



drishti

Current Affairs (CONSOLIDATION)

**JANUARY 2022
(PART – II)**

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Polity and Governance

Highlights

- SC Refuses to Give a Yardstick for Reservation in Promotions
- Supreme Court on MLAs' One-year Suspension
- Corruption Perception Index 2021
- Republic Day 2022
- 24th National Conference on e-Governance 2021
- Integrity Pact
- Election Freebies
- Promoting Drone Use in Agriculture
- Deputation of All India Services Officer
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- National Commission for Safai Karamcharis
- AntiMicrobial Resistance
- OBC Reservation in Local Body Polls
- Shared Parenting

SC Refuses to Give a Yardstick for Reservation in Promotions

Why in News

Recently, the **Supreme Court (SC)** refused to lay down the “yardstick” for determining the inadequacy of representation for granting **reservation in promotions** for **Scheduled Caste (SC)/Scheduled Tribe (ST)** candidates in government jobs.

- The court’s judgement came in a batch of **petitions** from across the country **seeking further clarity on the modalities for granting reservation in promotion.**

Key Points

- **SC’s Ruling:**
 - **Cadre for Collecting Data:**
 - It held ‘cadre’ and not class, group or the entire service as the unit for the purpose of collection of quantifiable data for giving promotion quotas.
 - It said otherwise the **entire exercise of reservation in promotions would be rendered meaningless** if data pertaining to the representation of SCs and STs was done with reference to the entire service.
 - **No Yardstick:**
 - The question of **adequate representation of an SC/ST community ought to be left to the**

respective States to determine and it cannot lay down any yardstick for determining the inadequacy of representation.

- **Set Aside the Judgement in B.K. Pavithra Case (2019):**
 - With the recognition of ‘cadre’ as the unit for collection of quantifiable data, the court **set aside its earlier judgement in the B.K. Pavithra case.**
 - **SC held that the conclusion of this court approving the collection of data on the basis of groups and not cadres is contrary to the law** laid down by the SC in Nagaraj and Jarnail Singh judgments.
 - The court held that the **Nagaraj judgement would have “prospective effect.”**
- **Review Ordered:**
 - The SC **ordered that a review had to be conducted regarding the data** for the purpose of determining the inadequacy of representation in promotions.
 - However, **the court left it to the Union government to fix a “reasonable” time** for the States to conduct the review.
- **Background:**
 - **Reservation in Promotions:**
 - The **Central and the State Government since the 1950s have been following a policy of reserving seats in promotions** in favours

Note:

of SC and ST communities on the ground that they are not adequately represented at the decision making level of public services.

○ **Indra Sawhney Case 1992:**

- This policy was held to be unconstitutional and void by the SC in **Indra Sawhney v. Union Of India 1992** case on the ground that under Article 16(4) the State is provided with the power to make reservations in favour of backward classes of citizens only at the entry level that is at the time of recruitment into public services but not subsequently.
- The Parliament responded by enacting the **77th Constitutional Amendment Act which introduced Article 16(4A)**.

○ **M Nagaraj Case 2006:**

- In this case applying the creamy layer concept in SC/ST reservation in promotions, the SC reversed its earlier stance in the **Indra Sawhney case (1992)**, in which it had excluded the **creamy layer concept on SCs/STs** (that was applicable on OBCs).
- The SC had **upheld the Constitutional amendments by which Articles 16 (4A) and 16 (4B) were inserted**, saying they flow from Article 16 (4) and do not alter its structure.
- It also laid down **three conditions for promotion of SCs and STs** in public employment.
 - The SC and ST community should be socially and educationally backward.
 - The SC and ST communities are not adequately represented in Public employment.
 - Such a reservation policy shall not affect the overall efficiency in the administration.
- The court held that the **government cannot introduce a quota in promotion for its SC/ST employees unless** it proves that the particular community was backward, inadequately represented and providing reservation in promotion would not affect the overall efficiency of public administration.
 - The opinion of the government should be **based on quantifiable data**.

○ **Jarnail Singh Case 2018:**

- Later in 2018, in the Jarnail Singh case, SC modified the Nagaraj judgement to the extent that **State need not produce quantifiable data to prove the “backwardness”** of a Scheduled Caste/ Scheduled Tribe community in order to provide quota in promotion in public employment.
- The court had given a **huge fillip to the government’s efforts to provide “accelerated promotion with consequential seniority”** for Scheduled Castes/ Scheduled Tribes (SC/ST) members in government services.

Constitutional Provisions for Promotion in Reservation

- **Article 16 (4):** Provides that the State can make any provision for the reservation of appointments or posts in favour of any backward class of citizens who, in the opinion of the state, are not adequately represented in the services under the State.
- **Article 16 (4A):** Provides that the State can make any provision for reservation in matters of promotion in favour of the Scheduled Castes and the Scheduled Tribes if they are not adequately represented in the services under the State.
- **Article 16(4B):** Added by the **81st Constitutional Amendment Act, 2000** which enabled the unfilled SC/ST quota of a particular year to be carried forward to the next year.
- **Article 335:** It recognises that special measures need to be adopted for considering the claims of SCs and STs to services and posts, in order to bring them at par.
 - **82nd Constitutional Amendment Act, 2000** inserted a condition at the end of Article 335 that enables the state to make any provision in favour of the members of the SC/STs for relaxation in qualifying marks in any examination.

Supreme Court on MLAs’ One-year Suspension

Why in News

Recently, the **Supreme Court** has set aside the one-year suspension of 12 BJP MLAs from the Maharashtra Legislative Assembly. The Supreme Court held that suspension for a year was ‘unconstitutional, substantively illegal and irrational’.

Note:

Key Points

➤ About the Suspension of MLAs:

- The MLAs were suspended for **misbehaviour in the Assembly** pertaining to **disclosure of data regarding OBCs**.
- The challenge to suspension relies mainly on grounds of denial of the **principles of natural justice**, and of **violation of laid-down procedure**.
 - The 12 MLAs have said they were not given an opportunity to present their case, and that the suspension violated their fundamental right to equality before the law under **Article 14 of the Constitution**.
- **Rule 53 of Maharashtra Assembly:** It states that the **“Speaker may direct any member who refuses to obey his decision, or whose conduct is, in his opinion, grossly disorderly, to withdraw immediately from the Assembly”**.
 - The member must **“absent himself during the remainder of the day’s meeting”**.
 - Should any member be ordered to withdraw for a second time in the same session, the Speaker may direct the member to absent himself “for any period not longer than the remainder of the Session”.

➤ Arguments by Maharashtra Assembly:

- **Article 212:** The House had acted within its **legislative competence**, under Article 212, and courts do not have jurisdiction to inquire into the proceedings of the legislature.
 - Article 212 (1) states that “The validity of any proceedings in the Legislature of a State shall not be called in question on the ground of any alleged irregularity of procedure”.
- **Vacancy of Seats:** The state had also said that a seat does not automatically become vacant if the member does not attend the House for 60 days but it becomes vacant only if declared so by the House.
 - It was submitted that the House is not obligated to declare such a seat vacant.
- **Article 194:** The state has also referred to **Article 194 on the powers and privileges of the House**, and argued that any member who transgresses these privileges can be suspended through the inherent powers of the House.
 - It has denied that the power to suspend a member can be exercised only through Rule 53 of the Assembly.

➤ Arguments by the Supreme Court:

- **Irrational Suspension:** Suspension of a member must be preferred as a short term or a temporary, disciplinary measure for restoring order in the Assembly.
 - Anything in excess of that would be irrational suspension.
- **Manipulating Opposition:** It said that a thin majority coalition government could use such suspensions to manipulate the number of Opposition party members.
 - Such Opposition will not be able to effectively participate in discussions/debates in the House fearing suspension of its members for a longer period.
- **Violation of Basic Structure of the Constitution:** The **basic structure of the Constitution** would be hit if the constituencies of the suspended MLAs remained unrepresented in the Assembly for a full year.
- **Constitutional Requirement:** The bench referred to **Article 190 (4)** of the Constitution, which says, “If for a period of sixty days a member of a House of the Legislature of a State is without permission of the House absent from all meetings thereof, the House may declare his seat vacant.”
- **Statutory Requirement:** Under **Section 151 (A) of The Representation of the People Act, 1951**, “a bye-election for filling any vacancy shall be held within a period of six months from the date of the occurrence of the vacancy”.
 - This means that barring exceptions specified under this section, no constituency can remain without a representative for more than six months.
- **Punishing Whole Constituency:** The Supreme Court said that the **one-year suspension was prima facie unconstitutional as it went beyond the six-month limit**, and amounted to “not punishing the member but **punishing the constituency as a whole**”.
- **Question of Supreme Court Intervention:** The Supreme Court is expected to rule on the question of whether the judiciary can intervene in the proceedings of the House.
 - Constitutional experts, however, say that the court has clarified in previous rulings that the judiciary can intervene in case of an **unconstitutional act done by the House**.

Note:

Provisions for Suspension of a Member of Parliament

- Rules 373, 374, and 374A of the **Rules of Procedure and Conduct of Business in Lok Sabha** provide for the withdrawal of a member whose conduct is **“grossly disorderly”**, and suspension of one who abuses the rules of the House or willfully obstructs its business.
- The maximum suspension as per these Rules is **“for five consecutive sittings or the remainder of the session, whichever is less”**.
- The maximum suspension for **Rajya Sabha under Rules 255 and 256** also does not exceed the remainder of the session.
- Similar Rules also are in place for **state legislative assemblies** and councils which prescribe a maximum suspension not exceeding the remainder of the session.

Corruption Perception Index 2021

Why in News

Recently, the **Corruption Perception Index (CPI)** 2021 was released by **Transparency International**.

- Overall, the CPI shows that control of corruption has stagnated or **worsened in 86% of countries over the last decade**.

Transparency International

- It is an **international non-governmental organisation** founded in 1993 based in **Berlin, Germany**
- Its non-profit purpose is to take action to **combat global Corruption with civil societal anti-corruption measures** and to prevent criminal activities arising from corruption.
- Its most notable publications include the **Global Corruption Barometer** and the **Corruption Perception Index**.

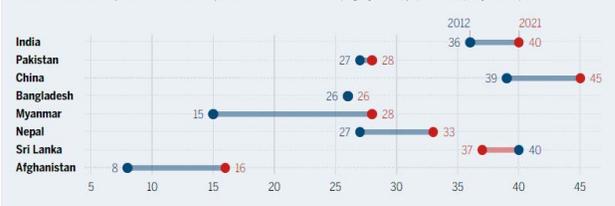
Key Points

- **About:**
 - The Index **ranks 180 countries and territories** by their perceived levels of public sector corruption according to experts and businesspeople.

- It relies on **13 independent data sources** and uses a scale of **zero to 100**, where **zero is highly corrupt and 100 is very clean**.
- More than two-thirds of countries (68%) score below 50 and the **average global score remains static at 43**. Since 2012, 25 countries significantly improved their scores, but in the same period 23 countries significantly declined.
- **Top performers:**
 - This year, the top countries are **Denmark, Finland and New Zealand**, each with a score of 88. **Norway (85), Singapore (85), Sweden (85), Switzerland (84), the Netherlands (82), Luxembourg (81) and Germany (80)** complete the top 10.
- **Bottom Performers:**
 - **South Sudan (11), Syria (13) and Somalia (13)** remain at the bottom of the index.
 - Countries experiencing armed conflict or authoritarianism tend to earn the lowest scores, including **Venezuela (14), Afghanistan (16), North Korea (16), Yemen (16), Equatorial Guinea (17), Libya (17) and Turkmenistan (19)**.
- **India's Performance:**
 - **India ranked 85 among 180 countries** in the current index (86 in 2020 and 80 in 2019). Transparency International gave India a **CPI score of 40**.
 - Except Bhutan, all of India's neighbours are ranked below it. Pakistan dropped 16 spots in the index and was ranked at 140.
 - **The country's score has remained stagnant over the past decade**, some of the mechanisms that could help reign in corruption are weakening.
 - There are **concerns over the country's democratic status, as fundamental freedoms and institutional checks and balances decay**.
 - Anyone that speaks up against the government has been targeted with **security, defamation, sedition, hate speech and contempt-of-court charges**, and with regulations on foreign funding.

How corruption in India, neighbours changed in 10 years

Perceived levels of public sector corruption on a scale of zero (highly corrupt) to 100 (very clean)



Note:

➤ Fall of Democracy:

- From the repression of **opposition supporters in Belarus**, to the closing of media outlets and civil society organisations in Nicaragua, the **deadly violence against protesters in Sudan** and the killing of human rights defenders in the Philippines, human rights and democracy are under threat around the world.
- Increasingly, **rights and checks and balances are being undermined not only in countries with systemic corruption and weak institutions, but also among established democracies.**
 - Since 2012, **90% of countries have stagnated or declined in their civil liberties score** on the Democracy Index.
- The global **Covid-19 pandemic has also been used in many countries as an excuse to curtail basic freedoms** and side-step important checks and balances.
- And despite the increasing international momentum to end the abuse of anonymous shell companies, **many high-scoring countries with relatively “clean” public sectors continue to enable transnational corruption.**
- The current wave of **authoritarianism is not driven by coups and violence, but by gradual efforts to undermine democracy.** This usually begins with attacks on civil and political rights, efforts to undermine the autonomy of oversight and election bodies, and control of the media.
- Such attacks allow corrupt regimes to evade accountability and criticism, allowing corruption to flourish.

➤ Suggestions:

- **Peoples Demand:**
 - To end the vicious cycle of corruption, human rights violations and democratic decline, **people should demand that their governments:**
 - Uphold the rights needed to hold power to account.
 - Restore and strengthen institutional checks on power.
 - Combat transnational forms of corruption.
 - Uphold the right to information in government spending.
- **Address Fundamental Failings:**
 - To forge ahead together in sustainable anti-corruption efforts, economic recovery strategies

should address the fundamental failings that have led to many countries’ corrupt systems.

- Effective control of corruption and common prosperity can only be achieved through the engagement of informed people who are able to assemble freely, speak openly and blow the whistle on corruption without fear of reprisal.
- **Anti- Corruption Agencies:**
 - Countries with no anti-corruption agency or weakening institutions should uphold the **2012 Jakarta Statement on Principles for Anti-Corruption Agencies**, its Colombo Commentary and regional commitments such as the Teieniwa Vision, alongside all other steps required by the **United Nations Convention against Corruption.**
 - The United Nations Convention against Corruption is the **only legally binding universal anti-corruption instrument.**

Related Indian Initiatives

- **The Indian Penal Code, 1860**
- **Prevention of Corruption Act, 1988**
- **The Prevention of Money Laundering Act, 2002**
- **The Foreign Contribution (Regulation) Act, 2010**
- **The Companies Act, 2013**
- **The Lokpal and Lokayuktas Act, 2013**
- **Central Vigilance Commission**

Republic Day 2022

Why in News

Republic Day (73rd) is celebrated every year on **26th January to commemorate the adoption of the Indian Constitution**, which came into effect on this day in 1950.

- The Constitution is the supreme law of the land and citizens are expected to abide by it.

Key Points

➤ Background:

- India became an independent nation on 15th August, 1947 — a date thrust upon by Lord Louis Mountbatten, as it marked the second anniversary of Japan’s submission to allied powers after **World War II.**
- After India became independent, it did not have its own constitution. The laws were based on a

Note:

common law system and a modified version of the “**Government of India Act, 1935**”, which was brought in by the British government.

- Approximately two weeks later, a **Drafting Committee** was appointed to draft the Indian Constitution with **Dr BR Ambedkar** as the chairman. The Indian Constitution was finally ready and adopted on **26th November, 1949 (Constitution Day)**.

- The Constitution came into effect after two months, on 26th January, 1950.

- The Indian National Congress, on 19th December, 1929, passed a historic resolution of “**Purna Swaraj**” or **complete self-rule** at its Lahore session. It was declared by the Congress party that **26th January, 1930**, will be celebrated as “**Independence Day**” by the Indians.

- Pandit Jawaharlal Nehru, who was the President of Congress party, hoisted the tricolor on the banks of the Ravi river in Lahore. This day was celebrated as Purna Swaraj day for the next 17 years.

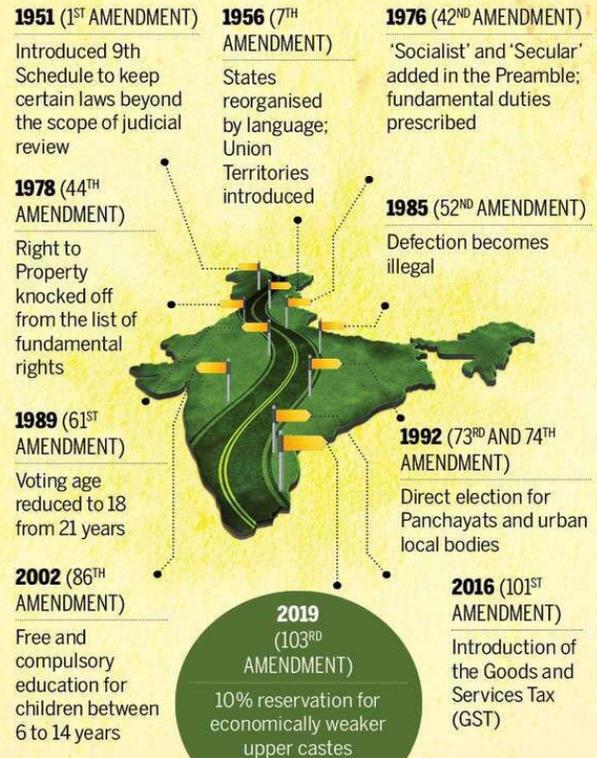
- Thus, when the Constitution of India was adopted on 26th November, 1949, many considered it necessary to celebrate and enforce the document on a day associated with national pride, which was – 26th January.

➤ Significance:

- Republic day is a monumental day in Indian history because it was on this day that India adopted its own Constitution and declared its own laws of the land.
- The **British colonial Government of India Act (1935) was finally replaced** and the country was set to make a fresh start.
- Additionally, it was also on this day that the **Preamble of the Constitution of India came into effect**.
 - The Preamble is largely a comprehensive statement that presents the key principles of the Constitution.
- On this day India shed the **last relic of the colonial system and effected** a new dawn by becoming a **Sovereign Democratic Republic**.
- The day is an **occasion to commemorate the values of our democracy and Republic, to reaffirm our commitment** to liberty, fraternity and equality across our society and among all our citizens.

- The day celebrates the **desire of a huge nation that wants to be governed through one single constitution** giving another example of India’s unity in diversity.

MAJOR CONSTITUTIONAL AMENDMENTS THAT CHANGED THE COURSE OF INDIA



➤ Threats to Indian Democracy:

- Although India has made a place for itself as one of the fastest growing economies in the world, it loses behind a lot in the name of growth.
- **Poverty** remains the biggest challenge of present day India, the majority of the people continue to live below the poverty line with a huge divide between the rich and the poor.
- **Gender discrimination** remains at all level with skewed female ratio, few economic opportunities, disparities in wages, violence, malnutrition etc.
- **Communalism and religious fundamentalism** have acquired a very dangerous form and alarming proportion in India. It is an affront to India’s nationalist identity and a tragic setback to its evolving secular culture.
- Indian democracy **also struggles with regionalism** which is primarily an outcome of regional disparities and imbalances in development.

Note:

- Continued feeling of inequality both among and within state creates a feeling of neglect, deprivation and discrimination.
- **Elections** which serve as the most evident expression of democracy are affected by money and muscle abuse by politicians and political parties.
- Most of the politicians have pending criminal cases against them; **source of funding for elections remains questionable.**

Sovereign, Democratic, Republic

- **Sovereign:** The word 'sovereign' implies that India is neither a dependency nor a dominion of any other nation, but an independent state. There is no authority above it, and it is free to conduct its own affairs.
- **Democratic:** It is based on the doctrine of popular sovereignty, that is, possession of supreme power by the people.
- **Republic:** Preamble indicates that India has an elected head called the President. He is elected indirectly for a fixed period of five years.

24th National Conference on e-Governance 2021

Why in News

Recently, the **24th National Conference on e-Governance (NCEG)** was organised by the Department of Administrative Reforms & Public Grievances (DARPG, Ministry of Personnel, Public Grievances & Pensions) and Ministry of Electronics & Information Technology (MeitY), in association with the State Government of Telangana.

- DARPG is the nodal agency of the Government of India for administrative reforms as well as redressal of public grievances relating to the states in general and those pertaining to Central Government agencies in particular.

Key Points

- **About:**
 - The Conference provides a **platform for constructive exchange of ideas** on some of the latest technologies for promoting **e-Governance**.
 - At the conference, the **'Hyderabad Declaration' on e-Governance** was adopted.

- The declaration aims to bring citizens and governments closer through digital platforms and transform citizen services through the use of technology.
- The Conference resolved that Government of India and State Governments shall collaborate to:
 - Transform citizen services through use of technology by leveraging the artifacts of India Stack that include **Aadhaar, UPI, DigiLocker, UMANG, e Sign** and consent framework.
 - **Fast track the implementation** of the national level public digital platforms in key social sectors viz. Health, Education, Agriculture, etc by adopting open interoperable architecture for joined up connected services.
 - **Operationalize the data governance framework** to facilitate data sharing within Government entities as also make available all data on data.gov.in except for a negative list.
 - Foster responsible use of emerging technology such as **Artificial Intelligence, Machine Learning, Blockchain, 5G, Augmented Reality, Virtual Reality**, etc for Social Empowerment.
 - Make India the global hub for emerging technology through **creation of a large pool of skilled resources** on futuristic technologies.
 - Ensure **resilient Government Infrastructure** with robust technological solutions to withstand pandemic like disruptions.
 - Integration of all State/District portals with **Centralized Public Grievance Redress and Monitoring System (CPGRAMS)** for seamless Redressal of Public Grievances.
 - **National E-Governance Service Delivery Assessment (NeSDA) 2021** to be adopted in collaboration with MeitY for improving e-Governance landscape.
- **Theme:** "India's Techade: Digital Governance in a Post Pandemic World"
- **National e-Governance Awards 2021:**
 - To recognise the implementation of e-Governance initiatives, the National e-Governance Awards 2021 were presented during the Inaugural Session.

Note:

- 26 awards were presented under the 6 categories of the Award Scheme to Central Ministries/ Departments, State/UT Governments, Districts, Local Bodies, Public Sector Undertakings and Academic & Research Institutions.
- These Awards are being given **since 2003**.

E-governance

➤ **About:**

- It can be defined as the **usage of Information and Communication Technology (ICT)** by the government to **provide and facilitate government services**, exchange of information, communication transactions and integration of various standalone systems and services.
- Through e-governance, **government services are made available to citizens and businesses** in a convenient, efficient and transparent manner.

➤ **Types of Interactions in e-Governance:**

- **Government to Government (G2G):**
 - Information is exchanged within the government i.e., either, between the central government, state government and local governments or between different branches of the same government.
- **Government to Citizen (G2C):**
 - The citizens have a platform through which they can interact with the government and get access to the variety of public services offered by the Government.
- **Government to Businesses (G2B):**
 - The businesses are able to interact with the government seamlessly with respect to the services of the government offered to businesses.
- **Government to Employees (G2E):**
 - The interaction between the government and its employees occurs in an efficient and speedy manner.

➤ **Objectives:**

- To support and simplify governance for government, citizens, and businesses.
- To make government administration more transparent and accountable while addressing the society's needs and expectations through efficient public services and effective interaction between the people, businesses, and government.

- To reduce corruption in the government.
- To ensure speedy administration of services and information.
- To reduce difficulties for business, provide immediate information and enable digital communication by e-business.

➤ **Challenges:**

- **Lack of computer literacy:** India is still a developing country and a vast majority of the citizens lack computer literacy which hinders the effectiveness of e-governance.
- **Lack of accessibility:** Lack of accessibility to the internet or even computers in some parts of the country is a disadvantage to e-governance.
- **Loss of Human interaction:** Governance results in a loss of human interaction. As the system becomes more mechanised, lesser interaction takes place among people.
- **Risk of Data Theft:** It gives rise to the risk of personal data theft and leakage.
- **Lax Administration:** Governance leads to a lax administration. The service provider can easily provide excuses for not providing the service on technical grounds such as "server is down" or "internet is not working", etc.

➤ **e-Governance in the Indian context:**

- There are a large number of e-Governance initiatives, both at the Union and State levels.
- In 2006, the **National e-Governance Plan (NeGP)** was formulated by the Department of Electronics and Information Technology and Department of Administrative Reforms and Public Grievances that aims at making all government services accessible to the common man, ensure efficiency, transparency and reliability of such services at affordable costs to realise the basic needs of the common man.
- **NeGP** has enabled many e-governance **initiatives:**
 - **Digital India, Aadhaar, myGov.in, (Unified Mobile Application for New-age Governance) App, Digital Locker, PayGov, Computerisation of Land Records.**
 - myGov.in is a national citizen engagement platform where people can share ideas and be involved with matters of policy and governance.
 - PayGov facilitates online payments to all public and private banks.

Note:

Integrity Pact

Why in News

Recently, the **Central Vigilance Commission (CVC)** has modified the criteria for the nomination of **Independent External Monitors (IEM)** in government bodies.

- The modification came months after it had issued a **revised standard operating procedure for adoption and implementation of the 'Integrity Pact' clause**, which is meant to prevent corruption in public procurement.

Key Points

- **Integrity Pact:**
 - The 'Integrity Pact' envisages an **agreement between the prospective vendors/bidders and the buyer**, committing persons and officials of both sides to not resort to any corrupt practices in any aspect or stage of the contract.
 - Any violation of the clause entails the **disqualification of bidders and exclusion from future business dealings**.
 - The pact also ensures **transparency, equity and competitiveness** in public procurement.
- **Independent External Monitors:**
 - The IEMs independently and objectively review the documents to determine if the parties have complied with their obligations under the pact.
 - They give recommendations to the authorities concerned after examining the complaints related to any contract.
 - They may submit a report to the chief executive of the organisation concerned or directly to the **Chief Vigilance Officer (CVO) and the CVC**, if they find serious irregularities attracting the **Prevention of Corruption Act, 1988 provisions**.
- **IEM Rules Modification:** The zone of consideration for empanelment as IEMs has been revised. It now includes:
 - Officers who have held the post of Additional Secretary to the Government of India;
 - Those who were Chairman-cum-Managing Directors (CMD) of Schedule 'A' **public sector enterprises**.
 - Persons equivalent/higher to Additional Secretary to the Central government at the time of retirement.

- CMDs/MDs and Chief Executive Officers (CEOs) of public sector banks, insurance companies and other financial institutions at the time of retirement;
- Officers of the armed forces who were in a pay scale equivalent to or higher than that of Additional Secretary at the time of retirement, are also eligible.

Central Vigilance Commission

- CVC is the **apex vigilance institution**, free of control from any executive authority, monitoring all vigilance activity under the Central Government and advising various authorities in Central Government organizations in planning, executing, reviewing and reforming their vigilance work.
 - It is an independent body and is **only responsible to the Parliament**.
- It was set up by the Government in February, 1964 on the recommendations of the Committee on Prevention of Corruption, headed by **K. Santhanam**.
- The Parliament enacted **Central Vigilance Commission Act, 2003 (CVC Act)** conferring statutory status on the CVC.

Election Freebies

Why in News

Recently, a petition has been filed in the Supreme Court seeking a direction to the **Election Commission of India (ECI)** to seize the **election symbol or deregister a political party** that promises or distributes "**irrational freebies**" from public funds before elections.

- The petition argued that the recent trend of political parties to influence voters by offering freebies with an eye on elections is not only the **greatest threat to the survival of democratic values** but also injures the **spirit of the Constitution**.

Key Points

- **About Freebies in Indian Politics:**
 - Political parties promise to offer **free electricity/ water supply, monthly allowance to unemployed, daily wage workers and women as well as gadgets like laptops, smartphones etc.** in order to secure the vote of the people.
- **About the Petition:**
 - Petitioner submits that arbitrary promises of irrational freebies violate the **ECI's mandate for free and fair elections**.

Note:

- **Distributing private goods-services**, which are not for public purposes, from public funds clearly violates **Articles 14 (equality before law), 162 (executive power of a State), 266(3) (expenditure from Consolidated Fund of India) and 282 (Discretionary grants) of the Constitution.**
- The petition also sought the Supreme Court to give a direction to the Union **to enact a law in this regard.**
- It sought a direction to the ECI to insert an additional condition in the relevant paragraphs of the **Election Symbols (Reservation and Allotment) Order 1968.**
 - It deals with conditions for recognition as a state party, that a **“political party shall not promise/distribute irrational freebies from the public fund before the election”.**
- **Arguments in Favor of Freebies:**
 - **Essential for Fulfilling Expectations:** In a country like India where the states have (or don't have) a certain level of development, upon the emergence of the elections, there are **expectations from the part of people which are met by such promises of freebies.**
 - Moreover, there are also comparative expectations when the people of the adjoining/ other states (with different ruling parties) get freebies.
 - **Helps Lesser Developed States:** With the states that have comparatively lower level of development with a larger share of the population suffering from poverty, such **kind of freebies become need/demand-based** and it becomes **essential to offer the people such subsidies for their own upliftment.**
- **Associated Issues With 'Freebies':**
 - **Economic Burden:** This places a huge economic burden on the exchequer of the state as well as centre.
 - **Against Free and Fair Election:** The promise of irrational freebies from public funds before elections unduly influences the voters, disturbs the level playing field and vitiates the purity of the poll process.
 - It amounts to an unethical practice that is just like giving bribes to the electorate.
 - **Against Equality Principle:** Distribution of private goods or services, which are not for public purposes, from public funds before the election violates several articles of the Constitution, including **Article 14 (equality before law).**

- **SC Judgement:** The Supreme Court in ***S Subramaniam Balaji vs Government of Tamil Nadu 2013*** case held that unrealistic poll promises and freebies are a serious issue that disturbs the level-playing field in elections.
 - The court also held that **promises in the election manifesto cannot be construed as “corrupt practice” under the Representation of People Act** or under any other prevailing law and hence, distribution of freebies can't be stopped when the ruling party uses public funds for this purpose through passage of Appropriation Acts in state assembly.
 - At the same time, the court noted that there is no enactment that directly governs the contents of the election manifesto, and **directed ECI to frame guidelines for the same in consultation with all the recognised political parties.**

Promoting Drone Use in Agriculture

Why in News

Recently, the **Ministry of Agriculture and Farmers Welfare** has issued revised guidelines of the **“Sub-Mission on Agricultural Mechanization” (SMAM)** scheme in a move aimed at **making drones more accessible to the farmers.**

- The funding guidelines will **make this technology affordable** by assisting in **purchase, hiring and demonstrations of agriculture drones.**
- The financial aid and grants shall be applicable till **31st March 2023.**
- SMAM scheme was launched in **2014-15** with the objectives of **increasing the reach of farm mechanization to small and marginal farmers** and to the regions & difficult areas where farm power availability is low.

