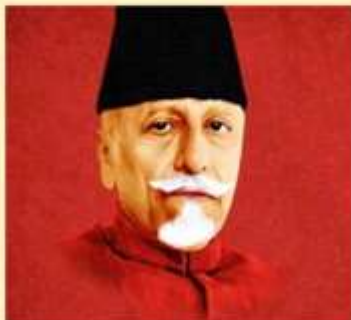




SHANMUGAM IAS ACADEMY

DECEMBER 2022

MONTHLY CAPSULE | CURRENT AFFAIRS



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HISTORY

1. THE STORY OF MEITEI SCRIPT

Context:

Newspapers in Manipur will be replacing the Bengali script with the Meitei script by 15th Jan 2023.

About the Script:

- **Patronised by Meitei rulers**, the language fell into disuse after the advent of Hinduism and eventually disappeared, as Bengali script became popular. The **earliest epigraphic record of the script** - stone inscription from Khoibu village, was erected on the orders of Meidingu Kiyamba (1467-1508).
- A movement to revive the Meitei Mayek was started in the the1930s and gathered strength in the 1950s.
- **The Manipur Official Language Act, 1979**, defined Manipuri language as “**Meiteilon written in Bengali script** and spoken by the majority of Manipuri population”.
- **By an Amendment Act of 2021**, the definition of “**Manipuri language**” in the Official Language Act was modified as “Meiteilon in Meetei Mayek and spoken by the majority of the Manipur population”.



2. SANSKRIT PROBLEM IN PANINI'S 'ASHTADHYAYI'

Context:

In his PhD thesis, **Dr Rishi Rajpopat claims to have solved Sanskrit's biggest puzzle**—a grammar problem found in the ‘**Ashtadhyayi**’, (an ancient text written by the scholar **Panini** in the 4th century BC)

Significance:

Experts are calling the **discovery revolutionary**, as it may allow **Panini's grammar to be taught to computers** for the first time.

3. KASHI-TAMIL SANGAMAM

Other Cultural Significance of the Sangamam:

- Kashi Tamil Sangamam' is an attempt to **bring a cultural renaissance** that will unite the country and connect different languages.
- Kashi is the **cultural capital of India** whereas Tamil Nadu and Tamil culture are at the centre of **India's antiquity and glory**
- “**Kashi-Kanchi**” in the “**Sapta Puris**” (the seven holy pilgrimage sites in Hinduism), he takes us on a journey from Baba Vishwanath Dham in Kashi to Lord Rameshwaram in Tamil Nadu.
- **Connection:** Both Kashi and Tamil Nadu are the **birthplaces and 'karma bhoomi'** (workplace) of the **greatest acharyas of Indian spirituality**. Kashi is the land of devotees of **Tulsi**, while Tamil Nadu is the land of Saint **Thiruvalluvar**.
- The Kashi-Tamil Sangamam has also helped to bring the **Hindi and Tamil-speaking people closer**.
- **Unity in Diversity:** Kashi-Tamil Sangamam signifies that we might speak different languages, and follow different cultures and traditions, but we all are Indians.
- **Other linkages: Kutch- Tamil Linkages:** It is said that hundreds of years ago a large population from the Kutch-Saurashtra region migrated to Tamil Nadu.

Today, a large number of **Gujarati-origin people** live in Madurai and other parts of Tamil Nadu.

4. VIJAY DIWAS – BANGLADESH LIBERATION WAR

Context:

Vijay Diwas or Victory Day is commemorated on December 16, marking the end of the **1971 Indo-Pak War** and the **liberation of Bangladesh**. India declared victory on this day 51 years ago after Pakistan signed the Instrument of Surrender.

What led to the 1971 Indo-Pak War?

After the partition of India following the end of British rule in 1947, two independent countries were formed – India and Pakistan. **The latter consisted of East Pakistan (now Bangladesh) and West Pakistan (present-day Pakistan).**

Issues within Pakistan:

- **Geographical disconnect between them.**
- **Cultural conflict.** For instance, when **Urdu, used in West Pakistan, was made the official language of the country**, it was seen as an imposition on the culture of the people in the East (**Bengali-speaking majority**).

Background of the war:

- In the first-ever free and fair elections in Pakistan in 1970, Awami League, led by Sheikh Mujibur Rahman from East Pakistan came to power. However, Military General Yahya Khan did not accept the result and **started “Operation Searchlight”**, committing **genocide to cleanse the land of Bengali and Hindu populations** and political distracters.

- **China gave its support to Pakistan against India**, while the US believed a victory for India would be

considered an expansion of Soviet hegemony in South Asia.

- In the background of large-scale genocide, looming refugee crisis, and threat to internal security. India felt strategically isolated. Therefore, **India and the Soviet Union inked the Indo-Soviet Treaty of Peace, Friendship and Cooperation to neutralize the emerging US-China– Pakistan axis and defend their vital geopolitical interests.**

India’s role in the 1971 War

- **Launched Operation Jackpot**, an operation to **recruit, train, arm, equip, supply** and advise Mukti Bahini fighters engaged in **guerrilla warfare against the Pakistan military.**
- When the Pakistan Air Force launched **pre-emptive strikes towards Western India** (including Amritsar, Pathankot, Srinagar, Avantipura, Ambala, Sirsa and Agra), **India formally declared war on December 4.**
- An important figure in this war was India’s Field Marshal Sam Manekshaw, who is often evoked in relation to it. **His planning and strategy helped secure one of the quickest victories in recent military history.**

Shimla Agreement:

- The Agreement **was a peace treaty signed between India and Pakistan** on 2 July 1972 in Shimla, the capital city of the Indian state of Himachal Pradesh.
- The agreement converted the **cease-fire line of 17 December 1971 into the Line of Control (LOC)** between India and Pakistan and it was agreed that “neither side shall seek to alter it unilaterally, irrespective of mutual differences and legal interpretations”.

GEOGRAPHY AND ENVIRONMENT

1. 'CLEAN GANGA' – NOW TOWARDS CONSERVATION, TOURISM, LIVELIHOOD

Direction:

The article covers the flagship Namami Gange program and the new focus areas of the program.

Context:

Namami Gange program was designed to enhance cleanliness levels in Ganga River. It has now geared to shift its focus to conservation, tourism and economic livelihoods.

About Namami Gange Programme:

- It is an **Integrated Conservation Mission** approved as a 'Flagship Programme' of the Ministry of Jal Shakti in **2014**.
- It aims to accomplish the **twin objectives** of effective abatement of pollution, conservation and rejuvenation of the National River Ganga.
- It is being implemented by the **National Mission for Clean Ganga** (NMCG) and State Program Management Groups (SPMGs).
- **Its implementation** has been divided into Entry-Level Activities (for immediate visible impact), Medium-Term Activities (to be implemented within 5 years of time frame) and Long-Term Activities (to be implemented within 10 years).

Key achievements under the Namami Gange Programme:

Since 2014, close to ₹30,000 crores have been sanctioned for various projects, including **building and improving sewers and river rejuvenation activities**.

New focus areas to include:

Tourism Ministry	Tourist Circuits, Exhibitions, Fairs along the towns.
Agriculture Ministry	Organic and Natural Farming corridors
Urban Affairs Ministry	Drains and Solid waste management
Environment Ministry	Afforestation, conservation efforts hiked
Arth Ganga	Harnessing economic potential from Ganga
Power Ministry	Wastewater treatment for thermal power
Rural Development Ministry	Rejuvenate small rivers and protect traditional water bodies.

2. ARCTIC REPORT CARD

Direction:

The article highlights the environmental changes in the Arctic, the factors responsible for these changes, their impact and the way ahead.

Context:

This year's assessment of Arctic conditions - the Arctic Report Card, which the US NOAA has produced since 2006, has highlighted rapid environmental changes in the Arctic.

Background:

Insights about the circumpolar region are relevant to the conversation about the warming of planet Earth, as the impacts of climate change have been witnessed first in polar regions.

Highlights of the Arctic Report Card:

- **Temperatures** in the Arctic Circle have been rising much more quickly than the rest of the planet.
- This has **transformed the region's climate** into one defined less by sea ice, snow and permafrost and more by open water, rain and green landscapes.
- It has turned the Arctic to be **wetter and stormier (rainier)**, with shifts in its climate and seasons.

- Although 2022 was only the **Arctic's 6th warmest** year on record, researchers saw plenty of new signs. **For example**, a recent heat wave in Greenland.

Factors behind rapid Arctic environmental change:

- Warmer air can hold more moisture.
- Sea ice retreats and storms absorb more open ocean water.
- Storms are passing over warmer water before reaching the Arctic, feeding them with more energy.

Consequences of rapid Arctic environmental change:

In the form of combined effects of - Physical conditions, Responses of biological resources, Impacts on infrastructure, Decisions influencing adaptive capacities and Environmental and international influences on economics and well-being.

3. HEATWAVES IN INDIA

Context:

- A new report by the **World Bank** suggests **India could soon become** one of the first places in the world to **experience heatwaves that break the human survivability limit**.
- India has witnessed a **concurrent increase in meteorological droughts and heat waves** over the last 60 years.

About Heatwaves:

A Heat Wave is a period of **abnormally high temperatures, more than the normal maximum temperature** that usually occurs during the summer season.

About Human Survivability Limit:

The Human Survivability Limit refers to the rule of thumb, which states **humans can survive three minutes**

without air, three days without water, and three weeks without food.

Heatwave in India

- In **April 2022**, India suffered an early spring heat wave that **saw temperatures in New Delhi**, topping 46 degrees Celsius.
- The **month of March was the hottest ever recorded**.
- The heatwaves would be **devastating for many poor and marginalized communities** across India, who live in **inadequately ventilated, hot, and crowded homes without proper access to cooling**.
- **Only 8% of Indian households** own air-conditioning units, according to an analysis presented in the **India Cooling Action Plan (ICAP), 2019**.

Negative effects of Heatwaves:

On Indian economy

- By 2030, India may account for **34 million of the projected 80 million global job losses** from heat stress-associated productivity decline.
- Analysis by McKinsey & Company shows that **lost labour from rising heat and humidity could put up to 4.5% of India's GDP**

On food and public health

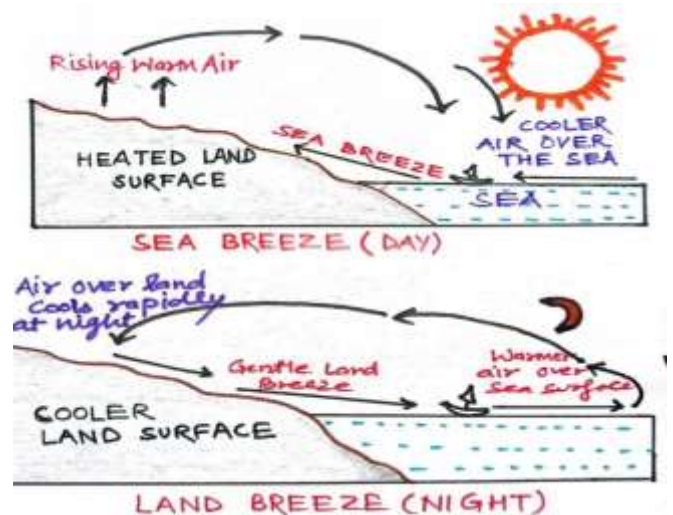
- India's long-term **food security and public health security** will depend on a **reliable cold chain network**.
- A single temperature lapse in the journey can break the cold chain, spoiling fresh produce and weakening the potency of vaccines.

Human Health

Heat conditions can alter human behaviour, the transmission of diseases, air quality, and critical social infrastructures such as energy, transport, and water.

Ecological impacts

- Heatwaves, without increases in precipitation, can lead to water shortages and increased stress for plants, particularly in arid regions.
- Animals are also highly impacted because of heat waves.



4. BEHIND MUMBAI'S UNUSUALLY FOUL AIR, CHANGES IN WIND PATTERNS

Direction:

The article mainly highlights how local winds like sea breezes could influence the pollution level of a place.

Context:

Over the last month, air quality in India's financial hub, Mumbai, has been worse than in prior years, giving Mumbaikars a taste of what people in Delhi have become used to at this time of year.

