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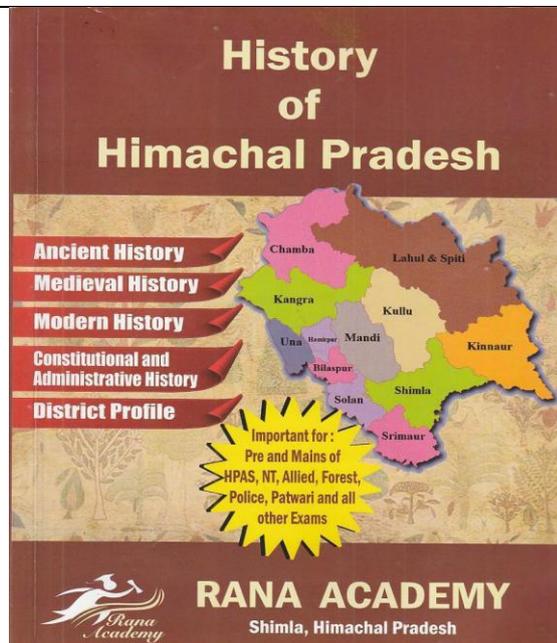
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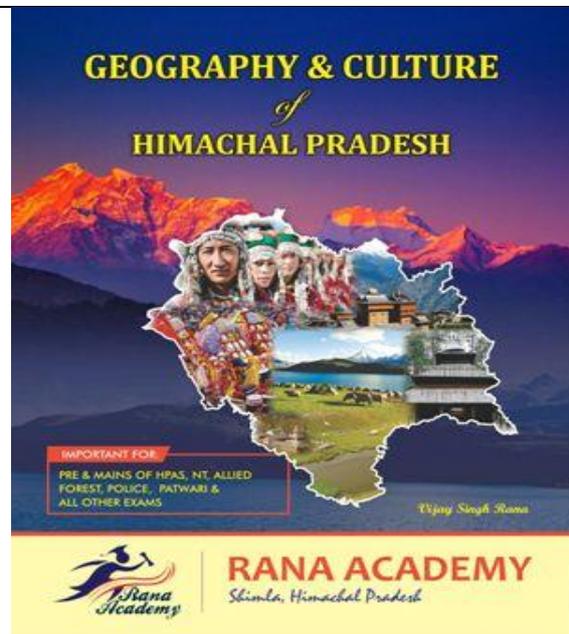
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INTERNATIONAL / WORLD NEWS

US-China tensions over Taiwan

- Recently, the Speaker of the House of Representatives of US **Nancy Pelosi** visited Taiwan, the highest level American official to go to the island since 1997. This visit has raised tension between US and China. The move was unwelcomed by China who launched **aggressive military drills around Taiwan**.
- Earlier, in May 2022, US President Joe Biden indicated that he would use military force to defend Taiwan if it were ever attacked by China. This was indicated by Biden at a news conference with Prime Minister Fumio Kishida of Japan during his visit to Tokyo.

What is the Taiwan-China issue?

- Taiwan is located north of the Philippines and the South China Sea.
- It is about 180 km off the south-eastern coast of China.
- It is separated from the mainland by the **Taiwan Strait**.

Background

- The island seems to have first appeared in Chinese records in AD 239, when an emperor sent an expeditionary force to explore the area. This evidence is used by Beijing to back its territorial claim.
- After a relatively brief spell as a Dutch colony (1624-1661), **Taiwan was administered by China's Qing dynasty from 1683 to 1895**.
- In **1895, Japan** won the First Sino-Japanese War, and the Qing government had to cede Taiwan to Japan.
- After World War II, **Japan surrendered** and relinquished control of territory.

Civil War

- When Japan surrendered, The **Chinese Nationalist Party (also known as the Kuomintang / KMT)** began ruling **Taiwan** with the consent of its allies, the US and UK. **Chiang Kai-shek** was the ruler of this party.
- However, almost immediately following Japan's surrender, the Chinese Civil War broke out **between the KMT and the Chinese Communist Party (CPC)**.
- After the **communists led by Mao Zedong won the civil war** in mainland China, **Chiang Kai-shek, the leader of the nationalist Kuomintang party (KMT), fled to Taiwan in 1949**. Chiang Kai-shek set up the government of the Republic of China on the island and remained President until 1975.
- Following the split of China and Taiwan in the civil war, the Republic of China (ROC) government was relocated to Taiwan. On the other hand, The Communist Party of China (CPC) established the People's Republic of China (PRC) in the mainland.
- Since then, the PRC observes Taiwan as a traitor province and awaits reintegration with Taiwan, if possible, by peaceful means.

Disagreement and confusion about Taiwan

- China regards Taiwan as a breakaway province which it has vowed to retake, by force if necessary.
- China has repeatedly insisted that Taiwan should be called "**Chinese Taipei**", in efforts to prevent international recognition of Taiwan as a country. But Taiwan's leaders argue that it is a sovereign state. Taiwan continues to participate in international events and dialogues separately.
- Taiwan has its own constitution, democratically-elected leaders, and about 300,000 active troops in its armed forces.

Present status:

- China has never recognized the existence of Taiwan as an independent political entity, arguing that it was always a Chinese province. But China and Taiwan have had economic ties. Many migrants from Taiwan work in China, and China has investments in Taiwan.

Who recognises Taiwan?

- Chiang Kai-shek's Republic of China (ROC) government held China's seat on the United Nations Security Council.
- It was recognised by many Western nations as the only Chinese government. **However, in 1971 the UN switched diplomatic recognition to Beijing and the ROC government was forced out**. Since then, the number of countries that recognise the ROC government diplomatically has fallen drastically to about **15**.

USA's and Taiwan

- **'One China' policy** means that the nations who want to have diplomatic relations with the People's Republic of China (PRC) have to recognize the PRC but not the ROC as China, breaking the relations with Republic of China (ROC). It established that the communist government in mainland China was the legitimate representative and Taiwan was a breakaway part of it.

- Under the policy, the **US snapped formal diplomatic ties with the Republic of China (ROC) in Taiwan**, and established ties with the People's Republic of China (PRC) in Beijing in 1979. But it also has unofficial ties with Taiwan and do support Taiwan in the form of defending the island from external aggression by providing military equipment and intelligence.

China's Concern with the Recent Visit of US speaker to Taiwan:

- As China considers Taiwan as a part of its territory, it claimed that the visit would severely undermine China's sovereignty and territorial integrity. It could gravely impact the foundation of China-US relations and send a seriously wrong signal to Taiwan's independence forces. According to China, the presence of a senior American figure in Taiwan would indicate some kind of US support for Taiwan's independence.

India-Taiwan relations

- **India does not have formal diplomatic ties with Taiwan.** India also follows the **One-China policy**.
- Like most countries, India maintains commercial ties with Taiwan. **In 1995, New Delhi set up the India-Taipei Association (ITA) in Taipei** to promote interactions between the two sides. The aim of ITA was to facilitate business, tourism, and cultural exchanges. ITA has also been authorized to provide all consular and passport services. In the same year (1995), Taiwan too established the **Taipei Economic and Cultural Centre in Delhi**.

Importance of Taiwan

- The majority of **semiconductors** are produced in Taiwan and it dominates the outsourcing of semiconductor manufacturing. Semiconductors are critical components that power electronics from computers and smartphones to brake sensors in cars. Since pandemic times, the world is facing shortage of semiconductors.

What should be done by India

- It is time for India to rethink its One China Policy and separate its relationship with mainland China from that with Taiwan. Also, further enhance its security and economic ties with Taiwan in the same way as China is expanding its involvement in Pakistan occupied Kashmir (PoK) through its ambitious project China Pakistan Economic Corridor (CPEC).

What are the implications of China-Taiwan Crisis?

- Taiwan is the world's leading chipmaker, and home to Taiwan Semiconductor Manufacturing Corporation (TSMC), which holds 90% of the market for advanced chips that power computers and phones. Disruption in the exports of chips **will lead to global shortage of electronic goods and appliances, automobiles** and other manufacturing industries dependent upon semiconductor chips.
- It will lead to **militarization of the region**. China has started its military operations against Taiwan while the U.S stationed four warships close to the East of Taiwan. The intensification of the situation may invite more players to the conflict and fuel more militarization.
- Any extreme military action and forced annexation attempt **might result in a Russia-Ukraine-like conflict**. This will be **detrimental for the global economy**, which is already facing recession fears amid the war in East Europe.
- India's trade with Taiwan has risen rapidly in the last decade. India imports iron and Steel, electrical machinery, electronics and chemicals among other things from Taiwan. Disruption in the India-Taiwan trade and a global recession will further add to **domestic inflation** and slowdown economic growth.

India-Uzbekistan IGC

- Recently, the Union Minister for Commerce & Industry attended the **13th Session** of the India-Uzbekistan Inter-Governmental Commission (IGC).
- Note : **Dustlik** is joint military exercise held between India and Uzbekistan.
- About IGC : IGC meeting is an important platform to deliberate on ideas, discuss issues & strengthen bilateral relations especially in the field of trade & investment.

India's exclusion from Minerals Security Partnership (MSP)

- India is exploring the possibilities of joining the Minerals Security Partnership.
- **Minerals Security Partnership** is an ambitious new **US-led partnership** to secure supply chains of critical minerals, aimed at reducing dependency on China.
- Members: US, Australia, Canada, Finland, France, Germany, Japan, the Republic of Korea, Sweden, United Kingdom, and the European Commission.
- The new grouping could focus on the supply chains of minerals such as Cobalt, Nickel, Lithium and also the 17 "rare earth" minerals.

Major Critical Minerals:

- Graphite, Lithium and Cobalt are used for making EV batteries.
- Aerospace, communications and defence industries also rely on several such minerals as they are used in manufacturing fighter jets, drones, radio sets and other critical equipment.
- While Cobalt, Nickel and Lithium are required for batteries used in electric vehicles, rare earth minerals are critical, in trace amounts, in the semiconductors and high-end electronics manufacturing.

Significance of joining MSP for India

- Given the push of India towards Electric Vehicles, it needs to secure the supply of critical minerals.
- China has created a processing infrastructure in rare earth minerals and has acquired mines in Africa for elements such as cobalt.

India Maldives

- The President of Maldives, Ibrahim Mohamed Solih, Visited India at the invitation of the Prime Minister of India, Narendra Modi.

Outcomes of the Bilateral Talks

- Security: To counter the threat of transnational crime, terrorism and drug trafficking in the Indian Ocean region, India will give 24 vehicles and one naval boat to the Maldives Security Force and help train the island-nation's security personnel. India will also cooperate in building police facilities in 61 islands of Maldives.
- Male connectivity project: The two leaders also welcomed the launch of the Greater Male Connectivity Project, a USD 500 million project funded by New Delhi.
- Both leaders participated in the virtual "pouring of the first concrete" ceremony of the USD500-million Greater Male Connectivity Project, being built under grant and concessional loan support from India.
- Agreements: The countries signed **six agreements** to expand cooperation in a range of areas in Maldives, including: Cybersecurity, Capacity Building, Housing, Disaster Management, Infrastructure Development
- India announced USD100 million financial aid to help the island-nation complete certain infrastructure projects.

Referendum in TUNISIA

- In the referendum held recently, Tunisian voters have approved a new Constitution that would turn the country back into a presidential system, institutionalising the one-man reign of President Kais Saied, who suspended the elected Parliament and awarded more powers to himself last year.
- While Mr. Saied has welcomed the result, his critics have warned that the new Constitution would erase whatever democratic gains Tunisia has made since the 2011 Arab Spring (Jasmine) revolution and push the country back into an authoritarian slide.

Arab spring

- The Arab Spring protests began in Tunisia in December 2010, leading to the fall of the regime of Zine El Abidine Ben Ali, who had been in power since 1987. Ben Ali had to flee the country in the face of the mass uprising. Tunisia was the only country that saw a peaceful transition to democracy in 2011.
- Quickly, protests spread to other Arab countries such as Egypt (fall of dictator Hosni Mubarak), Libya (fall of dictator Gadhafi), Bahrain, Yemen and Syria.

Joint Comprehensive Plan of Action (JCPOA).

- Recently, there has been a fresh round of talks over Iran's nuclear programme in Vienna to revive Joint Comprehensive Plan of Action (JCPOA).

Iran Nuclear Deal / JCPOA

- The Joint Comprehensive Plan of Action aims to guarantee the **civilian nature** of Iran's nuclear programme in exchange for a gradual lifting of sanctions. JCPOA known commonly as the **Iran deal**, is an international agreement on the nuclear program of Iran reached in Vienna on **14 July 2015 between Iran, the P5+1** (the five permanent members of the United Nations Security Council—China, France, Russia, United Kingdom, United States—plus **Germany**), and the **European Union**.
- Under it, Iran agreed to significantly cut its stores of key components for nuclear weapons like centrifuges, enriched uranium and heavy-water. Iran would only have enough enriched uranium to maintain its energy needs (civil purpose), without having the ability to build a nuclear bomb.
- It also agreed to dismantle much of its nuclear programme and open its facilities to more extensive international **inspections** in exchange for billions of dollars' worth of sanctions relief.
- The International Atomic Energy Agency (IAEA) played an important role in enforcing the deal, keeping a check on Iran and inspections.

Earlier Sanctions on Iran

- The United Nations (UN), the US and the European Union (EU) imposed sanctions to force Iran to halt uranium enrichment. It crippled Iran's economy, costing it more than USD 160 billion in oil revenue from 2012 to 2016 alone.
- Under JCPOA, Iran gained access to more than USD 100 billion in assets frozen overseas and was able to resume selling oil on international markets and using the global financial system for trade.

US's Withdrawal and Reinstated Sanctions

- The Iran nuclear deal was seen as the greatest diplomatic achievement by Former US President Barak Obama. But the Iran nuclear deal was not ratified in the US Senate. So, Mr Obama implemented the deal based on periodic executive orders.
- Under the Trump administration, the Iran nuclear deal was seen as a one-sided deal hence **in May 2018, the US under President Donald Trump, abandoned the deal.**
- The US held that the deal failed to address the threat of Iran's missile programme and did not include a strong enough mechanism for inspections and verification of Iran's nuclear sites.
- **In November 2018, US reinstated sanctions** targeting both Iran and States that trade with it.
- It resulted in a downturn in Iran's economy, pushing the value of its currency to record lows, quadrupling its annual inflation rate, driving away foreign investors and triggering protests.
- **The UK, Germany and France opposed the sanctions** and set up an alternative payment mechanism aimed at helping international companies trade with Iran without facing US penalties.

Issues with US withdrawal :

- Due to the unilateral withdrawal of the United States in 2018 and the re-imposition of U.S. sanctions, Iran has backtracked on its obligations.
- In January 2020, following the drone strike on Islamic Revolutionary Guard Corps commander Gen. Qasem Soleiman, Iran announced that it would no longer observe the JCPOA's restraints.
- Iran subsequently exceeded the JCPOA's uranium enrichment rate of 3.67%, **rising to 20%** in early 2021.
- It then crossed an unprecedented 60% threshold, getting closer to the 90 percent needed to make a bomb.
- Note : The collapse of the JCPOA drags Iran towards nuclear brinkmanship, like North Korea, which has created major geopolitical instability in the region and beyond.

Opposing countries:

- **Israel**, America's closest ally in the Middle East, strongly rejected the deal, and other countries like Iran's great regional rival **Saudi Arabia**, complained that they were not involved in the negotiations even though Iran's nuclear programme posed security risks for every country in the region.

Significance of JCPOA for India

- Removing sanctions may revive India's interest in the **Chabahar port, Bandar Abbas port**, and other plans for regional connectivity.
- This would further help India to neutralize the Chinese presence in Gwadar port, Pakistan.
- Apart from Chabahar, India's interest in the **International North-South Transit Corridor (INSTC)**, which runs through Iran, and will improve connectivity with five Central Asian republics, may also get a boost.
- Restoration of ties between the US and Iran will help India to procure **cheap Iranian oil** and aid in energy security.

Soil Mapping

- Recently, Food and Agriculture Organization (FAO) started a project to digitally map soil nutrients in sub-Saharan Africa (SSA) and central America to increase efficiency in using fertilizers. Also, it will organize and improve existing soil maps.
- Soil Mapping is the process of delineating natural bodies of soils, classifying and grouping the delineated soils into map units, and capturing soil property information for interpreting and depicting soil spatial distribution on a map.
- **Benefits:** It will enhance the understanding of what types of nutrients our soils and crops need. Further, it will reduce waste when applying fertilizers and increase their effectiveness.

India-China

- Recently, India and China held a special round of military talks on Air space Violations at the **Chushul-Moldo border meeting point in Eastern Ladakh.**
- The talks were held against the backdrop of the "provocative behaviour" by Chinese fighters flying close to the Line of Actual Control (LAC) often violating the 10-km no-fly zone Confidence Building Measure (CBM).

New START Treaty

- In News : Recently, Russia suspended United States of America's on-site inspections under New START Treaty with Washington due to Western sanctions and coronavirus infections.

The New START Treaty:

- It has replaced the 1991 START treaty, which expired in December 2009.
- New START treaty came into force on 5th February, 2011.
- It entered into force on 5th February, 2011. Its duration was for ten years that is till 2021, but it was extended by five more years till 2026.
- It is a treaty **between the United States of America and the Russian Federation** on measures for the further reduction and limitation of strategic offensive arms. The term 'strategic offensive arms' applies to nuclear warheads deployed by Strategic Nuclear Delivery Vehicles ('SNDVs').

- **SDNVs** are Inter-Continental Ballistic Missiles (‘ICBMs’) with a range exceeding 5,500 kilometres, strategic bombers, warships (including strategic submarines) and cruise missiles, including air and sea-launched cruise missiles.
- The treaty enhances U.S. national security by placing verifiable limits on all Russian deployed intercontinental-range nuclear weapons.

