

GS ANALYST

MONTHLY CURRENT AFFAIRS MAGAZINE

- ✓ Coverage of Monthly topics for GS Paper 1, 2, 3 & 4
- ✓ Key Concepts & Prelims Specific Topics
- ✓ Questions for Answer Writing Practice

PRELIMS

- ☐ Maharashtra's Ahmednagar renamed Ahilyanagar
- ☐ 'Rani Durgavati Gaurav Yatra' in MP
- ☐ India-US defence Deal
- ☐ QS World ranking
- ☐ 'Joha Rice' varieties of North-eastern India
- ☐ Food Safety Index 2023
- ☐ State of India's Environment 2023
- ☐ Petersberg Climate Dialogue
- ☐ Evolution of Prokaryotes to eukaryotes

MAINS

- ☐ Cyclone's impact on monsoon's onset
- ☐ G20 towards rules for international cyber law
- ☐ Digital Competition Law
- ☐ Uniform Civil Code (UCC)
- ☐ Adverse possession
- ☐ 80 castes to be added to the Central OBC list
- ☐ Human Induced Disaster Management and Issues
- ☐ Need for a Universal Basic Income

KEY CONCEPTS

- ☐ Global Slavery Index
- ☐ Services PMI 2023 released
- ☐ New Chikungunya Vaccine
- ☐ Exercise Ekatha
- ☐ Planet TOI 4603b
- ☐ East Africa's Masai giraffes
- ☐ Mizoram Parachute Gecko
- ☐ Chite Lui River
- ☐ Northern Sea Route (NSR)
- ☐ Daulat Beg Oldi
- ☐ 7.2 Magnitude Quake strikes near Tonga

CONTEMPORARY ISSUE BASED ESSAY

Unleashing the Wrath of Man: Understanding the Rising Tide of Man-Made Disasters

— Disclaimer —

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

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

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CYCLONE'S IMPACT ON MONSOON'S ONSET

Context: The Arabian Sea witnessed a 'very severe cyclone' 'Biparjoy' in the month of June that had the potential to affect the onset of Monsoon in India.

Changing scenario:

- Due to **Global warming**, the occurrence of cyclones in **Indian Ocean** and typhoons in **North-western Pacific Ocean** is changing, which has a significant impact on **onset and withdrawal of monsoon** in India.
- Against the conventional pattern of occurrence of cyclones usually **post-monsoon (October-November)** has shifted to **pre-monsoon times (April-May)**.
- This unusual occurrence of cyclones either in **Arabian Sea or Bay of Bengal** affects the monsoon showers over Indian subcontinent.
- The course of monsoon usually is affected by the **three tropical oceans – Indian, Atlantic, and Pacific**.



About Monsoon:

- The "monsoon" climate is related to the **seasonal reversal of wind direction**.
- The monsoons are a seasonal wind pattern that travels from **the sea to the land in the summer** and from **the Land to Sea in the winter**.
- The Indian subcontinent, **central-western Africa, Southeast Asia**, and a few other regions all have monsoons, but the winds are highest in **the Indian subcontinent**.

Onset of the Monsoon:

- In **April and May**, the sub-continent to the north of the Indian Ocean gets exceedingly hot.
- This causes an **intense low-pressure system** to build in the **north western section** of the subcontinent.
- Because the pressure in the Indian Ocean to the south of the landmass is high due to the slow heating of water, the low-pressure cell attracts southeast trades over the **Equator**. These factors help the Intertropical Convergence Zone to move northward.
- The southwest monsoon can be considered as a continuation of the southeast trades deflected towards the Indian subcontinent after crossing the Equator.
- These winds cross the Equator between **40°E and 60°E longitudes**.
- The southwest monsoon arrives on the Kerala coast and sweeps fast through **Mumbai and Kolkata**.
- By **mid-July**, the **southwest monsoon** engulfs the whole subcontinent.

How position of cyclone affects Monsoonal winds?

For Cyclones in North Indian Ocean:

- Since the circulation of winds around the cyclones is in the **anticlockwise direction**, the location of the cyclone is critical as far as the cyclone's impact on the **transition of the monsoon trough** is concerned.

► The monsoon trough is a **low-pressure region** that is a characteristic feature of the monsoons.

► For example, if a cyclone lies further north in the Bay of Bengal, the back-winds blowing from the southwest to the northeast can pull the **monsoon trough forward**, and assist in the monsoon's onset.

Monsoon Trough:

- Monsoon trough is a part of the **Inter Tropical Convergence Zone (ITCZ)** where the northern hemisphere and southern hemisphere winds meet.
- This is normally shown as a line connecting the **location of monsoon** low pressure areas.
- These troughs run across continents during peak monsoon periods.

- **South-westerly winds** over the **Arabian Sea** are positive for onset as they bring large quantities of moisture onto the Indian subcontinent.
- On the other hand, **south-westerly winds** over the Bay of Bengal are **bad news for the monsoon**.



INDIA-NEPAL TRANSIT AGREEMENT

Context: In a recent visit of Nepal's Prime Minister, both sides signed a series of agreements on 'energy and transport' including the export of Nepal's hydropower to Bangladesh through Indian Territory.

About the Power Trade Agreement:

- **Objective:**
 - ▶ To take forward the **2022 India-Nepal vision document** for cooperation in the power sector that sets an ambitious goal in **India-Nepal power trade and transmission**.
 - ▶ It will help Nepal's population access **India's inland waterways**.
- **Key points:**
 - ▶ Under this Agreement, a target of **importing 10,000 MW** of electricity from Nepal has been estimated.
 - ▶ A new pipeline will be constructed from **Siliguri to Jhapa** in eastern Nepal, connecting Nepal and Bangladesh via India's land.
 - ▶ AMoU between **NHPC and VUCL (Vidyut Utpadan Company Ltd)**, Nepal has been signed for the development of **Phukot Karnali Hydroelectric Project** and a **Project Development Agreement for Lower Arun Hydroelectric Project** between **SJVN (India)** and **Investment Board of Nepal**.



- ▶ **Gorakhpur-Bhutwal Transmission Line:** It was also announced that the two countries signed the

revised **Treaty of Transit** under which Nepal will get access to India's inland waterways.

- **Other Projects inaugurated:**
 - ▶ Two Prime Ministers jointly inaugurated the Indian Railway cargo train from **Bathnaha in India to Nepal Customs Yard**.
 - ▶ An **Integrated Checkposts (ICPs) at Nepalgunj** in Nepal and Rupaidiha on the Indian side was also started.
 - ▶ India has also announced to set up a **fertilizer plant in Nepal**.

India-Nepal ties:

- India and Nepal shares a cordial relationship under the **India-Nepal Treaty of Peace and Friendship, 1950** and its provisions.
- It is a bilateral treaty between **Nepal and India** establishing a close strategic relationship between the two South Asian neighbours.
- The treaty was signed in **Kathmandu** on 31 July 1950.
- This treaty allows **free movement of people and goods between** the two nations and a close relationship and collaboration between the two countries on matters of **defense and foreign policy**.

About BIMSTEC:

- The **Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC)** is a regional organization comprising **seven Member States:** five deriving from South Asia, including **Bangladesh, Bhutan, India, Nepal, Sri Lanka** and two from Southeast Asia, including **Myanmar and Thailand**.
- This sub-regional organization came into being on **6 June 1997** through the Bangkok Declaration.

Reason behind India's closeness with BIMSTEC countries:

- **Geographical relevance:** The Bay of Bengal is the **largest bay** in the world.
 - ▶ **Over one-fifth (22%)** of the world's population accounts of these seven countries.
- **Economic:** Despite economic challenges, all these **seven countries** have been able to sustain average annual rates of economic growth between **3.4% and 7.5%** from **2012 to 2016**.
 - ▶ They have a combined **GDP close to 2.7 trillion dollars**.
 - ▶ The Bay of Bengal is the route for about **25% of global trade**.
 - ▶ India's robust relation with BIMSTEC will ensure its access to huge untapped resources especially in

the **energy sector** in the form of massive reserve of natural gas in the Bay of Bengal region over China and other major powers.

- ▶ **One-fourth of the world's traded goods** cross the Bay every year.
- ▶ In the era of growing protectionism there is a need for India to **diversify its export market**.



PM STATE VISIT TO US: KEY-TAKEAWAYS

Context: Indian Prime Minister Narendra Modi completed a 'four-day' state visit to the United States, both the nation has assigned agreement on various line.

Key-highlights:

- **Win-win situation for India:** The United States also offered concrete wins. The Biden administration promised to help India-
 - ▶ Increase production of electric vehicles.
 - ▶ meet its goal of installing **500 gigawatts of wind, solar, and other renewable energy** this decade
- U.S. memory chip firm Micron Technology will **invest up to 825 million dollars** in a new chip assembly and test plant in Gujarat, which will be its first factory in India.
- On immigration, the United States agreed to allow a small number of Indians on **H-1B visas** to renew them in the United States without traveling abroad.



How US gained from the visit?

The United States too made symbolic and material gains.

- In terms of symbolic wins, the United States was able to showcase its close partnership with India—a country that also shares its deep anxiety about the specter of a rising China—and highlight the exchange of effusive warm statements between President Biden and Prime Minister Modi a mere two days after the former labelled President of China Xi Jinping a "dictator."

Material wins:

- ▶ Indian solar panel maker **Vikram Solar Limited** will invest up to \$1.5 billion in the U.S. solar energy supply chain.
- ▶ India has also agreed to join the **U.S.-led Artemis Accords** on space exploration and will work with NASA on a joint mission to the International Space Station in 2024.
- ▶ India will remove retaliatory tariffs imposed on U.S. products such as **chickpeas** and **apples** without the expectation that the United States will remove its own tariffs on steel and aluminium imports that had initially led to these retaliatory tariffs.

Important Agreements:

- U.S. Company **General Electric** has signed a memorandum of understanding with **Hindustan Aeronautics Limited** to produce **fighter jet engines** for the **Indian Air Force**.
- India's defense ministry has approved the purchase of armed **MQ-9B SeaGuardian drones** (a type of Predator drone) made by General Atomics, which will enhance the intelligence, surveillance, and reconnaissance capabilities of India's armed forces across domains. Currently, only some U.S. allies own Predator drones.
- The two countries also established a **Joint Indo-U.S. Quantum Coordination Mechanism** to facilitate joint research between **public and private sectors**.
- They also launched the **INDUS-X partnership** to expand their strategic technology and defense industrial cooperation.
- India also agreed to join the **Minerals Security Partnership (MSP)**, a U.S.-led partnership with twelve other countries plus the European Union, to create critical energy minerals supply chains.

'GE 414 Jet Engines': India-US technology Transfer

- Both countries announced to sign a MoU for the **co-production in India** of 'GE 414 Jet Engines' for the **Tejas Mk2 light combat aircraft**.
- The deal is about manufacturing jet engines in India for **Light Combat Aircraft 'Tejas' Mk2** and later for AMCA.
- The deal was between the US engine manufacturer **General Electric** and state owned **Hindustan Aeronautics Limited (HAL)**.

About the F414-GE-INS6 technology:

- This is an Indian version of the **F414-GE-100 turbofan engine**, which is used to power the **Boeing F/A-18E/F Super Hornet**.

- The '**INS6 variant**' has a number of improvements, including:
 - ▶ A higher thrust rating of 22,000 pounds (98 kN)
 - ▶ A **Full Authority Digital Engine Control (FADEC)** system

The **F414-GE-INS6** is being used to power the **Indian Air Force's Tejas Mk2** and it is also being considered for use in the '**KAI KF-21 Boramae fighter**' jet program.

Key features required for Indian missile needs:

- **Performance:** The F414-GE-INS6 is a high-performance engine that provides the **Tejas Mk II** with the thrust and power it needs to meet India's demanding **Air Force and Naval requirements**.
 - ▶ It has a **thrust-to-weight ratio of 9.4:1**, which gives the Tejas Mk II excellent acceleration and climb performance.
 - ▶ It also has a **high top speed of Mach 2.0** and a range of **over 1,000 miles**.
- **Reliability:** The F414-GE-INS6 has a proven track record of reliability. It has over 10 million hours of flight time accumulated, and it has been used in a variety of military aircraft, including the F/A-18E/F Super Hornet and the JAS 39 Gripen.
- **Cost:** The F414-GE-INS6 is a cost-effective engine. It is priced competitively, and it has **low maintenance costs**.

India joins 'Artemis Accords':

- Artemis Accords ensures that space exploration is conducted in a **safe, sustainable and transparent** manner and in full compliance with international law.
- The founding members of the Artemis Accords are **Australia, Canada, Italy, Japan, Luxembourg, United Arab Emirates, United Kingdom, and the US**.



- As more countries establish a presence in outer space, via **research stations, satellites, or even rocket launchers**, these accords provide a set of principles to create a safe and transparent environment that inspires **exploration, science, and commercial activities**.

India joins US-led Minerals Security Partnership (MSP)

- **Mineral Security Partnership (MSP)** is a US-led collaboration that aims to catalyse public and private investment in critical mineral supply chains globally.
- The MSP includes **Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, UK, the European Commission, Italy, and now India**.
- It will focus on the supply chains of minerals such as **Cobalt, Nickel, Lithium** and also the **17 'rare earth' minerals**.
- The alliance is seen as primarily focused on **evolving an alternative to China**, which has created processing infrastructure in rare earth minerals and has acquired mines in Africa for elements such as **Cobalt**.
- **Goal:**
 - ▶ The goal of the MSP is to ensure that critical minerals are produced, processed, and recycled in a manner that supports the ability of countries to realize the full economic development benefit of their geological endowments.
 - ▶ This grouping is aimed at catalysing investment from governments and the private sector to develop strategic opportunities.
- **Need:** Demand for critical minerals, which are essential for **clean energy and other technologies**, is projected to expand significantly in the coming decades.
- **Significance:** The MSP will help catalyse investment from governments and the private sector for strategic opportunities — across the full value chain — that adhere to **the highest environmental, social, and governance standards**.

Reason for India to join MSP:

- **To find alternative of China:** The proposal for India to **become a part of MSP** comes after a strong diplomatic push at reducing **dependency on China** for **securing critical minerals**.
- **To break the increasing monopoly:** China is a strong player in the critical mineral space and has created processing **infrastructure** in rare earth minerals and has also acquired mines in Africa for sourcing elements **such as cobalt**, has become a concern for other countries.

India's position on Critical minerals:

- Though India has **6% of the world's rare earth reserves**, it only produces **1% of global output**, and meets most of its requirements of such **minerals from China**.
- In 2018-19, for instance, **92% of rare earth metal imports** by value and 97% by quantity were sourced from China.
- In India, **monazite and thorium** is the principal source of rare earths.

Indian Rare Earths Ltd (IREL) which is a Government of India Undertaking, and **KMML**, a Kerala State Government Undertaking are actively engaged in mining and processing of beach sand minerals from placer deposits.

Conclusion

To conclude, this visit had a significant impact on India's global standing, highlighting the country's dual identity as a spiritual democracy and an economic power.



G20 TOWARDS RULES FOR INTERNATIONAL CYBER LAW

Context: The National Cybersecurity Coordinator has outlined a draft named the '**Delhi Declaration**' which contains a series of commitments to responsible state behaviour in cyberspace for G20 member countries.

About the draft:

The Delhi Declaration and UNCTC:

- UNCTC adopted the **Delhi Declaration on Countering the Use of New and Emerging Technologies for Terrorist Purposes**.
- On 29 October 2022, the Delhi Declaration on the use of the Internet and other technologies for terrorist objectives was unanimously endorsed by the **UN Counter-Terrorism Committee (UNCTC)**.
- According to the proclamation, one of the biggest challenges to global peace and security is terrorism, in all of its expressions and forms.
- As one of the essential takeaways, India now intends to carry out the recommendations based on the three **Counter-Terrorism Committee (CTC)** special meeting themes.
- These include:**
 - Threats and opportunities related to new payment technologies and fund raising methods

- Countering terrorist exploitation of ICT and emerging technologies
- Threats posed by terrorist misuse of Unmanned Aerial Systems (UAS)

- The draft drawn contains **non-binding norms** similar in lines signed at **United Nations Centre on Transnational Corporations (UNCTC)**.
- The basic provisions would include that the **G20 countries would commit to-**
 - Not damage **critical infrastructure** or other essential systems
 - Commit to **cooperate, mitigate and investigate cyber incidents**, and other malicious activities in cyberspace like **ransom ware**
 - Commit to **protect and not disrupt software supply chains**
 - Commit to respect **international law and rule of law in cyberspace**
 - Also commit to **protecting the humanitarian sector**

Need of a common framework for Cybersecurity:

- Cyberspace has inherent vulnerabilities that cannot be removed innumerable entry points to internet.
- Assigning attribution:** Internet technology makes it relatively easy to misdirect attribution to other parties.
- Computer Network Defense techniques**, tactics and practices largely protect individual systems and networks rather than critical operations (missions)
- Attack technology is outpacing defense technology
- Nation **states, non-state actors, and individuals** are at a peer level, all capable of waging attacks.



INDIA-EGYPT SIGN PACT TO ELEVATE TIES TO 'STRATEGIC PARTNERSHIP'

Context: During the PM Modi's visit, India and Egypt has elevated their relationship to a '**Strategic Partnership**' with a particular focus on enhancing political and security cooperation.