Background:

Since December 5, the AQI in Mumbai has consistently been in the "very poor" range (AQI > 300), according to the SAFAR (System of Air Quality and Weather Forecasting and Research) network.

Why is this unusual?

- This is not the first time Mumbai's air has been so toxic, but it **has never lasted more than 1-2 days**.
- Though Mumbai generates pollutants in equivalent amounts as compared to Delhi, it has an **important location advantage**.
- **Mumbai's relatively clean air is the result of strong sea breezes that sweep air pollutants away from the land.**

Reasons for this unusual pattern:

Change in flow patterns:

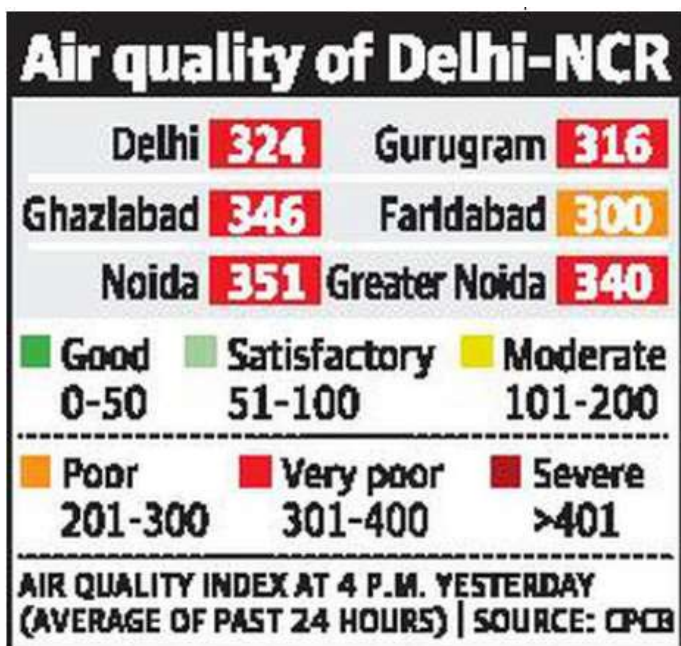
- In Mumbai, winds move from land to sea for a few days and then from sea to land and this cyclic pattern usually repeats every 3-4 days.
- **When the wind is not moving away from the land, air pollutants accumulate over the city. But then the wind direction changes, and it all gets cleaned.**
- **This cycle is delayed this year. Instead of repeating every 3-4 days, it is happening after a week, even 10 days.**
- **Even when the wind direction turns favourable, the lack of adequate speed means that the air is not entirely cleaned.**

About SAFAR:

- It is an initiative of the **Union Ministry of Earth Sciences (MoES)** launched in 2010 (for Delhi) for greater metropolitan cities to provide - **Location-specific information on air quality in near real-time and It's forecast 1-3 days in advance.**
- It is developed by the **Indian Institute of Tropical Meteorology, Pune**, and is

operationalised by the India Meteorological Department (IMD).

- SAFAR framework considers almost all pollutant levels - PM10, 1, 2.5, CO, NOx, SO2, Volatile Organic Compounds, etc., to compile the Air Quality Index (AQI).
- It promotes **public awareness** by educating the public, encouraging self-mitigation, and assisting policymakers in developing mitigation policies.



5. INDIA TO ALMOST DOUBLE ITS RENEWABLE POWER CAPACITY IN THE NEXT 5 YEARS

Context:

According to International Energy Agency (IEA), renewable energy will **comprise 90 per cent of global electricity capacity expansion** in the next five years and much of it will be in India.

Reasons for such a spike:

- The first truly global energy crisis, triggered by **Russia's invasion of Ukraine**, has sparked **unprecedented momentum for renewables**.

- The favourable policies and market reforms the world over.

Key highlights of the report:

- **China, the United States and India** all to double their renewable capacity expansion in the next five years, **accounting for two-thirds of global growth**.
- The global solar photovoltaic (PV) supply chain is diversifying, but **China will continue to dominate manufacturing**.
- **Waste and residues are a key growth area for biofuels** but require action to prevent a supply crunch.
- Renewables become the **largest source of global electricity generation** by early 2025, surpassing coal.
- Solar PV's installed power capacity is poised to **surpass that of coal by 2027**, becoming the largest in the world.
- **Global wind capacity has almost doubled**, with offshore projects accounting for one-fifth of the growth.

Initiatives taken by India to transition to renewables:

- The creation of a separate Ministry of New and Renewable Energy.
- At CoP26, India committed **50% of its total power generation from Renewable Energy**.
- The **Production Linked Incentive Scheme (PLI)** scheme is to enhance the manufacturing sector for the production of raw materials for renewable energy.
- India's decision to **achieve 'net zero' by 2070** has made reasonable progress by reaching **nearly 110 GW of RE by the end of March 2022**.

6. WHY HAVE COUNTRIES FAILED TO MEET THEIR BIODIVERSITY GOALS?

Context:

Parties to the United Nations Convention on Biological Diversity (CBD) are meeting in Montreal, Canada for a **new global agreement on halting environmental loss**.

Many of the **24 conservation targets** under discussion at the **15th Conference of the Parties (COP15)** aim to avoid past mistakes and improve on the world's last set of conservation goals — **the Aichi Biodiversity Targets that expired in 2020**.

What were the Aichi Targets?

The Aichi Targets, adopted during the **2010 CBD summit in Nagoya**, included **goals such as reducing deforestation by at least half during the coming decade and curbing pollution so that it no longer harmed ecosystems**.

To what extent were the Aichi Targets met?

Aichi was **deemed a failure by the United Nations** and the CBD secretariat called on parties to come up with another guiding document to direct **conservation efforts through 2030 and beyond**.



India's progress:

India amended its National Biodiversity Action Plan (NBAP) to cover **all 20 Aichi targets into 12 National Biodiversity Targets (NBTs)**.

As per India's 6th National Report, India is on track to achieve 9 out of its 12 NBTs.

7. UN GROUNDWATER SUMMIT 2022

Direction:

The article highlights the groundwater situation across the world and in India and efforts to conserve groundwater.

Context:

The importance of groundwater protection and techniques for its **sustainable use** will be highlighted during the United Nations-Water Summit on Groundwater 2022 in Paris, France.

Groundwater:

- Water seeps through rocks and soil and is stored **beneath the ground**.
- **Aquifers** are the rocks in which groundwater is stored.
- This untapped resource accounts for **only 0.62%** of the total water and **30%** of freshwater accessible on the planet.
- It is a **vital resource** that provides almost half of drinking water, 40% of water for irrigation and a third of water required for the industry worldwide.
- **The role of groundwater in human development** becomes bigger in the face of water scarcity affecting about 2.7 billion people around the world.

Background:

- Groundwater management is imperative to meet the **UN-mandated SDG 6** of providing clean water and sanitation for all.

- The UN World Water Development Report (UN WWDR 2022) titled 'Groundwater: Making the invisible visible' describes the challenges and opportunities associated with the development, management and governance of groundwater across the world.

About the United Nations-Water Summit on Groundwater 2022:

Organised by:

UN-Water, UNESCO and the International Groundwater Resources Assessment Centre.

Objective:

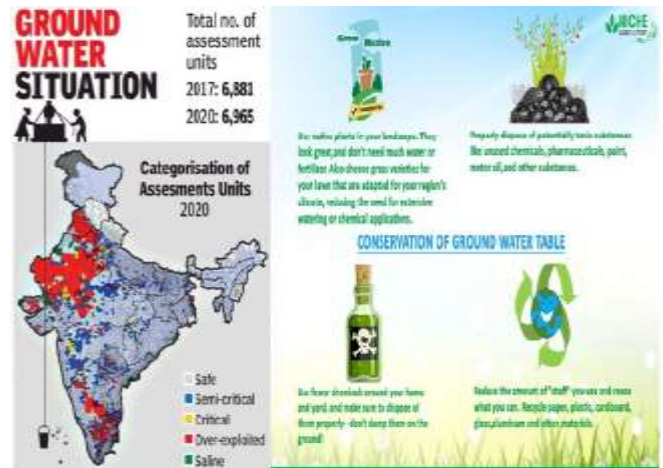
To **raise awareness** on groundwater conservation and to highlight the **opportunities and challenges** of groundwater management.

To mark the completion of the "Groundwater: Making the invisible visible" campaign run by UN-Water throughout 2022.

Main themes of the discussions: The 5 pillars of the SDG 6 Global Acceleration Framework - data and information, capacity development, innovation, finance and governance.

Steps taken by the Indian government:

- Atal Bhujal Yojana** is a groundwater management scheme launched in 2019.
- Jal Shakti Abhiyan (JSA) (2019):** It was launched in 256 water-stressed districts in the country to improve water availability including groundwater conditions in these areas.
- Aquifer Mapping and Management Programme**



8. ACCESS AND BENEFIT-SHARING (ABS) MECHANISMS

Context:

Access and benefit sharing, one of the three objectives of the United Nations Convention for Biological Diversity (CBD), is **set to be discussed at its upcoming 15th Conference of the Parties (COP15).**

What is ABS?

Access and benefit sharing refers to the **way in which genetic resources may be accessed, and how users and providers reach an agreement on the fair and equitable sharing** of the benefits that might result from their use.

Article 15 of the Convention on Biological Diversity (CBD) sets out rules, which govern access and benefit sharing. Under these rules, the **governments of countries have two key responsibilities:**

- To put in place systems that facilitate access to genetic resources for environmentally sound purposes
- To ensure that the benefits resulting from their use are shared fairly and equitably between users and providers

Why are access and benefit sharing important

- Access to genetic resources can lead **to benefits for both users and providers.**
- Access and benefit sharing ensures that the way in which **genetic resources are accessed and used.**
- **maximizes the benefits for users, providers, and the ecology help communities where they are found.**
- To **deliver a range of benefits;** from basic scientific research, such as taxonomy, to developing commercial products which contribute to human wellbeing.

About CBD:

The CBD is a multilateral treaty **aimed at conserving biodiversity**, its sustainable use and ensuring **“fair and equitable sharing” of the benefits obtained through bioresources.**

India’s participation:

- India became a signatory to the **Convention on Biological Diversity (CBD) in 1994.**
- In 2002, India became one of the **first countries to enact a law, the Biological Diversity Act**, to implement the treaty within its borders. This Act is decentralized for implementation.

Recent Issues:

Only 25 countries have provided 4,344 **internationally recognized certificates of compliance (IRCC)** to access resources in accordance with CBD guidelines as of November 15, 2022.

9. POWER FROM SEA WAVES

Context:

Researchers at the **Indian Institute of Technology Madras (IIT Madras)** have invented an **‘Ocean Wave Energy Converter’ (OWEC)** that can generate electricity from sea waves.

Mechanism:

- The device is called **Sindhuj-I**. It consists of a floating buoy, a spar and an electric module.
- A **vertically submerged floater absorbs wave energy** (based on an Oscillating Water Column) which is converted by a piston or linear generator into electricity.

How will it benefit:

- It can help **India’s coastal states and Islands** such as Lakshadweep and Andaman and Nicobar produce 40-50 GW of wave energy.
- Seawater stores tidal, wave and ocean thermal energy, making the harnessing of 40 GW wave energy possible in India.
- The converter may help India achieve the **climate change-related goal of generating 500 GW** of renewable energy by 2030.
- **Other ways to harness energy from the ocean:** Ocean thermal energy conversion (OTEC) based on temperature difference (see image: right image); Tidal energy converter; Offshore Wind turbines etc.

10. BLACK SOIL

Context:

- As per the Food and Agriculture Organization (FAO) report **“Global status of black soils”**, black soils are under threat, with most losing at least half of their **soil organic carbon (SOC)** stocks (the carbon stored in soil organic matter).

What does the report say?

- **Black soil is important for climate change mitigation:** Soils remove carbon from the atmosphere and lock it up in soil organic matter (called carbon sequestration).
- Soils have been proposed as an important solution to mitigate **human-induced climate change.**

- However, black soils are quickly losing their SOC stocks. They have lost **20 to 50 per cent** of their original SOC stock.