Key Points

- **40-100% Subsidy:**
 - A grant up to 100% of the cost of agriculture drone or Rs.10 lakhs, whichever is less, as a grant for the purchase of drones will be provided.
 - But, this 100% grant will be **limited to only Farm Machinery Training and Testing Institutes,**

Note:

Indian Council of Agricultural Research (ICAR) institutes, **Krishi Vigyan Kendras** and State Agriculture Universities.

- **Subsidy to Agriculture Graduates:**
 - Agriculture graduates establishing **Custom Hiring Centers (CHCs)** will be eligible to receive **50% of the basic cost of a drone** and its attachments or up to **Rs. 5 lakh** in grant for drone purchases.
- **Subsidy to FPOs or Cooperative Society of Farmers:**
 - Existing CHCs or new ones, already or to be set up by cooperative society of farmers, **Farmer Producers Organizations (FPOs)** and **rural entrepreneurs** are entitled to receive 4% (maximum Rs. 4 lakh) as grant on the basic cost of drone.
 - CHCs are the **main agencies at grassroots to popularize farm mechanization** and unless they are given the incentives, drone use will not gather momentum.
 - **Rural entrepreneurs** are defined as those who have passed the class tenth examination from a recognised Board and have a remote pilot license from an institute recognized by the **Director-General of Civil Aviation (DGCA)**.
- **Demonstration Purposes:**
 - The FPOs would be eligible to **receive a subsidy of 75%** of the cost of the drone if **used only for demonstration purposes**.
 - Additionally, **Rs. 6,000/hectare** would be given to these implementing agencies that **hire drones from CHCs, Hi-tech Hubs, drone manufacturers and start-ups** for demonstrations.
 - But, they would receive Rs 3,000/hectare if they purchase the drones for demonstrations.
- **Significance:**
 - The subsidized purchase of agriculture drones for CHCs/Hi-tech Hubs will **make the technology affordable**, resulting in their widespread adoption.
 - This would make **drones more accessible to the common man in India** and will also significantly encourage domestic drone production.
- **Other Related Initiatives:**
 - **Sub-Mission on Agroforestry Scheme.**
 - **National Mission for Sustainable Agriculture.**
 - **National Food Security Mission.**
 - **Rashtriya Krishi Vikas Yojana (RKVY).**
 - **Mission for Integrated Development of Horticulture.**

- **Pradhan Mantri Krishi Sichayee Yojana (PMKSY).**
- **Pradhan Mantri Fasal Bima Yojana.**
- **Paramparagat Krishi Vikas Yojana.**

Agriculture/Farm Mechanization

➤ About:

- Mechanised agriculture is the process of using agricultural machinery to mechanise the work of agriculture.
- To boost up mechanization in the agriculture sector, improved agricultural implements and machinery are essential inputs.

➤ Level of farm Mechanization:

- India stands at about 40-45% with states such as UP, Haryana and Punjab having very high mechanization levels, but north-eastern states having negligible mechanization.
- This level of farm mechanization is still low as compared to countries such as the US (95 %), Brazil (75%) and China (57%).

➤ Significance:

- It plays a vital role in optimizing the use of land, water energy resources, manpower and other inputs like seeds, fertilizers, pesticides etc to maximize the productivity of the available cultivable area and make agriculture a more profitable and attractive profession for rural youth.
- It is one of the key drivers for the **sustainable development** of the agriculture sector.

➤ Negative Impact:

- Reduce workforce hence decreases farm employment.
- Use of machinery increases pollution.

Deputation of All India Services Officer

Why in News

Recently, the **Department of Personnel and Training (DoPT)** wrote to the States that the Union government **proposes to amend Rule 6 (deputation of cadre officers) of the Indian Administrative Service (Cadre) Rules 1954.**

- Under this, the Union government will acquire for itself **overriding powers to transfer IAS and IPS officers through Central deputation**, doing away with the requirement of taking the approval of the State governments.

Note:

Key Points

➤ All India Services (AIS):

- **About:** The All India Services (AIS) comprises the three civil services of India:
 - Indian Administrative Service (IAS);
 - Indian Police Service (IPS); and
 - Indian Forest Service (IFoS).
- **Federal Nature of AIS Officers:** AIS officers are recruited by the Union Government (by UPSC) and their services are allotted under various State Cadres.
 - Hence, they have the **accountability to serve both under the State and the Centre.**
 - However, the **Cadre Controlling Authority** of AIS is the Union Government.
 - The **DoPT** is the cadre controlling authority of IAS officers.
 - Cadre controlling authority for deputation of **Indian Police Service and Indian Forest Service Officers (IFoS)** is the **Ministry of Home Affairs (MHA) and the Environment Ministry respectively.**
- **Central Deputation Reserve:** The State government has to prescribe a number of officers available for deputation as prescribed under **Central Deputation Reserve.**
 - Every State cadre of the service provides for a **Central deputation quota** which in turn requires additional recruitment to be made to the service to provide for trained and experienced members to serve on posts in the Central Government.
- **Deputation of AIS Officer and Present Rules:**
 - In normal practice, the **Centre asks every year for an “offer list”** of officers of the All India Services willing to go on central deputation, after which it selects officers from that list.
 - Officers have to get a **no-objection clearance** from the State government for Central deputation.
 - States have to depute the All India Services (AIS) officers, to the Central government offices and at any point, it cannot be more than **40% of the total cadre strength.**
- **Proposed Amendments:**
 - If the State government **delays posting a State cadre officer to the Centre and does not give effect to the Central government’s decision within**

the specified time, the officer shall stand relieved from cadre from the date as may be specified by the Central government.

- The **Centre will decide the actual number of officers** to be deputed to the Central government in consultation with the State and the latter should make eligible the names of such officers.
- In case of any **disagreement between the Centre and the State**, the matter shall be decided by the Central government and the State shall give effect to the decision of the Centre.
- In specific situations where services of cadre officers are required by the Central government in **“public interest,”** the State shall give effect to its decisions within a specified time.
- **DoPT Stand:**
 - The DoPT said that it is taking this decision in the wake of a **shortage of All India Services (AIS) officers in Union Ministries.**
 - According to the DoPT, states are not sponsoring an adequate number of officers for Central deputation, and the number of officers is not sufficient to meet the requirement at the Centre.
- **Opposition by Some States:**
 - It is against the spirit of cooperative federalism.
 - The proposed amendment would weaken the State’s political control over the bureaucracy.
 - It would hobble effective governance and create avoidable legal and administrative disputes.
 - The Centre could weaponise the bureaucracy against an elected State government.

Electoral Bonds

Why in News

The **19th tranche of electoral bonds**, which have been pitched as an alternative to cash donations, were on sale, ahead of the upcoming Assembly elections in five States.

- In the past, the **Supreme Court has raised the possibility of misuse of money** received by political parties through electoral bonds.
- This may defeat the original idea of the introduction of these bonds to **bring transparency in electoral funding** and keep a **check on the criminalization of politics.**

Note:

Key Points

- **About Electoral Bonds:**
 - These bonds are issued in **multiples of Rs. 1,000, Rs. 10,000, Rs. 1 lakh, Rs. 10 lakh and Rs. 1 crore** without any maximum limit.
 - **State Bank of India is authorised** to issue and encash these bonds, which are valid for fifteen days from the date of issuance.
 - These bonds are **only redeemable** in the designated account of a **registered political party**.
 - 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.
 - A person being an individual can **buy bonds, either singly or jointly with other individuals**.
 - **The donor's name is not mentioned on the bond.**
- **Associated Issues:**
 - **A Blow to Democracy:** Through an **amendment to the Finance Act 2017**, the Union government has **exempted political parties from disclosing donations received through electoral bonds**.
 - This means the voters will not know which individual, company, or organization has funded which party, and to what extent.
 - However, in a representative democracy, citizens cast their votes for the people who will represent them in Parliament.
 - **Compromising Right To Know:** The Indian Supreme Court has long held that the **"right to know"**, especially in the context of elections, is an integral part of the **right to freedom of expression (Article 19) under the Indian Constitution**.
 - **Against Free & Fair Elections:** While electoral bonds provide no details to the citizens.
 - The said anonymity does not apply to the government of the day, which can always access the donor details by demanding the data from the **State Bank of India (SBI)**.
 - This implies that the government in power can leverage this information and disrupt free and fair elections.
 - **Crony Capitalism:** The electoral bonds scheme removes all pre-existing limits on political donations and effectively allows well-resourced corporations to fund elections subsequently paving the way for crony capitalism.

Freedom of Media

Why in News

Recently, the **Editors Guild of India** has expressed **anguish over the shutting down of the Kashmir Press Club**. It held that the shutting down of the Club sets a **dangerous precedent for media freedom**.

- The **Editors Guild was founded in 1978** with the twin objectives of protecting press freedom and raising the standards of editorial leadership of newspapers and magazines.

Key Points

- **Freedom of Media & Democracy:**
 - **Free Exchange of Ideas:** A free exchange of ideas, free exchange of information and knowledge, debating and expression of different viewpoints is important for the **smooth functioning of democracy**.
 - A free press can inform citizens of their leaders' successes or failures.
 - It conveys the people's needs and desires to government bodies, making informed decisions and strengthening society as a result.
 - It promotes open discussion of ideas that allows individuals to fully participate in political life.
 - **Making Government Accountable:** Free Media makes people question the decisions of the government and make it accountable.
 - **Voice of Marginalised:** The free media by virtue of being the voice of the masses empowers them with the **right to express opinions**.
- **Thus, free media is critical in a democracy.**
 - **Fourth Pillar of Democracy:** Due to these attributes, the Media can be rightly considered as the fourth pillar of democracy, the other three being legislature, executive and judiciary.
- **Threats to Freedom of Press:**
 - **Fake News:** The government's pressure in the name of regulations, the bombardment of fake news and the influence of social media is dangerous for the occupation.
 - **Paid News:** Corruption-paid news, advertorials and fake news are threats to free and unbiased media.
 - **Attack Against Journalists:** The security of journalists is the biggest issue, killings and assaults on Journalists covering sensitive issues are very common.

Note:

- Hate speech shared and amplified on social networks are targeted against journalists using social media.
- Reports such as '**Freedom in the World 2021** (Freedom House, US)', '**2020 Human Rights Report** (US State Department)', '**Autocratisation Goes Viral** (V-Dem Institute, Sweden)' have all highlighted intimidation of journalists in India.
- **Biased Media:** Corporate and political power has overwhelmed large sections of the media, both print and visual, which lead to vested interests and destroy freedom.
- **Press Freedom in India:**
 - **Romesh Thappar v. State of Madras, 1950:** The **Supreme Court** in *Romesh Thappar v. the State of Madras* observed that freedom of the press lay at the foundation of all democratic organisations.
 - **Fundamental Right Under Article 19:** The Indian Constitution guarantees freedom of speech and expression under **Article 19**, which deals with 'Protection of certain rights regarding freedom of speech, etc.
 - **Implicit Right:** Freedom of the press is not expressly protected by the Indian legal system but it is impliedly protected under article 19(1) (a) of the constitution.
 - However, Freedom of the press is also **not absolute**.
 - A law could impose only those restrictions on the exercise of this right, it faces certain restrictions under article 19(2), which is as follows:
 - Sovereignty and integrity of India,
 - Security of the State,
 - Friendly relations with foreign States,
 - Public order, decency or morality or in
 - Contempt of court,
 - Defamation
 - Incitement to an offence.

➤ **Press Council of India (PCI)**

- It is a regulatory body established under the **Press Council of India Act of 1978**.
- It aims to preserve the freedom of the press and maintain and improve the standards of newspapers and news agencies in India.

➤ **International Initiative for Freedom of Press**

- The Paris based Reporters Without Borders (RSF) publishes annually a **World Press Freedom Index (WPI)**.
- The index evaluates the level of freedom available to the media in 180 countries, which makes the governments and authorities aware of their policies and regulations against and for freedom of the press.
 - India has been ranked at **142nd out of 180 countries** in **World Press Freedom Index, 2021**.

Hunger in India

Why in News

Recently, the Union government informed the **Supreme Court (SC)** that no starvation death (Death by Hunger) has been reported by any state or Union territory (UT) in recent years.

Key Points

➤ **The Petition:**

- The court is hearing a petition that **highlights how starvation deaths continue to eat into the right to life and dignity** of social fabric and a "**radical**" **new measure like community kitchens need to be set up across the country** to feed the poor and the hungry.
- The petition also referred to **Rajasthan's** Annapurna Rasoi, Indira Canteens in **Karnataka**, **Delhi's** Aam Aadmi Canteen, Anna Canteen of **Andhra Pradesh**, **Jharkhand** Mukhyamantri Dal Bhat and **Odisha's** Ahaar Centre.

➤ **SC's Ruling:**

- The SC asked the Centre to explore the possibility of a "**model**" **community kitchen scheme** by which it could support the States to ensure food security for the poor.
- It asked the Centre to **make a model scheme and leave it to the States to follow** the guidelines depending on their individual food habits.
- Called for the **creation of a national food grid** by the Centre which is beyond the scope of the **Public Distribution Scheme**.

Note:

Hunger in India

➤ Related Data:

- **Food and Agriculture Report, 2018** stated that **India houses 195.9 million of the 821 million undernourished people in the world**, accounting for approximately 24% of the world's hungry. Prevalence of **undernourishment in India is 14.8%**, higher than both the global and Asian average.
- It had been reported in **2017 by the National Health Survey** that approximately **19 crore people in the country were compelled to sleep on an empty stomach every night**.
- Moreover, the most alarming figure revealed is that **approximately 4500 children die every day under the age of five years in the country due to hunger and malnutrition**, amounting to over three lakh deaths every year, owing to hunger, of children alone.
- India slipped to 101st position in the **Global Hunger Index (GHI) 2021** of 116 countries, from its 2020 position of 94th.

➤ Causes of Malnutrition:

- There are multiple dimensions of **malnutrition in India** that include
 - **Calorific deficiency**- Though the government has **surplus of foodgrains**, there is calorific deficiency because the allocation and distribution is not proper. Even the yearly budget allocated is not fully utilised.
 - **Protein hunger**- **Pulses** are a major contributor to address protein hunger. However, there is not enough budgetary allocations done to tackle the problem. With Eggs missing from menus of Mid-day Meals in various States, an easy way to improve protein intake is lost.
 - **Micronutrient deficiency** (also known as **hidden hunger**): India faces a severe crisis in micronutrient deficiency. Its causes include poor diet, disease, or increased micronutrient needs not met during pregnancy and lactation.
- **Other factors:**
 - Poor access to **safe drinking water** and
 - Poor access to **Sanitation** (especially toilets),
 - Low levels of **immunisation** and
 - Education, especially of women.

➤ Government Interventions

- **Eat Right India Movement:** An outreach activity organised by the **Food Safety and Standards Authority of India (FSSAI)** for citizens to nudge them towards eating right.
- **POSHAN Abhiyan:** Launched by the **Ministry of Women and Child Development** in 2018, it targets to reduce stunting, undernutrition, anaemia (among young children, women and adolescent girls).
- **Pradhan Mantri Matru Vandana Yojana:** A **centrally sponsored scheme** executed by the Ministry of Women and Child Development, is a maternity benefit programme being implemented in all districts of the country with effect from 1st January, 2017.
- **Food Fortification:** Food Fortification or Food Enrichment is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content.
- **National Food Security Act, 2013:** It legally entitled up to 75% of the rural population and 50% of the urban population to receive subsidised food grains under the **Targeted Public Distribution System**.
- **Mission Indradhanush:** It targets children under 2 years of age and pregnant women for immunisation against 12 Vaccine-Preventable Diseases (VPD).
- **Integrated Child Development Services (ICDS) Scheme:** Launched in 1975, the ICDS Scheme offers a package of six services to children in the age group of 0-6 years, pregnant women and lactating mothers.

Open Data Week

Why in News

Recently, the **Ministry of Housing and Urban Affairs (MoHUA)** has announced the initiation of the **Open Data Week** to encourage the adoption of open data and promote innovation across India's urban ecosystem.

- It is being conducted during the third week of January, i.e., **from 17th January 2022 to 21st January 2022**.
- The idea is to provide a platform that offers ample opportunities on how to continue creating and promoting the use of data that **addresses complex urban issues**, such as the ongoing **Covid-19 pandemic**.

Note:



Key Points

➤ About Open Data:

- Open data is data that can be **freely used, re-used and redistributed by anyone** – subject only, at most, to the requirement to attribute and share alike. It can be understood under three broad categories:
 - **Availability and Access:** It is easily available at a minimal cost. It should also be available in a usable form.
 - **Re-use and Redistribution:** It is made available without any restriction on re-use and redistribution.
 - **Universal Participation:** Anyone and everyone can access and/or re-use it. There should be no discrimination against a person or group based on any criteria.

➤ Advantages of Open Data in Urban Planning:

- **Transparency:** Greater transparency and integrity of the public sector. It enhances the possibility to **track public money flows and market insights**.
- **Multi-dimensional Correlation:** It illuminates the **current and historical trends**, which can be correlated with information on **social, political, and environmental climates**.
- **Action-Oriented Approach:** It provides the ability to **recognize, respond to, or even predict changes in real-time**.
 - Estimates of the impact of different types of change through modeling and simulation, and the ability to test those predictions with a **high accuracy** depending on the amount of data available.
 - Increased productivity via the streamlining of processes and services, by allowing the **easy identification of inefficient or ineffective practices**.
- **Environmental Sustainability:** Reduction of **environmental impact** by simplifying the identification of its sources, and by aiding in the compliance of existing projects, services and infrastructure with environmental regulations.
- **Tailored solutions:** Allowing similar problems to be addressed across different legal frameworks and different demographics.
- **Democratization of Data:** It will allow information to be accessible to the average end-user.

- It describes a methodological framework of values and actions that benefit and minimize any harm to the public or the typical user.

National Commission for Safai Karamcharis

Why in News

The Union Cabinet has approved the **extension of the tenure of the National Commission for Safai Karamcharis (NCSK) for three years beyond 31st March, 2022**.

- The major beneficiaries would be the Safai Karamcharis and identified manual scavengers in the country.
- **Manual scavenging** is defined as “the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers”.

Key Points

➤ About:

- The NCSK was established in the year 1993 as per the provisions of the **NCSK Act 1993** to give its recommendations to the Government regarding specific programmes for welfare of Safai Karamcharis.
 - The NCSK Act ceased to have effect from 29th February, 2004. After that the **tenure of the NCSK has been extended as a non-statutory body** from time to time through resolutions.
- It studies and evaluates the existing welfare programmes for Safai Karamcharis, investigates cases of specific grievances etc.
- As per the provisions of the **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**, the NCSK has been assigned the work to monitor the implementation of the Act, tender advice for its effective implementation to the Center and State Governments and enquire into complaints regarding contravention/non-implementation of the provisions of the Act.
- The Chairperson and Members of the Commission undertake extensive touring of the country to study the socio-economic and living conditions of Safai Karamcharis and their dependents.
- The Commission calls for the factual reports in connection with these complaints/petitions from

Note:

the concerned authorities and impress upon them to redress the grievances of the affected Safai Karamcharis.

➤ **Status:**

- As per the **NCSK** (2020 data), a total of **631 people have died** in the country while cleaning sewers and septic tanks in the last 10 years.
 - **2019 saw the highest number of manual scavenging deaths** in the past five years. 110 workers were killed while cleaning sewers and septic tanks.
 - This is a 61% increase as compared to 2018, which saw 68 cases of such similar deaths.
- As per data collected in **2018, 29,923 people were engaged in manual scavenging in Uttar Pradesh**, making it the highest in any State in India.

➤ **Related Schemes:**

○ **Prevention of Atrocities Act:**

- In 1989, the Prevention of **Atrocities Act** became an integrated guard for sanitation workers; more than 90% people employed as manual scavengers belonged to the Scheduled Caste. This became an important landmark to free manual scavengers from designated traditional occupations.

➤ **Safaimitra Suraksha Challenge:**

- It was launched by the Ministry of Housing and Urban Affairs on **World Toilet Day (19th November)** in 2020.
- The Government launched this “challenge” for all states to make sewer-cleaning mechanized by April 2021 — if any human needs to enter a sewer line in case of unavoidable emergency, proper gear and oxygen tanks, etc., are to be provided.
- **‘Swachhta Abhiyan App’:**
 - It has been developed to identify and geotag the data of insanitary latrines and manual scavengers so that the insanitary latrines can be replaced with sanitary latrines and rehabilitate all the manual scavengers to provide dignity of life to them.
- **National Safai Karamcharis Finance and Development Corporation:**
 - It is a not-for-profit company under the Ministry of Social Justice and Empowerment.

- The primary objective of this corporation is to **uplift the Safai Karamcharis, Scavengers and their dependents socially and economically.**
- **SC Judgment:**
 - In 2014, a **Supreme Court** order made it mandatory for the government to identify all those who died in sewage work since 1993 and provide Rs. 10 lakh each as compensation to their families.

Prohibition of Employment of Manual Scavengers and their Rehabilitation Act, 2013

- The Act **prohibits employment of manual scavengers, manual cleaning of sewers and septic tanks without protective equipment**, and the construction of insanitary latrines.
- No person, local authority or agency (like Municipal Corporations) should engage or employ people for hazardous cleaning of sewers and septic tanks. Mechanized cleaning of septic tanks is the prescribed norm.
- It seeks to **rehabilitate manual scavengers and provide for their alternative employment**. Each local authority, cantonment board, and railway authority is responsible for surveying insanitary latrines within its jurisdiction. They shall also construct a number of sanitary community latrines.
- Each occupier of insanitary latrines **shall be responsible for converting or demolishing the latrine** at his own cost. If he fails to do so, the local authority shall convert the latrine and recover the cost from him.
- The **Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020** has been introduced.

AntiMicrobial Resistance

Why in News

- According to the **Global Research on Antimicrobial Resistance (GRAM) report**, 1.27 million people died in 2019 as a direct result of AMR (AntiMicrobial Resistance).
- The death due to AMR is now a leading cause of death worldwide, **higher than HIV/AIDS or malaria.**
 - Most of the deaths from AMR were **caused by lower respiratory infections**, such as pneumonia, and bloodstream infections, which can lead to sepsis.

Note:

- MRSA (Methicillin-Resistant Staphylococcus Aureus) was particularly deadly, while E. coli, and several other bacteria, were also linked to high levels of drug resistance.

Key Points

➤ About:

- Antimicrobial resistance is the **resistance acquired by any microorganism (bacteria, viruses, fungi, parasite, etc.)** against antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics) that are used to treat infections.
- As a result, standard treatments become ineffective, infections persist and may spread to others.
- Microorganisms that develop antimicrobial resistance are sometimes referred to as “superbugs”.
 - The **World Health Organization (WHO)** has identified AMR as one of the top ten threats to global health.

➤ Reasons for Spread of AMR:

- The **misuse of antimicrobials in medicine and inappropriate use in agriculture.**
- **Contamination around pharmaceutical manufacturing sites** where untreated waste releases large amounts of active antimicrobials into the environment.

➤ AMR in India:

- India, with its combination of large population, rising incomes that facilitate purchase of antibiotics, high burden of infectious diseases and easy over-the-counter access to antibiotics, is an important locus for the generation of resistance genes (such genes help bacteria in surviving on being exposed to antibiotics).
- The multi-drug resistance determinant, **New Delhi Metallo-beta-lactamase-1 (NDM-1)**, emerged from this region to spread globally.
 - Africa, Europe and other parts of Asia have also been affected by multi-drug resistant typhoid originating from South Asia.
- In India, over 56,000 newborn deaths each year due to sepsis are caused by organisms that are resistant to first line antibiotics.
- A study reported by **ICMR (Indian Council of Medical Research)** from 10 hospitals showed that when Covid patients acquire drug-resistant infections in hospitals, the mortality is almost 50-60%.

➤ Measures Taken to Address AMR (India):

- **National Programme on AMR containment:** Launched in 2012. Under this programme, AMR Surveillance Network has been strengthened by establishing labs in State Medical College.
- **National Action Plan on AMR:** It focuses on **One Health approach** and was launched in April 2017 with the aim of involving various stakeholder ministries/departments.
- **AMR Surveillance and Research Network (AMRSN):** It was launched in 2013, to generate evidence and capture trends and patterns of drug resistant infections in the country.
- **AMR Research & International Collaboration: Indian Council of Medical Research (ICMR)** has taken initiatives to develop new drugs /medicines through international collaborations in order to strengthen medical research in AMR.
 - ICMR along with Research Council of Norway (RCN) initiated a joint call for research in antimicrobial resistance in 2017.
 - ICMR along with the Federal Ministry of Education and Research (BMBF), Germany has a joint Indo-German collaboration for research on AMR.
- **Antibiotic Stewardship Program:** ICMR has initiated antibiotic stewardship program (AMSP) on a pilot project across India to control misuse and overuse of antibiotics in hospital wards and ICUs.
 - DCGI has banned 40 Fixed Dose Combinations (FDCs) which were found inappropriate.

➤ Global Measures:

- **World Antimicrobial Awareness Week (WAAW):**
 - Held annually since 2015, WAAW is a global campaign that aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policy makers to slow the development and spread of drug-resistant infections.
- **The Global Antimicrobial Resistance and Use Surveillance System (GLASS):**
 - WHO launched the GLASS in 2015 to continue filling knowledge gaps and to inform strategies at all levels.
 - GLASS has been **conceived to progressively incorporate data** from surveillance of AMR in humans, surveillance of the use of antimicrobial medicines, AMR in the food chain and in the environment.

Note:

OBC Reservation in Local Body Polls

Why in News

- Recently, the **Supreme Court (SC)** while hearing a plea by the Maharashtra government decided to recall its December 2021 order, **which stayed 27% reservation for Other Backward Classes (OBCs) in local body elections.**
- The Supreme Court has entrusted the **Backward Classes Commission** with the responsibility of giving political reservation to OBCs in the upcoming local body elections in Maharashtra.
- Maharashtra is not the only state where OBC reservation in local bodies was stayed. **In December 2021, the top court passed a similar order for the Madhya Pradesh government,** directing the OBC seats to be notified as general category for failing to comply with the three-test criteria (as stated in the 2010 judgement).
 - Likewise, the Madhya Pradesh government has filed a similar application, claiming to have 51% OBC population in the state.

Key Points

- **Background:**
 - In March 2021, the SC asked the state government to comply with triple conditions — **setting up a dedicated commission for collecting empirical data on the OBC population, specifying the proportion of reservation and ensuring that the cumulative share of reserved seats don't breach 50% of total seats.**

THE GIST

- The apex court's latest order in *Rahul Ramesh Wagh v. State of Maharashtra & Ors.* makes it mandatory that the principles laid down by the Supreme Court for providing reservation to OBCs in local bodies shall be followed across the country.
- A five-judge Constitution Bench in the *K. Krishnamurthy (Dr.) v. Union of India (2010)* judgment said that barriers to political participation are not the same as barriers to education and employment.

Though reservation to local bodies is permissible, the top court declared that the same is subject to three conditions: 1) to set up a dedicated Commission to conduct empirical inquiry into the nature of the backwardness in local bodies, 2) to specify the proportion of reservation required to be provisioned local body-wise 3) such reservation shall not exceed aggregate of 50% of the total seats reserved for SCS/STS/OBCs taken together.

- Maharashtra had constituted a Commission to ascertain the backwardness of OBCs in June 2021- But without waiting for an empirical report, an ordinance was promulgated to amend the Maharashtra Zilla Parishads Act, Panchayat Samitis Act and the Maharashtra Village Panchayat Act so as to conduct local body elections with OBC reservation. This was struck down by the Supreme court.
 - Following the SC order, the government appointed the **dedicated commission for empirical data of OBCs and also promulgated an ordinance** to give up to 27% reservation to the OBCs in local bodies without exceeding the 50% ceiling limit of the reservation.
 - However, the apex court **stayed it in December 2021, saying it cannot be implemented without the empirical data,** and asked the State Election Commission (SEC) to **convert the OBC seats into the general category and hold the elections.**
- **Plea:**
 - The Maharashtra government claimed that the top court's December order would result in two adverse effects.
 - The persons belonging to **OBC are deprived of an opportunity to be elected to the elected positions through democratic process** and fulfill the aspirations of not only the residents of the OBC community but everyone else, which helps in the development of leadership quality in such communities.
 - Such inadequate representation or non-representation of OBCs is strictly contrary to the object, intent and purpose of the Constitutional scheme.
 - The state also claimed that **it had already complied with two of the three-fold test guidelines by appointing a commission and gathering data.**

Note:

- The reservation in various districts of Maharashtra is **based on the proportion of population of OBCs in the respective districts** and is not a blanket reservation of 27% in all the districts in the entire state of Maharashtra.
- As an intermediate measure to justify the 27% OBC quota in local bodies, the state referred to a sample survey which said that the distribution of OBCs in the sample size was found to be 48.6%.
- **SC's Direction:**
 - The Supreme Court directed the Maharashtra government to submit data on OBCs to the MSCBC (Maharashtra State Commission for Backward Classes) to examine its **correctness and make recommendations on their representation in elections** for the local bodies.
- **Implications:**
 - The SC's order has increased the **chances of restoring the OBC quota in the upcoming local bodies polls.**
 - The government data includes **the various surveys of the state's rural development department and urban development department** carried out in the local bodies for poverty alleviation, health and education sectors.
 - The government is likely to **refer to the data of the previous backward classes commission** and the census 2011 data as well.
 - The government should ensure proper coordination with the MSCBC and the State Election Commission (SEC) and should work together to restore the OBC quota in the local bodies.

The 2010 Judgement

- The five-judge Constitution Bench decision in *K. Krishnamurthy (Dr.) v. Union of India* (2010) wherein the Supreme Court had **interpreted Article 243D(6) and Article 243T(6), which permit reservation by enactment of law for backward classes in panchayat and municipal bodies respectively**, to hold that barriers to political participation are not the same as that of the barriers that limit access to education and employment.
- However, for creating a level playing field, reservation may be desirable as mandated by the aforementioned Articles which **provide a separate constitutional basis for reservation, as distinct from what are conceived under Article 15 (4) and Article 16 (4) which form the basis for reservation in education and employment.**

- Though reservation to local bodies is permissible, the top court declared that the same is subject to empirical finding of backwardness in relation to local bodies as fulfilled through the three tests.

Shared Parenting

Why in News

Seeking custody of a child in the event of a marriage breaking down of parents, is a very traumatic event for children. Although parents get separated after the divorce, this is not in the **"best interests of the child"**.

- The Supreme Court, in 2019, ruled that **'a child has the right to affection of both his parents'**.
- In this context, the concept of **shared parenting** can help the child. However, it is not an option in India, **due to the archaic laws.**
- **Shared parenting** is when children are brought up with the love and guidance of both parents following a separation.