What does 'Strategic Partnership' mean?

- A '**strategic relationship**', as the term suggests, involves a shared understanding between the two or

more states involved on the nature of threats in the environment and the place of their collective power in helping mitigate the threats.

- This does not amount to an **'alliance'**, meaning a deeper relationship in which the states are treaty bound to come to each other's assistance in case of materialisation of a threat against any member state.

Highlights of the visit:

- It was the first bilateral visit by an Indian Prime Minister to Egypt in **26 years**.
- During the visit, **Four MoUs and agreements** were signed, including the "Strategic Partnership" between India and Egypt.
- Both countries gave a particular focus on enhancing the **political and security cooperation, defence collaboration, trade and investment ties, scientific and academic collaboration and strengthening of people to people ties**.
- Besides the agreement on **strategic partnership**, the two countries also signed three more pacts on — agriculture and allied sectors; protection and preservation of monuments and archaeological sites; and competition law.

Why Relations with Egypt significant for India?

- **Balancing geopolitical issues:** - Recent visit is an important step in balancing the **Arab-Israel contact**.
 - ▶ Improving relation with Egypt will give us strategic advantage in Middle East.
 - ▶ It will help in curbing terrorism through mutual cooperation and information sharing.
- **Close cooperation in Counter-terrorism** (Egypt is a major power in Middle East fighting ISIS) & Maritime security efforts in Middle East which is becoming vulnerable to pirate threats & Yemen unrest since Arab Spring.
- Egypt has expressed its interest to buy Indian missiles can have positive impact in making middle east & Egypt in particular strategically secure.
- **Suez Canal route – its safety and security**, are critical for **Indian Maritime exports** to Europe. India must support Egypt's initiatives to make it secure. Suez Canal route is important till the time INSTC (International North-South Transport Corridor) route gets completed
- **Maritime engagement through coordinated drills & exercises**. Sisi gov close ties with Israel provides India with crucial opportunity to strategically engage with Egypt without aggrieving Israel, a crucial strategic partner of India

- **Oil Exports** – Egypt being largest Oil producer Outside OPEC can help India meet its energy demands

India's role:

- India is playing an important role in **economic development of Egypt**.
- India can invest in **banking, pharmaceutical and insurance sector while Egypt can be developed as major source of oil import**.
- **Pan Africa e-Network Project:**
 - ▶ The **Pan Africa e-Network Project**, one of the flagship programmes of the Indian Government to strengthen ties with Africa, has been operational through an E-learning Centre since July 2009 at Alexandria University.
 - ▶ The **Tele-medicine Centre** under the Project also became operational in November 2009 at the Centre for Women's Health and Development in Alexandria.
 - ▶ The programme offers online medical consultation in various medical disciplines.



CENTRE TO BRING UREA UNDER NBS REGIME

Context: The Commission for Agricultural Costs and Prices (CACP) in its report named "*Price Policy for Kharif crops, The Marketing Season 2023-24*", has recommended the Centre to bring urea under the nutrient-based subsidy (NBS) regime to address the problem of imbalanced use of nutrients.

What is nutrient-based subsidy (NBS)?

- Under the **NBS Policy**, a fixed rate of subsidy (Rs./Kg) is announced on nutrients - '**N**', '**P**', '**K**' and '**S**' by the Government on annual basis.
- The **market price of subsidized fertilizers**, except Urea, is left open to manufacturers /marketers and determined through demand-supply dynamics, but any sale above the printed MRP is punishable.
- The **distribution and movement of fertilizers** is monitored online through web based "**Fertilizer Monitoring System (FMS)**".
- The NBS is passed on to the **farmers** through the **fertilizer industry**.
- The payment of NBS to the **manufacturers/importers** is done by the government.

About the recommendations by CACP:

- The commission recommended that steps should be taken to bring urea under **NBS regime** to address the problem of **imbalanced use of nutrients**.
- The main cause of the nutrient imbalance is **price distortions** resulting from fertiliser subsidies, which have grown dramatically and continue to increase rapidly.
- Urea does not come **under NBS**, which includes **non-urea fertilisers** like phosphorous and potassium.

Role of Commission for Agricultural Costs and Prices (CACP):

- CACP was set up in 1965.
 - It is a **decentralized agency** of the Government of India (GoI).
 - It is an expert body that recommends **the Minimum Support Prices (MSPs)** by taking into consideration various factors.
- Keeping urea out of NBS essentially means that the government has retained direct control over **MRP of urea and its subsidy**.
 - It also recommended a cap on the **number of subsidised bags of fertilisers per farmer**, as has been done for **subsidised LPG cylinders**.
 - The CACP said this would reduce the government's subsidy burden, releasing resources to invest in agriculture research and development and infrastructure development.
 - **Need of the initiative:**
 - ▶ Fertiliser response and efficiency has continuously declined over decades mainly due to imbalanced use of nutrients, deficiency of micro and secondary nutrients and depletion of soil organic carbon, while fertiliser subsidy.

Concerns associated:

- India is one of the **largest producers and consumers** of fertilisers in the world, and fertiliser consumption has increased significantly over the years.
- The MRPs of fertilisers other than Urea have been under **indirect control by virtue of NBS policy**.
- Manufacturers of these fertilisers have the freedom to fix MRP within "**reasonable limits**", and a fixed per-**tonne subsidy linked** to their nutrient content is given.
- This has caused **their MRPs to increase over the years**, whereas urea's price has remained unchanged.
- This has led to tilting of the usage of fertilisers in favour of urea because farmers have overused it, owing to its low pricing, thus resulting in **deteriorating soil health**.



DIGITAL COMPETITION LAW

Context In a letter to the Ministry of Corporate Affairs, various stakeholders have demanded that the Committee on Digital Competition Law (CDCL) to conduct its proceedings by including smaller stakeholders for more transparency.

Background

- India's **Digital Competition Act** is in the works amid growing concern among policymakers about the dominance of tech giants in the digital economy, and the need to ensure a level playing field for all players, including startups in the market.
- The proposed new digital competition law is expected to promote competition and consumer protection in India.

Key-demands

The **Ministry of Corporate Affairs** formulated a **Committee on Digital Competition Law (CDCL)** to work on the contours of the upcoming law in India. (Following the Parliamentary Standing Committee on Finance's 53rd Report on 'Anti-competitive Practices by Big Tech Companies' (Report) in December 2022.)

- The stakeholders have urged the MCA to hold an "open consultative public engagement process" while drafting the Digital Competition Bill, which is understood to be in the final stages.
- **Concerning issues:**
 - ▶ **Impact on consumers:** The stakeholders involved are concerned that the proposed *Digital Competition Act* would impact a wide range of subjects such as **digital inclusivity, user experience, data protection and security, foreign investment, cost of doing digital business for MSMEs**, and there would also be an indirect impact on cost for consumers, etc.
 - ▶ **Direct impact on stakeholders:** The proposed law directly and indirectly affects a much wider range of stakeholders.
- **Adoption of ex-ante laws:** The letter also makes a case against the adoption of **ex-ante laws** under the new digital competition law.

Ex-ante framework

- Ex ante is legally any law that is formed before the occurrence of a situation, is called an ex-ante law. It is important to note that only two to three legal systems have adopted ex ante laws globally.

- The **Standing Committee on Finance** had in its 53rd report titled '**Anti-competitive practices by big tech company**' suggested an ex-ante framework to regulate '**Systemically Important Digital Intermediaries**' (SIDIs) under a **new Digital Competition Act**.
- This signals a new era of **ex-ante frameworks**, meant to cover only SIDIs in digital markets, marking a significant exit from the existing sector-agnostic framework which covers all market players.

What's the need to regulate digital economy?

- **Significant growth in the sector:** Between 2014 and 2019, India's "*digital economy*" grew 2.4 times faster than the Indian economy as a whole.
- **Involvement of big tech companies:** A few large technology companies have significantly contributed to this growth. However, globally as well as in India, often these companies act both as intermediary platforms and providers of services and goods on those platforms.
 - ▶ This has heightened concerns about potential **economic harm** brought about by the concentrated structure of the digital economy.
 - ▶ Therefore, competition regulators across jurisdictions have highlighted the need to **regulate the behaviour of big-tech companies** in digital markets.
- Despite existing regulation, due to the rapid pace at which digital businesses grow a need was felt to evaluate competition in digital markets *ex-ante*.

In India, competition in digital markets is regulated by the **Competition Commission of India (CCI)** under the **Competition Act, 2002 (Competition Act)**.

UNIFORM CIVIL CODE (UCC)

Context The concept of a **Uniform Civil Code (UCC)** in India has been a subject of **intense debate and discussion for several decades in India.**

About

- The idea behind a UCC is to have a **common set of laws governing personal matters** such as marriage, divorce, inheritance, and adoption for all citizens, irrespective of their religious affiliations.
- India, being a diverse country with multiple religions and religious laws, currently has different personal laws for different religious communities.

What does Indian Constitutional says about Uniform Civil Code?

- The Constitution of India, under **Article 44**, one of the **Directive Principles of State Policy**, states that the state shall endeavor to secure a Uniform Civil Code for its citizens.
- However, the framers of the Constitution left it to the discretion of the government to implement a UCC, recognizing the sensitivity and complexity of the issue.
- Over the years, various governments have discussed and debated the implementation of a UCC, but it has remained a contentious and politically sensitive topic.

Examples of Different Civil Codes in India:

- In India, personal laws governing marriage, divorce, inheritance, and other such matters are based on religious texts and customs.
- The major religious communities in India, including Hindus, Muslims, Christians, and Sikhs, have their own distinct personal law.

Why UCC is a controversial topic in India?

The Uniform Civil Code (UCC) in India is a topic that sparks controversy due to various reasons. Here are some key points regarding the arguments put forth by both supporters and opponents of a UCC:

- **Religious and Cultural Diversity:** India is known for its diverse religious and cultural landscape. Critics argue that implementing a UCC would undermine this diversity by replacing individual religious laws with a uniform code applicable to all citizens. They believe that this could potentially infringe upon religious freedom and erode the country's cultural fabric.
- **Protection of Minority Rights:** Opponents express concern about the impact of a UCC on minority communities. Personal laws are closely tied to the religious identity and practices of these communities. Imposing a common civil code might dilute their unique rights and protections, thereby compromising their cultural autonomy.
- **Political Considerations:** The sensitive nature of religious identity and potential consequences for minority communities have turned it into a polarizing topic, where political calculations overshadow genuine discussions about the merits and drawbacks of a UCC.
- **Gender Equality and Women's Rights:** Supporters argue that a UCC would promote gender equality and women's rights by eliminating discriminatory practices found in certain religious personal laws.

- **National Integration:** Some people believe that a common civil code would enhance national integration by fostering unity among diverse religious communities and strengthening the secular fabric of the country. Others argue that the issue of a UCC is highly complex and sensitive due to the diversity of religious beliefs and customs in India.



GENERAL DECLINE IN CONSUMPTION AND SHARING OF NEWS IN INDIA: REPORT

Context: According to the Reuters Institute Digital News Report 2023, the overall consumption and sharing of news declined in India compared to the year 2022.

Highlights of the Report:

- **About:** The 12th edition of the report surveyed the 'news consumption habits' of consumers across 46 markets.
- **In terms of 'Overall Trust in News':**
 - ▶ As per the report, India registered a small decrease of **3 percentage points (pp)** (38%) in overall trust in news compared to last year.
 - ▶ India was **ranked 24th among 46 countries** in terms of 'overall trust in News' criteria.
 - ▶ Finland remained the country with the highest levels of overall trust in news (69%) while Greece had the **lowest levels of trust (19%)**, globally.
- Among individual news brands, public broadcasters like **DD India, All India Radio, and BBC News** retained high levels of trust among survey respondents in India.
- **YouTube** was the most preferred social media platform for news with **56% of the respondents** accessing it.
- **WhatsApp (47%) and Facebook (39%)** were the next two preferred **social media platforms** for news in India among the survey respondents.
- **In terms of way of delivery:**
 - ▶ **Video-based content**, distributed via networks such as **TikTok, Instagram and YouTube** are becoming more important for news, especially in parts of the Global South.
- **Concerns highlighted:**
 - ▶ The survey found that users of TikTok, Instagram and Snapchat paid more attention **to celebrities and social media influencers** than they did to journalists and media companies when it came to news topics.

- ▶ The proportion of people consuming news as the main access point is **via a news website or app** has fallen from **32% in 2018 to 22% in 2023**, while dependence on social media access for news has grown from **23% to 30%**.
- ▶ The report also found that **news podcasting** continued to resonate with educated and younger audiences though it remained a minority activity overall.

News consumption pattern in India:

- India's news industry is largely dominated by the **television and print sectors**, with the **Hindi-speaking** market accounting for much of the **media consumption** in the country.

The **news channels Aaj Tak and CNN-News18** emerged on top with the largest shares of viewership in the Hindi and English speaking markets, respectively.

- Meanwhile, the rapid penetration of **smartphones and mobile internet in India** has led to digital media emerging as a key player within the news industry.
- The younger, urban, and more educated news audiences in India frequently access news through online sources that include social media platforms.
- India is home to **over 600 million netizens** more than half of which are active social media users.
- A significant number of these online users access the news using their smartphones which further propelled the use of news aggregators like **Google News and Daily Hunt**.

What are the emerging Challenges for India?

- **Threat of spreading 'Fake News':** **Fake news or hoax news** refers to false propaganda published under the guise of authentic news.
- **Effects:**
 - ▶ It can be used to **influence public opinions**, to gain popularity or to malign the image, character of certain individuals or opponents or to defame them.
 - ▶ It **polarizes public opinion** and affects political institutions; political disinformation campaigns in the Indian electoral system could lead to the deepening of existing social discord, loss of civic trust in the electoral system, and the compromise of basic democratic principles.
 - ▶ **It affects social & communal harmony** by spreading extremists' ideologies especially in sensitive areas like radicalization of youths, inciting violence and hatred among the communities, swinging public opinions etc.

Laws related to Fake News:

- **IPC Sections 153A and 295:** Under this action can be initiated against someone creating or spreading fake news if it can be termed as hate speech.
- **Defamation Suit:** IPC Section 499 makes defamation a criminal offence. Section 500 provides for punishment for criminal defamation.
- **The Information Technology (IT) Act:** It imposes an obligation on intermediaries such as search engine giant Google to remove any objectionable content pursuant to takedown notices by law enforcement agencies.
- **Contempt of Court laws:** False stories about judicial proceedings would be covered by contempt of court laws and false stories about Parliament and other legislative bodies would violate privilege.
- The Constitution of India provides a long-term solution under **Article 51A (h)**, which says, "It shall be the **duty of every citizen to develop the scientific temper, humanism and the spirit of inquiry and reform.**"

Related authorities:

- **The Press Council of India:** Created by an Act of Parliament, it is a **statutory body** and keeps vigil on fake news. It can warn, admonish or censure the newspaper, the news agency.
- **Broadcasting Content Complaint Council (BCCC):** A complaint relating to objectionable TV content or fake news can be filed to the Broadcasting Content Complaints Council.



FOCUS ON NUTRITION OF ADOLESCENT GIRLS

Context: To unlock the full potential of India's future, there is need to prioritise the health and nutrition of its adolescent girls.

The Nutrition problem:

- Adolescent girls are particularly vulnerable to **undernutrition and anaemia** due to the onset of menstruation.
- The findings of the **National Family Health Survey-5 (2019-21)** confirm these concerns, as a staggering **59.1% of adolescent girls** were found to be anaemic.



- A recent report from Asia shows that malnutrition reduces **human productivity by 10 percent to 15 percent and gross domestic product by 5 percent to 10 percent.**
- By improving the nutrition of adolescent girls and women, nations can reduce health care costs, increase intellectual capacity, and improve adult productivity.

Nutrition criteria for girls:

- Nutritional guidelines for adolescents state that girls need an average of **2,200 calories per day.**
- Around **25% of the total energy** should come from fats, and less than 10% of the energy should come from saturated fats.
- Adolescents also require about **50 grams of protein every day.**

Reasons for malnourishment of girls:

- **Lack of knowledge** in the family and community about the importance of nutrition during adolescence
- Lack of food because of **socio-economic circumstances**
- **Inequitable distribution of food** in the family wherein girls being denied nutritious food
- Poor dietary intake of food and vegetables rich in iron
- Food adulteration
- Hookworm infestation
- Diseases like Malaria
- Perpetuation of a vicious cycle of malnutrition and infection, which might begin, even before birth and may have more serious consequences for the girl child.

Implications of less-Nutrient based diets:

- **Health hazards:** Iron deficiency and anaemia cause **fatigue, reduce work capacity, and make people more susceptible to infection.** Severe anaemia places women at **higher risk of death** during delivery and the period following childbirth.
- **Illnesses** associated with nutrient deficiencies have significantly **reduced the productivity of women** in less developed countries.
- **Other problems:** Low Birth Weight, impair foetal development (due to maternal malnutrition)

Existing Government schemes for adolescent girls:

- '**SABLA** 'scheme stands for **Rajiv Gandhi Scheme for Empowerment of Adolescent Girls** and it aims to empower adolescent girls (AGs) **aged 11 to 18**

years old through nutrition, health care, and life skills education.