Butterfly Mines

- The UK Ministry of Defence, in its intelligence assessment of the ongoing war in Ukraine, has sounded an alarm on the possible use of PFM-1 series ‘Butterfly Mines’ by the Russian military in Donetsk and Kramatorsk.

About:

- The PFM-1 and PFM-1S are two kinds of anti-personnel landmines that are commonly referred to as ‘Butterfly mines’ or ‘**Green Parrots**’.
- These names are derived from the shape and colour of the mines. The main difference between the PFM-1 and PFM-1S mine is that the latter comes with a self destruction mechanism which gets activated within one to 40 hours.
- The ‘Butterfly mine’ has earned a reputation for being particularly attractive to children because it looks like a coloured toy.
- It is very sensitive to touch and just the act of picking it up can set it off. Because of the relatively lesser explosive packed in this small mine, it often injures and maims the handler rather than killing them.
- These mines are also difficult to detect because they are made of plastic and can evade metal detectors.

Hunger Stones

- Europe is suffering from the worst drought in half a millennium. Rivers have dried up so much that ‘hunger stones’ have been revealed and have gone viral on social media.

- Hunger stones or hungersteine in German are a common hydrological marker in central Europe. They date back to the pre-instrumental era.
- These stones were embedded into rivers by ancestors when rivers were subdued to severe levels subsequently causing famine and food shortages.
- Many of the hunger stones found have unique carvings on them that seek to remind the next generation that if water levels get to this point, food availability will be affected.



PEN-PLUS strategy

- Africa has adopted the PEN-PLUS strategy to boost access to the diagnosis, treatment and care of severe non-communicable diseases (NCD).
- Aim: To bridge the access gap in the treatment and care of patients with chronic and severe NCDs.
- Features: The strategy urges countries to put in place standardized programmes to tackle chronic and serious non-communicable diseases by ensuring that essential medicines, technologies and diagnostics are available and accessible in district hospitals.

Kushiyara River

- **India and Bangladesh** have signed an **interim water sharing agreement** for the Kushiyara river. This is the first such pact between them in over 25 years — the Ganga water treaty was signed in 1996.
- The pact will benefit people in southern Assam and Sylhet in Bangladesh. Under the pact, the two countries will also share the data on floods.
- Kushiyara River : this River is a **distributary river** in Bangladesh and Assam. It forms on the India-Bangladesh border as a branch of the Barak River when the **Barak** separates into the Kushiyara and Surma. The waters of the Kushiyara originate in the state of Nagaland and pick up tributaries from Manipur, Mizoram and Assam.

Devastating Floods in Pakistan’s

- In recent days, Pakistan has been hit by the worst natural disaster(flood). The Prime Minister of India has expressed condolences to the victims of the flooding in India’s neighborhood.
- As per the official statements, due to flooding, one-third of Pakistan is underwater, more than 1,100 people have died, and over 33 million people have been affected. Homes, roads, and infrastructure have been damaged, amounting to a loss of about \$10 billion.
- Further, standing crops have been affected. There are fears of disease as well as food shortages.

Causes behind Pakistan’s Flood 2022

- Pakistan experienced a monsoon in 2022, which is unusually wet, called “**monsoon on steroids**” by UN Secretary-General.
- It is an imprint of a global-warming-induced extreme weather event.
- In several parts of Pakistan, river embankments have not been repaired for years. Therefore, rivers caused havoc in surrounding places.
- Pakistan’s city drainage systems have not received adequate attention from the country’s planners.

Global Response to Pakistan’s Flood, 2022

- Various countries such as the U.K., the U.S., China, the UAE, Qatar, and Turkey have already dispatched aid to Pakistan, and many others have promised help.
- The **IMF announced a \$1.1 billion** bailout tranche, as part of ongoing negotiations with Pakistan.
- There are indications that India will join the growing number of countries and international bodies that have responded to Pakistan’s appeal for help to deal with the ravages of the worst floods..

GOVERNANCE

NIDAAN Portal

- India’s first portal named NIDAAN' on arrested narco offenders ' gets operational.
- NIDAAN or National Integrated Database on Arrested Narco-offenders portal has been developed by the **Narcotics Control Bureau (NCB)**.
- It is part of the narcotics coordination mechanism (NCORD) portal that was launched in July 2022 during the national conference on 'Drug trafficking and national security'.
- It sources its data from the ICJS (inter-operable criminal justice system) and the e-Prisons (a cloud-based application) repository and it is planned to integrate it in the future with the crime and criminal tracking network system or CCTNS.
- **Significance:** It is a one-stop solution for all narcotics offenders' related data and will help investigative agencies as an effective tool to connect the dots while probing narcotics cases. It hosts data about those accused who have been arrested and jailed for drug offenses and those who are "directly or indirectly involved in any narcotics or psychotropic substance. Any agency can search for the crime history, personal details, fingerprints, court cases and appeals made etc. with regard to a drug offender from any part of the country.

Mandla : India’s first fully ‘functionally literate’ district

- Tribal-dominated **Mandla district of Madhya Pradesh** has become the first completely “functionally literate” district of India. Mandla is the first district of India where people were able to write their names, read and count.
- During 2011 survey, literacy rate in Mandla district was 68%. Another report of 2020 highlights that, more than 2.25 lakh people in this district were not literate, most of them were tribals from forest areas.

Natural Resource Accounting (NRA)

- The Comptroller and Auditor General of India stated it will be coming up with a report on Natural Resource Accounting(NRA) by November 2022.

What is Natural Resource Accounting(NRA)?

- Natural Resource Accounting is a process of estimating the value of natural resource depletion and environmental degradation due to economic activities. The concept of NRA emerged to capture the intimate interplay between the various components of the natural environment and the economic progress of a country. It is based on the concept – ‘measurement of a resource leads to its better management’.

Origin of NRA Concept

- The need for the NRA took its first step at the United Nations (UN) conference on Human Environment in 1970 when the relationship between economic development and environmental degradation was discussed for the first time.
- The **Brundtland Commission**, set up by the UN, articulated the idea of the close association between the environment and economic activities in 1987, which was followed up by environmental accounting and the Earth Summit at Rio de Janeiro in 1992.

What are the initiatives taken globally for NRA?

- The UN adopted the System of Economic and Environmental Accounting – Central Framework (SEEA – CF) in 2012 – which is the latest internationally accepted and adopted framework for resource accounting.
- The UN General Assembly resolution titled, “**Transforming our world; the 2030 agenda for sustainable development**” (2016) which got the approval of more than 190 countries, requires the preparation of Natural Resource Accounts. India is a signatory to this resolution.

What are India Specific Initiatives for NRA?

- **Government Accounting Standards advisory board(GASAB)** : The CAG established the Government Accounting Standards Advisory Board (GASAB) in 2002 with the aim to improve standards of Governmental accounting and financial reporting to enhance the quality of decision-making and public accountability.
- It consists of representatives of all accounting services in GoI, regulatory authorities like RBI, ICAI and State Governments.
- CAG of India is a member of an international body of Supreme Audit Institutions called WGEA (Working Group on Environmental Auditing) which suggested (2010) that the audit institutions should aid their countries to adopt Natural Resources Accounts.

Electoral bonds (EBs)

- Recently, the State Bank of India (SBI) shared data reporting that Donations to political parties through electoral bonds (EBs) have crossed the Rs 10,000-crore mark.
- In the 21st sale of EBs conducted in July 2022, parties received another Rs 389.5 crore from EB purchases.
- The total amount collected by parties has gone up to Rs 10,246 crore since 2018 when the EB scheme was introduced.

What are Electoral Bonds?

- State Bank of India is authorised to issue and encash these bonds.
- Electoral bonds are purchased anonymously by donors and are valid for 15 days from the date of issue.
- As debt instruments, these can be bought by donors from a bank, and the political party can then encash them.
- These can be redeemed only by an eligible party by depositing the same in its designated account maintained with a bank.
- The bonds are issued by SBI in denominations of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh and Rs 1 crore.
- The bonds are available for purchase by any citizen of India for a period of ten days each in the months of January, April, July and October as may be specified by the Central Government.
- **Eligibility**: Only the political parties registered under Section 29A of the Representation of the People Act, 1951 and have secured not less than 1% of the votes polled in the last general election to the House of the People or the Legislative Assembly, are eligible to receive electoral bonds.

Higher Education Commission of India (HECI)

- The HECI is supposed to **replace** the **university grants commission (a statutory body)** which has been responsible for the maintenance of the standard of higher education in India. HECI shall function as a body that lays down uniform standards for the development of education in India. Higher Education Regulatory Council (HERC) is expected to function as the common, **single point regulator** for the higher education sector to relook and repeal existing Acts and restructure various existing regulatory bodies.

Govts efforts to establish HECI

- A bill named **“Draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018”** was introduced in January, 2018. But it was never finalised, and within two years, the National Education Policy 2020 was announced.
- Recently, the Government of India announced that they’re reworking a draft of the Bill (Draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018). The new reworked draft will also be in tune with the National Education Policy of India.

Udyam Portal

- Around **one crore** Micro, Small and Medium Enterprises (MSMEs) have registered on the Udyam portal within a span of 25 months, according to the Union Minister of Micro, Small, and Medium Enterprises (MSMEs).
- **About Udyam Portal** : It was launched on 1st July, 2020. It’s an online system for registering MSMEs, launched by the Union MSME ministry. Further, it is linked to the databases of the Central Board of Direct Taxes(CBDT) and Goods and Services Tax Network (GSTN). It is fully online, does not require any documentation, and is a step towards Ease of Doing Business for MSMEs.
- **Significance**: Udyam registrations are essential for MSMEs to utilize the benefits of schemes for the Ministry of MSME and for Priority Sector Lending from banks. Also, MSMEs contribute to the GDP, exports, and employment generation of the country.

Panch Pran (Five Vows)

- Recently, the Prime Minister Narendra Modi in his Independence Day Speech laid out Panch Pran (Five Vows) to be completed **by 2047** when India celebrates **100 years of Independence**,
- The first vow is for India to become a **Developed Country in the next 25 years**.
- **The remaining pledges for 2047 are** - removing any sign of servility, pride in heritage, unity and fulfilling our duties.

Har Ghar Jal

- Recently, Goa and Dadra & Nagar Haveli and Daman & Diu (D&NH and D&D) became the first 'Har Ghar Jal' certified State and UT in the country respectively.
- The people from all the villages have declared their village as 'Har Ghar Jal' through a resolution passed by Gram Sabha, certifying that all households in the villages have access to safe drinking water through taps.
- Village Water and Sanitation Committee (VWSC) or paani Samiti has been constituted in all the 378 villages of Goa and 96 villages of D&NH and D&D. It is responsible for the operation, maintenance, and repair of water supply infrastructure developed under 'Har Ghar Jal' programme.

What is Jal Jeevan Mission-Har Ghar Jal?

- Jal Jeevan Mission is a flagship programme of Government of India launched in 2019.
- Aim: To make provision of potable tap water supply in adequate quantity, of prescribed quality and on regular & long-term basis to every rural household of the country by 2024.
- The program is implemented by the Government of India in partnership with States/UTs.

How are States and UTs certified as Har Ghar Jal?

- The process of certification has been detailed in the Margdarshika of Jal Jeevan Mission.
- First, the field engineer submits a completion certificate regarding the water supply scheme to the Panchayat during the Gram Sabha meeting. The villages confirm through a resolution of the Gram Sabha, that every household is getting a regular supply of water of prescribed quality and not a single household is left out. They also confirm that all schools, Anganwadi centres and other public institutions are also getting tap water.

ODF+, Swachh Bharat Mission Grameen

- Over 1 lakh villages declared themselves as ODF (Open Defecation Free) Plus under Swachh Bharat Mission Grameen (SBM-G).
- SBM-G was launched in 2014 by the Ministry of Jal Shakti to accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation. The mission was implemented as nation-wide campaign/Janandolan which aimed at eliminating open defecation in rural areas.

What is Open Defecation Free Status?

- **ODF**: An area can be notified or declared as ODF if at any point of the day, not even a single person is found defecating in the open.
- **ODF+**: This status is given if at any point of the day, not a single person is found defecating and/or urinating in the open, and all community and public toilets are functional and well maintained.
- **ODF++**: This status is given if the area is already ODF+ and the faecal sludge/septage and sewage are safely managed and treated, with no discharging or dumping of untreated faecal sludge and sewage into the open drains, water bodies or areas.

Nikshay Poshan Yojna

- Only two-thirds of people living with tuberculosis benefitted from the Union government's Nikshay Poshan Yojana (NPY), sole nutrition support scheme, in 2021, which raises major public health concern.
- Nikshay Poshan Yojna : The NPY was launched in 2018 by the Ministry of Health and Family Welfare. It aims to support every Tuberculosis (TB) Patient by providing a **Direct Benefit Transfer (DBT) of Rs 500 per month** for nutritional needs.
- Challenges: Several hurdles were found in the DBT for both health providers and patients such as **non-availability of bank accounts and unlinked bank accounts**.
- TB is caused by a bacterium called *Mycobacterium tuberculosis*, belonging to the Mycobacteriaceae family consisting of about 200 members.
- As per India TB Report 2022, during 2021, the total number of TB patients was more than 19 lakhs. In 2020 it was around 16 lakhs, increasing 19 %. **India has set a target to eliminate TB by 2025.**

Concept of 'Nitipath' : Civil Services

- Recently, many people have suggested to the government to launch a "Nitipath" scheme for civil servants on the lines of Agnipath.
- Experts have called for officers to be filtered out after 10, 25 and 30 years of service.
- The government can recruit four times as many candidates at the entry level without being constrained by the number of apex-level positions and career paths. Instead of 600-1,000 candidates appointed to the All India Services, govt can have 4,000 officers entering service every year. Only 25% of them will be retained after a performance review after the fourth year.

- Options for retired officers: The 3,000 or so officers leaving the Union civil service after the fourth year can be employed in the state services, where there is a crisis of selection, a massive shortfall and acute demand for better governance.

PAREKH

- The Union government is planning to set up a national regulator PAREKH for achieving a benchmark framework to assess students at the secondary and higher secondary level.
- Full-Form: PAREKH stands for Performance Assessment, Review and Analysis of Knowledge for Holistic Development.
- It will act as a constituent unit of the NCERT.
- Mandate: It will be tasked with holding periodic learning outcome tests like the National Achievement Survey (NAS) and State Achievement Surveys.
- Objectives: To encourage and help school boards to shift their assessment patterns toward meeting the skill requirements of the 21st century.
 - To bring uniformity across the state and central boards which currently follow different standards of evaluation, leading to wide disparities in scores.
 - To put an end to the emphasis on rote learning, as envisaged by the National Education Policy (NEP) 2020.
- Composition: Its team will consist of leading assessment experts with a deep understanding of the education system in India and internationally.
- Significance: PAREKH will eventually become the national single-window source for all assessment-related information and expertise, with a mandate to support learning assessment in all forms, both nationally and where applicable, internationally.

Dr. VK Paul task force

- The Centre announced that it will set up a task force to keep track of monkeypox cases in India. Dr. VK Paul, Member (Health), Niti Aayog,

POLITY (Articles or Sections in News)

The Energy Conservation (amendment) bill, 2022

- The Energy Conservation (Amendment) Bill, 2022 was introduced in Lok Sabha on August 3, 2022.
- The Bill seeks to amend the **Energy Conservation Act, 2001**. The Act promotes energy efficiency and conservation. It provides for the regulation of energy consumption by equipment, appliances, buildings, and industries.

Permission required for Foreign Visit of the State Government Ministers

- Recently, Delhi's Chief Minister was denied permission to attend the World Cities Summit in Singapore.
- Also, in 2019 the Delhi Chief Minister's proposed visit to Copenhagen for attending the 7th C-40 World Mayors Summit was rejected by the MEA without providing any reason.
- Note : Foreign visits by members of the State governments in their official capacity would require clearances from the Ministry of External Affairs (MEA), Ministry of Home Affairs, Finance Ministry, and the Central Administrative Ministry.

Benami law cant be applied retrospectively: SC

- The Supreme Court has struck down two vital provisions of the Prohibition of Benami Property Transactions Act, 1988 which were introduced in the Benami law in 2016.

Background

- In 2016, the Government of India enacted the Benami Transactions (Prohibition) Amendment Act of 2016. The law amended the original Benami Act of 1988.
- Section 3 (2) introduced through the amendment mandates a punishment of three years imprisonment for those who have entered into Benami transactions between September 5, 1988, and October 25, 2016. That is, a person can be sent behind bars for a Benami transaction entered into 28 years before the section even came into existence.
- Section 5 said that any property which is the subject matter of a benami transaction shall be liable to be confiscated by the Central Government.
- In 2019, the Calcutta High Court ruled that the Benami Transactions (Prohibition) Amendment Act, 2016 cannot be applied retrospectively. The Central government then appealed to the Supreme Court against this judgement.

What was the Supreme Court verdict on these amendments?

- The Supreme Court has declared Sections 3(2) and 5 introduced through this amendment as unconstitutional and held that these provisions cannot be applied retrospectively.
- The court also held that the amendment also violated Article 20(1) of the Constitution. Article 20(1) mandates that no person should be convicted of an offence which was not in force “at the time of the commission of the act charged as an offence”.
- The court dismissed the government’s version that forfeiture, acquisition and confiscation of property under the 2016 Act was not in the nature of prosecution and cannot be restricted under Article 20.

Withdrawal of Personal Data Protection Bill by Govt

- The **Personal Data Protection Bill, 2019** was introduced in Lok Sabha by the Minister of Electronics and Information Technology, on December 11, 2019. Commonly referred to as the “**Privacy Bill**”, it intended to protect individual rights by regulating the collection, movement, and processing of data that is personal, or which can identify the individual.