Key Points

- **About 'Best Interests of the Child':**
 - India is a signatory to the **United Nations Convention on the Rights of the Child (UNCRC).**
 - The definition of **"best interests of the child"** has been incorporated from the UNCRC in the **Juvenile Justice (Care and Protection of Children) Act, 2015.**
 - The **"best interests of the child"** means **"the basis for any decision taken regarding the child, to ensure fulfilment of his basic rights and needs, identity, social well-being and physical, emotional and intellectual development"** and is **paramount in any custody battle.**
- **Laws Determining the Custody of Children in India:**
 - **Hindu Minority and Guardianship Act (HMGA) of 1956:**
 - It states that the **natural guardian of a Hindu minor boy or unmarried girl** shall be the father and mother, provided that custody of a minor who has **not completed five years of age** shall ordinarily be with the mother.
 - However, the HMGA does not contain any independent, legal or procedural mechanism for **deciding custody rights or declaring court-appointed guardians.**

Note:

- **Guardian and Wards Act of 1890 (GWA):**
 - This deals with the appointment of a person as a ‘guardian’ to a child, both with respect to the child and property.
 - Child custody, guardianship and visitation issues between parents are determined under the GWA, if a natural parent wants to be declared as an exclusive guardian to his/her own child.
 - Upon disputes between parents in a petition under the GWA, read with the HMGA, guardianship and custody can be vested with one parent with visitation rights to the other parent.
 - In doing so, the welfare of the minor or “best interests of the child” shall be of paramount consideration.
- **Related Supreme Court Judgments:**
 - In 2017, in *Vivek Singh v. Romani Singh*, the Supreme Court highlighted the concept of **Parental Alienation Syndrome**.
 - It refers to the unjustified disdain of a child towards his or her parents.
 - The judgement underlined its “psychological destructive effects”.
 - In 2019, the Supreme Court of India held in *Lahari Sakhamuri v. Sobhan Kodali* that the “best interests of the child” is wide in its connotation and “cannot remain the love and care of the primary care, i.e., the mother in case of an infant or the child who is only a few years old.”
- In 2022, the Supreme Court in *Vasudha Sethi v. Kiran V. Bhaskar* held that a **child’s welfare, not the individual or personal legal right of the parents**, is of paramount concern in a custody battle. Welfare of the child must take precedence over the parents’ rights.
- **Legal Opinion on Shared Parenting:**
 - The Law Commission of India Report in 2015, on Reforms in Guardianship and Custody Laws in India, recommended **joint custody and shared parenting**.
 - It disagreed with the idea of singular child custody with one parent.
 - It made exhaustive recommendations for amendments in the HMGA and GWA for joint custody and for guidelines for such custody, child support, and visitation arrangements.
 - **Report 263 of the Law Commission of India**, titled **The Protection of Children (Inter-Country Removal and Attention) Bill, 2016**, recommended a draft Bill for protecting the “best interests of the child” relating to custody as per the UNCRC.
 - The report of the **Justice Bindal Committee**, submitted to the Government in 2018, also said that “best interests of the child” are of paramount importance in matters relating to child custody in view of the UNCRC.



Note:

Economic Scenario

Highlights

- RBI's Approval Pending for the Bad Bank
- Counterproductive High Tariffs on Electronic Components
- ILO World Employment and Social Outlook Trends 2022
- Design Linked Incentive for Semiconductors
- K-Shaped Economic Recovery
- Great Resignation
- National Startup Awards 2021
- Design Linked Incentive for Semiconductors
- National Technical Textiles Mission
- Cage Culture in Aquaculture
- Forex Reserves
- Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector- Phase-II

RBI's Approval Pending for the Bad Bank

Why in News

The **Reserve Bank of India's (RBI's)** approval for the implementation of the proposal for setting up a '**Bad Bank**' is still pending.

- In **September 2021**, the Union Cabinet approved the Rs. 30,600 crore guarantee to back Security Receipts issued by **National Asset Reconstruction Company Limited (NARCL) for acquiring stressed loan assets.**

Key Points

- **NARCL & IDRCL:**
 - The NARCL has been set up and issued a license by the RBI to conduct business as an **Asset Reconstruction Company (ARC)**.
 - NARCL will acquire stressed assets worth about Rs 2 lakh crore from various commercial banks in different phases.
 - Public Sector Banks (PSBs) will maintain 51% ownership in NARCL.
 - Simultaneously, a separate company has been set up to function as an Asset Management Company, named **India Debt Resolution Company Limited (IDRCL), which will provide management and resolution of assets** and also help in the operational aspects, relating to price discovery and aim at evolving the best possible recovery and the resolution process.

- PSBs and Public Financial Institutes (FIs) will hold a maximum of 49% stake in IDRCL. The remaining 51% stake will be with private-sector lenders.
- The **NARCL is majorly owned by public sector banks with 51% ownership** but in the case of the **IDRCL, 51% shares are in private hands.**
- **Functioning of the Dual Structure:**
 - The **NARCL will first purchase bad loans from banks.**
 - It will pay **15% of the agreed price in cash** and the remaining **85% will be in the form of "Security Receipts"**.
 - When the assets are sold, with the help of IDRCL, the **commercial banks will be paid back the rest.**
 - If the bad bank is unable to sell the bad loan, or has to sell it at a loss, **then the government guarantee will be invoked.**
 - The difference between what the commercial bank was supposed to get and what the bad bank was able to raise will be paid from the Rs 30,600 crore that has been provided by the government.
 - This **guarantee is extended for a period of five years.**
- **Demand of Indian Banks:**
 - Normally, a **single entity to be held accountable as owner, and for recovery of the assets**, is the practice followed across geographies.
 - Possibly a 'Principal and Agent mechanism' or similar arrangement may evolve to resolve this issue.

Note:

- The **Indian Banks' Association** is learnt to have **wanted a dual structure**, with the AMC as a privately held entity, to be out of the purview of the regulatory entities.
- **RBI's Reservation:**
 - RBI is **not inclined to permit a dual structure** in which one entity acquires **non-performing loans** and another reaches a **resolution**. It has now indicated that **both the acquisition and resolution should be housed under the same legal entity**.
 - The impediments include **issues arising from the ownership structure and operational mechanism**, with the proposed setting up of two separate entities — the **NARCL and the IDRCL**.

Bad Bank

- **About:**
 - The bad bank is an **ARC or an Asset Management Company (AMC)** that takes over the bad loans of commercial banks, manages them and finally recovers the money over a period of time.
 - The bad bank is **not involved in lending and taking deposits**, but helps commercial banks clean up their balance sheets and resolve bad loans.
 - The takeover of bad loans is normally below the book value of the loan and the **bad bank tries to recover as much as possible subsequently**.
- **Effect of Bad Bank:**
 - **Commercial Banks' Perspective:** Commercial banks are saddled with high NPA (Non-Performing Assets/loans) levels, setting up of the Bad bank will help.
 - That's because **such a bank will get rid of all its toxic assets**, which were reducing its profits, in one quick move.
 - When the recovery money is paid back, it will further **improve the bank's position**. Meanwhile, it can start lending again.
 - **Government and Taxpayer Perspective:** Whether it is recapitalising PSBs laden with bad loans or giving guarantees for security receipts, the money is coming from the taxpayers' pocket.
 - While recapitalisation and such guarantees are often designated as "reforms", they are band aids at best.
 - The only **sustainable solution is to improve the lending operation in PSBs**.

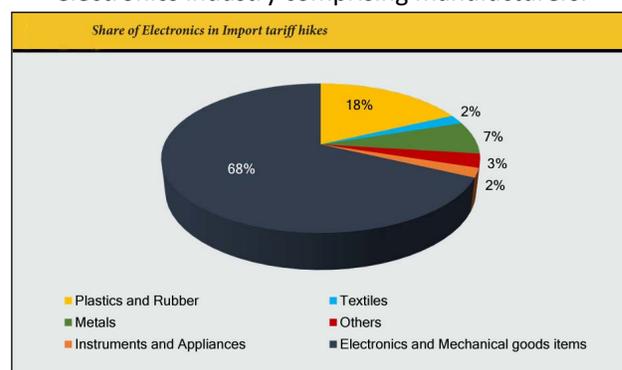
- The plan of bailing out commercial banks will collapse if the bad bank is unable to sell such impaired assets in the market. **The burden indeed will fall upon the taxpayer.**

Counterproductive High Tariffs on Electronic Components

Why in News

Recently, a report by the **Indian Cellular and Electronics Association (ICEA)** has said that India's policy of adopting **high tariffs on the import of electronics components** may prove to be **counterproductive**.

- **ICEA** is the apex industry body of the mobile and electronics industry comprising manufacturers.



Key Points

- **High Tariffs:**
 - India has adopted high tariffs on the import of electronics components **to reduce risks from global competition and save domestic companies**.
 - However, it may prove to be counterproductive to its schemes aimed at increasing domestic production of electronic products.
- **India vs Other Nations:** All the countries have tried to **encourage the domestic production of electronic goods in their geographies by adopting almost similar strategies** such as attracting **Foreign Direct Investment (FDI)**, improving domestic capabilities and competitiveness, increasing exports and then linking their markets with global value chains.
 - **China:** Since 1980 **China has improved its ranking in terms of office and telecom equipment export from 35 to 1**, while **Vietnam**, which did not export any such electronic products up until 1990s has **climbed the ladder to become the eight largest export** in just 20 years.

Note:



- **Mexico:** Similarly, **Mexico**, which was 37th in terms of electronics product export in the 1980s has steadily **risen through the ranks to gain 11th place**, a position it has maintained over the last two decades.
- **Thailand:** It ranked 45 in 1980, has also **consolidated its position in the top 15 electronic product exporters**, according to the report.
- **India:** On the other hand, **India, which started at 40th position in the 1980s** has gained and lost positions to reach **28th position by 2019**.
- **High Tariffs and India's Loss:**
 - Though all the countries followed nearly the same policy to boost domestic electronics manufacturing, **one major difference between India and the rest of the countries was heavy reliance on tariffs**.
 - It is **due to such high tariffs that investors and electronic component makers from global markets shy away from India** as a market since the participation of the country in **global value chains** has remained low.
 - Further, despite the size of the Indian economy, **its participation in exports and international trade has remained low**.
 - Even for the domestic markets, **the assumption that it will be beneficial to most companies since it is large and growing is wrong**.
 - **For example**, in the case of mobile phones, where one of the largest PLI schemes is currently operational, the size of the domestic market is expected to increase to USD 55 billion by 2025-26, whereas the global market is expected to reach USD 625 billion by the same time.
 - Thus, at present, **the Indian domestic market is about 6.5% of the global market**, with a possibility of growing to 8.8%, if the growth forecasts are reasonably robust.
 - At present, **India's market share is not attractive enough for FDI to choose India as a location** primarily on the basis of its domestic market per se, especially if India's policies result in cost inefficiencies which create obstacles to accessing a much larger global market.
- **Counterproductivity of PLI Scheme:**
 - One of the major reasons why the report concluded that a high tariff on the import of electronic

components may end up undoing the gains of **Production Linked Incentive (PLI) schemes** is that companies which have extensive global value chains are reluctant to enter India when tariffs for components are high.

- While the large electronics markets of India may look attractive, they are very small in global terms. Moreover, **India does not produce about 50% of the components on which tariff has been increased**. Hence the impact of tariffs is likely to be adverse on India's competitiveness.
- Although globally companies such as the US are increasing tariffs on the import of electronic components, **India must keep its tariff at a bare minimum to ensure it remains competitive** among its peers in the Asian neighbourhood.
- **Related Initiatives:**
 - **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)**.
 - **Modified Electronics Manufacturing Clusters (EMC 2.0) Scheme**.
 - **National Policy on Electronics 2019**.

India's Electronic Sector

- The Indian electronics sector is **tremendously growing with the demand expected to cross USD 400 billion by 2023-24**.
- Domestic **production has grown from USD 29 billion in 2014-15 to nearly USD 70 billion in 2019-20 (Compounded Annual Growth Rate of 25%)**.
- Most of this production takes place in the final assembly units (last-mile industries) located in India and focussing on them would help develop deep backward linkages, thus inducing industrialisation.
 - This was an **idea propounded by economist Albert O Hirschman in his theory of 'Unbalanced Growth'**.
- The **Economic Survey 2019-20** also promoted this idea and suggested "assembly in India for the world", especially in "networked products", in a bid to create four crore well-paid jobs by 2025 and eight crore jobs by 2030.

Note:

ILO World Employment and Social Outlook Trends 2022

Why in News

Recently, the **International Labour Organisation (ILO)** released a report titled **World Employment and Social Outlook - Trends (WESO Trends) 2022**.

- The Outlook remains fragile because the **future path of the pandemic remains uncertain**.
- The WESO Trends includes **comprehensive labour market projections** for 2022 and 2023. It gives assessments of how labour market recovery has unfolded worldwide, reflecting different national approaches to pandemic recovery and analysing the effects on different groups of workers and economic sectors.

Key Points

- **Unemployment:**
 - Global **unemployment** is expected to **remain above pre-Covid-19 levels** until at least 2023.
 - The **2022 level is estimated at 207 million**, compared to 186 million in 2019.
- **Global Working Hours:**
 - In 2022, it will be almost **2% below their pre-pandemic level** — that is equivalent to the loss of 52 million full-time jobs. This deficit is twice as large as the ILO's forecast in 2021.
- **Global Labour Force Participation:**
 - It is estimated that in 2022 **around 40 million people will no longer be participating** in the global labour force.
- **Regional Differences:**
 - The impact has been **particularly serious for developing nations** that experienced higher levels of inequality, more divergent working conditions and weaker social protection systems even before the pandemic.
 - Many low and middle-income countries have **low access to vaccines and limited scope to expand government budgets** to address the crisis.
- **Starkly Different Impacts:**
 - The report warns of **stark differences in the impact** that the crisis is having across groups of workers and countries – deepening inequalities within and among nations – while weakening the economic,

financial and social fabric of almost every State, regardless of development status.

- The damage is likely to **require years to repair**, with potential long-term consequences for labour forces, household incomes, and social and possibly political cohesion.
- **Different Sectors:**
 - Some sectors, such as travel and tourism have been particularly hard hit, while other sectors such as those related to information technology have thrived.
- **Impact on Women and Young Population:**
 - Women have been **worse hit by the labour market crisis** than men and this is likely to continue.
 - The **closing of education and training institutions** will have long-term implications for young people, particularly those without internet access.
- **Expected Recovery:**
 - There can be **no real recovery from this pandemic** without a broad-based labour market recovery.
 - Sustainable recovery is possible, but it must be based on the principles of decent work, including health and safety, equity, social protection, and social dialogue.
 - The new labour market forecast can be **vital for policy planning for a country like India**, where most of the work is informal, to prevent further employment losses and reductions in working hours.

International Labour Organisation

- **About:**
 - It was created in **1919**, as part of the **Treaty of Versailles** that ended World War I, to reflect the belief that universal and lasting peace can be accomplished only if it is based on social justice.
 - It became a specialized agency of the **United Nations** in 1946.
 - It is a tripartite organization, the only one of its kind bringing together representatives of governments, employers and workers in its executive bodies.
- **Members:**
 - India is a founding member of the ILO with a total 187 member States.
 - In 2020 **India assumed the Chairmanship** of the Governing Body of ILO.

Note:

- **Headquarter:**
 - Geneva in Switzerland.
- **Awards:**
 - In 1969, ILO received the **Nobel Peace Prize** for improving fraternity and peace among nations, pursuing decent work and justice for workers, and providing technical assistance to other developing nations.

Design Linked Incentive for Semiconductors

Why in News

The Ministry of Electronics and Information (MeitY) is seeking applications from 100 domestic **semiconductor** chip design firms, companies, start-ups and **Micro, Small and Medium Enterprises (MSMEs)** under its **Design Linked Incentive (DLI) Scheme**.

- The DLI scheme is part of the MeitY's **comprehensive Program for the Development of Semiconductors and Display Manufacturing Ecosystems** in the country.
- Lately, there has been an abrupt and **cascading shortage of semiconductors worldwide**.

Semiconductors

- Any of a **class of crystalline solids intermediate in electrical conductivity** between a conductor and an insulator.
- Semiconductors are employed in the manufacture of various kinds of electronic devices, including **diodes, transistors, and integrated circuits**. Such devices have found wide application because of their compactness, reliability, power efficiency, and low cost.
- As discrete components, **they have found use in power devices, optical sensors, and light emitters, including solid-state lasers**.

Key Points

- **About:**
 - Under the DLI Scheme **financial incentives and design infrastructure support will be extended to domestic companies, startups and MSMEs**.
 - The incentives **will be provided across various stages of development and deployment of**

semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design **for over a period of 5 years**.

- **Eligibility:**
 - The approved applicants that claim incentives under the scheme will be encouraged to **retain their domestic status** (i.e., more than 50% of the capital in it is beneficially owned by resident Indian citizens and/ or Indian companies, which are ultimately owned and controlled by resident Indian citizens) for a **period of three years** after claiming incentives under the scheme.
 - An **applicant must meet the Threshold and Ceiling Limits** to be eligible for disbursement of incentives under the Scheme.
 - A **dedicated portal** has also been made available.
- **Aim:**
 - To **nurture at least 20 domestic companies** involved in semiconductor design and facilitate them to achieve turnover of more than Rs.1500 Crore in the next 5 years.
- **Approach:**
 - The DLI Scheme will also take a **graded and pre-emptive approach** to Identify the Products of national priorities and implement strategies for their complete or near complete indigenisation & deployment thereby taking steps towards the import substitution & value addition in strategic & societal sectors.
- **Nodal Agency:**
 - **C-DAC (Centre for Development of Advanced Computing)**, a scientific society operating under MeitY, will serve as the nodal agency for implementation of the DLI scheme.
- **Components of DLI:** The scheme has three components – Chip Design infrastructure support, Product Design Linked Incentive and Deployment Linked Incentive:
 - **Chip Design Infrastructure Support:** Under this, **C-DAC will set up the India Chip Centre to host the state-of-the-art design infrastructure** (viz. EDA Tools, IP Cores and support for MPW (Multi Project Wafer fabrication) & post-silicon validation) and **facilitate its access to supported companies**.
 - **Product Design Linked Incentive:** Under this, **a reimbursement of up to 50% of the eligible expenditure subject to a ceiling of Rs.15 Crore**

Note:

per application will be provided as fiscal support to the approved applicants who are engaged in semiconductor design.

- **Deployment Linked Incentive:** Under this, an incentive of 6% to 4% of net sales turnover over 5 years subject to a ceiling of Rs.30 Crore per application will be provided to approved applicants whose semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design are deployed in electronic products.
- **Related Initiatives:**
 - **For Semiconductor Fabs and Display Fabs:**
 - Government would provide fiscal support of up to 50% of the project cost for setting up semiconductor and display fabrication units.
 - **Semi-conductor Laboratory (SCL):**
 - MeitY will take requisite steps for modernization and commercialization of Semi-conductor Laboratory (SCL).
 - **For Compound Semiconductors:**
 - Government will support fiscal support of 30% of capital expenditure to approved Compound Semiconductors units.
 - **India Semiconductor Mission:**
 - In order to drive the long-term strategies for developing a sustainable semiconductors and display ecosystem, a specialised and independent India Semiconductor Mission (ISM) will be set up.
 - **Production Linked Incentives:**
 - Incentive support to the tune of Rs.55,392 crore (7.5 billion USD) have been approved under **Product Linked Incentive (PLI)** for Largest Scale Electronics Manufacturing, PLI for IT Hardware, SPECS Scheme and Modified **Electronics Manufacturing Clusters** (EMC 2.0) Scheme.

Centre for Development of Advanced Computing

- C-DAC is the premier Research & Development organisation of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas.
- India's first supercomputer **PARAM 8000** was indigenously built (in 1991) by the Centre for Development of Advanced Computing.

K-Shaped Economic Recovery

Why in News

According to the latest round of **ICE360 Survey 2021**, K-shaped recovery emerges from the economy hit by the coronavirus pandemic.

- The survey was conducted by **People's Research on India's Consumer Economy (PRICE)**, a Mumbai-based think-tank.
- The survey, between **April and October 2021**, covered 2,00,000 households in the first round and 42,000 households in the second round.

Key Points

- **Effect on Annual Income:**
 - The **annual income of the poorest 20%** of Indian households, constantly rising since 1995, **plunged 53%** in the pandemic year 2020-21 from their levels in 2015-16.
 - In the same five-year period, the **richest 20% saw their annual household income grow 39%** reflecting the sharp contrast Covid's economic impact has had on the bottom of the pyramid and the top.

HOW COVID DEEPENS DISTRESS, DIVIDE

	Widening disparity in annual household income (₹ lakh)		
	2015-16	2020-21	Change (%)
Q1 (Poorest 20%)	1.37	0.65	-52.6 ▼
Q2 (Lower middle 20%)	1.85	1.25	-32.4 ▼
Q3 (Middle 20%)	2.25	2.05	-8.9 ▼
Q4 (Upper middle 20%)	3.01	3.22	7.0 ▲
Q5 (Richest 20%)	5.26	7.31	39.0 ▲
All-India average	2.98	3.23	8.4 ▲
Total personal disposable income of households (₹ bn)	83,574	99,184	18.7 ▲

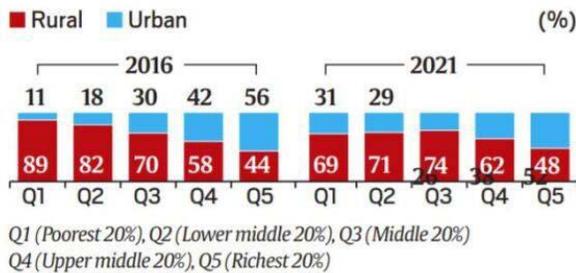
*Q is quintile and is obtained by dividing population into five equal slabs of 20% each;

- **Urban Poor Most Hit:**
 - The survey shows that the **pandemic hit the urban poor most** and eroded their household income.
 - This resulted in job losses and loss of income for the casual labour, petty traders and household workers.
 - The pandemic brought economic activity to a standstill for at least two quarters in 2020-21 and resulted in a **7.3% contraction in GDP in 2020-21**.

Note:



RURAL - URBAN SPLIT OF EACH INCOME SLAB



➤ Rise in the Share of Poor in Cities:

- While **90% of the poorest 20% in 2016**, lived in rural India, that number had dropped to **70% in 2021**.
- On the other hand, the share of the **poorest 20% in urban areas** has gone up from around **10% to 30% now**.

➤ View of Economist on K Shaped Recovery:

- The government **needs to do more to prevent a K-shaped recovery** of the economy hit by the coronavirus pandemic.
- The Indian economy has **“some bright spots and a number of very dark stains”** and the government should target its spending **“carefully”** so that there are no huge deficits.
 - The bright spots are the **health of large firms**, the roaring business the IT and IT-enabled sectors are doing, including the **emergence of unicorns** in a number of areas, and the strength of some parts of the financial sector.
 - The “dark stains” are the extent of **unemployment and low buying power**, especially amongst the lower middle-class, the financial stress small and medium-sized firms are experiencing, “including the very tepid credit growth, and the tragic state of the schooling”.

Economic Recovery

➤ About:

- It is the business cycle stage following a **recession** that is characterized by a sustained period of improving business activity.
- Normally, during an economic recovery, GDP grows, incomes rise, and unemployment falls and as the economy rebounds.

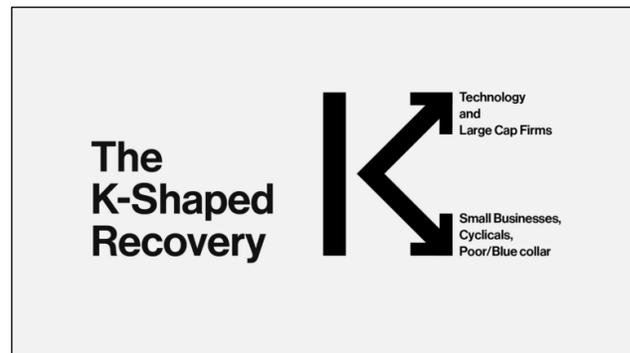
➤ Types:

- Economic recovery can take many forms, which is depicted using alphabetic notations. For example,

a **Z-shaped recovery, V-shaped recovery, U-shaped recovery, elongated U-shaped recovery, W-shaped recovery, L-shaped recovery** and K-shaped recovery.

➤ K-Shaped Recovery:

- A K-shaped recovery occurs when, following a recession, **different parts of the economy recover at different rates, times, or magnitudes**. This is in contrast to an even, uniform recovery across sectors, industries, or groups of people.
- A K-shaped recovery **leads to changes in the structure of the economy** or the broader society as economic outcomes and relations are fundamentally changed before and after the recession.
- This type of recovery is called **K-shaped** because the path of different parts of the economy when charted together may diverge, resembling the two arms of the Roman letter “K.”



Great Resignation

Why in News

Recently, in the aftermath of **Covid-19**, large numbers of people are embracing the credo of **“antiwork”**, and walking out of their jobs, **especially in the US and European countries**.

- A record 4.3 million people resigned in August 2021, up 2,42,000 from July, according to the **US Bureau of Labor Statistics (BLS)**.
- The **American psychologist Anthony Klotz** has called it the **“Great Resignation”** — a call to remap priorities in the work-life equation.

Key Points

➤ Impact of Covid:

- While those opting out of work include, **prominently, employees in the retail and hospitality sectors**, many were willing to **switch jobs or to re-evaluate their options**.

Note:

- Many countries in Central and Eastern Europe, have recorded a **fall in the skilled labour force**.
 - However, this could be due to stronger social safety nets.
- Living through and surviving pandemic lockdowns nudged many to see “**work-free” living as a viable option**.
- **Significance of Great Resignation:**
 - **Grievances** about low pay, unrealistic deadlines and bad bosses bubbled up from subconscious depths to feed the impulse.
 - This also means that these workers have **market values** beyond their existing employers.
 - They are relying on their experience and contacts to bag better job opportunities or choose start-ups.
 - There is a general apprehension that **not enough capital allocation** has been made in **capacity building**.
- **Indian Scenario:**
 - Due to the **absence of social security and unemployment benefits**, there are no such phenomena in India.
 - The luxury of walking out of jobs was not available to most in India.
 - However, **remote working** has made it possible for corporates and employees to have **flexible work models**.
 - Due to this, the **jobs are moving towards people** in tier II and tier III cities. Thereby, making a shift in **India’s spatial economy**.
 - Also, **work-from-home** has triggered changes in the demand structure in the market.
 - Further, Indians are switching their jobs in the IT and ITeS sectors.
 - Several start-ups have become **unicorns** and many are hiring in bulk and are ready to pay significantly higher.

National Startup Awards 2021

Why in News

Recently, the Union Minister of Commerce & Industry presented the **second edition of National Startup Awards 2021**.

- It was also announced that **16th January (Startup India Initiative was launched on this day in 2016)** will be celebrated as **National Start-up Day**, to take the Startup culture to the far flung areas of the country.
- The ‘**Blockchain-enabled verification** for Department for Promotion of Industry and Internal Trade (DPIIT) tax incentive certificates’, ‘**Digilocker** enabled DPIIT Startup recognition certificate’ were also launched.

Startup India Initiative

- It envisages **building a robust Startup ecosystem in the country** for nurturing innovation and providing opportunities to budding entrepreneurs. It was launched in 2016.
- The action plan of this initiative focuses on following three areas:
 - Simplification and Handholding.
 - Funding Support and Incentives.
 - Industry-Academia Partnership and Incubation.

Key Points

- **Designed by:**
 - Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry.
- **Aim:**
 - To recognize and reward outstanding Startups and ecosystem enablers that are building innovative products or solutions and scalable enterprises, with high potential of employment generation or wealth creation, demonstrating measurable social impact.
- **2021 Awards:**
 - The second edition of the awards invited applications across **15 sectors and 49 sub-sectors**.
 - The 2021 edition of the awards also recognized exceptional Startups innovating solutions to promote Indic languages and to compliment national efforts to combat **Covid-19 pandemic**.
 - All applicants were **evaluated against six broad parameters** namely Innovation, Scalability, Economic Impact, Social Impact, Environmental Impact, and Inclusiveness and Diversity.
- **Prize:**
 - The winning startup founders will get a cash prize of Rs. 5 lakh and an opportunity to present

Note:

their solutions to relevant public authorities and corporates. Incubators and accelerators will get Rs. 15 lakh as the winning amount.

- 46 startups along with 1 incubator and 1 accelerator were honoured with the award.

Status of Start-ups in India

➤ About:

- Today, India is the **third largest start-up ecosystem globally** (by number of start-ups) with more than 15,000 start-ups established in 2020, up from 5000 in 2010.
- The underlying enablers of this startup ecosystem include smartphone and internet penetration, **cloud computing, application programming interfaces (APIs)**, and a national payments stack in place.
- Additionally, amid the **Covid-19 pandemic**, India has witnessed more number of **Unicorn startups (startups having valuation of over USD1 billion) in just 2021** than it did in the period 2011-20.
- However, still there are many challenges (Building and Scaling an Indian Startup, Diversity and the **Digital Divide**, Complex Regulatory Environment) that act as a hindrance in realising the true potential of startups in India.

➤ Other Related Initiatives:

- **Ranking of States on Support to Startup Ecosystems:** It is an evolved evaluation tool aimed to strengthen the support of States and UTs to holistically build their startup ecosystems.
- **SCO Startup Forum:** The first-ever **Shanghai Cooperation Organisation (SCO)** Startup Forum was launched in October 2020 to develop and improve startup ecosystems collectively.
- **Prarambh:** The 'Prarambh' Summit aims to provide a platform to the startups and young minds from around the world to come up with new ideas, innovation and invention.
- **Startup India Seed Fund Scheme:** It aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry, and commercialization.
- **Fisheries Startup Grand Challenge:** The Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying In association with Startup India, the Ministry of Commerce and Industry inaugurated the **Fisheries Startup Grand Challenge**.

Design Linked Incentive for Semiconductors

Why in News

The Ministry of Electronics and Information (MeitY) is seeking applications from 100 domestic **semiconductor** chip design firms, companies, start-ups and **Micro, Small and Medium Enterprises (MSMEs)** under its **Design Linked Incentive (DLI) Scheme**.

- The DLI scheme is part of the MeitY's **comprehensive Program for the Development of Semiconductors and Display Manufacturing Ecosystems** in the country.
- Lately, there has been an abrupt and **cascading shortage of semiconductors worldwide**.

Semiconductors

- Any of a **class of crystalline solids intermediate in electrical conductivity** between a conductor and an insulator.
- Semiconductors are employed in the manufacture of various kinds of electronic devices, including **diodes, transistors, and integrated circuits**. Such devices have found wide application because of their compactness, reliability, power efficiency, and low cost.
- As discrete components, **they have found use in power devices, optical sensors, and light emitters, including solid-state lasers**.

Key Points

- **About:**
 - Under the DLI Scheme **financial incentives and design infrastructure support will be extended to domestic companies, startups and MSMEs**.
 - The incentives **will be provided across various stages of development and deployment of semiconductor design** for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design **for over a period of 5 years**.
- **Eligibility:**
 - The approved applicants that claim incentives under the scheme will be encouraged to **retain their domestic status** (i.e., more than 50% of the capital in it is beneficially owned by resident Indian citizens and/ or Indian companies, which

Note:

are ultimately owned and controlled by resident Indian citizens) for a **period of three years** after claiming incentives under the scheme.

