at least Rs 10 lakh in the past financial year.
- NPOs raising funds through the issuance of zero coupon zero principal instruments, need to make disclosure about its vision, disclose target segment (those affected by the problem and how are they affected) and approach to accomplish its planned activities; details of its governing body, composition, dates of board meetings held; and details of key managerial staff.
- NPOs need to make disclosure of financial statements for last three financial years, details of past social impact and risks that they see to its work and how it proposes to mitigate these.
- In respect of annual disclosure by NPOs on SSE which have either raised funds through SSE or are registered with SSE, such NPOs will have to disclose details of the top five donors or investors in terms of budget, scale of operations, including employee and volunteer strength, governance structure, financial statement, programme-wise fund utilisation for the year and auditors report and auditor details.

### **How will SSEs work?**

- The SSE shall be a separate segment under the existing stock exchanges. It is a set of processes that act as a filter, selecting only those entities that are creating measurable positive social impact and reporting such impact.
- What are the tax benefits?
- Investors will get Section 80G benefits which allow all investments in securities/instruments of NPOs listed on SSE to be tax deductible, and corporates to deduct CSR expenditure from their taxable income, among other things.
- Investment by companies will be considered as part of their Corporate Social Responsibility (CSR) initiatives.

### **What is the size of the market?**

India has over 31 lakh NPOs – more than double the number of schools and 250 times the number of government hospitals, which amount to one NPO for 400 Indians.

### **Significance of SSEs**

- SSE is a novel concept in India and it is meant to serve the private and non-profit sectors by channelling greater capital to them. It will also make investing in social ventures easier for morally conscious investors.
- This would be set up “under the regulatory ambit of SEBI for listing social enterprises and voluntary organisations working for the realisation of a social welfare”.
- The establishment of the Social Stock Exchange is expected to create more opportunities for Social Auditors since the regulation makes it mandatory for social enterprises which are keen to list on the platform and raise money to undergo social audit.

## **EASTERN RAJASTHAN CANAL PROJECT**

### **In News:**

The Rajasthan Government allocated 13000 crores for Eastern Rajasthan Canal Project.

### **Analysis of Background:**

- The Eastern Rajasthan Canal Project aims to harvest surplus water available during the rainy season in rivers in southern Rajasthan such as Chambal and its tributaries including Kunnu, Parvati, Kalisindh and use this water in south-eastern districts of the

state where there is a scarcity of water for drinking and irrigation. The project was announced in 2017.

- Rajasthan, the largest state of India with a geographical area of 342.52 lakh hectares which amount to 10.4 per cent of the entire country, holds only 1.16 per cent of India's surface water and 1.72 per cent of groundwater.
- Among the state's water bodies, only the Chambal river basin has surplus water but this water cannot be tapped directly because the area around the Kota barrage is designated as a crocodile sanctuary.
- Through the help of diversion structures, intra-basin water transfers, linking channels and construction of pumping main feeder channels, the ERCP aims to create a network of water channels which will cover 23.67 per cent area of Rajasthan along with 41.13 per cent population of the state.

### **Benefits Estimated in The Project**

- ERCP is estimated to create an additional command area of 2 lakh hectares and an area of 4.31 lakh hectare will get irrigation facilities because of this project.
- The ERCP also intends to improve the groundwater table in rural areas of the state, positively influencing the socio-economic conditions of people from these areas.
- It also adds special emphasis on the Delhi-Mumbai Industrial Corridor (DMIC), hoping that sustainable water sources will enhance and help industries grow in these areas resulting in investment and revenue.
- It will ensure the availability of water for drinking and irrigation purposes.
- It will improve the groundwater table of the state.
- It will promote socio-economic development in the state.
- It will ensure women's empowerment and also improve the standard of living of the people.
- It will help in encouraging investment in the state and also increase the revenue potential of the state.

### **About Chambal River**

- The Chambal River is located in northern India and flows through three Indian states: Madhya Pradesh, Rajasthan and Uttar Pradesh. The Chambal also forms part of the Rajasthan-Madhya Pradesh boundary.

- The perennial Chambal originates at Janapav, south of Mhow town, near Manpur, Indore, on the south slope of the Vindhya Range in Madhya Pradesh.
- About 885 km (550 miles) long, after rising in the old Vindhya Range and flows in northeastern direction. There, it becomes the second biggest tributary of the Yamuna River, which is the largest tributary of the Ganges.
- The Chambal and its tributaries drain the Malwa region of northwestern Madhya Pradesh, while its tributary, the Banas, which rises in the Aravalli Range, drains southeastern Rajasthan. It ends a confluence of five rivers, including the Chambal, Kwari, Yamuna, Sind, Pahuj, at Pachnada near Bhareh in Uttar Pradesh state, at the border of Bhind and Etawah districts.
- The main tributaries of Chambal include the Banas and Mej rivers on the left and the Parbati, Kali Sindh and Shipra rivers on the right.

## DISINVESTMENT

### In News:

- In the Union Budget for 2023-24, the government has set a disinvestment target of ₹51,000 crore, down nearly 21% from the budget estimate for the current year and just ₹1,000 crore more than the revised estimate.

### Analysis of Background:

#### Disinvestment:

- Disinvestment means sale or liquidation of assets by the government, usually Central and state public sector enterprises, projects, or other fixed assets. Disinvesting is an exit strategy that means taking out an existing investment. Disinvestment policies are commonly followed by governments to allocate resources more efficiently.
- **For example:** The Government of India will sell 30.48% of its stake in the IDBI bank, and Life Insurance Corporation of India (LIC) shall sell 30.24%, aggregating to 60.72% of IDBI Bank's share capital, along with transfer of management control in the lender.
- In a nutshell, Disinvestment by the government means the market activity through which the Government conducts sale or liquidation of Government-owned assets. Such assets usually refer to the Government's ownership stake in Central Public Sector Enterprises (CPSEs) and state public sector enterprises (SPSEs), but are not limited to that. Government assets also include project undertakings and other fixed assets.

## **Disinvestment in India:**

### **Why Disinvestment is done?**

- Reducing the financial burden on the Government finances
- Opening up markets for private firms, which eventually leads to better capital markets and efficient allocation of resources
- Supporting the **liquidity** measures in the market by aiding to consumption and demand as the need arises
- Raise money to facilitate long-term Government goals of growth and development in the country
- Channelize resources to more productive avenues and projects by reducing the capital expenditures on existing non-performing assets or loss-making firms
- Improve the Return on Investment (ROI) of underperforming firms.

### **Main objectives of Disinvestment in India:**

- Reducing the fiscal burden on the exchequer.
- Improving public finances.
- Encouraging private ownership.
- Funding growth and development programmes.
- Maintaining and promoting competition in the market.
- Reducing the financial burden on the government.
- Improving public finances.
- Encouraging an open share of ownership.
- Introduction, competition, and market discipline.
- Depoliticizing essential services.
- Upgrading the technology used by public enterprises to become competitive.
- Rationalizing and retraining the workforce.
- Building competence and strength in R&D.
- Initiating the diversification and expansion programmes.

### **Importance of Disinvestment**

The importance of disinvestment lies in utilisation of funds for:

- Financing the increasing fiscal deficit,
- Financing large-scale infrastructure development,
- For investing in the economy to encourage spending,

- For retiring Government debt- Almost 40-45% of the Centre's revenue receipts go towards repaying public debt/interest,
- For social programs like health and education.

<b>Point of Difference</b>	<b>Disinvestment</b>	<b>Privatization</b>
Control	Dilution of ownership, Government retains control	Transfer of ownership, control changes hands
Shareholding threshold	More than 50 percent	Less than 50 percent
Purpose	To ease public finances and increase productivity of Government capital	Strategic in terms of achieving operational efficiency

## UNION BUDGET FOR 2023-24

### In News:

The Union Budget for 2023-24 was presented in the parliament on February 1, 2023, by finance minister Nirmala Sitharaman.

### Key Highlights of Union Budget 2023-24:

In the 75th year of India's Independence, the World has recognized the Indian Economy as a 'bright star' as the Economic Growth is estimated at 7 per cent, which is the highest among all major economies, in spite of the massive global slowdown caused by COVID-19 and Russia-Ukraine War.

- Stated by Smt. Nirmala Sitharaman, while presenting the Union Budget 2023-24 in Parliament.

### Budget 2023: Top 10 takeaways

- India to grow at 7% in the current year
- Personal income tax slabs to be reduced to 5, tax exemption up to Rs 7 lakh per year
- Capital outlay of Rs 2.40 lakh crore for Indian Railways
- Allocation for PM Awaas Yojana increased to over INR 79,000 crore
- Green hydrogen, clean energy storage and transmission to be key drivers of government's "Green Growth"
- Three centres of excellence in Artificial Intelligence will be set up in top educational institutions
- Outlay of Rs 4,795.24 crore for the Digital India Programme announced
- Open source digital infrastructure for agriculture and an agriculture accelerator fund announced
- Centre to provide free food grains to all antyodaya and priority households until December 2023.
- Subsidy for UPI expected to Rs 2,137 crore in FY23

### PART A

- Per capita income has more than doubled to ₹1.97 lakh in around nine years.
- Indian economy has increased in size from being 10th to 5th largest in the world in the past nine years.
- EPFO membership has more than doubled to 27 crore.
- 7,400 crore digital payments of ₹126 lakh crore has taken place through UPI in 2022.
- 7 crore household toilets constructed under Swachh Bharat Mission.
- 6 crore LPG connections provided under Ujjwala.

- 220 crore covid vaccination of 102 crore persons.
- 8 crore PM Jan Dhan bank accounts.
- Insurance cover for 44.6 crore persons under PM Suraksha Bima and PM Jeevan Jyoti Yojana.
- Cash transfer of ₹2.2 lakh crore to over 11.4 crore farmers under PM Kisan Samman Nidhi.
- Seven priorities of the budget 'Saptarishi' are inclusive development, reaching the last mile, infrastructure and investment, unleashing the potential, green growth, youth power and financial sector.
- Atmanirbhar Clean Plant Program with an outlay of ₹2200 crore to be launched to boost availability of disease-free, quality planting material for high value horticultural crops.
- 157 new nursing colleges to be established in co-location with the existing 157 medical colleges established since 2014.
- Centre to recruit 38,800 teachers and support staff for the 740 Eklavya Model Residential Schools, serving 3.5 lakh tribal students over the next three years.
- Outlay for PM Awas Yojana is being enhanced by 66% to over Rs. 79,000 crore.
- Capital outlay of Rs. 2.40 lakh crore has been provided for the Railways, which is the highest ever outlay and about nine times the outlay made in 2013-14.
- Urban Infrastructure Development Fund (UIDF) will be established through use of priority Sector Lending shortfall, which 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.
- Entity DigiLocker to be setup for use by MSMEs, large business and charitable trusts to store and share documents online securely.
- 100 labs to be setup for 5G services based application development to realize a new range of opportunities, business models, and employment potential.
- 500 new 'waste to wealth' plants under GOBARdhan (Galvanizing Organic Bio-Agro Resources Dhan) scheme to be established for promoting circular economy at total investment of Rs 10,000 crore. 5 per cent compressed biogas mandate to be introduced for all organizations marketing natural and bio gas.
- Centre to facilitate one crore farmers to adopt natural farming over the next three years. For this, 10,000 Bio-Input Resource Centres to be set-up, creating a national-level distributed micro-fertilizer and pesticide manufacturing network.



- Pradhan Mantri Kaushal Vikas Yojana 4.0, to be launched to skill lakhs of youth within the next three years covering new age courses for Industry 4.0 like coding, AI, robotics, mechatronics, IOT, 3D printing, drones, and soft skills.
- 30 Skill India International Centre to be set up across different States to skill youth for international opportunities.
- Revamped credit guarantee scheme for MSMEs to take effect from 1st April 2023 through infusion of Rs 9,000 crore in the corpus. This scheme would enable additional collateral-free guaranteed credit of Rs 2 lakh crore and also reduce the cost of the credit by about 1 per cent.
- Central Processing Centre to be setup for faster response to companies through centralized handling of various forms filed with field offices under the Companies Act.
- The maximum deposit limit for Senior Citizen Savings Scheme to be enhanced from Rs 15 lakh to Rs 30 lakh.
- Targeted Fiscal Deficit to be below 4.5% by 2025-26.
- Agriculture Accelerator Fund to be set-up to encourage agri-startups by young entrepreneurs in rural areas.
- To make India a global hub for '*Shree Anna*', the Indian Institute of Millet Research, Hyderabad will be supported as the Centre of Excellence for sharing best practices, research and technologies at the international level.
- ₹20 lakh crore agricultural credit targeted at animal husbandry, dairy and fisheries
- A new sub-scheme of PM Matsya Sampada Yojana with targeted investment of ₹6,000 crore to be launched to further enable activities of fishermen, fish vendors, and micro & small enterprises, improve value chain efficiencies, and expand the market.
- Digital public infrastructure for agriculture to be built as an open source, open standard and inter operable public good to enable inclusive farmer centric solutions and support for growth of agri-tech industry and start-ups.
- Computerisation of 63,000 Primary Agricultural Credit Societies (PACS) with an investment of ₹2,516 crore initiated.
- Massive decentralised storage capacity to be set up to help farmers store their produce and realize remunerative prices through sale at appropriate times.
- Sickle Cell Anaemia elimination mission to be launched.
- Joint public and Private Medical research to be encouraged via select ICMR labs for encouraging collaborative research and innovation.
- New Programme to promote research in Pharmaceuticals to be launched.

- 10 lakh crore capital investment, a steep increase of 33% for third year in a row, to enhance growth potential and job creation, crowd-in private investments, and provide a cushion against global headwinds.
- Aspirational Blocks Programme covering 500 blocks launched for saturation of essential government services across multiple domains such as health, nutrition, education, agriculture, water resources, financial inclusion, skill development, and basic infrastructure.
- 15,000 crore for implementation of Pradhan Mantri PVTG Development Mission over the next three years under the Development Action Plan for the Scheduled Tribes.
- Investment of Rs. 75,000 crore, including Rs. 15,000 crore from private sources, for one hundred critical transport infrastructure projects, for last and first mile connectivity for ports, coal, steel, fertilizer, and food grains sectors.
- New Infrastructure Finance Secretariat established to enhance opportunities for private investment in infrastructure.
- District Institutes of Education and Training to be developed as vibrant institutes of excellence for Teachers' Training.
- A National Digital Library for Children and Adolescents to be set-up for facilitating availability of quality books across geographies, languages, genres and levels, and device agnostic accessibility.
- 5,300 crore to be given as central assistance to Upper Bhadra Project to provide sustainable micro irrigation and filling up of surface tanks for drinking water.
- 'Bharat Shared Repository of Inscriptions' to be set up in a digital epigraphy museum, with digitization of one lakh ancient inscriptions in the first stage.
- 'Effective Capital Expenditure' of Centre to be Rs. 13.7 lakh crore.
- Continuation of 50-year interest free loan to state governments for one more year to spur investment in infrastructure and to incentivize them for complementary policy actions.
- Encouragement to states and cities to undertake urban planning reforms and actions to transform our cities into 'sustainable cities of tomorrow'.
- Transition from manhole to machine-hole mode by enabling all cities and towns to undertake 100 percent mechanical desludging of septic tanks and sewers.
- iGOT Karmayogi, an integrated online training platform, launched to provide continuous learning opportunities for lakhs of government employees to upgrade their skills and facilitate people-centric

- More than 39,000 compliances reduced and more than 3,400 legal provisions decriminalized to enhance Ease Of Doing Business.
- Jan Vishwas Bill to amend 42 Central Acts have been introduced to further trust-based governance.
- Three centres of excellence for Artificial Intelligence to be set-up in top educational institutions to realise the vision of “Make AI in India and Make AI work for India”.
- National Data Governance Policy to be brought out to unleash innovation and research by start-ups and academia.
- One stop solution for reconciliation and updation of identity and address of individuals to be established using DigiLocker service and Aadhaar as foundational identity.
- PAN will be used as the common identifier for all digital systems of specified government agencies to bring in Ease of Doing Business.
- 95 per cent of the forfeited amount relating to bid or performance security, will be returned to MSME’s by government and government undertakings in cases the MSME’s failed to execute contracts during Covid period.
- Result Based Financing to better allocate scarce resources for competing development needs.
- Phase-3 of the E-Courts project to be launched with an outlay of Rs. 7,000 crore for efficient administration of justice.
- R & D grant for Lab Grown Diamonds (LGD) sector to encourage indigenous production of LGD seeds and machines and to reduce import dependency.
- Annual production of 5 MMT under Green Hydrogen Mission to be targeted by 2030 to facilitate transition of the economy to low carbon intensity and to reduce dependence on fossil fuel imports.
- ₹35000 crore outlay for energy security, energy transition and net zero objectives.
- Battery energy storage systems to be promoted to steer the economy on the sustainable development path.
- 20,700 crore outlay provided for renewable energy grid integration and evacuation from Ladakh.
- “PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth” (PM-PRANAM) to be launched to incentivize States and Union Territories to promote alternative fertilizers and balanced use of chemical fertilizers.