Why has the Bill been withdrawn?

- The Personal Data Protection Bill, 2019 was deliberated in great detail by the Joint Committee of Parliament(JCP), 81 amendments were proposed, and 12 recommendations were made toward a comprehensive legal framework for the digital ecosystem. Hence, in the circumstances, it is proposed to withdraw the bill and present a new bill that fits into the comprehensive legal framework.

Expected NRC in Manipur

- Recently, the Manipur Assembly has unanimously adopted two private member resolutions to implement the National Register of Citizens (NRC) and establish a State Population Commission (SPC). The decision has come after at least 19 apex tribal organisations wrote to the Prime Minister demanding NRC and other mechanism to insulate the indigenous people from the “ever-increasing number of non-local residents”.
- **National Register of Citizens** : NRC is a register prepared in respect of each village, showing the houses or holdings in a serial order and indicating against each house or holding the number and names of persons staying therein. The register was first prepared after the **1951** Census of India and since then it has not been updated until recently. It has been updated in **Assam** only for now and the government plans to update it nationally as well.
- **Purpose:** To separate “illegal” immigrants from “legitimate” residents.
- **Nodal Agency:** Registrar General and Census Commissioner India.

Criminal Procedure (Identification) Act , 2022

- Recently, the President of India has given his assent to the Criminal Procedure (Identification) Bill.
- Criminal Procedure (Identification) Act **replaces** the Identification of Prisoners Act, 1920, a colonial era law, and authorises police officers to take measurements of people convicted, arrested or facing trial in criminal cases.
- It provides Legal sanction to the police to take physical and biological samples of convicts as well as those accused of crimes.
- The police as per section 53 or section 53A of the Code of Criminal Procedure (CrPC), 1973, can collect Data.
- **Data that can be collected:** Finger-impressions, Palm-Print impressions, Footprint impressions, Photographs, Iris and Retina scan, Physical, Biological samples and their analysis, Behavioural Attributes including signatures, Handwriting or any other examination
- CrPC is the primary legislation regarding the procedural aspects of criminal law.
- Any person convicted, arrested or detained under any preventive detention law will be required to provide "measurements" to a police officer or a prison official.
- National Crime Records Bureau (NCRB) will store, preserve, share with any law enforcement agency and destroy the record of measurements at national level. The records can be stored up to a period of 75 years.
- It aims to ensure the unique identification of those involved with crime and to help investigating agencies solve cases.

Repeals the old act

- The Act seeks to repeal the Identification of Prisoners Act (IPA) of 1920, whose scope was limited to recording measurements which include finger impressions and footprint impressions of certain convicts and non-convict persons.

Ban on VLC media Player in India

- The website of VideoLAN Client (VLC) Media Player has been banned in India. (While the VLC website has been banned, the VLC app continues to be available for download on Google and Apple stores).
- **Reasons for Ban:** Report from cybersecurity firm, Symantec, in April 2022 suggested that Cicada, a hacker group allegedly backed by China, has been using the VLC Media Player to deploy a malicious malware loader.

There are two routes through which content can be blocked online in India :

- Executive Route :
 - Section 69A of the Information Technology Act, 2000: Section 69A allows the government to direct an intermediary to “block for access by the public” any information generated, transmitted, received, stored or hosted in any computer resource if it is necessary or expedient to do so, in the interest of sovereignty and integrity of India, defence of India, security of the state, friendly relations with foreign states or public order or for preventing incitement to the commission of any cognisable offence”.
 - Section 69A draws its power from Article 19(2) of the Constitution which allows the government to place reasonable restrictions on the fundamental right to freedom of speech and expression.
- Judiciary Route :
 - Courts in India have the power to direct intermediaries to make content unavailable in India to provide effective remedy to the victim/plaintiff. For example, courts may order internet service providers to block websites which provide access to pirated content and violate the plaintiff’s copyright.

Constitution Bench of Supreme court

- A Constitution Bench is a bench of the Supreme Court **having five or more judges** on it. These benches are not a routine phenomenon. Presently, Constitution Benches are set up on an **ad hoc basis** (particular purpose) as and when the need arises.
- Other bench (for non constitutional cases) : A vast majority of cases before the Supreme Court are heard and decided by a bench of two judges (called a Division Bench), and sometimes of three.
- In News : Justice Uday Umesh Lalit, 49th Chief Justice of India (CJI), assured there will be at least one Constitution Bench functioning **throughout the year** in the Supreme Court.

Aadhaar-Voter ID Linkage

- The Election Commission had launched the National Electoral Law Purification and Authentication Programme to link the Aadhaar number with the voter ID number. As per the government, linkage of Aadhaar with voter IDs will assist in ensuring that only one Voter ID is issued per citizen of India.
- Further, Government officials have asked individuals to link their Aadhaar with their Voter IDs and failure to link voter ID with Aadhaar could lead to the cancellation of their Voter ID card.
- **Purpose of Aadhaar-Voter ID linkage**: To weed out duplication of voters, such as migrant workers who may have been registered more than once on the electoral rolls in different constituencies or for persons registered multiple times within the same constituency.

Associated issues:

- Aadhaar is only a proof of residence and not a proof of citizenship. Therefore, verifying voter identity against this will only help in tackling duplication but will not remove voters.
- The estimate of error rates in biometric based authentication differ widely. The Supreme Court held in Puttaswamy case that a person would not be denied of benefits in case Aadhaar based authentication could not take place.
- Linking of the two databases of electoral rolls and Aadhaar could lead to the linkage of Aadhaar’s “demographic” information with voter ID information, and lead to violation of the right to privacy and surveillance measures by the state.
- There is also evidence that it will lead to the arbitrary deletion of eligible voters on a large scale. It was seen in the Assembly elections in Telangana and Andhra Pradesh recently.
- There is an absence of data protection law. It can possibly lead to misuse by agencies that can access the voter’s database, as Aadhaar cards are now used at various places for different services.

ECONOMY NEWS

October 1 set as the card tokenization deadline by RBI

- In a circular issued, the Reserve Bank of India (RBI), instructed all parties—aside from card networks and card issuers—to delete all previously stored **Card-on-File (CoF) data** by October 1, 2022.

Financial Inclusion Index

- The Reserve Bank of India (RBI) has released the Financial Inclusion Index(FI-Index) for the year ending March 31, 2022.
- Aim: To capture the extent of financial inclusion across the country.
- Parameters: The index comprises **three broad parameters** — access (35% weightage), usage (45%) and quality (20%). Each of these parameters will consist of various dimensions, which are computed based on 97 indicators.
 - The quality parameter includes aspects such as financial literacy, consumer protection, and inequalities and deficiencies in services.

- **Scores:** The index captures information on various aspects of financial inclusion in a single value ranging between 0 and 100 where 0 represents complete financial exclusion and 100 indicates full financial inclusion.
- **Base Year:** The index has been constructed **without any “base year”**. It reflects the cumulative efforts of all stakeholders.
- **Key findings of the index :** The extent of financial inclusion across the country has increased to **56.4** in March 2022 showing growth across parameters. The index stood at **53.9 in March 2021**. It was at 43.4 for the period ending March 2017. This shows **rapid improvement** in the reach of financial services over the past five years.

FRP for Sugarcane hiked

- The Cabinet Committee on Economic Affairs has hiked Fair and Remunerative Price (FRP) of sugarcane for sugar season 2022-23 (October - September) **by Rs 15 per quintal**.

How are the Prices of Sugarcane Determined?

- The Prices of Sugarcane are Determined by the Central Government (Federal Government) and the State Governments.
- **Central Government:** Fair and Remunerative Price (FRP)
 - The Central Government announces Fair and Remunerative Prices which are determined on the recommendation of the **Commission for Agricultural Costs and Prices (CACP)** and announced by the **Cabinet Committee on Economic Affairs (CCEA)**. CCEA is chaired by the Prime Minister of India.
 - The FRP is based on the Rangarajan Committee report on reorganising the sugarcane industry.
 - **About CACP :** The Commission for Agricultural Costs and Prices(CACP) is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India. It came into existence in January **1965**. It is an **advisory body** whose recommendations are not binding on the Government.
- **State Government:** State Advised Prices (SAP)
 - The SAP is announced by the Governments of key sugarcane producing states.
 - SAP is generally higher than FRP.

Why is the Government Encouraging Sugar Production?

- The government wants to reduce its Import Bill on Crude Oil by cutting oil imports and blending ethanol with Petrol under the Ethanol Blended with Petrol programme. (Currently, India’s 85% requirement of crude oil is met through imports).
- Also, to reduce pollution & to make India Atma Nirbhar in petroleum sector, Government is encouraging sugar mills to divert excess sugarcane to ethanol which is blended with petrol, which not only serves as a green fuel but also saves foreign exchange on account of crude oil import.
- The government has fixed a target of 10% blending of fuel grade ethanol with petrol by 2022 & 20% blending by 2025.

Key facts

- India is the largest producer of Sugarcane in the World. India has surpassed Brazil in the sugar production in the current sugar season 2021-22.
- India is the Second Largest exporter of Sugar after Brazil.

RBI issues guidelines to regulate digital lending

- The Reserve Bank of India (RBI) recently issued the first set of guidelines for digital lending in order to combat illegal activities by certain players. This is in response to the recommendation of the Working Group on Digital Lending (WGDL), which recently submitted its report.

Digital Lending

- Digital lending is the process of availing credit online. It involves lending through web platforms or mobile apps, utilising technology in customer acquisition, credit assessment, loan approval, disbursement, recovery and associated customer service. Its increased popularity amongst new-age lenders can be attributed to expanding smartphone penetration, credit range flexibility and speedy online transactions. It includes products like Buy Now, Pay Later (BNPL), which is a financing option (or simply a short-term loan product).
- It allows one to buy a product or avail a service without having to worry about paying for it immediately.
- There are many gaps that are existent in this model of lending. For example, There have been instances of unethical behaviour, such as unauthorised lenders providing credit to customers without any collateral, charging exorbitant interest rates and unethical recovery practices.
- Unrestricted engagement of third parties, mis-selling, breach of data privacy, unfair business conduct.

Formation of Working Group on Digital Lending (WGDL):

- The RBI constituted a WGDL in 2021 To evaluate digital lending activities and assess the standards of outsourced digital lending activities of RBI regulated entities.
- The current digital lending norms, issued by RBI, are based on the recommendation of this group.

Key highlights of the new digital lending norms:

- According to the new rules, all loan disbursements and repayments must be made between the borrower's bank account and the REs, with no pass-through or pool account of the Lending Service Providers (LSPs) or any third party.
- The new rules require that any fees or charges owed to LSPs during the credit intermediation process be paid directly by the bank or NBFC rather than the borrower.
- A standardised Key Fact Statement (KFS) must be provided to the borrower before executing the loan contract.
- It also includes a cooling-off period in the loan contract, during which borrowers can exit digital loans by paying the principal and the proportionate annual percentage rate without penalty.
- All-inclusive cost of digital loans in the form of Annual Percentage Rate is required to be disclosed to the borrowers.
- The new norm prohibits any automatic increase in credit limit without the explicit consent of the borrower.
- Banks must ensure that they, as well as the LSPs they employ, have a suitable nodal grievance redressal officer to deal with digital lending-related complaints.
- Current guidelines allow borrowers to file a complaint with the RBI's Integrated Ombudsman Scheme if their complaint is not resolved by the bank within 30 days.

Tilapia Fish : Aquaculture

- To bring about the blue revolution, the **Technology Development Board(TDB)**, a **statutory body** under the Department of Science and Technology is funding its first ever 'Aquaculture' project using 'state of the art' Israeli technology for production of Tilapia Fish".
- Tilapia Fish : 'Tilapia' has emerged to be one of the most productive and internationally traded food fish in the world. The culture of tilapia has become commercially popular in many parts of the world and fishery experts have dubbed the tilapia as "**aquatic chicken**" due to its quick growth and low maintenance cultivation.
- In order to facilitate the culture of Tilapia in India in a responsible manner, M/s Fountainhead Agro Farms Private Limited envisages setting up a complete production line (from breeding to full fish) in **Mudhol (Karnataka)**. The company aims to produce 500 tons of Tilapia to be grown from the **imported parent broodstock 'Hermon' from Israel**.
- Hermon : Hermon is a hybrid of two selected strains of Tilapia, namely Oreochromis Niloticus (Male) and Oreochromis Aureus (Female). It is known for special characteristics such as high growth rate; resistance to low temperature; light (attractive) colour; all hybrid fry progeny of males only, without the conventional system of usage of hormones.
- Significance of this project : The project will be a great addition to Pradhan Mantri Matsya Sampada Yojana(PMMSY) which aims to double the export earnings to Rs.1,00,000 crore from the fisheries sector.

Aqua Bazar App

- The Union **Minister of Fisheries, Animal Husbandry and Dairying** has launched Aqua Bazar App.
- It is an **online marketplace** application that will help the fish farmers and stakeholders to source the inputs such as fish seed, feed, medicines and services required for fish culture. Through this platform, any registered vendor can list their input materials. The listed items will be displayed in the marketplace based on geographical proximity to the app user. The listings are categorized into the following major categories, fish seeds, input materials, services, jobs, and table fish. Every listing will contain detailed information about the product, price, available quantity, supply area, etc. along with the seller's contact details. The needy farmers/stakeholders can contact the vendors and fulfill their procurements. It also allows the fish farmers to list their grown table-size fish/fish seeds for sale with an option to indicate the date of availability along with the price offer. Interested fish buyers will contact the farmers and offer their prices.
- Developed by: Bhubaneswar-based **ICAR-Central Institute of Freshwater Aquaculture** with the funding support of the National Fisheries Development Board (**NPFB**).

National Fisheries Development Board(NFDB) :

- Headquartered in **Telangana**, NFDB was established in **2006** as an autonomous organization under the administrative control of the Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying.
- Aim: To enhance fish production and productivity in the country and to coordinate fishery development in an integrated and holistic manner.

Liquid Nano Urea

- India is hoping to **end its reliance on imported urea** within the **next four years, till 2025** by expanding output of a locally developed version known as Liquid Nano Urea.
- Liquid Nano Urea is urea in the form of a nanoparticle. It is a nutrient (liquid) to provide nitrogen to plants as an alternative to the conventional urea. It is developed to replace conventional urea and it can curtail the requirement

of the same by at least 50%. It contains 40,000 mg/L of nitrogen in a 500 ml bottle which is equivalent to the impact of nitrogen nutrient provided by one bag of conventional urea.

- The first Liquid Nano Urea (LNU) plant is inaugurated at **Kalol, Gujarat**.
- Note : Urea is a chemical nitrogen fertiliser, white in colour, which artificially provides nitrogen, a major nutrient required by plants.

Paddy Dwarfing

- Recently, a mysterious disease hit the paddy crop causing “dwarfing” of the plants in Punjab and Haryana.
- Scientists have decoded the mystery blaming it on ‘**Southern Rice Black-Streaked Dwarf Virus**’ (SRBSDV), named after Southern China where it was first reported in 2001.

Vishnugad Pipalkoti Hydro Electric Project

- Recently, the World Bank has agreed to look into environmental damage from the under-construction Vishnugad Pipalkoti Hydro Electric Project (VPHEP) on the **Alaknanda River in Uttarakhand**.
- The panel has considered the request for an enquiry after accepting the Complaints from 83 Local Communities.

About Vishnugad Project

- Vishnugad Project is a run-of-river hydroelectric project being constructed on Dhauliganga River in Chamoli District of Uttarakhand.
- Built by: Tehri Hydropower Development Corporation (THDC), a partially State-owned enterprise.
- Funded by: The project is primarily funded by the World Bank and was sanctioned in 2011.
- Expected completion year: The project is proposed to be completed in June 2023.

Why is this project being opposed by residents?

- Residents are opposing this project on the following grounds: Ecological Impact, forced resettlement, loss of livelihoods, threatens the local Lakshmi Narayan Temple which is deemed to be of historical and cultural importance, limited availability of water and inadequate compensation.

HISTORY, ART AND CULTURE

Pingali Venkayya : designer of India’s National Flag

- Recently, the Ministry of Culture organized ‘**Tiranga Utsav**’ to celebrate Pingali Venkayya’s **146th Birth Anniversary**. The government of India also released a special commemorative postage stamp on this occasion.
- Pingali Venkayya was born in a Telugu Brahmin family at Bhatlapenumarru, near Machilipatnam, in what is now the Indian state of **Andhra Pradesh**. He was an agriculturist and also an educationist who set up an educational institution in Machilipatnam.
- He designed India’s National Flag and was a follower of Gandhian principles. It was upon the request of Mahatma Gandhi that he designed the Indian National Flag.
- He wrote a book titled “National Flag for India,” which was published in 1916. The book showcased thirty designs of what could make the Indian flag.

80 years of Quit India Movement

- On 8th Aug 2022, India completed 80 years of Quit India Movement also known as August Kranti.
- On **8th August 1942**, **Mahatma Gandhi** called to end British rule and launched the Quit India Movement at the session of the All-India Congress Committee in Mumbai. Gandhiji gave the call “**Do or Die**” in his speech delivered at the *Gowalia Tank Maidan*, now popularly known as *August Kranti Maidan*.
- Aruna Asaf Ali popularly known as the ‘Grand Old Lady’ of the Independence Movement is known for hoisting the Indian flag at the Gowalia Tank Maidan in Mumbai during the Quit India Movement.
- The slogan ‘**Quit India**’ was coined by **Yusuf Meherally**, a socialist and trade unionist who also served as Mayor of Mumbai. Meherally had also coined the slogan “Simon Go Back”.