- An **applicant must meet the Threshold and Ceiling Limits** to be eligible for disbursement of incentives under the Scheme.
 - A **dedicated portal** has also been made available.
- **Aim:**
 - To **nurture at least 20 domestic companies** involved in semiconductor design and facilitate them to achieve turnover of more than Rs.1500 Crore in the next 5 years.
- **Approach:**
 - The DLI Scheme will also take a **graded and pre-emptive approach** to Identify the Products of national priorities and implement strategies for their complete or near complete indigenisation & deployment thereby taking steps towards the import substitution & value addition in strategic & societal sectors.
- **Nodal Agency:**
 - **C-DAC (Centre for Development of Advanced Computing)**, a scientific society operating under MeitY, will serve as the nodal agency for implementation of the DLI scheme.
- **Components of DLI:** The scheme has three components – Chip Design infrastructure support, Product Design Linked Incentive and Deployment Linked Incentive:
 - **Chip Design Infrastructure Support:** Under this, **C-DAC will set up the India Chip Centre to host the state-of-the-art design infrastructure** (viz. EDA Tools, IP Cores and support for MPW (Multi Project Wafer fabrication) & post-silicon validation) and **facilitate its access to supported companies.**
 - **Product Design Linked Incentive:** Under this, **a reimbursement of up to 50% of the eligible expenditure subject to a ceiling of Rs.15 Crore per application will be provided** as fiscal support to the approved applicants who are engaged in semiconductor design.
 - **Deployment Linked Incentive:** Under this, **an incentive of 6% to 4% of net sales turnover over 5 years subject to a ceiling of Rs.30 Crore per application will be provided** to approved applicants whose semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design are deployed in electronic products.

➤ **Related Initiatives:**

- **For Semiconductor Fabs and Display Fabs:**
 - Government would provide fiscal support of up to 50% of the project cost for setting up semiconductor and display fabrication units.
- **Semi-conductor Laboratory (SCL):**
 - MeitY will take requisite steps for modernization and commercialization of Semi-conductor Laboratory (SCL).
- **For Compound Semiconductors:**
 - Government will support fiscal support of 30% of capital expenditure to approved Compound Semiconductors units.
- **India Semiconductor Mission:**
 - In order to drive the long-term strategies for developing a sustainable semiconductors and display ecosystem, **a specialised and independent India Semiconductor Mission (ISM) will be set up.**
- **Production Linked Incentives:**
 - Incentive support to the tune of Rs.55,392 crore (7.5 billion USD) have been approved under **Product Linked Incentive (PLI)** for Largest Scale Electronics Manufacturing, PLI for IT Hardware, SPECS Scheme and Modified **Electronics Manufacturing Clusters** (EMC 2.0) Scheme.

Centre for Development of Advanced Computing

- C-DAC is the **premier Research & Development organisation of the Ministry of Electronics and Information Technology (MeitY)** for carrying out R&D in IT, Electronics and associated areas.
- **India's first supercomputer PARAM 8000** was indigenously built (in 1991) by the Centre for Development of Advanced Computing.

National Technical Textiles Mission

Why in News

Recently, the Ministry of Textiles cleared 20 strategic research projects worth Rs 30 crores in the areas of **Specialty fibers and Geotextiles** under the Programme '**National Technical Textiles Mission.**'

Note:

Technical Textiles

- Technical textiles are **functional fabrics** that have applications across various industries including automobiles, civil engineering and construction, agriculture, healthcare, industrial safety, personal protection etc.
 - Technical Textile products derive their demand from development and industrialization in a country.
- Based on usage, there are **12 technical textile segments**: Agrotech, Meditech, Buildtech, Mobiltech, Clothtech, Oekotech, Geotech, Packtech, Hometech, Protech, Indutech and Sportech.
 - For example, 'mobiltech' refers to products in vehicles such as seat belts and airbags, airplane seats; geotech, which is incidentally the fastest growing sub-segment, used to hold back soil, etc.

Key Points

- **About:**
 - It was **approved in 2020 by the Cabinet Committee on Economic Affairs (CCEA)** with the aim to **position the country as a global leader in technical textiles** and increase the use of technical textiles in the domestic market.
 - It aims at taking the domestic market size from USD 40 billion to USD 50 billion by 2024.
- **Ministry:**
 - A Mission Directorate is operational in the Ministry of Textiles.
- **Components:** It will be **implemented for four years starting from 2020-2021** and has four components-
 - **First component:** It will **focus on research, development and innovation** with an outlay of Rs. 1,000 crores.
 - The research will be at both fiber level and application-based in geo, agro, medical, sports and mobile textiles and development of biodegradable technical textiles.
 - Research activities will also focus on the development of indigenous machinery and process equipment.
 - **Second component:** It will be for the **promotion and development of the market for technical textiles.**
 - **Third component:** It will **focus on export promotion** so that technical textile exports from the country reach from Rs 14,000 crores to Rs 20,000 crores

by 2021-2022 and ensure 10% average growth every year till the Mission ends.

- An **export promotion council** for technical textiles will be set up.
- **Fourth component:** It will **focus on education, training and skill development.**
 - The Mission will promote technical education at higher engineering and technology levels related to technical textiles and its application areas.
- **Scenario of Technical Textile:**
 - The growth of technical textiles in India has **gained momentum in the past five years**, currently growing at an **8% per annum rate.**
 - It is aimed to **hasten this growth to 15-20% range** during the next five years.
 - The current world market is USD 250 billion and **India's share in it is USD 19 billion.**
 - India is an aspiring player **with USD 40 billion in this market (8% Share).**
 - The **biggest players are the USA**, western Europe, China and Japan (20-40% share).
- **Initiatives Related to Technical Textile:**
 - **Production Linked Incentive (PLI) Scheme for Textiles Sector:** It aims to promote the production of high value Man-Made Fiber (MMF) fabrics, garments and technical textiles.
 - **Harmonized System of Nomenclature (HSN) Codes for Technical Textile:** In 2019, Government of India dedicated 207 HSN codes to technical textiles to help in monitoring the data of import and export, in providing financial support and other incentives to manufacturers.
 - **100% FDI under Automatic Route:** The Government of India allows 100% **Foreign Direct Investment (FDI)** under automatic route. International technical textile manufacturers such as Ahlstrom, Johnson & Johnson etc have already initiated operations in India.
 - **Technotex India:** It is a flagship event organized by the Ministry of Textiles, in collaboration with **Federation of Indian Chambers of Commerce & Industry (FICCI)** and comprises exhibitions, conferences and seminars with participation of stakeholders from across the global technical textile value chain.
 - **Amended Technology Upgradation Fund Scheme:** To improve exports and indirectly promote investments in textile machinery.

Note:

Cage Culture in Aquaculture

Why in News

The **Ministry of Fisheries, Animal Husbandry and Dairying** organised a **webinar on “Cage aquaculture in Reservoir: Sleeping Giants”** as a part of “Azadi Ka Amrit Mahotsav”.

- Department of Fisheries, GOI earmarked the investment targets for **promoting cage aquaculture under flagship scheme Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.

Key Points

- **About:**
 - Cage aquaculture involves the **growing of fishes in existing water resources while being enclosed in a net cage** which allows free flow of water.



- It is an aquaculture production system **made of a floating frame, net materials and mooring system (with rope, buoy, anchor etc.) with a round or square shaped floating net** to hold and culture large numbers of fishes and can be installed in reservoir, river, lake or sea.
- Cage farms are positioned in such a way **to utilize natural currents, which provide the fish with oxygen and other appropriate natural conditions.**
- **Factors Causing Cage Culture:**
 - Factors such as increasing consumption of fish, declining stocks of wild fishes and poor farm economy have increased interest in fish production in cages.
 - Many small or limited resource farmers are looking for alternatives to traditional agricultural crops.
 - In view of the high production attainable in the cage culture system, it can play a significant role in increasing the overall fish production in India.

➤ Significance:

- **Removes Constraints of fish farming on land:**
 - Farming of fish in an existing water body **removes one of the biggest constraints of fish farming on land**, ie., the need for a constant flow of clean, oxygenated water.
- **Least Carbon Emission:**
 - Cage culture is a low impact farming practice with high returns and **least carbon emission activity**.
- **Expanding Opportunities:**
 - Aquaculture appears to be a rapidly expanding industry and it offers opportunities even on a small scale.
- **Better Utilization of India’s long Coastline:**
 - Suitable locations in India’s long coastline, vast brackish water areas available in coastal states and other underutilized water bodies can be better utilized by adopting cage culture.
- **Offers alternative income Source:**
 - Since the investment is low and requires very little/no land area, this farming method is ideal for small-scale fisherfolks as an alternative income source.
 - This can be taken up as a household/women activity since labour involved is minimal and can be managed by a small family.
 - The design of the cage and its accessories can be tailor-made in accordance to the individual farmer’s requirements.

➤ Challenges:

- Feed to the caged fish must be nutritionally complete and kept fresh.
- Low Dissolved Oxygen Syndrome (LODOS) is an ever present problem and may require mechanical aeration.
- Fouling of the net cage.
- Vandalism or poaching is a potential problem.
- Navigation issues.
- Accumulation of unused feed and excreta will lead to water pollution as well as eutrophication.
- Change in water quality parameters.
- Conflicts within the local community.
- Predation by aquatic mammals and birds.
- Escapement.
- Overcrowding of aquatic organisms in cages.

Note:

Initiatives related to Fisheries

- **Matsya Setu**
- **Fisheries and Aquaculture Infrastructure Development Fund (FIDF).**
- **Blue Revolution**
- **Marine Products Export Development Authority (MPEDA)**
- **Kisan Credit Card (KCC)c**

Forex Reserves

Why in News

According to recent data from **Reserve bank of india (RBI)**, India's **Foreign Exchange (Forex) reserves** posted a decline of USD 678 million during the week ended 21st January 2022 to reach USD 634.287 billion.

- The slip in the reserves was on account of a **drop in the Foreign Currency Assets (FCA)**, a vital component of the overall reserves. FCA declined by USD 1.155 billion to USD 569.582 billion in the reporting week.
- **Gold reserves** saw an increase of USD 567 million to USD 40.337 billion in the reported week.
- The **Special Drawing Rights (SDRs)** with the **International Monetary Fund (IMF)** fell USD 68 million to USD 19.152 billion.

Key Points

- **Foreign Exchange Reserves:**
 - Foreign exchange reserves are assets held on reserve by a central bank in foreign currencies, which can include bonds, treasury bills and other government securities.
 - It needs to be noted that most foreign exchange reserves are held in US dollars.
 - **India's Forex Reserve include:**
 - Foreign Currency Assets
 - Gold reserves
 - Special Drawing Rights
 - Reserve position with the **International Monetary Fund (IMF)**.
- **Objectives of Holding Forex Reserves:**
 - Supporting and maintaining confidence in the policies for monetary and **exchange rate** management.

- Provides the capacity to intervene in support of the national or union currency.
- Limits external vulnerability by maintaining foreign currency liquidity to absorb shocks during times of crisis or when access to borrowing is curtailed.
- **Significance of Rising Forex Reserves:**
 - **Comfortable Position for the Government:** The rising forex reserves give comfort to the government and the RBI in managing India's external and internal financial issues.
 - **Managing Crisis:** It serves as a cushion in the event of a **Balance of Payment (BoP)** crisis on the economic front.
 - **Rupee Appreciation:** The rising reserves have also helped the rupee to strengthen against the dollar.
 - **Confidence in Market:** Reserves will provide a level of confidence to markets and investors that a country can meet its external obligations.

Foreign Currency Assets

- FCAs are assets that are **valued based on a currency other than the country's own currency.**
- FCA is the **largest component** of the forex reserve. It is expressed in dollar terms.
- The FCAs include the **effect of appreciation or depreciation of non-US units like the euro, pound and yen** held in the foreign exchange reserves.

Special Drawing Rights

- The SDR is an **international reserve asset**, created by the IMF in 1969 to supplement its member countries' official reserves.
- The SDR is neither a currency nor a claim on the IMF. Rather, it is a **potential claim on the freely usable currencies of IMF members.** SDRs can be exchanged for these currencies.
- The value of the **SDR is calculated** from a weighted basket of major currencies, **including the US dollar, the euro, Japanese yen, Chinese yuan, and British pound.**
- The interest rate on SDRs or (SDRi) is the interest **paid to members on their SDR holdings.**
- Recently, the **IMF has made an allocation of SDR 12.57 billion** (equivalent to around USD 17.86 billion) to India. Now, the total SDR holdings of India stand at SDR 13.66 billion.

Note:

Reserve Position in the International Monetary Fund

- A reserve tranche position implies a **portion of the required quota of currency each member country must provide** to the IMF that can be utilized for its own purposes.
- The reserve tranche is basically an **emergency account that IMF members can access** at any time without agreeing to conditions or paying a service fee.

Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector- Phase-II

Why in News

The **Ministry of Heavy Industries (MHI)** has notified the **Scheme on Enhancement of Competitiveness in the Indian Capital Goods Sector- Phase-II** for providing assistance to Common Technology Development and Services Infrastructure.

Key Points

- **About:**
 - The objective of Phase II of the Scheme is to **expand and enlarge the impact created by the Phase I pilot scheme**, thereby providing greater impetus through creation of a strong and globally competitive capital goods sector that contributes at least 25% to the manufacturing sector.
 - The scheme on 'Enhancement of competitiveness in the Indian Capital Goods Sector' was notified in November, 2014 to **encourage technology development and infrastructure creation**.
- **Financial Outlay:**
 - The scheme has a financial outlay of Rs. 1207 crores with Budgetary support of Rs.975 crore and Industry Contribution of Rs. 232 crore.
- **Components:**
 - Identification of Technologies through **Technology Innovation Portals**.
 - Setting up of four **New Advanced Centers of Excellence** and augmentation of Existing Centers of Excellence.
 - **Promotion of skilling in the Capital Goods Sector**—creation of Qualification packages for skill levels 6 and above.

- Setting up of four **Common Engineering Facility Centers (CEFCs)** and augmentation of existing CEFCs.
- Augmentation of Existing **Testing and Certification Centers**.
- Setting up of ten **Industry Accelerators for Technology Development**.

Indian Capital Goods Sector

- **Capital Goods:**
 - Capital goods are **physical assets that a company uses in the production process to manufacture products and services** that consumers will later use.
 - Capital goods include **buildings, machinery, equipment, vehicles, and tools**.
 - Capital goods are **not finished goods**, instead, they are used **to make finished goods**.
 - The Capital Goods sector has a multiplier effect and has bearing on the growth of the user industries as it provides critical input, i.e., machinery and equipment to the remaining sectors covered under the manufacturing activity.
- **Scenario:**
 - The capital goods industry **contributes 12% to the total manufacturing activity** which translates to about **1.8% of GDP**.
 - It provides **approximately 1.4 mn direct and 7 mn indirect jobs**.
- **Related Policies:**
 - **No industrial license** is required for the sector.
 - **FDI (Foreign Direct Investment) up to 100% permitted** on automatic route (through RBI).
 - Quantum of payment for technology transfer, design & drawing, royalty etc. to the foreign collaborator has no limit.
 - The **maximum basic customs duty rate is generally 7.5-10%**.
 - India has entered many **FTAs (Free Trade Agreements)**, in which the duty rates are even lower. Lower duty rates are also available under the Project Imports facility.
 - Exports are promoted by allowing duty free imports of raw materials, consumables, components and subassemblies through various schemes of DGFT (Directorate General of Foreign Trade), Ministry of Commerce and Industry.



Note:



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International Relations

Highlights

- Collaboration between India and UK on Food Security
- Davos Summit: World Economic Forum
- India's Trade with China
- Nord Stream Pipeline
- Second ASEAN Digital Ministers Meeting
- China-Lithuania Tensions
- India- Pakistan Joint Protocol on Religious Pilgrimages 1974
- India-Central Asia Summit
- The America COMPETES Act
- Social Housing Units Project in Mauritius
- Houthis Attack UAE
- Devas-Antrix Deal
- Army Rule in Burkina Faso
- India and Israel Relations
- India and Oman

Collaboration between India and UK on Food Security

Why in News

Recently, the Union Minister of Science & Technology addressed the **joint India-UK meet on "Sustaining Food Production under Environmental Stress"** and called for collaboration between the two nations on issues of mutual concern like achieving the goals of **Food Security** and **Zero Hunger**.



Key Points

- **Call for Global Collaborations in Various Fields:**
 - India and the UK must invite global collaborations in various dimensions of science like **agriculture, medicine, food, pharma, engineering or defence**.
 - India-UK joint collaboration may include programmes like student exchange, basic research, technology development, product development as well as product/process demonstration and their implementation in joint collaboration.
- **Issue of Shrinking Arable Land:**
 - Dwelling on the issue of **Sustainable Food Production**, the **South Asian region** is facing the shrinking arable land, besides the problem of **Global Climate Change** that needs to be addressed.
 - Arable land in South Asia was reported at 43.18% in 2018 which has been stagnant since the early 1970s and recently declining.
 - Growth yields and more intensive use of land will account for **all of the growth in crop production and will also compensate for losses** in the arable land area.
- **Improving Quality of Nutritional Foods:**
 - **NABI (National Agri-Food Biotechnology Institute)** could provide an impetus to the nations need for addressing nutritional security even under the climatic changes happening around the world.
 - NABI is a premier institute that works at the interface of Agri-Food and Nutrition Biotechnology.

Note:

- **Joint Funding to Address the Challenges:**
 - Underlining that the global pattern of food production and distribution may **need to shift significantly as climate change progresses**.
 - Need of joint funding to **develop a coherent and stakeholder-relevant R&D (Research and Development) program that will address this challenge**.

India-UK Partnership

- **About:**
 - India and the UK are vibrant democracies, with a partnership built on our shared history and rich culture.
 - The diverse Indian diaspora in the UK, which acts as a “Living Bridge”, adds further dynamism to the relations between the two countries.
 - The UK is one of the largest investors in India, among the **G20 countries**.
 - Recently, both countries have announced their intent to negotiate a comprehensive **Free Trade Agreement (FTA)**, including consideration of an interim trade agreement to deliver early gains.
 - As part of the **UK’s tilt towards the Indo-Pacific region**, the UK Carrier Strike Group (CSG) is conducting engagements with Singapore, the Republic of Korea, Japan and India.
- **Roadmap 2030:**
 - For elevating bilateral ties to a “**Comprehensive Strategic Partnership**” both Countries adopted Roadmap 2030 in 2021.
 - It provides a framework for UK-India relations across health, climate, trade, education, science and technology, and defense.
- **Security & Defence:**
 - **Cooperation on Maritime Domain Awareness:**
 - Includes invitation to the UK to join **India’s Information Fusion Centre** in Gurgaon and an ambitious exercise programme which includes joint trilateral exercises.
 - **Light Combat Aircraft Mark 2:**
 - Support India’s indigenous development of the **Light Combat Aircraft Mark 2**.
 - **Exercises:**
 - Air Force Exercise ‘**Indradhanush**’.
 - Navy Exercise **Konkan**.
 - Army Exercise ‘**Ajeya Warrior**’

- **Climate Change:**
 - India and the UK jointly launched a new flagship international initiative at the **COP26** World Leaders’ Summit in Glasgow, backed by over 80 countries, to dramatically accelerate the global transition to a clean powered world.
 - The new initiative, called ‘**Green Grids Initiative – One Sun One World One Grid**’ (**GGI-OSOWOG**), is aimed at accelerating the development and deployment of interconnected electricity grids across continents, countries and communities, and improve energy access of the poorest through mini-grids and off-grid solutions.

Davos Summit: World Economic Forum

Why in News

Recently, the **Prime Minister addressed the World Economic Forum’s (WEF) Davos Agenda** via video conferencing.

- The WEF annual meeting in Davos (Switzerland) engages the world’s top leaders to shape global, regional and industry agendas.



Key Points

- **One Earth, One Health:**
 - During the course of **Covid-19**, India saved many lives by exporting essential medicines and vaccines by **following its vision of “One Earth, One Health”**.
 - India has delivered 1154.173 lakh doses of Covid-19 vaccines to 97 countries till 31st December 2021.
 - India is the **world’s third-largest pharmaceutical producer** and is considered ‘pharmacy to the world’.

Note:

➤ Pro-Planet People (P3) Approach:

- Proposed the idea of the “P3 (Pro-Planet-People) movement” that underscores **India’s commitments to climate change at the global forum (UNFCCC COP 26)**.
 - Reiterated India’s “clean, green, sustainable, and reliable” energy goals which dwell on **achieving a net-zero carbon emission target by 2070**.
- **Making LIFE (Lifestyle for Environment - given by the Indian PM at UNFCCC COP 26 Conference) into a mass movement can be a strong foundation for P3.**
 - LIFE is a vision of a resilient and sustainable lifestyle that will come handy in dealing with the climate crisis and other unpredictable challenges of the future.
 - Throwaway culture and consumerism has enhanced the climate challenge.

➤ Reforms recently Undertaken by India:

- In physical and digital infrastructure like **optical fibre** in 6 lakh villages, 1.3 trillion dollars **invested in connectivity-related infrastructure**, the goal of generation of 80 billion dollars through asset monetization.
- **Gatishakti National Master Plan** to bring all the stakeholders on the single platform to infuse new dynamism to the seamless connectivity of goods, people and services.
- Today India has the world’s largest, **secure and successful digital payments platform**.
 - In December 2021, 4.4 billion transactions were done through **Unified Payments Interface (UPI)** in India.
- Technological solutions like **Arogya-SetuApp** for tracking of Corona Infections and **CoWinPortal** for Vaccination.

➤ India as an Investment Destination:

- Recently, various reform measures have been taken by the Government, such as the removal of **Retrospective taxation, reduction in compliance requirements** and simplification of the **Corporate Tax rate structure** making it the best Investment Destination today.
 - In the last year alone, India has reduced more than 25,000 compliances.
- Today, India has the **third largest number of unicorns in the world**. More than **10,000 start-ups have been registered** in the last six months.

- India is promoting **Ease of Doing Business, minimizing government intervention**.
- Policy-making is focussed on needs for the next 25 years for a “clean and green” as well as “sustainable and reliable” growth.

➤ Challenges before Multilateral Organizations:

- When these institutions were formed, the situation was different. Today, the circumstances are different.
- Therefore, it is the responsibility of every democratic country to emphasize reforms in these institutions so that they can **be enabled to meet the challenges of the present and future**.

➤ Collective Efforts for Challenges Ahead:

- There is a need for collective and synchronized action by every country, every global agency.
- **Supply chain disruptions, inflation and climate change** are examples of these.
- Another example is **cryptocurrency**. The kind of technology that is associated with it, the decisions taken by a single country will be insufficient to deal with its challenges.

World Economic Forum

➤ About:

- The World Economic Forum (WEF) is a **Swiss nonprofit foundation established in 1971**, based in Geneva, Switzerland.
- Recognized by the Swiss authorities as the international institution for public-private cooperation.

➤ Mission:

- Committed to **improving the state of the world by engaging business, political, academic, and other leaders of society** to shape global, regional, and industry agendas.

➤ Founder and Executive Chairman: Klaus Schwab.

➤ Some major reports published by WEF are:

- **Energy Transition Index.**
- **Global Competitiveness Report.**
- **Global IT Report**
 - WEF along with INSEAD, and Cornell University publishes this report.
- **Global Gender Gap Report.**
- Global Risk Report.
- Global Travel and Tourism Report.

Note:

India's Trade with China

Why in News

India's trade with China in 2021 crossed USD125 billion with imports from China nearing a record USD100 billion, underlining continued demand for a range of Chinese goods, particularly machinery.

- This is when the relations hit a new low due to the prolonged standoff by the militaries in eastern Ladakh.



Key Points

- **India's Biggest Exports to China:**
 - India's biggest exports to China in recent years were iron ore, cotton and other raw material-based commodities, which have seen a recovery in demand in China last year (2021).
- **India's Biggest Imports from China:**
 - India has imported large quantities of electrical and mechanical machinery, **Active Pharmaceutical Ingredients (APIs)**, auto components and, over the past two years, a range of medical supplies from oxygen concentrators to Personal Protective Equipments (PPEs).
- **Growth in Bilateral Trade:**
 - The **43% year-on-year growth in bilateral trade with India was among the highest among China's major trading partners.**
 - Trade figures with China's top three trading partners showed growth of 28.1% with **ASEAN** (to USD 878.2 billion), 27.5% with the **European Union** (to USD 828.1 billion), and 28.7% with the United States, to USD 755.6 billion.

➤ Trade Deficit with China:

- The trade deficit for India grew to USD 69.38 billion in 2021.
- India has been highlighting its concerns over the growing trade deficit with China for over a decade and calling on China to open its markets for India's IT and pharmaceutical products.
 - Trade deficit refers to a situation where the country's import dues exceed the receipts from the exports.

➤ Steps taken to Counter Dependence on China:

- **Ban on Chinese apps.**
- Increasing scrutiny of Chinese investments in many sectors, and a decision to keep Chinese companies out of **5G trials.**
- The government has also made its **prior approval mandatory for foreign investments** from countries that share land border with India to curb "opportunistic takeovers" of domestic firms - a move which will restrict FDI from China.
- To cut import dependency on China for **APIs (Active Pharmaceutical Ingredients)**, the government in March, 2020 **approved a package comprising four schemes** with a total outlay of Rs. 13,760 crore to boost domestic production of bulk drugs and medical devices in the country along with their exports.
- In 2020, the Ministry of Commerce and Industry **identified 12 sectors** - to make India a global supplier and cut import bills.
 - These sectors are food processing, organic farming, iron, aluminium and copper, agro chemicals, electronics, industrial machinery, furniture, leather and shoes, auto parts, textiles, and coveralls, masks, sanitisers and ventilators.

Current Issues in India-China Relations

➤ Military Standoff in Eastern Ladakh:

- The border standoff between India's and China's armies began in May 2020 after a violent confrontation in the **Pangong lake areas**, and both sides have gradually increased their deployment by pouring in tens of thousands of soldiers and heavy weaponry.
- On 12th January, 2022 the two sides met for the **14th round of Corps Commander-level discussions** to end the standoff in the remaining territories, and they promised to meet again shortly.

Note:

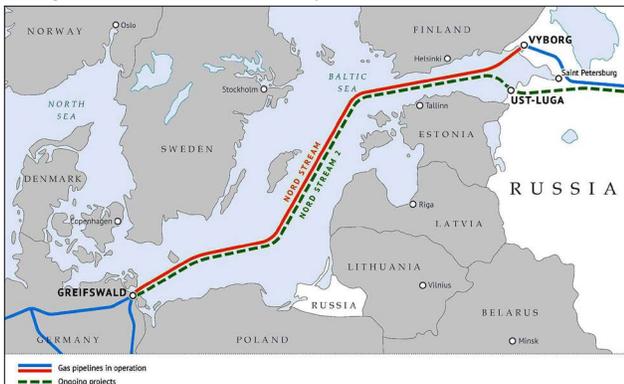
- **New Border Law:**
 - China's new law on land borders has come into effect from the new year (2022).
 - The law states among other things that China abides by treaties concluded with or jointly acceded to by foreign countries on land boundary affairs.
- **Renaming of several places in Arunachal Pradesh:**
 - Several places in Arunachal Pradesh have been renamed recently by China as part of its claim on the Indian state.
 - India condemned the move on a global scale and the country has responded with a clear statement that assigning invented names would do no good and would not alter the facts that the places are a part of Arunachal Pradesh.
- **Bridge across Pangong Lake:**
 - Recently, it was found that China is building a new bridge on **Pangong Tso** which will provide an additional axis to deploy troops faster between the north and south banks of the lake, and closer to the **LAC (Line of Actual Control)**.
 - The bridge is in their territory, and the Indian Army will have to factor this in its operational plans.

Nord Stream Pipeline

Why in News

Recently, the **US has said it will stop the Nord Stream if Russia attacks Ukraine.**

- However, European countries, led by Germany, **seemed reluctant initially to impose sanctions** on the Nord Stream due to its importance though it has now said sanctions are not off the table.
- Nord Stream, the **longest subsea pipeline**, is an **export gas pipeline** which runs under the **Baltic Sea** carrying gas from Russia to Europe.



Key Points

- **About:**
 - Nord Stream consists of two pipelines, which have two lines each.
 - Nord Stream 1 was **completed in 2011** and runs from **Vyborg in Leningrad (Russia) to Lubmin near Greifswald, Germany.**
 - Nord Stream 2 which runs from **Ust-Luga in Leningrad to Lubmin** was completed in September 2021 and has the capacity to handle 55 billion cubic meters of gas per year once it becomes operational.
 - The twin pipelines together can transport a **combined total of 110 billion cubic metres (bcm) of gas a year** to Europe for at least 50 years.
 - The Nord Stream crosses the **Exclusive Economic Zones (EEZs)** of several countries including Russia, Finland, Sweden, Denmark and Germany, and the territorial waters of Russia, Denmark, and Germany.
 - In Germany, the pipeline connects to the **OPAL (Baltic Sea Pipeline)** and **NEL (North European Pipeline)** which further connects to the **European grid.**
- **Objections to the Pipeline:**
 - **By Germany:**
 - According to environmentalists, it **does not fit in with German efforts to cut dependence on fossil fuels** and fight **climate change.**
 - Nord Stream 2 has **not yet started operating** because Germany says it **does not comply with German law** and has suspended its approval. The project is also awaiting approval from the **European Commission.**
 - **Strategic Objection:**
 - The **strategic objection**, particularly from the **U.**, is that it will make **Europe too dependent on Russia**, increasing Russia's influence in Europe.
 - Moreover, there is concern that **Russia could use it as a geopolitical weapon.**
 - Ukraine has objected because it will **lose around USD 2 billion in transit fees** once the pipeline becomes operational.
 - Moreover, so long as Russian gas transits through Ukraine, Russia is unlikely to intervene and cause instability in Ukraine and Europe will stay invested in its security.
 - Countries like **Poland and Belarus also stand to lose transit fees** and hence oppose the pipeline

Note:

as it will bypass existing pipelines running through them.

➤ **Importance for Europe and Russia:**

○ **Europe:**

- Europe requires more than **100 billion cubic metres (bcm) of natural gas each year** and around 40% of its gas comes from Russia.
- Over the last few years, Europe has become more dependent on gas imports because of a decrease in domestic gas production. Reducing dependence on Russian gas is difficult as there are no easy replacements.
- Many European businesses have large investments in Nord Stream 2 and there is pressure on governments from these businesses. Finally, a reduction in gas from Russia would increase already high gas prices and that would not be popular domestically.

➤ **Russia:**

- As for Russia, which has the largest natural gas reserves in the world, around **40% of its budget comes from sales of gas and oil**.
- Nord Stream 2 is important because it **eliminates the risks related with sending gas through transit countries**, cuts operating costs by doing away with transit fees and gives direct access to its most important European customer, Germany.
- It increases Europe's dependence on Russia while giving it a reliable customer.