- ▶ It is a **centrally sponsored program** launched by the Government of India in 2011 under the **Ministry of Women and Child Development**.
- ▶ The SABLA scheme has two main components - **Nutrition and Non-Nutrition**.

Need for better interventions:

- Adolescent girls are particularly **vulnerable to malnutrition** because they are growing faster than at any time after their first year of life.
- They need **protein, iron, and other micronutrients** to support the adolescent growth spurt and meet the body's increased demand for **iron during menstruation**.



ADVERSE POSSESSION

Context: In a recent report, the 22nd Law Commission has mentioned that, there is no justification for introducing any change in the law relating to 'adverse possession'.

About:

- The concept of adverse possession stems from the idea that land **must not be left vacant** but instead, be put to **judicious use**.



- Essentially, adverse possession refers to the **hostile possession of property**, which must be "**continuous, uninterrupted, and peaceful**."
- According to the Law Commission's report, the rationale behind this comes from considerations that the;
 - ▶ **Title to land** should not in doubt, for long
 - ▶ Society will benefit from someone making **use of land the owner leaves** idle, and

- ▶ Persons who come to regard the **occupant as owner** may be protected.

- The report also mentions that **the original title holder** who neglected to **enforce his rights over the land** cannot be permitted to **re-enter the land after a long passage of time**.

Supreme Court's view:

- A two-judge SC bench, in its 2008 ruling in **Hemaji Waghaji Jat v. Bhikhabhai Khengarbhai Harijan and Others**, while dealing with **Article 65 of the Schedule of the Limitation Act, 1963**, observed that the law of adverse possession "ousts an owner on the basis of inaction within limitation" and is '**irrational, illogical, and wholly disproportionate**'.
- The law as it exists is extremely harsh for the true owner and a windfall for a dishonest person who has illegally taken possession of the property.
- On **December 19, 2008**, a reference was made to the Law Commission by the Ministry of Law and Justice, requesting it to examine the matter and furnish its report on the adverse possession.

Constitutional Provisions:

- As per the Constitution of India, "**Land**" was the subject of the "**State**" list.
- Till 1977 the **property right** was regarded as a **fundamental right**; however, after the **44th Constitution amendment**, the property right was no longer considered a fundamental right and became a **constitutional right** which is to be protected under the **authority of Land ownership laws in India**.
- Today the right to land in India is protected and **regulated by State laws**.
- Different states have different Land ownership laws in India to **check and restore any illegal land transfer**.

Laws related to Land ownership in India:

- The land is an **immovable property** where the value of a such property depends on its surroundings and the population; a growing population where its demand increases and supply remains limited makes it a unique asset, and therefore it is mandatory that **the ownership of such land** is clearly defined and is governed by **Land ownership laws** in India.
- Land ownership is determined by considering who has access to a land title; such determination helps protect the rights of the titleholder and impacts livelihoods.
- However, in India, **land titles are unclear**, and hence various land ownership laws in India are framed.

How landownership is determined?

- Under land ownership laws in India, the rights of the title holder are to be protected so that no other person can claim the property.
- Therefore, land ownership laws in India are determined via various land documents such as **property tax documents, registered sale deeds, and government survey records.**



UNIQUE DISABILITY IDS (UDIDS)

Context: As per the information of the Department of Empowerment of Persons with Disabilities (DEPwD), generation of unique disability IDs (UDIDs) had increased from an average of 5,000 IDs a day to an average of 7,000 to 9,000 daily during the '90-day Azadi Se Antodaya Tak campaign'.

Azadi Se Antodaya Tak campaign:

- The campaign was launched on **April 28, 2023** by the Union government to improve enrolment in several schemes across Ministries in **75 districts** identified for their connection with freedom fighters as a **part of Azadi Ka Amrit Mahotsav.**
- The campaign was organised by the **Rural Development Ministry.**

About the 'Unique Disability ID':

- The UDID project initiated by **Department of Empowerment of Persons with Disabilities** aims at building a holistic **end-to-end integrated system for Issuance of Universal ID & Disability Certificates** for Person with Disabilities with **their identification and disability details.**
- Implemented by:**
 - Unique ID for Persons with Disabilities project is being implemented with a view of creating a **National Database for PwDs**, and to issue a Unique Disability Identity Card to each person with disabilities.
- It includes -**
 - Online availability of data of Person with Disabilities** across country through a centralized web application
 - Online filing and submission of registration application form for **disability certificate/ Universal ID card**; Offline applications may also be accepted and subsequently digitized by agencies.
 - Quick Assessment process** for calculating the percentage of disability by the hospitals/ Medical Board.
 - Non-duplication of PwDs data
 - Online renewal and update of information by Person with Disabilities/ on their behalf

Types of Disabilities:

- As per the **Persons with Disabilities (Equal Opportunities, Protection of Rights & Full Participation) Act, 1995** - A person with disability can be defined as one with **one or more of disabilities** falling under any of the below mentioned categories :
- Blindness:** A condition where a person suffers from any of the following conditions namely:-
 - Total absence of sight; or** Visual acuity **not exceeding 6/60 or 20/200 (Snellen)** in the better eye with correcting lenses; or
 - Limitation of the field of vision** subtending an angle of **20 degree or worse**
 - Low vision:-** A person with impairment of visual functioning even after treatment of standard refractive correction but who uses or is potentially capable of using vision for the planning or execution of a task with appropriate assistive device;
- Cerebral Palsy:-** A group of non-progressive conditions of a person characterized by abnormal motor control posture resulting from brain insult or injuries occurring in the pre-natal, peri-natal or infant period of development;
- Locomotor disability:-** Disability of the bones, joints or muscles leading to substantial restriction of the movement of the limbs or any form of cerebral palsy;
- Leprosy-cured:-** Person who has been cured of leprosy but is suffering from loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifest deformity;
- Mental retardation-** A condition of arrested or incomplete development of mind characterized by sub normality of intelligence.
- Mental illness:-** Any mental disorder other than Mental retardation
- Hearing Impairment:** Loss of sixty decibels or more in the better ear in the conversational range of frequencies.

- ▶ **MIS reporting framework**
- ▶ Effective management including **interoperability of the benefits / schemes** launched by the Government for Person with Disability (PwD)
- ▶ To take care of additional disabilities in future. Number of disabilities at the moment is seven and shall be subject to increase as per the new Act/ notification which can be up to 19 or more.



80 CASTES TO BE ADDED TO THE CENTRAL OBC LIST

Context: According to information, around 80 more castes in six States are going to be added to the Central List of Other Backward Classes (OBCs), with the National Commission for Backward Classes (NCBC) already processing the approval for most of them in the Parliament.

About the move:

- In a report released by the **Ministry of Social Justice and Empowerment (MSJE)**, the government had decided to include **16 communities** to the Central list of OBCs from the states like **Himachal Pradesh, Bihar, Jharkhand, Madhya Pradesh, and Jammu and Kashmir**.
- The other states include **Maharashtra, Telangana, Andhra Pradesh, Himachal Pradesh, Punjab, and Haryana**, from where communities are shortlisted to get included under the central OBC list.

Currently there are **2,650 different communities** listed in the Central OBC list for all **States and Union Territories**.

Other Backward Classes (OBC) status and inclusion:

- Currently, for each state, there are **two OBC lists**, i.e.,
 - ▶ One for the state and the Centre.
 - ▶ So, a caste included in the OBC list of a state enjoys the reservation benefits in state government jobs and educational institutions, but not with respect to central government jobs or educational institutions.

Procedure to include communities in Central List:

- National Commission for Backward Classes Act, 1993:
 - ▶ As per the **NCBC Act, 1993**, the Commission is mandated **to constitute a Bench** to examine the proposals of inclusion and then forward their decision to the **Union government (with dissent, where applicable)**.
 - ▶ The Cabinet then needs to approve the additions and bring legislation to this effect.
 - ▶ **The President** is empowered to **notify** the change.

Constitutional Provisions:

- **Articles 15(4) and 16(4)** make special provisions for **socially and educationally backward classes** of citizens (SEBCs, popularly known as OBCs), the **Scheduled Castes (SCs) and Scheduled Tribes (STs)**.
- **The Constitution (102nd Amendment) Act, 2018:** It granted constitutional status to the National Commission for Backward Castes (NCBC).
- **It further inserted:**
 - ▶ **Article 338B**, which deals with the **structure, duties, and powers** of the NCBC.
 - ▶ **Role of NCBC:** It was tasked with monitoring safeguards provided for socially and educationally backward classes, giving advice on their **socio-economic development**, inquiring into complaints, and making recommendations, among other functions.
 - ▶ **Article 342A**, which deals with the powers of the President to notify a particular caste as an SEBC and the **power of Parliament to change the list**.

Supreme Court's observations:

- **The Maratha Reservation case:**
 - ▶ The SC had ruled that **only the Centre** had the power to draw up the **OBC list**, as per the above interpretation of the Constitution (102nd Amendment) Act (**Article 342A only mentions the President & Parliament with no reference to states**)
- To reverse the verdict and to restore the **powers of the state governments** to maintain the state list of OBCs, Parliament passed the **127th Constitution Amendment Bill, 2021**

SHORTAGE OF MEDICAL PERSONNEL IN RURAL HEALTHCARE

Context: Amid the proposals for a three-year diploma course for medical practitioners, who would then serve in primary health centres (PHCs), concerns surrounds the fact for ethical, safety and Professional challenges.

Gaps in Rural Healthcare system:

- More than **two-thirds** of Indians live in villages, but the healthcare facilities in these areas are yet to show the progress seen in urban areas.

The Data:

- 43.2 per cent** of the primary health centres in Chhattisgarh and **37.7 per cent** in West Bengal also do not have a doctor.
- And in Bihar, **72.12 per cent** of Sub Centres has no **female health worker** who is supposed to manage them.

- The chances of you going to a **rural health facility** without a doctor or a health professional are still very high in the country.
- The analysis of the data available with the **Ministry of Health and Family Welfare** tells us that things are way worse than they used to be 17 years ago, in 2005.

About the proposal:

- This idea was proposed by the **Chief Minister of West Bengal**, as the number of doctors per 10,000 populations is below the national average in the state.
- So, to drive a cadre of doctors who are capable of **providing first-level care** to the rural countryside, if not of handling critical situations is required.
- To retain MBBS doctors in rural areas is not going to be possible for at least **30-40 years** because ultimately, **rural doctor shortage** is a development problem.
- As, rural area lacks



adequate hospital Infrastructure and **basic living amenities**.

- PHCs are the most essential part of the **healthcare infrastructure** and should possess doctors who are fully trained.
- The recent **National Medical Commission (NMC) Act** also makes a provision for **community health officers**.

Why health facilities in rural India faces workforce crisis?

- Lack of incentives:** Lack of incentives may be prompting Doctors to not work in rural health facilities.
- Urban-Rural divide:** Health infrastructure is more in urban areas, so medical professionals are interested stay in urban areas.
- Lack of incomes:** Incomes in rural areas are less as compared to urban areas.
- Low government spending:** Government spending on health is not even **2% of GDP**. Health facilities are poor in rural areas.

Possible consequences:

- Maternal mortality and Infant mortality rates** high in rural areas due to lack of basic health check-ups.
- Increasing disease burden** due to lack of timely services in rural areas.
- Higher cost of treatment:** Affordable medical facilities are provided to people living in rural areas, however lack of public intervention will motivate private sector to reach the areas and charge them with high cost.

Government initiative to boost rural healthcare infrastructure:

- Ayushman Bharat Health Infrastructure Mission:** It envisages increased investments in public health and other health reforms to provide better access to health in rural areas.
- National Rural Health Mission:** Under the NRHM, support is provided to the States for ensuring a range of free services related to maternal health, child health, adolescent health, family planning, universal immunization etc.
- National Ambulance Service:** Government of India in implementation of **National Ambulance Service** under NHM for free transportation to health facilities. This service is extended to remote and rural tribal areas also.
- ASHA workers:** An ASHA acts as the interface between the **community and the public health system** in rural India.



HUMAN INDUCED DISASTER MANAGEMENT AND ISSUES

Context: Recently, the most discussed issue in the country is the accident at Balasore, Odisha involving three trains collided and de-railed from the track taking lives of up to 300 peoples, has highlighted the man-made disasters and its extent.

About the situation of man-made disaster in India:

- More than **6,000 natural** and **7,000 human-made disasters** took place between **1970 and 2021**.
- More than **one fourth** (29.02 per cent) of all people worldwide affected by **natural disasters live in India**.
- Natural disasters have killed **45, 91,768 Indians since 1900**.

According to insurance giant **Swiss Re**, human-made disasters comprises of;

- Fires and explosions
- Aviation and space disasters

- Shipping disasters
- Rail disasters
- Mining accidents
- The collapse of buildings/bridges, and
- Miscellaneous causes (including terrorism)

- India ranks among the **top ten countries** in the world that is prone to disasters.

According to the **Centre for Research on the Epidemiology of Disasters' Emergency Events Database** or '**EM-DAT**', India has encountered **205 storms and 316 floods**, highlighting the significant occurrence of storms and floods as natural disasters in the country over the century (1900-2022).

What does the man-made disaster exactly means?

- Man-made disasters have an element of human intent, negligence, or error involving a failure of a man-made system, as opposed to natural disasters resulting from natural hazards.
- Such man-made disasters are **crime, arson, civil disorder, terrorism, war, biological/chemical threat, cyber-attacks, etc.**

Forms of man-made disasters in India			
Gas Leaks	Oil Spills	Nuclear disaster	Industrial Fires
<p>The most serious gas leak occurred in Bhopal, India in 1984. Known as the Bhopal Gas Tragedy, it began with the leakage of methyl isocyanide (MIC), a colourless gas used in pesticides, from the Union Carbide of India Ltd. The gas formed a deadly cloud causing severe body irritation, coughing, lung swelling, bleeding, and even death from direct concentrated inhalation. It killed roughly 5,000 people, affected 50,000 more people, and left at least 1,000 blind.</p>	<p>Oil spills are some of the most familiar man-made disasters, devastating to people, the environment, animals and global socio-economics. 2010 saw the worst and largest oil spill: the Deep-water Horizon Oil Spill in the Gulf of Mexico.</p> <p>Impacts:</p> <p>The surrounding environments have been choked to death, and at least 3,500 volunteers suffered liver and kidney damage from prolonged contact with the oil.</p>	<p>One of the most famous nuclear meltdowns occurred in Chernobyl, Ukraine in 1986. One of the reactors in the power plant exploded, resulting in more fallout than the Hiroshima and Nagasaki atomic bombs combined. While 350,000 people were evacuated from the surrounding area, nearly 500,000 workers laboured to end the meltdown, 31 of which died during the attempt.</p>	<p>The Bombay High North oil platform operated by state-owned Oil and Natural Gas Corporation (ONGC) was struck by a drifting ship named Samudra Suraksha. The collision caused a major oil spill which caused both the platform and the ship to catch fire.</p>

Why man-made disasters are a cause of concern?

- **Increasing Number of Climate refugees:** More people are likely to migrate due to slow-onset

processes of environmental degradation such as **inundation, desertification, soil erosion and changing coastlines** than sudden-onset events like storms and cyclones.

- **Economic Losses:** The economic losses due to man-made disaster can be massive and also can impact the surrounding environments too. Especially for a developing country like India, economic losses induced by disaster are very high.
- **Social Impacts:** People affected and after-effects of man-made disasters can impact society at large.
- **Psychological impacts:** The man-made disasters sometimes can cause a mental impact on people affected by it. This can create lack of trust.
- NDMA has the power to authorise the **Departments or authorities** concerned, to make emergency procurement of provisions or materials for rescue and relief in a threatening disaster situation or disaster.
- The general superintendence, direction, and control of the **National Disaster Response Force (NDRF)** are vested in and will be exercised by the NDMA.
- The **National Institute of Disaster Management (NIDM)** works within the framework of broad policies and guidelines laid down by the NDMA.

Disaster Management in India:

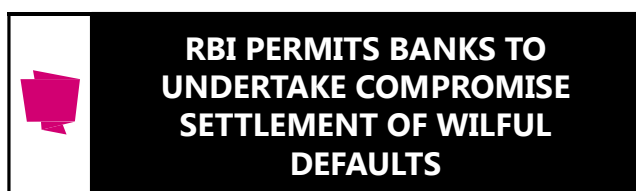
- Disaster Management efforts are geared towards **disaster risk management**.
- Disaster Risk Management implies **the systematic process of using administrative decisions, organisation, operational skills, and capacities to implement policies, strategies and coping capacities of the society** and communities to lessen the impact of natural hazards and related environmental and technological disasters.
- **Disaster Risk Reduction (DRR):** Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters.
 - ▶ **Pre-Disaster risk reduction includes-**
 - ▶ **Mitigation:** To eliminate or reduce the impacts and risks of hazards through proactive measures taken before an emergency or disaster occurs.
 - ▶ **Preparedness:** To take steps to prepare and reduce the effects of disasters.
 - ▶ Post-Disaster risk reduction includes-
 - ▶ **Rescue:** Providing warning, evacuation, search, rescue, providing immediate assistance.
 - ▶ **Relief:** To respond to communities who become victims of disaster, providing relief measures such as food packets, water, medicines, temporary accommodation, relief camps etc.
 - ▶ **Recovery:** This stage emphasises upon recovery of victims of disaster, recovery of damaged infrastructure and repair of the damages caused.