Recommendation by the Report:

- **Preserving natural vegetation** on black soils such as grasslands, forests and wetlands and **adopting sustainable soil management approaches** on cropped black soils were the two main goals highlighted by the report.

- **Regenerative agriculture:** It is a **conservation and rehabilitation approach** to food and farming systems.
- It focuses on topsoil regeneration, increasing biodiversity and improving the water cycle.
- **Reversative agriculture** (organic or natural farming) — a low-cost approach to reducing greenhouse gas emissions.
- **Organic farming** does not use chemicals, but it does increase organic matter content, microorganism population and plant availability of both micro- and macro-nutrients.

Black Soils

As per the Food and Agriculture Organization (FAO) report "Global status of black soils", black soils are under threat, with most losing at least half of their soil organic carbon (SOC) stocks (the carbon stored in soil organic matter).

Distribution of Black Soils: Maharashtra, Madhya Pradesh, parts of Karnataka, Telangana, Andhra Pradesh, Gujarat and Tamil Nadu.

Characteristics of the Black Soil

- **Parent Material:** volcanic rocks that were formed in the Deccan Plateau (Deccan and the Rajmahal trap)
- The **Black soil** is typical to the dry and hot regions of the Peninsula.
- **Fertility:** Black soils of uplands are of low fertility while those in the valleys are very fertile.
- **Highly retentive of moisture.** It swells greatly on accumulating moisture.
- **Deep cracks:** In summer, the moisture evaporates, the soil shrinks and is seamed with broad and deep cracks. The **cracks** permits oxygenation of the soil to sufficient depths and the soil has extraordinary fertility.

Color of Black Soils: The black color is due to the presence of a small proportion of titaniferous magnetite or iron and black constituents of the parent rock.

Crops in Black Soils: Best for cotton crop. Hence these soils are called as regur and black cotton soils.

Other major crops grown are: wheat, jowar, linseed, Virginia tobacco, castor, sunflower and millets.

Rice and sugarcane are equally important where irrigation facilities are available.

World Soil Day 2022

Context: World Soil Day (WSD) is observed every year on December 5, to highlight the value of healthy soil and to promote the sustainable management of soil resources.
Theme for this year: **Soils: Where Food Begins**

Soil Degradation

Causes: Deforestation, Overgrazing, Agricultural Expansion, Urbanization, Industrialization, Climate Change

Consequences: Ecosystem & Landscape deterioration, Fertilizer loss, Carbon sequestration, Loss of biodiversity, Desertification, Soil erosion, Salinization, Acidification, Pollution

Threats: Soil organic carbon loss, Biodiversity loss, Soil erosion, Salinization, Acidification, Pollution

Initiative for soils

- **Global Soil Partnership (GSP)** (est. 2012): To position soils in the Global Agenda and to promote sustainable soil management.
- **Bonn challenge:** To bring 150 million hectares of degraded and deforested land into restoration by 2020 and 350 million by 2030.
- **Pledge to achieve land degradation neutrality** by 2030
- **Soil Health Cards Scheme**
- **Zero Budget natural farming**

Importance of Soil

- Soil supports life by providing **essential nutrients to plants**.
- Soil is home to a large, diversified community of creatures that enhance the **soil's structure, recycle vital nutrients, and aid in the management of weeds, plant pests, and diseases**.
- Soil reduces climate change by preserving or increasing **soil organic carbon**.
- **95% of our food** comes from soils

11. WORLD SOIL DAY 2022

Context:

World Soil Day (WSD) is observed every year on **December 5**, to highlight the value of healthy soil and to promote the **sustainable management of soil resources**

Background:

UN designated December 5 2014, as the first official soil day

Solutions for soil degradation:

12. GRI'S SELF-REPORTING OF ENVIRONMENTAL IMPACT APPROVED

Context:

The Global Sustainability Standards Board (GSSB) has approved the exposure draft of the revised Global Reporting Initiative (GRI) Biodiversity Standard which will allow organisations to self-report their major impacts on biodiversity and its management

What role will these standards play?

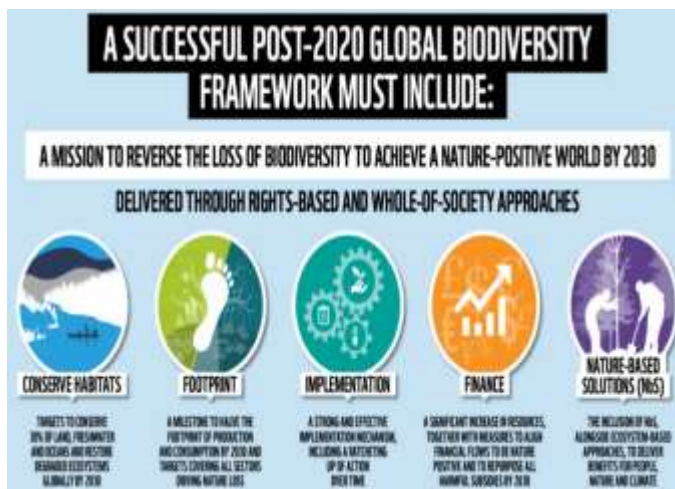
These standards will play a major role in the COP15 (currently being held in Montreal) in deciding collective commitments for the Post-2020 Global Biodiversity Framework.

What is GRI?

- **The GRI is an independent global entity** that helps businesses take responsibility for their impacts on biodiversity.
- **GRI Standards** (last revised in 2006) are designed to be used by organisations to report on their impacts on the economy, the environment and society.

What is Biodiversity?

- Biodiversity or biological diversity is the variety and variability of life on Earth.
- Biodiversity is a measure of variation at the genetic, species, and ecosystem levels.



13. KOUNDINYA SANCTUARY SEES A MASSIVE SHIFT

Context:

An 18-member herd of all female elephants from the forests of Gudiyattam and Pernambattu of Tamil Nadu are currently on the move in the Koundinya wildlife sanctuary zone in Chittoor district, apparently “in search of mates”.

550/3, DR NANJAPPA ROAD, OPPOSITE TOWN BUS STAND, GANDHIPURAM, COIMBATORE, TAMIL NADU 641009



14. NATURE POSITIVE FUND

Context:

More than 100 experts have rejected the idea of this fund at the CoP15 on Convention on Biological Diversity in Montreal, Canada.

Directions:

The concept might be important for prelims. But negatives can be used as value addition in mains under climate finance.

What is Nature Positive?

- **Nature-positive** is the term used to describe a world where nature – species and ecosystems - is being restored and is regenerating rather than declining.
- It gives a **Monetary valuation** of nature’s ecological functions.
- If the total monetary value remains constant, it means that nature remains stable.
- Ex – **Carbon Trading** was introduced in Kyoto to monetise carbon emissions, thus making efforts to reduce them.

Countries have rejected this Nature positive fund:

- Misleading figures from the nature-positive fund could lead to **wrong policy decisions** and thus result in **irreversible** consequences.

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- **State companies and countries** can't destroy nature in one place and restore it elsewhere.
- The money from the fund may lead to **land-grabbing of indigenous land** in poor countries, causing human right abuse (Green Neo colonialism) Concerns about **irrational changes** in the financial markets.

Way forward:

Tighter environmental regulations

15. INTERNATIONAL CHEETAH DAY

Context:

Social media fuels illegal trade in the species.

- **International Cheetah Day** is celebrated on December 4 to raise awareness about the need for helping cheetahs fight extinction.
- **Social media** has significantly increased **dealers' ability** to expand their audiences.
- They also provide **exotic pet owners** with a platform to showcase their illegal purchases.

Cheetah is Back

The fastest land animal in the world, Cheetah, declared extinct in India in 1952, will find a new home in the Maro-Falgu National Park (MNF). African cheetahs are being brought under an intercontinental translocation project between India and Africa mainly from South Africa and Namibia. It comes under the Action Plan for introduction of Cheetah in India, under which 50 of these big cats will be introduced in the next five years.

Cheetah's IUCN Status:
 IUCN Status: Critically Endangered (Extinct in the Wild)
 IUCN Code: CR (Extinct in the Wild)
 Population: 350-400 (in South Africa)

Leopard IUCN Status:
 IUCN Status: Vulnerable
 IUCN Code: VU
 Population: 10,000 (in India)

Jaguar IUCN Status:
 IUCN Status: Threatened
 IUCN Code: EN (Endangered)
 Population: 17,000 (in South America)

Physical Characteristics:
 - **Cheetah:** Small, rounded head with black 'tear marks', partially exposed claws, solid black spots.
 - **Leopard:** Relatively small, angular head, small, densely packed rosettes.
 - **Jaguar:** Large, rounded head, large rosettes with central spot, relatively short tail.

16. THREE HIMALAYAN MEDICINAL PLANTS ENTER IUCN RED LIST

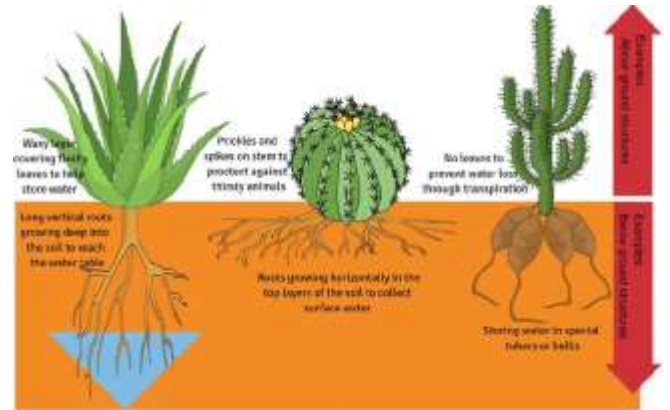
Context:

- Three medicinal plant species found in the Himalayas have made it to the IUCN Red List of Threatened Species.
- However, a recent assessment shows that deforestation, habitat loss, forest fires, illegal trade and climate change pose a serious threat to the species.

<p>Meizotropis pellita - 'critically endangered', known as Patwa, a perineal shrub, endemic to Uttarakhand, rich in antioxidants, and used in essential oils.</p>	
<p>Fritillaria cirrhosa: 'vulnerable', perennial bulbous herb, used in China for treatment of bronchial disorders, pneumonia and cough suppressant.</p>	
<p>Dactylorhiza hatagirea- 'endangered', a perennial tuberous species endemic to the Hindu Kush and Himalayan ranges of Afghanistan, Bhutan, China, India, Nepal, and Pakistan, extensively used in the Indian system of medicine to cure dysentery chronic fever, stomach ache etc.</p>	

Other Facts –

- **30% of India's land** is categorised as 'Degraded Land'.
- The Watershed Development component of **PM Krishi Sinchayi Yojana (WDC-PMKSY)** aims to restore degraded land under the Department of Land Resources.



17. CACTUS PLANTATION

Context:

The government is promoting Cactus plantation and its economic usage.

About Cactus –

- It is a **xerophytic plant** which grows at a slower pace.
- It is **adapted** to grow in an **arid and semi-arid climate**

Economic advantages of promoting Cactus Cultivation –

- Plantations of cacti will help in the **restoration of degraded land**.
- Cactus can be used as– **biofuel, food, fodder and in bio fertiliser production**.
- Contributing to **employment and income generation** for poor farmers.
- Help in achieving **Nationally Determined Contributions and Sustainable Development Goals**

Polity and Governance

1. LADAKH UNDER 6TH SCHEDULE?

Direction:

The article covers the Sixth Schedule of the Indian Constitution and examines the case of UT of Ladakh to be included under the Schedule.

Context:

- The objective of the including tribal populations under the 6th schedule of the Constitution is to ensure their **overall socio-economic development**, which the Ladakh UT administration has already been taking care of.
- This was a reference made by the Union Home Ministry to a Parliamentary panel, evading a direct reply on the possible inclusion of Ladakh under the 6th Schedule.

Background:

- **On August 5, 2019**, the former State of J&K was bifurcated into – Union Territories of J&K and Ladakh, the latter without a Legislative Assembly.
- After the special status was removed, **several political groups** (the apex body for Leh) in Ladakh **have been demanding** that its land, employment, and cultural identity should be protected under the 6th Schedule.
- In 2021, the only MP from Ladakh demanded constitutional safeguards by amending the Ladakh Autonomous Hill District Council (LAHDC) Act under the 6th Schedule.