Second ASEAN Digital Ministers Meeting

Why in News

Recently, the 2nd ASEAN Digital Ministers' (ADGMIN) Meeting with India virtually, where two sides finalized **India-ASEAN Digital work plan 2022** for future collaboration in the field.

Key Points

➤ **About:**

- ADGMIN is an **annual meeting of telecom ministers of 10 ASEAN (Association of South-East Asian Nations) countries and dialogue partner countries**—Australia, Canada, China, EU, India, Japan, Republic of Korea, New Zealand, Russia, UK and US.

- **ASEAN nations include** Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam.

➤ **India-ASEAN Digital Work Plan 2022:**

- India and ASEAN nations have **jointly approved a work plan** under which they will **develop a system to combat use of stolen and counterfeit mobile handsets**.
- Other areas of cooperation include **wifi access network interface** for nationwide public internet.
- Emphasis will also be given on the **capacity building and knowledge sharing** in emerging areas in the field of **information and communication technologies** such as **Internet of Things (IoT), 5G**, advanced satellite communication, cyber forensics.

➤ **Significance of the ICT:**

- Information and Communication Technologies (ICT) **enables and strengthens democratic systems and institutions** through enhanced engagement between citizens and the state.
- Use of ICTs **promote free speech, human rights and the free flow of information** besides expanding citizens' opportunities to participate in decision-making processes and have potential to transform lives of people living in rural areas.
- Technology has emerged as a **powerful tool to mitigate the impact of the Covid-19 pandemic** which is not just a challenge for the public health system but is also adversely impacting the economy and social order of the countries.

➤ **Related Steps taken by India:**

- The telecom ministry in December 2019 had launched a **portal to help people in Delhi-NCR block and trace their stolen or lost mobile phones**.
 - The project is backed by the **Central Equipment Identity Register (CEIR) system**, which was undertaken by the telecom department for addressing security, theft and other concerns including reprogramming of mobile handsets.

Other Related Groupings

➤ **ASEAN Defence Ministers Meeting (ADMM) Plus:**

- It is an **annual meeting of Defence Ministers of 10 ASEAN countries and eight dialogue partner countries**.
- The **ADMM-Plus countries include ten ASEAN Member States and eight Plus countries**, namely Australia, China, India, Japan, New Zealand, Republic of Korea, Russian Federation, and the United States (same as in the EAS).

Note:

➤ ASEAN Regional Forum:

- Established in 1994, the ASEAN Regional Forum (ARF) is an important platform for security dialogue in the Indo-Pacific.
- It comprises **27 members**: the **10 ASEAN member states**, the **10 ASEAN dialogue partners** (Australia, Canada, China, the European Union, India, Japan, New Zealand, the Republic of Korea (ROK), Russia and the United States); Bangladesh, the Democratic People's Republic of Korea, Mongolia, Pakistan, Sri Lanka, and Timor-Leste; and one ASEAN observer (Papua New Guinea).

➤ East Asia Summit (EAS):

- Established in 2005, it is a forum of **18 regional leaders for strategic dialogue and cooperation** on the key political, security, and economic challenges facing the Indo-Pacific region.
- It comprises the **ten member states of the ASEAN** which are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, **along with 8 other countries namely** Australia, China, Japan, India, New Zealand, the Republic of Korea, Russia and the USA.

China-Lithuania Tensions

Why in News

Recently, the **European Union** launched action against China at the **World Trade Organization (WTO)** for targeting Lithuania over its stance on Taiwan.



Key Points

➤ About the Issue:

- In November 2021, a Taiwanese Representative Office was opened in Lithuania, notable because it is for the **first time that Taiwan was allowed to use its own name** to open an office within the EU.
- Following this, **China has downgraded its diplomatic relations with Lithuania**, calling it a violation of the **“One China Policy”**. China has also unofficially boycotted products from Lithuania, whether it is sourced directly or indirectly from the country.
 - China alleges that **Lithuania is acting in concert with the American efforts** of containment by using the **Taiwan card**, and to spread discord between China and Europe.
 - **‘One China Policy’** means that countries seeking diplomatic relations with the People's Republic of China (PRC, Mainland China) must break official relations with the Republic of China (ROC, Taiwan) and vice versa.

➤ Action at WTO:

- By going to the WTO, the **EU lent support to accusations by Lithuanian business leaders and officials** that the row has resulted in China blocking imports from Lithuania and other economic restrictions.
 - China's crackdown on Lithuanian imports **affects other European nations as well**.
 - The country has also **imposed trade restrictions** on goods from countries like **France, Germany and Sweden**, which include parts from Lithuanian supply chains.
 - The EU is currently **China's largest trading partner**, and about **80-90% of Lithuania's exports** are based on manufacturing contracts with the rest of the EU.
 - A 60-day window was launched for the two sides to come to a solution before moving the dispute to a panel.
- #### ➤ Reasons for taking on China by Lithuania:
- **Domestic Reasons:**
 - Lithuania's current wave of assertive moves against China to a certain extent have been attributed to the **change of government in 2020**.
 - The new Government of Lithuania espouses a **“values-based” foreign policy** based on

Note:

democracy and freedom, and had explicitly offered support to the cause of Taiwan in 2020 itself.

○ Geopolitical Reasons:

- It is also due to growing **geopolitical tensions in Eastern Europe** over EU and **NATO's** fallout with Lithuania's adversarial neighbours, Russia and Belarus.
 - Lithuania, being the **first constituent of the Soviet Union** to break out as an **independent state**, has its own historical context and ideological rationale for standing up to China.
- The **growing Sino-Russian partnership** against the West has also made Lithuania wary of China.

○ Others:

- Lithuania has been **one of the biggest critics of China** within the EU on the **Xinjiang and Hong Kong issues**.
- Lithuania supported Taiwan's pitch to become an **observer** at the **World Health Organization in 2020** against China's opposition in the wake of the **Covid-19 pandemic**.
- Moreover, Lithuania's rationale that **economic relations can be sustainable only with democratic regimes**, has heightened tensions between Lithuania and China.
 - In May 2021, Lithuania **quit China's 17+1 cooperation forum** with central and eastern Europe, by calling it "divisive", now it is 16+1.
 - Lithuania is the first country in that group to have done so and stated economic non-reciprocity of China and threats to European unity as reasons for its exit.
- Citing security reasons, Lithuania has advised its **population to avoid buying smartphones made in China**, and has kept China away from acquiring controlling stakes in its **Klaipėda seaport, as well as from its 5G infrastructure bids**.

➤ Geopolitical Fallout:

- Taiwan has made efforts to compensate the Lithuanian economy from China's coercion.
 - About 20,000 bottles of Lithuanian rum that had been bound for China were bought by Taiwan offering a symbolic gesture of support.
 - Taiwan has come up with a USD 200 million investment plan to help cover Lithuania's economic losses.

- This move is also supposedly designed to make Lithuania a gateway to Taiwan for accessing the EU market, especially given the current **semiconductor supply shortages**.

- Taiwan is also planning to introduce a USD1 billion credit program aimed at benefiting Lithuanian businesses.

- The **US has expressed concerns** about China's attempts to coerce Lithuania over Taiwan, along with EU countries like Germany who have expressed solidarity with Lithuania.

India- Pakistan Joint Protocol on Religious Pilgrimages 1974

Why in News

Recently, the **Ministry of External Affairs (MEA)** announced that India is "positive" and "willing to engage" in talks with Pakistan on upgrading the **1974 Joint Protocol on Religious Pilgrimages**.

- It will allow air travel as well as increase the number of shrines pilgrims from both countries could visit.
- The government also **reopened the Kartarpur Sahib Gurudwara corridor** to Pakistan to allow Sikh pilgrims to cross over, more than 20 months after it was shut down due to the **Covid-19 pandemic**.
- Earlier, India and Pakistan had **exchanged a list of their nuclear installations**.

Key Points

➤ About:

- Under the protocol **both the countries agreed on the following principles** for facilitating visits to such shrines:
 - Pilgrimage **visits from one country to the other shall be allowed without discrimination** as to religion or sect. The **list of shrines to be visited shall be finalised** shortly through correspondence.
 - The agreed list may be **enlarged from time to time by mutual agreement**.
 - The protocol currently includes five Muslim shrines on the Indian side and 15 shrines on the Pakistani side, a majority of them gurdwaras.
 - Upto **20 parties may be allowed to visit** from one country to the other every year. This number may be revised from time to time.

Note:

- Every effort should continue to be made to ensure that places of religious worship mentioned in the agreed list are properly maintained and their sanctity preserved.
 - Such visitors will be given Visitor Category visas.
- **Kartarpur Corridor:**
- The Kartarpur corridor connects the Darbar Sahib Gurdwara in Narowal district of Pakistan with the Dera Baba Nanak shrine in Gurdaspur district in India's Punjab province.
 - The corridor was built to commemorate 550th birth anniversary celebrations of **Guru Nanak Dev**, founder of Sikhism on 12th November 2019.

India-Central Asia Summit

Why in News

- Recently, the Prime Minister of India hosted the first **India-Central Asia Summit** in virtual format.
- It was attended by Presidents of the **Republic of Kazakhstan, Kyrgyz Republic, Republic of Tajikistan, Turkmenistan and Republic of Uzbekistan**.
 - This first India-Central Asia coincided with the **30th anniversary of establishment of diplomatic relations between India and Central Asian countries**.
 - The summit came two days after a **similar China-Central Asia Conference** was held where China offered USD 500 million in assistance and pledged to ramp up trade to USD 70 billion from the present levels of about USD 40 billion a year.

Key Points

- **Institutionalisation of the Summit:**
 - Discussed the **next steps in taking India-Central Asia relations to new heights**. In a historic decision, the Leaders agreed to institutionalise the Summit mechanism by deciding to **hold it every 2 years**.
 - They also **agreed on regular meetings** of Foreign Ministers, Trade Ministers, Culture Ministers and Secretaries of the Security Council to prepare the groundwork for the Summit meetings.
 - An **India-Central Asia Secretariat in New Delhi** would be set up to support the new mechanism.
- **India-Central Asia Cooperation:**
 - The Leaders discussed far-reaching proposals to **further cooperation in areas of trade and connectivity, development cooperation, defence**

and security and, in particular, on cultural and people to people contacts. These included:

- **Round-Table** on Energy and Connectivity.
 - **Joint Working Groups** at senior official level on **Afghanistan** and use of **Chabahar Port**.
 - **Showcasing of Buddhist exhibitions** in Central Asian countries and commissioning of an India-Central Asia dictionary of common words.
 - Joint **counter-terrorism exercises**.
 - Visit of 100 member **youth delegation** annually from Central Asian countries to India and special courses for Central Asian diplomats.
- A **comprehensive Joint Declaration** was adopted by the leaders that enumerates their common vision for an enduring and comprehensive India-Central Asia partnership.
- **Afghanistan:**
- The leaders reiterated their **strong support for a peaceful, secure and stable Afghanistan** with a truly representative and inclusive government.
 - India conveyed its **continued commitment to provide humanitarian assistance** to the Afghan people.
- **India's Stand on:**
- **Kazakhstan:** It has become a vital partner for India's energy security. India also expressed condolences for the recent **loss of life and property in Kazakhstan**.
 - **Uzbekistan:** India's state governments are also **active partners in its growing cooperation with Uzbekistan**.
 - **Tajikistan:** Both the countries have a **longstanding cooperation in the field of security**.
 - **Turkmenistan:** It is an important part of Indian vision in the field of regional connectivity, which is evident from participation in the **Ashgabat Agreement**.
 - **Regional connectivity in Central Asia is a key arm** of the 2018 Ashgabat Agreement.

Significance of the Summit for India

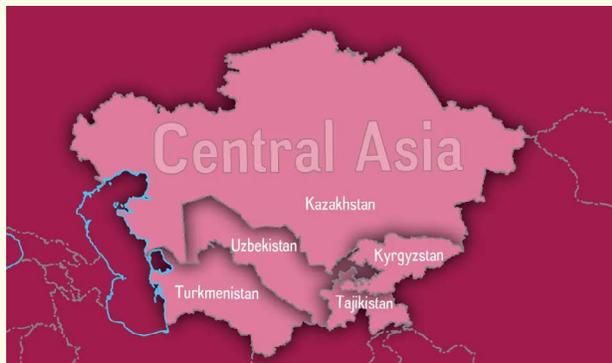
- **Geo-Political Dynamics:**
 - The summit is symbolic of the importance attached by the leaders of India and the Central Asian countries to a comprehensive and enduring India-Central Asia partnership.

Note:

- It is being held at a critical juncture when **tensions between the West and Russia** and the **United States (US) and China** are rising. India too has faced geopolitical setbacks: Border tensions with China and the Taliban takeover of Afghanistan.
- It follows **President Vladimir Putin's visit to India**, which may have allowed **India to push Russia to moderately balance China** in Eurasia and to contain the threats from Afghanistan.
- The **recent unrest in Kazakhstan** also showed that **"new actors"** are vying for influence in the region though their motives are still not clear.
- **Trade:**
 - India has always maintained excellent diplomatic ties with all the five Central Asian states; Indian PMs including Prime Minister Narendra Modi in 2015, have visited them. Yet, **India's trade with them has been only at USD 1.4 billion in 2019**.
 - In 2017, India joined the **Shanghai Cooperation Organisation (SCO)** to engage with the region. But SCO is only a sluice gate to regulate the Russian and Chinese subliminal rivalry to prevent either power from dominating the region.
 - Russia tends to use SCO for regulating India-China tensions.
- **Security:**
 - The summit is a **massive stride for India's diplomacy**. Since the region is a critical lynchpin to India's security policy, the summit will have a waterfall impact to facilitate India's multifaceted approach towards the region.

India-Central Asia Dialogue

- It is a ministerial-level **dialogue** between India and the Central Asian countries namely Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
- **All five nations became independent states** after the collapse of the USSR in 1991, post-**Cold war**.



- All the countries participating in the dialogue, except for Turkmenistan, are also members of the SCO.
- The dialogue **focuses on a number of issues including ways to improve connectivity and stabilise war-ravaged Afghanistan**.

The America COMPETES Act

Why in News

The United States has unveiled the ambitious **America Creating Opportunities for Manufacturing, Pre-Eminence in Technology, and Economic Strength (COMPETES) Act, 2022**, which proposes to **open up new vistas for talented individuals** from across the world with a new start-up visa.

- It aims to make the supply chains stronger and reinvigorate the innovation engine of the country's economy to outcompete China and the rest of the world for decades to come.

Key Points

- **Provisions:**
 - USD 52 billion to encourage semiconductor production in the US and USD 45 billion for **grants and loans to improve supply chain resilience and manufacturing**, among other programs.
 - Funding to address **social and economic inequality, climate change and immigration**. For example, it offers an exemption for **STEM (science, technology, engineering or mathematics) PhDs** from the green card limit and creates a new green card for entrepreneurs.
 - A Green Card holder (permanent resident) is someone who has been granted authorization to live and work in the United States on a permanent basis.
 - The bill issues USD 600 million a year to build **manufacturing facilities to make the United States less dependent on solar components** manufactured in Xinjiang, China.
 - It creates a **new "W" classification of non-immigrants for entrepreneurs** with an ownership interest in a start-up entity, essential employees of a start-up entity, and their spouses and children.
- **Significance:**
 - It would mean **more opportunities in the US for Indian talent** and skilled workers.

Note:

- Every year, Indians and **Indian companies corner the lion's share of H-1B work permits issued that year.** With this new category, Indian professionals will likely have a better shot at opportunities that the Act is likely to provide.

Work Visas

➤ About:

- The IT revolution, arrival of internet and low-cost computers in developing nations like India has **given rise to the number of people who are willing to work at relatively low costs in the US** which is a win-win situation for both the employer and the employee.
- The US administration **issues a certain number of visas each year** to fill a vacuum of highly-skilled low-cost employees in IT and other related domains.
- These visas **allow companies from outside the US to send employees** to work on client sites.

➤ Some Examples from US:

- **H-1B Visa:**
 - These are issued to skilled workers and are the most popular among Indian IT companies.
 - H-1B is for people in Specialty Occupation and requires a higher education degree or its equivalent.
- **H-2B Visa:**
 - These are issued to seasonal workers in the landscaping and hospitality industries.
- **L-1 Visa:**
 - It allows companies to transfer highly skilled workers to the US for a period of up to seven years.
- **H-4 Visas:**
 - It is for dependents of H-1B visa holders.
- **J-1 Visas:**
 - It is for students on work-study summer programmes.

Social Housing Units Project in Mauritius

Why in News

Recently, the Prime Minister of India and Mauritius jointly inaugurated **India-assisted social housing units**

project in Mauritius virtually as part of India's development support.



Key Points

➤ About:

- In May 2016, India had extended a grant of USD 353 mn to Mauritius as **Special Economic Package (SEP)** to execute **five priority projects** identified by Mauritius, among others.
- These were: the Metro Express Project, **Supreme Court Building**, New ENT Hospital, Supply of Digital Tablets to Primary School Children, and the Social Housing Project.
- With the inauguration of the Social Housing Project, all the high profile projects under the SEP have been implemented.

➤ Foundation Stone for Two Other Projects:

- **Construction of a State-of-the-Art Civil Service College:**
 - It is being financed through a grant support of USD 4.74 million, under an MoU signed in 2017 during the visit of Prime Minister of Mauritius to India.
 - Once constructed, this will **provide a fully equipped and functional facility for the civil servants of Mauritius** to undertake various training and skill development programmes.
 - It will further strengthen institutional linkages with India.
 - The Prime Minister of India also acknowledged the importance of the Civil Service College project in nation building and offered to share learnings of **Mission Karmayogi**.
- **8 MW Solar PV Farm.**
 - It involves the **installation of 25,000 PV cells** to generate approximately 14 GWh of green

Note:

energy annually, to electrify approximately 10,000 Mauritian households.

- It will help mitigate the climate challenges that Mauritius faces through avoidance of 13,000 tons of CO₂ emissions.
 - The idea for the **One Sun One World One Grid (OSOWOG) initiative** was put forth by the Indian Prime Minister at the **First Assembly of the International Solar Alliance (ISA)** in October 2018.

○ Exchange of Two Key Bilateral Pacts:

- Agreement for the extension of USD 190 million Line of Credit from India to Mauritius for the Metro Express and other infrastructure projects.
- MoU on the Implementation of Small Development Projects.

India-Mauritius Relations

➤ About:

- Connections between **India and Mauritius date back to 1730** and diplomatic relations were **established in 1948** before Mauritius became an independent state (1968).
- India has viewed Mauritius through the **prism of the diaspora**. This was, perhaps, natural since communities of Indian origin constitute a significant majority in the island.
 - Indian-origin people constitute **nearly 70% of the population of Mauritius**.
- It is a significant partner of India in celebrating **Pravasi Bharatiya Diwas** which is a forum for issues concerning the **Indian Diaspora**.

➤ Significance for India:

- **Geo-strategic:** India has begun to see the strategic significance of Mauritius to the renewed great power contestation in the **Indian Ocean**.
 - In 2015, India unveiled its strategic vision for the Indian Ocean called the **SAGAR** (Security And Growth for All in the Region).
 - In 2015, India and Mauritius signed an agreement that allows India to develop infrastructure in terms of establishing **military bases on the Mauritian islands**.
- **Geo-Economic:**
 - As a “central geographic point” Mauritius holds importance for commerce and connectivity in the Indian Ocean.

- As a member of the **African Union, Indian Ocean Rim Association** and the **Indian Ocean Commission**, Mauritius is a stepping stone to multiple geographies.

- As a founding-member of the **‘Small Island Developing States’ (SIDS)** it has been seen as a significant neighbour.

- India is Mauritius’s largest trading partner and has been the largest exporter of goods and services to the Indian Ocean island nation since 2007.

- **Regional Hub:** As new investments pour into Mauritius from Africa, Mauritius can be the fulcrum for India’s own African economic outreach.

- India could also contribute to the evolution of Mauritius as a regional centre for technological innovation.
- Mauritius could also become a valuable place for regional and international maritime scientific research.

- **Pivot of Island Policy:** Until now India has tended to deal with the so-called **Vanilla islands** of the south western Indian Ocean — Comoros, Madagascar, Mauritius, Mayotte, Reunion and Seychelles — on a bilateral basis.

- If the Indian establishment thinks of them as a collective, it could make Mauritius the pivot of Delhi’s island policy.
- It can facilitate a number of Indian commercial activities in the south western Indian ocean — as a banking gateway and hub for tourism.

- **Keeping Pace with China:** In its “string of pearls” policy, China has built significant relations across the Indian Ocean, from Gwadar (Pakistan) to Hambantota (Sri Lanka) to Kyaukpyu (Myanmar).

- Therefore, India should help Indian Ocean littoral states like Mauritius, Maldives, Sri Lanka and Seychelles as part of capacity and capability enhancement in strengthening their maritime domain awareness capabilities.

➤ Important Developments:

- In 2021, India approved signing of the **Comprehensive Economic Cooperation and Partnership Agreement (CECPA)** between India and Mauritius.
- India has signed a contract with Mauritius for the export of an **Advanced Light Helicopter Mk III**. The helicopter will be used by the Mauritius Police Force.

Note:

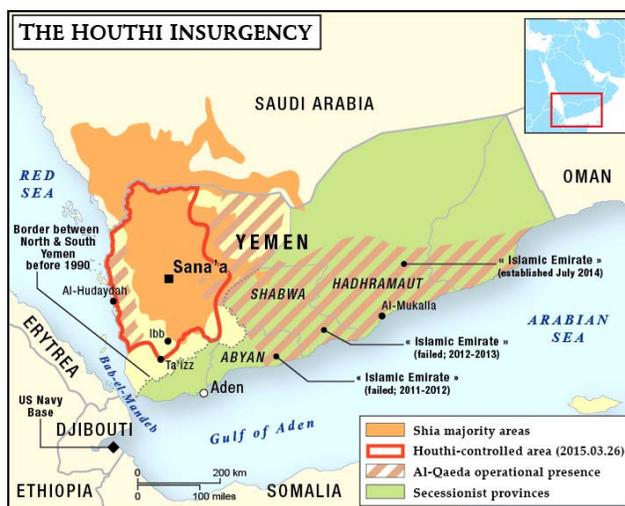


Houthis Attack UAE

Why in News

Recently, a suspected **drone** attack in Abu Dhabi, the capital of the **United Arab Emirates (UAE)**, caused multiple explosions in which two Indians were also killed.

- The **Shia Houthi rebels of Yemen**, who have been **controlling the northern parts of the country**, including the capital Sana'a, for almost seven years, have claimed responsibility for the attack.
- **India has conveyed solidarity with the UAE** in face of such unacceptable acts.
- Earlier in 2021, there was a **ballistic missile attack by the Houthis on the Saudi capital Riyadh**.



Key Points

- **Houthis:**
 - The roots of the Houthi movement can be traced to **“Believing Youth”** (Muntada al-Shahabal-Mu'min), a **Zaydi revivalist group founded by Hussein al-Houthi** and his father, Badr al-Din al-Houthi, in the **early 1990s**.
 - Badr al-Din was an influential Zaydi cleric in northern Yemen. **Inspired by the Iranian revolution of 1979 and the rise of Hezbollah** in southern Lebanon in the 1980s, **Badr al-Din and his sons started building vast social and religious networks among the Zaydis of Yemen**, who make up roughly one-third of the Sunni-majority country's population.
 - But when the movement turned political and started attacking the **“corrupt” regime of Ali Abdullah**

Saleh (in Yemen) and his support for the US' war on terror, it became a thorn on Saleh's side.

- They called themselves Ansar Allah (Partisans of God), **mobilising tribesmen in the north against the government**.
- In 2004, Saleh's government issued an arrest warrant against Hussein al-Houthi. He resisted the arrest, **starting an insurgency**.
- In **September 2004**, the government troops attacked the rebels and killed Hussein. Since then, the government launched multiple military campaigns in Sa'dah, the **Zaydi stronghold, to end the resistance, which was locally called the Houthis movement**, after their “martyred” leader.
- But it only strengthened the Houthis, who, by 2010, when a ceasefire was reached, had captured Sa'dah from the government troops.

Zaydis

- **Zaydis** are the oldest branch of the Shia. The Zaydis are named after Zayd Bin Ali, the great grandson of Imam Ali, Prophet Mohammed's cousin and son-in-law who Shias, Sunnis and Zaydis revere.
- Zayd Bin Ali had led a revolt against the **Umayyad Caliphate in the eighth century**. He was killed, but **his martyrdom led to the rise of the Zaydi sect**. While the Zaydis are seen part of the Shia branch of Islam, both in terms of theology and practice, they are different from the 'Twelver' Shias of Iran, Iraq and Lebanon.
- For centuries, the Zaydis were a powerful sect within Yemen.
- After the collapse of the **Ottoman Empire in 1918**, the Zaydis would establish a monarchy (the Mutawakkilite Kingdom) in the country. But their dominance would come to an end in 1962 when the Egypt-backed republicans overthrew the monarchy.
- **Reason for Houthis Rise:**
 - When protests broke out in Yemen in 2011 as part of the **Arab Spring** protests that felled Tunisian and Egyptian dictators, the **Houthis, now confident from their military victories and the support they enjoyed in Sadah, backed the agitation**.
 - **President Saleh, a Zaydi who was in power for 33 years, resigned in November 2011**, handing the reins to his deputy, Abdrabbuh Mansur Hadi, a Saudi-backed Sunni.

Note:

- Yemen, under the tutelage of Saudi Arabia and the UAE, started a **national dialogue to resolve internal differences**.
- The **Houthis were part of the dialogue**. But they fell out with the transitional government of Mr. Hadi, claiming that the proposed federal solution, which sought to divide the Zaydi-dominated north into two land-locked provinces, was intended to weaken the movement.
- They soon **got back to insurgency**. Saleh, who was sidelined by the interim government and its backers, joined hands with his former rivals and launched a joint military operation.
- **By January 2015, the Houthi-Saleh alliance had captured Sana'a and much of northern Yemen**, including the vital Red Sea coast. (Later the Houthis turned against Saleh and killed him in December 2017).
- **Reason for Saudi Arabia's Attack on Yemen:**
 - The **rapid rise of the Houthis in Yemen set off alarm bells in Saudi Arabia which saw them as Iranian proxies**.
 - Saudi Arabia started a military campaign in March 2015, hoping for a quick victory against the Houthis. But the Houthis had dug in, refusing to leave despite Saudi Arabia's aerial blitzkrieg.
 - With no effective allies on the ground and no way-out plan, the **Saudi-led campaign went on with no tangible result**. In the past six years, **the Houthis have launched multiple attacks on Saudi cities from northern Yemen in retaliation for Saudi air strikes**.
 - In 2019, the **Houthis claimed the attack on two Saudi oil installations** that knocked out, briefly, half of the kingdom's oil output (the Houthi claim was disputed by experts and governments, who said the attack was too sophisticated for the rebels to carry out. The US has blamed Iran).
 - The **Houthis have established a government in the north**. There are serious allegations against both the Saudis and the Houthis in the war.
 - While the Saudi bombings caused a large number of civilian deaths, the Houthis were accused, by rights groups and governments, of preventing aid, deploying forces in densely populated areas and using excessive force against civilians and peaceful protesters.
- **Reason for Houthis Attacking UAE:**
 - This is not the first time the Houthis attacked the UAE. **In 2018, when the UAE-backed forces were making advances in Yemen, the Houthis claimed attacks against the Emirates**.
 - Since then, the UAE pulled out its troops from Yemen and offered tactical support to the **Southern Transitional Council, a group of rebels based in Aden, that was also fighting the Saudi-backed government forces** of UAE.
 - During this period, the Houthis stayed focussed entirely on Saudi Arabia and Saudi-backed forces inside Yemen.
 - But in recent months, **Giants Brigades, a militia group** largely made up of Southern Yemenis (backed by the UAE) and the Joint Forces (the militia led by a nephew of the slain former President Saleh) **turned their guns against the Houthis**.
 - Now with the attacks the Houthis appear to have sent a clear message to the Emiratis — stay out of Yemen or face more attacks.
- **Concerns:**
 - **Yemen is strategically important** because it sits on a **strait linking the Red Sea with the Gulf of Aden**, through which much of the world's oil shipments pass.
 - It also worries the West because of the **threat of attacks - such as from al-Qaeda or IS affiliates**-emanating from the country as it becomes more unstable.
 - The **Houthis have escalated cross-border attacks on the kingdom even after the US delisted the rebels as terrorists** and stepped up efforts to de-escalate the six-year conflict.
 - The **conflict is also seen as part of a regional power struggle between Shia-ruled Iran and Sunni-ruled Saudi Arabia**.
- **India's Interest:**
 - For India, it is a challenge which cannot be washed away taking into consideration the **oil security and 8 million expats living in the region** with more than USD 80 billion of incoming remittance annually.
- **Indian Initiatives:**
 - **Operation Rahat:**
 - India launched a **massive air and sea operation to evacuate over 4000 Indian nationals from Yemen** in April 2015.

Note:

- **Humanitarian Assistance:**
 - India has **provided food and medical aid to Yemen** in the past and thousands of Yemeni nationals have availed of medical treatment in India over the past few years.
 - India also continues to **facilitate education of a large number of Yemeni nationals** in various Indian institutions.

Devas-Antrix Deal

Why in News

The controversial deal between Indian Department of Space's commercial entity **Antrix** and Bengaluru-based startup Devas Multimedia has been under the scanner for more than a decade now.

HOW IT UNFOLDED	Sept 2017: International Chamber of Commerce awards Devas compensation worth \$1.3 billion	liquidate Devas
<ul style="list-style-type: none"> ▶ Jan 2005: Agreement between Antrix and Devas for former to launch two satellites and lease 90% of S-band to Devas ▶ 2011: UPA govt cancels deal on 'security' grounds after allegations of corruption ▶ Aug 2016: CBI charge-sheets former ISRO chief G Madhavan Nair and other officials 	<ul style="list-style-type: none"> ▶ Oct 2020: A United States Federal Court confirms ICC's award ▶ Jan 2021: Govt approaches NCLT to begin liquidation proceedings of Devas. NCLT admits case and appoints liquidator ▶ Sept 2021: NCLAT upholds NCLT order to 	<ul style="list-style-type: none"> ▶ Dec 2021-Jan 2022: A Canadian court allows seizing of Air India assets by Devas after latter alleges that India breached bilateral treaty with Mauritius. Antrix-Devas deal was signed under this treaty ▶ Jan 2022: Supreme Court upholds NCLT decision, orders liquidation of Devas. Liquidator takes over Devas

Key Points

- **Allocation of Spectrum:** The **International Telecommunication Union** granted India **S-band spectrum** in the **1970s**.
- **Handing Over of Spectrum to ISRO:** By 2003, there was a fear that the spectrum would be lost if not used effectively;
 - 40 MHz of S-band was given to the **Department of Telecom (DoT)** for terrestrial use.
 - 70 Mhz was to be put to efficiently used by the **Department of Space (DoS)** or in effect to be used by **Indian Space Research Organisation (ISRO)**.
- **Global Negotiations for Growth of Communication Systems:** Initially, an MoU was signed by **Forge** (a US Consultancy) and **Antrix in July 2003** for use of the **satellite spectrum for the growth of communication systems in India**, but later a start-up was envisaged, and Devas Multimedia was floated.
 - Following this, Devas Multimedia was able to attract foreign investors.