Who is responsible for disaster management?

- The **National Disaster Management Authority (NDMA)**, headed by the Prime Minister of India, is the apex body for Disaster Management in India.
- Setting up of NDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated by the **Disaster Management Act, 2005**.

National Policy on Disaster Management (NPDM) 2009:

- The **Disaster Management Act, 2005**, provides for the **legal and institutional framework** for the effective management of disasters.
- The Act mandates creation of new institutions and assignment of specific roles for **Central, State and Local Governments**.
- Under the provisions of the Act, the **National Disaster Management Authority (NDMA)** has been established under the Chairmanship of the Prime Minister and National Executive Committee (NEC) of Secretaries has been created to assist the NDMA in the performance of its functions.
- At the State level, a **State Disaster Management Authority** has been created under the Chairmanship of Chief Minister of the State, which has been assisted by a State Executive Committee. At the District level, District Disaster Management Authorities have been created.



Context: In order to ensure maximum recovery from distressed assets, the Reserve Bank of India (RBI) has allowed banks to go for compromise settlement of 'fraud accounts' and 'wilful defaults'.

Technical Write-offs:

Technical write-offs would refer to cases where **the non-performing assets** remain outstanding at the borrowers' loan account level but are **written off (fully or partially)** by the RE only for accounting purposes. This is without involving **any waiver of claims against the borrower**.

What is provision for borrowers?

- The compromise settlements and technical write-offs would be without **prejudice to any mutually agreed contractual provisions between the RE and the borrower** relating to future contingent realisations or recovery by the RE.
- The above conditions are subject **“to such claims not being recognised in any manner on the balance sheet of REs at the time of the settlement or subsequently till actual realisation of such receivables.”**
- In respect of borrowers subject to compromise settlements, the notification said, there would be a cooling period as determined by the respective board-approved policies before the REs can assume fresh exposures to such borrowers.
- The cooling period in respect of exposures other than farm credit exposures would be subject to a **floor of 12 months**.
- REs are free to **stipulate higher cooling periods** in terms of their Board approved policies.

The cooling period for **farm credit exposures** would be determined by the REs as per their respective Board approved policies.

What are Non-performing assets (NPA)?

- They are loans or advances that are in default or in arrears.
- In other words, these are those kinds of loans wherein principal or interest amounts are late or have not been paid.

When a loan is classified as NPA?

- Non-Performing Assets are basically **Non-Performing Loans**.
- In India, the timeline given for classifying the asset as **NPA is 180 days**. As against **45 to 90 days** of international norms.

Why is there a need to recognise NPAs?

- In the banking system, the government and regulatory authorities need to have a good view of how healthy the financial system is.
- India became more aggressive in recognising loans as **'bad' in the 2014 to 2015 period**.
- The **periodic asset quality review** was introduced. Further, the regulator stepped in to prevent ever-greening of loans (i.e., lending more to an already stressed asset in the hope that it could be brought back to its feet).

What process does a bank undertake to recover NPA?

- The banks employ the Lok Adalats for settling the NPA loans. The Lok Adalats help in settling the NPA between the **banks and defaulters**.

A **National Asset Reconstruction Company Ltd. (NARCL)** was announced in the **Union Budget for 2021-2022** to resolve stressed loans amounting to about **Rs.2 lakh crore in phases**.

Impact of NPAs on Financial Operations:

- This reduces the profits of the banks.
- This reduces a bank or financial institution's capital adequacy.
- The banks have become averse to giving loans and taking risks of zero per cent. Thus, the creation of fresh credit is debarred.
- The banks start concentrating on the management of credit risk instead of the bank becoming profitable.
- The funds happen to cost due to NPA.



NEED FOR A UNIVERSAL BASIC INCOME

Context: At an interaction organised by the Confederation of Indian Industry (CII), the Chief Economic Advisor V Anantha Nageswaran has mentioned that, the concept of 'Universal Basic Income (UBI)' is not necessary for India since natural economic growth would take care of the country's many aspirations.

What is Universal Basic Income (UBI)?

- Universal basic income (UBI) is a **socio-political financial transfer policy** proposal in which all citizens of a given country receive a legally stipulated and **equally set financial grant** paid by the government.
- A basic income can be implemented **nationally, regionally, or locally**.
- **Universal basic income (UBI)** is a government program in which **every adult citizen** receives a set amount of money regularly.
- The goals of a basic income system are to replace other **need-based social programs** that potentially require greater bureaucratic involvement.

Benefits	Challenges
<ul style="list-style-type: none"> To accommodate a diverse workforce, UBI could potentially provide the necessary support and flexibility for individuals to find suitable work or pursue education and entrepreneurship. UBI is supposed to be easily accessible, periodic, in the form of funds (and not vouchers or coupons) and is paid to individuals not households. 	<ul style="list-style-type: none"> UBI did not significantly reduce labour force participation, except for new mothers and teenagers, who used the income to extend their maternity leaves and focus on education. UBI has no criteria to select the beneficiaries, Agency involved providing support in the form of cash transfers to respect, not dictate recipients' choices.

What are the Arguments in Favour of UBI in India?

- **Social Justice:** No society can be just or stable if it does not give all members of the society a stake. A Universal Basic Income promotes many of the basic values of a society which respects all individuals as free and equal.
- **Administrative Efficiency:** A UBI will reduce the burden of financing a plethora of separate government schemes and administrative burden of implementation.
- **Employment:** UBI is an acknowledgement of the government's duty to guarantee a minimum living standard (**Article 43 of Indian Constitution**) is even more urgent in an era of uncertain employment generation.
- **Insurance against Shocks:** Poor households often face multiple shocks such as bad health, job loss or aggregate shocks such as **crop loss, water borne diseases, loss of property and natural disaster.**
 - ▶ The UBI income floor will provide a safety net against health, income and other shocks.
- **Freedom of Choice:** A UBI treats beneficiaries as agents and entrusts citizens with the responsibility of using welfare spending as they see best, this may not be the case with in-kind transfers.

About Prepaid Payment Instrument (PPI):

- PPIs are instruments that facilitate the **purchase of goods and services**, conduct of financial services and enable remittance facilities, among others, against the money stored in them.
- PPIs can be issued as **cards or wallets.**
- There are **two types of PPIs – small PPIs and full-KYC (know your customer) PPIs.**
 - ▶ Further, small PPIs are categorized as – PPIs up to Rs.10,000 (with cash loading facility) and PPIs up to Rs.10,000 (with no cash loading facility).
- PPIs can be **loaded/reloaded by cash, debit to a bank account**, or credit and debit cards.
- The cash loading of PPIs is limited to **Rs.50, 000 per month** subject to the overall limit of the PPI.

Prepaid Payment Instrument (PPI) holders are going to get protection for their money against any **fraud or unauthorised payment transactions.**

Who can issue PPI instruments?

- PPIs can be issued by **banks and non-banks** after obtaining approval from the RBI.
- As on November 9, 2022, **over 58 banks** including **Airtel Payments Bank, Axis Bank, Bank of Baroda, Jio Payments Bank, Kotak Mahindra Bank, Standard Chartered Bank, UCO Bank and Union Bank** have been permitted to issue and operate prepaid payment instruments.

What has the RBI committee recommended?

- The committee mentioned that the RBI has authorised a **number of banks and non-banks entities** to issue PPIs in the country.
- The money kept in wallets is in the nature of deposits.
- However, currently, the **DICGC cover extends** only to bank deposits.
- Being deposits with the PPI issuers who are also regulated by the Reserve Bank, extending **deposit insurance to the PPI segment needs examination**, the RBI-appointed committee recommended.



DEPOSIT INSURANCE COVER FOR PPIS

Context: Recently a committee was set up to review the Customer Service Standards in RBI Regulated Entities has recommended that " the central bank should examine the extension of Deposit Insurance and Credit Guarantee Corporation (DICGC) cover Prepaid Payment Instrument (PPI) to which, at present, is available only to bank deposits."

What is DICGC?

- DICGC is a **wholly-owned subsidiary of the RBI** and **provides deposit insurance**.
- The deposit insurance system plays an important role in maintaining the **stability of the financial system**, particularly by assuring the **small depositors of the protection of their deposits** in the event of a bank failure.
- The deposit insurance extended by DICGC covers **all commercial banks** including local area banks (LABs), payments banks (PBs), small finance banks (SFBs), regional rural banks (RRBs) and co-operative banks, that are licensed by the RBI.
- **Role:**
 - ▶ DICGC insures all deposits such as **savings, fixed, current and recurring** including **accrued interest**.
 - ▶ Each depositor in a bank is insured up to a maximum of **Rs.5 lakh for both principal and interest** amount held by them as **on the date of liquidation or failure of a bank**.

**MSP, CROP PROCUREMENT AND INFLATION**

Context: RBI's Monetary Policy Committee (MPC) must consider the inflationary impact of about 5%–11% increase in the minimum support price (MSP) for farm produce in its bi-monthly policy.

About the Food inflation and price rises:

- There is a **7% increase** in **paddy MSP** could lead to higher prices if the crop is not higher than last year's output.
- Procurement takes place **for rice, whose inflation is already high at 11%**.
- While **procurement of cereals** was primarily in terms of wheat and rice, the **procurement of pulses** was not much.

What is Minimum Support Price (MSP)?

- The MSP is the **rate at which the government purchases** crops from farmers, and is based on a calculation of at least **one-and-a-half times** the cost of production incurred by the farmers.
- MSP is a "**minimum price**" for any crop that the government considers as remunerative for farmers and hence deserving of "**support**".
- **Crops under MSP:**

- ▶ **The Commission for Agricultural Costs & Prices (CACP)** recommends MSPs for 22 mandated crops and **fair and remunerative price (FRP)** for sugarcane.
 - ▶ CACP is an attached office of the **Ministry of Agriculture and Farmers Welfare**.
- ▶ The mandated crops include **14 crops of the Kharif season, 6 Rabi crops and 2 other commercial crops**.
- ▶ In addition, the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.

How MSP can aggravate Inflation?

- Sharp and frequent increases in MSP can feed inflation too.
- It is believed that it was MSP increases on **paddy and wheat** that fuelled high food inflation in the years to 2013.
- Government procurement at MSP is benefiting the **large traders than farmers**.
- Small farmers typically do not have enough **marketable surpluses**.
- Their crop is usually sold to traders at low post-harvest prices in the village itself or the nearest '**mandi**'.

According to recent research, farmers may typically get as little as **25% of the price** that consumers finally pay.

- The input costs have been rising faster than sale prices, squeezing the meagre income of the small farmers and driving them into debt.
- MSP is attractive towards wheat and rice which is produced by large farmers. Small farmers who mostly dependent on **vegetables, pulses, coarse grains** are at disadvantage.
- The payments are delayed when the farmers are in immediate need of cash.
- In some states, the awareness about the time of their announcement is very low.
- The reason for not selling at MSP was that the purchase centres were located at distance which required high transportation costs.

Problems need to be addressed:

- **Low Yield:** To use rights manures and fertilisers to increase the yield and providing subsidies.
- **Access to Quality seeds:** Quality seeds are primary for higher yield.
- **Irrigation:** Till now India's one-third of the land remains less or no irrigated.

- **Low profit margins:** Farmers are facing increase in cost of production, which depends upon several factors namely, cost of fertilisers, transportation and MSP.
- **Lack of mechanisation:** Due to less affordability, mechanisation is less inclusive in India.
- **Lack of awareness:** Farmers must be educated regarding increasing production.



SEBI'S DIRECTIONS FOR 'ONLINE BOND PLATFORMS'

Context: Recently, the Securities and Exchange Board of India (SEBI) has directed online bond platforms (OBPs) to desist from offering debt securities that are not listed or are not proposed to be listed, in contravention of their regulatory framework.

What are Online Bond Platforms (OBPs)?

- Online Bond Platform Providers (OBPPs) would be **companies incorporated in India** and they should register themselves as **stock brokers in the debt segment** of the stock exchange, as per the framework that would be effective immediately.

About the move:

◦ Revised clause:

- ▶ SEBI has revised **Clause 5.2 of the OBP circular** to include a few new product categories such as **government securities and listed sovereign gold bonds.**



Sovereign gold bonds (SGBs):

- As per the Reserve Bank of India SGBs are **government securities denominated in grams of gold.**
- These are the substitutes for holding physical gold. Investors **have to pay the issue price in cash** and the bonds will be redeemed in cash on maturity.
- ▶ Under the revised clause 5.2, OBPPs can offer listed debt securities, listed municipal debt

securities, and listed securitized debt instruments; debt securities, municipal debt securities, and securitized debt instruments proposed to be listed through a public offering; listed government securities, state development loans, and treasury bills; and listed sovereign gold bonds.

◦ Need of the initiative:

- ▶ According to SEBI, certain OBP are offering unlisted bonds/other products on a separate platform/website and has not divested of such offerings, and certain OBPs "have a link on the online bond platform/website to another platform/website for transacting in unlisted bonds/other products."

◦ Significance:

- ▶ For any **vibrant fixed-income** market to develop, government securities are at the core of investment in a credit continuum.
- ▶ By allowing **government securities and sovereign gold bonds (SGBs)** to be offered on OBPPs, investors now have a choice of bond investments as per their own risk appetite.

Bond Market:

- The bond market broadly describes a marketplace where investors buy debt securities that are brought to the market by either governmental entities or corporations.
- National governments generally use the proceeds from bonds to finance infrastructural improvements and pay down debts.
- Companies issue bonds to raise the capital needed to maintain operations, grow their product lines, or open new locations.
- Bonds are either issued on the primary market, which rolls out new debt, or traded on the secondary market, in which investors may purchase existing debt via brokers or other third parties.

Role of Securities and Exchange Board of India (SEBI):

- SEBI is a statutory body established on April 12, 1992 in accordance with the provisions of the **Securities and Exchange Board of India Act, 1992.**
- **Function:**
 - ▶ The basic functions of the Securities and Exchange Board of India is **to protect the interests of investors in securities and to promote and regulate the securities market.**



CLIMATE CHANGE HAS EXACERBATED MODERN SLAVERY & POVERTY

Context: According to a new report by Walk Free, 'Climate change', along with other environmental factors, has exacerbated modern slavery.

- This problem has been identified in Africa, where the government response to curtail the menace was also the poorest, according to 'the **Global Slavery Index 2023**'.

Key-Findings of Global Slavery Index 2023:

- **India, China, Russia, Indonesia, Turkey, and the U.S.** are among the top G20 countries with the highest number of forced labourers.
- It ranks **160 countries** based on their **estimated prevalence of modern slavery per 1,000 people**.
- The countries with the highest prevalence are **North Korea (104.6), Eritrea (90.3), and Mauritania (32.0)**, where modern slavery is widespread and often state-sponsored.
- The countries with the lowest prevalence are **Switzerland (0.5), Norway (0.5), and Germany (0.6)**, where strong governance and effective responses to modern slavery are evident.

Africa as a 'Hotspot' for Modern slavery:

- More than **3.1 million Africans** are in forced marriage and more than **3.8 million in forced labour**, the report stated.
- On any given day in 2021, an estimated **seven million men, women and children** were living in modern slavery in Africa.
- The countries with the highest prevalence of modern slavery in Africa are **Eritrea, Mauritania and South Sudan**.
- The countries with the lowest



prevalence of modern slavery in Africa are **Mauritius, Lesotho and Botswana**.

- The region recorded the **fourth highest prevalence of modern slavery** after the **Arab States (10.1 per thousand), Europe and Central Asia (6.9) and Asia and the Pacific (6.8)**.

One in every 300 females in the region was in a forced marriage compared to one in every thousand males.

Modern slavery and consequences:

- Modern slavery encompasses various forms of **exploitation, including forced labour, forced marriage, debt bondage, commercial sexual exploitation, human trafficking, slavery-like practices and the sale and exploitation of children**.
- **Modern slavery has devastating consequences for individuals, communities, and societies.**
 - It violates human rights, undermines human dignity and erodes social cohesion.
 - It also hampers **economic development, perpetuates inequality, and fuels corruption. It poses a threat to global security and stability by fuelling conflict, terrorism, and organised crime.**

Reasons for increasing Modern slavery:

- **Adverse climate impacts:** Climate change has magnified other drivers of displacement such as **loss of livelihoods, poverty, food insecurity and a lack of access to water and other resources**.
 - Thus, people are pushed to migrate and become vulnerable to modern slavery.
 - **For example:** In the Horn of Africa, increases in the rate of child marriages in drought-affected areas have been linked to the impacts of the climate crisis, particularly economic and food insecurity, displacement from homes and **interrupted education for girls**.
- **Lack adequate livelihood options:** become more vulnerable to forced labour as they and may be easily tricked into accepting risky opportunities for survival.
- **Limited Government intervention:** While some governments improved identification measures but legal frameworks, gaps in services available to survivors remained and only limited action has been taken to address systemic risk factors to modern slavery.

CELL-CULTIVATED MEAT AND ADVANTAGES

Context: Recently, two California based companies were cleared to make and sell cell cultivated chicken. As a concept, it is being hailed by stakeholders as a major step towards reducing carbon emissions associated with the food industry worldwide.

What is cell-Cultivated chicken?