About the Sixth Schedule of the Indian Constitution:

- It **protects tribal populations**, providing autonomy to communities by creating **Autonomous District Councils** (ADCs).
- It also provides for **Regional Councils** for each area constituted as an autonomous region.
- It consists of provisions for the administration of tribal areas in **Assam, Meghalaya, Tripura and Mizoram (Article 244)**.
- As of now, **10** autonomous councils exist in the above 4 states.

About Autonomous District Councils (ADC):

Composition:

Each autonomous district and regional council (term - 5 years) consists of **not more than 30 members** (4 nominated by the governor and the rest via elections).

Powers:

- Enact legislation on topics such as land, forestry, fisheries, social security, entertainment, public health, etc., with due approval from the Governor.
- Constitute **village courts** within their jurisdiction to hear trials of cases involving the tribes.

Role of Governors of states:

Specifying the jurisdiction of High Courts and are empowered to organise or reorganise boundaries of the tribal areas and alter or change the names of autonomous regions without separate legislation.

The central and state governments: are restricted from the territorial jurisdiction of these autonomous regions. **For example**, Acts passed by Parliament and state legislatures may or may not be applied in these regions. In the case of Assam, the direction of the Governor, both in respect of acts of Parliament or state legislature is required to be applicable. In the case of Meghalaya, Tripura and Mizoram, the direction of the president with respect to acts of Parliament and the governor in respect of acts of the state legislature is required.

2. APPOINTMENT OF AD HOC JUDGES

Context:

The Supreme Court suggested a less cumbersome and even **“out-of-the-box” thinking**, including **roping in senior lawyers to act as ad hoc judges in High Courts**, to meet the rising tide of pendency.

Constitutional Provision – Article 224 A

- Under the Article, the Chief Justice of a High Court for any State may at any time, with the previous consent of the President, request any person who has held the office of judge of that court or of any other High Court to sit and act as a judge of the High Court for that State.
- Such a judge is entitled to such allowances as the president may determine. He will also enjoy all the jurisdiction, powers and privileges of a judge of the Supreme Court.

What the SC says?

- Retired judges willing to come back to the Bench will bring their e xperience in dealing with arrears.

- Once a Chief Justice recommends, the appointment should happen in a matter of days.
- Out-of-the-box thinking – roping in senior lawyers to act as Ad Hoc judges in High Courts to meet the rising tide of pendency.

Additional and Acting Judges –

The President can appoint duly qualified persons as additional judges of a high court for a temporary period not exceeding two years when:

1. there is a temporary increase in the business of the high court; or
2. there are arrears of work in the high court.

The President can also appoint a duly qualified person as an acting judge of a high court when a judge of that high court (other than the chief justice) is:

1. unable to perform the duties of his office due to absence or any other reason; or
2. appointed to act temporarily as chief justice of that high court.

An acting judge holds office until the permanent judge resumes his office.

However, both the additional or acting judge cannot hold office after attaining the age of 62 years.

3. WHAT IT TAKES TO BECOME A NATIONAL PARTY IN INDIA?

Context:

With 12.9% seats, AAP is set to be recognised as the 9th national party by the Election Commission of India (ECI).

What is a National Party? (ECI Criteria)

- It is 'recognised' in at least four states; **OR**
- if its candidates polled at least 6% of valid votes in any four or more states in the last Lok Sabha or Assembly elections and have at least four MPs in the last LS polls; **OR**

- if it has won at least 2% of the total seats in LS from not less than three states.

What is a State Party?

- At least 6% vote share in the last Assembly election and at least 2 MLAs; **OR**
- 6% vote share in the last LS elections from that state and at least one MP from that state; **OR**
- At least 3% of the total number of seats or three seats, whichever is more, in the last Assembly elections; **OR**
- At least one MP for every 25 members or any fraction allotted to the state in Lok Sabha; **OR**
- At least 8% of total valid votes in the last Assembly election or LS election from the state.

Advantages of being a National Party

- Right to have **reserved symbol** for its candidates contesting across the country.
- **Entitled to land or building** for national headquarters at Delhi.
- Candidates need **only one proposer to file nominations** (2 in case of other parties).
- Get dedicated **broadcast slots on Doordarshan and All India Radio** during general elections.
- Can have up to **40 Star campaigners** (20 for other parties).
- Expenditure on campaigning and star campaigners isn't added to the candidate's spending limit.

The Case of AAP-

- Delhi and Punjab – large vote share
- Goa – 6.77 % of the votes
- Himachal Pradesh – 1% of the votes
- Gujarat – 13% of the votes



4. NATIONAL COMMISSION FOR BACKWARD CLASSES (NCBC)

Context:

- Hansraj Ahir assumes charge as NCBC chairperson.
- Following the **102nd Constitutional Amendment Act, 2018**, NCBC became a constitutional body, established under **Article 338B** of the Indian Constitution.
- The commission was the outcome of the Indra Sawhney case (1992) and was a statutory body.

About NCBC

- The Chairperson, Vice-Chairperson and other Members of the Commission shall be appointed by the **President**.
- The conditions of service and tenure of office shall be decided by President.
- The Commission shall have the **power to regulate** its own procedure.

- The commission considers **inclusions and exclusions** from the lists of communities.
- The commission has the same powers as a **Civil Court**.

5. RIGHT TO CONVERSION

Context:

- SC offers to find the solution to **'deceitful conversions'**.
- The Supreme Court said it would examine veiled intentions behind religious conversions through allurements by offering food, medicines, treatment, etc.
- **Article 25:** Freedom of conscience and free profession, practice and propagation of religion.
- The MHA has said that the right to freedom of religion does not include a fundamental right to "convert people to a particular religion".

6. RESERVATION FOR DALIT CONVERTS: SC TO DECIDE ON HEARING PETITIONS

Direction:

The article highlights the issues related to the inclusion/exclusion of communities in the SC list.

Context:

The SC stated it would consider whether to wait for the **Justice K.G. Balakrishnan Commission's** report or hear a series of petitions seeking Scheduled Castes quota benefits for Dalit converts to other religions, notably Christianity.

Article 341 of the Indian Constitution:

- **Clause (1):** The **President** may with respect to any State/ UT and where it is a State after consultation with the Governor, may notify the castes, races or

tribes or parts of or groups within castes, races or tribes to be SCs in relation to that State/UT.

- **Clause (2): Parliament** may by law include or exclude from the list of SCs specified in a notification issued.

Background:

- Earlier, the SC had sought the Union government's position on petitions challenging **the Constitution (Scheduled Castes) Order of 1950**.
- The Order allows only members of **Hindu, Sikh and Buddhist** religions to be recognised as SCs.
- A group seeking inclusion under the Order, is required to show **extreme social, educational and economic backwardness** arising out of the practice of **untouchability**.
- The Union government rejected the possibility of including Dalit Christians and Muslims and recently constituted **a new Commission** (under former CJI K.G. Balakrishnan) under the Commission of Inquiry Act, 1952 to re-examine their inclusion.

A case for inclusion:

- The existence of caste and **caste inequalities** among Indian Christians and Indian Muslims.
- The **caste-based discrimination** continues even after conversion.
- The 1st Backward Classes Commission's report (1953), the Mandal Commission Report, **the Ranganath Misra Commission Report**, etc., highlight the same fact. **In Sikhism and Buddhism**, though casteism is not present, they have been included as SCs.

7. THE IMPASSE OVER THE APPOINTMENT OF JUDGES

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Direction:

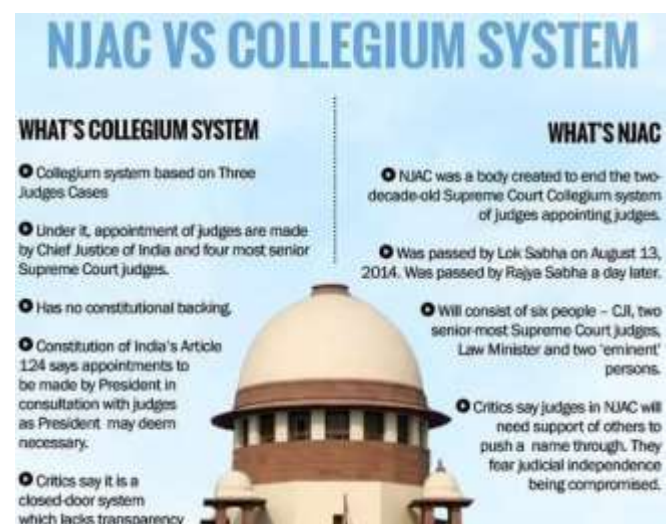
The article discusses the issue of the appointment of judges to the higher judiciary in the context of the 2015 SC's verdict which struck down NJAC.

Context:

The Vice President of India recently commented on the ongoing heated debate between the Central government and the Supreme Court over the matter of judicial appointments.

Background:

The VP questioned the SC's 2015 decision, which struck down the National Judicial Appointments Commission (NJAC) and the 99th Constitutional Amendment, 2014, on the grounds of **endangering judicial independence**.



Changes brought by the Constitution (99th Amendment) Act, 2014:

- **In order to replace the collegium system**, it introduced 3 primary Articles. **Article 124A**, created a constitutional body - **NJAC** to replace the collegium system.
- **Article 124B**, which conferred the NJAC powers to make appointments.
- **Article 124C**, empowering Parliament to regulate the NJAC's functioning.

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Appointment procedure provided under the NJAC Act:

Act:

- The NJAC was to recommend the Chief Justice of India and Chief Justices of the HCs based on **seniority**, while SC and HC judges were to be recommended based on **ability, merit and other criteria**.
- Unlike the collegium system, the Act enables both **executive and judicial members** to serve on the NJAC and empowered any 2 members of the NJAC to **veto** a recommendation.

Why was the NJAC challenged?

- In 2015, the Supreme Court Advocates on Record Association (SCAORA) filed a plea arguing that - The NJAC **took away the primacy of the judiciary's collective opinion** as it could be vetoed.
- The amendment "severely" damaged the **basic structure** (independence of the judiciary) of the Constitution.

The Centre's argument:

- The collegium that worked on an **"intradependence"** structure has **"no transparency."**
- The Act did not deprive the judiciary of its primacy but rather **diminished the executive's power** because the NJAC had only 1 member (Law Minister), as compared to 3 SC judges.
- The amendment was **"perfectly consonant"** with the basic structure as it strengthened the independence of the judiciary, checks and balances and democracy.

The SC's 2015 ruling (4:1 majority) (4th Judge Case):

- The NJAC was **unconstitutional** and violated the basic structure of the constitution.
- The Bench admitted that **all was not well even with the collegium system** and that the time was ripe to improve the system of judicial appointments.

Criticism of the ruling:

The NJAC came through a unanimously passed constitutional provision that reflected **"the will of the people,"** as both the bills were ratified by the required number of State Legislatures.

Current arrangement of judicial appointments:

- The collegium system was **restored**.
- **The Memorandum of Procedure (MoP)** - an agreement between the judiciary and the government (which came into existence after NJAC) that outlines the criteria for appointing judges to the SC and HCs.

8. FIVE SOCIAL SECTOR MINISTRIES JOIN PM GATI SHAKTI

Context:

- Five key social sector departments – **health, women and child development, rural development and panchayat raj, education, and housing and urban affairs** – have joined the **PM Gati Shakti Scheme**, aimed at cutting India's logistical costs.
- **Implementing agency:** DPIIT (Department for promotion of Industry and Internal Trade) of the commerce and industry ministry.

How Gati Shakti will improve the functioning of these social sector departments:

- Improved **Planning** of the projects.

- Improved **coordination** among departments e.g., concerned departments can upload their **GIS data (Geographic Information System)** to be shared among other departments.
- Improved **monitoring** of projects.
- Improved **evaluation of the impact** of the projects.

About PM Gati Shakti National Master Plan

PM Gati Shakti Master Plan (2021), is a **Rs. 100 lakh-crore projects** for developing 'holistic infrastructure'. It aims to ensure the speed (Gati) and Power (Shakti) of **infrastructure projects** in the **next four years**, with a focus on expediting works on the ground, saving costs and creating jobs, and bringing down the logistics cost.