- **Signing of the Deal:** In 2005, the deal was signed to provide multimedia services to mobile users using the leased S-band satellite spectrum.
 - Under the deal, ISRO would lease to Devas two communication **satellites (GSAT-6 and 6A)** for 12 years.
 - In return, Devas would provide multimedia services to mobile platforms in India using S-band transponders on the satellites.
 - As a result of the deal, Devas introduced and utilised technologies like never before and was a huge revenue generator for Antrix.
- **Scrapping of the Deal:** The deal was cancelled in 2011 on the ground that the auction of the broadband spectrum was **mired in fraud**.
 - The decision was taken in the midst of the **2G scam** and allegations that the Devas deal involved the **handing over of communication spectrum valued at nearly Rs 2 lakh crore** for a pittance.
 - The government also held that it needed the S-band satellite spectrum for national security and other social purposes.
- **Filing of Corruption Charges:** Meanwhile, in August 2016, the **Central Bureau of Investigation (CBI)** filed a charge sheet against officials from Devas, ISRO and Antrix linked to the deal for **"being party to a criminal conspiracy"**.
 - Amongst them, were the **former ISRO chairman G Madhavan Nair** and former Antrix executive director K R Sridharamurthi.
- **International Tribunal Arbitration:** Devas Multimedia initiated arbitration against the annulment at the **International Chambers of Commerce (ICC)**.
 - Two separate arbitrations were also initiated under the **Bilateral Investment Treaty (BIT)** by Mauritius investors in Devas Multimedia under the India-Mauritius BIT and by Deutsche Telekom -- a German company -- under the India-Germany BIT.
 - **India lost all three disputes** and has to pay a total of USD 1.29 billion in damages.
- **Aftermath of Tribunal Award:** Due to the Indian Government not paying the compensation, a **French court has recently ordered the freezing of Indian government property in Paris**, to enforce a USD 1.3 billion arbitration award.
- **Indian Arbitration Scenario:** Recently, the Supreme Court reiterated the Government's 2011 stance

Note:

and directed the winding up of Devas Multimedia business in India.

- The Supreme Court also upheld the previous award by the **National Company Law Appellate Tribunal (NCLAT) and National Company Law Tribunal (NCLT)**.
- Antrix filed a plea in the NCLT in January 2021 for the liquidation of Devas in India, which it said was incorporated in a fraudulent manner.
- These tribunals directed the winding up of Devas Multimedia and appointed a **provisional liquidator for the purpose**.

Seizure of Property by Foreign Countries

- The state and its property are protected against legal proceedings in the courts of other countries.
 - This emanates from a well-established principle of international law, referred to as **State immunity**.
 - This covers immunity from both jurisdiction and execution.
- However, there is no international legal instrument in force dealing with state immunity in the municipal legal systems of different countries.
 - This has created an international void.
 - Consequently, countries have filled this void through their national legislations and domestic judicial practices on state immunity.
- Countries like France, follow the **concept of restrictive immunity** (a foreign State is immune only for sovereign functions) and not absolute immunity (total immunity from all legal proceedings in a foreign court).
- In the context of the execution of BIT awards, it implies that state property serving **sovereign functions** (diplomatic mission buildings, central bank assets, etc.) **cannot be attached**.
- However, properties **servicing commercial functions are available for seizure**.

S-band Spectrum

- The S-band spectrum, which is part of the **Devas-ISRO deal**, is **extremely valuable for mobile broadband services**, in terms of usage as well as money.
- The frequency, also known as **2.5 Ghz band**, is globally used for providing mobile broadband services using **fourth generation technologies such as WiMax and Long Term Evolution (LTE)**.

- This frequency band is unique because it has a substantial amount of spectrum (190 MHz) that can be put to use for mobile services.

Bilateral Investment Treaty

- **An agreement made between two countries containing reciprocal undertakings for the promotion and protection of private investments** made by nationals of the signatories in each other's territories.
- **BITs provide protection against illegal nationalisation and expropriation of foreign assets** and other actions by a signatory of the BIT that may undermine the ownership or economic interest of a national of the other signatory.
- One of the main protections under a BIT is that it **allows foreign investors to sue states directly by submitting claims for breach of the BIT to arbitration** rather than to local courts.

Antrix Corporation Limited

- Antrix Corporation Limited (ACL), Bengaluru is a **wholly owned Government of India Company** under the **administrative control of the Department of Space**.
- It was **incorporated as a private limited company owned by the Government of India** in September 1992.
- It is a **marketing arm of ISRO** for promotion and **commercial exploitation of space products, technical consultancy services** and transfer of technologies developed by ISRO.
- Another major objective is to **facilitate development of space related industrial capabilities in India**.

International Telecommunication Union

- It is the **United Nations specialized agency** for information and communication technologies – ICTs.
- It is the oldest among all the 15 specialized agencies of the UN.
- **Founded in 1865** to facilitate **international connectivity** in communications networks, it allocates global radio spectrum and satellite orbits, develops the technical standards that ensure networks and technologies seamlessly interconnect, and strives to improve access to ICTs to underserved communities worldwide.
- **Based in Geneva, Switzerland**, it is also a member of the **United Nations Development Group** and has 12 regional and area offices in the world.

Note:

- Its membership includes **193 Member States and around 800 public and private sector companies and academic institutions** as well as international and regional telecommunication entities.
- Recently, India got elected as a member of **ITU Council for another 4-year term - from 2019 to 2022**. India has remained a regular member since 1952.

International Chamber of Commerce (ICC)

- ICC is the **world's largest business organization** working to promote international trade and responsible business conduct.
- It has been helping to **resolve difficulties in international commercial and business disputes** to support trade and investment since 1923.
- ICC headquarters is in **Paris, France**.

Army Rule in Burkina Faso

Why in News

Recently, Burkina Faso's army announced that it had **ousted President Roch Kabore, suspended the constitution, dissolved the government** and the national assembly, and closed the country's borders.

- Army has toppled governments over the past 18 months in **Mali** and Guinea.
- The military also took over in **Chad last year (2021) after President Idriss Deby died fighting rebels** on the battlefield in the country's north.



Key Points

➤ Burkina Faso:

- A former French colony, **Burkina Faso has suffered chronic instability since gaining independence in 1960**, including several coups.
- The country's name, meaning "**land of the honest men**", was picked by revolutionary military officer Thomas Sankara who took power in 1983. He was toppled and killed in 1987.
- Since 2015, the **country has been fighting an Islamist insurgency** that spilled over from neighbouring Mali. This has fuelled anger in the military and damaged the once important tourist industry.
- Landlocked Burkina Faso, **one of West Africa's poorest countries despite being a gold producer**, has experienced numerous coups since independence from France in 1960.
- Islamist **militants control swathes of Burkina Faso's territory and have forced residents in some areas to abide by their harsh version of Islamic law**, while the military's struggle to quell the insurgency has drained scarce national resources.
- **Kabore had faced waves of protests** in recent months amid frustration over killings of civilians and soldiers by militants, some of whom have links to Islamic State and al Qaeda.
 - The discontent escalated in November 2021, when 53 people, mainly members of the security forces, were killed by suspected jihadists.

➤ About:

- The announcement cited the deterioration of the security situation and what the army described as **Kabore's inability to unite the West African nation and effectively respond to challenges**, which include an Islamist insurgency.
- The statement was made in the name of a previously unheard-of entity, **the Patriotic Movement for Safeguard and Restoration**, or **MPSR**, its French-language acronym. MPSR, which **includes all sections of the army**.
- The MPSR said **it would propose a calendar for a return to constitutional order** "within a reasonable time frame, after consultations with various sections of the nation."
- The military also announced the **closure of Burkina Faso's borders**.

Note:

➤ Global Response:

- African and Western powers **denounced what they called an “attempted coup”** and the **European Union** demanded the “immediate” release of the President.
- The **United States** also called for the **President’s release** and urged “members of the security forces to respect Burkina Faso’s constitution and civilian leadership.”
- **The United Nations’** Secretary-General **strongly condemns any attempted takeover of the government by the force of arm** in Burkina Faso and calls on the coup leaders to lay down their weapons.
- The **African Union** and regional bloc, **Economic Community of West African States (ECOWAS)**, have also condemned the forceful takeover of power, with ECOWAS saying it holds the soldiers responsible for the deposed president’s well-being.
 - The **African Union** is a continental body that consists of 55 states belonging to the African continent.
 - **ECOWAS** is made up of fifteen member countries that are located in the Western African region.

India and Israel Relations

Why in News

To mark the **30th anniversary of the establishment of diplomatic ties** between the two countries, **India and Israel launched a commemorative logo.**

- The logo features the **Star of David and the AshokaChakra**- the two symbols that adorn the national flags of both countries- and forms the numeral 30 depicting the 30th anniversary of bilateral relations.



Key Points

➤ Diplomatic Ties:

- Though India officially recognised Israel in 1950, the two countries established full diplomatic ties only on **29th January 1992**. As of December 2020, India was among 164 **United Nations (UN)** member states to have diplomatic ties with Israel.

➤ Economic and Commercial Relations:

- From USD 200 million in 1992, bilateral merchandise trade stood at USD 4.14 billion (excluding defence) during the period April 2020 – February 2021 with the **balance of trade being in India’s favour**.
 - **Trade in diamonds** constitutes about 50% of bilateral trade..
- India is **Israel’s third-largest trade partner in Asia** and seventh largest globally.
 - Israeli companies have invested in India in energy, renewable energy, telecom, real estate, water technologies, and are focusing on setting up R&D centers or production units in India.
- India is **also in dialogue with Israel for concluding a Free Trade Agreement (FTA)**.

➤ Defence:

- **India is the largest buyer of military equipment** from Israel, which, in turn, is the second-largest defence supplier to India, after Russia.
- The Indian armed forces have **inducted a wide array of Israeli weapon systems** over the years, which range from **Phalcon AWACS (Airborne Warning And Control Systems)** and Heron, Searcher-II and Harop drones to Barak anti-missile defence systems and Spyder quick-reaction anti-aircraft missile systems.
- The acquisitions also include a **host of Israeli missiles and precision-guided munitions**, from Python and Derby air-to-air missiles to Crystal Maze and Spice-2000 bombs.
- At the **15th Joint Working Group (JWG 2021)** meeting on Bilateral Defence Cooperation, countries agreed to form a Task Force to formulate a comprehensive Ten-Year Roadmap to identify new areas of cooperation.

➤ Cooperation in Agriculture:

- In May 2021, **“a three-year work program agreement”** for development in agriculture cooperation, was signed.

Note:

- The programme aims to **grow existing Centres of Excellence, establish new centers, increase CoE's value chain, bring the Centres of Excellence** into the self-sufficient mode, and encourage private sector companies and collaboration.

➤ **Science & Technology:**

- Recently, experts from India and Israel deliberated on widening the scope of **India-Israel Industrial R&D and Technological Innovation Fund (I4F)** at its 8th Governing Body meeting.
- They approved 3 joint R&D projects worth 5.5 million USD and suggested measures to create a broader India-Israel collaborative ecosystem.
 - I4F is a cooperation between the two countries to promote, facilitate and support joint industrial R&D projects between companies from India and Israel to address the challenges in the agreed 'Focus Sectors'.

➤ **Others:**

- Israel is also joining the **India-led International Solar Alliance (ISA)**, which aligns very well with the objectives of both countries to scale up their cooperation in **renewable energy** and partner in clean energy.



India and Oman

Why in News

The **Secretary General of the Ministry of Defence of the Sultanate of Oman** is on a visit to India.

- He will be in Delhi to co-chair the **Joint Military Cooperation Committee (JMCC)** with India's Defence Secretary.



Key Points

➤ **Background:**

- The two countries across the **Arabian Sea** are linked by geography, history and culture and enjoy warm and cordial relations, which are attributed to **historical maritime trade linkages**.
- While **people-to-people contact between India and Oman can be traced back 5000 years**, **diplomatic relations were established in 1955** and the relationship was upgraded to **Strategic partnership in 2008**. Oman has been a **key pillar of India's West Asia Policy**.
 - The **Sultanate of Oman is a strategic partner of India in the Gulf and an important interlocutor at the Gulf Cooperation Council (GCC), Arab League and Indian Ocean Rim Association (IORA)** fora.
- **Gandhi Peace Prize 2019** was conferred on Late HM Sultan Qaboos in **recognition of his leadership in strengthening the ties between India & Oman** and his efforts to promote peace in the **Gulf region**.

➤ **Defence Relations:**

- **Joint Military Cooperation Committee:**
 - The **JMCC is the highest forum of engagement between India and Oman in the field of defence**.

Note:

- The JMCC is **expected to meet annually**, but could not be organised since 2018 when the meeting of the 9th JMCC was held in Oman.
 - The 10th JMCC is **expected to comprehensively evaluate the ongoing defence exchanges** and provide a roadmap for further strengthening defence ties in the coming years.
 - **Military Exercises:**
 - Army exercise: Al Najah
 - Air Force exercise: **Eastern Bridge**
 - Naval Exercise: Naseem Al Bahr
 - **Economic & Commercial Relations:**
 - Institutional mechanisms like Joint Commission Meeting (JCM) and Joint Business Council (JBC) oversee economic cooperation between India and Oman.
 - **India is among Oman's top trading partners.**
 - For Oman, India was the 3rd largest (after UAE and China) source for its imports and 3rd largest market (after UAE and Saudi Arabia) for its non-oil exports in 2019.
 - Major Indian financial institutions have a presence in Oman. **Indian companies have invested in Oman in sectors** like iron and steel, cement, fertilisers, textile etc.
 - **India-Oman Joint Investment Fund (OIJIF)**, a JV between State Bank of India and State General Reserve Fund (SGRF) of Oman, **a special purpose vehicle to invest in India, has been operational.**
 - **Indian Community in Oman:**
 - There are about **6.2 lakh Indians in Oman**, of which about 4.8 lakh are workers and professionals. There are Indian families living in Oman for more than 150-200 years.
 - There are many **Indian schools offering CBSE syllabus** catering to the educational needs of about 45,000 Indian children.
- Oman's Strategic Significance for India**
- **About:**
 - Oman is **India's closest defence partner in the Gulf region** and an important anchor for India's defence and strategic interests.
 - Oman is at the gateway of **Strait of Hormuz** through which India imports one-fifth of its oil imports.
 - **Defence cooperation has emerged as a key pillar for the robust India-Oman strategic partnership.** Defence exchanges are guided by a **Framework MOU which was recently renewed in 2021.**
 - Oman is the **only country in the Gulf region with which all three services of the Indian armed forces conduct regular bilateral exercises** and staff talks, enabling close cooperation and trust at the professional level.
 - Oman also **provides critical operational support to Indian naval deployments** in the Arabian sea for anti-piracy missions.
 - **Bilateral training cooperation between the two sides is also robust with Omani forces regularly subscribing to training courses in India** both at professional as well as higher command level. Indian armed forces also subscribe to the Staff and Command courses conducted in Oman.
 - **Oman also actively participates in the Indian Ocean Naval Symposium (IONS).**
 - India has supplied rifles to Oman. Also, **India is considering setting up a defence production unit in Oman.**
 - **Port of Duqm:**
 - In a strategic move to expand its footprint in the Indian Ocean region, **India has secured access to the key Port of Duqm in Oman for military use and logistical support.** This is part of India's maritime strategy to counter Chinese influence and activities in the region.
 - The **Port of Duqm is situated on the southeastern seaboard of Oman, overlooking the Arabian Sea and the Indian Ocean.**
 - It is strategically located, in close proximity to the **Chabahar port** in Iran. With the **Assumption Island** being developed in Seychelles and Agalega in Mauritius, **Duqm fits into India's proactive maritime security roadmap.**
 - The Port of Duqm also has a **special economic zone**, where about USD 1.8 billion investments are being made by some Indian companies.



Note:

Social Issues

Highlights

- *Chakmas and Hajongs Communities*
- *Petition on Conjugal Rights*
- *SC on Inheritance of Daughters*
- *Special Marriage Act 1954*
- *Desh Ke Mentor Programme: Delhi Government*

Chakmas and Hajongs Communities

Why in News

Recently, the **National Human Rights Commission (NHRC)** in its order directed Ministry of Home Affairs and Arunachal Pradesh to submit action taken report within six weeks against alleged **racial profiling and relocation of the Chakmas and Hajongs from the State**.

- Also both the authorities were directed to “ensure that human rights of the Chakmas and Hajongs are protected by all the ways”.
- Members of the two communities have allegedly been victims of **hate crime**, police atrocities and denial of rights and beneficiary programmes.

Key Points

- **Background:**
 - In 2015, the **Supreme Court directed the State to grant them citizenship**, but this had not yet been implemented.
 - In a judgment in 1996, the Court had stated that the “**life and personal liberty of every Chakma residing within the State shall be protected**”.
 - In light of these orders and given that **most of the Chakma/Hajong community members were born in the State** and have been living peacefully, the Arunachal Pradesh Chief Minister’s announcement, in August 2021, that they would be **relocated outside the State** and that steps would be taken for a “census” of the communities was clearly unwarranted.

- After that **Chakma Development Foundation of India (CDFI)** requested urgent intervention of the NHRC against racial profiling of 65,000 Chakma and Hajong tribals of Arunachal Pradesh through illegal census which was scheduled to commence from **31st December, 2021** (later plan of census was dropped) for their **deportation / expulsion/ relocation from the State**.

- **Racial profiling** is government or police activity that involves using people’s racial and cultural characteristics to identify people to investigate.

➤ Issues with the Special Census:

- Chakma organisations said the census was nothing but **racial profiling of the two communities** because of their ethnic origin and **violated Article 14 of the Constitution of India and Article 1 of the International Convention on Elimination of Racial Discrimination ratified by India**.

- Article 14 says that no person shall be denied treatment of equality before the law or the equal protection of the laws within the territory of India.

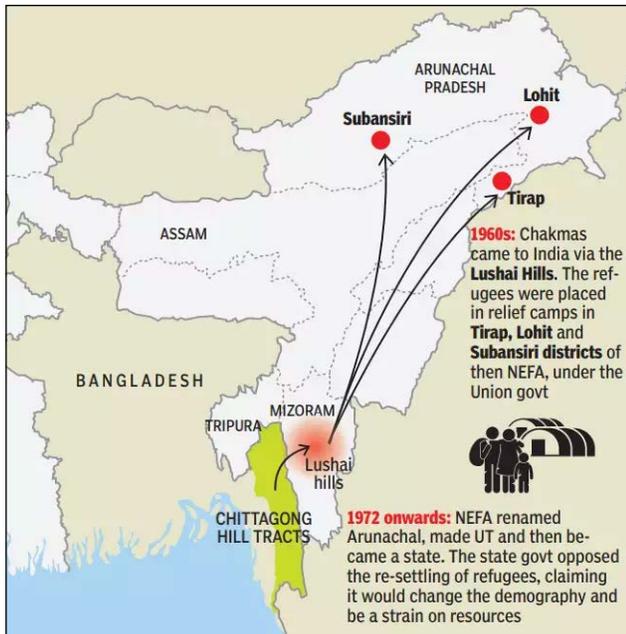
- The **United Nation General Assembly** in October 1966 proclaimed 21st March as the International Day for the Elimination of Racial Discrimination, to be commemorated annually.

➤ Chakmas and Hajongs:

- Mizoram and Tripura have a sizeable population of the **Buddhist Chakmas** while the **Hindu Hajongs mostly inhabit the Garo Hills of Meghalaya** and adjoining areas of Assam.
- The Chakmas and Hajongs of Arunachal Pradesh are migrants from the Chittagong Hill Tracts of erstwhile **East Pakistan, now Bangladesh**.

Note:

- Displaced by the Kaptai dam on the Karnaphuli River in the 1960s, they sought asylum in India and were settled in relief camps in the southern and south-eastern parts of Arunachal Pradesh from 1964 to 1969.
- A majority of them live in the **Changlang district** of the State (**Arunachal Pradesh**) today.



➤ **Citizenship Status:**

- Out of the 65,000 Chakmas and Hajongs, about 60,500 are citizens by birth under Section 3 of the **Citizenship Act, 1955**, after having been born before 1st July 1987, or as descendants of those who were born before this date.
 - The applications of the remaining 4,500 surviving migrants following the 1996 **Supreme Court order** have not been processed to date.
- The **Citizenship (Amendment) Act of 2019**, which amended two sections of the 1955 Act, has nothing to do with the Chakma-Hajongs since they were permanently settled by the Union of India in the 1960s.
- And since 95% of the migrants were born in the **North-East Frontier Agency or Arunachal Pradesh**, the **Inner Line Permit** mandatory under the Bengal Eastern Frontier Regulation of 1873 for outsiders seeking to visit the State, also does not apply to them.

Petition on Conjugal Rights

Why in News

A petition challenging the provision allowing restitution (recovery) of conjugal rights under Hindu personal laws (**Hindu Marriage act 1955**). has been pending in the **Supreme Court (SC)** for months without a hearing.

- The petition, titled **Ojaswa Pathak vs Union of India**, was filed in the SC in February 2019. The **case was last heard in July 2021**.

Key Points

➤ **Conjugal Rights:**

- Conjugal rights are **rights created by marriage**, i.e. right of the husband or the wife to the society of the other spouse.
- **The law recognises these rights**— both in personal laws dealing with marriage, divorce etc, and in criminal law requiring payment of maintenance and alimony to a spouse.
 - **Section 9 of the Hindu Marriage Act 1955** and **Section 22 of the Special Marriage Act 1954** empower a husband or a wife to move the local district court, complaining that the other partner has “withdrawn” from the marriage without a “reasonable cause”.
- The **concept of restitution of conjugal rights** is codified in Hindu personal law now, but has **colonial origins**.
- Originating **from Jewish law**, the provision for restitution of conjugal rights reached India and other common law countries through British Rule.
- The **British law treated wives as their husband’s personal possession** hence they were not allowed to leave their husbands.
- Similar provisions exist in Muslim personal law as well as the **Divorce Act, 1869, which governs Christian family law**.
- Incidentally, in **1970, the U.K repealed the law on restitution of conjugal rights**.
- **Challenged Provision:**
 - Section 9 of the Hindu Marriage Act, 1955, which deals with restitution of conjugal rights, reads:
 - When either the husband or the wife has, without reasonable excuse, withdrawn from

Note:

the society of the other, **the aggrieved party may apply, by petition to the district court.**

- For restitution of conjugal rights and the court, on being satisfied of the truth of the statements made in such a petition and that **there is no legal ground why the application should not be granted**, may decree restitution of conjugal rights accordingly.

➤ **Reason for Challenging the Law:**

○ **Violation of Rights:**

- The law is being challenged now on the **main grounds that it violates the fundamental right to privacy.**
- In 2019, a **nine-judge Bench of the SC recognised the right to privacy as a fundamental right.**
 - The right to privacy is protected as an intrinsic part of the right to life and personal liberty under **Article 21** and as a part of the freedoms guaranteed by Part III of the Constitution.
- The 2019 judgement has set the stage for potential challenges to several laws such as criminalisation of **homosexuality, marital rape**, restitution of conjugal rights, the two-finger test in rape investigations.
- The **plea argues that a court-mandated restitution of conjugal rights amounted to a “coercive act”** on the part of the state, which violates one’s sexual and decisional autonomy, and right to privacy and dignity.

○ **Biassed Against Women:**

- Although the law is **gender-neutral since it allows both wife and husband to seek restitution of conjugal rights**, the provision disproportionately affects women.
- **Women are often called back to marital homes** under the provision, and given that marital rape is not a crime, leaves them susceptible to such coerced cohabitation.
- It is also argued whether the state can have such a compelling interest in protecting the institution of marriage that it allows a legislation to enforce cohabitation of spouses.

○ **Not in Consonance with SC Judgements:**

- In the recent judgement of **Joseph Shine v Union of India 2019**, the SC has put great emphasis on the right to privacy and bodily autonomy of married women, stating that marriage does not take away their sexual freedom nor choice.

- If everybody is entitled to their bodily autonomy, choice, and right to privacy, **how can a court mandate two adults to cohabit if one of them does not wish to do so.**

○ **Misuse of the Provision:**

- Another pertinent matter to take into consideration is the **misuse of this provision as a shield against divorce** proceedings and alimony payments.
- Often an aggrieved spouse files for divorce from their place of residence and their spouse retaliates by filing for a decree of restitution in their place of residence.

➤ **Previous Judgements:**

- In the 1960s, the Punjab and Haryana High Court in the **Tirath Kaur case**, **upheld restitution of conjugal rights**, noting that “a wife’s first duty to her husband is to submit herself obediently to his authority and to remain under his roof and protection”.
- The courts, in a series of judgments in the 1980s, **have supported the law, holding that the denial of marital and sexual life** to the husband by the wife by refusing to permanently return to him is an act of both mental and physical cruelty.
- In 1984, the SC had upheld Section 9 of the Hindu Marriage Act in the case of **Saroj Rani v Sudarshan Kumar Chadha**, holding that the provision serves a social purpose as an aid to the **prevention of break-up of marriage.**
- In 1983, a single-judge bench of the Andhra Pradesh High Court had for the first time struck down the provision in the case of **T Sareetha v T Venkatasubbaiah** and declared it null and void.
 - It cited the **right to privacy among other reasons.** The court also held that in “a matter so intimately concerned the wife or the husband the parties are better left alone without state interference”.
 - The court had, **most importantly, also recognised that compelling “sexual cohabitation” would be of “grave consequences for women”.**
- However, in the same year, a single-judge Bench of the Delhi High Court took a diametrically opposite view of the law. In the case of **Harvinder Kaur v Harmander Singh Chaudhry**, the Delhi High Court upheld the provision.

Note:

- The Madhya Pradesh High Court in the Vibha Shrivastava case, noted:
 - This **orthodox concept of wife (Dharmpatni, Ardhangini, Bharya or Anugamini)** and expectations from her to subject herself to husband's wishes has undergone a revolutionary change with education and high literacy in women and with **recognition of equal rights to women in the constitution and abolition of sex distinction** in all walks of life.
 - She is a **partner in marriage with equal status** and equal rights with the husband, and the marriage cannot be a tyranny.

SC on Inheritance of Daughters

Why in News

Recently, the **Supreme Court (SC)** has ruled that daughters will have equal rights to their father's property even prior to the enactment of the **Hindu Succession Act (HSA) of 1956**.

- The case **involved a dispute over the property of a person who died in 1949** leaving behind a daughter who also died issueless in 1967.
- Earlier, the **trial court held that since the person had died prior to the enforcement of HSA, 1956 therefore the petitioner and her other sisters were not the heirs** as on the date of his death and was not entitled to partition of share in the suit properties. Later, the **High Court, too, dismissed the appeal against the trial court.**

Key Points

- **Daughters Inheritance:** It ruled that the **property of a man who had died** without executing a will and **is survived only by a daughter will devolve upon the daughter** and not others such as his brother.
 - Earlier in 2020, the SC has already **expanded the Hindu women's right** to be the coparcener (joint legal heir) and inherit ancestral property on terms equal to male heirs.
- **Ancient Texts & Judicial Pronouncements:** The SC referred to ancient texts (smritis), **commentaries by various renowned learned persons** and even **judicial pronouncements which have recognised the rights of several female heirs**, the wives and the daughter's being the foremost of them.

- Tracing the sources of customary Hindu law on inheritance, **the SC discussed Mitakshara law.**
- SC also looked into **Vyavastha Chandrika**, a digest of Hindu Law by Shyama Charan Sarkar Vidya Bhushan which quoted 'Vrihaspati' as saying 'the **wife is pronounced successor to the wealth of her husband**; in her default, the daughter. As a son, so does the daughter of a man proceed from his several limbs.
- The SC **also noted that the book quoted Manu as saying** "the son of a man is even as himself, and the daughter is equal to the son. How then can any other inherit his property, notwithstanding the survival of her, who is, as it were, himself".

- **Old Law:** Right of a widow or daughter to inherit the self-acquired property or share received in partition of a coparcenary property of a Hindu male dying intestate is **well recognised not only under the old customary Hindu Law.**

- If a property of a male Hindu dying intestate is a self-acquired property or obtained in partition of a coparcenary or a family property, the same would devolve by inheritance and not by survivorship, and a **daughter of such a male Hindu would be entitled to inherit such property** in preference to other collaterals".

- **Property After Woman's Death:** The court also said that if a female Hindu dies intestate without leaving any issue, then the **property inherited by her from her father or mother would go to the heirs of her father** whereas the property inherited from her husband or father-in-law would go to the heirs of the husband.

- In case a **female Hindu dies leaving behind her husband or any issue, then Section 15(1)(a) of the HSA 1956 will come into operation** and the properties left behind including the properties which she inherited from her parents would devolve simultaneously upon her husband and her issues.

Land Rights and Women in India

- **Related Data:** Property in India is largely inclined to be passed on to male heirs. This in turn deprives women of agency, financial independence and entrepreneurship. According to the **National Family Health Survey-5**, **43% of women respondents reported owning house/land alone or jointly**, but doubts remain about women's ability to actually access and control property.

Note:



- In fact, a 2020 University of Manchester working paper found **barely 16% of women in rural landowning households own land.**
- **Patriarchy:** In deep **patriarchal mores and rural-agrarian settings, property, which is seen as a primary source of wealth,** is largely inclined to be passed on to male heirs.
- **State Laws:** Inheritance laws for agricultural land remain a minefield with conflicting central personal laws and state laws.
 - In this regard, states such as Punjab, Haryana, Uttar Pradesh (UP) and even Delhi **have regressive inheritance provisions.**
 - In fact, **Haryana twice tried to take away the progressive rights given to women through HSA1956,** while in **UP since 2016 married daughters aren't considered primary heirs.**
- **Ground-level Resistance:** There is also a lot of **ground-level resistance to registering land for women in several north Indian states.** Thus, women's empowerment and property rights remain an unfinished project.

Hindu Succession Act, 1956:

➤ About:

- The **Mitakshara school of Hindu law codified as the Hindu Succession Act, 1956** governed succession and inheritance of property but only recognised males as legal heirs.
- It applied to everyone who is not a **Muslim, Christian, Parsi or Jew by religion. Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahma Samaj,** are also considered Hindus for this law.
- In a Hindu Undivided Family, **several legal heirs through generations can exist jointly.**
- Traditionally, only male descendants of a common ancestor along with their mothers, wives and unmarried daughters are considered a joint Hindu family. The legal heirs hold the family property jointly.

➤ Hindu Succession (Amendment) Act, 2005:

- The 1956 Act was amended in September 2005 and **women were recognised as coparceners for property partitions arising from 2005.**
- Section 6 of the Act was amended to make a daughter of a coparcener also a coparcener by birth "in her own right in the same manner as the son".