Meat Industry in India:

- The meat industry handles the **slaughtering, processing, packaging, and distribution** of animals such as **poultry, cattle, pigs, sheep and other livestock**.
 - While India has an abundant supply of meat, the meat processing industry is still emerging.
 - Meat processing covers a spectrum of products from sub-sectors comprising animal husbandry and poultry farms, to bulk frozen meat, chilled and deli meat, packaged meat, and ready-to-eat processed meat products.
 - In the present scenario, there is a **large scope for meat processing in poultry** as well as in red meat.
 - In fact, the poultry industry has made considerable progress by developing and marketing value-added products.
- Cell-Cultivated meat is also called as **'Cultured meat'**.
 - **Process of Isolation-** It involves isolation of the cells that make up the meat (the meat that we consume), and putting them in a setting where they have all the resources they need to grow.
 - **Processed with additives-** Once there are enough cultivated cells, they are collected and processed with additives to improve texture.

India's Meat Market:

- According to a research, meat production in India is estimated at **6.3 million tons** annually and is **ranked 5th** in the world in terms of production volume.
- India is responsible for **3% of the total meat production in the world**.
- The nation has the **world's largest population of livestock** at about 515 million.

Need for Lab-grown meat in India:

- **Higher consumption:** According to data from the National Family Health Survey 5 by India's Ministry

of Health and Family Welfare, close to **77 percent of India's population eats fish, chicken and other types of meat**.

- ▶ The survey also discovered that **83 percent of men and 71 percent of women** are non-vegetarians.
- **Environmental hazards:** According to a joint report by the **Vasudha and Shakti foundations**, Indian livestock is responsible for the annual emission of over **200 million tons of CO2 into the atmosphere**.
- **Less resource consumption:** Lab-grown meat enterprises use up to **95 percent less land and 78 percent less water** when renewable energy is used in production than conventional meat.
- **For making Nutrition food affordable:** As per the World Bank, in 2019, 10.2 percent of Indians were projected to have been living below the **international poverty level**.
 - ▶ Hence, it is believed that the **cost of cultivated meat** will most likely decline when production scales up.

Challenges to be addressed:

- **Consumer acceptance-** Perfectly substituting animal meat with alternative meat requires it to match the original in taste, texture and appearance.
- **Cost Analysis-** The cost of cell cultivated meat is expected to remain high in the near future.
- **Availability of conducive environment for cultivation-** For cultivation, researchers require high quality cells, a suitable growth medium in which the cells can be cultured, plus other resources required to maintain the quality of the final product.

Government Interventions:

- **GFI India's National Mission for Smart Protein**, the group has partnered with the Institute of Chemical Technology (ICT) Mumbai to establish the world's first government research **Centre for the development of cultivated meat**.
- GFI India has also partnered with **ICAR-Central Institute of Fisheries Education (Mumbai)** with the aim of establishing India's **'first Smart Protein Innovation Hub on Cultivated Seafood'**.

KAVACH SYSTEM

Context: The death of over 288 passengers in triple train accident at Bahanaga Bazaar railway station in the Balasore district of Odisha has brought into sharp focus the safety mechanisms needed to prevent such tragedies.

About the Technology:

- The KAVACH is an indigenously developed **Automatic Train Protection (ATP) system** by the **Research Design and Standards Organisation (RDSO)** in collaboration with the Indian industry.



- The trials were facilitated by the **South Central Railway** to achieve safety in train operations across Indian Railways.
- It is a **state-of-the-art** electronic system with **Safety Integrity Level-4 (SIL-4) standards**.
- It is meant to provide protection by preventing trains to pass the signal at Red (which marks danger) and avoid collision.

SoS means, a call or request for help or rescue

- It activates the train's braking system automatically if the driver fails to control the train as per speed restrictions.
- In addition, it prevents the collision between two locomotives equipped with functional Kavach systems. The system also relays **SoS messages** during emergency situations.
- An added feature is the centralised live monitoring of train movements through the **Network Monitor System**.

'Kavach' is one of the **cheapest, SIL-4 certified technologies** where the probability of error is **1 in 10,000 years**.

How does Kavach work on Railway Systems?

- The **Traffic collision avoidance system (TCAS)**, with the help of equipment on board the locomotive and transmission towers at stations connected with **Radio Frequency Identification (RFID) tags** helps in two-way communication between the **station master and loco-pilot** to convey any emergency message.
- The instrument panel inside the cabin helps the loco-pilot know about the signal in advance without visual sighting, and the permissible speeds to be maintained.
 - If a red signal is jumped and two trains come face to face on the same line, the technology automatically takes over and applies sudden brakes.
 - Additionally, the hooter activates by itself when approaching a level crossing which serves as a big boon to loco-pilots during fog conditions when visibility is low.

Both the **Shalimar-Chennai Coromandel Express** and the **Yeshwanthpur-Howrah Express** were not fitted with KAVACH-TACS.

About Research Design and Standards Organisation (RDSO):

- Research Design and Standards Organization (RDSO) is an ISO 9001 research and development organization under the Ministry of Railways of India.
- It functions as a technical adviser and consultant to the Railway Board, the Zonal Railways, the Railway Production Units, RITES and IRCON International in respect of design and standardization of railway equipment and problems related to railway construction, operation and maintenance.

Indian Railways' **Research Design & Standards Organization (RDSO)** has recently become the nation's first institution to be declared as **Standard Developing Organization (SDO)** under the mission called **"One Nation One Standard"** on Bureau of Indian Standards.



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Section B **[CONTEMPORARY ISSUES BASED ESSAY]**

Topic

☞ **“Unleashing the Wrath of Man: Understanding the Rising Tide of Man-Made Disasters”**

"UNLEASHING THE WRATH OF MAN: UNDERSTANDING THE RISING TIDE OF MAN-MADE DISASTERS"

Essay Prompt: Discuss the growing prevalence and impact of man-made disasters, and explore the underlying factors contributing to their increase. Analyze the challenges in mitigating and preventing such disasters and propose effective strategies for their reduction.



in displacement, destruction of critical infrastructure, and the disruption of basic services, amplifying the vulnerability of affected populations.

Factors Contributing to the Increase in Man-Made Disasters

The surge in man-made disasters can be attributed to several interconnected factors. Rapid industrialization and urbanization, driven by the pursuit of economic growth, often prioritize short-term gains over long-term sustainability and safety measures. This leads to the proliferation of hazardous industries and the inadequate integration of disaster risk reduction strategies into development plans.

Man-made disasters refer to catastrophic events that are caused by human activities, resulting in significant harm to lives, property, and the environment. These disasters are distinct from natural disasters, such as earthquakes or floods, as they are directly influenced by human actions or negligence. Unfortunately, the world has witnessed a distressing increase in man-made disasters in recent years. This essay aims to explore the causes, impacts, challenges, and potential strategies for reducing the occurrence and severity of man-made disasters.

Causes and Types of Man-Made Disasters

Man-made disasters can take various forms, each with its unique set of causes. Industrial accidents and technological disasters are prominent examples. These include incidents such as chemical leaks, explosions, or nuclear meltdowns, which can lead to severe environmental contamination and pose health risks to surrounding communities. Additionally, environmental degradation and pollution-related disasters, such as oil spills or deforestation-induced landslides, stem from unsustainable human practices and neglect for ecological balance.

Infrastructure failures and urban disasters are also on the rise due to inadequate planning, maintenance, and monitoring. Examples include building collapses, bridge failures, and incidents related to inadequate waste management. Furthermore, human conflicts and warfare have become catalysts for man-made disasters, resulting

Inadequate safety regulations and enforcement exacerbate the situation. Weak or corrupt governance, lack of oversight, and non-compliance with safety standards further jeopardize the safety of communities and environments. Negligence and human errors, both in individual and collective capacities, play a significant role in triggering disasters. These errors can range from improper handling of hazardous materials to flawed decision-making processes.

Climate change also intersects with man-made disasters, amplifying their frequency and intensity. Rising temperatures, changing weather patterns, and sea-level rise contribute to events such as heatwaves, droughts, floods, and storms, exacerbating the vulnerability of communities and infrastructure.

Impact of Man-Made Disasters

The impact of man-made disasters is multi-dimensional and far-reaching. Loss of human lives and injuries are immediate consequences that leave lasting scars on communities and families. The economic implications are severe, as man-made disasters result in significant damage to infrastructure, industries, and livelihoods. The cost of recovery and rehabilitation often imposes a tremendous burden on affected regions and nations.

Furthermore, man-made disasters have long-term environmental consequences. Pollution from industrial accidents or oil spills contaminates air, water, and soil, leading to the degradation of ecosystems and the loss of

biodiversity. The psychological and social repercussions cannot be overlooked, as man-made disasters cause trauma, displacement, and social disruption, challenging the resilience of affected individuals and communities.

Challenges in Mitigating and Preventing Man-Made Disasters

Mitigating and preventing man-made disasters require overcoming various challenges. Firstly, there is a lack of awareness and preparedness among individuals, communities, and even governments. Effective disaster management plans, early warning systems, and community-based initiatives are often absent or underdeveloped.

Balancing economic development with safety measures poses another significant challenge. Governments and industries must prioritize safety and sustainability while ensuring continued economic growth. Striking a balance between short-term economic benefits and long-term risk reduction remains a persistent challenge.

Coordination and accountability among stakeholders are vital for effective disaster management. In many instances, there is a lack of coordination between government agencies, private sectors, and civil society organizations, hindering timely response and recovery efforts. Additionally, holding accountable those responsible for negligence or non-compliance with safety regulations is often a complex legal and bureaucratic process.

Addressing man-made disasters requires international cooperation, especially when dealing with transboundary issues such as air pollution, water contamination, or climate change. Collaborative efforts are necessary to establish frameworks for information sharing, technology transfer, and joint response mechanisms.

Strategies for Reducing Man-Made Disasters

To tackle the rising tide of man-made disasters, several strategies can be adopted. Strengthening regulatory frameworks and enforcement mechanisms is crucial. Governments should develop and implement stringent safety standards, regularly audit and monitor industries, and ensure that non-compliant entities face appropriate consequences. Improving accountability and transparency will foster a culture of safety and responsibility.

Essay Outline:

- **Introduction**
 - ▶ Definition of man-made disasters
 - ▶ Statement of the problem: The alarming rise in man-made disasters
 - ▶ Brief overview of the essay's structure
- **Causes and Types of Man-Made Disasters**
 - ▶ Industrial accidents and technological disasters
 - ▶ Environmental degradation and pollution-related disasters
 - ▶ Infrastructure failures and urban disasters
 - ▶ Human conflicts and warfare as catalysts for disaster
- **Factors Contributing to the Increase in Man-Made Disasters**
 - ▶ Rapid industrialization and urbanization
 - ▶ Inadequate safety regulations and enforcement
 - ▶ Negligence and human errors
 - ▶ Climate change and its intersection with man-made disasters
- **Impact of Man-Made Disasters**
 - ▶ Loss of human lives and injuries
 - ▶ Economic implications and damage to infrastructure
 - ▶ Long-term environmental consequences
 - ▶ Psychological and social repercussions
- **Challenges in Mitigating and Preventing Man-Made Disasters**
 - ▶ Lack of awareness and preparedness
 - ▶ Balancing economic development with safety measures
 - ▶ Coordination and accountability among stakeholders
 - ▶ International cooperation and addressing transboundary issues
- **Strategies for Reducing Man-Made Disasters**
 - ▶ Strengthening regulatory frameworks and enforcement mechanisms
 - ▶ Investing in research and technological advancements
 - ▶ Promoting sustainable practices and environmental conservation
 - ▶ Enhancing education, training, and awareness programs
- **Case Studies: Learning from Past Man-Made Disasters**
 - ▶ Bhopal gas tragedy
 - ▶ Chernobyl nuclear disaster
 - ▶ Deepwater Horizon oil spill
- **Conclusion**
 - ▶ Recap of key points discussed
 - ▶ Emphasis on the urgent need for collective action
 - ▶ Hope for a future where man-made disasters are minimized through proactive measures

Investing in research and technological advancements can contribute to disaster prevention and response. Innovations such as remote sensing, early warning systems, and advanced monitoring technologies can enhance preparedness and enable timely interventions. Collaboration between researchers, scientists, and policymakers can drive technological solutions that mitigate risks and enhance resilience.

Promoting sustainable practices and environmental conservation is essential. Governments, industries, and individuals must adopt sustainable development models that prioritize resource efficiency, waste management, and ecosystem preservation. Integrating disaster risk reduction into urban planning and infrastructure development can minimize vulnerabilities and enhance resilience.

Education, training, and awareness programs play a critical role in disaster prevention and preparedness. Governments should prioritize public education campaigns that promote safety practices, risk awareness,

and community-based disaster management. Equipping individuals and communities with the knowledge and skills to respond effectively to emergencies can save lives and reduce the impact of disasters.

Case Studies: Learning from Past Man-Made Disasters

Examining past man-made disasters provides valuable lessons for the future. The Bhopal gas tragedy, resulting from a chemical leak in 1984, highlighted the devastating consequences of inadequate safety measures and the importance of corporate accountability. The Chernobyl nuclear disaster in 1986 underscored the catastrophic impact of nuclear accidents and the need for robust safety protocols in the energy sector. The Deepwater Horizon oil spill in 2010 demonstrated the need for

stringent regulations and oversight in the oil and gas industry to prevent environmental degradation.

Conclusion

The rising tide of man-made disasters is a pressing global concern. Understanding the causes, impacts, challenges, and potential strategies is vital to address this issue effectively. Governments, industries, civil society, and individuals must collaborate to strengthen safety regulations, invest in research and technology, promote sustainable practices, and enhance education and awareness. By taking collective action, we can strive towards a future where man-made disasters are minimized, lives are protected, and our planet is safeguarded for generations to come.





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Section C [PRELIMS]

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- ☞ Maharashtra's Ahmednagar renamed Ahilyanagar
- ☞ 'Rani Durgavati Gaurav Yatra' in MP
- ☞ India-US defence Deal
- ☞ Poshan app' allows migrant workers to access nurseries
- ☞ Mission on Advanced and High-Impact Research (MAHIR)
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- ☞ RBI permits 'loan default guarantee' in digital lending
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MAHARASHTRA'S AHMEDNAGAR RENAMED AHILYANAGAR

Context: Marking the 298th birth anniversary of Maratha queen Ahilyabai Holkar on 31st May 2023, Maharashtra government announced to rename Ahmednagar after her.

About Ahilyabai Holkar:

- Ahilyabai was born in **Chondi village of Ahmednagar** to the village head Mankoji Shinde, who ensured that his daughter received an education.
- It is believed that **Malhar Rao Holkar**, the army commander to Peshwa Bajirao, spotted eight-year-old Ahilyabai at a temple service in Chondi.
- Impressed by her devotion and character, he decided to get his son, **Khande Rao**, married to her.
- After her husband's death in the **Battle of Kumbher** against the king of Bharatpur in 1754, **Ahilyabai took control of Malwa**.



The Holkar Dynasty:

- The Holkar dynasty belongs to the Hindu Maratha family.
- The history of the Holkar dynasty is traced back to the village of Holegaon on the banks of **the Nira River**.
- They got their name from the **Holegaon village**.
- Malhar Rao Holkar has considered the Holkar dynasty founder in 1732.
- Initially, Holkars ruled as kings **under the Maratha Empire**.
- Later in 1818, the Indore state became a princely state under the protectorate of the British Empire.



'RANI DURGAVATI GAURAV YATRA' IN MP

Context: Recently, the Madhya Pradesh government completed the six-day Rani 'Durgavati Gaurav Yatra'.

About:

- Rani Durgavati is said to have been born in 1524, in **Mahoba's Chandela dynasty**.
 - ▶ The region comes under present-day Uttar Pradesh, near the **southern border with MP**.
- Her father was **Raja Salbahan of Ratha and Mahoba**, and the **Chandelas** were known for building the famous **Khajuraho temples** in the 11th century.
- She was later married to **Dalpat Shah**, the son of the **Gond King Sangram Shah** of the kingdom of **Garha-Katanga**.
 - ▶ This kingdom included the **Narmada Valley** and parts of northern MP.
 - ▶ It was first welded together by **Sangram Shah** and is noted as one of the most powerful kingdoms of the Gond tribe.
- Taking the Gondwana throne after the death of her husband, she proved to be a skilled fighter and able administrator.
- The queen is believed to have died while fighting the Mughals in the mid-16th century — as a day of sacrifice.



INDIA-US DEFENCE DEAL

Context: During the recent visit of Indian Prime Minister to Unites States (US), both the leaders have signed agreement on defence and security, maritime domain awareness and space among other areas.



Bilateral agreement signed:

- Jet engine tech transfer:
 - ▶ Both the countries have announced to sign a MoU for the **co-production in India** of 'GE 414 Jet Engines' for the Tejas Mk2 light combat aircraft.

- ▶ The deal is about manufacturing jet engines in India for **Light Combat Aircraft 'Tejas' Mk2** and later for AMCA.
- ▶ The deal was between the US engine manufacturer **General Electric** and state owned **Hindustan Aeronautics Limited (HAL)**.