- ‘Mangrove Initiative for Shoreline Habitats & Tangible Incomes’, MISHTI, to be taken up for mangrove plantation along the coastline and on salt pan lands, through convergence between MGNREGS, CAMPA Fund and other sources.
- Green Credit Programme to be notified under the Environment (Protection) Act to incentivize and mobilize additional resources for environmentally sustainable and responsive actions.
- Amrit Dharohar scheme to be implemented over the next three years to encourage optimal use of wetlands, enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities.
- A unified Skill India Digital platform to be launched for enabling demand-based formal skilling, linking with employers including MSMEs, and facilitating access to entrepreneurship schemes.
- Direct Benefit Transfer under a pan-India National Apprenticeship Promotion Scheme **to** be rolled out to provide stipend support to 47 lakh youth in three years.
- At least 50 tourist destinations to be selected through challenge mode; to be developed as a complete package for domestic and foreign tourists.
- Sector specific skilling and entrepreneurship development to be dovetailed to achieve the objectives of the ‘Dekho Apna Desh’ initiative.
- Tourism infrastructure and amenities to be facilitated in border villages through the Vibrant Villages Programme.
- States to be encouraged to set up a Unity Mall for promotion and sale of their own and also all others states’ ODOPs (One District, One Product), GI products and handicrafts.
- **National Financial Information Registry** to be set up to serve as the central repository of financial and ancillary information for facilitating efficient flow of credit, promoting financial inclusion, and fostering financial stability. A new legislative framework to be designed in consultation with RBI to govern this credit public infrastructure.
- Financial sector regulators to carry out a comprehensive review of existing regulations in consultation with public and regulated entities. Time limits to decide the applications under various regulations would also be laid down.
- To enhance business activities in GIFT IFSC, the following measures to be taken.
  - Delegating powers under the SEZ Act to IFSCA to avoid dual regulation.
  - Setting up a single window IT system for registration and approval from IFSCA, SEZ authorities, GSTN, RBI, SEBI and IRDAI.
  - Permitting acquisition financing by IFSC Banking Units of foreign bank.

- Establishing a subsidiary of EXIM Bank for trade re-financing.
- Amending IFSCA Act for statutory provisions for arbitration, ancillary services, and avoiding dual regulation under SEZ Act
- Recognizing offshore derivative instruments as valid contracts.
- Amendments proposed to the Banking Regulation Act, the Banking Companies Act and the Reserve of India Act to improve bank governance and enhance investors' protection.
- Countries looking for digital continuity solutions would be facilitated for setting up of their Data Embassies in GIFT IFSC.
- SEBI to be empowered to develop, regulate, maintain and enforce norms and standards for education in the National Institute of Securities Markets and to recognize award of degrees, diplomas and certificates.
- Integrated IT portal to be established to enable investors to easily reclaim the unclaimed shares and unpaid dividends from the Investor Education and Protection Fund Authority.
- To commemorate Azadi Ka Amrit Mahotsav, a one-time new small savings scheme, Mahila Samman Savings Certificate to be launched. It will offer deposit facility upto Rs 2 lakh in the name of women or girls for tenure of 2 years (up to March 2025) at fixed interest rate of 7.5 per cent with partial withdrawal option.
- The maximum deposit limit for Monthly Income Account Scheme to be enhanced from Rs 4.5 lakh to Rs 9 lakh for single account and from Rs 9 lakh to Rs 15 lakh for joint account.
- The entire fifty-year interest free loan to states to be spent on capital expenditure within 2023-24. Part of the loan is conditional on States increasing actual Capital expenditure and parts of outlay will be linked to States undertaking specific loans.
- Fiscal Deficit of 3.5% of GSDP allowed for States of which 0.5% is tied to Power sector reforms.

#### **Revised Estimates 2022-23:**

- The total receipts other than borrowings is Rs 24.3 lakh crore, of which the net tax receipts are Rs 20.9 lakh crore.
- The total expenditure is Rs 41.9 lakh crore, of which the capital expenditure is about Rs 7.3 lakh crore.
- The fiscal deficit is 6.4 percent of GDP, adhering to the Budget Estimate.

### **Budget Estimates 2023-24:**

- The total receipts other than borrowings is estimated at Rs 27.2 lakh crore and the total expenditure is estimated at Rs 45 lakh crore.
- The net tax receipts are estimated at Rs 23.3 lakh crore.
- The fiscal deficit is estimated to be 5.9 per cent of GDP.
- To finance the fiscal deficit in 2023-24, the net market borrowings from dated securities are estimated at Rs 11.8 lakh crore.
- The gross market borrowings are estimated at Rs 15.4 lakh crore.

### **PART – B**

#### **DIRECT TAXES**

- Direct Tax proposals aim to maintain continuity and stability of taxation, further simplify and rationalise various provisions to reduce the compliance burden, promote the entrepreneurial spirit and provide tax relief to citizens.
- Constant endeavour of the Income Tax Department to improve Tax Payers Services by making compliance easy and smooth.
- To further improve tax payer services, proposal to roll out a next-generation Common IT Return Form for tax payer convenience, along with plans to strengthen the grievance redressal mechanism.
- Rebate limit of Personal Income Tax to be increased to Rs. 7 lakh from the current Rs. 5 lakh in the new tax regime. Thus, persons in the new tax regime, with income up to Rs. 7 lakh to not pay any tax.
- Tax structure in new personal income tax regime, introduced in 2020 with six income slabs, to change by reducing the number of slabs to five and increasing the tax exemption limit to Rs. 3 lakh. Change to provide major relief to all tax payers in the new regime.

New tax rates

Total Income (Rs)	Rate (per cent)
Up to 3,00,000	Nil
From 3,00,001 to 6,00,000	5
From 6,00,001 to 9,00,000	10
From 9,00,001 to 12,00,000	15
From 12,00,001 to 15,00,000	20
Above 15,00,000	30

- Proposal to extend the benefit of standard deduction of Rs. 50,000 to salaried individual, and deduction from family pension up to Rs. 15,000, in the new tax regime.
- Highest surcharge rate to reduce from 37 per cent to 25 per cent in the new tax regime. This to further result in reduction of the maximum personal income tax rate to 39 per cent.
- The limit for tax exemption on leave encashment on retirement of non-government salaried employees to increase to Rs. 25 lakh.
- The new income tax regime to be made the default tax regime. However, citizens will continue to have the option to avail the benefit of the old tax regime.
- Enhanced limits for micro enterprises and certain professionals for availing the benefit of presumptive taxation proposed. Increased limit to apply only in case the amount or aggregate of the amounts received during the year, in cash, does not exceed five per cent of the total gross receipts/turnover.
- Deduction for expenditure incurred on payments made to MSMEs to be allowed only when payment is actually made in order to support MSMEs in timely receipt of payments.
- New co-operatives that commence manufacturing activities till 31.3.2024 to get the benefit of a lower tax rate of 15 per cent, as presently available to new manufacturing companies.
- Opportunity provided to sugar co-operatives to claim payments made to sugarcane farmers for the period prior to assessment year 2016-17 as expenditure. This expected to provide them a relief of almost Rs. 10,000 crore.
- Provision of a higher limit of Rs. 2 lakh per member for cash deposits to and loans in cash by Primary Agricultural Co-operative Societies (PACS) and Primary Co-operative Agriculture and Rural Development Banks (PCARDBs).

- A higher limit of Rs. 3 crore for TDS on cash withdrawal to be provided to co-operative societies.
- Date of incorporation for income tax benefits to start-ups to be extended from 31.03.23 to 31.3.24.
- Proposal to provide the benefit of carry forward of losses on change of shareholding of start-ups from seven years of incorporation to ten years.
- Deduction from capital gains on investment in residential house under sections 54 and 54F to be capped at Rs. 10 crore for better targeting of tax concessions and exemptions.
- Proposal to limit income tax exemption from proceeds of insurance policies with very high value. Where aggregate of premium for life insurance policies (other than ULIP) issued on or after 1st April, 2023 is above Rs. 5 lakh, income from only those policies with aggregate premium up to Rs. 5 lakh shall be exempt.
- Income of authorities, boards and commissions set up by statutes of the Union or State for the purpose of housing, development of cities, towns and villages, and regulating, or regulating and developing an activity or matter, proposed to be exempted from income tax.
- Minimum threshold of Rs. 10,000/- for TDS to be removed and taxability relating to online gaming to be clarified. Proposal to provide for TDS and taxability on net winnings at the time of withdrawal or at the end of the financial year.
- Conversion of gold into electronic gold receipt and vice versa not to be treated as capital gain.
- TDS rate to be reduced from 30 per cent to 20 per cent on taxable portion of EPF withdrawal in non-PAN cases.
- Income from Market Linked Debentures to be taxed.
- Deployment of about 100 Joint Commissioners for disposal of small appeals in order to reduce the pendency of appeals at Commissioner level.
- Increased selectivity in taking up appeal cases for scrutiny of returns already received this year.
- Period of tax benefits to funds relocating to IFSC, GIFT City extended till 31.03.2025.
- Certain acts of omission of liquidators under section 276A of the Income Tax Act to be decriminalized with effect from 1st April, 2023.
- Carry forward of losses on strategic disinvestment including that of IDBI Bank to be allowed.



- Agniveer Fund to be provided EEE status. The payment received from the Agniveer Corpus Fund by the Agniveers enrolled in Agnipath Scheme, 2022 proposed to be exempt from taxes. Deduction in the computation of total income is proposed to be allowed to the Agniveer on the contribution made by him or the Central Government to his Seva Nidhi account.

## **INDIRECT TAXES**

- Number of basic customs duty rates on goods, other than textiles and agriculture, reduced to 13 from 21.
- Minor changes in the basic custom duties, cesses and surcharges on some items including toys, bicycles, automobiles and naphtha.
- Excise duty exempted on GST-paid compressed bio gas contained in blended compressed natural gas.
- Customs Duty on specified capital goods/machinery for manufacture of lithium-ion cell for use in battery of electrically operated vehicle (EVs) extended to 31.03.2024
- Customs duty exempted on vehicles, specified automobile parts/components, sub-systems and tyres when imported by notified testing agencies, for the purpose of testing and/ or certification, subject to conditions.
- Customs duty on camera lens and its inputs/parts for use in manufacture of camera module of cellular mobile phone reduced to zero and concessional duty on lithium-ion cells for batteries extended for another year.
- Basic customs duty reduced on parts of open cells of TV panels to 2.5 per cent.
- Basic customs duty on electric kitchen chimneys increased to 15 per cent from 7.5 per cent.
- Basic customs duty on heat coil for manufacture of electric kitchen chimneys reduced to 15 per cent from 20 per cent.
- Denatured ethyl alcohol used in chemical industry exempted from basic customs duty.
- Basic customs duty reduced on acid grade fluorspar (containing by weight more than 97 per cent of calcium fluoride) to 2.5 per cent from 5 per cent.
- Basic customs duty on crude glycerin for use in manufacture of epichlorhydrin reduced to 2.5 per cent from 7.5 per cent.
- Duty reduced on key inputs for domestic manufacture of shrimp feed.
- Basic customs duty reduced on seeds used in the manufacture of lab grown diamonds.
- Duties on articles made from dore and bars of gold and platinum

- Import duty on silver dore, bars and articles
- Basic Customs Duty exemption on raw materials for manufacture of CRGO Steel, ferrous scrap and nickel cathode continued.
- Concessional BCD of 2.5 per cent on copper scrap is continued.
- Basic customs duty rate on compounded rubber increased to 25 per cent from 10 per cent or 30 per kg whichever is lower.
- National Calamity Contingent Duty (NCCD) on specified cigarettes revised upwards by about 16 per cent.

### **Legislative Changes in Customs Laws**

- Customs Act, 1962 to be amended to specify a time limit of nine months from date of filing application for passing final order by Settlement Commission.
- Customs Tariff Act to be amended to clarify the intent and scope of provisions relating to Anti-Dumping Duty (ADD), Countervailing Duty (CVD), and Safeguard Measures.
- CGST Act to be amended
  - to raise the minimum threshold of tax amount for launching prosecution under GST from one crore to two crore;
  - to reduce the compounding amount from the present range of 50 to 150 per cent of tax amount to the range of 25 to 100 per cent;
  - decriminalise certain offences;
  - to restrict filing of returns/statements to a maximum period of three years from the due date of filing of the relevant return/statement; and
  - to enable unregistered suppliers and composition taxpayers to make intra-state supply of goods through E-Commerce Operators (ECOs).

## **NREGA**

### **In News:**

- NREGA is underperforming because its most basic design principles have been forgotten or wilfully ignored. Now, a committee to suggest reforms has been constituted.

### **Analysis of Background:**

#### **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005:**

- The MGNREGA is Indian labour law and social security programme that aims to guarantee the 'right to work'.
- It provides a legal right for 100 days of employment in every financial year to at least one member of every rural household whose adult members agree to do unskilled manual work.
- The Ministry of Rural Development is monitoring the implementation of this scheme.
- Women were guaranteed one-third of the jobs made available under the MGNREGA.
- The MGNREGA programme also helps in creating durable assets (such as roads, canals, ponds and wells).
- Work to be provided within 5 km of workers' residence and minimum wages are to be paid.
- Right to get unemployment allowance in case employment is not provided within 15 days of applying.
- MGNREGA is implemented mainly by gram panchayats. Adult members of rural households submit their details to the Gram Panchayat. The Gram Panchayat registers households after making an enquiry and issues a job card. The job card contains the details of the adult member enrolled and his /her photo
- The involvement of contractors is banned.
- The Social Audit of MGNREGA works is mandatory, which ensures accountability and transparency.

### **Challenges with NREGA:**

- Ridiculously low wage rate: Currently, MGNREGA wage rates of 17 states are less than the corresponding state minimum wages.
- Insufficient budget allocation: MGNREGA's success at the ground level is subject to proper and uninterrupted fund flow to the states.

- Regular payment delays: The Union Ministry of Rural Development considers wages paid once the FTO (Fund Transfer Order) is signed by the second signatory. However, delays take place even in the processing of signed FTOs, for which the Management Information System (MIS) does not calculate compensation.
- Workers penalised for administrative lapses: The ministry withholds wage payments for workers of states that do not meet administrative requirements within the stipulated time period
- The banking puzzle: The rural banks are highly de-capacitated in terms of staff and infrastructure and thus always remain hugely crowded.
- Faulty MIS data: There is a growing pile of evidence on how real-time MIS has made MGNREGA less transparent for workers, reduced accountability of frontline functionaries and aided in centralisation of the programme.
- Non-payment of unemployment allowance: There are a huge number of unemployment allowances being shown in the MIS currently.
- Genuine job cards being deleted to meet 100% DBT targets: Genuine job cards are being randomly deleted, as there is a huge administrative pressure to meet 100 per cent Direct Benefit Transfer (DBT) implementation targets in MGNREGA.
- Too much centralisation weakening local governance: A real-time MIS-based implementation and a centralised payment system has further left the representatives of the Panchayats Raj Institutions with literally no role in implementation, monitoring and grievance redress of MGNREGA schemes.
- Administration not honouring local priorities: However, with the administration almost dictating its implementation, it is literally a burden now for the people and especially for the local elected representatives.