Women heroes of India’s freedom struggle

- During 75th Independence Day anniversary speech, the Prime Minister hailed “nari shakti”, and urged people to pledge to not do anything that lowers the dignity of women. He also paid tribute to women freedom fighters for showing the world the true meaning of India’s “nari shakti”. Following women freedom fighters have been mentioned by PM in his speech :

Rani Laxmibai:

- Rani Laxmibai is known for her role in the First War of India’s Independence in 1857. Refusing to cede her territory (Jhansi), the queen decided to rule on behalf of the heir and later joined the uprising against the British in 1857. She was wounded in combat near Gwalior’s Phool Bagh, where she later died. (She died fighting Hugh Rose on 18 June 1858).

Jhalkari Bai:

- She was a soldier in women brigade (*Durga dal*) of Rani Laxmibai's army. She rose to become one of the queen's most trusted advisers. She is known for putting her own life at risk to keep the queen out of harm's way. To date, the story of her valour is recalled by the people of Bundelkhand, and she is often presented as a representative of **Bundeli identity**. Many Dalit communities of the region look up to her as an incarnation of God and also celebrate **Jhalkaribai Jayanti** every year in her honour.

Durga Bhabhi:

- Durgawati Devi was popularly known as Durga Bhabhi. She was a revolutionary who joined the armed struggle against colonial rule. She was born in Allahabad in 1907 and **married to Hindustan Socialist Republican Association (HSRA) member Bhagwati Charan Vohra**. She was a member of the Naujawan Bharat Sabha. **She helped Bhagat Singh escape in disguise from Lahore** after the 1928 killing of British police officer John P Saunders. During the train journey that followed, Durgawati and Bhagat Singh posed as a couple and Rajguru as their servant. Later, as revenge for the hanging of Bhagat Singh, Rajguru, and Sukhdev, she made an unsuccessful attempt to kill the former Punjab Governor, **Lord Hailey**.

Rani Gaidinliu

- Born in 1915 in **present-day Manipur, Rani Gaidinliu was a Naga spiritual and political leader** who fought the British. She joined the **Heraka religious movement** which later became a movement to drive out the British. She rebelled against the Empire and refused to pay taxes, asking people to do the same.
- The British launched a manhunt, but she evaded arrest, moving from village to village. Gaidinliu was finally arrested in 1932 when she was just 16 and later sentenced for life. She was released in 1947.
- Prime Minister **Jawaharlal Nehru** described Gaidinliu as the "**daughter of the hills**", and gave her the title of 'Rani' for her courage.
- She was awarded with the **Tamra Patra** — an award bestowed upon distinguished individuals for their contribution to the Indian freedom struggle — in **1972** and the **Padma Bhushan in 1982**.
- In 1993, Rani Gaidinliu passed away. The government of India issued a postal stamp in her honour in 1996, and a commemorative coin in 2015.
- The Indian Coast Guard commissioned a Fast Patrol Vessel "**ICGS Rani Gaidinliu**" in 2016.

Begum Hazrat Mahal (Mahak Pari)

- After her husband, Nawab of Awadh Wajid Ali Shah was exiled after the 1857 revolt, Begum Hazrat Mahal, along with her supporters, took on the British and wrested control of Lucknow. She was forced into a retreat after the colonial rulers recaptured the area. She **finally escaped to Nepal**.

Rani Velu Nachiyar

- Rani Velu Nachiyar is the 18th century queen from **Sivagangai district in Tamil Nadu**, who fought against British rule to recapture her kingdom. She was known as the first queen to fight against the colonial power during that time. She is widely known as **Veeramangai (brave woman)**.
- She proudly ruled Sivagangai for more than 10 years. During her reign, the queen also created a women's only army called **Udaiyaal**.

Statues of Pandurang Khankhoje and Swami Vivekananda in Mexico

About Pandurang Khankhoje

- His statue is unveiled by Lok Sabha Speaker Om Birla in **Chapingo University** in Mexico.
- Pandurang Khankhoje(1884 – 1967) was an **Indian revolutionary, scholar and agricultural scientist**. He was one of the founding members of the **Ghadar Party**, established by Indians living abroad in 1914, mostly belonging to Punjab. Its aim was to lead a revolutionary fight against the British in India.
- Mexico connection : Pandurang Khankhoje decided to go abroad for further training in revolutionary methods and militaristic strategy. He joined the Mount Tamalpais Military Academy in the US. At the military academy, he met many people from Mexico. The Mexican Revolution of 1910 had led to the overthrow of the dictatorial regime and this inspired Khankhoje. Along with the Indian workers, militant action was planned by Khankhoje in India, but the outbreak of the First World War halted these plans. He then reached out to Bhikaji Cama in Paris, and met with Vladimir Lenin in Russia among other leaders, seeking support for the Indian cause. However, as he was facing possible deportation from Europe and could not go to India, he sought shelter in Mexico.
- In Mexico, he was appointed as a professor at the National School of Agriculture. He researched corn, wheat, pulses and rubber, developing frost and drought-resistant varieties and was part of efforts to bring in the Green Revolution in Mexico.

About Swami Vivekananda

- Lok Sabha Speaker Om Birla unveiled a statue of Swami Vivekananda at Autonomous University of State of Hidalgo in Mexico. This is the first statue of Swami Vivekananda in Latin America.
- Swami Vivekanand ,original name Narendranath Datta was born on 12th January, 1863.
- National Youth Day is held every year to observe the birth anniversary of Swami Vivekananda.
- In 1893, upon the request of Maharaja Ajit Singh of the Khetri State, he took the name 'Vivekananda.'

- He popularized across world, the Indian philosophies of **Vedanta and Yoga**.
- He is best known for his **speech** at the **World Parliament of Religion in Chicago in 1893**.
- He was the chief disciple of the 19th-century mystic Ramakrishna Paramhansa and established the **Ramakrishna Mission in 1897**.
- In 1899, he established Belur Math, which became his permanent abode.
- He died at Belur Math in 1902.
- Belur Math, located in **West Bengal**, is the headquarters of Ramakrishna Math & Ramakrishna Mission.

Statue of Mahatma Gandhi in Paraguay

- External affairs minister S Jaishankar unveiled a bust of Mahatma Gandhi in Paraguay and visited the historic Casa de la Independencia, from where the South American country's independence movement started more than two centuries ago.

Mithila Makhana got GI Tag

- The Government of India has awarded the Geographical Indication(GI) tag to Mithila Makhana.
- Mithila Makhana : Makhana is a special variety of aquatic cash fruit crops cultivated in Mithila region of Bihar and Nepal. In Mithila culture of Bihar, Makhana is known as Makhaan in Maithili. It is an auspicious ingredient in offerings to the God and Goddesses during festivals and is used to show reverence. The geographical area of production of "Mithila Makhana" takes place in 21 out of 38 districts, mostly situated in the North of the Bihar state. Its major regions include Darbhanga, Muzaffarpur, Champaran, Begusarai, Madhubani, Katihar among many. *Pan, Makhan and Machh* (fish) are the three prestigious cultural identity of Mithila. Makhana is also very famous in **Kojagara festival of Maithil Brahmins** celebrated for newly married couples. Makhana contains **protein and fiber**, along with micronutrients like **calcium, magnesium, iron, and phosphorus**.

What is a GI Tag?

- A GI is primarily an agricultural, natural or manufactured product (handicrafts and industrial goods) originating from a definite geographical territory. The Geographical Indications of Goods (Registration and Protection) Act, 1999 seeks to provide for the registration and better protection of geographical indications relating to goods in India. It is governed and directed by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- Once a product gets this tag, any person or company cannot sell a similar item under that name. This tag is valid for a period of 10 years following which it can be renewed.
- The other benefits of GI registration include legal protection for that item, prevention against unauthorized use by others and promotion of exports.

APPOINTMENTS and RESIGNATIONS

Nallathamby Kalaiselvi (Senior electrochemical scientist) :

- She has been appointed as first woman director general of the Council of Scientific and Industrial Research / CSIR.

About CSIR

- Established: September 1942 ; Headquarters: New Delhi
- President: Prime Minister of India (Ex-officio)
- Vice President: Union Minister of Science and Technology (Ex-officio)
- Governing Body: The Director-General is the head of the governing body.
- Note : **Dr Shanti Swarup Bhatnagar** was the Founder Director (and later first Director-General) of CSIR who is credited with establishing twelve national laboratories.

Note : Data compiled by the Department of Science and Technology (DST) shows that **28%** of participants in extramural Research & Development projects in 2018-19 were women, up from 13% in 2000-01 due to various initiatives taken by successive governments. The ministry aims to raise women's participation in Science & Technology to **30% by 2030**.

Guillermo Pablo Rios

- Recently, U.N. Secretary General has appointed **Rear Admiral Guillermo Pablo Rios** of **Argentina** as the Head of Mission and Chief Military Observer for the United Nations Military Observer Group in India and Pakistan (UNMOGIP).
- UNMOGIP : It was established in **January 1949**. After the first war in Kashmir (1947-1948), India approached the United Nations Security Council (UNSC) to bring the conflict in Kashmir to the notice of Security Council members. In January 1948, the UNSC adopted Resolution 39, establishing the three-member United Nations Commission for India and Pakistan (UNCIP) to investigate and mediate the dispute.
- In April 1948, by its Resolution 47, the UNCIP was reconstituted as UNMOGIP.

- The **Karachi Agreement** of July 1949 firmed up the role of UN-level military observers and permitted supervision of the Ceasefire Line established in Jammu and Kashmir.
- India officially maintains that the UNMOGIP's role was "overtaken" by the **Simla Agreement of 1972** that established the Line of Control (LoC).
- In the **Shimla Agreement**, India and Pakistan agreed to move the ceasefire line to the Line of Control and to resolve their disputes **bilaterally**, without the intervention of a third party.
- Since 1972 India has not gone to UNMOGIP with complaints against Pakistan.
- In 2014, India requested that UNMOGIP cease operations in Kashmir, and the Ministry of External Affairs (MEA) reiterated in 2017 that UNMOGIP has no mandate to monitor the situation in Kashmir.
- Pakistan, on the other hand, does not accept the Indian argument and continues to seek cooperation from the UNMOGIP.

<u>Suresh N Patel</u>	<ul style="list-style-type: none"> • Appointed as Chief of the Central Vigilance Commission. • He has been working as the acting Central Vigilance Commissioner (CVC) since June this year.
Samir V Kamat	<ul style="list-style-type: none"> • Secretary and Chairman, DRDO • Sameer V Kamat, Director General, Naval Systems and Materials Division of DRDO, was recently appointed as the new Chairman of DRDO. Kamat will continue in this post till the age of 60 years or till further orders. • He succeed G. Satheesh Reddy (G. Satheesh Reddy was recently appointed Scientific Advisor to the Defense Minister). • Note : The DRDO is headquartered in Delhi. It was established in 1958.
Sanjay Arora	<ul style="list-style-type: none"> • Delhi Police commissioner
Satyendra Prakash	<ul style="list-style-type: none"> • Principal Director General of the Press Information Bureau (PIB).
Shweta Singh	<ul style="list-style-type: none"> • Director in the Prime Minister's Office (PMO).
Piyush Goyal	<ul style="list-style-type: none"> • CEO, NATGRID (National Intelligence Grid).
Vikram K. Doraiswami	<ul style="list-style-type: none"> • India's High Commissioner to the United Kingdom
Rajesh Verma	<ul style="list-style-type: none"> • Secretary to President Droupadi Murmu.
Gustavo Petro	<ul style="list-style-type: none"> • Sworn in as the first leftist president of Colombia.
William Ruto	<ul style="list-style-type: none"> • President of Kenya

SCIENCE AND TECHNOLOGY

Khayyam : Iranian satellite

- Russian rocket has successfully launched an Iranian satellite named Khayyam into orbit from southern Kazakhstan. The name of the satellite was named after Omar Khayyam, a Persian scientist who lived in the 11th and 12th centuries.

Langya Virus

- A new **zoonotic virus** (from animal to humans) named Langya Henipavirus or the **LayV** has been discovered in China with 35 infections identified so far. Langya is a part of a genus of viruses called henipaviruses, which has a single-stranded RNA genome with a negative orientation.
- The LayV virus RNA has been predominantly found in **shrews**, which may be its **natural hosts**.
- Note: It is not known yet whether this virus is capable of human-to-human transmission.
- Treatment : As of now there are no licensed drugs or vaccines meant for humans.
- Symptoms of the Langya virus : Fever, Fatigue, cough, muscle aches and pains, nausea, headache and vomiting were the common symptoms.
- More than half of the patients also had **leukopenia** defined as an insufficient number of pathogen-fighting white blood cells. More than a third had **thrombocytopenia**, a low number of blood-clotting cells called platelets. An impaired **liver or kidney function** was also detected in a few patients.

'Roshini'

- Union Minister of Earth Sciences, Jitendra Singh has launched **India's first saline water lantern, 'Roshini'**, which uses seawater to power Light Emitting Diode (LED) lamps.
- The minister unveiled the first-of-its-kind lantern during his visit to **Sagar Anveshika**, a coastal research vessel operated by the National Institute of Ocean Technology (NIOT) Chennai for marine research.

African Swine Fever (ASF) : Kerala

- Recently, African Swine Fever has been confirmed for the first time, at a private pig farm in in Kerala.

- It is a highly contagious and fatal animal disease that infects and leads to an acute form of hemorrhagic fever in domestic and wild pigs. It was first detected in Africa in the 1920s.
- The mortality is close to 95% - 100% and since the fever has no cure, the only way to stop its spread is by culling (selective killing of infected ones) the animals.
- ASF is **not a threat to human beings** since it only spreads from animals to other animals.
- ASF is a disease listed in the World Organisation for Animal Health (OIE)'s Terrestrial Animal Health Code.

What is Classical Swine Fever?

- CSF, also known as **Hog Cholera**, is an important disease of pigs. It is caused by a virus of the genus Pestivirus of the family Flaviviridae, which is closely related to the viruses that cause bovine viral diarrhoea in cattle and border disease in sheep. Mortality rate of Classical Swine Fever is 100%.
- Note : **H1N1 virus** is related to **Swine Flu**.

Tomato Flu

- Tomato Flu in India was first identified in the **Kollam district of Kerala**.
- Tomato Flu is a **viral disease**. It is caused by **Coxsackie virus A 16**. It belongs to *Enterovirus* family.
- Note: Hand-foot-and-mouth-disease(HFMD) is a frequent febrile rash illness of childhood caused by enteroviruses(EV).
- Named After: The flu was named on the basis of the eruption of red blisters giving a resemblance to a tomato.
- Symptoms: The primary symptoms observed in children with tomato flu are similar to those of chikungunya, which include high fever, rashes, and intense pain in joints.
- Transmission: Tomato flu is very **contagious** and children are at increased risk of exposure to tomato flu as viral infections are common in this age group and spread is likely to be **through close contact**.
- Treatment: Tomato flu is **similar to chikungunya and dengue** as well as hand, foot, and mouth disease. Hence, the treatment is also similar — isolation, rest, plenty of fluids, and a hot water sponge for the relief of irritation and rashes.

Solar Power

- Government of India has set the target to expand India's renewable energy installed capacity to 500 GW by 2030.
- India is also targeting to reduce India's total projected carbon emission by 1 billion tonnes by 2030, reduce the carbon intensity of the nation's economy by less than 45% by the end of the decade, achieve net-zero carbon emissions by 2070.

Present Status of Renewable Energy in India

- The total installed capacity for renewable energy in India is 151.4 GW.
- The following is the breakup of total installed capacity for Renewables:
 - Wind power (40.08 GW), Solar Power (50 GW), Biopower (10.61 GW), Small Hydro Power (4.83 GW), Large Hydro (46.51 GW).

Present Solar Power capacity:

- 45 solar parks of aggregate capacity 37 GW have been approved in India.
- Solar Parks in Pavagada (2 GW), Kurnool (1 GW) and Bhadla-II (648 MW) are included in the top 5 operational solar parks of 7 GW capacity in the country.
- The world's largest renewable energy park of 30 GW capacity solar-wind hybrid project is under installation in Gujarat.

What are the Challenges ?

- Imports dependent : India doesn't have enough module and PV cell manufacturing capacity. The current solar module manufacturing capacity is limited to 15 GW per year, whereas the domestic production is around 3.5 GW only.
- Raw Material Supply : The silicon wafer, the most expensive raw material, is not manufactured in India.
- It currently imports 100% silicon wafers and around 80% cells.

What are Government Initiatives?

- PLI scheme to Support Manufacturing: The Scheme has provisions for supporting the setting up of integrated manufacturing units of high-efficiency solar PV modules by providing Production Linked Incentive (PLI) on sales of such solar PV modules.
- Domestic Content Requirement (DCR): Under some of the current schemes of the Ministry of New & Renewable Energy (MNRE), namely Central Public Sector Undertaking (CPSU) Scheme Phase-II, PM-KUSUM, and Grid-connected Rooftop Solar Programme Phase-II, wherein government subsidy is given, it has been mandated to source solar PV cells and modules from domestic sources.
- Further, the government made it mandatory to procure modules only from an Approved List of Manufacturers (ALMM) for projects that are connected to state/ central government grids.

- Imposition of Basic Customs Duty on import of solar PV cells & modules: The Government has announced the imposition of Basic Customs Duty (BCD) on the import of solar PV cells and modules.
- Modified Special Incentive Package Scheme (M-SIPS): It's a scheme of the Ministry of Electronics & Information Technology. The scheme mainly provides a subsidy for capital expenditure on Pv cells and modules – 20% for investments in Special Economic Zones (SEZs) and 25% in non-SEZ.