- It **also gave the daughter the same rights and liabilities** "in the coparcenary property as she would have had if she had been a son".
- The law **applies to ancestral property and to intestate succession** in personal property, where succession happens as per law and not through a will.

Schools of Hindu Laws

Mitakshara Law School	Dayabhaga Law School
The term Mitakshara is derived from the name of a commentary written by Vijnaneswara, on the Yajnavalkya Smriti.	The term Dayabhaga is derived from a similarly named text written by Jimutavahana.
It is observed in all parts of India and subdivided into the Benares, the Mithila, the Maharashtra and the Dravida schools.	It is observed in Bengal and Assam.
A son, by birth acquires an interest in the ancestral property of the joint family.	A son has no automatic ownership right by birth but acquires it on death of his father.
All the members enjoy coparcenary rights during the father's lifetime.	Sons do not enjoy coparcenary rights when the father is alive.
A coparcener's share is not defined and cannot be disposed of.	The share of each coparcener is defined and can be disposed of.
A wife cannot demand partition but has the right to a share in any partition between her husband and her sons.	Here, the same right does not exist for the women because the sons cannot demand partition as the father is the absolute owner.

Oxfam Report: Inequality Kills

Why in News

Recently, the **Oxfam report** titled "Inequality Kills" was released, the report **pointed out a stark income divide worsened by the Covid pandemic,** globally and in India.

Note:

Key Points

- **Magnitude of Growing Inequities:** Widening economic, gender, and racial inequalities—as well as the inequality that exists between countries—are tearing our world apart.
 - The wealth of the **world's 10 richest men has doubled** since the pandemic began.
 - The incomes of **99% of humanity are worse off because of Covid-19.**
 - Inequality **contributes to the death of at least one person every four seconds.**
- **Economic Violence:** A kind of economic violence is perpetrated when structural policy choices are made for the richest and most powerful people. This affects the poorest people, women and girls, and racialized groups most.
 - **Unequal Access to Healthcare:** Healthcare of good quality is a human right, but is too often treated as a luxury for rich people.
 - **Gender-Based Violence:** It is rooted in patriarchy and sexist economic systems. For example, sex-selective abortions.
 - **Poverty-Induced Hunger:** Hunger is one of the ways in which poverty kills, and it is faced by billions of ordinary people all over the world each day.
 - **Inequality of Climate Change Crisis:** The emissions of the richest people are driving this Climate Change crisis, with the CO₂ emissions of 20 of the richest billionaires estimated on average to be 8,000 times that of the billion poorest people.
- **Vaccine Apartheid:** Rich countries may back their pharmaceutical monopoly billionaires and hoard vaccines to protect their populations, but in so doing they push their own people toward risk from the mutations that vaccine apartheid is creating.
 - Vaccine apartheid as a concept calls attention to the effects of inequitable vaccine distribution policies on historically subordinated peoples.

Indian Scenario

- **Decline in Social Security Expenditure:**
 - A Covid continued to ravage India, the country's **healthcare budget saw a 10% decline** from RE (Revised Estimates) of 2020-21.
 - There was a **6% cut in allocation for education.**

- The **budgetary allocation for social security schemes declined from 1.5% of the total Union budget to 0.6%.**
- **Growing Inequalities:** According to the report, the **income of 84% of households in the country declined in 2021**, but at the same time, the **number of Indian billionaires grew from 102 to 142.**
 - **Growing Rich:** During the pandemic, the wealth of Indian billionaires increased from Rs 23.14 lakh crore to Rs 53.16 lakh crore.
 - India has the third-highest number of billionaires in the world, just behind China and the United States.
 - There is a 39% increase in the number of billionaires in India in 2021.
 - **Growing Poor:** More than 4.6 crore Indians are estimated to have fallen into extreme poverty in 2020. This is nearly half of the global new poor according to the United Nations.
 - Also, in the same year, the share of the bottom 50% of the population in national wealth was a mere 6%.
 - The unemployment in India has also increased.
- **Blow to Gender Parity:** Women collectively lost Rs 59.11 lakh crore in earnings in 2020, with 1.3 crores fewer women in work now than in 2019.
- **Increasing Fiscal Deficit:** Lowering **corporate taxes from 30% to 22%** to attract investment last year (2020) resulted in a loss of Rs 1.5 lakh crore, which contributed to the increase in India's **fiscal deficit.**
- **Unequal Federalism:** Despite the country's federal structure, the revenue resources remained concentrated in the Centre's hands.
 - However, the management of the pandemic was left to the states – who were not equipped to handle it with its financial or human resources.

Special Marriage Act 1954

Why in News

- Recently, the law that governs inter-faith marriages in the country, the **Special Marriage Act (SMA), 1954**, is being challenged in the Supreme Court.
- In 2021, petitions were filed to strike down several of its provisions.

Note:

The Special Marriage Act (SMA), 1954

- It is the legislation made to validate and register interreligious and inter-caste marriages in India.
- It allows two individuals to **solemnise their marriage through a civil contract**.
- No religious formalities are needed to be carried out under the Act.
- This Act includes **Hindus, Muslims, Christians, Sikhs, Jains, and Buddhists marriages**.
- This Act applies not only to Indian citizens who belong to different castes and religions but also to Indian nationals who live abroad.

About the Current Petition:

- **Section 5** of the SMA requires a **person marrying** under this law to give a notice of intended marriage.
- **Section 6(2)** says it should be **affixed at a conspicuous place at the office of the marriage officer**.
- **Section 7(1)** allows any person to object to the marriage within 30 days of the publication of the notice, failing which a marriage can be solemnised under **Section 7(2)**.
- Due to these provisions breaching personal liberties, several inter-faith couples approached the Court, **challenging Sections 6 and 7 of the Act**.

Key Points

- **About Interfaith Marriages:**
 - The matrimonial relationship developed between two individuals having different religious faiths.
 - Although marrying into a different religion is a matter of choice for an adult, there are certain issues regarding the same.
- **Issues with Interfaith Marriages:**
 - Interfaith marriages are believed to be a **forced conversion of one of the spouses (mostly women)**.
 - As per the Muslim Personal law, in order to get married to a non-Muslim, **conversion of religion is the only way**.
 - Hindu religion allows **only monogamy** and those **who want to marry a second time take another course**.
 - There is no provision regarding **caste determination of children born out of such marriages**.
 - The Special Marriage Act, 1954 is **not compatible with backwardness of the society**.

- There is debate over the validity of **Article 226 in the context of annulling the interfaith marriage by the high court**.
 - **Article 226:** Power of high courts to issue certain writs.
- **Challenges with Contemplating Laws for Interfaith Marriages:**
 - **Against Fundamental Rights:** Interference of the law in an individual's choice of marriage violates the existing fundamental rights such as:
 - Right to equality (Article 14),
 - Right to Freedom & Personal Liberty (Article 19),
 - Freedom of Religion and Right to Life (Article 25 and Article 21).
 - **Against Secularism:** Indian Constitution enshrines **secularism** as one of the cardinal principles.
 - **Article 25 of the Indian constitution** provides the freedom to practice any religion of one's choice.
 - Hence, in India inter-faith marriages are allowed as the constitution allows one to convert to a different religion from what one was born with and further the personal laws of the religion have provisions.
 - **Asymmetrical With Various Supreme Court's Judgements:**
 - The Supreme Court in **Shafin Jahan v Ashok KM (2018)**, has upheld the right to marry a person of one's choice as a part of Article 21.
 - According to the Supreme Court, the Constitution protects the ability of each individual to pursue a way of life or faith to which she or he seeks to adhere.
 - Therefore, the right to marry a person of one's choice is integral to Article 21 of the Constitution.
 - Further, Supreme Court in **K.S. Puttaswamy v UOI (2017)** judgement held that "**right of choice of a family life**" as a **fundamental right**.
 - **Patriarchal Roots:** This shows the law has deep-seated patriarchal roots, wherein women are infantilised, placed under parental and community control, and denied the right to take life decisions, should those decisions not be agreeable to their guardians.

Note:

Desh Ke Mentor Programme: Delhi Government

Why in News

Recently, the **National Commission for Protection of Child Rights (NCPCR)** suggested that the **Delhi government suspend its flagship 'Desh ke Mentor' Programme** till "the time when all the loopholes pertaining to the safety of the children are overhauled.

National Commission for Protection of Child Rights

- NCPCR is a **statutory body set up in March 2007 under the Commissions for Protection of Child Rights (CPCR) Act, 2005.**
- It is under the **administrative control of the Ministry of Women & Child Development.**
- The Commission's mandate is to ensure that all laws, policies, programmes, and administrative mechanisms are in consonance with the child rights perspective as enshrined in the Constitution of India and also the UN Convention on the Rights of the Child.
- It inquires into complaints relating to a child's right to free and compulsory education under the **Right to Education Act, 2009.**
- It monitors the implementation of **Protection of Children from Sexual Offences (POCSO) Act, 2012.**

Key Points

- **About:**
 - It was **launched in October 2021, aiming at connecting students in classes IX to XII with voluntary mentors.**



- People between the ages of **18 and 35 can sign up to be mentors through an app** created by a team at the Delhi Technological University and will be connected with students based on mutual interests.
- The **mentorship entails regular phone calls for a minimum of two months**, which can optionally be carried on for another four months.
- The idea is for the **young mentors to guide students through higher education and career options**, preparation for higher education entrance exams, and dealing with the pressure of it all.
- So far, 44,000 people have signed up as mentors and have been working with 1.76 lakh children.
- **Concerns Raised by NCPCR:**
 - Assigning children to a mentor of the same gender as them **does not necessarily assure their safety from abuse.**
 - **Lack of police verification** of the mentors.
 - A **psychometric Test is not a full proof assessment of a person** in terms of potential threat to any child.
 - Limiting interactions to phone calls also **does not ensure the safety of children** since "child related crime can be initiated through phone calls as well."
 - The responsibility and accountability of preventing children from such situations lies with the Department. The consent of parents cannot be used as a cushion in case of any untoward incident.

Note:



Science & Technology

Highlights

- Small Satellite Launch Vehicle
- Web 3.0
- 5G Telecoms and Airline Safety
- Dark Matter Shapes Galaxies
- Negative Ion Technology

Small Satellite Launch Vehicle

Why in News

Recently, the **Indian Space Research Organisation (ISRO) chairman** has mentioned the launch of an “**SSLV-D1 Micro SAT** in April 2022”.

- The **SSLV (Small Satellite Launch Vehicle)** aims to cater to the market for the launch of small satellites into **Earth's low orbits** that has emerged in recent years to cater to the needs of developing countries, universities for small satellites, and private corporations.

Key Points

- **About:**
 - It is the **smallest vehicle weighing only 110-tonne**. It will take only 72 hours to integrate, unlike the 70 days taken now for a launch vehicle.
 - It can **carry satellites weighing up to 500 kg** to a low earth orbit while the tried and tested **Polar Satellite Launch Vehicle (PSLV)** can launch satellites weighing in the range of 1000 kg.
 - SSLV is a **three-stage all solid vehicle** and has a capability to launch up to 500 kg satellite mass into 500 km Low Earth Orbit (LEO) and 300 kg to Sun Synchronous Orbit (SSO).
 - It is **perfectly suited for launching multiple microsatellites** at a time and supports multiple orbital drop-offs.
 - The key features of SSLV are **low cost, with low turn-around time, flexibility in accommodating multiple satellites, launch on demand feasibility, minimal launch infrastructure requirements, etc.**

- The Government has sanctioned a total cost of **Rs. 169 Crores for the development project** including the development & qualification of the vehicle systems and the flight demonstration through three development flights (SSLV-D1, SSLV-D2 & SSLV-D3).
- **ISRO's new chairman Dr Somanath is credited with designing and developing the SSLV** during his tenure as director of the Vikram Sarabhai Space Centre in Thiruvananthapuram since 2018.
 - The maiden flight of the SSLV was scheduled to launch in July 2019 but that has since been delayed due to setbacks from Covid-19 and other issues.
- **Significance of SSLV:**
 - The development and manufacture of the SSLV are **expected to create greater synergy between the space sector and private Indian industries** – a key aim of the space ministry.
 - Indian industry has a consortium for the production of PSLV and should come together to produce the SSLV as well once it is tested.
 - One of the mandates of the newly-created ISRO commercial arm, **New Space India Limited (NSIL)** is to **mass-produce and manufacture the SSLV and the more powerful PSLV** in partnership with the private sector in India through technology transfers.
 - Its aim is to **use research and development carried out by ISRO** over the years for commercial purposes through Indian industry partners.
 - Small satellite launches have **so far depended on 'piggy-back' rides with big satellite launches on the Polar Satellite Launch Vehicle (PSLV)** – ISRO's work-horse with more than 50 successful launches. As a result, small satellite launches have relied on ISRO finalising launch contracts for larger satellites.

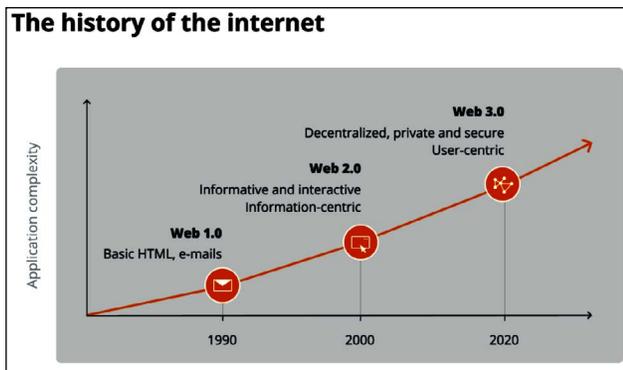
Note:



Web 3.0

Why in News

The concept of **Web3**, also called **Web 3.0**, used to describe a potential **next phase of the internet**, created quite a buzz in 2021.



Key Points

- **About:**
 - **World Wide Web**, which is also known as a Web, is a **collection of websites or web pages stored in web servers** and connected to local computers through the internet.
 - These websites contain text pages, digital images, audios, videos, etc. Users can access the content of these sites from any part of the world over the internet using their devices such as computers, laptops, cell phones, etc.
 - Web 3.0 is a **decentralized internet** to be run on **blockchain technology**, which would be **different from the versions in use, Web 1.0 and Web 2.0**.

- In Web3, **users will have ownership stakes in platforms and applications** unlike now where tech giants control the platforms.
 - Gavin Wood, founder of **Ethereum**, a block chain technology company, used the term Web3 first in 2014 and in the past few years many others have added to the idea of Web3.

➤ Previous Versions:

- **Web 1.0:**
 - Web 1.0 is the **world wide web or the internet that was invented in 1989**. It became popular from 1993. It **lasted until 1999**.
 - The internet in the Web 1.0 days **was mostly static web pages** where users would go to a website and then read and interact with the static information.
 - Even though there were **e-commerce** websites in the initial days it was still a **closed environment** and the users themselves could not create any content or post reviews on the internet.
- **Web 2.0:**
 - Web 2.0 **started in some form in the late 1990s itself though 2004 was when most of its features were fully available**. It is still the age of Web 2.0 now.
 - The differentiating characteristic of Web 2.0 compared to Web 1.0 is that **users can create content**.
 - They can **interact and contribute** in the form of comments, registering likes, sharing and uploading their photos or videos and perform other such activities.
 - Primarily, a **social media** kind of interaction is the differentiating trait of Web 2.0.

➤ Need of Web 3.0:

- In Web 2.0, **most of the data** in the internet and the internet traffic are **owned or handled by very few companies** ex. Google.
- This has **created issues related to data privacy, data security** and abuse of such data.
- There is a sense of disappointment that the **original purpose of the internet has been distorted**.

➤ Significance of Web 3.0:

- **Decentralized and Fair Internet:** Web3 will deliver a **decentralized and fair internet** where users control their own data.

Note:

- **Eliminates Intermediaries:** With block chain, the time and place of the transaction are recorded permanently.
 - Thus, Web3 enables peer to peer (seller to buyer) transactions by eliminating the role of the intermediary. This concept can be extended to
- **Decentralization and Transparency:** The spirit of Web3 is Decentralized Autonomous Organization (DAO).
 - DAO is all about the business rules and **governing rules in any transaction are transparently available for anyone** to see and software will be written conforming to these rules.
 - With DAO, there is **no need for a central authority to authenticate or validate.**

5G Telecoms and Airline Safety

Why in News

Recently, the US Federal Aviation Administration (FAA) has warned that the new **5G technology** could interfere with sensitive navigation equipment such as altimeters, which could lead to “catastrophic disruptions.”

- Airlines across the world, including India, are adjusting their scheduled flights to the US due to the rollout of 5G by telecom companies near American airports.

5G Technology

- 5G is the **5th generation mobile network**. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks.
- It enables **a new kind of network that is designed to connect virtually everyone and everything together** including machines, objects, and devices.
- Internet speeds in the **high-band spectrum of 5G has been tested to be as high as 20 Gbps (gigabits per second)**, while, in most cases, the maximum internet data speed in 4G has been recorded at 1 Gbps.
- In India, Satcom Industry Association-India (SIA) has **voiced concerns over the Government’s plan to include the Millimetre Wave (mm Wave) bands** in the 5G spectrum auction.

Key Points

- **About:**
 - The higher the frequency in the spectrum, the faster the service. So in order to get full value from 5G, operators want to operate at higher frequencies.
 - Some of the **C band (a radio frequency band between 3.7 and 4.2 GHz) spectrum** auctioned had been used for satellite radio but the transition to **5G means there will be much more traffic.**
 - The **new C band 5G service could render a significant number of aircraft** unusable, causing chaos for US flights and potentially stranding tens of thousands of Americans overseas.
- **Concern:**
 - The United States auctioned mid-range 5G bandwidth to mobile phone companies in early 2021 in the C band, for about USD 80 billion.
 - FAA warned that the **functioning of Altimeters**, which measure how far above the ground an aeroplane is travelling, operating in the **4.2-4.4 GHz range** which sits too close to the frequency of C range, **may get hampered.**
 - In addition to altitude, **altimeter readouts are also used to facilitate automated landings** and to help detect dangerous currents called wind shear.
 - Companies have argued that **C band 5G has been deployed in about 40 other countries without aviation interference issues.** They have agreed to buffer zones around 50 airports in the United States, similar to those used in France, for six months to reduce interference risks.
- **Solution:**
 - In the short-term, Companies agreed to **temporarily defer turning on some wireless towers near key airports** to avert a significant disruption to US flights.
 - In the Longer-term, **the FAA needs to clear and allow the vast majority of the US commercial aeroplane fleet** to perform low-visibility landings at many airports where 5G C-band will be deployed. This means **certifying altimeters to operate near 5G base stations.**

Note:

Dark Matter Shapes Galaxies

Why in News

Recently, scientists investigating how the **shape of dark matter** affects the motion of stars in the centre of some galaxies (stellar bars) have found that **out-of-plane bending** can be explained through **dark matter halos in barred galaxies**.

- Out of plane bending of the bar in **barred galaxies** is a rare violent bar thickening mechanism known as **buckling**.
- A **dark halo** is the inferred halo of invisible material (dark matter) that permeates and surrounds individual galaxies, as well as groups and clusters of galaxies.

Note:

- A barred spiral galaxy is a spiral galaxy with a central bar-shaped structure composed of stars.
- For example, the Milky Way is a disk galaxy made up of stars moving in circular orbits around the center in a flattened disk, with a dense collection of the stars at the center called the bulge.
 - These bulges can have shapes ranging from nearly spherical to as flat as the galaxy disk. The Milky Way has a flat boxy or peanut-shaped bulge in its center.
 - Such bulges are formed due to thickening of the stellar bars in galaxies.
- One of the violent thickening mechanisms is buckling, where the bar bends out of the plane of the galaxy disk.
- **Stellar bar:** A bar-shaped accumulation of stars in galaxies.

Key Points

- **About Dark Matter:**
 - Dark matter, though never detected, is believed to be present in the entire universe.
 - It is presumed that primordial black holes, those that were formed in the early age of the universe, are a source of dark matter. It was **proposed by Professor Stephen Hawking**.
 - It is believed that combined with dark energy, it makes up more than **95% of the universe**.

- Its **gravitational force** prevents stars in our **Milky Way** from flying apart.
- However, attempts to detect such dark matter particles using underground experiments, or accelerator experiments including the world's largest accelerator, the **Large Hadron Collider (LHC)**, have failed so far.

➤ Dark Matter Presence in the Universe:

- **Laws of gravity** expect us to see stars closer to the center of galaxies rotating faster than the stars on the edge.
 - However, in most galaxies, **the stars closer to the center and the stars at the edge of the galaxies take almost the same time to make one revolution**.
- This implied that something **invisible and enveloping the galaxies** was giving an extra push to the outer stars, speeding them up.
- This entity has remained as one of the unresolved puzzles in cosmology since the 1930s. **It was named 'Dark Matter'**.
- The material is considered to be a 'matter' since it has gravitational attraction and it is **'dark' because it does not seem to interact with light** (or any part of the electromagnetic spectrum).

➤ Dark Matter and Dark Energy:

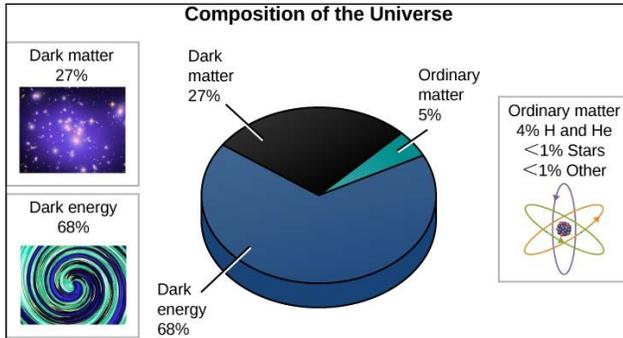
- While dark matter attracts and holds galaxies together, dark energy repels and causes the expansion of our universe.
- Despite both components being invisible, a lot more is known about dark matter, since its existence was suggested as early as the 1920s, while **dark energy** wasn't discovered until 1998.

➤ About Dark Energy:

- The **Big Bang** occurred nearly 15 billion years ago and expanded.
- Earlier, astronomers believed that eventually the expansion of the Universe will slow down because of gravity and it will recollapse.
 - However, data from the **Hubble Telescope** suggested that the Universe's expansion is accelerating.
- The astronomers theorize that the faster expansion rate is due to a mysterious, dark force or energy that is pulling galaxies apart.
 - The term 'dark' is used to denote the unknown.

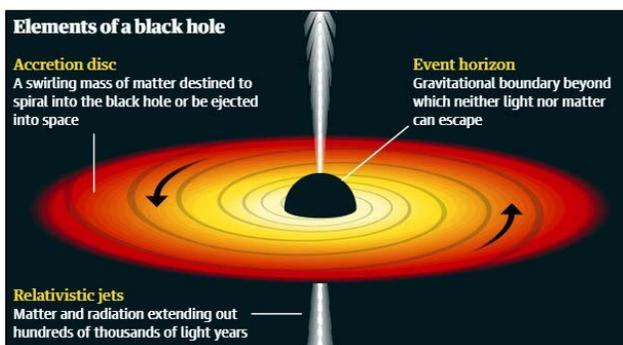
Note:

- The following diagram reveals changes in the rate of expansion since the universe's birth 15 billion years ago.



Black Holes

- It refers to a point in space where the matter is so compressed as to create a gravity field from which even light cannot escape.
- The concept was theorized by Albert Einstein in 1915 and the term 'black hole' was coined in the mid-1960s by American physicist John Archibald Wheeler.
- Usually, the black holes belong to two categories:
 - One category ranges between a few solar masses and tens of solar masses. These are thought to form when massive stars die.
 - The other category is of supermassive black holes. These range from hundreds of thousands to billions of times that of the sun from the Solar system to which Earth belongs.
- In April 2019, the scientists at the Event Horizon Telescope Project released the **first-ever image of a Black Hole** (more precisely, of its shadow).
 - The Event Horizon Telescope is a group of 8 radio telescopes (used to detect radio waves from space) located in different parts of the world.
- **Gravitational waves** are created when two black holes orbit each other and merge.



Negative Ion Technology

Why in News

Recently, the **Authority for Nuclear Safety and Radiation Protection (ANVS), Netherlands** issued a statement **identifying various negative ion wearable products containing more Radioactivity than legally permitted.**

Key Points

- **About:**
 - Negative ion technology **embeds negative ions in personal products** and is currently being advertised as a means to maintain health, balance energy, and improve well-being.
 - This technology is used in certain silicone wristbands, quantum or scalar-energy pendants, and kinesthesiology tape.
 - Negative ions are also made **when sunlight, radiation, air, or water break down oxygen.**
 - The minerals that produce these negative ions often include **naturally occurring radioactive substances such as uranium and thorium.**
 - It is believed that negative ions create positive vibes and uplift the mood. They show the various mental and physical health benefits, such as stress reduction, better sleeping, respiration etc. whereas these ions **may also act on pollutants, make them negatively charged** and get them collected on surfaces.
- **Related Concerns:**
 - The **radiation detected in some of these products has been higher than the background level and in some cases high enough** to require licensing.
 - The minerals used in products contain varying levels of radioactivity, it can be **difficult for the consumer to know exactly how radioactive these items are.**
 - Radioactivity is the act of emitting radiation spontaneously.
 - The products were found to contain radioactive materials and therefore continuously **emit ionizing radiation, thereby exposing the wearer.**
 - Exposure to **ionizing radiation can cause adverse health effects** and wearing the products for extended periods could pose health risks that **include tissue and DNA damage.**

Note:

- Exposure can also cause **severe harmful effects such as:** Skin burns, Acute radiation sickness that causes cancer and hairfall, Temporary reduction in white blood cells, Possible chromosomal damage, Reduction in resistance to infection.
 - **IAEA (International Atomic Energy Agency)** researchers found that the undergarment industry in Malaysia and elsewhere advertised that their “negative ion undergarments” contain **tourmaline, monazite and zircon, all known to contain uranium and thorium.**
- **Efforts:**
 - In “Radiation Protection and Safety of radiation Sources: **International Basic Safety Standards” (2014)**, the IAEA considers that the frivolous use of radiation or radioactive substances in toys and personal jewelry or adornments, which result in an increase in activity, is unjustified.
 - The IAEA published a specific safety guide titled “**Radiation Safety for Consumer Products (2016)**.”
 - In India, the **Atomic Energy (Radiation Protection) Rules, 2004** contains provisions consistent with those of the IAEA.



Note:



drishti

Environment & Ecology

Highlights

- 2021 Sixth Warmest Year
- Domestic Hazardous Waste
- Indian Environment Service (IES)
- Eastern Swamp Deer
- Ranking of States on Faster Green Nods
- Environment Management Plan for Najafgarh Jheel
- Fly Ash Management and Utilisation Mission
- Environmental Emergency in Peru
- Development Project in the Great Nicobar Island: Inaccurate EIA

2021 Sixth Warmest Year

Why in News

Recently, two American agencies have released data showing that **2021 was the world's sixth warmest year on record.**

- And the last 10 years were the warmest since record-keeping began in 1880.
- The data was collected by the US. space agency **NASA** and the National Oceanic and Atmospheric Administration (NOAA).

Key Points

- **Earth in 2021:**
 - Earth in 2021 was about **1.1 degrees Celsius warmer** than the late 19th century average, the start of the industrial revolution.
- **Northern and Southern Hemisphere:**
 - The Northern Hemisphere land surface temperature was the **third highest on record** — 2016 (second) and 2020 (first) were warmer.
 - The 2021 Southern Hemisphere surface temperature was the **ninth highest on record.**
- **Sea Surface Temperatures:**
 - Record-high sea surface temperatures were observed across parts of the Atlantic and Pacific oceans.
 - The upper ocean heat content was record high in 2021, surpassing the previous record set in 2020.
 - The seven highest ocean heat content have all occurred in the last seven years (2015-2021).

➤ Antarctic Sea:

- Antarctic sea ice extent during December 2021 was 3.55 million square miles.
- This value is 11.6% below average and was the third-smallest December extent on record.
- Only December of 2016 and 2018 had a smaller extent.

➤ Effects of La Niña:

- Effects of **La Niña** kept world temperatures lower.
 - La Niña is a weather pattern that happens in the Pacific Ocean but affects weather around the world.
 - A La Niña event happens when ocean surface waters cool along the Pacific coast of the South American tropics. This takes place about every two to seven years.

➤ Reasons for the Warming Trend:

- This warming trend around the globe is due to **human activities** that have increased **emissions of carbon dioxide** and other **greenhouse gases** into the atmosphere.
 - The planet is already seeing the effects of global warming: **Arctic sea ice is declining, sea levels are rising, wildfires** are becoming more severe and animal migration patterns are shifting.

Rising Temperature in India

- The **Intergovernmental Panel on Climate Change (IPCC)** released the first part of its **Sixth Assessment Report (AR6)** titled Climate Change 2021: The Physical Science Basis in August, 2021.
- Indian Sub-continent Specific Findings:
 - **Heatwaves:** **Heatwaves** and humid heat stress will be more intense and frequent during the 21st century over South Asia.

Note:

- **Monsoon:** Changes in monsoon precipitation are also expected, with both annual and summer monsoon precipitation projected to increase.
 - The **South West Monsoon** has declined over the past few decades because of the increase of **aerosols**, but once this reduces, the country will experience heavy monsoon rainfall.
- **Sea Temperature:** The Indian Ocean, which includes the Arabian Sea and Bay of Bengal, has warmed faster than the global average.
 - The sea surface temperature over the Indian ocean is likely to increase by 1 to 2 °C when there is 1.5°C to 2°C global warming.
- **Recent Climate Related Measures by India:**
 - An ambitious climate action vision with five elements has been unveiled at UNFCCC **COP26**.
 - Taking non-fossil energy capacity to 500 GW by 2030.
 - Meeting 50% of energy requirements from renewable energy by 2030.
 - Reducing total projected carbon emissions by one billion tons by 2030.
 - Reducing the carbon intensity of the economy to less than 45% by 2030.
 - Achieving the target of **"net zero"** by 2070.
 - India now ranks fourth in terms of installed **renewable energy** capacity and non-fossil energy has increased by more than 25% in the past seven years and reached 40% of the total energy mix.
 - India has also taken the lead in initiatives such as the **International Solar Alliance (ISA)** and **Coalition for Disaster Resilient Infrastructure (CDRI)**.

Domestic Hazardous Waste

Why in News

Segregation of domestic hazardous waste remains a distant dream for most Indian cities in absence of robust framework and infrastructure.

- **Indore is the only city in the country** that safely handles its domestic hazardous waste.

Key Points

- **About:**
 - Domestic Hazardous Waste is any **chemical or product that can cause serious illness or pose**

an environmental or health threat if improperly stored, transported or disposed of.