#### **Success of MGNREGA:**

- Reduced the distress in agriculture & economy due low agricultural productivity & small land-holding size thus provided them better livelihood opportunities.
- Most of MGNREGA work is directed towards building irrigation canals, tanks etc. thus provides resources base for further rural development.
- It has reduced rural distress & intensive urban migration.
- The provisions like work up to 5 km from home, equal wages promotes women empowerment, gender parity & directed towards backward section of society.

- The programme has generated over 1,980 crore person-days. In the short span of 10 years that the Act has been in existence, it has generated 19.86 billion person-days of employment benefitting 276 million workers, with more than half the jobs going to women workers and almost a 3rd to members of scheduled castes and scheduled tribes.
- It has resulted into social upliftment of all sections including SC/ST. The percentage of Scheduled Caste workers benefitted under the scheme has consistently been about 20% and of Scheduled Tribe workers has been about 17%.
- The legislation has reduced distress migration in traditionally migration-intensive areas.

## WORLD ECONOMIC OUTLOOK (WEO) REPORT

### In News:

In its January update of the World Economic Outlook (WEO) Report, the IMF has marginally improved the forecast for global growth in 2023 — a relief, given the fears of a global recession in 2023.

### Analysis of Background:

#### What Is the World Economic Outlook (WEO)?

- The World Economic Outlook (WEO) is a comprehensive report published twice a year by the International Monetary Fund (IMF).
- It includes the IMF's estimates and forecasts for global output growth and inflation.
- It also includes estimates of real gross domestic product (GDP) growth, consumer prices, current account balances and unemployment in the fund's 190 member countries, grouped by region and development status.
- The data is drawn from IMF representatives' consultations with member countries, and is included in the WEO database.

### Key takeaways from the latest update:

#### Global growth will bottom out in 2023

#### Earlier predictions:

- In the October 2022 WEO, the IMF forecast that the global growth rate will decelerate from 3.4% in 2022 to 2.7% in 2023.
- In fact, at that time the IMF painted a grim picture: More than a third of the global economy will contract this year or next, while the three largest economies—the United

States, the European Union, and China—will continue to stall. In short, the worst is yet to come, and for many people 2023 will feel like a recession.

### **Recent estimates**

- Compared with the October forecast, the estimate for 2022 and the forecast for 2023 are both higher by about 0.2 percentage point, reflecting positive surprises and greater-than-expected resilience in numerous economies.
- China, Russia, the US, Germany, and Italy are some of the key economies that have seen the most significant upward revisions in their 2023 GDP forecasts. The United Kingdom saw a substantial (almost 1 percentage point) downgrade in its 2023 GDP.

### **Global inflation has peaked but relief will be slow**

#### **Inflation-Disinflation**

Inflation, which destabilised the global economy, is expected to have peaked in 2022 but the disinflation (the fall in inflation rate) will be slow and take all of 2023 and 2024.

#### **Headline Inflation**

About 84 percent of countries are expected to have lower headline (consumer price index) inflation in 2023 than in 2022.

#### **Global Inflation**

- Global inflation is set to fall from 8.8 percent in 2022 (annual average) to 6.6 percent in 2023 and 4.3 percent in 2024—above pre-pandemic (2017–19) levels of about 3.5 percent.

#### **Price Rise**

- Price rise is slowing for two main reasons:
  1. One, monetary tightening all across the world — higher interest rates drag down overall demand for goods and services and that, in turn, slows down inflation.
  2. Two, in the wake of a faltering demand, prices of different commodities — both fuel and non-fuel — have come down from their recent highs.
- In 2023, advanced economies are expected to have an inflation of 4.6% while emerging economies will continue to face an inflation of 8.1%.
- India will stay the world's fastest growing major economy in 2023 and 2024

- There's been no change in India's growth outlook since October 2022.
- Growth in India is set to decline from 6.8 percent in 2022 to 6.1 percent in 2023 before picking up to 6.8 percent in 2024, with resilient domestic demand despite external headwinds.
- This means India will remain the world's fastest growing major economy both in 2023 as well as 2024.

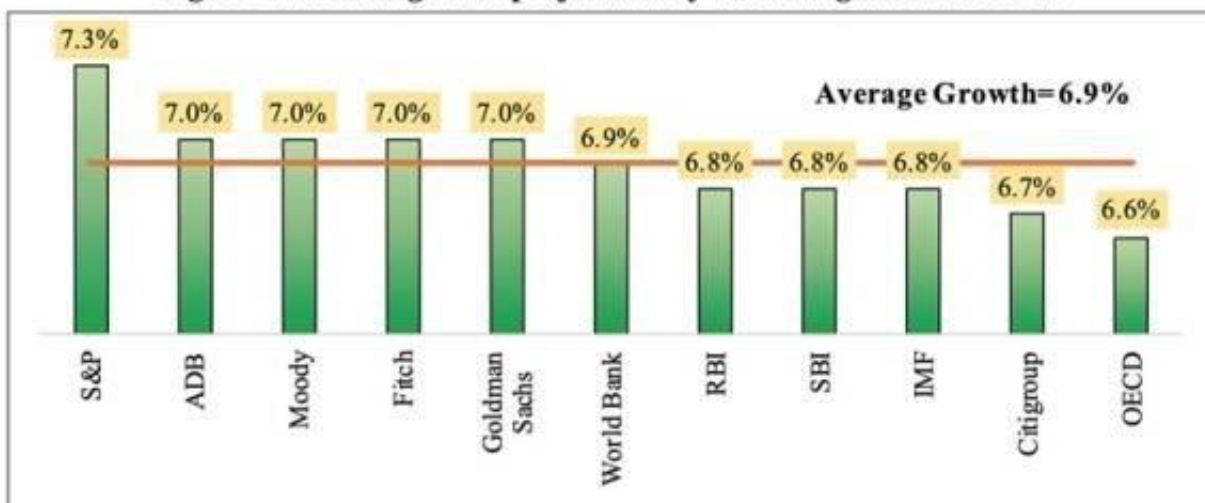
## ECONOMIC SURVEY 2023

Recently, the government tabled the Economic Survey 2022-23. The Survey laid out the outlook for India's growth, inflation and unemployment in the coming years.

### What is the Economic Survey?

- The Survey provides a detailed report of the national economy for the year along with forecasts.
- It touches upon everything from agriculture to unemployment to infrastructure. It is prepared by the Economic Division of the Department of Economic Affairs (DEA).
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Figure I.17: India growth projections by various agencies for FY23



Source: Various Agencies

Note: ADB stands for Asian Development Bank, IMF is International Monetary Fund

### What are the main takeaways this year?

#### GDP Growth

- The Survey said India's growth estimate for FY23 is higher than for almost all major economies.
- Despite strong global headwinds and tighter domestic monetary policy, if India is still expected to grow between 6.5 and 7.0 per cent, and that too without the advantage of

a base effect, it is a reflection of India’s underlying economic resilience; of its ability to recoup, renew and re-energise the growth drivers of the economy.

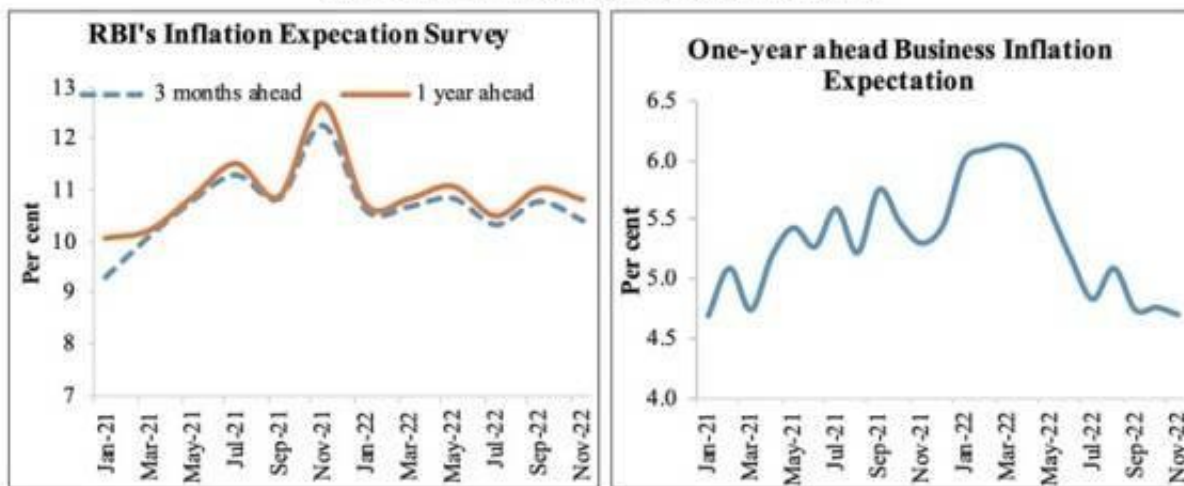
## **BASE EFFECT**

It refers to the impact of an increase in the price level (i.e. previous year’s inflation) over the corresponding rise in price levels in the current year (i.e., current inflation). If the inflation rate was low in the corresponding period of the last year, then even a small increase in the price index will give a high rate of inflation in the current year.

## **Inflation**

- The RBI has projected headline inflation at 6.8% in FY23, outside its comfort zone of 2% to 6%. High inflation is seen as one big factor holding back demand among consumers.
- However, the Survey sounded optimistic about the inflation levels and trajectory, saying “it is not high enough to deter private consumption and also not so low as to weaken the inducement to invest.”

**Figure I.32: Inflation Expectations Anchoring**



Source: RBI

Source: IIMA

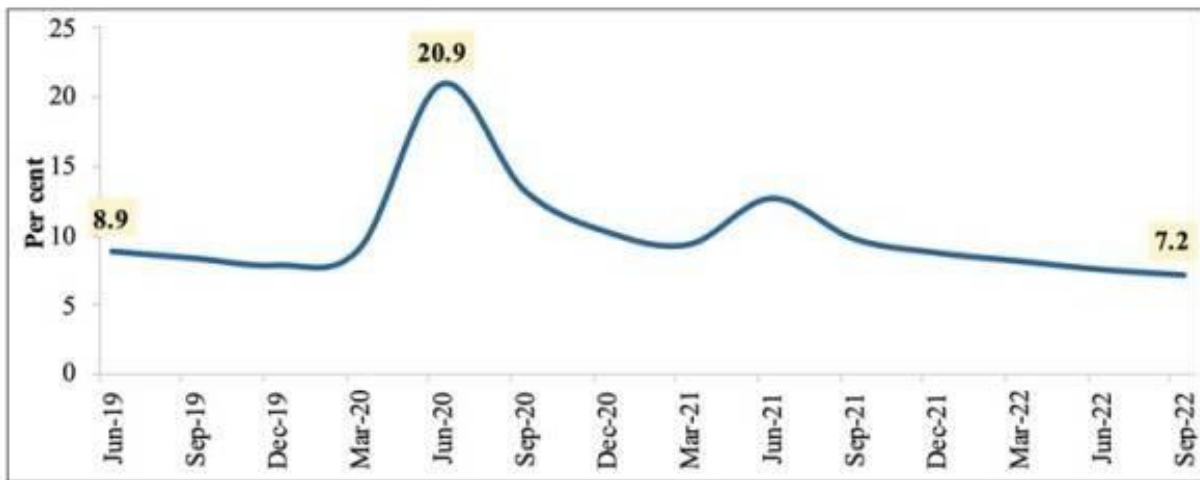
## **Unemployment**

- The Survey said “employment levels have risen in the current financial year”, and that “job creation appears to have moved into a higher orbit with the initial surge in exports, a strong release of the “pent-up” demand, and a swift rollout of the capex.”



- It pointed to the Periodic Labour Force Survey (PLFS), which showed that urban unemployment rate for people aged 15 years and above declined from 9.8% in the quarter ending September 2021 to 7.2% one year later.

**Figure I.33: Urban Unemployment Rate at four-year low**



Source: NSO, MoSPI

- The Survey also underlined that the fall in unemployment rate is accompanied by an improvement in the labour force participation rate.

### Outlook for 2023-24

- The Survey projected a baseline GDP growth of 6.5% in real terms in FY24.
- However, it detailed some downside risks. For instance, low demand for Indian exports, (due to poor global growth), may widen India's trade deficit and make the rupee depreciate. Similarly, sustained monetary tightening (higher interest rates) may drag down economic activity in FY24.
- What does it mean for India's economy?
- The central thrust of this year's Survey is that India's economy has recovered from the Covid disruption and, at long last, is poised to see sustained robust growth in the rest of the decade.
- The phase between 2014 and 2022— has witnessed “wide-ranging structural and governance reforms that strengthened the economy's fundamentals by enhancing its overall efficiency”.

### Reference to 2003:

- The Survey argued that the situation in 2023 is similar to how the economy was poised in 2003.

- It said the period between 2014 and 2022 is analogous to 1998-2002, when despite transformative reforms by the government the Indian economy lagged growth returns. This was due to temporary shocks such as the US sanctions after India's nuclear test, two successive droughts, the collapse of the tech boom, etc. But once these shocks faded, the structural reforms paid growth dividends from 2003. The Survey claims the same story is set to repeat from 2023.

**More on details:**

- India is the world's most populous country with a growing youth bulge. It has the world's largest pool of poor people and the largest pool of malnourished children.
- Given the low levels of per capita income, it requires much faster growth than many developed countries.
- A growth rate of 4% in India can feel like a recession and even though a 6% growth should be achievable, it may not create enough jobs to satisfy a growing population.

**TOPIC: ENVIRONMENT**

**BISPHENOL A**

**In News:**

A study conducted in Thiruvananthapuram, Kerala, suggests it can indirectly aid in the spread of vector-borne diseases in humans and animals.

**Analysis of Background:**

- Bisphenol A (BPA) is a chemical produced in large quantities for use primarily in the production of polycarbonate plastics.
- It is found in various products including shatterproof windows, eyewear, water bottles, and epoxy resins that coat some metal food cans, bottle tops, and water supply pipes.

**Effects:**

- The adverse effect of bisphenol A, or BPA, on human health is well known.

- When ingested, the chemical that is widely used to soften plastics, paints and other products, disrupts the endocrine system by interfering with the hormones and affects the brain and prostate gland of foetuses, infants and children.
- Several studies establish that the chemical can cause high blood pressure, diabetes and cardiovascular disease in adults.

### **How does BPA get into the body?**

- The primary source of exposure to BPA for most people is through the diet. While air, dust, and water are other possible sources of exposure, BPA in food and beverages accounts for the majority of daily human exposure.
- Bisphenol A can leach into food from the protective internal epoxy resin coatings of canned foods and from consumer products such as polycarbonate tableware, food storage containers, water bottles, and baby bottles.
- The degree to which BPA leaches from polycarbonate bottles into liquid may depend more on the temperature of the liquid or bottle, than the age of the container.
- BPA can also be found in breast milk.

### **Findings:**

- It establishes that the human-made chemical can significantly shorten the breeding time of southern house mosquitoes (*Culex quinquefasciatus*), a major carrier of the West Nile virus, Rift Valley fever virus and avian pox in tropical and subtropical countries, and thereby aid in its quick multiplication.
- This is a matter of concern as most urban wastewater canals, which serve as breeding sites for mosquitoes, are choked with BPA-laden plastic waste.

### **What is Plastic Pollution?**

- Plastic pollution occurs when plastic has gathered in an area and has begun to negatively impact the natural environment and create problems for plants, wildlife, and even the human population.
- This includes killing plant life and posing dangers to local animals.
- Plastic is an incredibly useful material, but it is not biodegradable.

### **Various Causes of Plastic Pollution:**

- As plastic is less expensive, it is one of the most widely available and overused items in the world today.
- Rapid urbanization and population growth increase the demand of cheap plastics.
- Since it is an affordable and durable material, it is utilized in every other way possible, from packaging materials to plastic bottles and containers, straws to plastic carry bags.
- Plastic takes 400 years and even more to Decompose. The decomposition rate of plastic typically ranges from 500 to 600 years, depending on the type.
- Abandoned Fishing Nets
- Disposal of plastic is often mismanaged; it ends up in landfills.
- Burning plastic is incredibly toxic and can lead to harmful atmospheric conditions and deadly illnesses.