OTEC plant in Lakshadweep

- The National Institute of Ocean Technology, an autonomous institute under the Union Ministry of Earth Sciences (MoES) is establishing an **Ocean Thermal Energy Conversion(OTEC)** plant with a capacity of 65 kilowatts (kW) in *Kavaratti*, the capital of Lakshadweep.
- The plant is the first of its kind in the world as it will generate drinking water from seawater using indigenous technology, green energy and environmentally friendly processes.
- About OTEC : Ocean thermal energy conversion(OTEC) is a process or technology for producing energy by harnessing the **temperature differences** (thermal gradients) between ocean surface waters and deep ocean waters. Especially in tropical regions, surface water can be much warmer than deep water because of the Sun's heat. This temperature difference can be used to produce electricity and desalinate ocean water.
- Note: OTEC systems use a temperature difference (of **at least 77°F**) to power a turbine to produce electricity.

How does OTEC plant work?

- Warm surface water is pumped through an evaporator containing a working fluid. The vaporized fluid drives a turbine/generator. Then the vaporized fluid is turned back to a liquid in a condenser cooled with cold ocean water pumped from deeper into the ocean.
- OTEC systems use seawater as the working fluid and can use condensed water to produce desalinated water.
- Advantages of OTEC: Two of the biggest advantages of OTEC are: 1) It produces clean environmentally friendly renewable energy and 2) Unlike solar plants which can't work at night and wind turbines which only work when it's windy, OTEC can produce energy at all times.
- Disadvantages of OTEC: The disadvantages are that a) It is economically expensive and b) It only works in a few regions of the world as the required temperature difference is only present in tropical waters.

Liquefaction Potential and Grain Shape

- Recently, the Scientists have studied and highlighted the important effects of shape of Sand Grain on the liquefaction potential of granular soils.
- Liquefaction of sand is a phenomenon in which the strength and stiffness of soil is reduced (Decreases Cohesive Forces) by earthquake shaking or other rapid loading and leads to the collapse of structures resting on the liquefied ground.
- Key Finding : Natural sand with regular shape liquefies easily than the irregular manufactured sand.
- Conclusion : As natural sand with regular shape liquefies easily, the natural sand used in structures like slopes and retaining walls can be replaced with irregular manufactured sand to improve stability and sustainability.

Small Satellite Launch Vehicle (SSLV)

- Recently, Indian Space Research Organisation (ISRO) launched the first flight of the Small Satellite Launch Vehicle(SSLV), carrying an Earth observation satellite EOS-02 and co-passenger students' satellite *AzaadiSAT*.
- However, the **mission failed** to place the satellites in their required orbits, and the satellites, as they were already detached from the launch vehicle, were lost.

Failure / Why are these satellites no longer usable?

- The SSLV rocket placed these satellites in an **elliptical orbit instead of a circular one**.
- An elliptical orbit is the lowest orbit and is not stable due to the Earth's attraction force due to which the satellites could not stay in orbit and have already crashed. As a result, these satellites are no longer usable.
- Note : Satellites that orbit the Earth are mostly placed in circular orbits.

About Small Satellite Launch Vehicle :

- Small Satellite Launch Vehicle (SSLV) is a **three stage Launch Vehicle** configured with **three Solid Propulsion Stages and a liquid propulsion**-based Velocity Trimming Module (VTM) as a terminal stage.
- SSLV is 2m in diameter and 34m in length with a lift-off weight of **around 120 tonnes** (it is India's smallest launch vehicle).
- SSLV is capable of **launching 500kg satellites in 500km planar orbit** from Satish Dhawan Space Centre (SDSC).

Why was the SSLV developed?

- The SSLV has been developed to cater to a market for the launch of small satellites into low earth orbits.
- The demand for small satellites has emerged in recent years on account of the need for developing countries, private corporations, and universities for small satellites.

- Until now, the launch of small satellites is dependent on ‘piggy-back’ rides with big satellite launches on ISRO’s Polar Satellite Launch Vehicle, which has had over 50 successful launches so far.

What are the advantages of SSLV?

- 1) Can be assembled within 72 hours by a team of just 5-6 people. 2) It costs at least one-tenth of those currently in use. 3) It can enable a space launch from India every week. 4) It caters specifically to the small and micro satellites that constitute over 90% of all satellites being launched these days.

What is EOS-02 ?

- EOS-02 is an Earth Observation Satellite. It will provide information about thermal anomalies in the field of geo-environmental studies, forestry, hydrology, agriculture, soil and coastal studies.

What is Azaadi SAT?

- Azaadi satellite has been designed by 750 girl students of government schools in rural areas from Kashmir to Kanyakumari.
- Purpose: The satellite weighs around 8 kg and has 75 Femto experiments (selfie cameras to click pictures of its own solar panels and long-range communication transponders).
 - It also contains a long-range transponder and a solid-state PIN diode-based radiation counter to measure the ionizing radiation in its orbit.
 - The satellite also carried a recorded version of the national anthem sung by Rabindranath Tagore, which will be played in space as a tribute to the country.
- Significance: The satellite is the result of ISRO pushing for girls to take up Science, Technology, Engineering, and Mathematics(STEM).

Chronic Fatigue Syndrome

- A petition has been filed in the Delhi High Court to stop a person, who has been suffering from Chronic Fatigue Syndrome since 2014, from travelling to Europe to undergo a physician-assisted euthanasia.
- Chronic Fatigue Syndrome is a serious and debilitating disease that **affects the nervous system, the immune system and the body’s production of energy**. It is also known as “*Myalgic Encephalomyelitis*”. Its potential results are viral or bacterial infection, hormonal imbalances and genetic predispositions. It can affect anyone, from children to adults of all ages.
- Symptoms: Significantly lowered ability to do activities that were performed before the illness. At least 6 months (or longer) of debilitating fatigue that is more severe than everyday feelings of tiredness. Most recognizable symptom is Post-Exertional Malaise (PEM).
- Note : In 2018, the Supreme Court of India declared the right to die with dignity as a fundamental right, **allowing passive euthanasia in the country**. Passive euthanasia means intentionally letting a patient die by withholding artificial life support.
- Active euthanasia: Killing a patient by active means, for example, injecting a patient with a lethal dose of a drug. Sometimes called “aggressive” euthanasia. It is **not allowed in India**.

Hydrogen Fuel Cell Bus

- In news : Union Minister of Science & Technology has launched India’s first truly indigenously developed Hydrogen Fuel Cell Bus.
- Developed by: Council of Scientific and Industrial Research (CSIR) and private firm KPIT Limited.
- Working Process: The fuel cell utilizes Hydrogen and Air to generate electricity to power the bus and the only effluent from the bus is water, therefore making it possibly the most environmentally friendly mode of transportation.

Advantages of fuel cells:

- The High efficiency of fuel cell vehicles and the high energy density of hydrogen ensures that the **operational costs in rupees per kilometre** for fuel cell trucks and buses are **lower** than diesel-powered vehicles and this can bring freight revolution in India.
- Fuel Cell vehicles also give **zero greenhouse gas emissions**. For comparison, a single diesel bus plying on long-distance routes typically emits 100 tons of CO₂ annually and there are over a million such buses in India.

Bisphenol-A pilot plant in CSIR-NCL

- The Union Minister inaugurated a Bisphenol A(BPA) pilot plant by setup by the Council of Scientific and Industrial Research-National Chemical Laboratory(CSIR-NCL).
- Bisphenol A(BPA) is a chemical produced in large quantities for use primarily in the production of polycarbonate plastics, epoxy resins and other engineering plastics.
- The entire global market for Bisphenol-A is projected to reach 7.1 Million Tons by 2027, growing at a CAGR of 2% over the analysis period 2020-2027.
- The entire estimated annual demand of 1,35,000 tons in India is imported today. Hence, this pilot plant will enable import substitution of this important raw material and help in India’s Atmanirbhar initiative.

India's first commercial / Private Space Situational Awareness(SSA) Observatory

- **Location:** It will be set up in **Garhwal** region of Uttarakhand
- **To be Setup by:** Digantara, a Bengaluru-based space sector start-up.
- **Purpose:** The observatory will assist in tracking any activity in space including that of space debris and military satellites hovering over the region.
- **Working:** The observatory will help to monitor events occurring in deep space, especially in the geostationary, medium-Earth, and high-Earth orbits. The high-quality observations made will be complemented by observations of its partner ground-based sensor network.
 - With this data, India would be able to reduce the potential for collisions between satellites and other spacecraft by making more accurate predictions of their location, speed, and trajectory.
- **Significance:** The observatory will fill the crucial gap in SSA observations in the region as there is a lack of such facilities between Australia and Southern Africa. It will also give India indigenous capabilities to monitor space activity over the subcontinent providing a strategic advantage.
 - At present, the US is a dominant player in monitoring space debris.
- **Note :** **Space Situational Awareness(SSA)** refers to the knowledge of the space environment, including the location and function of space objects and space weather phenomena.

India's first geothermal energy project : Puga valley, Ladakh

- The state-run explorer Oil and Natural Gas Corporation (ONGC) will generate electricity on a utility scale by tapping steam gushing from the earth's interiors at **Puga, Ladakh**.
- This will be India's first geothermal energy project, and also the **world's highest**.
- ONGC started drilling its first well for the project recently and encountered high-pressure steam at 100 degrees Celsius with a discharge rate of 100 tonne geothermal energy per hour.

Puga Valley:

- Puga Valley is situated in the Changthang Valley in the south-eastern part of Ladakh, about 22 km away from the Salt Lake Valley. It is a region of great significance known for its natural beauty and geothermal activities. Puga is also visited for its hot sulphur spring.

Significance of Project

- It will boost Ladakh's potential to emerge as one of the country's clean energy bowls by expanding the area's horizon beyond solar/wind power.
- A bigger plant will provide 24x7 supply for the far-flung settlements and the large defence establishment in the eastern sector, reducing their dependence on diesel for running generators.
- **Note :** Geothermal energy is **clean, sustainable, carbon-free, continuous, uninterrupted and environment-friendly**. It can be extracted without burning fossil fuels like coal, gas, or oil.
- Geothermal fields produce only about 1/6th of the carbon dioxide (CO₂) that a relatively clean natural-gas-fueled power plant produces. Unlike solar and wind energy, geothermal energy is always available throughout the year. It's also relatively inexpensive and savings from direct use can be as much as 80 percent over fossil fuels.

DEFENCE

Pacific Dragon drill

- It is a joint ballistic missile defence exercise between **South Korea, the US, and Japan**.
- **Australia** and **Canada** also took part in the exercise in the edition of 2022
- It took place in the Waters off **Hawaii**, USA.

Ulchi Freedom Shield'

- Joint military drills between South Korea and the United States.
- The drills, called the Ulchi Freedom Shield, are **tri-service drills** involving thousands of troops as well as live-fire exercises.

'Ex Skylight'

- The Indian Army has conducted a **pan-India satellite communication exercise** named 'Ex Skylight' to test the operational readiness and robustness of its hi-tech satellite communication systems, in the event of an attack by an adversary. The Indian Army is preparing to have its own multi-band dedicated satellite, with added security features by 2025.

AL NAJAH-IV

- Fourth edition of joint Military Exercise held between **Indian Army and Royal Army of Oman**.

- Other exercises with Oman: **Naseem-Al-Bahr** (Navy), **Eastern Bridge** (Air Force).

Ex VINBAX 2022

- The **3rd edition** of **Vietnam-India Bilateral Army Exercise** “Ex VINBAX 2022” is being conducted in in **Chandimandir** (Panchkula, Haryana).
- Theme: Employment and deployment of an Engineer Company and a Medical Team as part of United Nations Contingent for Peacekeeping Operations.

Exercise Pitch Black

- Held in **Australia** and hosted by the Royal Australian Air Force (RAAF).
- It is one of the largest training airspaces in the world. It's a **biennial exercise** to enhance interoperability and strengthen relationships among participants.
- Participants : 17 Nations - Australia, Canada, France, Germany, Indonesia, **India**, Japan, Malaysia, Netherlands, New Zealand, the Philippines, South Korea, Singapore, Thailand, UAE, the U.K, and the U.S.
- Note : In 2018, India participated in the exercise for the first time.

Exercise Udarashakti

- It is a bilateral **air force exercise** between **India and Malaysia**. It took place recently in Malaysia.
- The Indian Air Force participated in the air exercise with **Su-30 MKI and C-17** aircraft while Malaysian Air Force took part with **Su 30 MKM** aircraft.
- Note : Exercise **Harimau Shakti** is a bilateral joint **military** exercise between India and Malaysia.

Exercise Vajra Prahar 2022

- Recently, **India - USA Joint Special Forces** conducted the **13th edition** of exercise Vajra Prahar 2022 culminated at **Bakloh, Chamba** (Himachal Pradesh).
- It's an **annual exercise** is hosted alternatively between Special Forces India and the United States. Special Forces are the units of a country's armed forces that undertake covert, counterterrorist, and other specialized operations.

Other Exercises between India and the USA?

- Yudh Abhyas (joint military exercise)
- Exercise Tiger Triumph (Humanitarian Assistance and Disaster Relief exercise)
- Cope India (Air Force).
- Malabar Exercise (Quadrilateral naval exercise of India, USA, Japan and Australia).
- Red Flag (US' multilateral air exercise).

Indian Air Force will retire all squadrons of MiG-21 by 2025

- The Indian Air Force will retire one of its four remaining squadrons, MiG-21 (Russian combat aircraft) fighter jets by 2022 September and the other three squadrons are scheduled to be phased out by 2025.
- **The old MiG-21s will be replaced with newer fighter jets.**
- Six MiG-21s have been lost in crashes in the last 20 months, killing five pilots. The IAF also plans to start the phasing out of the three squadrons of MiG-29 fighter jets in the next five years.
- Currently, the IAF has around 70 Mig-21 aircraft and 50 Mig-29 variants.

Chief of Royal Malaysian Navy visited India

- Admiral **Tan Sri Mohd Reza Bin Mohd Sany**, Chief of Royal Malaysian Navy visited India at the invitation of Admiral R Hari Kumar, Chief of the Naval Staff, Indian Navy.
- Both Navies have recently concluded the Bilateral Exercise **Samudra Laksamana** in May 2022.

Anti-Tank Guided Missiles (ATGM)

- Recently, Defence Research and Development Organisation (DRDO) has successfully test fired indigenously developed Laser-Guided Anti-Tank Guided Missiles (ATGM).
- ATGMs are primarily designed to hit and destroy heavily armored military vehicles. These are ‘fire-and-forget’ missiles where the operator can retreat right after firing as there is no more guidance required.
- Laser-Guided ATGM: The all-indigenous Laser Guided ATGM employs a tandem High Explosive Anti-Tank (HEAT) warhead to defeat Explosive Reactive Armour (ERA) protected armoured vehicles. The ATGM has been developed with multi-platform launch capability and is currently undergoing technical evaluation trials from the 120 mm rifled gun of MBT Arjun.

Advanced Towed Artillery Gun System (ATAGS)

- On Independence Day, ATAG, an indigenously developed howitzer, became part of a 21-gun salute at the Red Fort.
- The ATAGS is an indigenous 155 mm x 52 calibre howitzer gun. (Howitzers is an umbrella term for a category of long-range artillery guns).
- It is developed by the **Defence Research and Development Organisation (DRDO)** with its Pune-based facility Armament Research and Development Establishment (**ARDE**) being the nodal agency.
- The ATAGS project was started in 2013 by DRDO to replace older guns in service in the Indian Army with a modern 155 mm artillery gun.

New Defence systems handed over to the Army

- The Defence Minister has handed over several new defence systems including the F-INSAS, the Nipun mines, the Landing Craft Assault (LCA) to the Army.

F-INSAS system:

- F-INSAS stands for Future Infantry Soldier As A System. It is a programme for infantry modernisation aimed at enhancing the operational capability of the soldier. Under this programme, soldiers are being equipped with modern systems which will be lightweight, all-weather-all-terrain, economical and would require low maintenance. The full gear of the F-INSAS system includes an **AK-203 assault rifle** and a **multimode hand grenade**. Apart from this, soldiers are also provided with **ballistic helmets and ballistic goggles** for protection against small projectiles and fragments, along with a bullet-proof vest. F-INSAS also comes with hands-free, secured **advanced communications** set for real-time exchange of information with the command post and fellow soldiers for enhanced situational awareness.

Nipun Mines

- Nipun mines are indigenously designed and developed **anti-personnel mines** termed by the DRDO as '**soft target blast munition**'. These mines are meant to act as the first line of defence against infiltrators and enemy infantry.
- Developed by: Armament Research and Development Establishment, a Pune-based DRDO facility, and Indian industry.
- Note: Anti-personnel mines are meant to be used against humans as against anti-tank mines that are aimed at heavy vehicles. They are smaller in size and can be deployed in large numbers.

Landing Craft Assault

- The Landing Craft Assault(LCA) is meant to serve as a replacement for the boats with limited capabilities currently in use in the Pangong Tso lake.
- Developed by: Goa-based Aquarius ShipYard Limited.
- Features: It has better launch speed and capacity to operate across water obstacles in eastern Ladakh. Similar vessels are already in operation in the Indian Navy.

Facial recognition technology

- News: A recent RTI findings reveal that the **Delhi Police treats matches of above 80% similarity generated by its facial recognition technology system as positive results**. But it is unclear why 80% has been chosen as the threshold between positive and false positive.
- Facial recognition technology : It is an algorithm-based technology which creates a digital map of the face by identifying and mapping an individual's facial features, which it then matches against the database to which it has access.

AK-203 assault rifles

- The Indo-Russian joint venture "Indo-Russian Rifles Private Ltd (**IRRPL**)" will be manufacturing over 6.1 lakh AK-203 assault rifles costing over ₹5,000 crore in **Amethi**, Uttar Pradesh.
- Training of Indian workers of the factory will begin shortly and the manufacturing process will reach 100% indigenisation in three years.
- The AK-203 assault rifles will replace the India-made INSAS assault rifles and the older AK-47.