Gati Shakti scheme will give the necessary push to infrastructure development:

- **Boost to infrastructure:** A **plug-and-play model** for industrial parks. It will subsume National Infrastructure Pipeline launched in 2019.
- **Helps solve logistical issues:** India's logistics cost burden is **13-14% of GDP**, compared to **6-8%** in more competitive economies.
- **Curbs red-tapism:** E.g., the Railways has started a '**Common Drawing Approval System**' on an online platform, so all the approvals can be accessed on one portal.
- **Increased coordination:** Gati Shakti will **bring together 16 infrastructure-related Ministries**.
- **Incorporation of various projects from different ministries:** Gati Shakti will incorporate the **infrastructure schemes of various Union ministries and state governments:** Bharatmala, Sagarmala, UDAN, inland waterways, dry/land ports, etc.



9. SOCIAL HOSTILITIES INDEX (SHI)

Context:

India tops the index on social hostilities relating to religion.

- The report was released by the **Washington-based think tank Pew Research Centre**.
- The SHI measures acts of religious hostility by private individuals, organizations or groups.
- The index comprises 13 metrics, including religion-related armed conflict or terrorism and mob or sectarian violence.
- At 9.4 out of a maximum possible score of 10, India's Social Hostilities Index (SHI) in 2020 was worse than neighbouring Pakistan and Afghanistan.
- The study has recorded the targeting of minorities in India during the pandemic.



10. INDIA INEQUALITY REPORT 2022

Context:

According to 'India Inequality Report 2022: Digital Divide' released by the NGO Oxfam India - growing inequalities based on caste, religion, gender, class, and geographic location are being worryingly replicated in the digital space in India.

Key Highlights of the report:

- **Gender Divide:** Women constitute **only one-third of internet users in India.**
- 61% of men-owned **mobile phones** compared to just **31 % of women in 2021.**
- **Rural-Urban Divide:** Only **31 per cent of the rural population** uses the Internet compared to **67 per cent of their urban counterparts.**
- **Maharashtra has the highest internet** penetration, while **Bihar** has the lowest.
- **Religion and Caste wise Divide:** **Sikhs** have the **highest** likelihood of **having a computer** followed by Christians, Hindus and lastly Muslims.
- The tendency to **use formal financial services** is **lowest for ST households**, followed by SC households and OBC households.
- **Division because of poverty:** The chances of having a computer are higher with **higher levels of education as well as income.**
- The likelihood of a **digital payment by the richest 60 per cent is four times** more than the poorest 40 per cent in India.

ECONOMY:

1. WHAT'S THE EFFECT OF THE RUSSIAN OIL PRICE CAP, BAN?

Context:

Western countries, G7 and European Union have agreed to cap the price of Russia's oil exports (to **\$60 per barrel**) in an attempt to limit the fossil fuel earnings that support Russia's budget, its military and the invasion of Ukraine.

What is the price cap?

A **price-cap regulation** is a form of economic regulation that establishes an upper limit on the prices that a utility provider can charge.

Impact of the price cap:

- **Increase volatility in the Oil market:** The price cap could have an **uncertain effect on the price of oil as worries over lost supply** through the boycott compete with fears about **lower demand from a slowing global economy.**
- **Hurt Russia's Finance:** The price cap is meant to **hurt Russia's finances while avoiding a sharp oil price spike** if Russia's oil is suddenly taken off the global market.
- **Insurance companies and other firms** needed to ship oil would only be able to deal with Russian crude if the oil is priced at or below the cap.

Impact on India:

- **Buyers in India might not go along with the cap.**
- **Russia or China or India** could try to set up their own insurance providers to replace those barred by U.S., U.K. and Europe.

Counter-measures by Russia:

- Experts say a **\$60 cap will not have much impact** on Russia's finances. Russia (the world's No. 2 in oil production) has already **rerouted much of its supply to India, China and other Asian countries** at discounted prices after Western countries shunned it even before the EU ban.
- Russia has said it will **not observe a cap** and will halt deliveries to countries that do.

- **Fear of Black Marketing:** Russia also could sell oil off the books by using “dark fleet” tankers with obscure ownership.

Conclusion:

Experts view that the \$60 cap is way too high. A \$30 cap would “give Russia the financial crisis”. But “\$60 is better than not agreeing at all”

2. THE UNIFIED PAYMENTS INTERFACE (UPI)

Direction:

The article discusses UPI and the latest NPCI rules, which affect both major and small payment apps.

Context:

The National Payments Corporation of India (NPCI) has extended the deadline for platforms using UPI to meet its 30% market share cap by two years.

Background:

The NPCI’s market cap rules limit any single payments app from processing more than 30% of UPI transactions in a month.

About Unified Payments Interface (UPI):

- UPI is a **technology** that consolidates various bank accounts into a single mobile app (of any participating bank) - Providing an instant real-time payment system.
- Allowing users to transfer money across multiple bank accounts without revealing details of one’s bank account to the other party.
- It was launched by the NPCI in 2016 in conjunction with the Reserve Bank of India (RBI) and the Indian Banks Association (IBA).

Features and benefits of UPI:

NPCI:

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- It is an umbrella organisation incorporated in **2008** as a “Not for Profit” Company under the Companies Act 1956 (now Section 8 of the Companies Act 2013).
- It is an initiative of **RBI and IBA** under the provisions of the Payment and Settlement Systems Act, 2007, for creating infrastructure for the entire Banking system in India for physical as well as electronic payment and settlement systems.



3. NEW LABOUR CODES GIVE A FREE HAND TO EMPLOYERS: UNIONS

Direction:

The article covers issues faced by Indian labour policies, including 4 new labour codes and suggests measures and best practices to overcome the challenges. Kindly read yesterday’s article on [Lingering crisis of Labour](#).

Context:

At the 17th Asia-Pacific Regional Meeting (APRM) of the ILO in Singapore, international workers’ groups criticised

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the Indian government’s labour policies, including 4 new labour codes.

About the 4 Labour Codes:

- The Indian Parliament enacted **4 labour codes** - the Industrial Relations Code, 2020; the Code on Social Security, 2020; the Code on Occupational Safety, Health, and Working Conditions, 2020; and the Code on Wages, 2020.
- These codes **aim to consolidate and simplify** the country’s current and overlapping labour laws by combining 29 pre-existing labour laws into 4.
- Labour is a **concurrent subject**, hence, states must develop their own rules and only then can the codes be fully implemented.
- There are suggestions of a **phased implementation** as the Ministry of Labour and Employment lays the groundwork for the 4 new labour laws.

Some employment Generation Schemes of Government of India:

Sr. No.	Name of the Scheme/ Programme	Ministry	Remarks
1	Atmanirbhar Bharat Rojgar Yojana (ABRY)	Ministry of Labour and Employment	It was launched with effect in 2020 as part of Atmanirbhar Bharat package 3.0 to incentivise employers for creation of new employment along with social security benefits and restoration of loss of employment during Covid-19 pandemic.

2	Pradhan Mantri Rojgar Pratsahan Yojana (PMRPY)	"	It was launched in 2016 to incentivise employers for creation of new employment.
3	National Career Service (NCS) Project	"	Project for transformation of the National Employment Service to provide a variety of career related services like job matching, career counselling, vocational guidance, information on skill development courses, etc.

Programmes that have the potential to generate productive employment

1	Digital India	MeitY	Digital India seeks to transform India into a digitally empowered society and knowledge economy.
2	Stand Up India Scheme	Ministry of Finance	Stand-Up India Scheme for financing SC/ST and/or Women Entrepreneurs. The objective of the Stand-Up India scheme is to facilitate bank loans for setting up a green-field enterprise.
3	Startup India	DPIIT, Ministry of Commerce & Industry	Startup India intends to catalyse startup culture and build a strong and inclusive ecosystem for innovation and entrepreneurship in India.

4. SUBSIDISED FERTILISERS AND THE FEAR OF CROP YIELD

Direction:

The article highlights the reasons behind high urea, and DAP consumption, its impact and how to minimise the excess consumption.

Context:

- Ministry of Chemicals and Fertilisers’ data reveal that, the **sale of urea and di-ammonium phosphate (DAP) increased** by 3.7% and 16.9%, respectively, from April-October 2022 over the previous year.

- However, the sales of other fertilisers including complexes containing nitrogen (N), phosphorus (P), K (potash) and sulphur (S), have fallen.

Background:

- Two schemes- **Soil Health Card and mandatory neem-coating of urea**, were designed to promote the balanced use of fertilisers.
- However, the annual consumption of urea (30 to 35 MT in the last 5 years) and DAP have grown over the years.
- This means, **instead of providing a balanced mix** of plant nutrients based on soil testing and crop requirements, **Indian farmers are applying only urea and DAP** - both containing 46% N and P, respectively.

Reasons behind increased consumption of urea and

DAP:

- **High subsidy on urea:** The maximum retail price (MRP) of urea is fixed at Rs 5,628 per tonne, while the MRPs of other fertilisers are technically decontrolled.
- **DAP - a cheaper substitute:** An upper ceiling of Rs 27,000/ tonne has been fixed for DAP (Rs 29,000-31,000/ tonne for NPKS complexes), which has 46% P and 18% N.
- The **choice of fertilisers depends more on its price** rather than NPKS complexes or other micro- macro nutrients.

The effects of overconsumption of urea and DAP:

- The current NPK ratio of **13:5:1**, as against the ideal **4:2:1**, would adversely affect **crop yields**.
- It will negatively impact the **health of plants and humans**, due to lack of a balanced nutrient mix.

Way ahead:

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- Replacement of subsidies on individual fertiliser products with a **flat per-hectare cash transfer**.
- **e-wallet account** for every farmer, to be used only for the purchase of fertilisers.
- **Maintaining a stock** of decontrolled fertilisers to ensure no unexpected price rise.

5. INDIA'S FIRST 5G-ENABLED AUTO MANUFACTURING UNIT

Context:

- **Bharti Airtel and Tech Mahindra** have announced a strategic partnership under which they have **deployed a "5G for Enterprise" Solution** i.e., a **'captive private network'** at Mahindra and Mahindra's Chakan facility in Maharashtra, making it **India's first 5G-enabled auto manufacturing unit**.
- The partnership is in line with Tech Mahindra's NXT. NOWTM framework, which aims to **enhance the "Human Centric Experience"**, focuses on investing in **emerging technologies and solutions** that enable digital transformation and meet the evolving needs of the customer.
- As the **industry 4.0 paradigm** gathers momentum, reliable data networks will prove to be a key **differentiator in factory and manufacturing performances**.

About 5G:

The **fifth generation of mobile networks**, or 5G, is what comes after the 2G, 3G, and 4G generations. 5G is expected to deliver **substantially higher connection speeds**.

About private 5G network:

- Also called a **captive non-public network (CNPN)**, it is a network that is set up **solely for a firm's own use**. Unlike a public network, it is closed to external communication.

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- The network relies on **high-frequency, low-wavelength airwaves** and is therefore ideal for institutions like factories, manufacturing plants, hospitals, universities etc.