### **Serious Effects of Plastic Pollution:**

- Negative Effects on Human Health: Microplastics entering the human body via direct exposures through ingestion or inhalation can lead to an array of health impacts, including inflammation, genotoxicity, oxidative stress, apoptosis, and necrosis, which are linked to an array of negative health outcomes including cancer, cardiovascular diseases.
- Plastic-contaminated seafood: Scientists have found microplastics in 114 marine species, and around one-third of these end up on our plates.
- Upsets the Food Chain: Because it comes in sizes large and small, polluting plastics even affect the world's tiniest organisms, such as plankton.
- Groundwater Pollution: Most of the litter and pollution affecting the world's oceans and groundwater comes from plastics.
- Land Pollution: When plastic is dumped in landfills, it interacts with water and forms hazardous chemicals. When these chemicals seep underground, they degrade the water quality. The wind carries and deposits plastic from one place to another, increasing the land litter.
- Air Pollution: Burning of plastic in the open air leads to environmental pollution due to the release of poisonous chemicals.
- Economic impacts: Plastic pollution costs \$13 billion in economic damage to marine ecosystems per year. This includes losses to the fishing industry and tourism, as well as

the cost to clean up beaches. Economic costs include those linked to clean-up operations, litter removal, the repair and replacement of damaged vessels and gear, reduced fishing catches, and a decline in coastal tourism and impact on related industries.

- Marine life: The most visible and disturbing impacts of marine plastics are the ingestion, suffocation and entanglement of hundreds of marine species. Marine wildlife such as seabirds, whales, fishes and turtles, mistake plastic waste for prey, and most die of starvation as their stomachs are filled with plastic debris.

## HARIKE WETLAND

### In News:

The arrival of migratory birds this year to Harike, **northern India's largest wetland**, declined 12% from 2021, according to the latest census of these water birds.

### Analysis of Background:

The Forest and Wildlife Preservation department census counted 65,624 birds from 85 species at Harike.

### Harike wetland:

- The Harike wetland, one of the largest in northern India, is situated in Tarn Taran district of the Punjab state in India.
- It stands on the confluence of the Beas and the Sutlej.
- It is home to birds visiting from as far as the Arctic and Siberia.
- It is one of the Ramsar sites in India, for conservation, development and preservation of the ecosystem.
- It is a man-made, riverine, lacustrine wetland.
- The wetland was declared a bird sanctuary in 1982 and named as Harike Pattan Bird Sanctuary.

## UN HIGH SEAS TREATY

### In News:

A new round of negotiations on the much-awaited United Nations High Seas Treaty for conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) began in New York February 20, 2023.

### Analysis of Background:

- The two-week meeting resumed after member nations failed to reach a consensus on the treaty at the fifth session of the Intergovernmental Conference (IGC) on the BBNJ in August 2022.
- The high seas are areas beyond the 200 nautical mile limit of the exclusive economic zones of coastal states.
- Home to around 270,000 species, the high seas cover more than two-thirds of the global ocean.
- Over 1,550 marine animals and plants face a risk of extinction, with climate change impacting at least 41 per cent of threatened marine species
- Only 1.44 per cent of the high seas are protected.
- The legally binding treaty, if adopted, will safeguard global ocean health, climate resilience, socio-economic well-being and food security for millions of people.

### Sharing of MGRs:

- Member states discussed an important element under the treaty: The benefit sharing of marine genetic resources (MGRs).
- It includes marine plants, animals and microbes from areas beyond national jurisdiction.
- The element aims to address the inequalities in sharing benefits from samples, basic and applied research results as well as monetary benefit sharing from MGRs.

### What is the proposed UN High Seas treaty?

- Also referred to as the 'Paris Agreement for the Ocean', the treaty to deal with Biodiversity Beyond National Jurisdiction has been under discussion for several years.
- The proposed treaty concerns the ocean existing beyond the Exclusive Economic Zones that lie from the coast of a country to about 200 nautical miles or 370 km into the sea, till where it has special rights for exploration.

- Waters beyond that are known as open seas or high seas.
- The treaty was to be negotiated under the United Nations Convention on Laws of the Sea (UNCLOS) of 1982 which governs the rights of countries regarding marine resources.
- As there is no treaty for conserving the health of vast swathes of the earth's oceans, a UN resolution in 2017 had decided to rectify this while setting 2022 as the deadline.
- The pandemic resulted in many delays, and later, a High Ambition Coalition, which now has more than 100 countries including India, the US, and the UK, came about and put the focus on '30x30' goals – protecting 30% of the ocean by 2030. After the latest deadlock, talks will only resume next year, unless a special session is called.
- Some aspects of negotiations included establishing marine protected areas to put limits on certain activities, environmental impact assessments or clearances for sustainability of works, financial support to countries and sharing other scientific knowledge. The
- International Union for Conservation of Nature has said binding agreements are needed for this treaty to be effective.

#### **About United Nations Convention on Biological Diversity (CBD)**

- CBD is a legally binding Convention recognized for the first time, that the conservation of biological diversity is “a common concern of humankind” and is an integral part of the development process.
- The agreement covers all ecosystems, species, and genetic resources.

#### **Objectives:**

- The conservation of biodiversity
- Sustainable use of the components of biodiversity
- Sharing the benefits arising from the commercial and other utilization of genetic resources in a fair and equitable way
- It acknowledges that substantial investments are required to conserve biological diversity.

## SUNDARBANS

### In News:

Birders, wildlife enthusiasts and forest officials have sighted 145 different bird species during the first Sundarban bird festival.

### Analysis of Background:

- Two threatened bird species of the Sundarbans, Eurasian Curlew and Lesser Sand Plover, were also spotted. Birders were able to spot seven of the 12 species of kingfishers found in the Sundarbans.
- A publication by Zoological Survey of India, (ZSI) in 2021, had recorded 428 bird species in the Sundarbans which is one-third of all the avian species found in the country.
- Despite being home to so many species of birds the habitats face threats including plantation activity along the *chars*(river islands) which disturbs the birds, and illegal activities along *chars* and uninhabited islands.

### Sundarbans:

- The Sundarbans mangrove forest, one of the largest such forests in the world (140,000 ha), lies on the delta of the Ganges, Brahmaputra and Meghna rivers on the Bay of Bengal.
- It is adjacent to the border of India's Sundarbans World Heritage site inscribed in 1987.
- The site is intersected by a complex network of tidal waterways, mudflats and small islands of salt-tolerant mangrove forests, and presents an excellent example of ongoing ecological processes.
- The area is known for its wide range of fauna, including 260 bird species, the Bengal tiger and other threatened species such as the estuarine crocodile and the Indian python.
- The Sundarbans Reserve Forest (SRF) is the largest contiguous mangrove forest in the world.
- The Sundarbans is of universal importance for globally endangered species including the Royal Bengal Tiger, Ganges and Irawadi dolphins, estuarine crocodiles and the critically endangered endemic river terrapin (Batagur baska).
- It is the only mangrove habitat in the world for *Panthera tigris* species.



- The Sundarbans provides a significant example of on-going ecological processes as it represents the process of delta formation and the subsequent colonization of the newly formed deltaic islands and associated mangrove communities. These processes include monsoon rains, flooding, delta formation, tidal influence and plant colonization.
- As part of the world's largest delta, formed from sediments deposited by three great rivers; the Ganges, Brahmaputra and Meghna, and covering the Bengal Basin, the land has been moulded by tidal action, resulting in a distinctive physiology.

## TIGER RESERVES IN INDIA

### In News:

The Supreme Court on Wednesday banned all construction activities in the core areas of tiger reserves, national parks and wildlife sanctuaries after it was brought to its notice by a court-appointed panel that illegal constructions for establishment of a tiger safari was being done within in the buffer area of the Corbett Tiger Reserve in Uttarakhand.

### Analysis of Background:

- A bench sought response from the Centre and the NTCA on the recommendation of SC-appointed central empowered committee (CEC) to review guidelines for setting up of zoos and safaris within tiger reserves and wildlife sanctuaries in India in order to discourage tourism in wildlife habitat
- "The MoEF&CC to review norms issued under Forest (Conservation) Act, 1980 and Wildlife (Protection) Act, 1972 relating to setting up of zoos and safaris within tiger reserves and wildlife sanctuaries and amend the same so as to discourage use of wildlife habitat for wildlife tourism activities which are non site specific. Any approvals given for setting up of zoos and safaris within tiger reserves and protected areas are withdrawn forthwith..." CEC said.

### Tiger:

- Tiger (*Panthera tigris*) is the largest living cat species.
- It is an apex predator.
- Tiger cubs stay with their mother for about two years and then become independent, leaving their mother's home range to establish their own.
- Since the early 20th century, tiger populations have declined by at least 93%.

- Major reasons for population decline are habitat destruction, habitat fragmentation and poaching.
- Tigers are also victims of human-wildlife conflict, particularly in range countries with a high human population density.
- Today, the tiger's range is fragmented, stretching from Siberian temperate forests to subtropical and tropical forests on the Indian subcontinent, Indo-china and Sumatra.
- The tiger is listed as **Endangered on the IUCN Red List**.
- The tiger is the national animal of India, Bangladesh, Malaysia and South Korea.
- Protected under **schedule 1** of Wildlife Protection Act.
- As of 2019, **India's Tiger population stands at a total of 2967 which is 70% of the global tiger population**.
- India successfully fulfilled its target of doubling tiger numbers, made at St. Petersburg in 2010, much before the target year of 2022.
- **The Indian states with the Tiger population:**
  - Madhya Pradesh – 526
  - Karnataka – 524
  - Uttarakhand – 442
  - Maharashtra – 312

#### **Tigers in India:**

- India's strategy of tiger conservation attaches topmost importance to involving local communities.
- India is home to over 70% of the tiger population globally.
- India is home to 53 tiger reserves and the last tiger census of 2018 showed a rise in the tiger population.
- India achieved the target of doubling of tiger population four years ahead of schedule of the St. Petersburg Declaration on tiger conservation.
- National assessment for the "Status of Tigers, Co-predators, Prey and their Habitat" is conducted once in every four years. The methodology used for this assessment was approved by the Tiger Task Force in 2005. The first assessment based on this scientific methodology was done in 2006 and subsequently in 2010, 2014 and 2018.
- The fourth cycle of National tiger status assessment of 2018-19 is the most accurate survey conducted.

### **Project Tiger:**

- This tiger conservation programme launched in April 1973 by the Government of India during Prime Minister Indira Gandhi's tenure.
- Aim: Ensuring a viable population of Bengal tigers in their natural habitats, protecting them from extinction, and preserving areas of biological importance as a natural heritage
- From 9 tiger reserves since its formative years, the Project Tiger coverage has increased to 50 at present, spread out in 18 of our tiger range states.
- The tiger reserves are constituted on a core/buffer strategy.
- Core areas are the legal status of a national park or a sanctuary.
- Whereas, buffer or peripheral areas are a mix of forest and non-forest land, managed as a multiple use area.
- The government has set up a Tiger Protection Force to combat poachers and funded relocation of villagers to minimize human-tiger conflicts.

### **NTCA:**

**National Tiger Conservation Authority** was established in 2005 following a recommendation of the Tiger Task Force, to reorganise management of Project Tiger and the many Tiger Reserves in India. It is the overarching body for conservation of tigers in India.

### **Structure of NTCA:**

- **Environment Minister is the Chairman of the NTCA.**
- Below chairman are eight experts or professionals having qualifications and experience in wildlife conservation and welfare of people including tribals, apart from three Members of Parliament (1 Rajya Sabha, 2 Lok Sabha).
- The Inspector General of Forests, in charge of project Tiger, serves as ex-officio Member Secretary.

### **Functions:**

- Its main administrative function is to approve the Tiger Conservation Plan prepared by the State Governments and then evaluate and assess various aspects of sustainable ecology and disallow any ecologically unsustainable land use such as, mining, industry and other projects within the tiger reserves.

- As per the WLPA, every State Government has the authority to notify an area as a tiger reserve.
- However, the Tiger Conservation Plans sent by state government need to be approved by the NTCA first.
- Alternatively, Central Government via NTCA may advise the state governments to forward a proposal for creation of Tiger Reserves.

**Other Functions of NTCA are as follows:**

- Regulation and standardization of tourism activities
- Provide for management focus and measures for addressing conflicts of men and wild animals.
- Provide information on protection measures.
- Ensure that the tiger reserves and areas linking one protected area or tiger reserve with another protected area or tiger reserve are not diverted for ecologically unsustainable uses, except in public interest and with the approval of the National Board for Wild Life and on the advice of the Tiger Conservation Authority.
- Facilitate and support the tiger reserve management in the State.
- Ensure critical support including scientific, information technology and legal support for better implementation of the tiger conservation plan.
- TX2 stands for “Tigers times two”, signalling the goal to double the population of wild tigers by 2022.
- India and Bhutan are among 13 countries working towards TX2, a goal that the World Wildlife Fund(WWF) had set through the Global Tiger Initiative, Global Tiger Forum and other critical platforms.
- The number of the striped cat in the Indian Manas increased from nine in 2010 to 25 in 2018 while that in the Bhutan Manas more than doubled from 12 in 2008 to 26 in 2018.

**Global Tiger Initiative (GTI):**

- The Global Tiger Initiative (GTI) was launched in 2008 as a global alliance of governments, international organizations, civil society, the conservation and scientific communities and the private sector, with the aim of working together to save wild tigers from extinction.
- In 2013, the scope was broadened to include Snow Leopards.

- The GTI's founding partners included the World Bank, the Global Environment Facility (GEF), the Smithsonian Institution, Save the Tiger Fund, and International Tiger Coalition (representing more than 40 non-government organizations).
- The initiative is led by the 13 tiger range countries (TRCs).

#### **Global Tiger Forum:**

- The Global Tiger Forum (GTF) is the only inter- governmental international body established with members from willing countries to embark on a global campaign to protect the Tiger.
- The GTF was formed in 1993 on recommendations from an international symposium on Tiger Conservation at New Delhi, India.
- The GTF is focused on saving the remaining 5 sub-species of Tigers distributed over 13 Tiger Range countries of the world.

#### **TX2 Conservation Excellence Award:**

- TX2 is the global award, which was set up in 2010 in St. Petersburg, Russia by international organizations working for tiger conservation like UNDP, Global Tiger Forum, International Union for Conservation of Nature, World Wide Fund for Nature, Conservation Assured/Tiger Standards and the Lion's Share.
- The TX2 awards include a financial grant to assist ongoing conservation.
- The award recognises a site that has achieved excellence in two or more of five themes:
  - Tiger and prey population monitoring and research (tiger translocation/prey augmentation);
  - effective site management;
  - enhanced law enforcement,
  - protection and ranger welfare improvement;
  - community-based conservation,
  - benefits and human-wildlife conflict mitigation and habitat and prey management.

## VERMIN

### In News:

The Wildlife Institute of India (WII) is working to develop immuno-contraceptive measures for population management of species that have become problematic for humans in many parts of the country.

### Analysis of bAckground:

- The new measures will be able to reduce reproduction in the species by making the female sterile. This will be done by injecting a vaccine made from a hormone derived from the ovary lining of pigs.
- The Union Ministry of Environment, Forests and Climate Change (MoEF&CC) approved the 10-year research project for developing the immuno-contraception in 2016.
- The MoEF&CC had approved a project of Rs 10.65 crore for WII, Dehradun, to put an end to this problem.
- The project deals with population management of species involved in human-wildlife conflict.
- It includes a study on immune-contraceptive measures for population management of four species namely elephant, wild pig, Rhesus macaque and Nilgai.

### Need:

- Nilgai antelope and wild boar have become a menace in many areas of India, destroying crops and causing human-animal conflict.
- In May 2022, the forest department of Kerala gave permission for the culling of wild boar while Bihar went ahead with the same for Nilgai and wild boar in August after it was found that the two animals had become a menace for locals and were leading to destruction of life and property.

### WPA 1972:

- The Wildlife (Protection) Act, 1972, states that the central government can “declare any wild animal other than those specified in Schedule I and Part II of Schedule II to be vermin for any area and for such period as may be specified therein and so long as such notification is in force, such wild animal shall be deemed to have been included in Schedule V.”