F/A 18 Super Hornet fighter jet

- Ahead of India commissioning its first Indigenous Aircraft Carrier (IAC) Vikrant, the US aviation major Boeing has proposed the Indian Navy to choose its F/A 18 Super Hornet fighter jet.
- F/A-18 Super Hornet is a premier frontline naval fighter jet. It is the newest and most advanced tactical aircraft in the US Navy inventory.
- **Purpose:** It has been designed as a carrier-based fighter for high-loading, high-stress operations and requires minimal support equipment.

Why is the F/A-18 Super Hornet compatible with IAC Vikrant?

- It has been designed and built for carrier operations and is fully compliant with INS Vikramaditya and INS Vikrant aircraft carrier. For instance:
 - It will be able to operate on the deck, in the hangar and on the lifts of the Indian Navy's aircraft carriers.
 - The Super Hornet's Precision Landing Mode software is specially designed to reduce pilot workload while landing on the Indian Navy's Vikramaditya carrier by maintaining the proper glide slope and proper approach speeds.
 - It comes in single-seater (E-Variant) and two-seater variants (F-Variant), and both variants are carrier compatible to perform the full range of combat missions and can fully operate from the carrier deck. Furthermore, the twin-seat fighter can also be used as a trainer.
- IAC Vikrant** is the largest warship (Indian Aircraft carrier/IAC) to have ever been built in India, and the **first indigenously designed and built aircraft carrier** for the Indian Navy. It is designed by the Cochin Shipyard Ltd (CSL), a public sector shipyard under the Ministry of Ports, Shipping & Waterways. The ship had successfully completed its fourth and final phase of sea trials.
- The '**INS Vikramaditya**', which was commissioned in 2013 and which is currently the Navy's only aircraft carrier, started out as the Soviet-Russian warship 'Admiral Gorshkov'.
- 'INS Vishal'** : Since 2015, the Navy has been seeking approval to build a third aircraft carrier for the country, which, if approved, will become India's second Indigenous Aircraft Carrier (IAC-2). This proposed carrier, to be named 'INS Vishal', is intended to be a giant 65,000-tonne vessel, much bigger than both IAC-1 and the 'INS Vikramaditya'.

RANKING AND REPORTS

National e-Governance Service Delivery Assessment (NeSDA) 2021

- Recently, the website of the Ministry of Home Affairs (MHA) has been ranked first under Central Ministries Portal, and the Digital Police portal ranked second in a National E-Governance service delivery assessment (NeSDA) of websites of central government ministries.

About NeSDA:

- NeSDA is a periodic assessment intended to improve the effectiveness of States/Union Territories and the Central Government in delivery of their online services to citizens. It is released by Ministry of Personnel, Public Grievances and Pensions. In this assessment, the **service portals were evaluated alongside their parent Ministry/portal** Department's in this project.
- Conducted by : the **Department of Administrative Reforms and Public Grievances (DARPG)** in association with its knowledge partners NASSCOM and KPMG in 2021.
- NeSDA 2021 is the **second edition** of NeSDA, the first edition was launched in 2019 and it is a biennial study.

Categorisation of Portal:

- All Government portals that were evaluated were divided into two main categories-
 - States/Union Territories/Central Ministry portal.
 - State/Union Territory/ Central Ministry Services Portals.
- Parameters: 4

Recent evaluation of NeSDA 2021:

- In the case of MHA, the National Crime Records Bureau (NCRB) Digital Police portal was shortlisted for evaluation under the Services Portal.
- Accordingly, the main website of Ministry of Home Affairs was chosen as the parent Ministry portal for evaluation.
- In the category of State/UT portal, among group A states- **Kerala** became a front runner and the progress was made by Tamil Nadu followed by Punjab.
- Among group B states- **Odisha** being at top followed by Uttar Pradesh and Bihar.
- Among North-Eastern states - **Nagaland**, Meghalaya and Assam are at top.
- Among UTs - **J&K** topped followed by A&N, Puducherry, Delhi and Chandigarh.

Aridity Anomaly Outlook (AAO) Index : July 2022

- Released by Indian Meteorological Department (IMD)
- Findings : at least 85% of districts face arid conditions across India.
- About AAO Index : The index monitors agricultural drought, a situation when rainfall and soil moisture are inadequate to support healthy crop growth till maturity, causing crop stress. An anomaly from the normal value signifies a water shortage in these districts that could directly impact agricultural activity.

"Food Security and Gender Equality" report : by CARE

- Recently, a report was released named "Food Security and Gender Equality: A synergistic understudied symphony", which highlighted a global link between Gender Inequality and Food Insecurity.
- The Report was released by **CARE**, which is an international humanitarian organisation fighting global poverty and world hunger by working alongside women and girls.

- Across 109 countries, as gender inequality goes up, food security goes down.
- Nations with high gender inequality, such as Yemen, Sierra Leone and Chad, experienced the lowest food security and nutrition.

Youth employment declined in India, says ILO report

- Recently, the International Labour Organisation (ILO) has released the Global Employment Trends for Youth 2022 report.
- Title of Report : “Global Employment Trends for Youth 2022: Investing in transforming futures for young people”.
- The report focuses on the impact of the COVID-19 crisis and on how targeted and sustained investments in the green, blue, digital, creative and care economies can support a human-centred recovery and help to improve the labour market for young people.
- In India, the report said that the youth employment participation rate declined by 0.9 percentage points over the first nine months of 2021 relative to its value in 2020. The situation is particularly severe for very young people aged 15-20 years.

Air Quality and Health in Cities

- Recently, a report was released titled Air Quality and Health in Cities, which analysed pollution and global health effects for more than **7,000 cities** around the world between 2010 and 2019.
- The study ranked cities on the basis of **two major air pollutants** found — fine Particulate Matter (PM2.5) and Nitrogen Dioxide (NO2).

PM 2.5 Levels:

- Delhi and Kolkata are ranked first and second in the list of top 10 most polluted cities when PM 2.5 levels were compared.

NO2 Levels:

- No Indian city appeared in the list of top 10 or even top 20 polluted cities when NO2 levels were compared.
- Average NO2 levels for Delhi, Kolkata and Mumbai, according to the report, ranged from 20-30 µg/m3.
- This list saw **Shanghai at the top** with an average annual exposure of 41 µg/m3

Death Burden:

- Beijing had the largest disease burden associated with a PM 2.5-related illness, with 124 attributable fatalities per 100,000 persons. Five Chinese cities were in the top 20.
- Delhi came in 6th, with 106 deaths per 100,000 and Kolkata at 8th with 99 deaths.

“Accidental Deaths and Suicides in India” and “Crime in India(CII)” report 2021

- Released by : National Crime Records Bureau(NCRB)
- key highlights of “Accidental Deaths and Suicides in India” report
- Suicides in 2021: At 120 deaths per million population, 2021 saw the highest rate of deaths from suicide since 1967, the earliest year for which this data is available. (The second highest rate of suicide ever reported in the country was in 2010, when it was 113.5 deaths per million population).
- Statewise: For the third consecutive year, Maharashtra topped the country in terms of the number of suicides reported in 2021.
- Category wise: The daily wage earners remained the largest profession-wise group among suicide victims in 2021, accounting for 25.6%.
 - The fastest increase in deaths by suicide was observed among students and small entrepreneurs supporting anecdotal accounts of prolonged stress induced by the pandemic.

Key highlights from Crime in India(CII) Report 2021?

- Crime against women: Cases of crime against women rose to 15.3% from 2020. The crime rate registered per lakh women population is 64.5 in 2021 compared with 56.5 in 2020.
 - A majority of cases under IPC were registered for ‘cruelty by husband or relatives’ (31.8%) followed by molestation (20.8%), kidnapping (17.6%) and rape (7.4%).
 - In terms of actual number of cases registered in 2021, **UP tops the list** followed by Rajasthan, Maharashtra, West Bengal and Odisha.
 - Among the metropolitan cities, **Delhi** reported the highest number of cases.
 - **Nagaland stood out with the lowest number** of crimes against women registered in the past three years.
 - The highest rate of crime against women in 2021 was registered in **Assam** (168.3%).
- Conviction rate in rape cases: The conviction rate in rape cases across India remained abysmally low at 24.8% in 2021 with only 156 cases convicted and around 22,313 cases currently under trial.
- Note: According to NCRB data, rape-murders make up less than 1 per cent of the total rapes in the country annually. I

- **Domestic Violence Act:** Only 507 cases were registered in the country under the Domestic Violence Act in 2021 — 0.1 per cent of the total cases of crime against women. The highest number of cases (270) were filed in **Kerala**.
- **Dowry Deaths:** Around 6,589 cases of dowry deaths were registered last year with the highest number of such deaths registered in **UP and Bihar**.

Asia's richest woman

- **Savitri Jindal**, the Chairperson Emeritus of OP Jindal Group, has surpassed China's Yang Huiyan to become Asia's richest woman, as per the real-time **Bloomberg Billionaires Index**.

SCHEMES and Programmes in News

'SPARK' space museum : ISRO

- The digital platform known as the 'SPARK' space museum was launched by the Chairman of ISRO, S Somnath. This digital space museum 'SPARK' has an interactive interface through which users can interact with the site easily. The platform hosts several documents, images, and videos related to ISRO's launch of vehicles, satellites, and scientific missions.

'Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)

- Recently, Government has modified the earlier scheme of 'Special Central Assistance to Tribal Sub-Scheme (SCA to TSS)' with nomenclature 'Pradhan Mantri Adi Adarsh Gram Yojana (PMAAGY)' for implementation during **2021-22 to 2025-26**.
- About PMAAGY : It supplements the efforts of State Governments for development and welfare of tribal people by extending **Special Central Assistance** as an additive to the State Tribal Sub-Plan (TSP).
- It aims at mitigating gaps and providing basic infrastructure in villages with significant tribal population in convergence with funds available under different schemes in Central Scheduled Tribe Component.

SMILE-75 Initiative

- Launched by: Ministry of Social Justice & Empowerment under the SMILE: Support for Marginalized Individuals for Livelihood and Enterprise Scheme.
- Aim: To make **cities/towns and municipal areas begging-free** and make a strategy for comprehensive **rehabilitation** of the persons engaged in the act of begging through the coordinated action of various stakeholders.
- Under the initiative, **seventy-five (75) Municipal Corporations** in collaboration with **NGOs** and other stakeholders will cover several comprehensive welfare measures for persons who are engaged in the act of begging.
- These measures will focus extensively on rehabilitation, provision of medical facilities, counselling, awareness, education, skill development, economic linkages and convergence with other Government welfare programmes etc.

Status of Beggars in India

- According to the Census 2011, the total number of beggars in India is 4,13,670 (including 2,21,673 males and 1,91,997 females) and the number has increased from the last census.
- **West Bengal** tops the chart followed by **Uttar Pradesh** and **Bihar** at number two and three respectively.
- Lakshadweep merely has two beggars according to the 2011 census.
- Among the union territories, **New Delhi** had the largest number of beggars 2,187 followed by 121 in Chandigarh.
- Among the northeastern states, Assam topped the chart with 22,116 beggars, while Mizoram ranked low with 53 beggars.

II Phase of Grameen Udyami Project launched in Ranchi

- National Skill Development Corporation(NSDC) in partnership with Seva Bharti and Yuva Vikas Society has launched the second phase of Grameen Udyami Project (Rural Tribal Technical Training Program) to augment skill training in tribal communities for their inclusive and sustainable growth.
- Aim: To multiskill India's tribal youth and impart functional skills to them for enabling livelihoods.
- Coverage: The project is being implemented in six states— Maharashtra, Rajasthan, Chhattisgarh, Madhya Pradesh, Jharkhand, and Gujarat.
- The project is implemented under *Sansadiya Parisankul Yojana*.
- Funded by: National Skill Development Corporation(NSDC)
- The training under the project will be conducted in the following Job roles: Electrician & Solar PV Installation Technician Plumbing & Masonry 2-Wheeler Repair & Maintenance IT/ITES with e-Governance and Farm Mechanization.
- Phases: In the first phase of the project, candidates were mobilized from rural and tribal areas of Maharashtra, Rajasthan, Chhattisgarh, Madhya Pradesh, and Gujarat.
 - The phase-II of the pilot project was launched in Ranchi, Jharkhand.

- Significance of the project: The project will help in achieving the following objectives: a) Increase in Rural/Local Economy, b) Enhance employment opportunities, c) Reduce forced migration due to lack of local opportunities and d) Conservation of natural resources.

BIODIVERSITY , ENVIRONMENT & GEOGRAPHY

Loktak Lake, Manipur

- It's the **largest freshwater** lake in Northeast India, the pristine Loktak Lake is one of the most popular tourist attractions in Manipur. It is known for its floating circular swamps, which are locally called phumdis.
- The lake houses the **only floating national park in the world**, the **Keibul Lamjao National Park**, which is the last refuge of the endangered brow-antlered deer or **Sangai (dancing deer)**, Manipur's state animal.
- In addition, the lake shelters several species of aquatic plants, birds, and fauna like barking deer, sambar, and Indian python.
- Loktak lake was initially designated as a **wetland of international importance under the Ramsar Convention in 1990**. Later it was also listed under the **Montreux Record** in 1993.
- In News : Recently, Loktak Lake Authority of Manipur recently issued a notice to remove all floating houses and fishing structures on Loktak lake. This has evoked a sharp reaction from the local Fishing Community & Homestay Operators.

Right to a clean and healthy environment

- The United Nations (UN) has passed a resolution declaring every person on the planet has the Right to live in a clean, healthy environment. In other words, the **United Nations** declares access to a **clean, healthy environment** as a **universal human right**.
- This resolution has been passed by over **160 UN member nations** including **India**.
- It is **not a legally binding** resolution.
- The resolution recognizes the right to a clean, healthy and sustainable environment as a human right essential for the full enjoyment of all human rights and among others.
- It calls upon states and international organizations to adopt policies and scale up efforts to ensure a clean, healthy and sustainable environment for all. Since it is not legally binding, only through conventions and treaties do state parties undertake obligations for such rights.

Significance of this resolution:

- The Right to a clean and healthy environment is not included in the Universal Declaration of Human Rights, 1948. So, this is a historic resolution that will change the very nature of international human rights law. The resolution will also empower people, especially those in vulnerable situations including environmental human rights defenders, children, youth, women and indigenous people.

Issues with this resolution

- The words 'clean', 'healthy' and 'sustainable' lack an internationally agreed definition.
- The resolution text also fails to refer to the foundational principle of equity in international environmental law.

Wildlife (Protection) Amendment Bill 2021

- Recently, Lok Sabha passed by voice vote the Wildlife (Protection) Amendment Bill, 2021 that seeks to provide for implementation of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This bill was introduced in Lok Sabha by the Minister of Environment, Forest and Climate Change on 17th December 2021. The Bill amends the Wild Life (Protection) Act, 1972. The Act regulates the protection of wild animals, birds and plants.
- The Bill seeks to increase the species protected under the law, and implement the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
- Currently, the Act has six schedules for specially protected plants (one), specially protected animals (four), and vermin species (one). **The Bill reduces the total number of schedules to four by:**
 - Schedule I for species that will enjoy the highest level of protection.
 - Schedule II for species that will be subject to a lesser degree of protection.
 - Schedule III that covers plants.
 - It removes the schedule for vermin species.
 - Vermin refers to small animals that carry diseases and destroy food.
 - It inserts a new schedule for specimens listed in the Appendices under CITES (scheduled specimens).
- The Bills empowers the central government to regulate or prohibit the import, trade, possession or proliferation of invasive alien species.
- The Act entrusts the Chief Wildlife Warden to control, manage and maintain all sanctuaries in a state. The Chief Wildlife Warden is appointed by the state government.

Conservation Reserve:

- State governments may declare areas adjacent to national parks and sanctuaries as a conservation reserve, for protecting flora and fauna, and their habitat.
- The Bill empowers the central government to also notify a conservation reserve.

Penalties:

- The WPA Act 1972 prescribes imprisonment terms and fines for violating the provisions of the Act.
- The Bill increases these fines :

Type of Violation	1972 Act	2021 Bill
General violation	Up to Rs 25,000	Up to Rs 1,00,000
Specially protected animals	At least Rs 10,000	At least Rs 25,000

Pre-Summit meeting of TRC

- India has hosted the Pre-Summit meeting of Tiger Range Countries (TRCs).
- The Tiger Range Countries Summit is scheduled to be held at Vladivostok, Russia on 5th September 2022.
- The meeting was attended by 12 tiger range countries except for China and Indonesia.

The Peninsular Rock Agama (*Psammophilus dorsalis*)

- It is a type of garden lizard which has a strong presence in southern India. This lizard is a large animal, strikingly coloured in orange and black. They do not generate their own body heat, so they need to seek warmth from external sources like a warm rock or a sunny spot on the wall.
- In News : recently, a study on this Lizard has been carried out by researchers from Indian Institute of Science (IISc).

Katchal island

- Recently, a study by the National Aeronautics and Space Administration (NASA), highlighted the loss of mangrove cover on Katchal island, part of India's **Nicobar** archipelago.
- About Mangroves : Mangroves are tropical plants that are adapted to loose, wet soils, salt water, and being periodically submerged by tides. They are **Viviparous** i.e. their seeds germinate while still attached to the parent tree.
- Asia has the largest number of mangroves worldwide. South Asia comprises 6.8% of the world's mangrove cover.
- Indian Mangrove Cover: India's contribution is **45.8%** total mangrove cover in South Asia.
- Mangrove cover in India is 4992 sq. Km which is 0.15% of country's total geographical area.
- **Sundarbans** in West Bengal are the largest mangrove forest regions in the world. It is listed as a UNESCO World Heritage Site.
- **Bhitarkanika** Mangroves, Odisha is second largest mangrove forest in India, created by the two river deltas of River Brahmani and Baitarani.
- Note : Recently, the Bhitarkanika National Park have reached a **saturation point in the population of crocodile** which could lead to more human-Crocodile conflict.