About the F414-GE-INS6 technology:

- This is an Indian version of the **F414-GE-100 turbofan engine**, which is used to power the **Boeing F/A-18E/F Super Hornet**.
- The '**INS6 variant**' has a number of improvements, including:
 - ▶ A higher thrust rating of 22,000 pounds (98 kN)
- A **Full Authority Digital Engine Control (FADEC)** system

The **F414-GE-INS6** is being used to power the **Indian Air Force's Tejas Mk2** and it is also being considered for use in the '**KAI KF-21 Boramae fighter**' jet program.

Key features required for Indian missile needs:

- **Performance:** The F414-GE-INS6 is a high-performance engine that provides the **Tejas Mk II** with the thrust and power it needs to meet India's demanding **Air Force and Naval requirements**.
 - ▶ It has a **thrust-to-weight ratio of 9.4:1**, which gives the Tejas Mk II excellent acceleration and climb performance.
 - ▶ It also has a **high top speed of Mach 2.0** and a range of **over 1,000 miles**.
- **Reliability:** The F414-GE-INS6 has a proven track record of reliability. It has over 10 million hours of flight time accumulated, and it has been used in a variety of military aircraft, including the F/A-18E/F Super Hornet and the JAS 39 Gripen.
- **Cost:** The F414-GE-INS6 is a cost-effective engine. It is priced competitively, and it has **low maintenance costs**.

Tejas-MK2 Light Combat Aircraft (LCA):

- The Indigenous LCATEjas Mk2 is a **fighter aircraft developed in India** that can carry eight **Beyond-Visual-Range (BVR) missiles** simultaneously, along with integrating all native weapons and advanced weapons from other countries.
- The LCA Mk2 is an upgraded version of the LCA Tejas Mk1, which has improved range and mission endurance.
- **Features:**
 - ▶ Designed to carry a range of air-to-air, air-to-surface, precision-guided, weapons.
 - ▶ Air to air refueling capability.

- **Other Variants of Tejas:**
 - ▶ **Tejas Trainer:** 2-seater operational conversion trainer for training air force pilots.
 - ▶ **LCA Navy:** Twin- and single-seat carrier-capable for the Indian Navy.



POSHAN APP' ALLOWS MIGRANT WORKERS TO ACCESS NURSERIES

Context: More than 57,000 migrant workers have registered for the special 'one nation one Anganwadi programme', to avail the benefits of schemes especially for children and mothers which is important for inclusive development and welfare society.

About One Nation One Anganwadi Programme:

- Under '**One Nation One Anganwadi Programme**', people even if relocate to another State, they can avail of the benefits given to **children under six years** and **pregnant women and lactating mothers** by the government.
- Under the programme **each migrant worker** who had registered in their original state could go to the nearest Anganwadi in their current place of residence and avail of the schemes and services offered.
- This can become possible with the coordination of **Centre and the State governments** using the '**Poshan Tracker App**' on mobile phones.
- An **age-appropriate take home ration** is also being designed for children up to six years of age and a proposal has been sent for the same to the finance ministry.

The **Poshan Tracker management application** provides a **360-degree view** of the activities of the Anganwadi Centre (child care centres), service deliveries of Anganwadi Workers and complete beneficiary management for pregnant women, lactating mothers and **children under six**.

- It also **digitizes and automates** physical registers used by workers that helps improve the quality of their work.

POSHAN Abhiyaan (National Nutrition Mission):

- It was launched by the government on **March 8, 2018**.
- **Aim:** The Abhiyaan targets to reduce **stunting, undernutrition, anemia (among young children, women and adolescent girls) and reduce low birth weight** by **2%, 2%, 3% and 2%** per annum respectively.

POSHAN 2.0:

- **About:** The government has amalgamated various programmes with similar objectives such as Supplementary Nutrition Programme and “**POSHAN Abhiyaan under one umbrella–Mission POSHAN 2.0**”—for creating synergies in operations and adopting an integrated approach in the nutrition services mechanism.
- **Components:**
 - **Convergence:** The Abhiyaan is to ensure convergence of all nutrition related schemes of MWCD on the target population. The Abhiyaan will ensure convergence of various programmes.
 - **ICDS-CAS:** Software based tracking of nutritional status will be done.
 - **Behavioral change:** The Abhiyaan will be run as a **Jan Andolan** where mass involvement of people is desired. A community-based event will happen once a month to create awareness and address issues.
 - **Incentives:** Front line workers will be given incentives for performance.
 - **Training and Capacity Building:** Incremental Learning Approach will be adopted to teach **21 thematic modules**. The training will be given by Master Trainers to front line workers.
 - **Grievance Redressal:** A call centre will be set up for ease of access to solutions to any issues faced.



MISSION ON ADVANCED AND HIGH-IMPACT RESEARCH (MAHIR)

Context: The Ministry of Power and the Ministry of New and Renewable Energy have jointly launched a National Mission ‘MAHIR’ to quickly identify emerging technologies in the power sector and develop them indigenously, at scale, for deployment within and outside India.

About:

- **Title:** Mission on Advanced and High-Impact Research (MAHIR)
- **Aim:** To facilitate indigenous research, development and demonstration of the latest and emerging technologies in the power sector.
- By identifying emerging technologies and taking them to the implementation stage, the Mission seeks to leverage them as the main fuel for future economic growth and thus make India a manufacturing hub of the world.

The key objectives of the Mission are as follows:

- To identify emerging technologies and areas of future relevance for the Global Power Sector and take up indigenous end-to-end development of relevant technologies
- To provide a common platform for Power Sector Stakeholders for collective brainstorming, synergetic technology development and devise pathways for smooth transfer of technology
- To support pilot projects of indigenous technologies (developed especially by Indian Start-ups) and facilitate their commercialization
- To leverage foreign alliances and partnerships to accelerate research & development of advanced technologies and to build competencies, capabilities and access to advanced technologies through bilateral or multilateral collaborations, thereby facilitating exchange of knowhow and Technology Transfer.
- To seed, nurture and scale up scientific and industrial R&D and to create vibrant & innovative ecosystem in the Power Sector of the country
- To make our Nation among the leading Countries in Power System related Technologies & Applications development.



QS WORLD RANKING

Context: The Indian Institute of Technology (IIT) in Mumbai has achieved its highest rank ever, breaking into the world’s top 150 universities in the latest edition of the QS World University Ranking released.

QS RANKING (INDIAN INSTITUTIONS)			
National Rank	2024 Rank	2023 Rank	Institution Name
1	149	172	IIT, Bombay (IITB)
2	197	174	IIT, Delhi (IITD)
3	225	155	Indian Institute of Science
4	271	270	IIT, Kharagpur (IIT-KGP)
5	278	264	IIT, Kanpur (IITK)
6	285	250	IIT, Madras (IITM)
7	364	384	IIT, Guwahati (IITG)
8	369	369	IIT, Roorkee (IITR)
9	407	521-530	University of Delhi
10	427	551-560	Anna University

Source: QS

About:

- This marks the **first time in eight years** that an Indian higher education institution has made it to the top 150 list, with the Indian Institute of Science (IISc) Bangalore previously achieving this feat in 2016 with a ranking of 147.
- IIT Bombay climbed **23 positions** to secure the 149th rank globally in this year's edition of the rankings.
- IISc falling **70 positions** from **155th rank to 225**. It now stands as the **third-highest ranked Indian institution**.
- IIT Kanpur ranked from 264 to 278 and IIT Madras from 250 to 285, among others.
- **Parameters included:**
 - ▶ The weightage given to the academic reputation indicator has been lowered from 40 per cent to 30 per cent.
 - ▶ Similarly, the emphasis on **faculty student ratio** has also been decreased **from 15% to 10%**,
 - ▶ The significance attributed to the **employer reputation indicator has been increased from 10% to 15%**.
- With **45 universities** ranked this year, India is the **seventh most represented country globally and the third in Asia** trailing only Japan (52 universities) and China (Mainland) (71 universities).
- India has **two more entries** in the world's top 500 universities with the **University of Delhi (ranked 407th) and Anna University (ranked 427th) making their debut in this tier**

- ▶ Outreach
- ▶ Inclusivity and perception
- **Addition of new category (Innovation) subject domain-**
 - ▶ **Agriculture & Allied Sectors**
 - ▶ Expanded '**Architecture**' to '**Architecture and Planning**'
- **Objective:** India Rankings have served as a valuable tool for students in selecting universities based on their relative standing in various categories and subject domains among **higher education institutions (HEI)** in the country.
- **Significance:** **Multi-dimensional parameters** of India Rankings have successfully captured the quality and excellence of HEIs in India.

In total, **5,543 unique institutions** offered themselves for ranking **under 'overall', category-specific and/or domain-specific rankings** for India Rankings 2023.

Key Highlights:

- **On the basis of Field:**
 - ▶ The **Indian Institute of Technology (IIT)-Madras** in Chennai remained the best educational institution in overall rankings for the **fifth consecutive term**.
 - ▶ The **Indian Institute of Science (IISc)**, Bengaluru ranked as the best university in the country for eight years in a row.
 - ▶ **Miranda House**, Delhi is ranked **the best college**.
 - ▶ **Indian Institute of Management (IIM), Ahmedabad** is the top management institute.
 - ▶ **National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad** is ranked number one for pharmaceutical studies.
 - ▶ The **All India Institute of Medical Sciences (AIIMS)**, Delhi is ranked the **best medical college**, and Saveetha Institute of Medical and Technical Sciences, Chennai is the **top dental college**.
 - ▶ **National Law School of India University, Bengaluru** is ranked the best law college in the country.
 - ▶ **IIT-Madras** has also been ranked the **best engineering college** for the eighth consecutive year (from 2016 to 2023).
- **On the basis of Research Capability:**
 - ▶ IISc Bengaluru stood first in '**Research Institutions**' category.



NATIONAL INSTITUTIONAL RANKING FRAMEWORK (NIRF) 2023

Context: Recently, the National Institutional Ranking Framework (NIRF), under the Union Ministry of Education, announced the '**India Rankings 2023 of higher education institutions**' in New Delhi.

About the rankings:

- This was the **eighth consecutive edition** of India Rankings of HEIs in India. The **five broad categories** of parameters identified in the NIRF are:
 - ▶ Teaching
 - ▶ Learning and resources
 - ▶ Research and professional practice
 - ▶ Graduation outcome

- ▶ IISc is followed by the **Jawaharlal Nehru University (JNU)** and **Jamia Millia Islamia University** as the second and third best universities, respectively.
- **In Agriculture sector:**
 - ▶ **Indian Agricultural Research Institute, New Delhi** remained at the top in 'Agriculture and Allied Sectors'.
 - ▶ IIT-Kanpur topped the '**Innovation**' category.
 - ▶ **IISc, Bengaluru and IIT-Delhi** are ranked the **second and third best institutes** in the overall category.
 - ▶ **Hindu College, Delhi and Presidency College, Chennai** are ranked the second and third best colleges, respectively.

RBI PERMITS 'LOAN DEFAULT GUARANTEE' IN DIGITAL LENDING

Context: The Reserve Bank of India (RBI) has allowed default loss guarantee (DLG), a safety-net arrangement among banks, non-banking finance companies, and lending service providers (LSPs) in the digital lending space.

Who are lending service providers (LSP)?

- Lending service providers are **new-age players** who use technology platforms in the lending space.
- They are agents of a bank or NBFC who carry out one or more of a lender's functions (in part or full) in customer acquisition, underwriting support, pricing support, disbursement, servicing, monitoring, recovery of specific loan or loan portfolio on behalf of REs .

First Loss Default Guarantee (FLDG):

- DLG is also known



as '**First Loss Default Guarantee (FLDG)**'.

- FLDG is an arrangement whereby a **third party** such as a **financial technology (fintech)** player (LSP) compensates lenders if the borrower defaults.
- The LSP provides certain credit enhancement features such as **first loss guarantee** up to a pre-decided percentage of loans generated by it.
- Offering FLDG acts to investors will work as a demonstration of its underwriting skills.
- From the perspective of the lender, it ensures the **platform's skin in the business**.

INDIA TO REMOVE RETALIATORY CUSTOMS DUTIES ON 'EIGHT' US PRODUCTS

Context: During the recent state visit of Prime Minister to United States (US), both countries decided the termination of Six WTO disputes and the removal of these retaliatory tariffs on certain US products.

Background:

- In 2018, the US imposed an **import duty of 25 per cent** on **steel products** and 10 per cent on certain **aluminium products** on grounds of national security.

Custom Duty:

- Customs duty refers **to the tax imposed on goods when they are transported across international borders. In simple terms, it is the tax that is levied on import and export of goods.**
- The government uses this duty to raise its revenues, safeguard domestic industries, and regulate movement of goods.

◦ In retaliation, India in **June 2019** imposed '**customs duties**' on '**28 American products**'.

About the move:

- According to information, India has decided to lift the additional duties on **eight American products**.
- As part of the agreement, India will be removing additional duty on **chickpeas (10 per cent), lentils (20 per cent), almonds fresh or dried (Rs.7 per kg), almonds shelled (Rs.20**

per kg), walnuts (20 per cent), apples fresh (20 per cent), boric acid (20 per cent), and Diagnostic Regents (20 per cent).

The six WTO disputes:

- **Those initiated by India;**
 - ▶ Countervailing measures on certain hot-rolled carbon steel flat products from India
 - ▶ Measures relating to the renewable energy sector
 - ▶ Certain measures on steel and aluminium products
- **Those initiated by USA:**
 - ▶ Certain measures relating to solar cells and modules
 - ▶ Export-related measures
 - ▶ Additional duties on some products from the US

WTO Dispute Resolution Process:

There are **two main ways to settle a dispute** once a complaint has been filed in WTO:

- **Bilateral consultations:** Parties find a mutually agreed solution, particularly during the phase of bilateral consultations.
- Adjudication, including the subsequent **implementation of the panel and Appellate Body, reports.**
- **The WTO dispute settlement process involves three stages:**
 - ▶ Consultations between the parties
 - ▶ Establishment of a dispute settlement panel if consultations fail
 - ▶ Adjudication by panels.

World Trade Organisation (WTO):

- WTO came into existence in **Uruguay Rounds of 1986-1994 through Marrakesh Agreement in 1995.**
- **Members** – 164 and together, they constitute **98% of the global trade**
- In 2000, 4th WTO Ministerial led to a new round of negotiation, Doha Development Agenda, which is still in progress.
- **Mandate** – to open trade for the benefit for all
- All decisions are made by consensus.
- WTO Headquarters is in **Geneva, Switzerland.** It has no other branch office.
- Ministerial Conference is WTO's top level decision making body. It meets once in two years.
- **WTO Agreements:**
 - ▶ **For Goods** – Marrakesh Agreement (1995) and Trade Facilitation Agreement (2017)
 - ▶ **For Services** – General Agreement on Trade in Services
 - ▶ **For Intellectual Property** - The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).



'JOHA RICE' VARIETIES OF NORTH-EASTERN INDIA

Context: As per the Ministry of Science, Joha rice, aromatic rice cultivated in the North-eastern region of India is effective in lowering blood glucose and preventing diabetes onset and hence is an effective nutraceutical of choice in diabetes management.

About Joha Rice:

- Joha is a **short-grain winter paddy** known for its significant **aroma and taste.**
- The traditional claims are that the consumers of Joha rice have



a **low incidence of diabetes and cardiovascular diseases.**

- These Rice **two unsaturated fatty acids** viz., **linoleic acid (omega-6) and linolenic (omega-3) acid.**
- **Significance:**
 - ▶ These essential fatty acids (which humans cannot produce) can help maintain various physiological conditions.
 - ▶ **Omega-3 fatty acid** prevents several metabolic diseases such as **diabetes, cardiovascular diseases, and cancer.**
 - ▶ Joha has also proved to be effective in lowering blood glucose and preventing diabetes.

Present Scenario:

- More than **half of men (55%)** and **two thirds (65%) of women** aged 20 years in India are more likely to develop diabetes, with most of those cases (around 95%) likely to be **type 2 diabetes (T2D) in their lifetime.**
- Diabetes is a **Non-Communicable Disease (NCD)**

that occurs either when the pancreas does not produce enough insulin (**a hormone that regulates blood sugar, or glucose**), or when the body cannot effectively use the insulin it produces.

Type 2 diabetes:

- It affects the way the body uses insulin. While the body still makes insulin, unlike in type I, the cells in the body do not respond to it as effectively as they once did.
- The population with 45 and above age groups is the most affected with it.
- This is the most common **type of diabetes and it has strong links with obesity.**



FOOD SAFETY INDEX 2023

Context: Recently, the State Food Safety Index 2023 has been released by 'Food Safety and Standards Authority of India (FSSAI)'.

Highlights of the Index:

- **Aim:** The aim is to create a competitive and positive change in the food safety ecosystem in the country.
- **Objective:**
 - ▶ The Food Safety Index evaluates the performance of states and Union Territories based on five different aspects.
 - ▶ These include human resources and institutional data, compliance, food-testing facility, training and capacity building, and consumer empowerment.
- **State-wise assessment:**
 - ▶ Among **larger states**, Kerala secured the top ranking in the State Food Safety Index.
 - ▶ In the **smaller states category**, Goa emerged as the leader, demonstrating exemplary efforts in maintaining high food safety standards.
 - ▶ **Amongst the union territories**, Jammu and Kashmir, Delhi, and Chandigarh secured the first, second, and third rank, respectively.
- **Initiatives taken:** To further strengthen food safety practices, FSSAI released **three manuals** that provide guidance and analysis methods.