### **The vermin conflict:**

- The damage to the national economy due to crop depredation by wild animals has never been computed. But for lakhs of farmers around India's many protected forests, it is the biggest challenge to livelihood (not to mention the occasional threat to life).
- Since 1972, the WLPA has identified a few species — fruit bats, common crows and rats — as vermin.
- Killing animals outside this list was allowed under two circumstances:
- Under Section 62 of WLPA, given sufficient reasons, any species other than those accorded the highest legal protection (such as tigers and elephants but not wild boars or nilgais) can be declared vermin at a certain place for a certain time.
- Under Section 11 of WLPA, the chief wildlife warden of a state can allow the killing of an animal, irrespective of its status in the Schedules, if it becomes “dangerous to human life”.
- The state governments took the decisions under Section 62 until 1991 when an amendment handed over the powers to the Centre.
- The purpose was apparently to restrict the possibility of eliminating a large number of animals at a species level as vermin. Under Section 11, the states could issue culling permits only locally and for a few animals.
- In recent years, however, the Centre has started using its powers under Section 62 to issue sweeping orders declaring species as vermin at even state levels, often without any credible scientific assessment.
- For example, nilgais were declared as vermin across 20 districts in Bihar for a year in 2015. The Centre cited “large-scale destruction of agriculture” as the ground for declaring monkeys (Rhesus macaque) vermin in Shimlamunicipality in 2019.
- The issue has since entered the realm of centre-state politics. Since last year, Kerala's requests for declaring wild boars as vermin have been turned down repeatedly by the Environment ministry.
- That is why the House was divided on the issue, with members from Kerala highlighting the growing number of wild boar attacks in the state, and others seeking a more tempered and scientific approach in declaring a species as vermin.

**WII:**

- The Wildlife Institute of India (WII) is an autonomous natural resource service institution established in 1982 under the Ministry of Environment Forest and Climate change, Government of India.
- WII carries out wildlife research in areas of study like Biodiversity, Endangered Species, Wildlife Policy, Wildlife Management, Wildlife Forensics, Spatial Modeling, Ecodevelopment, Ecotoxicology, Habitat Ecology and Climate Change.
- WII has a research facility which includes Forensics, Remote Sensing and GIS, Laboratory, Herbarium, and an Electronic Library.
- The founder director was V. B. Saharia while the first Director was Hemendra Singh Panwar who remained the director from 1985 to 1994.
- Trained personnel from WII have contributed in studying and protecting wildlife in India.
- The national tiger census or the All India Tiger Estimation, is done by WII along with NTCA and state forest departments.
- The institute is based in Dehradun, India. It is located in Chandrabani, which is close to the southern forests of Dehradun. It is close to Rajaji National Park.
- The training of the direct recruits of the India Forest Service Officers and also those who are recruited as the State Forest Officers is done here itself.

**BHARATPUR SANCTUARY****In News:**

The Rajasthan state Forest Department has proposed to construct a zoo inside Keoladeo National Park, a World Heritage Site popularly known as Bharatpur bird sanctuary, to display a range of wetland species, including rhinos, water buffaloes, crocs, dolphins and exotic species.

**Analysis of Background:**

- The purpose of this zoo, called Wetland ex-situ Conservation Establishment (WESCE), says the Detailed Project Report (DPR) of the Rajasthan Forestry and Biodiversity Development Project (RFBDP), is “to rejuvenate the bio-diversity of Keoladeo National Park, thereby boosting its outstanding universal values.”



- The Rs 15-crore WESCE plan for Bharatpur is part of the ambitious RFBDP for which Agence Française de Développement (AFD), the overseas development arm of the French government, has agreed to fund up to Rs 1,200 crore over eight years.

### **Bharatpur Sanctuary:**

- Formerly known as the Bharatpur Bird Sanctuary, the Keoladeo National Park is recognised as one of the world's most important bird breeding and feeding grounds.
- It originated in as a royal hunting reserve during the 1850s and was a game reserve for Maharajas and the British.
- In fact, Lord Linlithgow, Viceroy of India from 1936 to 1943, shot over thousands of ducks with his hunting party in a single day!
- In 1982, Keoladeo was declared a national park and then later listed as a World Heritage Site by UNESCO in 1985.
- The park is home to over 370 species of birds and animals such as the basking python, painted storks, deer, nilgai and more.
- Noted Indian ornithologist and naturalist Salim Ali used his influence to garner government support to create Keoladeo National Park.
- It was also known as the breeding ground for the rare and elusive to spot Siberian crane

## **YAYA TSO**

### **In News:**

Yaya Tso, known as birds' paradise for its beautiful lake located at an altitude of 4,820 metres, has been proposed as Ladakh's first biodiversity heritage site (BHS)

### **Analysis of Background:**

- Yaya Tso to become Ladakh's first biodiversity heritage site
- The proposed Yaya Tso site will have an approximate area of 60 square kilometers, which will also include the lake's watershed, and is among the most beautiful lakes in Ladakh.
- The Biodiversity Management Committee, the panchayat of Chumathang village, along with SECURE Himalaya Project recently resolved to declare Yaya Tso as Ladakh's first BHS under the Biological Diversity Act.
- Yaya Tso is a nesting habitat for a large number of birds and animals, such as the bar-headed goose, black-necked crane and brahminy duck, the officials said, adding it also

has the distinction of being one of the highest breeding sites of the black-necked crane in India.

- What are Biological Diversity Heritage Sites?
- Biodiversity Heritage Sites (BHS) are areas that are unique, ecologically fragile ecosystems having rich biodiversity comprising of any one or more of the components such as; species richness, high endemism, presence of rare, endemic and threatened species, keystone species, species of evolutionary significance, wild ancestors of domestic/cultivated species or land races or their varieties, past pre-eminence of biological components represented by fossil beds and having cultural or aesthetic values.

#### **Importance of Biological Diversity Heritage Sites:**

- Biodiversity is closely linked to ecological security.
- Loss of biodiversity and bioresources show an increasing trend mainly due to human activities. Therefore, it is necessary to instil and nurture conservation ethics in the community.
- Declaration of Biodiversity Heritage Sites is a welcome step which will exhibit the conservation ethics and values practiced by these societies to the wider world.
- Such declaration will help them renew their commitment to conservation besides acting as a model for other communities to follow. This is a small but important step that a community can take towards protecting the environment and ensuring sustainability of bio-resources across generations.
- BHS declaration marks the voluntary participation of communities in protection and conservation of biodiversity which helps in expanding the reach of conservation.

#### **Section 37 of the Biological Diversity Act:**

- As per this section, the State Governments are empowered to notify in the official gazette, in consultation with 'local bodies', areas of biodiversity importance as Biodiversity Heritage Sites.
- Under sub section (2) of Section 37 of the BD Act, the State Government in consultation with the Central Government may frame rules for the management and conservation of BHS.

- Under sub section (3) of Section 37 of the BD Act, the State Governments are empowered to frame schemes for compensating or rehabilitating any person or section of people economically affected by such notification.

**Criteria for Identification of BHS:**

- Areas having any of the following characteristics, may qualify for inclusion as BHS.
- Areas that contain a mosaic of natural, semi-natural, and manmade habitats, which together contain a significant diversity of life forms.
- Areas that contain significant domesticated biodiversity component and/or representative agro-ecosystems with on-going agricultural practices that sustain this diversity.
- Areas that are significant from a biodiversity point of view as also important cultural spaces such as sacred groves/trees and sites, or other large community conserved areas.
- Areas including very small ones that offer refuge or corridors for threatened and endemic fauna and flora, such as community conserved areas or urban greens and wetlands.
- Areas that provide habitats, aquatic or terrestrial, for seasonal migrant species for feeding and breeding.
- Areas that are maintained as preservation plots by the research wing of Forest department.
- Medicinal Plant Conservation Areas.

**Identification and Declaration of BHS:**

State Biodiversity Boards (SBB) may invite suggestion (or consider those already coming from communities) for declaration of BHSs, through the Biodiversity Management Committees (BMCs) and other relevant community institutions.

## CONSERVATION INITIATIVES IN THE BUDGET

### In News:

Finance Minister Nirmala Sitharaman's budget speech introduced schemes and policies aimed at ecological conservation.

### Analysis of Background:

#### MISHTI (Mangrove Initiative for Shoreline Habitats & Tangible Incomes)

- MISHTI is a new programme that will facilitate mangrove plantation along India's coastline and on salt pan lands.
- The programme will operate through "convergence between MGNREGS, Campa Fund and other sources".
- This new programme will aim at intensive afforestation of coastal mangrove forests.
- India has such forests on both its Eastern and Western coasts with the Sundarbans in Bengal being one of the largest mangrove forests on the planet.

#### PM PRANAM (Prime Minister Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth):

- This programme will seek to incentivise states and union territories promoting alternative fertilisers and the balanced use of chemical fertilisers.
- The programme aims to ultimately bring down the government's subsidy burden, which is estimated to reach Rs 2.25 lakh crore in 2022-23: 39 per cent higher than last year's figure of Rs 1.62 lakh crore.

#### Bhartiya Prakritik Kheti Bio-Input Resource Centres

- To further facilitate the adoption of "natural farming," 10,000 Bio-Input Resource Centres will be set-up, creating a national-level distributed micro-fertiliser and pesticide manufacturing network.
- This will impact over 1 crore farmers over the next three years, the finance minister said in her speech.

#### Amrit Dharohar

- This is a scheme that will be implemented over the next three years to encourage optimal use of wetlands, and enhance bio-diversity, carbon stock, eco-tourism opportunities and income generation for local communities.

- Amrit Dharohar will emphasise on the importance of wetlands and their preservation, with an outlook that is inclusive of local communities as caretakers of the ecosystem.

## BLACK-NECKED STORK

### In News:

The black-necked stork was recorded for the second consecutive year in Porbandar, while two tagged demoiselle cranes were also sighted during a two-day bird count that concluded in Porbandar

### Analysis of Background:

- BNS (*Ephippiorhynchus asiaticus*) is categorised as a near-threatened species on the Red List of the International Union for Conservation of Nature (IUCN) due to its declining population trend globally largely on account of habitat loss.
- It is considered a rare bird in Gujarat due to its small population size.
- The Khijadiya Bird Sanctuary near Jamnagar and the Marine National Park along the coast of Jamnagar and Devbhumi Dwarka district harbour the largest population of BNS in Gujarat.
- The species has been breeding successfully in Khijadiya, a Ramsar site, as well as in the coastal wetland area.
- Birds of this species are also sighted in Bharuch, Vadodara, Polo Forest in Sabarkantha and Kutch. They are also occasionally sighted at Nal Sarovar Bird Sanctuary, another Ramsar site, in the state.
- Porbandar is a major wintering ground for the demoiselle crane population that breeds in central Asia.

### About black-necked stork:

- The black-necked stork (*Ephippiorhynchus asiaticus*) belongs to the family Ciconiidae.
- The black-necked stork is distributed in the Indian Subcontinent, Southeast Asia and Australia.
- There are two subspecies of these birds. The subspecies *E. a. asiaticus* occurs in Pakistan, India, Nepal and Sri Lanka. The subspecies *E. a. australis* occurs in New Guinea, and Australia.
- They are large birds, measuring 110 to 140 cm in length and weighing 4,000 grams. The male and female birds look alike. Their wingspan is 190 to 220 cm. Their height is between 120 to 150 cm.

- These storks inhabit marshes, wetlands, lakes, flooded grasslands, swamps, rivers and water meadows. They feed on fish, frogs and snakes. They breed during August to January in India.

## **KAWAL TIGER RESERVE**

### **In News:**

More than 340 birds of different species, including the rare peregrine falcon, were enumerated in the water bodies inside the core area of the Kawal Tiger Reserve during the Asian Water Bird Census (AWC) 2023

### **Analysis of Background:**

- Kawal Tiger Reserve is a nature preserve located at Jannaram mandal of Mancherial District (Old Adilabad district) in the Telangana state of India.
- The government of India declared Kawal Wildlife Sanctuary to be a Tiger Reserve in 2012.
- The reserve is the oldest sanctuary in the northern Telangana region of the state. It is well known for its abundant flora and fauna.
- This sanctuary is catchment for the rivers Godavari and Kadam, which flow towards the south of the sanctuary.
- The KWS was established in 1965 and later declared as a Protected Area (PA) in 1999 under the WPA, 1972.
- The sanctuary is one of the richest teak forests in the state, with dense pristine areas free of human disturbance.
- Dry deciduous teak forests mixed with bamboo, terminalia, pterocarpus, anogeissus and cassias.

### **Peregrine Falcon:**

- Peregrine in Latin is peregrinus, which means traveler or wanderer.
- Peregrine Falcons are well known for their long fall and spring migration flights to and from their nesting places and wintering habitats.
- The Peregrine Falcon belongs to the genus Falco, which is characterized by long pointed wings.

- The word Falco comes from falx, the Latin word for sickle (a curved blade used for harvesting) -- referring to the distinct sickle-shaped silhouette of the Peregrine Falcon's extended wings in flight.
- The Peregrine Falcon uses its notched beak to kill prey by severing the spinal column at the neck. The notched beak is unique to this species.
- The Peregrine Falcon is crow-sized and weighs just over two pounds. Its wing span is about three feet. Females are generally 15 to 20 percent larger than males and can weigh 40 to 50 percent more than males.
- Apart from their size, male and female Peregrine Falcons are identical in appearance. Immature peregrines are buff-colored in front and have dark brown backs. Adults are white or buff in front and bluish grey on their backs.
- Adults have bluish grey upper parts, and whitish or buffy under parts with black spotting or barring. They also have a blackish malar stripe or mustache, usually set off by pale buff-colored cheeks.

## RED SANDERS

### In News:

The CITES trade database has recorded 28 incidents of red sanders confiscation, seizure and specimens from the wild being exported from India, a fact sheet prepared by TRAFFIC, a global wildlife trade monitoring organisation has revealed.

### Analysis of Background:

- These consignments were exported to China (53.5%), Hong Kong (25.0%), Singapore (17.8%) and the United States of America (3.5%) from 2016 to 2020.

#### THE COST AND THE CRIME

##### PRECIOUS COMMODITY

- Red Sanders — *Pterocarpus santalinus* — is a tree species native to Andhra Pradesh's Chittoor, Kadapa, Kurnool, Nellore & Prakasam districts
- The tree is on the endangered species list. Extraction of live trees is prohibited
- The brick red wood has immense value in countries like Japan, China and Myanmar where it is also used to make expensive furniture and musical instruments
- Smuggled wood is sent by land route through the Northeast states to Myanmar and by sea route to Singapore and Dubai
- In a recent auction, one tonne of

A-grade logs were sold for ₹1.9 crore. Most of the wood is of B-and C-grades, valued at ₹55 lakh and ₹25 lakh, respectively

- In November 2014, AP earned ₹900 crore by auctioning 2,600 tonne of seized wood
- Bidders from China, Hong Kong, Singapore & Japan took part. Yoga guru Ramdev's Patanjali Yogpeeth also bought the wood, for 'medicinal purposes'
- Second batch auctioning of 3,500 tonne planned for June 17.

##### WELL-OILED NETWORK

- The smuggling racket operates from forest villages to international markets
- An order placed from abroad is

communicated through middlemen to the local operator, who then calls the foreman who supplies the wood-cutters from TN

- Labourers are brought in trains or buses and, in the dark of the night, walk long distances to the heart of the forests where the trees are found
- Lower level forest officials guide them to the right patches
- The logs are chipped, cured and then loaded onto vehicles, concealed in rice husk, watermelons, oil tankers and even ambulances
- Red sanders smuggling involves various independent gangs. Often, it's the turf war that leads to a leak in information and the busting of a network.