New study regarding formation of Continents :

- Currently, **Plate Tectonics Theory** is the most commonly accepted theory explaining formation of continents.
- Recent study : According to a study published in The Nature journal, **giant meteorite impacts** could be responsible for the formation of continents on Earth. But there was little solid evidence for its support.
- Note: Meteorite impacts generated massive energy to form oceanic plates which later evolved into continents.

What is the evidence researchers have found?

- Zircon crystals in Pilbara Craton: The researchers looked for evidence in zircon crystals embedded in rocks from the Pilbara Craton in Western Australia. This craton is the remnant of an ancient crust that began forming more than three billion years ago.
- Note: A craton is an old and stable part of the continental lithosphere, which consists of Earth's two topmost layers, the crust and the uppermost mantle.
 - Zircons are formed by the crystallization of magma or are found in metamorphic rocks. They act as tiny time capsules, recording the period of geologic activity. Newer zircon adds to the original crystal as time progresses.
- Findings: By studying the composition of oxygen isotopes in these zircon crystals, the researchers have found a 'top-down' process starting with the melting of rocks near the surface and progressing deeper, consistent with the geological effect of giant meteorite impacts.
- Significance of this study : Understanding the formation and ongoing evolution of the Earth's continents is crucial given that these landmasses host the majority of Earth's biomass, all humans and nearly all of the planet's important mineral deposits.

Arctic amplification

- Polar amplification happens when changes to the earth's atmosphere led to a larger difference in temperature near the north and south poles than to the rest of the world. These changes are more pronounced at the northern latitudes and are known as the **Arctic amplification**.
- Recently, some studies were published on Arctic Amplification revealed that the Arctic is heating four times faster than the rest of the planet.

Causes the Arctic Amplifications?

- The **ice-albedo feedback**, **lapse rate feedback**, **water vapour feedback** (Change in Water Vapour amplify or weaken temperature range) and **ocean heat transport** are the primary causes.
- Sea ice and snow have high albedo (measure of reflectivity of the surface), implying that they are capable of reflecting most of the solar radiation as opposed to water and land.
- As the sea ice melts, the Arctic Ocean will be more capable of absorbing solar radiation, thereby driving the amplification.
- The lapse rate or the rate at which the temperature drops with elevation decreases with warming.
- Studies show that the ice-albedo feedback and the lapse rate feedback are responsible for 40% and 15% of polar amplification respectively.

New Ramsar Wetlands in India

- A Ramsar site is a wetland of international importance under the Ramsar Convention, which is also known as the 'Convention on Wetlands' — an intergovernmental environmental treaty established by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1971, and named after the city of Ramsar in Iran, where the convention was signed that year.
- India is one of the Contracting Parties to Ramsar Convention, signed in Ramsar, Iran, in 1971. India signed it on 1st Feb 1982.
- Sundarbans in West Bengal is the largest Ramsar site in India.
- Tamil Nadu has maximum no. of Ramsar sites (14), followed by UP which has 10 Ramsar sites.

Recent additions in 2022

In July 2022, five new sites from India were added to the List of Ramsar Sites. The new sites are:

- Karikili Bird Sanctuary – Tamil Nadu
- Pallikaranai Marsh Reserve Forest – Tamil Nadu : it is one of the last remaining natural wetlands
- Pichavaram Mangrove – Tamil Nadu : it is one of the last mangrove forests in the country.
- Sakhya Sagar – Madhya Pradesh : it was created from the Manier river in 1918, Sakhya Sagar is located near Madhav National Park.
- Pala Wetlands – Mizoram : it is a major component of the Palak Wildlife Sanctuary

- **Then in August 2022, 10 new wetland added**

- Koonthankulam Bird Sanctuary- Tamil Nadu
- Gulf of Mannar Marine Biosphere Reserve- Tamil Nadu
- Vembannur Wetland Complex- Tamil Nadu
- Vellode Bird Sanctuary- Tamil Nadu
- Vedanthangal Bird Sanctuary- Tamil Nadu
- Udhayamarthandapuram Bird Sanctuary - Tamil Nadu
- Satkosia Gorge (river Mahanadi) – Odisha
- Nanda Lake – Goa
- Ranganathittu Bird Sanctuary – Karnataka
- Sirpur Wetland - Madhya Pradesh

- **Then Again in August 2022, 11 new wetland added**

- Tampara Lake – Odisha
- Hirakud Reservoir – Odisha
- Ansupa Lake – Odisha
- Yashwant Sagar – Madhya Pradesh
- Chitrangudi Bird Sanctuary - Tamil Nadu
- Suchindram Theroor Wetland Complex - Tamil Nadu
- Vaduvur Bird Sanctuary - Tamil Nadu
- Kanjirankulam Bird Sanctuary- Tamil Nadu
- Thane Creek – Maharashtra
- Hygam Wetland Conservation Reserve - Jammu and Kashmir
- Shallbugh Wetland Conservation Reserve - Jammu and Kashmir

AWARDS NEWS

- Tibetan spiritual leader, **Dalai Lama** was honoured with the ‘**dPal rNgam Duston**’ award, the highest civilian honour of **Ladakh**. This award is given for his immense contribution to humanity, especially towards the union territory.
- Senior Congress leader **Shashi Tharoor**, conferred with **France’s highest civilian award *Chevalier de la Legion d’Honneur*** for his writings and speeches.
 - Note : In 2010, Tharoor had received a similar honour from the Spanish government, when the King of Spain had bestowed upon him the Encomienda de la Real Order Espanola de Carlos III.
- Former German chancellor **Angela Merkel** has been awarded the **Unesco Peace Prize 2022** for “her efforts to welcome refugees”.
- Bangladesh-born **Fahmida Azim** working for the Insider online magazine of the US has been selected for the **Pulitzer Prize 2022**. She is among the four journalists including Anthony Del Col, Josh Adams and Walt Hickey of Insider being published from New York, selected for their work on the Chinese oppression of the Uyghurs. The work ‘I escaped a Chinese internment Camp’ has illustrations by Fahmida Azim.

BOOKS and Authors

Book	Author
‘Rusty Skies and Golden Winds’	Sannidhya Sharma (11 years old student of class 7th, Jammu)
‘India’s Economy From Nehru To Modi:: A Brief History’	Pulapre Balakrishnan
“Lion of the Skies: Hardit Singh Malik, the Royal Air Force and the First World War”	Stephen Barker
“Dangerous Earth: What we wish we knew about volcanoes, hurricanes, climate change, earthquakes and more”.	Ellen Prager (Marine biologist)

OBITUARY / DEATHS

Amitabh Chaudhary	former BCCI acting secretary and president of Jharkhand State Cricket Association (JSCA)
Abhijit Sen	Renowned economist and former Planning Commission member. He was awarded the Padma Bhushan for public service in 2010.
Syed Sibtey Razi	Former Jharkhand Governor
Rakesh Jhunjhunwala	Veteran stock market investor. Often referred to as ‘ India’s Warren Buffett ’ and the Big Bull of Indian markets, Jhunjhunwala’s net worth was \$5.8 billion.
Samar ‘Badru’ Banerjee	Former India football team captain who led the country to a historic fourth-place finish in the 1956 Melbourne Olympics.
Abdul Gaffar Nadiadwala	Veteran filmmaker
Fidel Valdez Ramos	Former Philippine President

SPORTS

FIFA banned India

- FIFA has announced the suspension of the All India Football Federation(AIFF) for undue influence from third parties.
- Background: The problems for Indian football began after the erstwhile AIFF president (Praful Patel) refused to quit his post as the head of football in the country. After this, the Supreme Court intervened and removed the president from his post. The SC also appointed a Committee of Administrators(COA) to run the AIFF.

AIFF has been suspended on following grounds:

- Third Party Interference: It refers to a situation in which a member association of FIFA fails to remain independent, is co-opted, and no longer has control over its organization. In this case, the SC’s diktat to the COA to run the AIFF was a textbook case of third-party interference.

- Deviations in the roadmap of COA: The COA has made major changes to AIFF constitution. Principle among them was the decision to include 36 eminent players in the electoral college, i.e. 50% of 72 total voters, for the purposes of voting in the AIFF elections. (FIFA wanted the eminent players' representation to be limited to 25% of the electoral college).

What are the implications of the ban?

- National teams and clubs banned from any international competition.
- The **U-17 Women's World Cup** was scheduled to be held in **India in October 2022**. But this ban would lead to India losing the hosting rights to the Women's World Cup. However, the damage can be undone if the ban is lifted fast enough.
- About FIFA : Founded in 1904, FIFA now comprises 211 member nations. It is headquartered in Zurich.
- About AIFF : it is the organization that manages the game of association football in India. It was founded in 1937, and gained FIFA affiliation in the year 1948, after India's independence in 1947.

ONGC Para Games 2022

- Recently, the Government of India inaugurated the **4th** Oil and Natural Gas Corporation (ONGC) Para Games in **New Delhi**.
- About ONGC Para Games : ONGC Para Games is a special Human Resource Initiative to provide Equal Opportunities to **Persons with Disabilities PwDs** in all walks of corporate life. The intent is to contribute in the holistic development of the Human Resources of the public enterprises, who are our most valuable asset, in the pursuit of Energy.
- Participants : Employees of eight central oil and gas public enterprises are participating in the 4th ONGC Para Games, being organized by Oil and Natural Gas Corporation Limited (ONGC) during 2-4 August 2022.

Other sports news

- In Commonwealth Games 2022, Indian women's team scripted history by winning the country's first-ever Gold Medal in "**Women's Four Lawn Bowls**" Sport.
- **England** beats Germany in **Women's Euro 2022** (Football).
- Present International Olympic Committee President : **Thomas Bach**
- The Chennai-based chess prodigy **V Pranav** became **India's 75th Grandmaster** by winning a tournament in Romania.
- Indian chess legend, **Viswanathan Anand** was elected **deputy president of the International Chess Federation or World Chess Federation (FIDE)**, the sport's world governing body.
- **India beat Bangladesh 5-2** after extra time to clinch the **2022 SAFF U20 Championship** title, at **Kalinga Stadium** in Bhubaneswar, Odisha. India was the host of the 4th edition of the SAFF U-20 Championship.
- Tennis legend from the United States, **Serena Williams has announced her retirement**.
- **Sunil Chhetri and Manisha Kalyan** have been named the 2021-22 All India Football Federation (AIFF) Men's Footballer of the Year and the 2021-22 Women's Footballer of the Year, respectively.
- Former West Indies all-rounder, **Kieron Pollard** became the **first cricketer to play 600 T20 matches**. Behind him are players Dwayne Bravo (543 matches), Shoaib Malik (472), Chris Gayle (463) and Ravi Bopara (426).
- Young striker **Manisha Kalyan** became the **first Indian footballer to play at the UEFA Women's Champions League** when she made her debut for Apollon Ladies FC in the European Club competition in Engomi, Cyprus.
- Cricket Legend **Virat Kohli** has become the first Indian and just the second player overall in international cricket history to have played **100 matches each in all three formats** of the game.
- Indian Skipper, **Rohit Sharma overtook New Zealand's Martin Guptill** to become the **leading run-scorer** in men's **T20 Internationals**. In 133 matches in the shortest format for India, Rohit Sharma has scored 4 hundred and 26 half-centuries so far. Rohit now has 3499 runs in the format. Following him is Martin Guptill, who has scored 3497 runs. Virat Kohli is the third highest scorer in men's T20 Internationals with 3341 runs from 100 matches.
- England's **James Anderson** has become the first-ever fast bowler to complete 950 wickets in international cricket. He attained this historic feat on Day 3 of the second Test against South Africa. He broke the record of Australia's Glenn McGrath (949 wickets).
- The **Indian women's cricket team** has created history and secured the **country's first-ever medal in cricket in the history of the Commonwealth Games (CWG) 2022**. India won silver medal after losing to Australia in cricket.

IMPORTANT DAYS

6 August : Hiroshima Day

- It is observed to commemorate the atomic bombing of Hiroshima, Japan, in 1945, at the end of World War II.
- The horrific incident took place on August 6, 1945, when the United States dropped an atomic bomb named “**Little Boy**”, on the town of Hiroshima in Japan. 2022 marks the 77th anniversary of the world’s first atomic bombing.

7 August : National Handloom Day

- theme 2022 : ”Handloom, an Indian legacy”.

9 August : Nagasaki day

- On August 9, 1945, the United States dropped an atomic bomb on Nagasaki, Japan. It was code-named “**Fat Man**” due to the design of the bomb as it had a wide, round shape.
- On August 9, 1945, a US B-29 bomber dropped an atomic bomb on the city, killing nearly 20,000 people.

9 August : World Tribal Day (The International Day of the World's Indigenous People)

- Theme 2022 : “The Role of Indigenous Women in the Preservation and Transmission of Traditional Knowledge”.

10 August : World Biofuel Day

- This day is observed in honour of Sir Rudolf Diesel, the inventor of the diesel engine and was the first to predict the possibility of vegetable oil replacing fossil fuels.
- Ethanol Plant in Haryana : On this day, the government of India announced a 2nd generation (2G) ethanol plant to be set up at the Indian Oil Corporation’s refinery in Haryana. This ethanol plant will help reduce air pollution from the Delhi and the NCR region along with generating additional income and green fuel. It will boost India’s waste-to-wealth endeavours by utilising about 2 lakh tonnes of rice straw (parali) annually to generate around 3 crore litres of ethanol annually. This plant will also utilize maize and sugarcane waste besides paddy straw to produce ethanol.
- Ethanol Blending Programme: It is aimed at reducing the country’s dependence on crude oil imports, cutting carbon emissions and boosting farmers’ incomes. The Government of India has **advanced the target for 20% ethanol blending in petrol (also called E20) to 2025 from 2030**. India has **already achieved the target of 10%** ethanol blending in petrol with the country’s ethanol production increasing to 400 crore litres.

10 August : World Lion Day

- The lion is divided into two subspecies: the **African lion** (*Panthera leo leo*) and the **Asiatic lion** (*Panthera leo persica*). Asiatic lions are slightly smaller than African lions.
- Protection Status:
 - IUCN Red List: Vulnerable (Asiatic Lion – Endangered).
 - CITES: Appendix I for populations of India, all other populations are included in Appendix II.
 - Wildlife (Protection) Act 1972: Schedule I
- Status in India: India is home to the Asiatic Lions, who inhabit the protected territory of Sasan-Gir National Park (Gujarat). According to the data from 2020, there are 674 lions in India, which were 523 in 2015.

12 August : World Elephant Day

- Project Elephant: Project Elephant was launched in February 1992 as a Centrally Sponsored Scheme of the Ministry of Environment and Forests.
- **Karnataka** has the highest number of elephants followed by Assam and Kerala.

Conservation Status:

- International Union for Conservation of Nature (IUCN) Red List of threatened species:
- African Forest Elephant- Critically Endangered
 - African Savanna Elephant- Endangered
 - Asian Elephant- Endangered
- Convention of the Migratory species (CMS): Appendix I
- Wildlife (Protection) Act, 1972: Schedule I
- Elephants have the **longest-known gestational (pregnancy) period** of all mammals, lasting up to **680 days** (22 months). The **elephant herd is led by the oldest and largest female** member (known as the matriarch). This herd includes the daughters of the matriarch and their offspring.

32nd Elephant Reserve in India

- Recently, the Government of India has announced the notification of one more Elephant Reserve (ER) **Agasthiyamalai in Tamil Nadu** during a programme in the Periyar Wildlife Sanctuary in Kerala.
- This will be the 32nd Elephant Reserve in the country after Singphan ER in Nagaland was notified in 2018.

- Agasthiyamalai is **Tamil Nadu's 5th Elephant Reserve** and also a Biosphere Reserve.

20 August : Sadbhavna Diwas

- Sadbhavna Diwas 2022 commemorates the 78th birth anniversary of Rajiv Gandhi on 20th August 2022.

29 August : National Sports Day

- The great Indian hockey ('**Wizard of Hockey**') legend **Major Dhyan Chand** was born on this date in 1905.
- The day was first designated and celebrated in 2012 as India's National Sports Day.
- The nation celebrates the day honouring our sports stars. The president gives away sports awards such as the Major Dhyan Chand Khel Ratna Award, Arjuna Award, Dronacharya Award, and Dhyan Chand Awards on this occasion.
- Major Dhyan Chand Singh, was born on 29th August 1905 in present-day Prayagraj, Uttar Pradesh. He played as the centre forward at three Olympic Games for India winning Gold Medals at Amsterdam in 1928, Los Angeles in 1932 and Berlin in 1936 where he was the captain.

STATE'S NEWS

Himachal Pradesh

- Recently, the Himachal Pradesh government has proposed the **Himachal Pradesh Freedom of Religion (Amendment) bill 2022**, seeking to criminalise mass religious conversions. The Bill amends **Himachal Pradesh Freedom of Religion Act-2019**, which was enacted with a view to provide freedom of religion by prohibition of conversion from one religion to another.
- It defines mass conversion as conversion of **two or more persons** at the same time.
- The maximum sentence has been proposed to be extended to **maximum 10 years** and increase the amount of **fine**, if a person contravenes the provisions of Section 3 in respect of mass conversion. (Section 3 of the Freedom Act states that no person shall convert or attempt to convert, either directly or otherwise, any other person from one religion to another by use of misrepresentation, force, undue influence, coercion, inducement or by any fraudulent means or by marriage).
- Complaints received should be investigated or inquired into by a police officer **not below the rank of sub-inspector**. The offences punishable under the Act would be triable by the **sessions court**.
- If a person **marries someone by concealing his religion** in such a manner that other person believes that his religion is truly the one professed by him shall be punished with **minimum imprisonment of not less than three years and maximum imprisonment of 10 years**.