Significance of the move:

- Airtel and Tech Mahindra’s partnership shows the **opportunity for collaboration between telcos and private enterprises.**

Difference between 4G and 5G:

	5G	4G
Frequency	Uses utilise much higher radio frequencies of 28 GHz.	Uses lower reading frequencies of 700 MHz to 2500 MHz.
Speed	Transfer more data over the air at faster speeds.	Speed is lesser with less data transfer.
	Data transfer speed is up to 1 Gbps	Supports data bandwidth in Mbps
Latency	Has ultra-reliable low latency (ranging between 10 milliseconds and 1 millisecond) i.e., the delay before a transfer of data begins following an instruction.	Has higher latency (20-30 milliseconds)
Spectrum & Connectivity	Uses a millimetre wave spectrum which enables more devices to be used within the same geographic area supporting around one million per square kilometre.	Support a lesser number of devices of about 4,000 devices per square kilometre.
Coverage	Uses a new digital technology that improves coverage, speed and capacity.	Has led to more congestion and lesser coverage as compared to 5G.
Other Advantages	Has added advantages for machine learning, robotics, IoT and other programming modules. It can provide faster processing of data.	Limited

Opportunities of using 5G:

High-speed and Digital India:

- **Better Governance:** Better speed and connectivity would **reduce red-tapism.**

- **Employment generation:** 5G will open greater opportunities for new device manufacturers and application developers.
- **Enhanced coverage:** Device-to-device communication techniques will further enhance network performance.
- **Reduced digital gap: small cell concept** used in 5G will have multiple advantages of better cell coverage, maximum data transfer, low power consumption and cloud access network etc.
- **Entertainment and multimedia industry:** Analysts found that 55% of mobile Internet traffic has been used for video downloads globally in 2015.
- **Enhanced Security:** 5G wireless technology is one the best solution for security surveillance due to higher bandwidth and unlicensed spectrum.
- **Logistics and Shipping:** Logistic and shipping industry can make use of smart 5G technology for goods tracking, fleet management etc.
- **Boost Smart cities**
- **Industrial Growth**
- **Agricultural applications:** 5g technology can be used for agriculture and smart farming in future. Using **smart RFID sensors and GPS technology.**
- **Healthcare and mission-critical applications**

Education

Challenges for India:

- Indian operators have far **less spectrum** in comparison to international operators.
- Indian spectrum is also rather **expensive.**
- The high investment cost makes telecom companies **unsure about Return on Investment.**
- The switch from 4G to 5G will **be infrastructure intensive** and the development of infrastructure for 5G is very expensive.
- The transition experience from one technology generation to another is not very good as one has to **buy a whole new phone** to start using the latest

cellular technology, thereby creating financial liability.

6. ESSENTIAL COMMODITIES

Context:

- **States to set up district-wise price monitoring centres for essential items.**
- **Essential commodities** are the products, the supply of which, if obstructed due to hoarding or black marketing, would affect the normal life of the people.
- The **Department of Consumer Affairs** (under the Ministry of Consumer Affairs, Food & Public Distribution) has a system of collecting prices of 22 essential food commodities in the country.
- **All states should set up price monitoring centres** for critical goods in all districts.
- The Centre is providing **financial support to create 750 price** monitoring centres.
- Essential commodities are regulated under the **Essential Commodities Act, of 1955.**
- It aims to **regulate the production, supply and distribution** of, and trade and commerce in, certain commodities, in the interest of the general public.
- The central government may add or remove an essential commodity from the list through a notification.
- **Bureau of Indian Standards (BIS):** BIS is the National Standard Body of India under the Ministry of Consumer Affairs, Food & Public Distribution. It was established under the BIS Act 2016.
- **Minister for Consumer Affairs, Food & Public Distribution** is the ex-officio President. The main activities are **standardization**, marking and quality certification of goods.
- **BIS is responsible for developing Indian Standards**, implementing voluntary and mandatory standards,

such as Quality Control Orders, and providing quality assurance to consumers.

7. RAZORPAY BECOMES 1ST PAYMENT GATEWAY TO SUPPORT CREDIT CARDS ON UPI

Context:

With the aim to **further strengthen digital payments and boost India's credit penetration**, the platform announced its **readiness to support Credit Card Transactions on Unified Payments Interface (UPI).**

Present scenario:

- UPI enables customers to make transactions through their bank accounts.
- Linking credit cards with UPI will ensure that customers will no longer have to carry their credit cards with them at all times for payments.
- As per RBI's data, despite growing steadily at the rate of 30% over the last three years, remains primarily underpenetrated with **only 6% of Indians having access to a credit card.**
- On the other hand, **UPI has recorded over 731 crore transactions in Oct 2022 alone being used by more than 40% of Indians.**
- With RuPay credit cards being enabled on UPI, Razorpay merchants can begin accepting credit card payments on UPI, with minimal changes to their existing setup.

What are Payment Gateways?

- It is a **technology used by merchants to accept debit/credit card** purchases from customers.
- It includes physical card reading devices **found in brick-and-mortar retail stores** and the payment processing portals found in online stores.

8. DISTRICTS AS EXPORT HUB (DEH) INITIATIVE

Context:

- ODOP (One District One Product) initiative is operationally merged with the 'Districts as Export Hub (DEH)' initiative of the DGFT, Department of Commerce, with DPIIT as a major stakeholder.
- **ODOP focuses on identifying products in the districts** that have manufacturing and export potential.
- It comes under the Ministry of Food Processing Industries.
- **Under DEH**, a list of products and services with export potential is regularly updated for all districts of the country.
- It comes under the Ministry of Commerce and Industry.
- **District Export Promotion Committees (DEPCs)** are to be constituted in each District, headed by a Collector.
- The primary function of the DEPC is to prepare and act on **District Specific Export Action Plans** in collaboration with all the relevant stakeholders from the Centre, State and District.

Related news:

- **RoDTEP** (Remission of Duties and Taxes on Exported Products) Scheme has been now extended to **chemical, Pharma, Iron and Steel**.
- RoDTEP replaces the previous **MEIS scheme** which violated the provision of **WTO**.
- In RoDTEP (under the ministry of Commerce and Industry), **exporters** get the refund of the embedded duties/ taxes that are not rebated under other schemes.



SCIENCE AND TECHNOLOGY

1. INDIA TO BECOME A HUB OF DRONE TECHNOLOGY

Context:

Union Information and Broadcasting Minister said that India will become a **hub of drone technology and will require at least 1-lakh drone pilots by next year** while addressing the gathering after flagging of the 'Drone Yatra 2.0'.

About Drones:

- A **drone or UAV (Unmanned Aerial Vehicle)** is a remotely controlled flying device.
- Drones have been divided into **five categories** based on their weight (existing rules).
- **Nano:** Less than or equal to 250 grams,
- **Micro:** From 250 grams to 2kg,
- **Small:** From 2 kg to 25kg,
- **Medium:** From 25kg to 150kg,
- **Large:** Greater than 150kg.

Rules regulating drones in India:

- In India, the **Directorate General of Civil Aviation (DGCA)** governs the use of all (manned or automated) aerial vehicles.

- ‘The Drone Rules, 2021’, to regulate the use and operation of Drones or Unmanned Aerial Systems.

Application of Drones:

Commercial and Industrial Uses for Drones



Risks associated with drones:

- Drones can be misused as **weapons of Mass Destruction**.
- Increased Risk of **Armed Attacks**.
- To **smuggle arms, ammunition and drugs**.

Way Forward:

- Balancing **security and benefits** associated with drones.
- Increase Investments in developing drones, which are **safer and cheaper**.

2. PROFESSOR SUMAN CHAKRABORTY (FROM IIT, KHARAGPUR)

Context:

A slew of technologies by Professor Suman Chakraborty, who recently received the Infosys prize, along with his group, is helping community health workers deliver healthcare support to last-mile populations.

Affordable diagnostic technologies for remote, resource-constrained areas:

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- **COVIRAP:** Nucleic-Acid Based Rapid Diagnostic Test for infectious disease detection.
- **Diagnostics with Finger-Prick Blood** on Paper Strip for blood tests.
- **A low-cost portable hand-held** imaging device for early screening of oral cancer.
- **Folded paper kit** for evaluating antibiotic resistance.
- **A reagent-free anaemia** detection technology

3. RANSOMWARE

Context:

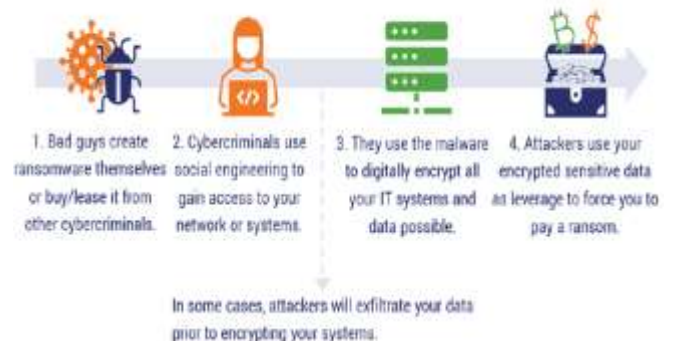
- Investigators search for the source of a ransomware attack on AIIMS servers
- **Ransomware** is a malware designed to deny a user or organization access to files on their computer.

Process:

- The malware first gains access to the device.
- Depending on the type of ransomware, either the entire operating system or individual files are encrypted.
- A ransom is then demanded from the victim.

Past attacks: WannaCry and Petya.

How Ransomware Works

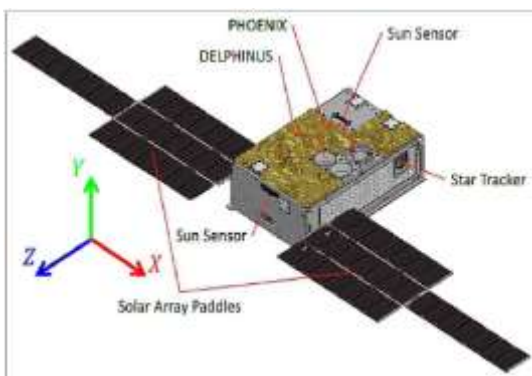


4. STEAM-PROPELLED SPACECRAFT

Context:

CONTACT NUMBER: 99944-27714, 95665-81666

- 'World's first steam-propelled spacecraft heads to the moon and beyond.
- **EQUULEUS** Spacecraft is a water-powered CubeSat spacecraft.
- It was developed by **Japan Aerospace Exploration Agency (JAXA)**.
- Launched from NASA's **Orion spacecraft**.
- The space mission will carry out a number of investigations, including testing of the radiation environment to help determine what precautions future astronauts would have to take out in the deep space location.
- Its planned orbital path will be the second Earth-Moon Lagrange point (EML2).



5. SPACETECH INNOVATION NETWORK (SPIN)

Context:

ISRO signed MoU with Social Alpha to establish SpIN

What is SpIN?

- **India's first dedicated platform** for innovation, curation and venture development for the blooming space entrepreneurial ecosystem.
- It is a **one-of-a-kind PPP** for start-ups and SMEs in the space industry.
- Provide a level playing field for all stakeholders to contribute and collaborate.
- Also, the **1st SpIN innovation challenge** was launched to develop solutions in areas like

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urbanisation, mapping, natural resources management etc. Selected start-ups can **access ISRO and Social Alpha's infrastructure and resources**.

6. KILONOVA

Context:

- The flash of light or a **gamma-ray burst (GRB)** was witnessed on December 11, 2021.
- The source was found to be an astronomical event called a **kilonova**.
- Kilonova explosions take place during the **merger of two neutron stars** or a **neutron star and a black hole releasing Gamma-Ray Bursts (GRB)**

What are GRBs?

- **Gamma-ray bursts (GRBs)** are immensely energetic explosions that have been observed in distant galaxies.
- They are the **most energetic and luminous electromagnetic events** since the Big Bang.
- Bursts can last from **ten milliseconds to several hours**.

GRBs can be divided into two classes:

- **Long-duration** (2 seconds to several minutes): mainly due to Supernova.
- **Short-duration** (a few milliseconds to 2 seconds): mainly due to Kilonova.
- **Stellar black holes** are made when the centre of a very big star falls in upon itself or collapses. When this happens, it causes a **supernova** — an exploding star that blasts part of the star into space.

Why this event was first of its kind?

- Both kilonova and supernova produce **GRBs** (Kilonova – short duration, and Supernova- long duration). However, this new event (from a

CONTACT NUMBER: 99944-27714, 95665-81666

Kilonova), generated a GRB that lasted roughly 50 seconds (long-duration), puzzling scientists.

- This breaks the long-held traditional GRB paradigm that massive star collapses produce long GRBs and supernovae and neutron star mergers produce short GRBs and kilonovae.

7. INDIA'S SPACE HEADWAY

Context: ISRO successfully conducted the Hot test of Scramjet and the 'Blowdown test' of a new Trisonic Wind Tunnel at Vikram Sarabhai Space Centre (VSSC, Thiruvananthapuram).

Scramjet Engine

Scramjet

- A scramjet (supersonic combustion ramjet) is a variant of a ramjet **airbreathing jet engine** in which combustion takes place in supersonic airflow.
- **Oxygen** (from atmosphere) + **Hydrogen** (already stored in the vehicle) trigger combustion, and produce the desired thrust to lift satellite to the designated orbit.
- **Advantage** - reduce 70% of propellant that has to be carried in the vehicle.