### **About the CITES:**

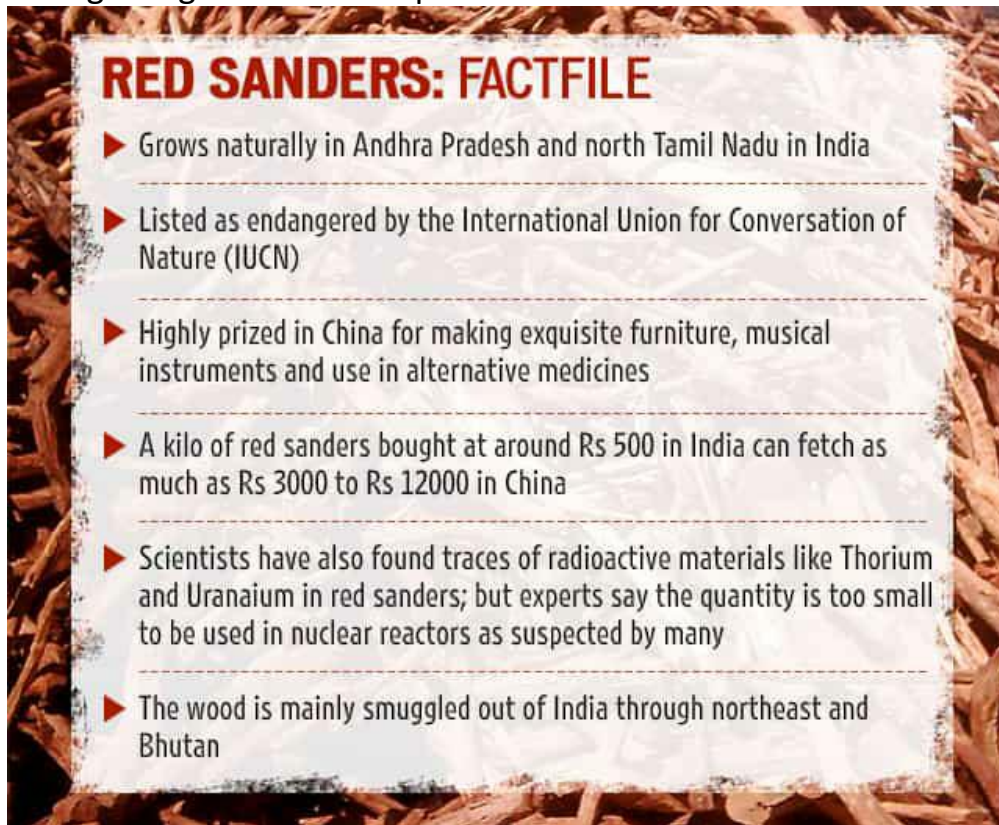
- Also known as the Washington Convention, CITES is an international agreement (Secretariat - Geneva, Switzerland) between governments to ensure that international trade in wild animals and plants does not threaten the survival of the species.
- It was drafted at a meeting of members of the International Union for Conservation of Nature (IUCN) in 1963.
- The convention was opened for signature (in Washington D.C.) in 1973 and CITES entered into force on 1 July 1975.
- With 184 Parties today (India since 1976), CITES is one of the conservation treaties with the most members.
- Although CITES is legally binding on the Parties (meaning they must implement the Convention), it does not replace national legislation.
- Under CITES, plant and animal specimens are classified into three categories (Appendices) based on the threat to their extinction.
- The Convention requires countries to regulate the trade of all listed specimens of wild animals and plants through permits and also seeks to regulate the possession of live animal specimens.

### **About Red Sanders (Red Sandalwood):**

- The species, *Pterocarpus santalinus*, is an Indian endemic tree species.
- Geographical range: restricted in the Eastern Ghats. It is endemic to a distinct tract of forests in Andhra Pradesh
- Protection status: 'Endangered' category in the International Union for Conservation of Nature's (IUCN) Red List.
- Uses:
- known for their rich hue and therapeutic properties.
- Are high in demand across Asia, particularly in China and Japan, for use in cosmetics and medicinal products as well as for making furniture, woodcraft and musical instruments.
- Why its status is downgraded?
- Threats: Over-exploitation and smuggling.
- Natural causes:



- Slow growth of the species and continued harvesting leaves no time for recovering naturally
- Cattle grazing and invasive species.



## WORLD WETLAND DAY

### In News:

The State Governments and Union Territory administrations celebrated World Wetlands Day (WWD) at all 75 Ramsar sites this year with over 200 events.

### Analysis of Background:

#### About World Wetlands Day:

- The World Wetlands Day is observed on 2<sup>nd</sup> February every year all over the world to commemorate the signing of Ramsar Convention on Wetlands of International Importance in 1971.
- India is a party to the Convention since 1982 and has so far declared 75 wetlands as Ramsar sites covering 23 states and Union Territories.
- The 2023 theme for World Wetlands Day is 'Wetland Restoration' which highlights the urgent need to prioritize wetland restoration.

- It is a call on an entire generation to take proactive action for wetlands, by investing financial, human and political capital to save the wetlands from disappearing and to revive and restore those that have been degraded.

### **Wetlands:**

- Wetlands, according to the Environment Ministry, are an “area of marsh, fen, peatland or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres, but does not include river channels, paddy fields, human-made water bodies/ tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes.”
- Wetlands are locations where water plays a major role in regulating the environment and the plant and animal life that exists there.
- They happen where the water table is at or near the earth's surface, or where the land is flooded.
- "Lands transitioning between terrestrial and aquatic eco-systems where the water table is generally at or near the surface or the land is covered by shallow water," according to the definition of wetlands.

### **Types of wetlands**

#### **Coastal Wetlands:**

- Coastal wetlands include shorelines, beaches, mangroves, and coral reefs, which are situated between land and open sea and are not impacted by rivers.
- Mangrove wetlands, which may be found in protected tropical coastal locations, are an excellent example.

#### **Shallow Lakes and Ponds:**

- Shallow lakes and ponds are wetlands with limited flow and are made up of permanent or semi-permanent bodies of water.
- Vernal ponds, spring pools, salt lakes, and volcanic crater lakes are among them.

#### **Marshes:**

- These are characterised by herbaceous (non-woody) flora suited to wet soil conditions and are occasionally saturated, flooded, or ponded with water.
- Tidal marshes and non-tidal marshes are the two types of wetlands.

**Swamps:**

- These are dominated by trees and shrubs and are predominantly nourished by surface water supplies.
- Swamps can be found in floodplains that are either freshwater or saltwater.

**Bogs:**

- Bogs are wet peatlands found in historic lake basins or landscape depressions. Rainfall provides almost all of the water in bogs.

**Estuaries:**

- The area where rivers meet the sea and the water transforms from fresh to salt may be home to a diverse range of wildlife.
- Deltas, tidal mudflats, and salt marshes are among the wetlands.

**What is the importance of wetlands?**

- Wetlands are extremely productive ecosystems that account for about two-thirds of the world's fish catch.
- Wetlands play a crucial part in the watershed's ecosystem. The combination of shallow water and high nutrient levels is perfect for the growth of creatures that serve as the foundation of the food web, feeding a variety of fish, amphibians, shellfish, and insects. Wetlands are extremely productive ecosystems that account for about two-thirds of the world's fish catch.
- Microbes, plants, and wildlife in wetlands play a role in world water, nitrogen, and sulphur cycles. Instead of releasing carbon dioxide into the sky, wetlands retain it in their plant communities and soil.
- Wetlands serve as natural barriers that capture and release surface water, rain, snowmelt, groundwater, and flood waters throughout time. Wetland vegetation also lowers soil erosion and slows the pace of flood flows, decreasing flood heights.
- Wetlands are essential for human and environmental survival. More than one billion people rely on them for a living, and wetlands are home to 40% of the world's biodiversity.
- Food, raw materials, genetic resources for pharmaceuticals, and electricity are all dependent on wetlands.
- They are vital in transportation, tourism, and people's cultural and spiritual well-being.
- They offer habitat for animals and plants, and many of them sustain a diverse range of life, including species and animals found nowhere else.

- Many wetlands are natural wonders that attract tourists, and many are significant to Aboriginal people.
- Wetlands also have a lot of advantages for industry. They are important to the commercial and recreational fishing sectors because they serve as nurseries for fish and other freshwater and marine species.

### **What are the threats to wetlands?**

- Wetlands near metropolitan areas are increasingly being developed for residential, industrial, and commercial purposes. Urban wetlands are critical for the long-term sustainability of public water sources.
- Paddy fields have been planted across vast swaths of marshes. The hydrology of the adjoining wetlands was considerably affected by the construction of a vast number of reservoirs, canals, and dams to supply irrigation.
- Natural water filters are found in wetlands. They can only clean up fertilisers and pesticides from agricultural runoff; they can't clear up mercury from industrial sources or other forms of contamination.
- Increased air temperature, precipitation changes, higher storm, drought, and flood frequency, increased atmospheric carbon dioxide concentration, and sea level rise might all have an impact on wetlands.
- Material is removed from a marsh or riverbed. Dredging of streams lowers the water table in the area and dries off nearby wetlands.
- Wetlands are drained by digging canals into the earth that collect and convey water away from the area. The water table is lowered, and the wetland is dried off.
- Exotic imported plant species such as water hyacinth and salvinia pose a threat to Indian wetlands. They block up rivers and crowd out native plants.

### **Ramsar Sites:**

- India's Ramsar wetlands are spread over 11,000 sq.km — around 10% of the total wetland area in the country — across 18 States.
- No other South Asian country has as many sites, though this has much to do with India's geographical breadth and tropical diversity.
- The U.K. (175) and Mexico (142) — smaller countries than India — have the most Ramsar sites, whereas Bolivia spans the largest area with 1,48,000 sq.km under the Convention protection.

- Being designated a Ramsar site does not necessarily invite extra international funds, but the States — and the Centre — must ensure that these tracts of land are conserved and spared from encroachment.
- Acquiring this label also helps with a locale's tourism potential and its international visibility.
- Until 1981, India had 41 Ramsar sites, though the past decade has seen the sharpest rise —13 — in designating new sites.
- To be Ramsar site, however, it must meet at least one of nine criteria as defined by the Ramsar Convention of 1961, such as supporting vulnerable, endangered, or critically endangered species or threatened ecological communities or, if it regularly supports 20,000 or more waterbirds or, is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks are dependent upon.
- The National Wetland Inventory and Assessment compiled by the ISRO estimates India's wetlands to span around 1,52,600 square kilometres.

#### **More on Details:**

- Any wetland site which has been listed under the Ramsar Convention that aims to conserve it and promote sustainable use of its natural resources is called a Ramsar Site.
- Ramsar Convention is known as the Convention of Wetlands. It was established in 1971 by UNESCO and came into force in 1975.
- India is a party to the Ramsar Convention. India signed under it on 1st February 1982.
- There are 75 Ramsar Sites in India
- Sundarbans is the largest Ramsar Site of India
- Chilika Lake (Orissa) and Keoladeo National Park (Rajasthan) were recognized as the first Ramsar Sites of India
- Uttar Pradesh has the most number of Ramsar Sites in India.
- Renuka Wetland in Himachal Pradesh is the smallest wetland of India.

## TOPIC: SCIENCE AND TECH

### CAR T CELL THERAPY

#### In News:

Recently, the researchers have said that India's first indigenously developed Chimeric Antigen Receptor (CAR)-T Cell T therapy for specific types of cancer patients has shown promising results and could be the safest therapy in this category so far.

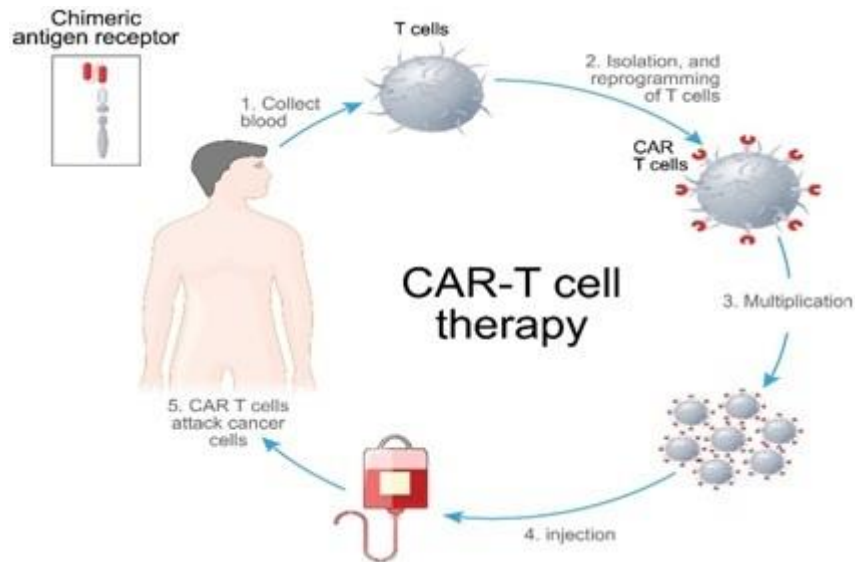
#### Analysis of Background:

- The three major forms of treatment for any cancer are surgery (removing the cancer), radiotherapy (delivering ionizing radiation to the tumour), and systemic therapy (administering medicines that act on the tumour).
- Surgery and radiotherapy have been refined significantly over time whereas advances in systemic therapy have been unparalleled.
- A new development on this front, currently holding the attention of many researchers worldwide, is the CAR T Cell therapy
- Systemic therapy's earliest form was chemotherapy; when administered, it preferentially acts on cancer cells because of the latter's rapid, unregulated growth and poor healing mechanisms. Chemotherapeutic drugs have modest response rates and significant side effects as they affect numerous cell types in the body. The next stage in its evolution was targeted agents, also known as immunotherapy. Here the drugs bind to specific targets on the cancer or on the immune cells that help the tumour grow or spread. This method often has fewer side effects as the impact on nontumour cells is limited. However, it is effective only against tumours that express these targets.
- Unlike chemotherapy or immunotherapy, which require mass-produced injectable or oral medication, CAR T cell therapies use a patient's own cells. They are modified in the laboratory to activate T cells, a component of immune cells, to attack tumours. These modified cells are then infused back into the patient's bloodstream after conditioning them to multiply more effectively. The cells are even more specific than targeted agents and directly activate the patient's immune system against cancer, making the treatment more clinically effective. This is why they're called 'living drugs'

#### What is CAR T Cell Therapy?

Chimeric antigen receptor T cells are T cells that have been genetically engineered to produce an artificial T-cell receptor for use in immunotherapy. Chimeric antigen receptors are receptor proteins that have been engineered to give T cells the new ability to target a specific protein.

- An 11-year-old has become the first patient to receive CAR-T therapy (immunotherapy) that uses the body's own cells to fight cancer.
- CAR-T is a personalized form of cancer treatment.



- CAR-T involves removing immune cells and modifying them in a laboratory so they can recognize cancer cells.
- Immunotherapy is treatment that uses your body's own immune system to help fight cancer.
- First, the patient has blood removed and the white blood cells are separated out, with the rest of the blood being returned to the patient.
- A harmless virus is used to insert genes into T-cells, a special type of immune cell.
- These genes cause the T-cells to add a hook on to their surface, known as a chimeric antigen receptor (CAR).
- These engineered CAR-T cells – programmed to recognize and destroy the patient's cancer cells – are multiplied in huge numbers and then infused back into the patient.

### Where is it used?

- As of today, CAR T cell therapy has been approved for leukemias (cancers arising from the cells that produce white blood cells) and lymphomas (arising from the lymphatic system).
- These cancers occur through the unregulated reproduction of a single clone of cells, that is, following the cancerous transformation of a single type of cell, it produces millions of identical copies. As a result, the target for CAR T-cells is consistent and reliable.
- CAR T cell therapy is also used among patients with cancers that have returned after an initial successful treatment or which haven't responded to previous combinations of chemotherapy or immunotherapy. Its response rate is variable. In certain kinds of leukemias and lymphomas, the efficacy is as high as 90%, whereas in other types of cancers it is significantly lower. The potential side effects are also significant, associated with cytokine release syndrome (a widespread activation of the immune



system and collateral damage to the body's normal cells) and neurological symptoms (severe confusion).

### **Cellular therapy (CT):**

It is the transplantation of human cells to replace or repair damaged tissue and/or cells. With new technologies, innovative products, and limitless imagination, many different types of cells may be used as part of a therapy or treatment for a variety of diseases and conditions.