- ▶ The Manual of Methods of Analysis of Foods – Fish & Fish Products,
- ▶ Manual of Methods of Analysis of Foods – Cereal and Cereal Products – 2nd editions, and
- ▶ Manual of Methods of Analysis of Foods – Beverages: Tea, Coffee & Chicory aim to align food analysis with technological advancements and promote adherence to safety standards.
- **Training and Infrastructure Development:**
 - ▶ To ensure food quality standards across the country, the Union Health Minister announced that the Food Safety and Standards Authority of India (FSSAI) will train **25 lakh food business operators** in the next three years.
 - ▶ This initiative aims to enhance the knowledge and skills of food industry professionals, ultimately promoting safer food practices.
 - ▶ In addition, the Union Health Minister unveiled plans to set up **100 Food Streets** across the country.
 - ▶ These Food Streets will serve as benchmarks for food **safety, hygiene, and nutrition**, ensuring that consumers have access to quality food in a conducive environment.



HUMAN DEVELOPMENT INDEX (HDI) FOR 28 LAKH PVTGS

Context: Recently, the Union Minister for Tribal Affairs has announced that the government is going to 'design a survey' that can gauge the Human Development Index (HDI) specifically for about 28 lakh people of the Particularly Vulnerable Tribal Groups (PVTGs) living in over 22,000 villages across the country.

Human Development Index:

- The HDI is a summary **measure of human development.**
- It measures the average achievement of a country in **three basic dimensions** of human development i.e.:
 - ▶ Long and healthy life (measured by life expectancy at birth)
 - ▶ Education (measured by mean years of schooling and expected years of schooling)
 - ▶ A decent standard of living (measured by GNI per capita in PPP terms in US\$)

About the Plan:

- **The Particularly Vulnerable Tribal Groups (PVTGs):** PVTGs are more vulnerable among the tribal groups and are determined by **the given criteria:**
 - ▶ They have declining or stagnant populations,
 - ▶ low levels of literacy,
 - ▶ pre-agricultural levels of technology and
 - ▶ Economically backward.

As per Census 2011, there are a total of **75 PVTGs out of 705 Scheduled Tribes**, spread **over 17 states** and one Union Territory (UT).

○ **Key features:**

- ▶ The government is going to collect information about the **changes in the lives of PVTGs** and document it and make a database from it at **the village-level.**
- ▶ The authorities are planning to draw up an HDI for primitive tribal groups.
- ▶ It will also be able to quantify how government policies are changing their lives.
- ▶ The programme envisions connecting all 22,544 PVTG villages to basic government services like **communications, electricity, public education, healthcare, water supply, and connectivity.**
- ▶ **In field of Education:**
- ▶ The government had already solved **teacher shortages at EMRSs** by creating the **National Education Society for Tribal Students (NESTS)** to centrally monitor their administration and now recruit teachers as well.

Related Government Interventions:○ **Pradhan Mantri PVTG Development Mission:**

- ▶ In order to improve the socio-economic conditions of the particularly vulnerable tribal groups (PVTGs), the Finance Minister stated that the **Pradhan Mantri PVTG Development Mission** has been launched.
- ▶ This will saturate PVTG families and habitations with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, road and telecom connectivity, and sustainable livelihood opportunities.

Rs.15, 000 crores has been sanctioned in **Budget 2023-24**, to implement the Mission in the next three years under the Development Action Plan for the Scheduled Tribes.

**STATE OF INDIA'S ENVIRONMENT 2023**

Context: On the occasion of World Environment Day (June 5), Centre for Science and Environment (CSE) has released their annual compendium of data "State of India's Environment 2023".

Key highlights of the report:○ **About:**

- ▶ The report offers statistics on the **state of climate and extreme weather, health, food and nutrition, migration and displacement, agriculture, energy, waste, water and biodiversity.**

○ **In terms of Progress in various parameters:**

- ▶ For overall **environmental performance**, **Telangana** ranked at the top for its progress in increasing its **forest cover and in municipal waste treatment.**
- ▶ However, the state has performed below average in parameters such as "share of water bodies not in use", "stage of groundwater extraction" and "change in number of polluted river stretches".
- ▶ **Gujarat, Goa and Maharashtra** followed Telangana.
- ▶ The bottom rank was occupied by **Rajasthan, Nagaland and Bihar.**
- ▶ The **bottom-ranked 10 states** include six from **the northeast**, including Assam.

About the World Environment Day:

- World Environment Day is an **annual global event** celebrated on **June 05.**
- It is observed to raise awareness on the **protection and preservation** of the environment.
- History:
 - ▶ The history of **World Environment Day** can be traced back to 1972 when the **United Nations Conference** on the Human Environment **was held in Stockholm.**
 - ▶ As a result of this conference, the **United Nations Environment Programme (UNEP)** was established on June 15, 1972.
- **Theme for World Environment Day 2023:**
 - ▶ The theme of the WED 2023 is **"BeatPlasticPollution"**.

- **In Agriculture:**
 - ▶ **Madhya Pradesh** takes the top slot for the highest share of net value added, and its jump in food grain production.
 - ▶ **Andhra Pradesh, Chhattisgarh and Uttar Pradesh** feature on the second, third and fourth spots.
 - ▶ The bottom is populated by **Delhi, Goa and Meghalaya**, among others.
- **In Health:**
 - ▶ Delhi leads in public health — it has allocated the **highest share of its budget to health** and boasts of a robust network of healthcare facilities. It, however, has a **low immunisation rate**.
 - ▶ **Sikkim, Goa and Mizoram follow Delhi**.
 - ▶ Madhya Pradesh, which is at the bottom, has a high incidence of maternal mortality ratio and infant mortality rate.
 - ▶ **Chhattisgarh, Assam and Uttar Pradesh** also range in the bottom half.
- **In Public Infrastructure and Human Development:**
 - ▶ Gujarat leads **the rankings in this category and it makes the cut for its performance in providing employment and tap water connections**.
- **Other Findings:**
 - ▶ The average life expectancy of an Indian is likely to have shortened by four years and 11 months due to air pollution in 2020.
 - ▶ In 2020-21, India generated over 160,000 tonnes of municipal solid waste a day.
 - ▶ **Rural average life expectancy** cut short by five years and two months. The life expectancy of their urban counterparts is nine months longer.
 - ▶ In 2022, India experienced extreme weather events **on 314 of the 365 days**.



PETERSBERG CLIMATE DIALOGUE

Context: The Petersberg Dialogue on Climate Change was held in Berlin to discuss the way forward towards COP28.

About the Conference:

- It was hosted by **Germany and the United Arab Emirates**, which is going to host **28th Conference of Parties (COP28)** to the **United Nations Framework Convention on Climate Change (UNFCCC)**.
- **Purpose:**
 - ▶ The need for “cleaning-up our economies — breaking our fossil fuel addiction and driving decarbonisation in every sector” to achieve a **1.5 degree global warming** pathway was discussed.
 - ▶ The Agenda calls for **coal phaseout by 2030** in Organisation for Economic Co-operation and Development countries, and
 - ▶ By 2040 in all others, as well as **achieving net Zero electricity generation** and decarbonising major sectors.

COP 28:

- The **2023 UN Climate Change Conference** is going to convene from **30**



November to 12 December 2023 in Dubai, **United Arab Emirates (UAE)**.

- **It will comprise of:**

- ▶ the 28th meeting of the Conference of the Parties (COP 28);
- ▶ the fifth meeting of the COP serving as the Meeting of the Parties to the Paris Agreement (CMA 5);
- ▶ the 18th meeting of the COP serving as the Meeting of the Parties to the Kyoto Protocol (CMP 18);
- ▶ the 59th meeting of the Subsidiary Body for Implementation (SBI 59); and
- ▶ The 59th meeting of the Subsidiary Body for Scientific and Technological Advice (SBSTA 59).

Significance of the event:

- The **first Global Stocktake** of the implementation of the **Paris Agreement** will conclude at COP 28.
- Each stocktake is a **two-year process** that happens **every five years**, with the aim of assessing the world's collective progress towards achieving its climate goals.

The first Global Stocktake takes place at the mid-point in the implementation of the **2030 Agenda for Sustainable Development and its SDGs, including Goal 13 (climate action)**.

Key points for Paris Agreement (COP 21):

- The **Climate Ambition Summit** to mark the **5th Anniversary** of the Paris Agreement started on 12th December 2020 **at Glasgow, Scotland**.
- It aimed to provide a platform for government

and non-governmental leaders to demonstrate their commitment to the Paris Agreement and the multilateral process.

- **The Goal of Paris agreement was:**
 - ▶ To curtail the rise of global temperature this century **below 2-degree Celsius**, above pre-industrial levels; and also pursue efforts to limit the **increase to 1.5 degrees Celsius**.
 - ▶ Develop mechanisms to help and support countries that are very vulnerable to the adverse impacts of climate change.
 - ▶ An example would be **countries like the Maldives** facing threat due to sea-level rise.
 - ▶ Confirms the obligation that developed countries have towards developing countries, by providing them financial and technological support.

CLIMATE SHIFT INDEX (CSI)

Context: Climate change at least doubled the chances of heat wave in Uttar Pradesh which swept through the state recently, causing multiple hospitalisations; an analysis conducted using a metric called the Climate Shift Index (CSI) shows.

About the Index:

- **Developed by:** "Climate Central", an independent US-based group of scientists and communicators, CSI is a tool that quantifies the contribution of climate change to daily temperatures.
- Researchers at Climate Central conducted the analysis using CSI, which measures how often and how much temperatures have shifted from the historical average.
- A higher index indicates more dramatic change compared to the past.
- CSI levels above **one indicate climate change**.
- Levels between **two and five mean** that climate change made those **temperatures between two to five times more likely**.
- The analysis shows that **certain parts of Uttar Pradesh** reached CSI levels of **three**, indicating temperatures that have become **at least three times more likely due to climate change**.

- New analysis shows that a **three-day extreme heat event** over Uttar Pradesh from June 14-16 was made at least two times more likely by human-caused climate change.
- According to them, extreme temperatures coupled with high humidity contributed to the severity of the event.

EVOLUTION OF PROKARYOTES TO EUKARYOTES

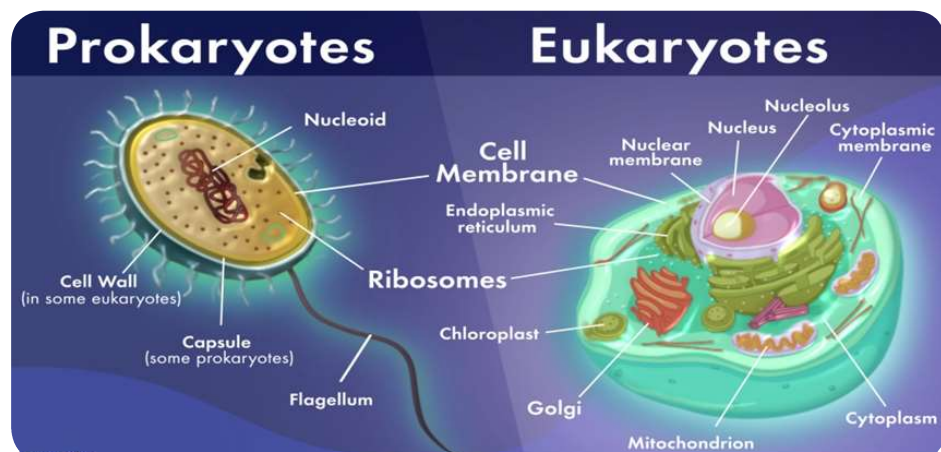
Context: Recently, it was found that evolution of eukaryotes from prokaryotes can answer the question of how complex cells with nuclei and organelles emerged.

The existing theory

- The **existing 'theory of endosymbiosis'** suggests that eukaryotes evolved from a symbiotic relationship between an ancient **archaeon (a primitive group of microorganisms that thrive in extreme habitats)** and a bacterium.

What are Prokaryotes and Eukaryotes?

- **Prokaryotes:** They are organisms that lack a true nucleus and membrane-bound organelles.
 - ▶ Their genetic material, typically a circular DNA molecule, is present in the cytoplasm without being enclosed within a nuclear membrane.
 - ▶ Prokaryotes include bacteria and archaeon.
 - ▶ Key features include **small, simple cells without a nucleus or organelles**.
- **Eukaryotes:** are organisms that have cells containing a well-defined nucleus enclosed within a membrane.
 - ▶ Eukaryotic cells have a variety of membrane-bound organelles such as mitochondria, endoplasmic reticulum, Golgi apparatus, and a complex network of internal membranes.



About the Evolution:

- **Endosymbiosis** is a process where “one organism lives inside another and both benefit from the relationship.”
- The endosymbiotic theory suggests that eukaryotes evolved from a **small archaeon** engulfing a bacterium.
- The archaeon protected the bacterium and provided a stable environment, while the bacterium supplied energy to the archaeon.
- Over time, they became dependent on each other and formed a new type of cell called a eukaryote.
- The engulfed bacterium became the mitochondrion, which produces energy for the cell.
- In plants, another endosymbiotic event occurred with a cyanobacterium becoming the chloroplast, responsible for photosynthesis.
- This symbiotic relationship allowed eukaryotes to grow larger, become more complex, and adapt to different environments.



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Section D [QUIK BYTE]

- ☞ 13th Century tomb-like structure in Siri Fort
 - ☞ Global Slavery Index
 - ☞ Global Liveability Index 2023
 - ☞ Seven products from Uttar Pradesh get GI tag
 - ☞ Services PMI 2023 released
 - ☞ Antardrishti
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13th Century tomb-like structure in Siri Fort



A **tomb-like structure** was discovered in the **Siri Fort area** by the Archaeological Survey of India (ASI).

About the site:

- Siri Fort was built in the **13th Century** by Alauddin Khilji, considered to be the most powerful ruler of the **Khilji dynasty (Delhi sultanate)**.
- It was used as a **garrison town** where his army used to reside.
- Hauz Khas village in Delhi was an **extension of the fort**, which was designed to meet the water needs of the army.
- The fort is currently in ruins and the only structure that remains is its boundary walls.

The Tomb architecture during Delhi sultanate:

Since the Delhi sultanate had a significant influence on the capital of Delhi:

- **Indo-Islamic Fusion:** The art and architecture of Delhi Sultanate also represented a fusion of **Islamic and Indian styles**.
- This is evident in Hindu motifs such as lotus and bell-shaped domes in Islamic buildings.
- For example, the **Qutub Minar features intricate carvings of Hindu deities, along with Arabic inscriptions**.
- **Use of Red Sandstone:** The Delhi Sultanate rulers extensively used locally available materials such as red sandstone, which was abundant in the region.

Global Slavery Index



Recently, the Global Slavery Index was released.

About:

- **Prepared by:** The United Nations (UN) International Labour Organization (ILO), the International Organization for Migration (IOM) and the Australia-based human rights organization Walk Free.
- 15.6 out of every thousand people in Turkey were defined as "modern slaves" in 2021.
- Compiled by the human rights charity Walk Free, the report defines modern slavery as encompassing "forced labour, forced or servile marriage, debt bondage, forced commercial sexual exploitation, human trafficking, slavery-like practices, and the sale and exploitation of children."

Global Liveability Index 2023

Recently, the **Global Liveability Index 2023** was released.

About:

- The Global Liveability Index assesses which locations around the world provide the **best and worst living conditions**.
- The Economist's Global Liveability Index for 2023 is based on data analyzed by the **Economist Intelligence Unit (EIU)**.

Biggest movers up the ranking in the past 12 months

City	Location	Rank	Index	Rank move
Wellington	New Zealand	23	93.7	35
Auckland	New Zealand	10	96.0	25
Perth	Australia	12	95.9	21
Bucharest	Romania	99	73.7	21
Hanoi	Vietnam	129	63.0	20
Adelaide	Australia	12	95.9	19
Kuala Lumpur	Malaysia	94	74.3	19
Jakarta	Indonesia	139	60.4	14
Stuttgart	Germany	25	93.4	13
Hong Kong	Hong Kong	61	88.1	13

Source: EIU.

- EIU's index ranks **173 cities across five categories:** stability, healthcare, education, culture and the environment, and infrastructure.
- Vienna has retained its **position at the top**, ahead of Copenhagen, while the **Australian cities of Melbourne and Sydney** have bounced back up the rankings to third and fourth place.
- **Asia-Pacific cities** have made some of the biggest gains, accounting for eight of the top ten movers up the rankings as economies recovered from the pandemic.

Seven products from Uttar Pradesh get GI tag

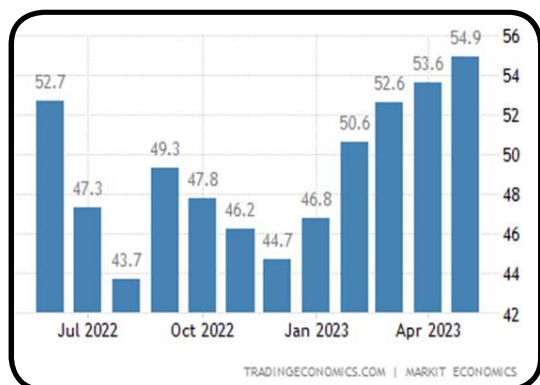


The **Geographical Indications Registry in Chennai** has given tags to seven different products from Uttar Pradesh.