A turbofan engine is a jet engine variant in which, a turbo (a fan) forces more air into the engine's cylinders which, added to some extra fuel, means more power can be created in the cylinder

A ramjet, or aero thermodynamic duct, is a form of airbreathing jet engine that uses the forward motion of the engine to produce thrust.

A Scramjet is advanced form of Ramjet.

Trisonic Wind Tunnel

A Trisonic Wind Tunnel (TWT) is a wind tunnel so named because it is capable of testing in three speed regimes - **subsonic, transonic, and supersonic**.

- Wind tunnels are devices used to study the effects of airflows on solid objects (scale models of ISRO rockets and spacecrafts).
- **Blow down test** - Stored gases are released and blown through the tunnel's test section, simulating flight conditions.

Schematic of Test Wind Tunnel

Labels: Inlet, Safety valve, Test section, Model, Spectra, Nozzle, Diffuser, Settling chamber, Variable area nozzle, Control valve, Storage tank, Settling chamber, Adjustable inlet, Adjustable diffuser, Variable area nozzle.

World Bank launched a “Toolkit on Enabling Gender Responsive Urban Mobility and Public Spaces in India” which aims at suggesting ways to make public transport in Indian cities more **inclusive of women’s travelling requirements**.

WHY URBAN PUBLIC SPACES AND MOBILITY SERVICES SHOULD BE VIEWED THROUGH A GENDER LENS?

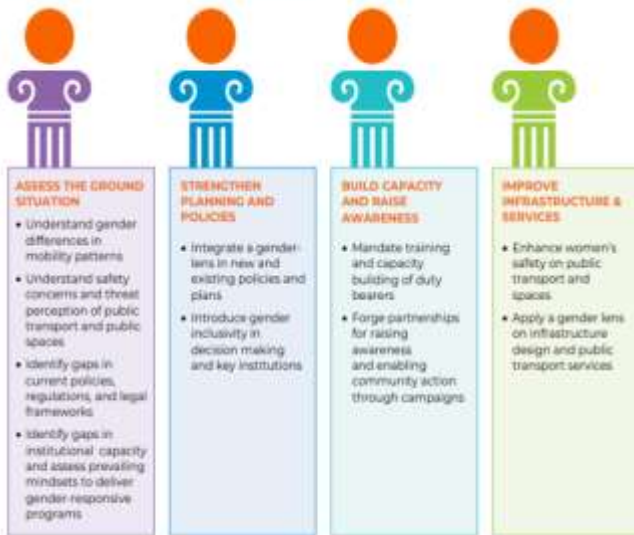
- Women are amongst the **biggest users of public transport across Indian cities**.
- **Lack of safety** deters women from stepping out; creating a vicious cycle that **lowers their presence in public spaces**.
- Women face barriers in using public transport owing to **gender-blind design elements** during access and egress, **waiting at stops and transfers, boarding and alighting, and inside the vehicle**.
- Barriers to women’s mobility actively **restrict their choices around education and employment**.
- **Deep-rooted gender-based social norms** actively restrict women’s movement outside their homes.
- Women bear a **disproportionate burden of unpaid care work** in India necessitating public transport solutions for the **mobility of care**.
- Women’s **‘time poverty’** constrains time available for commuting.
- The World Bank suggests a **four-pillared approach to help address prevailing issues in urban transport for women**.

Government Initiative and Policies

1. WORLD BANK'S NEW TOOLKIT ON ENABLING GENDER RESPONSIVE URBAN MOBILITY

Context:

THE KEY ASPECTS OF THE FOUR PILLAR FRAMEWORK:



2. E-SANJEEVANI

Context:

National Telemedicine Service of India achieves **8 crore consultations**

About eSanjeevani:

- e-health initiative of the Ministry of Health and Family Welfare, it strives to provide an alternative to conventional physical consultation via the digital platform.
- It has garnered the distinction of being the **world's largest government-owned telemedicine platform.**

It consists of two verticals:

- 1st vertical strives to bridge the rural-urban digital health divide by providing assistance to **Ayushman Bharat (AB) scheme.**
- **2nd vertical is the eSanjeevani OPD** which uses technology via smartphones, tablets and laptops to get doctor consultations in the comfort of the house.

- eSanjeevani is a part of the **Ayushman Bharat Digital Health Mission.** More than 45000 IDs have been generated via the **eSanjeevani** application.

3. PRINT AND DIGITAL MEDIA ASSOCIATION (PADMA)

Context:

Print, digital self-regulatory news association gets govt's approval.

- **Print and Digital Media Association (PADMA)** has been approved as a self-regulatory body for publishers of news and current affairs across the country.
- It has been approved under **rule 12 of the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.**
- The organization will look at grievances related to digital media news content on its platforms.
- The organization will be headed by former HC Judge Mool Chand Garg.
- **With Rule 12 of the IT Rules, 2021,** the Ministry has approved **nine self-regulatory bodies** since May 2021. They include DIGIPUB News India Foundation, Confederation of Online Media (India), and NBF- Professional News Broadcasting Standards Authority, among others.

4. NATIONAL SINGLE WINDOW SYSTEM (NSWS)

Context:

NSWS to help realize the Prime Minister's vision of transforming red tape into the red carpet.

- The platform is built to serve as an **advisory tool to identify approvals based on user input** and is to be used for guidance purposes only.
- It is a digital platform to guide you in **identifying and applying for approvals** according to your business requirements.
- The system would lead to **convergence of all Ministries/ Department and States/ UTs** through the “whole of Government approach”.

5. SHE STEM 2022

Context:

- SHE STEM 2022 encourages students to ‘Unleash their imagination’ as part of the Sweden India Nobel Memorial Week.
- SHE STEM is an annual event to celebrate women in the fields of science, technology, engineering, mathematics, and sustainability.
- It is organized by **the Embassy of Sweden** in India in partnership with the Atal Innovation Mission, NITI Aayog and the German Centre of Innovation and Research.

6. MAULANA AZAD FELLOWSHIP

Context:

The Ministry of Minority Affairs has stopped the Maulana Azad Fellowship — dedicated to pursuing higher education — to minority students, from 2022-23.

About the Fellowship:

A **5-year fellowship provided by the Centre**, in the form of financial assistance to six notified minority communities – Muslims, Christians, Buddhists, Jains, Parsi and Sikhs to pursue M Phils and PhDs

Why discontinued?

- **Overlaps** with other fellowship schemes for higher education.
- **Minority students are already covered** under such schemes.



7. GHAR- GO HOME AND RE-UNITE

Context:

National Commission for Protection of Child Rights (NCPCR), has developed and launched a portal namely **GHAR - GO Home and Re-Unite (Portal for Restoration and Repatriation of Child)**.

GHAR:

The GHAR portal has been developed to **digitally monitor and track the restoration and repatriation** of children according to the protocol NCPCR is a **statutory body (set up in 2007)** under the administrative control of the **Ministry of Women & Child Development**, Government of India.

8. DISABILITY REHABILITATION CENTRES: CENTRE'S CASUAL APPROACH FLAGGED

Direction:

The article discusses **District Disability Rehabilitation Centres (DDRC)** and shortcomings on part of the govt to establish such centres.

Context:

According to the Parliamentary Standing Committee on Social Justice and Empowerment, the Union Government looks somewhat casual in its approach to establishing the District Disability Rehabilitation Centres (DDRC)

Background:

The revised DDRC scheme requires the establishment of 269 DDRCs (only 55-60 DDRCs have been made operationalised). The 2011 census estimated (based on questions on 7 kinds of disabilities) that the number of PwDs in India is close to 2.68 crores (2.2% of the population) – that is more than the entire population of Australia.

Establishment of DDRCs:

- **Background:** During 1985-1990, District Resource Centres (DRCs) started as an outreach activity of the National Institutes/ALIMCO under the Ministry of Social Justice and Empowerment.
- These centres provided comprehensive services to persons with disabilities (PwDs) at the grass root level.
- 1999-2000 onwards, the DDRCs was established with support from the State Governments, with the District Management Team headed by Collector acting as the convergence point.
- DDRCs are funded under the Deendayal Disabled Rehabilitation Scheme (DDRS). Grants are released to State Governments to support various activities for the welfare of the disabled.
- **Objectives of setting up DDRCs:** To provide rehabilitative support to PwDs through awareness generation, early intervention, counselling, etc.
- **Number of DDRCs:** All the districts, including left-wing extremism-affected districts, have been approved for setting up of DDRCs. Each DDRC must provide rehabilitation services to PwDs of the

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adjoining/neighbouring district if it does not have a DDRC.

- **Artificial Limbs Manufacturing Corporation (ALIMCO):** It is a Central Public Sector unit, working under the aegis of the Department of Empowerment of Persons with Disabilities, Ministry of Social Justice & Empowerment, Government of India.
- Incorporated in 1972, ALIMCO has been engaged in the manufacture and supply/distribution of Assistive Devices for PwDs.

FOR EMPOWERING THE PERSONS WITH DISABILITIES (Divyangjan)

Rights of Persons with Disabilities Act, 2016 has come into force from 19th April, 2017

The Central Rules under the Act have been notified on 15th June, 2017

Highlights of the Act:

i. Types of disabilities increased from existing 7 to 21.

Leprosy Cured Persons	Multiple Sclerosis	Blindness
Autism Spectrum Disorder	Sickle Cell Disease	Dwarfism
Specific Learning Disability	Perkinson's Disease	Low-vision
Speech and Language Disability	Intellectual Disability	Thalassemia
Chronic Neurological Conditions	Muscular Dystrophy	Haemophilia
Hearing Impairment (deaf and hard of hearing)	Acid Attack Victims	Mental Illness
Multiple Disabilities Including Deaf-Blindness	Locomotor Disability	Cerebral Palsy

ii. Reservation in government jobs increased from 3% to 4%.

iii. To strengthen Prime Minister's Sugamya Bharat Abhiyan (Accessible India Campaign), provisions for Accessibility in public buildings (Government & Private), Transportation and Information and Communication Technology (ICT).

iv. Right to free education for every child (6 to 18 years of age) with benchmark disability.

v. 5% reservation in Government higher educational institutions and higher educational institutions receiving aid from the Government.

vi. Penal provisions for violation of the provisions of the Act.

To take everyone along, to make everyone self-reliant...

Department of Empowerment of Persons with Disabilities (Divyangjan)
Ministry of Social Justice & Empowerment
Government of India
www.disabilityaffairs.gov.in, www.socialjustice.nic.in
www.premiaa.gov.in, www.mysgov.in

Accessible India Campaign

Health

1. INVASIVE GROUP A STREP (IGAS)

CONTACT NUMBER: 99944-27714, 95665-81666

Context:

- UK: Six children die of Strep A, a common bacterial infection.
- **Group A streptococcal (GAS) infection** is caused by strains of the streptococcus pyogenes bacterium.
- The bacteria can live on **hands or the throat for long enough** to allow easy spread between people through sneezing, kissing and skin contact .
- Most infections cause mild illnesses such as “**strep throat**” or skin infections.
- It can also cause **scarlet fever** and in the majority of cases this clears up with antibiotics.
- On rare occasions, the bacteria can get deeper into the body - including infecting the lungs and bloodstream. It is known as **invasive GAS (iGAS)** and needs urgent treatment as this can be serious and life-threatening.
- It usually **manifests as high fever, severe muscle aches, pain** in an area of the body and unexplained vomiting or diarrhoea.

Invasive Group A Streptococcal Infections

- Streptococcal toxic shock syndrome
- Multi-organ system failure similar to staphylococcal toxic shock
- Initial infection may have been pharyngitis, cellulitis, peritonitis, or other wound infections



2. BRAIN FOG AFTER COVID-19

Context:

As per the new study **changes in the gene activity in the brain** of people with **severe** COVID-19 were found to

be similar to that seen in old age neurological conditions such as ‘brain fog’.

What is Brain Fog?

Brain fog is characterized by confusion, forgetfulness, and a lack of focus and mental clarity. This can be caused by **Old Age**, overworking, lack of sleep, stress, and spending too much time on the computer.

What have been the reasons cited?