## **GEOMAGNETIC STORM**

### **In News:**

- A Geomagnetic Storm is on the way, which could potentially destroy electronics, cause power grid failures and more on Earth.
- An X2-class solar flare erupted on a freshly formed sunspot AR3229 just days ago on February 17. This flare was hurled out in the Earth's direction by the Sun and has been travelling towards the planet.
- Experts now expect this solar flare to reach Earth today and it could spark a dangerous Geomagnetic storm.

### **Analysis of Background:**

#### **Solar storms/flares**

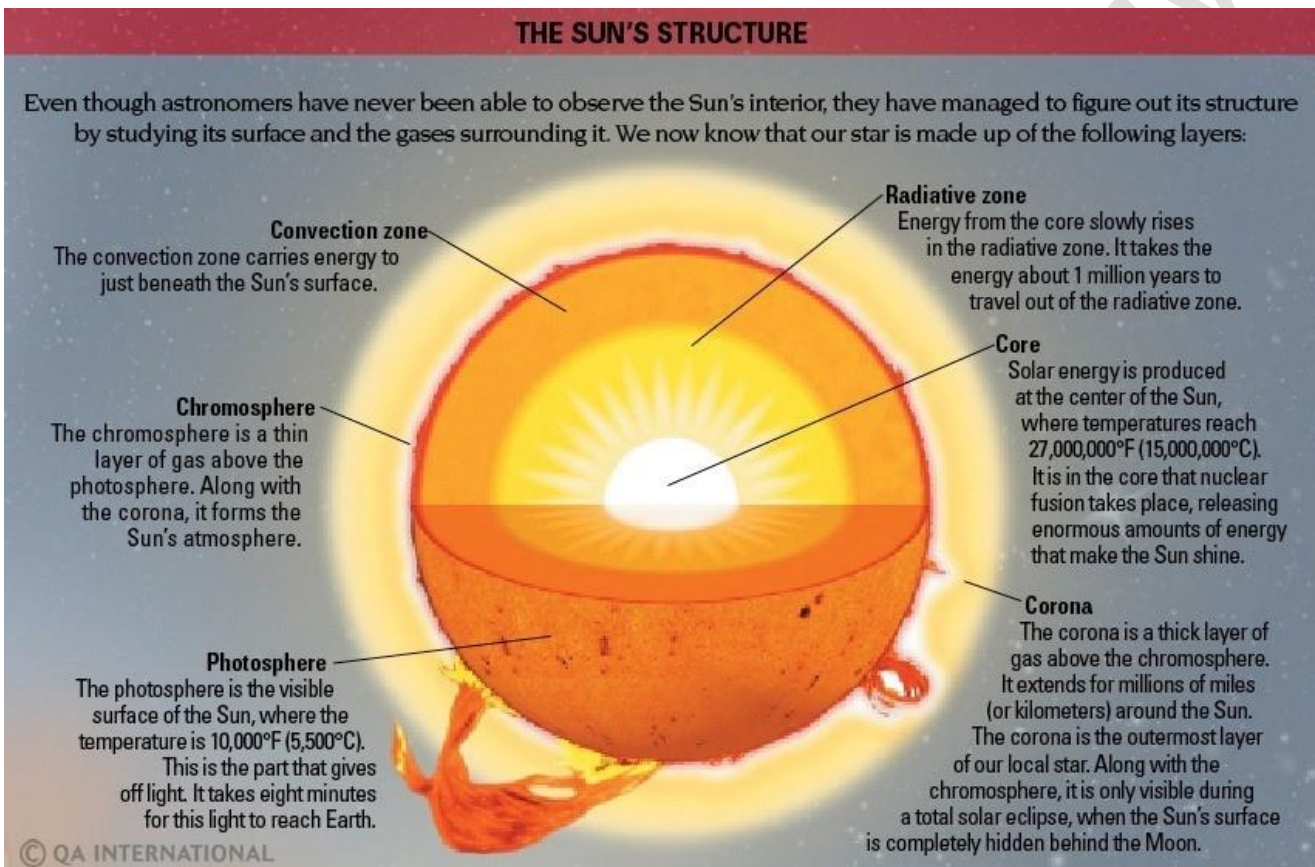
- About: Solar storms are magnetic plasma ejected at great speed from the solar surface.
- Occurrence: They occur during the release of magnetic energy associated with sunspots ('dark' regions on the Sun that are cooler than the surrounding photosphere), and can last for a few minutes or hours.

#### **Impact of Solar Flares on Earth**

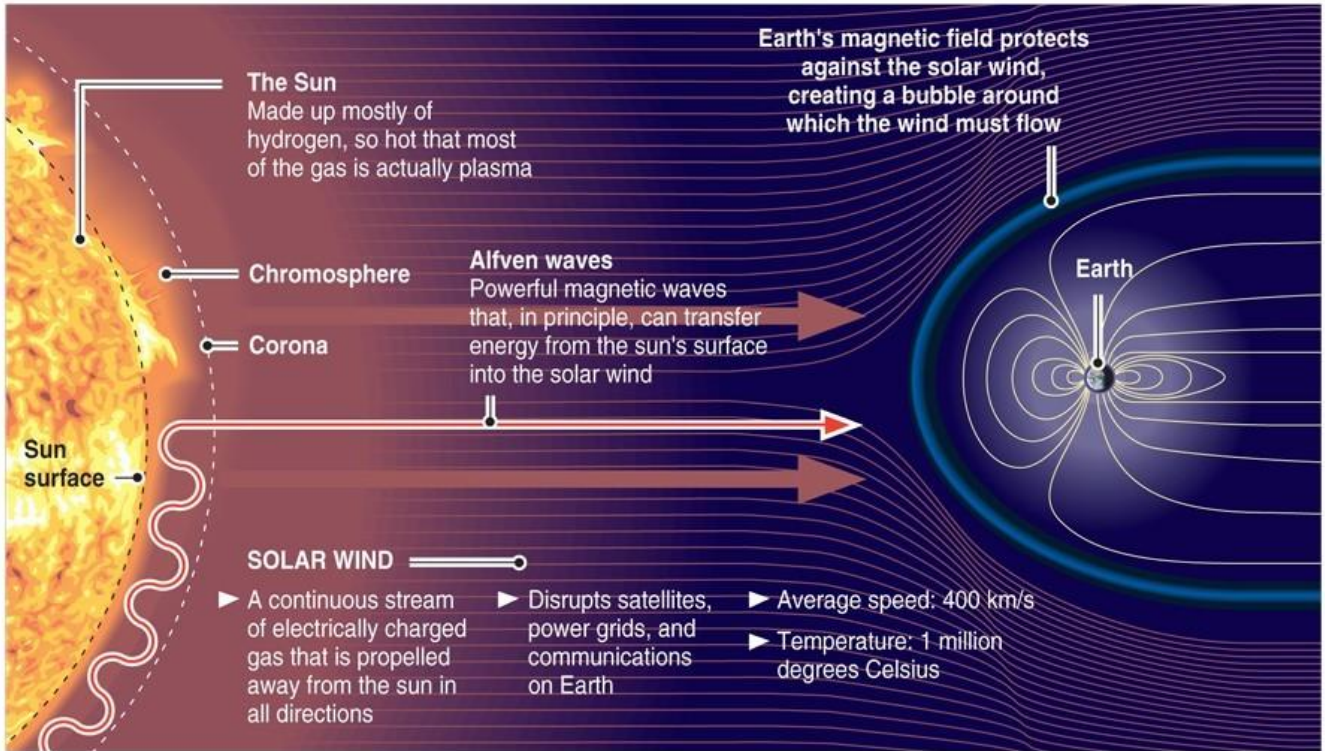
- Not all solar flares reach Earth, but solar flares/storms, solar energetic particles (SEPs), high-speed solar winds, and coronal mass ejections (CMEs) that come close can impact space weather in near-Earth space and the upper atmosphere.
- Space-dependent services: Solar storms can hit operations of space-dependent services like global positioning systems (GPS), radio, and satellite communications.
- Radio communication: Geomagnetic storms interfere with high-frequency radio communications and GPS navigation systems.



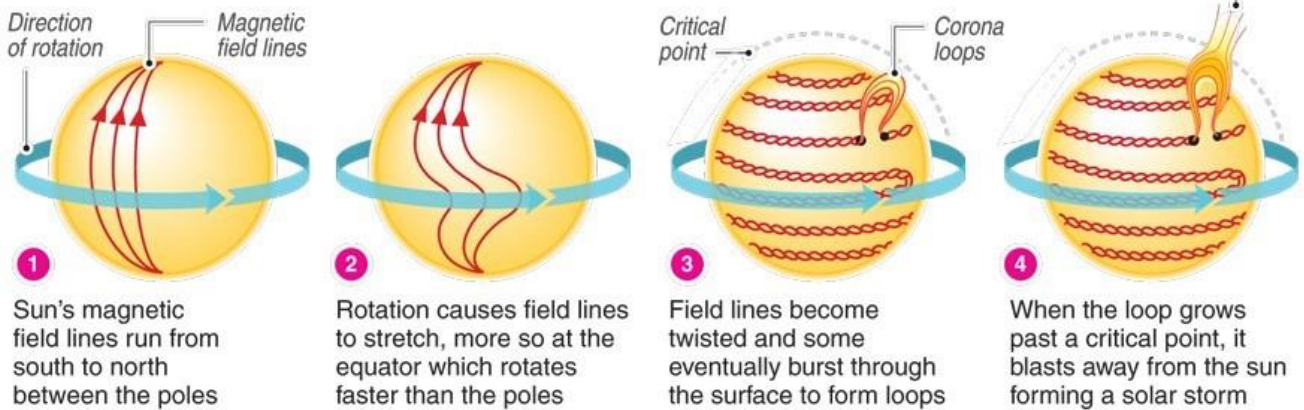
- **Magnetosphere:** CMEs, with ejectiles loaded with matter travelling at millions of miles an hour, can potentially create disturbances in the magnetosphere, the protective shield surrounding the Earth.
- **Astronauts:** Astronauts on spacewalks face health risks from possible exposure to solar radiation outside the Earth's protective atmosphere.
- **Other:** Aircraft flights, power grids, and space exploration programmes are vulnerable.



# SOLAR FLARES



## HOW A SOLAR FLARE IS FORMED



Source: NASA

Drawings are not to scale

Graphic: K. Pong/G. Cabrera/RNGS

REUTERS

## AstroSat MISSION

### In News:

The Indian Space Research Organisation (ISRO) has made an Announcement of Opportunity (AO) to allow scientists and researchers to analyse data from the first dedicated Indian astronomy mission, AstroSat.

### Analysis of Background:

#### AstroSat MISSION

- AstroSat is the first dedicated Indian astronomy mission aimed at studying celestial sources in X-ray, optical and UV spectral bands simultaneously.
- The payloads cover the energy bands of Ultraviolet (Near and Far), limited optical and X-ray regime (0.3 keV to 100keV).
- One of the unique features of AstroSat mission is that it enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite.
- AstroSat with a lift-off mass of 1515 kg was launched on September 28, 2015 into a 650 km orbit inclined at an angle of 6 deg to the equator by PSLV-C30 from Satish Dhawan Space Centre, Sriharikota.
- The minimum useful life of the AstroSat mission is expected to be 5 years.
- The scientific objectives of AstroSatmission are:
  - To understand high energy processes in binary star systems containing neutron stars and black holes;
  - Estimate magnetic fields of neutron stars;
  - Study star birth regions and high energy processes in star systems lying beyond our galaxy;
  - Detect new briefly bright X-ray sources in the sky;
  - Perform a limited deep field survey of the Universe in the Ultraviolet region.



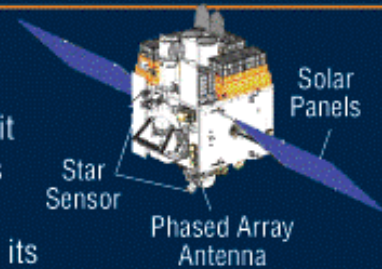


# Astrosat: India's first space observatory launched successfully

The Polar Satellite Launch Vehicle (PSLV), in its 31<sup>st</sup> flight (PSLV-C30), successfully launched India's first dedicated space observatory, Astrosat, into orbit on Sep 28, 2015. The flight also launched four US nanosatellites, a microsatellite from Indonesia and a nanosatellite from Canada

## ASTROSAT

- The scientific mission endeavours for a more detailed understanding of the universe
- One of the unique features of Astrosat mission is that it enables the simultaneous multi-wavelength observations of various astronomical objects with a single satellite
- India gains entry into the select club of nations having its own observatory after the US, Japan, Russia and Europe



Lift-off mass:  
**1,513 kgs**

Dry mass:  
**1,470 kgs**

Physical dimensions:  
**1.96 m X 1.75 m X 1.30 m**

Mission life:  
**5 years**

## PSLV-C30

Lift-off weight:  
**320.2 tonnes**

Height:  
**44.4 metres**

Diameter:  
**2.8 metres**

1<sup>st</sup> PSLV flight:  
**Sept 20, 1993**

Stages: **Four**  
(solid and liquid propulsion alternatively)



Launch site:  
**Satish Dhawan Space Centre, Sriharikota**

KBK Infographics

## NORTH STAR

### In News:

Vice President Jagdeep Dhankhar said Parliament is the “North Star” of democracy, “a place of discussion and deliberation to realise the aspirations and dreams of the people”.

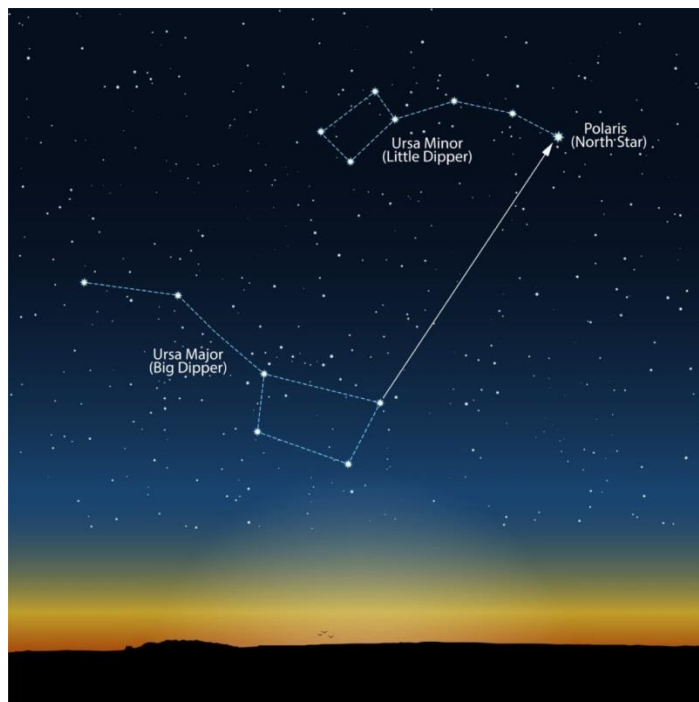
### Analysis of Background:

#### About Polaris:

- Polaris, known as the North Star, sits more or less directly above Earth's north pole along our planet's rotational axis. This is the imaginary line that extends through the planet and out of the north and south poles.
- Since Polaris is less than  $1^\circ$  away from the north celestial pole, almost in direct line with the Earth's rotational axis, it appears to sit motionless in the northern sky, with all the other stars appearing to rotate around it.
- Its position and brightness have allowed humans to use it for navigation since late antiquity. Simply the elevation of the star above the horizon gives the approximate latitude of the observer.

#### More on Details:

- Polaris is a star in the northern circumpolar constellation of Ursa Minor.
- It is designated  $\alpha$  Ursae Minoris and is commonly called the North Star or Pole Star.
- It is the brightest star in the constellation and is readily visible to the naked eye at night.
- The position of the star lies less than  $1^\circ$  away from the north celestial pole, making it the current northern pole star. The stable position of the star in the Northern Sky makes it useful for navigation.
- Although appearing to the naked eye as a single point of light, Polaris is a triple star system, composed of the primary, a yellow supergiant designated Polaris Aa, in orbit with a smaller companion, Polaris Ab; the pair is in a wider orbit with Polaris B.