About the products:

- The List includes;
 - ▶ 'Amroha Dholak',
 - ▶ Mahoba Gaura Patthar Hastashlip',
 - ▶ 'Mainpuri Tarkashi',
 - ▶ 'Sambhal Horn Craft',
 - ▶ 'Baghpat Home Furnishings',
 - ▶ Barabanki Handloom Product' and
 - ▶ 'Kalpi Handmade Paper' are the products that been given the Geographical Indication (GI) tag.
- The **Amroha Dholak** is a musical instrument made of natural wood.
- **Baghpat and Meerut** are famous for their exclusive handloom home furnishing product and running fabrics in cotton yarn since generations, and only cotton yarn are used in the handloom weaving process
- A Geographical Indication is a label that is applied to products that have a **specific geographical origin** and that have characteristics related to a particular location.

Services PMI 2023 released



India's **services sector output** grew at the second fastest pace in **13 years** this May, as per the **S&P Global India Services PMI Business Activity Index**.

Highlights of the Index:

- The index eased slightly from **62 in April to 61.2**, triggering a slight uptick in new jobs that was still the highest so far in 2023.
- **Positive demand trends** also persisted from overseas markets, with export orders rising for the fourth successive month and at the highest pace in 2023.
- **Favourable demand conditions**, new client wins and positive market dynamics supported output.
- The index is based on a survey of **purchasing managers** indicates demand resilience and output growth, inflationary pressures continued to pose a challenge.

'Antardrishti'



RBI launched a financial inclusion dashboard named **'Antardrishti'**.

About:

- The dashboard would, as its name suggests, provide the necessary knowledge to evaluate and track the development of financial inclusion by recording relevant data.
- This tool will also make it possible to assess the degree of financial exclusion at a local level across the nation so that such places may be addressed.

The Reserve Bank has been supporting financial inclusion by implementing a number of policy initiatives and the launch of 'Antardrishti' is another step in this direction.

Apocalyptic skies



Recently, the cities like **Montreal, Toronto and New York**, are covered in heavy smog as around **400 fires** burn incidents occurred in Canada.

About:

- The event can pose a significant health risks to tens of millions of residents in the **United States and Canada**, particularly those living in close proximity to the affected areas.
- New York City's air quality remains in the **"very unhealthy"** category as more thick smoke poured south from Canada's devastating wildfires.

What are Wild fires?

- Wildfires require right climatic conditions, burnable fuel and a spark.
- Rising temperatures suck moisture out of plants, creating an abundance of dry fuel.
- While dry vegetation is the burnable fuel that serves as kindling for fires, the spark is sometimes caused by lightning, at other times by accident or recklessness of the local population.
- Wildfire smoke contains various harmful pollutants, including fine **particulate matter, carbon monoxide, volatile organic compounds and nitrogen oxides**.

Griscelli Syndrome

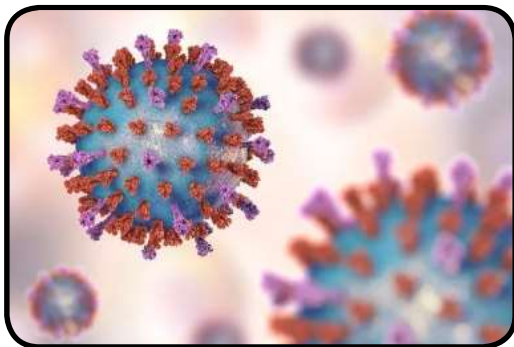


In a remarkable medical breakthrough, **Rainbow Children's Hospital** recently achieved a significant milestone by successfully treating a 3 years old female patient diagnosed with **Griscelli syndrome type 2, a rare genetic condition**.

About the disease:

- The disease is compounded by the development of **Hemophagocytic Lymphohistiocytosis (HLH)**, an immune system abnormality affecting her brain, the patient faced difficulty in walking for the past six months.
- **Cure:** With limited options available, the only curative treatment deemed viable was a bone marrow transplant (BMT).

Respiratory syncytial virus (RSV)



European regulators have approved the region's **first vaccine for respiratory syncytial virus (RSV)**, which causes thousands of hospitalisations and deaths annually.

About the disease:

- Respiratory syncytial (sin-SISH-uhl) virus, or RSV, is a common respiratory virus that usually causes mild, cold-like symptoms.
- Most people recover in a week or two, but RSV can be serious, especially for infants and older adults.
- RSV is the most common cause of bronchiolitis (inflammation of the small airways in the lung) and pneumonia (infection of the lungs) in children younger than **1 year of age**.

New chikungunya vaccine



The Phase-III human trial found the **live chikungunya vaccine** highly protective. Increased global spread of mosquito-borne illnesses due to climate change may render the shot necessary for wider populations.

Background:

- According to the study, **28 days** after a single vaccination with "**VLA1553**", the vaccine resulted in virus-neutralizing antibody levels lasting up to 180 days in **98.9%** of study participants.

Chikungunya:

- Symptoms include severe joint and muscle pain as well as high fever and skin rashes.
- There is currently no specific antiviral therapy.
- While symptoms usually improve within a week, joint pain (arthralgia) can persist for months. In some cases, lasting arthralgia can lead to debilitating chronic rheumatic arthritis disease.

Exercise Ekatha



Indian Navy MARCOS and the **Marines from the Maldives National Defence Force (MNDF)** has recently undergone the practice of combat shooting, demolition, Close-quarter battle, and diving operations including divator and rebreather diving.

About the exercise:

- **Exercise Ekatha** aims to enhance interoperability between the two navies, especially in diving and special operations.
- It is conducted on an annual basis.
- Counter-terrorism, maritime security, humanitarian assistance and disaster relief operations are also incorporated under Exercise Ekatha.
- The training regimen of **Exercise Ekatha** includes **Joint Drills, Workshops, Seminars, Tabletop Exercises** and specialized training in various combat-related activities.

IAF, Army carry out joint exercise



The **Indian Air Force (IAF)** has carried out a joint exercise with the Indian Army in the central sector with deployment of multiple combat assets to check the operational readiness of the two forces.

About:

- A fleet of Su-30MKI jets of the **Indian Air Force (IAF)** carried out a strategic mission over the Indian Ocean region for eight hours.
- Similar exercise was recently conducted using Rafale jets.
- The IAF carried out the two missions at a time China has been ramping up its presence in the **Indian Ocean region**, which is largely considered as the backyard of the Indian Navy.

Global Financial Innovation Network (GFIN)



An international team of scientists of the Physical Research Laboratory (PRL), Ahmedabad has discovered the densest alien planet, which is 13 times bigger than Jupiter.

About the discovery:

- They used the indigenous PRL Advanced Radial-velocity Abu-sky Search spectrograph (PARAS) at the Gurushikhar Observatory in Mt. Abu to measure the mass of the planet precisely.

The new Planet TOI 4603b:

- The exoplanet has a mass of 14 g/cm³.
- The newly discovered planet orbits a star called TOI4603 or HD 245134, and NASA's Transiting Exoplanet Survey Satellite (TESS) had initially declared the star as a possible candidate to host a secondary body of unknown nature.
- **Location:** The planet is located 731 light years away from Earth and orbits its star every 7.24 days.
- **Temperature:** The planet is raging hot with a temperature of 1396 degrees Celsius.

SPECIES IN NEWS

East Africa's Masai giraffes

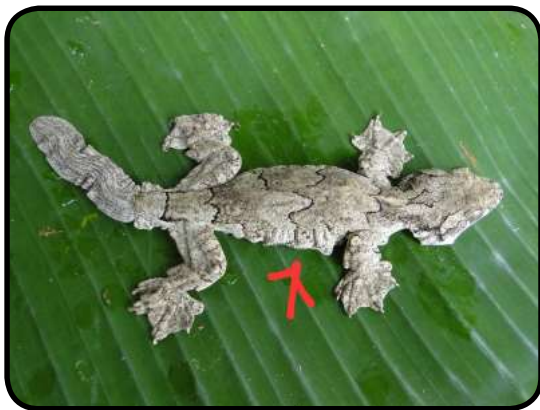


Context: According to a study, the population of **Masai giraffe is declining**. The **Great Rift Valley, of Africa**, is a crucial geological feature, has divided the Masai giraffe population into two groups.

Masai giraffes:

- Masai Giraffes have a small hump on their back and have a spotted pattern similar to that of a leopard.
- Each subspecies of giraffe has a different coat pattern.
- Masai giraffes are from Kenya and have patterns that look like oak leaves.
- Both male and female giraffes have two distinct, hair-covered horns called ossicones.
- Eat for **16 – 20 hours** a day.

Mizoram Parachute Gecko



Context: Scientists recently discovered a new species of **gliding geckos in Mizoram**, named '**Mizoram parachute gecko**'.

About the species:

- It is a newly discovered species of **gliding geckos**.
- The Mizoram parachute gecko, or **Gekko mizoramensis**, is one of the **14 geckos** known to take to the air.
- It is thought that the species evolved as a result of being separated from its closest relative, *G. popaensis*, by the Arakan Mountains.
- **Features:**
 - ▶ Unlike other gliding reptiles, which use the **bone to form their flying** surfaces, these geckos have **flaps of skin**.
 - ▶ When the lizards leap off a tall structure, air resistance pushes the flaps out to their full extent, much like a parachute, slowing the speed at which they fall.
 - ▶ The skin flaps also help to break up their shape, acting as a camouflage against predators.
 - ▶ Their specialised camouflage and body shape are shared by multiple species, making it hard to tell them apart from one another

What are Geckos?

They are **reptiles** and are found on all continents **except Antarctica**.

They are believed to be among the earliest evolving squamates, the group that contains all **lizards, snakes and their close relatives**.

There are more than **1,200 species of gecko** today, making up around a fifth of all known lizards.

LOCATION IN NEWS

Chite Lui River



Context: Chite Lui River is in danger as it turns into a dumping ground in Aizawl, Mizoram.

About:

- Chite Lui is not just a river for the people of the hilly north-eastern state. It holds sentimental values for them.
- Situated in an alluvial valley at an altitude of about 1,000 metres, the river starts its journey from Bawngkawn range in north Aizawl and flows for around 20 km in eastern Aizawl before joining River Tuirial at the southern end of the city.
- The river is close to the heart of the local population.
- Popular Mizo poet Rokunga wrote verses about Chite Lui.
- Stories and songs about the river are popular in Mizoram and even among the Mizo tribes in Myanmar.

Northern Sea Route (NSR)

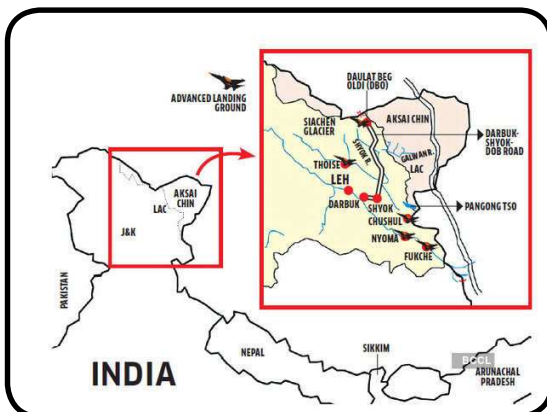


Context: Russia has unveiled plans to invest 2 trillion rubles (about 24.58 billion U.S. dollars) in the development of its **Northern Sea Route (NSR) over the next 13 years.**

About the location:

- The **Northern Sea Route (NSR)** – a set of sea routes along Russia's northern coastline connecting the Euro-Barents region with the **Pacific Ocean**
- It connects the eastern and western parts of the Arctic Ocean. The NSR runs from the **Barents Sea**, near Russia's border with Norway, to the **Bering Strait** between **Siberia and Alaska.**
- NSR is different from the Northwest Passage which is a series of possible shipping routes connecting the Atlantic and **Pacific Oceans** through the **Canadian Arctic.**
- The entire route lies in Arctic waters and within Russia's exclusive economic zone.
- It is one-third of the distance of the traditional route through the **Suez Canal.**

Daulat Beg Oldi



The **Border Roads Organisation** is giving the final shape to an alternate 56-km road that will connect **Sasoma in the Nubra Valley** to the strategically important **Daulat Beg Oldi, or DBO, Sector.**

- The new road is via **Saser La pass**, which is 17,660 feet high.

About the place:

- DBO is the only area where physical military collusion between Pakistan and China is possible.
- If India were to lose control of this sector and the **Saser La pass**, the People's Liberation Army (PLA) would make our defences in the **Siachen Glacier** untenable.
- A notable feature of the DBO Sector is the **Depsang Plains**, which are an extension of the disputed Aksai Chin plateau, situated at a base height of 5,200 meters (17,000 feet).
- The Depsang Plains are interspersed with gradual hills ranging from 5,500 to 6,000 meters in height (18,000–19,500 feet).
- These plains are irregular in shape and measure 60-70 km from west to east and 40-50 km from north to south.
- To the north, the Depsang Plains are bounded by the Karakoram Range, while the eastern boundary is defined by the **Lak Tsung Range** which forms the western watershed of **Karakash River.**
- To the south lies the **Shahi Kangri Range.** The terrain, which includes gradual hills, can be easily negotiated by wheeled and tracked vehicles, making it suitable for mechanised operations.
- It is also the only area that provides direct access from India to **Aksai Chin.**

7.2 magnitude quake strikes near Tonga



Context: According to the **U.S. Geological Survey (USGS)**, an earthquake of **magnitude 7.2** struck **near Tonga** in the **South Pacific Ocean** on June 16, 2023.

- The earthquake's epicenter was located about **280 km southwest of Tonga**, at a depth of 167.4 km.

About the location:

- Tonga, officially the **Kingdom of Tonga**, is a country in the **south-western Pacific Ocean**.
- It consists of **some 170 islands** divided into **three main island groups**:
 - ▶ Tongatapu in the south, Ha'apai in the centre, and Vava'u in the north.
- Isolated islands include **Niufo'ou (Capital city)**.
- Tonga is part of the **Pacific 'Ring of Fire'**, a zone of frequent earthquakes and volcanic eruptions that surrounds the basin of the Pacific Ocean.
- **Earthquakes and volcanic activity** can occur at any time, and can trigger tsunami alerts.
- The Tonga Trench is the place where the **Pacific and Australian plates meet**.
- The motion of these two plates has created one of the most seismogenic ("earthquake-making") regions in the world.

Pashupatinath temple in Nepal

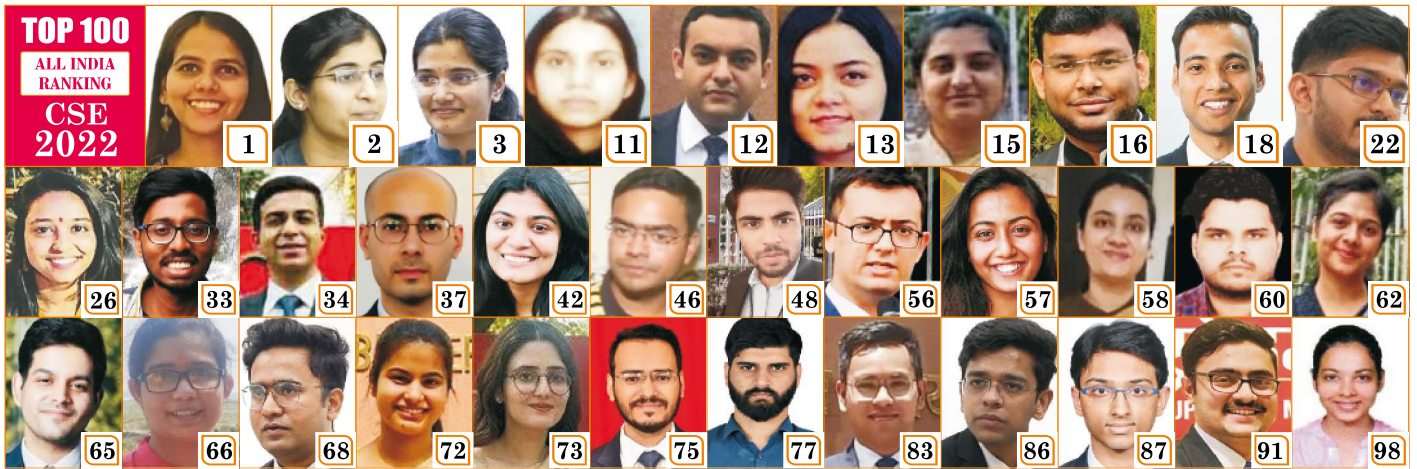


Context: Nepal's **Pashupatinath Temple** was shut for devotees, after the Himalayan nation's top **anti-corruption body** took control of the temple premises to investigate a report that 10 kgs of gold were missing from the ornament weighing 100 kgs.

About:

- Pashupatinath Temple is the oldest Hindu temple in Kathmandu.
- It is dedicated to **Lord Shiva, Pashupatinath** is one of the most important religious sites in Asia for devotees of Shiva.
- It is the largest temple complex in Nepal and stretches on both sides of the Bagmati River.
- Temples dedicated to several other Hindu and Buddhist deities surround the temple of Pashupatinath.
- Only Hindus are allowed through the gates of the main temple.
- It was conferred the status of a **World Heritage Site in 1979** by the **United Nations Educational, Scientific and Cultural Organization (UNESCO)**.





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