- As per the research, Genes that are linked to **inflammation and stress** were expressed more in the brains of people with severe COVID-19 than in others.
- Conversely, **genes linked to cognition** and the formation of connections between brain cells were less active.



3. GLOBAL PANDEMIC TREATY

Context:

Pandemic treaty draft negotiations to begin in Feb 2023.

Background:

- In December 2021, the World Health Assembly agreed to start a global process to draft the pandemic treaty.

- The need for an updated set of rules was felt after the COVID-19 pandemic exposed the shortcomings of global health systems.
- The Health Assembly adopted a decision titled “**The World Together**” .

About the treaty:

- The document will help **address global public health challenges made conspicuous by the ongoing COVID-19 pandemic.**
- These include equitable distribution of vaccines and health services among and within countries, knowledge and data sharing as well as realising capability-based responsibilities of various economies.
- It also includes **data sharing and genome sequencing of emerging viruses.**

Article 19 of WHO’s Constitution

- Article 19 of the WHO Constitution gives the World Health Assembly the **authority to adopt conventions or agreements on matters of health.**
- A two-thirds majority is needed to adopt such conventions or agreements.
- The WHO Framework Convention on Tobacco Control was set up under Article 19 and it came into force in 2005.

International Health Regulations (IHR)



4. ANTI-BACTERIAL RESISTANCE

Context:

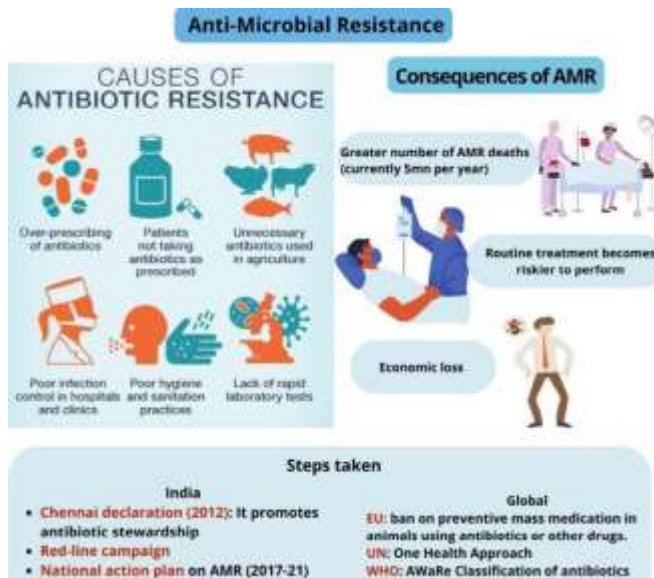
Over 50% of life-threatening bacterial infections are becoming resistant to treatment: the **Global Antimicrobial Resistance and Use Surveillance System (GLASS) report** of WHO.

Concerns as per the recent report:

- **8% of infections caused by *Klebsiella pneumoniae*** were resistant to carbapenems (the last resort antibiotic).
- **Over 60% of *Neisseria gonorrhoea***, a common sexually transmitted disease, show resistance to ciprofloxacin.
- **20% of *E.coli* isolates**, common in urinary tract infections were resistant to ampicillin and co-trimoxazole.
- **Bloodstream infections due to resistant *E.coli*, Salmonella and gonorrhoea** infections, have jumped by at least 15 per cent compared to 2017 rates.

Global Antimicrobial Resistance and Use Surveillance System (GLASS):

Provides a **standardized approach** to the collection, analysis, interpretation and sharing of data by countries and seeks to actively support capacity building and monitor the status of existing and new national surveillance systems.



International News and Organization

1. PARIS CLUB

Context:

The Paris Club is a group of officials from **major creditor countries** whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries.

Founded in **1956** with headquarters in **Paris** (France).

India is **not a member of the club** and acts as an ad-hoc participants.

2. INDIA-CHINA RELATIONS

Direction:

There were multiple articles on India-China relations. We have tried to club them all together.

Context:

- Indian and Chinese troops **clashed in Arunachal Pradesh's Tawang sector**, beating up each other with sticks and canes, in their **closest encounter since the deadly Galwan incident in eastern Ladakh in June 2020**.
- The incident came days after **China expressed objection to Operation Yudh Abhyas**, an India-US joint military exercise at Auli in the Uttarakhand hills, claiming **it to be a violation of 1993 and 1996 border agreements**.

What is the origin of the border dispute with China?

- After the communists took over in China, they withdrew from all international agreements citing them to be **"unequal treaties"** imposed on it during its **"century of humiliation"**, and **demanding a re-negotiation of all its borders**.

- The LAC separates Indian-controlled territory from Chinese-controlled territory.
- It is divided into three sectors: **the Eastern Sector (Arunachal Pradesh and Sikkim), Middle Sector (Uttarakhand and Himachal Pradesh) and Western Sector (Ladakh).**
- In the Eastern Sector, the alignment of the **LAC is along the McMahon Line**, named after **Sir Henry McMahon**, foreign secretary of British India. He drew the 890-km line as the border between British India and Tibet (a part of the 1914 Shimla Convention Between Great Britain, China, and Tibet). China now doesn't comply with this.

What is China's so-called claim on Arunachal Pradesh, and on what grounds?

- China claims around 90,000 sq km of Arunachal Pradesh — **the entire state** — as its territory.
- It calls the area "**Zangnan**" in the Chinese language and makes repeated references to it as "South Tibet".

Issue of recent Cyber-attack:

- The probe into the cyberattack on some servers at **AIIMS in Delhi has found** that the IP addresses of two emails **originated from Hong Kong and China's Henan province.**

India's reaction:

- China's latest transgression on the Line of Actual Control in Arunachal Pradesh led to calls for snapping **trade ties to teach Beijing a "lesson"**, but official data show that **India's imports from the country have jumped to a record high over the last 30 months.**

3. PARLIAMENTARY PANEL ON 'INDIA'S SOFT POWER'

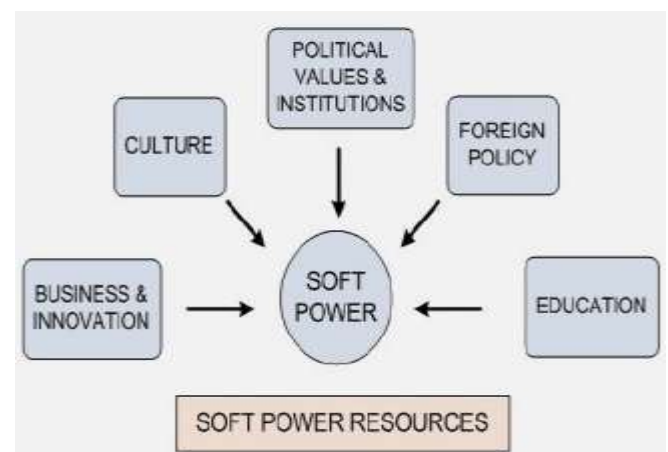
Context:

A parliamentary panel has recommended that the ministry of external affairs (MEA) prepare a policy document on India's soft power projections.

What is Soft Power?

- Power is the ability to affect others to get the outcomes one prefers, and that can be accomplished by coercion, payment, or attraction and persuasion.
- **Soft power is the ability to obtain preferred outcomes by attraction** rather than coercion or payment.

Elements of Soft power



Need for soft power:

- **Potential in augmenting positive perceptions** about a country and its national interests.
- **Change in other's attitudes** without competition or conflict.
- **India's civilizational heritage has an advantage** over other countries in soft power: According to Brand Finance's **Global Soft Power Index**, India ranks **27th** in terms of soft power.

Recommendations of the Committee:

- Prepare a policy document on India's soft power **projection**: To delineate India's soft power toolbox and how it is being projected abroad along with a vision statement for the future.

Prepare a soft power Matrix:

- **Comparative analysis of India's soft power with other similar countries such as China.**
- E.g., China spends around **\$10 billion a year** just on its Confucius Institutes and soft power promotion whereas **ICCR (Indian Council of Cultural Relations) and other agencies** put together spending around **Rs.300-400 crore.**
- Most of India's expenditure goes into the **establishment and administration.**
- **Get recognition for Ayurveda** by adopting the pharmacopoeia of India.
- **Revamp the focus, structure and functioning of DD India for its global outreach.**
- **Proactive interaction with the Indian Diaspora is an important part of India's "soft diplomacy" or "diaspora diplomacy".**
- For example, the **Indian Diaspora** played a critical role in the fructification of the **Indo-US Nuclear deal.**
- They help in building its brand internationally through their huge **success stories.**

4. INDIA CENTRAL ASIA SECURITY MEET

Context:

- India hosted a conclave of **top security officials from Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan** with a focus on the **evolving security situation in Afghanistan.**
- This year was the **30th anniversary** of the establishment of **diplomatic ties between India and Central Asian countries.**

About Central Asia:

It is a diverse region with a mix of upper-middle and low-income countries with major strategic importance.



Key highlights of the meeting:

- Support for a **peaceful, stable, and secure Afghanistan**, emphasizing **respect for its sovereignty, unity, and territorial integrity** and urging non-interference in its internal affairs.
- The participants supported India's proposal to **include the Chabahar port within the framework of the International North-South Transport Corridor.**
- The communique also called for the early **adoption of the UN Comprehensive Convention on International Terrorism (CCIT)**, which India had first proposed in 1996.

Why Central Asia is important for India:

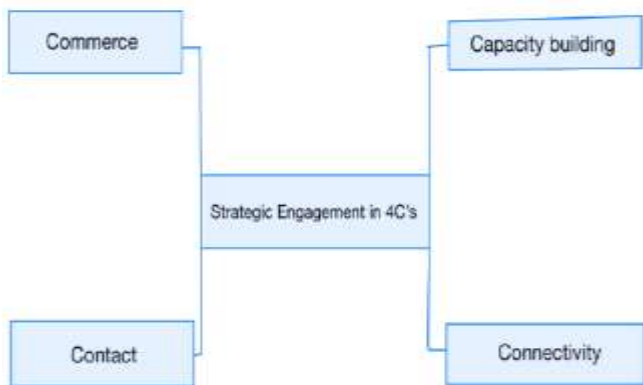
- **Historical reasons:** Central Asia was a transit route "**the silk route**" for the continent.
- By acting as a **bridge between Asia and Europe.**
- **As a bulwark against fundamentalism:** Peace and stability in the Central Asian region and adjoining Afghanistan are important in the fight against **religious fundamentalism and terrorism.**

Becoming a member of the Ashgabat Agreement

- **War on Drugs:** Drug trafficking poses a great challenge to the region; hence it is of utmost importance to check the drug menace by engaging with the stakeholders.
- **Soft power** - sports, music, art, culture, and cinema to have a philosophical and moral high ground in the region.

Conclusion:

The vast scope for **cooperation** is evident from the fact that there is a huge level of **unrealized potential** that needs to be tapped. We need to revisit the **Connect Central Asia Policy**, which is based on - the 4Cs:



- **International North-South Transport Corridor (INSTC)** is a multi-mode network of ship, rail, and road routes for moving freight between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia, and Europe.
- **The Ashgabat agreement** is a multimodal transport agreement between India, Iran, Kazakhstan, Oman, Turkmenistan, and Uzbekistan for creating an international transport and transit corridor facilitating the transportation of goods between Central Asia and the Persian Gulf.

Defence

NEW INDIAN NAVY CREST

Context:

550/3, DR NANJAPPA ROAD, OPPOSITE TOWN BUS STAND, GANDHIPURAM, COIMBATORE, TAMIL NADU 641009

President of India has approved the introduction of a new design for the President’s Standard and Color and **Indian Navy Crest** for the Indian Navy on Navy Day on 04 Dec 2022.

The new design of the President’s Standard and Colour comprises three main constituents –

- **National Flag** in the upper left canton adjacent to the staff,
- **State Emblem undescribed with ‘Satyamev Jayate’** in Golden Colour on the upper right canton on the fly side, and
- **Navy Blue - Gold Octagon** below the Golden State Emblem.
- *The new design of the **President’s Standard and Colour** highlights India’s **glorious maritime heritage** and also symbolises a powerful, courageous, confident and proud Indian Navy.*
- *The Indian Navy Crest has been amended to replace the **foul anchor** with a **Clear Anchor**.*



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