## Caesium-137

### In News:

- A Caesium-137 capsule lost in transit two weeks ago was discovered when a vehicle equipped with specialist detection equipment picked up the radiation.
- The small, round and silver capsule containing radioactive caesium-137 went missing in transportation through Western Australia.

### Analysis of Background:

#### Cesium and Cs-137:

- Cesium (Cs) is a soft, flexible, silvery-white metal that becomes liquid near room temperature, but easily bonds with chlorides to create a crystalline powder. The most common radioactive form of cesium is Cesium-137 (Cs-137).
- Cs- 137 is also one of the byproducts of nuclear fission processes in nuclear reactors and nuclear weapons testing.
- Caesium-137 was discovered by Glenn T. Seaborg and Margaret Melhase.
- Caesium-137 Characteristics:
- Caesium-137 has a relatively low boiling point of 671 °C and is volatilized easily when released suddenly at high temperature, as in the case of the Chernobyl Nuclear Accident. With atomic explosions, it can travel very long distances in the air.

- After being deposited onto the soil as radioactive fallout, it moves and spreads easily in the environment because of the high water solubility of caesium's most common chemical compounds, which are salts.
- A Cs-137 atom emits radiation in the form of medium-energy gamma rays, and to a lesser extent, high-energy beta particles.
- Caesium-137 has a half-life of approximately 30 years, which means that after a period of 30 years, the amount of Cs-137 will have halved due to radioactive decay.

#### **Applications of Cs-137:**

- Cs-137 is produced by nuclear fission for use in medical devices and gauges.
- In larger amounts, Cs-137 is used in medical radiation therapy devices for treating cancer; in industrial gauges that detect the flow of liquid through pipes; and in other industrial devices to measure the thickness of materials, such as paper, photographic film, or sheets of metal.

#### **Health Hazards:**

- External exposure to large amounts of Cs-137 can cause burns, acute radiation sickness.
- Exposure to Cs-137 can increase the risk for cancer because of exposure to high-energy gamma radiation.
- High levels of radioactive cesium in body can cause nausea, vomiting, diarrhea, bleeding, coma, and even death. This may occur after nuclear accidents or detonation of atomic bombs.

## TOPIC: SECURITY

### INS VIKRANT

#### In News:

The successful landing and take off of the indigenous LCA Navy on India's first Indigenous Aircraft Carrier is a momentous step forward towards the realisation of our collective vision of AatmaNirbharBharat. The maiden landing of the Mig-29K also heralds the integration of the fighter aircraft with INS Vikrant.

#### Analysis of Background:

##### INS Vikrant:

- It is country's maiden indigenous aircraft carrier (IAC-1).
- Built by: Cochin Shipyard Ltd.
- The IAC was commissioned in 2022 making it the most potent sea-based asset.
- Capabilities: can project Air Power over long distances, including Air Interdiction, Anti-Surface Warfare, offensive and defensive Counter-Air, Airborne Anti-Submarine Warfare and Airborne Early Warning.
- It has a STOBAR (short take off but arrested recovery) system of aircraft launch and recovery on the flight deck.
- It is armed with the Barak LR-SAM (long range surface-to-air missile) air defence and AK-630 close-in weapon system besides a slew of advanced sensors and an electronic warfare suite.

##### Other specifications:

- It is expected to have a top speed of 30 knots (approximately 55 kmph) and is propelled by four gas turbines.
- Its endurance is 7,500 nautical miles at 18 knots (32 kmph) speed.
- The vessel can carry up to 1,500 personnel and has 2,300 compartments.
- The ship shall operate MiG-29K fighter aircraft, Kamov-31 Air Early Warning Helicopters, the soon to be inducted MH-60R multi-role helicopter and the indigenously manufactured Advanced Light Helicopters.
- Italian, Russian help: While the design was done with help from the Italian firm Fincantieri, the Russians collaborated in designing and developing the aviation complex.



### **Significance of IAC:**

- Shining example of 'AatmaNirbhar Bharat' as it has nearly 75 per cent indigenous content - from design to steel used in construction to key weapons and sensors.
- It help secure India's interests in maritime domain.
- It will help to realize the vision of SAGAR(Security and Growth for All in the Region) and the wider goal of a free, open and inclusive Indo-Pacific to ensure peace and stability in the region.

### **LCA:**

#### **Background:**

- In 1983, the Government of India established the LCA project with the initial goal to develop a new light combat aircraft to replace the ageing IAF fighters, especially the MiG-21 variants.
- In 1984, the Government of India established Aeronautical Development Agency (ADA) under the aegis of Defence Research and Development Organisation (DRDO) to manage the LCA programme.

#### **Tejas under LCA Programme:**

- The HAL Tejas is an Indian, single engine, delta wing, light multirole fighter.
- In 2003, the LCA was officially named "Tejas". It is the smallest and lightest in its class of contemporary supersonic combat aircraft.
- The Tejas is the second supersonic fighter developed by HAL after the HAL HF-24 Marut.
- The Tejas currently has three production models – Tejas Mark 1, Mark 1A and trainer variant.

## **INDIAN COAST GUARD**

### **In News:**

The Prime Minister, Shri Narendra Modi has extended his best wishes to all Coast Guard personnel on their Raising Day.

### **Analysis of Background:**

#### **About ICG:**

- The Indian Coast Guard (ICG) is an Armed Force of the Union of India for ensuring the security of the maritime zones of India with a view to the protection of maritime and other national interests in such zones and for matters connected therewith.

- It operates under the Ministry of Defence.
- Headquarters in Kochi, Kerala
- The Indian Coast Guard's motto is (Vayam Rakshamah), which translates from Sanskrit as "We Protect".

#### **History:**

- The Indian Customs Department frequently called upon the Indian Navy for assistance with patrol and interception in the anti-smuggling effort.
- The Nagchaudhuri Committee was constituted with participation from the Indian Navy and the Indian Air Force to study the problem
- Admiral Kohli in 1974 made a recommendation outlining the need for a separate maritime service.
- As a result, in September 1974, the Indian cabinet set up the Rustamji Committee to examine gaps in security and law enforcement between the roles of the Indian Navy and the central and state police forces.
- The Indian Coast Guard was formally established on 1 February 1977 by the Coast Guard Act, 1978 of the Parliament of India.
- After the 2008 Mumbai attacks, the Indian government initiated a programme to expand the ICG force, assets and infrastructure.

#### **Missions:**

- Safety and protection of artificial islands, offshore terminals and other installations
- Protection and assistance to fishermen and mariners at sea
- Preservation and protection of marine ecology and environment including pollution control
- Assistance to the Department of Customs and other authorities in anti-smuggling operations
- Law enforcement in territorial as well as international waters
- Scientific data collection and support
- National defence during hostilities (under the operational control of the Indian Navy)

#### **Additional responsibilities:**

- Offshore Security Coordination Committee (OSCC) – The Director-General of the Indian Coast Guard is the Chairman of OSCC

- National Maritime Search and Rescue Coordinating Authority (NMSARCA) – The Director-General of the Indian Coast Guard is the NMSARCA for executing / coordinating search and rescue missions
- Lead Intelligence Agency (LIA) – For coastal and sea borders
- Coastal Security – The Director-General of the Indian Coast Guard is the commander of coastal command

**Leadership and organisation:**

- The Indian Coast Guard organisation is headed by the Director-General
- He is assisted by four Deputy Director-Generals
- Director-General of Indian Coast Guard is equivalent to Vice admiral of Indian Navy.
- The Indian Coast Guard operates five regions. Each region is headed by an officer of the rank of Inspector-General. Each of the regions is further divided into multiple districts, typically covering a coastal state or a union territory.

## TOPIC: MISCELLANEOUS

### HAIFA PORT

- An Adani Group-led joint venture took over Israel's Haifa Port.
- **Haifa Port is Located in northern Israel**; Haifa is one of the biggest commercial ports that handle nearly half of Israel's container cargo and is also a principal port for passenger traffic and cruise ships.
- The **Port of Haifa is the largest of Israel's three major international seaports**, the others being the Port of Ashdod, and the Port of Eilat.
- It has a natural deep-water harbour, which operates all year long, and serves both passenger and merchant ships.



### Israel:

- It is a country in Western Asia.
- **Situated between the Eastern Mediterranean and the Red Sea, it is bordered by;**
- Lebanon in the North.
- Syria in the Northeast.
- Jordan in the East.
- Egypt in the Southwest,
- Palestinian territories — the West Bank along the east and the Gaza Strip along the southwest — with which it shares legal boundaries.

- Tel Aviv is the economic and technological centre of the country, while its seat of government is in its proclaimed capital of Jerusalem, although Israeli sovereignty over East Jerusalem is unrecognized internationally.

## SICKLE CELL DISEASE

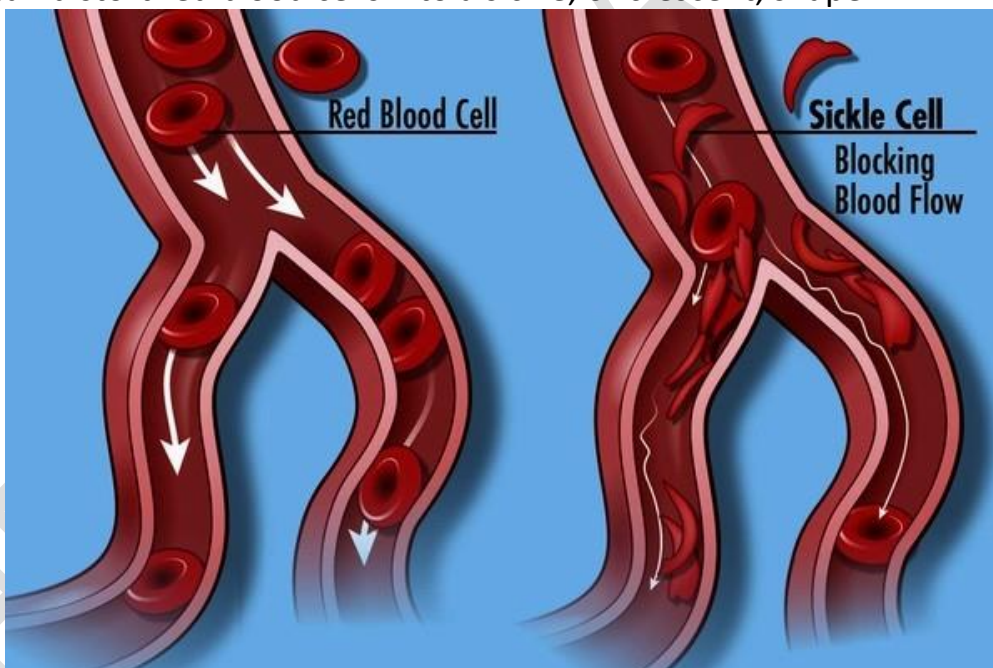
### In News:

Union budget of FY 2023-24, announced to launch of a **mission** to eliminate sickle cell anemia by 2047.

### Analysis of Background:

#### Sickle cell disease:

- Sickle cell disease is a group of disorders that affects hemoglobin, the molecule in red blood cells that delivers oxygen to cells throughout the body.
- People with this disease have atypical hemoglobin molecules called hemoglobin S, which can distort red blood cells into a sickle, or crescent, shape.



### Signs and symptoms:

- Signs and symptoms of sickle cell disease usually begin in early childhood. Characteristic features of this disorder include a low number of red blood cells (anemia), repeated infections, and periodic episodes of pain.

**The disease:**

- The signs and symptoms of sickle cell disease are caused by the sickling of red blood cells.
- When red blood cells sickle, they break down prematurely, which can lead to anemia.
- Anemia can cause shortness of breath, fatigue, and delayed growth and development in children.
- The rapid breakdown of red blood cells may also cause yellowing of the eyes and skin, which are signs of jaundice.
- Painful episodes occur when sickled red blood cells, which are stiff and inflexible, get stuck in small blood vessels. These episodes deprive tissues and organs, such as the lungs, kidneys, spleen, and brain, of oxygen-rich blood and can lead to organ damage.
- A particularly serious complication of sickle cell disease is high blood pressure in the blood vessels that supply the lungs (pulmonary hypertension), which can lead to heart failure. Pulmonary hypertension occurs in about 10 percent of adults with sickle cell disease.

**Treatment:**

- Sickle cell disease is a lifelong illness. A blood and bone marrow transplant is currently the only cure for sickle cell disease, but there are effective treatments that can reduce symptoms and prolong life.

**BIRD FLU****In News:**

A bird flu outbreak on a Spanish mink farm has alarmed scientists. The virus may be spreading for the first time from mammal to mammal — and could become a danger for humans.

**Analysis of Background:****What is Bird Flu?**

- Bird flu or avian influenza is a disease caused by avian influenza Type A viruses found naturally in wild birds worldwide.
- The virus infects domestic poultry including chickens, ducks, turkeys and there have been reports of H5N1 infection among pigs, cats, and even tigers in Thailand zoos.

- Avian Influenza type A viruses are classified based on two proteins on their surfaces – Hemagglutinin(HA) and Neuraminidase(NA).
- There are about 18 HA subtypes and 11 NA subtypes. Several combinations of these two proteins are possible e.g., H5N1, H7N2, H9N6, H17N10, etc.

#### **Bird flu: Infection in Humans:**

- There have been reports of avian and swine influenza infections in humans including A(H1N1), A(H1N2), A(H5N1), A(H7N9), etc.
- The first report of human H5N1 infection was in 1997 and currently, over 700 human cases of Asian Highly Pathogenic Asian Avian Influenza A (HPAI) H5N1 virus have been reported to the World Health Organisation from 16 countries.
- The infection is deadly as it has a high mortality rate of about 60%.
- The most common route of virus transmission is direct contact— when a person comes in close contact with infected birds, either dead or alive.
- Humans can also be affected if they come in contact with contaminated surfaces or air near the infected poultry.
- There is no sufficient evidence suggesting the spread of the virus through properly cooked meat.

#### **Symptoms of Avian Influenza:**

- Fever, cough, sore throat, muscle aches, nausea, abdominal pain, diarrhea, vomiting
- Severe respiratory illness
- Neurologic changes (altered mental status, seizures)

#### **Risk groups:**

Children and adults below 40 were seen to be the most affected and mortality was high in 10-19 years olds.

#### **Bird flu: Human-to-Human Transmission:**

- The transmission of the virus from birds to humans is rare and sustained human-to-human transmission of the H5N1 virus has not yet been established.
- But then people working closely with poultry must take precautionary measures and maintain proper personal hygiene.

- Although a few isolated family clusters have been reported, transmission in these clusters may have occurred through common exposure and in rare situations a very close physical contact; there is no evidence of human-to-human transmission via small-particle aerosols.

### **The recent outbreak:**

A bird flu outbreak on a Spanish mink farm has alarmed scientists. The virus may be spreading for the first time from mammal to mammal — and could become a danger for humans.

### **Why is the mink farm outbreak ‘incredibly concerning’?**

- The spread of the virus from birds to other species is nothing new. The pathogen that causes **bird flu**, or avian influenza, has been found in raccoons, foxes and seals, though these remain isolated cases.
- While there have been some cases of H5N1 infecting humans, the World Health Organization has said **there’s no evidence of human-to-human transmission so far.**
- When the disease has spread to humans and other mammals, it has been via direct contact with excrement from infected birds or their carcasses.
- But the mink outbreak appears to be a rare case where mammals are transmitting the disease to each other rather than through direct contact with an infected bird. This is something “new.”
- Part of the problem is that mink are intensively farmed. They’re kept in high numbers in confined spaces, which means infection spreads rapidly in the highly susceptible mammals.
- Researchers have identified several pathogen mutations in the mink, one of which allows “the virus to better reproduce in mammals.”
- Scientists are worried that the virus, which has led to the deaths of tens of millions of birds globally, could spread to more mink farms and become “more transmissible.”

### **Could avian influenza trigger a human pandemic?**

- Of the 868 known cases of H5N1 infection in humans worldwide between January 2003 and November 2022, 457 were fatal, according to the WHO.
- However, because there has been no sustained human-to-human transmission, the risk of human infection from avian flu is low.



## **OUR INITIATIVE FOR CURRENT AFFAIR COVERAGE**

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