World's highest railway bridge on Chenab : J&K

- The 'Golden Joint' of Chenab Railway bridge was inaugurated on August 13, 2022. It was decked with the National flag to celebrate the "Azadi ka Amrit Mahotsav".
- It is a **steel and concrete arch bridge**, constructed **between Bakkal and Kauri in Reasi district** of Jammu and Kashmir. It has been built on Chenab River, at a height of 359 m. It is **world's highest rail bridge**.

West Bengal

- Recently, the West Bengal Government has decided to erect a statue of **Burdwan's Maharaja Bijay Chand Mahatab** and his wife Radharani in front of the Lord Curzon Gate. Mahtab had built the gate in 1903 when Curzon visited the town. Maharajadhiraja Bijay Chand Mahtab (1881 – 1941) was the ruler of Burdwan Estate, Bengal in British India from 1887 till his death in 1941.
- Bengal will have seven new districts in six months, taking the total count to 30 from 23

Other states :

- Kerala leads in **hosting legislative sessions** (61 days) in 2021. Karnataka came in second with 40 sitting days, followed by Tamil Nadu with 34, and Odisha with 43.
- Tamil Nadu Police received President's colour from Vice President Venkaiah Naidu.
- Andhra Pradesh emerges as winner in Utilisation of Agri-Infra funds in the fiscal year 2021–22.
- The world's largest floating solar power plant (600 Megawatt) is going to be built at Khandwa in Madhya Pradesh.
- The **astronomical observatory at the Langat Singh College**, commonly known as L. S. College, Muzaffarpur, Bihar is now included in the UNESCO list of Important Endangered Heritage observatories of the world.
- **Uttarakhand** government has decided to develop one **Sanskrit-speaking village** in each of the 13 districts in the state.
- **Uttarakhand** government has appointed wicketkeeper-batter **Rishabh Pant as the 'State Brand Ambassador'**.
- The third airport in Arunachal Pradesh, which is now under construction in Itanagar, the state capital, has been given the name "**Donyi Polo Airport**" by the Arunachal Pradesh administration.

- Haryana government developed the Cheerag programme for Economically Weaker Section (EWS) Students. According to the plan, government students from the Economically Weaker Section (EWS) who attend private schools will receive a free education.
- UP Govt Plans to Double Farmers income under ‘**Panchamrut Yojana**’ .
- As part of the celebrations for Azadi Ka Amrit Mahotsav, Uttar Pradesh Chief Minister Yogi Adityanath debuted “**Radio Jaighosh**” to commemorate the anniversary of the Kakori Train Action.
- Delhi Chief Minister, Arvind Kejriwal has formally unveiled his Aam Aadmi Party’s national ambition with the launch of the ‘Make India No 1’ campaign.
- Recently, the **Anang Tal Lake in South Delhi** has been declared a monument of national importance through a gazette notification by the Ministry of Culture. The Anang Tal lake in South Delhi is believed to have been built a thousand years ago.
- Union Transport Minister, Nitin Gadkari has launched **India’s first electric double-decker bus “Switch EiV 22”**, at YB Centre in south Mumbai.
- The Border Road Organization (BRO) will build **Steel Slag Road in Arunachal Pradesh** based on the Pilot project.
- Chief Minister Eknath Shinde announces that ‘**Dahi-Handi**’ will be recognized as an **official sport** in Maharashtra. The state is set to organize a ‘Pro- Dahi Handi’ completion.
- The Punjab and Haryana governments have agreed to name the **Chandigarh International Airport** in Mohali after **Shaheed Bhagat Singh**.
- Prime Minister Narendra Modi inaugurated the **300-bed Homi Bhabha Cancer Hospital and Research Centre at Mullanpur, Mohali in Chandigarh**. It has = been built at a cost of over ₹660 crores by the Tata Memorial Centre which is an aided institute under the Union Department of Atomic Energy.
- India’s **first 3D-printed post office** is slated to come up in **Bengaluru, Karnataka** and will cost around one-fourth of the amount spent on a traditional building.
- North-east state, **Nagaland got its second railway station** after a gap of more than 119 years with the commissioning of a new facility at **Shokhuvi**. Its first ‘Dimapur Railway Station’ was inaugurated in 1903.
- Prime Minister Narendra Modi has dedicated **India’s first earthquake memorial**, named **Smruti Van at Bhuj** in Gujarat. Smruti Van is a unique memorial carrying the names of more than 12 thousand people who lost their lives in the devastating earthquake that struck here in January 2001.
- The NITI Aayog has declared the **holy city of Haridwar** in Uttarakhand as the **best aspirational district** on five parameters.
- Rajasthan chief minister Ashok Gehlot has inaugurated a month-long **Rajiv Gandhi Rural Olympic Games in Jodhpur**. The village Olympics is expected to see the participation of 44,000 villages across Rajasthan.

MISCELLANEOUS (in News)

- The world’s first fleet of hydrogen-powered passenger trains was launched by Germany.
- US Senate decisively approved the NATO membership of Sweden and Finland.
- A first-of-its-kind, Composite Indoor Shooting Range (CISR) was inaugurated by Vice Admiral Biswajit Dasgupta at INS Karna.
- According to the government of India, transgenders will be brought under the ambit of Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY).
- Ahmedabad University Professor, **Ramadhar Singh** becomes the **first Indian Social Psychologist on the US Heritage Wall of Fame of the Society** for Personality and Social Psychology (SPSP) in the United States.
- Recently, a **MiG-21 Bison aircraft** of the Indian Air Force (IAF) crashed in Barmer, Rajasthan killing the two pilots aboard the trainer version of the fighter aircraft.
- Recently, **DeepMind**, a company based in London, announced that it had predicted the three-dimensional structures of more than 200 million proteins using **AlphaFold**. AlphaFold is an Artificial Intelligence-based protein structure prediction tool. It is based on a computer system called Deep Neural Network.
- Recently, the Ministry of Education informed Lok Sabha that less than 10% of schools are equipped with Information and Communication Technology (ICT) tools or Digital Tools, in at least 10 states of India.
- Recently, India hosted the **1st Session of “India-Mauritius High-Powered Joint Trade Committee”** under the “India-Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)”.
- Recently, the Supreme Court ruled that the mother, being the only natural guardian of the child after the death of the biological father (husband), has the right to decide the surname of the child.
- Recently a report was released titled '**Outbound Travel and Tourism - An Opportunity Untapped**', which shows **India’s outbound tourism will surpass USD 42 billion by 2024**. (Outbound tourism is the act of travelling ‘out’ of the home country for the purposes of tourism).

- Recently, the Ministry of finance has informed Lok Sabha that the value of counterfeit/duplicate currency in the banking system reduced from Rs 43.47 crore in 2016-17 to about Rs 8.26 crore in 2021-22. (Counterfeiting is treated as a crime under section 489A of the Indian Penal Code).
- Recently, in a written reply to a question in Rajya Sabha, the Minister of State for Communications stated that there is no impact on the Environment due to Electromagnetic Field levels in India. (Electromagnetic fields are a combination of invisible electric and magnetic fields of force).
- Recently, the government of India announced that those who have received Covishield or Covaxin as their first or second dose for Covid-19 can take Corbevax as the third booster shot. Corbevax is still awaiting World Health Organisation's Emergency Use Listing (EUL).
- According to a recent study by the United Nations Trade and Development Body (UNCTAD), over 7% of India's population owned Digital Currency in 2021. Also, India was ranked seventh in the list of top 20 global economies for digital currency ownership as share of population.
- National Intellectual Property Awareness Mission (NIPAM), launched in 2021, has achieved the target of imparting Intellectual Property (IP) awareness and basic training to 1 million students. The target has been achieved ahead of the deadline which was 15 August 2022.
- Recently, the Comptroller and Auditor General (CAG) of India tabled a report in Parliament on whether steps taken by the Union Environment Ministry to conserve India's coastal ecosystems have been successful. This latest report contains the observations from an audit of Conservation of Coastal Ecosystems from 2015-20.
- Recently, the Parliamentary Standing Committee on Personnel, Public Grievances and Law and Justice tabled a report "Review of Guardianship and Adoption Laws" in Parliament and recommended district-level surveys to identify orphaned and abandoned children. In India, there are only 2,430 children available for adoption while the number of parents desiring to bring home a child is growing rapidly.
- Recently, China's satellite tracking vessel **Yuan Wang 5 has arrived at Sri Lanka's southern Hambantota Port**, despite India and the U.S. voicing concern with Colombo over the military ship's visit. (This port was given to China by Sri Lanka on a 99-year lease after Sri Lanka failed to repay Chinese loans. It is seen as a case of Chinese "debt trap" Diplomacy).
- Recently, A delegation from Gabon visited India and interacted with the Indian business community, also India congratulated Gabon on its Independence Day (17th August).
- **Scotland has become the first nation** in the world to **legally protect the right to access free period products** (sanitary products related to menstruation) and have made period products free for all by passing the Period Products Act. Thus, Scotland has become the first country in the world to end 'period poverty (Period poverty is often described as a lack of access to sanitary products due to financial constraints).
- Italy's worst drought in decades has reduced **Lake Garda**, the country's largest lake, to near its lowest level ever recorded.
- It was recently reported that India **held its first political dialogue with the North Atlantic Treaty Organisation (NATO) in Brussels on December 12, 2019.** (the idea was to ensure the dialogue was primarily political in character, and to avoid making any commitment on military or other bilateral cooperation.)
- Recently, the outer part of the "**Karam Dam**", which is being built on the Karam river, a tributary of the Narmada, collapsed.(The Dam Safety Act 2021 covers those dams having a height of over 15m and between 10m and 15m with certain stipulations).
- Recently, the government has prepared the Draft Indian Ports Bill, 2022. The draft Indian Ports Bill, 2022 seeks to repeal and replace the existing Indian Ports Act 1908, which is more than 110 years old, becoming imperative that the Act is revamped to reflect the present-day frameworks.
- Recently, the United Nations organised the Intergovernmental Conference in New York, USA to draft the first-ever treaty on the Ocean's Biological Diversity to conserve marine diversity in the High Seas.
- Recently, a study has found a Snailfish that lives in an iceberg habitat in Greenland can survive in icy Arctic waters due to the presence of antifreeze proteins in its bloodstream. The Snailfish releases biofluorescence, which allows it to glow green and red in the dark arctic waters.
- According to a recent study, scientists have found that rainwater from many places across the globe is contaminated with Per- and Polyfluoroalkyl Substances (PFAs). Further, they are called **Forever chemicals** because of their tendency to stick around in the atmosphere, rainwater, and soil for long periods of time. PFAs are also listed in the Stockholm Convention.
- Recently, China gave nod to Pakistan's decision to scrap the China-Pakistan Economic Corridor (CPEC) Authority amid reports of growing rift between the all-weather friends (Pakistan and China) over the slow pace of the USD 60 billion project.
- Recently, Memorandum of understanding (MoU) has been signed between the Space Applications Centre (ISRO) and the Indian Navy on data sharing and cooperation on Satellite-based Naval Applications in Oceanology and Meteorology.
- In recently released report on Gross State Domestic Products by Union Ministry of Statistics and Programme Implementation, Andhra recorded the highest growth of 11.43%, Puducherry recorded the lowest at 3.31%.

- India and Iran signed a Memorandum of Understanding (MoU) to smoothen movement of seafarers from both the countries as per the provisions of International Convention on Standards of Training, Certification and Watchkeeping (STCW) for Seafarers (1978). It sets qualification standards for masters, officers and watch personnel on seagoing merchant ships.
- Scientists from SN Bose Centre for Basic Science(SNBCBS) studied the thick dust formed around the novae called **Nova V1280 Scorpii**. The study of this cosmic dust could unravel the mysteries behind the start of life.
- Recently, a report has stated that Rhino poaching (illegal hunting) rates in Africa declined to 2.3% in 2021 from 3.9% in 2018.
- A recent study has reported that “**son bias**” is on a decline in India as Sex Ratio at Birth normalised from 111 boys per 100 girls in 2011 to 108 boys per 100 girls in 2019-21.
- India’s gold jewellery exports to the United Arab Emirates (UAE) rose by a sharp 42% in two months of a Free Trade Pact coming into effect in May 2022.
- After the record-breaking summer heat, 2022 may be the worst drought year in Europe in 500 years. Large rivers have been reduced to shallow streams, hitting power generation. China and the US too are facing drought situations.
- Recently, the Government of India has signed the tripartite agreement for swift development of modern Multi Modal Logistics Parks (MMLP) under Bharatmala Pariyojna across the country. The objective is to centralize freight consolidation and reduce logistics cost from 14% to less than 10% of GDP at par with International Standards. The tripartite agreement was signed by: National Highways Logistics Management Limited (NHLML), Inland Waterways Authority of India (IWAI), Rail Vikas Nigam Limited (RVNL).
- India has promised to cut its emissions to net zero by 2070 at the conference of parties-26(COP) summit.
- ‘**Arth Ganga’ Project** : ‘Arth Ganga’ implies a sustainable development model with a focus on economic activities related to Ganga.
- According to a recent study, researchers have identified gene called **CSA6** which could hold the key to prevent fungal infection Candidiasis that often affects intensive-care unit (ICU) patients, cancer patients and patients receiving immunosuppressive therapy.
- Recently, Pradhan Mantri Jan Dhan Yojana (PMJDY) - National Mission for Financial Inclusion, completed eight years of successful implementation. More than 46.25 crore beneficiaries banked under PMJDY since inception, amounting to Rs. 1,73,954 crores.
- Recently, Australia’s Bureau of Meteorology (BOM) predicted, that a **third consecutive event of La Nina** could be underway which could lead to unusual weather effects in various countries. There is an extended period of La Nina in 2022. (The years 1973-76 and 1998-2001 were consecutive La Nina years).
- Recently, the Ministry of Environment, Forest and Climate Change has objected to Chhattisgarh for its transfer of land without following due process from its Forest to the Revenue Department to ensure easy availability of land for setting up industries and building infrastructure.
- Recently, the Union Home and Cooperation Minister addressed the First convocation of National Forensic Science University (NFSU). Apart from Gujarat, its campuses have been opened in Bhopal, Goa, Tripura, Manipur and Guwahati.
- **Falkland island dispute** : Recently, India extended support to Argentina's campaign to restart international negotiation on the Falklands Territorial Issue. **Falkland island also called Malvinas Islands** or Spanish Islas Malvinas are internally self-governing overseas territory of the United Kingdom in the South Atlantic Ocean. It is **disputed between UK and Argentina**.
- Recently, North Atlantic Treaty Organization (NATO) Warned Russia's Military built up and Chinese interest in Arctic Region. As per various reports, China has deepening strategic partnership with Russia in the Arctic Region.
- Ministry of Coal seeks to bring more than 2400 hectare of area in and around coalfields under green cover. It has been aimed to plant more than 50 lakh saplings for the year 2022-23.
- **Zimbabwe has launched gold coins to be sold to the public** in a bid to **tame runaway inflation** that has further eroded the country’s unstable currency. The coin is called ‘Mosi-oa-Tunya’ which refers to Victoria Falls in the local Tonga language.
- **Point 5140** at Dras in Kargil sector **named as Gun Hill**.
- Indian American from Virginia, **Aarya Walvekar** has crowned **Miss India USA in 2022** in New Jersey.
- ASEAN Celebrated Its **55th Anniversary** In 2022.
- The Indian **national flag was unfurled in space** at an altitude of over 30 km as the country marked its 75 years of Independence. The tricolour was sent to the edge of space on a balloon by **Space Kidz India**, an aerospace organisation creating young scientists for the country.
- Researchers in **IIT Hyderabad** have successfully **3D-printed an artificial cornea** (3D-printed Human Cornea) and placed it in a rabbit eye for the first time ever in India.

- **London home of Dadabhai Naoroji will get a 'Blue Plaque'**, an honour that is reserved for notable personalities who have lived and worked in London. Naoroji was the first Asian who was elected as a Member of Parliament in Britain.
- The government of India unveiled the “**Manthan**” platform to drive collaboration between the industry and research institutes to implement technology-based social impact innovations and solutions in the country.
- **Paalan 1000** National campaign and **Parenting App** were launched by the Union Minister of State for Health, Bharti Pravin Pawar in Mumbai. The launch of the Paalan 1000 National campaign and Parenting App aims to reduce the child mortality rate and take care of the first 1000 days a child after birth.
- Local governments of Scotland are now required by law of Scotland to offer free sanitary products (Period Products) like tampons and pads to anyone who needs them.
- India has nominated the Indian dance form Garba to be inscribed on UNESCO's intangible cultural heritage list. Last year, Durga Puja was included in UNESCO's intangible cultural heritage list and for 2022, **India has nominated 'Garba'**. The next UNESCO meeting will be held in November.
- **South Korea** has once again shattered its own record for the **world's lowest fertility rate**. South Korean women were estimated, based on 2021 data, to have an average of just 0.81 children over their lifetimes, down from 0.84 a year earlier.
- **India** has now overtaken China and UK to become the **world's 10th largest life insurer**.

Super Vasuki: trail of Indian Railways longest freight train

- The train -- 'Super Vasuki', **3.5 km-long** having **295 wagons and 6 locos** carried 27,000 tonnes of coal.
- Super Vasuki's trial was conducted between Korba in Chhattisgarh and Rajnandgaon in Nagpur.

New Zealand's Bill on Tobacco Endgame:

- To fulfil its plan to be smokefree by 2025, the New Zealand Parliament recently tabled the Smokefree Environments and Regulated Products (Smoked Tobacco) Amendment Bill.

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