- When hazardous waste is disposed of in the trash, down the drain, or on the ground, our water and soils can be contaminated or trash collectors can be harmed.
- Most products labeled dangerous, flammable, poison, combustible and corrosive are considered hazardous waste.
- **Examples:** Auto batteries, Fertilizers, Batteries (non-alkaline), Paint.
- **Domestic Hazardous Waste in India:**
 - In 2020, a significant level of toxic heavy metals and persistent organic contaminants like pesticides have been found by the researchers from the Indian Institute of Technology (IIT) Delhi and IIT Bombay.
 - They analysed fine particles from eight dump sites across the country.
- **Governing Household Waste:**
 - Household waste is governed by the rules outlined in the **Solid Waste Management Rules 2016**.
 - These rules divide household waste into dry and wet waste.
 - Wet waste is categorised as any waste that decomposes or degrades by itself.
 - All other waste falls into dry waste according to the rules.
- **Issues:**
 - **Not Fully Covered in Solid Waste Management Rules, 2016:**
 - The **Solid Waste Management Rules, 2016** define it as "discarded paint drums, pesticide cans, compact fluorescent lightbulbs, tube lights, expired medicines, broken mercury thermometers, used batteries, used needles and syringes and contaminated gauge, etc generated at household levels".
 - The definition is not exhaustive, and so leaves a lot to the imagination of individual households and local government bodies such as Panchayats and municipalities.
 - For example, the rules **leave out cigarette butts** even though they contain traces of heavy metals and other chemicals.
 - **Not in Ground Translation of Rules:**
 - According to the rules, Households must segregate waste into wet, dry and domestic hazardous categories.

Note:

- Local government bodies must collect the hazardous waste, and/or set up collection centres every 20 km so households can deposit it on their own.
- The local authorities must then safely deliver the collected waste to disposal facilities. The rules also direct the authorities to develop the necessary infrastructure and sensitise people by 2018.
- But none of these requirements have been translated on the ground.
- **Not Enough Disposal Facilities:**
 - Even if the waste is collected, the country does not have enough disposal facilities to safely treat them.
 - A disposal facility typically has engineered landfills that stop the percolation of toxic leachate into the ground, and / or controlled incinerators.
 - Currently, **there are only 45 of these facilities**, as per the Handbook on Chemicals and Hazardous Waste Management and Handling in India released in 2019 by the Union Ministry of Environment, Forest and Climate Change.

Indian Environment Service (IES)

Why in News

Recently, the Supreme Court asked the Centre to establish a dedicated **Indian Environment Service (IES)** at the all-India level.

- The creation of IES was recommended by a committee headed by former Cabinet Secretary **TSR Subramanian in 2014**.

Note:

- The high-level committee was constituted in August 2014 under the chairmanship of Subramanian by the **Ministry of Environment, Forests And Climate Change (MoEF & CC)**.
- The committee was established to **review environmental laws in the country** and to bring them in line with the then required needs.

Key Points

- **About:** It will act as an **expert group** in the public and quasi-governmental sectors over the next decades, **regarding environmental matters**.
- **Need:** The constant **environmental degradation, ecological imbalance, climate change, water scarcity**, etc. are a great concern for India.
 - The citizens are facing many **environmental issues such as air pollution, water pollution, non-eradication of solid waste** and garbage and pollution of the natural environment.
 - One of the major causes of environmental degradation is the **flaw of the existing system** that lies in the enforcement capabilities of environmental institutions at various levels.
- **Observations of TSR Subramanian Committee:** Looking at the current administrative set-up, it can be **inferred that the government servants might not be able to spare special time for environmental causes**.
 - **Lack of Specialised Cadre:** There is a **lack of trained personnel involved in the administration**, policy formulation, and supervising the implementation of policies of the state and central governments.
 - India had a **strong environmental policy and legislative framework** but weak implementation has resulted in environmental governance being criticised by conservation experts and the judiciary.
 - It pointed out that there was no effective coordination amongst various Ministries/ institutions regarding the integration of environmental concerns.
- **Associated Challenges:** IES will overlap with the already existing one **All India Service (Indian Forest Service)**.
 - Apart from this, IES will also pose the **challenge to federal structure**.

Eastern Swamp Deer

Why in News

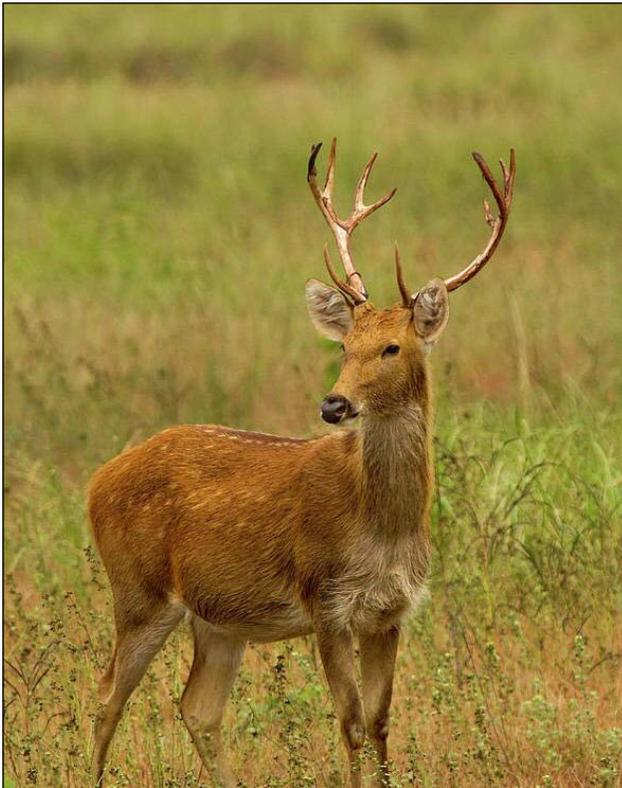
Recently, the population of the **vulnerable eastern swamp deer** has dipped in the **Kaziranga National Park** and **Tiger Reserve (Assam)**. The eastern swamp deer is **extinct elsewhere in South Asia**.

Note:

- This decline can be attributed to **two high floods** in 2019 and 2020.
- However, on the brighter side, the **eastern swamp deer** has now been distributed to areas beyond the Kaziranga National Park, such as **Orang National Park** and **Laokhowa-Burachapori wildlife sanctuaries** (Assam).

Key Points

- **About Swamp Deer:** There are three **subspecies of swamp deer** found in the Indian Subcontinent.
 - The **western swamp deer** (*Rucervus duvaucelii*) found in Nepal.
 - **Southern swamp deer/Hard Ground Barasingha** (*Rucervus duvaucelii branderi*) found in central and north India.
 - **Eastern swamp deer** (*Rucervus duvaucelii ranjitsinhi*) found in the **Kaziranga (Assam)** and **Dudhwa National Parks (Uttar Pradesh)**.



- **Protection Status of Swamp Deer:**
 - **IUCN Red List:** Vulnerable
 - **CITES:** Appendix I
 - **Wildlife Protection Act, 1972:** Schedule I

Ranking of States on Faster Green Nods

Why in News

The **Union Ministry of Environment, Forests and Climate Change** has decided to rank states, specifically **State Environment Impact Assessment Authorities (SEIAAs)**, on the speed with which they accord **Environmental Clearances (EC)** to development projects.

- The issue of action taken to enable **“ease of doing business”**, especially in the context of “ranking of states based on the time taken in accordance with clearances” was raised in November 2021.
- The average time to grant environmental clearances in all sectors has reduced significantly from over 150 days in 2019 to less than 90 days in 2021.

SEIAAs

- The SEIAAs are responsible for providing environmental clearance for a bulk of the infrastructure, developmental and industrial projects.
- Their main purpose is to assess the impact of the proposed project on the environment and people, and to try and minimise this impact.

Key Points

- **About:**
 - It has been decided to **incentivise the states through a star-rating system**, based on efficiency and timeliness in grant of EC.
 - This is intended as a mode of recognition and encouragement as well as for prompting improvements where needed.
 - The SEIAA, which clears projects in the shortest period of time, has a high rate of clearance, and seeks fewer “essential details”, will be ranked the highest.
- **Parameters for the Rating System:**
 - SEIAAs will be graded between 0 and 1 on five parameters, and 0 and 2 on one (for granting EC).
 - **The parameters are:**
 - The average number of days taken by an SEIAA to accept proposals seeking either EC or Terms of Reference (ToR) for projects.
 - The number of complaints addressed by the Authority.

Note:

- The percentage of cases for which site visits are carried out by either SEIAAs or State Expert Appraisal Committees (SEACs).
 - The percentage of cases in which the Authority seeks additional information from project proponents more than once.
 - The disposal percentage of proposals seeking fresh or amended ToRs that are older than 30 days.
 - The disposal percentage of proposals seeking fresh or amended EC that are older than 120 days.
- **Criticism of the Move:**
- **Reduce the SEIAA to a 'Rubber Stamps Authority':**
 - Such a rating system stands to reduce the SEIAA to a 'rubber stamps authority' where their performance will be judged by the speed with which they facilitate environmental degradation and jeopardising of community livelihoods.
 - **Against Article 21:**
 - The rating system is also against the environmental rule of law; **violates article 21** of the Constitution (Protection of Life and Personal Liberty) and is an arbitrary exercise of power to benefit only business at the cost of the environment and people.
 - **Constrain the Mandate of the SEIAAs:**
 - The move will **severely constrain the mandate of the SEIAAs** under the **Environment Protection Act, 1986** and the **Environment Impact Assessment notification**.
 - This ratings system could lead to a further dilution in the quality of environment impact assessments and it only demonises the regulatory process, whereas it is the state of the economy at large which has arrested the growth of business.
 - To assess the performance of SEIAAs, the criteria for the same should step from this environmental protection mandate, which is drawn from **Section 3(3) of the Environment Protection Act**.
 - The Act empowers the Central Government to establish authorities (under section 3(3)) charged with the mandate of preventing environmental pollution in all its forms and to tackle specific environmental problems that are peculiar to different parts of the country.

Environmental Clearance In India

- In India Environmental clearance of a project has to be obtained either from the **State Government and /or from the Central Government**.
- The basic objective behind the environmental clearance is to **ensure the least damage to the natural resources** and incorporate suitable remedial measures right at the stage of project formulation.
- The Environmental Impact Assessment (EIA) notification issued by the Ministry of Environment & Forest and Climate Change (MoEFCC) includes the details of the procedure for obtaining Environmental Clearance and public hearing for decision making.
- This EIA notification is valid for both Government as well as the Public sector/Private sector for mega projects undertaken by them.
- The potential impacts of proposed projects, plan programs, or legislative actions relative to the physical-chemical, biological, cultural, and socio-economic components of the total environment.

Environment Management Plan for Najafgarh Jheel

Why in News

Recently, the **National Green Tribunal (NGT)** has directed Delhi and Haryana to enforce the **Environment Management Plan (EMP)** that the two governments have prepared for the **rejuvenation and protection of the Najafgarh Jheel**, a transboundary **wetland**.

- The implementation of these action plans is to be monitored by the **National Wetland Authority** through the respective State Wetland Authorities.
- Earlier, the Union Environment Ministry had set up a **three-member committee to prepare an integrated EMP**.



Note:

Key Points

➤ The Environment Management Plan:

- The top priority would be to notify the Najafgarh jheel and its area of influence under **The Wetlands (Conservation and Management) Rules, 2017**.
 - The rules prohibit and regulate certain activities within wetlands and their 'zone of influence'.
- It lists immediate measures to be taken including demarcating the boundary of the wetland using geo-tagged pillars, and commissioning a hydrological assessment and species inventory.
- Medium-term measures to be implemented in two to three years include in-situ treatment of major drains meeting the Najafgarh jheel, regular monitoring of the waterbird population, and relocating flow obstructions such as power sub-stations.
 - The jheel is known to be a habitat for migratory and resident waterbirds.
- It also proposes a detailed estimation of sewage generation in the area considering 15 years of projected population, and identification of all drains contributing to pollution in the jheel.

➤ Najafgarh Jheel:

- It is located in a natural depression in southwest Delhi, close to the Gurugram-Rajokri border on National Highway-48.
- The lake is largely filled with sewage from Gurugram and surrounding villages of Delhi. A portion of the lake falls in Haryana.
- The presence of 281 bird species, including several threatened ones such as **Egyptian vulture, Sarus Crane, Steppe Eagle, Greater Spotted Eagle, Imperial Eagle** and those migrating along the **Central Asian Flyway** has been reported at the lake.

➤ Related Concerns:

- Once spread over 226 sq km, the water body straddling Delhi and Gurugram has **shrunk to just seven sq km due to rampant encroachment**.
 - According to **Indian National Trust for Art and Cultural Heritage (INTACH)**, the revival of the jheel would yield around **20 million gallons of water a day** to support a population of 3.5 lakh.
 - **INTACH** is a non-profit charitable organisation registered under the Societies Registration Act, 1860.

- Despite being the source of several benefits and sustaining habitats of diverse species, Najafgarh Jheel **has been highly fragmented and transformed, built upon, used as a waste receptacle, and infested with invasive species**.
- The **Sahibi river, of which Najafgarh Jheel was the natural floodplain, has been converted virtually into a drain**. The decimation of wetlands has exposed the neighbouring settlements in Haryana and Delhi to high risks of pluvial flooding and reduced groundwater levels.
- Recent **constructions within the wetlands**, while impeding natural wetland functions, are precarious owing to high seismicity and liquefaction within the region.

➤ Significance:

- The Najafgarh Jheel is a **critical natural infrastructure for the region, buffering floods, treating wastewater, recharging groundwater** (with high potential for water supply to significant population) and providing habitat to numerous plant, animal and bird species.
- It can regulate the **microclimate** by virtue of being a heat and carbon sink. In fact, if the EMPs are properly and fully implemented, the jheel can become central to the National Capital Region's ability to mitigate the local effects of **climate change**.

National Green Tribunal

- It is a **specialised body set up under the National Green Tribunal Act (2010)** for effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources.
- With the establishment of the NGT, **India became the third country in the world to set up a specialised environmental tribunal**, only after Australia and New Zealand, and the first developing country to do so.
- The NGT Act provided a specialised role to the tribunal to act on issues where a dispute arose under seven specified laws (mentioned in Schedule I of the Act): **The Water Act, The Water Cess Act, The Forest Conservation Act, Air Act, Environment Protection Act, Public Liability Insurance Act and the Biological Diversity Act**.
- The NGT has five places of sittings, New Delhi is the Principal place of sitting and Bhopal, Pune, Kolkata and Chennai are the other four.

Note:

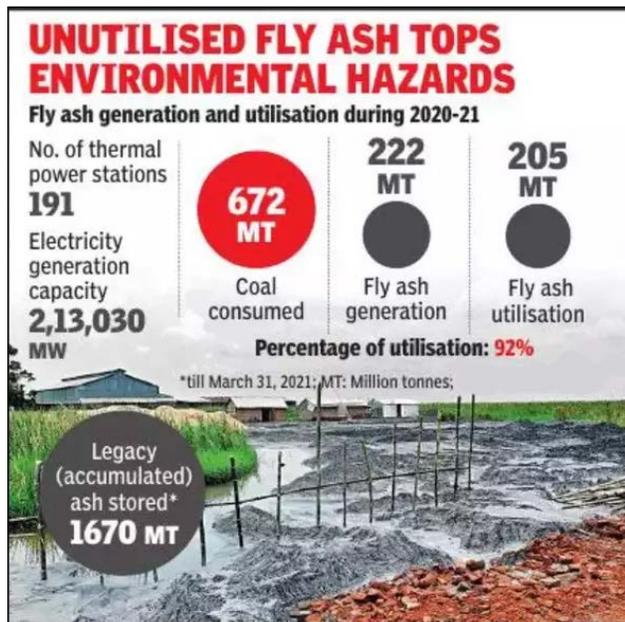
Wetlands

- Wetlands are areas where water is the primary factor controlling the environment and the associated plant and animal life. They occur where the water table is at or near the surface of the land, or where the land is covered by water.
- Wetlands are defined as: “lands transitional between terrestrial and aquatic eco-systems where the water table is usually at or near the surface or the land is covered by shallow water”.
- 2nd February is World Wetlands Day. It was on this date in 1971 that the **Ramsar Convention** on Wetlands was adopted in Ramsar, Iran.

Fly Ash Management and Utilisation Mission

Why in News

Recently, the **National Green Tribunal (NGT)** directed the constitution of a ‘**Fly Ash Management and Utilisation Mission**’.



Key Points

- **About:**
 - The order by the NGT takes note of the ‘**unscientific handling and storage**’ of the fly ash by coal thermal power stations.

- For example, the draining of industrial effluents and fly ash in the **Rihand Reservoir**.
- The Fly Ash Management and Utilisation Mission, besides monitoring the disposal of annual stock of unutilised fly ash, will also see how 1,670 million tonnes of legacy (accumulated) fly ash could be utilized in the least hazardous manner and how all safety measures could be taken by the power plants.
- The Mission will **hold its first meeting within one month to assess the fly ash management situation in coal power plants** and to prepare action plans to build road maps for ash utilisation by individual plants.
 - These meetings shall be **conducted each month, for a year**.
- **Aim:**
 - To ‘coordinate and monitor issues relating to the handling and disposal of fly ash and associated issues.’
- **Head & Nodal Agency:**
 - The Mission is to be jointly headed by the secretaries of the Union **Ministry of Environment, Forest & Climate Change (MoEF&CC)**, Union **Ministry of Coal and Power**, keeping on board chief secretaries of respective states where the mission is being implemented.
 - The secretary of **MoEF&CC** will be the nodal agency for coordination and compliance.
- **Different from Fly Ash Notification 2021:**
 - Fly Ash Notification 2021 was issued under the **Environment (Protection) Act 1986**.
 - Prohibiting dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land or into water bodies, the **Centre has made it mandatory for such plants to ensure 100% utilization of ash in an eco-friendly manner**, and introduced for the first time a penalty regime for non-compliance based on ‘polluter pays’ principle.
 - Under new rules, **the non-compliant power plants will be imposed with an environmental compensation** of Rs 1,000 per tonne on unutilised ash during the end of every financial year.
 - The amount, collected by the **Central Pollution Control Board (CPCB)** from the thermal power plants, **will be used towards the safe disposal**

Note:

of the unutilised ash. It may also be utilised for advancing research on use of ash including ash based products.

- In cases where fly ash is being used in various activities, **power plants will have to deliver fly ash at project sites free of cost.**
- The **power plant may, however, charge for ash cost and transportation as per mutually agreed terms**, in case it is able to dispose of the ash through other means.
- The new fly ash notification of December 2021, has made **provision for the 'enforcement, monitoring, audit and reporting' of the progress of fly ash utilisation and implementation** by coal thermal power plants and user agencies.
- The Notification **holds the CPCB and State Pollution Control Boards (SPCB) / Pollution Control Committees (PCC) responsible** for monitoring the effective implementation of mandates under it.
- However, along with these statutory regulators, **the Mission also extends the responsibility of fly ash management to the chief secretaries of the states.**
- The **Notification mandates the individual thermal power plant to upload monthly information** regarding ash generation and utilisation on its web portal.
 - The Mission as directed by the NGT, on the other hand, will make the roadmaps and progress in fly ash utilisation available for all thermal power plants and their clusters, on the MoEF&CC website on a quarterly basis for the knowledge of all stakeholders.

Fly Ash

➤ About:

- Fly ash is an **unwanted unburnt residue of coal combustion in a coal thermal power plant.**
- It is **emitted along with flue gases** during the burning of coal in a furnace and collected using the electrostatic precipitators.
- The fly ash **collected with the help of precipitators is converted into a wet slurry** to minimise fugitive dust emissions.
- It is then **transported to the scientifically designed ash ponds** through slurry pipelines.

- ##### ➤ Composition:
- Fly ash includes substantial amounts of silicon dioxide (SiO₂), aluminium oxide (Al₂O₃), ferric oxide (Fe₂O₃) and calcium oxide (CaO).

➤ Properties:

- **Resemble Portland cement** but is chemically different.
 - Portland cement is a binding material in the form of a finely ground powder that is manufactured by burning and grinding a mixture of limestone and clay.
 - Its chemical composition includes calcium silicates, calcium aluminate and calcium aluminoferrite.
- **Exhibit cementitious properties.**
 - A cementitious material is one that hardens when mixed with water.

- ##### ➤ Uses:
- It is used in **concrete and cement products, road base, metal recovery, and mineral filler** among others.

- ##### ➤ Harmful Effects:
- Fly ash particles are toxic air pollutants. They can trigger heart disease, cancer, respiratory diseases and stroke.

- When combined with water they cause leaching of heavy metals in ground water.
- It also pollutes the soil, and affects the root development system of trees.
- **Gross under-utilisation of this by-product over the years has led to the accumulation** of 1,670 million tonnes of fly ash according to the Summary of Ash Generation and Utilisation during 2020-2021 by the Joint Committee earlier constituted by the NGT.

➤ Related Initiatives:

- Earlier in 2021, **National Thermal Power Corporation (NTPC) Limited** had invited **Expression of Interest (EOI)** for sale of fly ash.
- NTPC has also collaborated with Cement manufacturers around the country to supply Fly Ash.
- **Pradhan Mantri Awas Yojana (Urban)** has focused on new construction technologies such as using fly ash bricks that are innovative, and environmentally friendly.
 - Even state governments have come out with their Fly ash utilisation policies, e.g. **Maharashtra was the first state to adopt the policy.**
- A web portal for monitoring of fly ash generation and utilisation and a mobile based application titled **"ASHTRACK"** has been launched by the Government.
- **Goods and Services Tax (GST)** rates on fly ash and its products have been reduced to 5%.

Note:

Environmental Emergency in Peru

Why in News

The Peruvian government declared a **90-day “environmental emergency”** in **damaged coastal territories**, after an oil spill that saw **6,000 barrels of crude oil pour into the sea**.

- The spill was caused by **freak waves**, which resulted from the **eruption of a volcano in Tonga**.
- The oil spill came out of a tanker belonging to the Spanish energy firm Repsol. The incident occurred at the La Pampilla refinery, some 30 kilometers north of the Peruvian capital of Lima in the Ventanilla district of the port city of Callao.



Key Points

- **About Freak Waves:**
 - A freak wave or rogue wave is usually defined as a **wave that is two times the significant wave height of the area**.
 - The significant wave height is the average of the highest one-third of waves that occur over a given period.

- Rogue waves can disable and sink even the largest ships and oil rigs.
- These so-called **“freak waves”** are not confined to the **Atlantic Ocean or North Sea**.
- One of the places rogue waves appear to happen most frequently is off the southeast coast of South Africa.

➤ Oil Spill:

- **About:** An oil spill refers to any uncontrolled release of crude oil, gasoline, fuels, or other oil by-products into the environment.
 - Oil spills can pollute land, air, or water, though it is mostly used for oceanic oil spills.
- **Major Causes:**
 - Oil spills have become a major environmental problem, chiefly as a result of intensified petroleum exploration and production on continental shelves and the transport of large amounts of oils in vessels.
 - Oil spills that happen in rivers, bays and the ocean most often are caused by accidents involving tankers, barges, pipelines, refineries, drilling rigs and storage facilities.
- **Environmental Impacts:**
 - **Threat to Indigenous people:** Oil pollution poses health hazards for the indigenous population who depend on seafood.
 - **Harmful to aquatic life:** Oil on ocean surfaces is harmful to many forms of aquatic life because it prevents sufficient amounts of sunlight from penetrating the surface, and it also reduces the level of dissolved oxygen.
 - **Hypothermia:** Crude oil ruins the insulating and waterproofing properties of feathers and fur of birds
 - Thus, oil-coated birds and marine mammals may die from hypothermia (decrease in body temperature to below-normal levels).
 - **Toxic Effects:** Moreover, ingested oil can be toxic to affected animals, and damage their habitat and reproductive rate.
 - **Threat to Mangroves:** Saltwater marshes and **Mangroves** frequently suffer from oil spills.
- **Economic Impacts:**
 - **Tourism:** If beaches and populated shorelines are fouled, tourism and commerce may be severely affected.

Note:

- **Power Plants:** The power plants and other utilities that depend on drawing or discharging sea water are severely affected by oil spills.
- **Fishing:** Major oil spills are frequently followed by the immediate suspension of commercial fishing.
- **Remedies:**
 - **Bioremediation:** Bacteria can be used to clean up oil spills in the ocean through bioremediation.
 - Specific bacteria can be used to bioremediate specific contaminants, such as hydrocarbons, which are present in oil and gasoline.
 - Using bacteria such as *Paraperlucidibaca*, *Cycloclasticus*, *Oleispira*, *Thalassolituus* *Zhongshania* and some others can help remove several classes of contaminants.
 - **Containment Booms:** Floating barriers, called booms, are used to restrict the spread of oil and to allow for its recovery, removal, or dispersal.
 - **Skimmers:** They are devices used for physically separating spilled oil from the water's surface.
 - **Sorbents:** Various sorbents (e.g., straw, volcanic ash, and shavings of polyester-derived plastic) that absorb the oil from the water are used.
 - **Dispersing agents:** These are chemicals that contain surfactants, or compounds that act to break liquid substances such as oil into small droplets. They accelerate its natural dispersion into the sea.
- **Related Laws in India:**
 - Presently, there is no law covering oil spill as such and its consequential environmental damage in India but India has "the **National Oil Spill Disaster Contingency Plan of 1996 (NOS-DCP)**" to handle such situations.
 - The document was issued by the **Ministry of Defense in 1996**; it was last updated in March 2006.
 - It gives the **Indian Coast Guard** the mandate to coordinate with state departments, ministries, port authorities and environmental agencies to assist in oil spill cleaning operations.
 - In 2015 India ratified the **International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 (Bunker Convention)**.
 - Convention ensures adequate, prompt and effective compensation for damage caused by oil spills.
 - It is administered by the **International Maritime Organization (IMO)**.

Development Project in the Great Nicobar Island: Inaccurate EIA

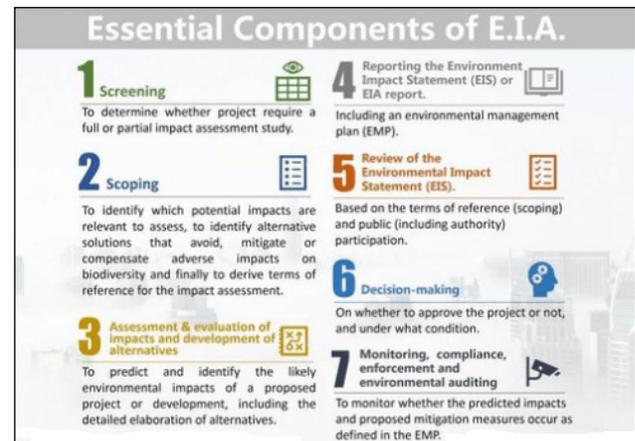
Why in News

The recently released **draft Environment Impact Assessment (EIA) report for the mega development project in the Great Nicobar Island has raised serious questions** related to submission of incorrect or incomplete information, scientific inaccuracy and failure to follow appropriate procedure.

- A committee of the **Ministry of Environment Forest and Climate Change (MoEFCC)** issued **Terms of Reference (ToR)** to prepare the **EIA report in May 2021**.
- Earlier, a plan for the sustainable and holistic development of the 680 sq km, fragile **Little Andaman Island** in the Andaman and Nicobar group had raised the alarm among conservationists.

Environmental Impact Assessment (EIA)

- It is a process of evaluating the likely environmental impacts of a proposed project or development, taking into account inter-related socio-economic, cultural and human-health impacts, both beneficial and adverse.
- EIA is statutorily backed by the **Environment Protection Act, 1986** which contains various provisions on EIA methodology and process.



Key Points

- **About:**
 - **NITI Aayog**-piloted **Rs. 72,000-crore integrated project** in Great Nicobar includes **construction of a mega port, an airport complex**, a township spread over 130 sq. km of pristine forest and a solar and gas-based power plant.

Note:

- Andaman and Nicobar Islands Integrated Development Corporation Ltd. (ANIIDCO) is the project proponent.
 - Ecologists and researchers have been raising concerns about this project for over a year.
- **Issues with the EIA Report:**
 - **Incorrect or Incomplete Information:**
 - The area of the island is mentioned in one place as 1,045 sq. km, while it is 910 sq. km (the current official figure) in another.
 - It was reported that the Galathea port area does not record any **coral reefs**, whereas the **Zoological Survey of India (ZSI)** study shows that the **coral reef spread over 116 hectares in Galathea Bay**.
 - Galathea Bay is an **iconic nesting site in India** of the enigmatic **Giant Leatherback**, the world's largest marine turtle—borne out by surveys done over three decades.
 - 330 species of fauna are recorded in the island, while the same ZSI study puts the number at more than double at 695.
 - The EIA says in another place **no migratory birds have been reported from Great Nicobar**, whereas it is well known that these islands are located along two globally significant bird flyways and **more than 40 species of migratory birds** have been recorded from Great Nicobar.
 - **Institutional Callousness:**
 - The EIA report was **expected to have details of the project proponent's (ANDICO) environmental policy** such as its standard operating process, procedures for highlighting violation of environmental and forest norms and for ensuring compliance with environmental clearance conditions.
 - The undertaking, issued by the Directorate of Tribal Welfare, the agency tasked with the **primary job of securing the rights of the indigenous people on the islands**.
 - It first assures that “the right of the tribal shall be well protected and taken care of” and,
 - Then goes on to conclude that “whenever any exemption from the existing regulations/policies/law of the land are required to be provided for the execution of the project, this Directorate will seek required exemptions(s) from the competent authority to that effect”.

- **Issues Raised by Environmentalists:**
 - This project is likely to **impact turtle and megapode nesting sites** and coral reefs at the islands.
 - Many reserved areas are expected to be **de-notified for the project** including land under **Great Nicobar Biosphere Reserve and a tribal reserve**.
 - Close to 81.74% of the island is covered with national parks, reserves and forests.
 - The project will have a direct impact on the biodiversity and cascading effects on the indigenous **Onge tribe**.
 - The Onge are one of the tribes of India's Andaman Islands.

Great Nicobar

➤ About:

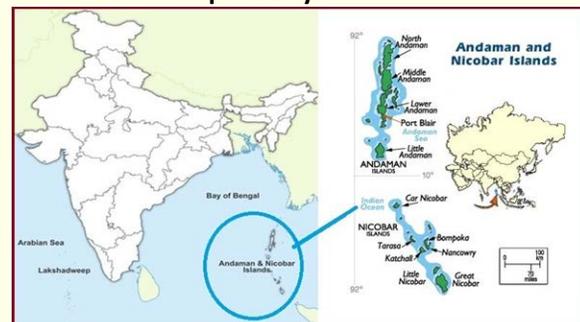
- Great Nicobar is the **southernmost island** of the Nicobar Islands Archipelago.
- It covers 1,03,870 hectares of unique and threatened tropical evergreen forest ecosystems.
- It is home to a **very rich ecosystem**, including 650 species of angiosperms, ferns, gymnosperms, bryophytes, among others.
- In terms of fauna, there are over 1800 species, some of which are endemic to this area.

➤ Ecological Characteristics:

- The **Great Nicobar Biosphere Reserve** harbours a wide spectrum of ecosystems comprising tropical wet evergreen forests, mountain ranges reaching a height of 642 m (Mt. Thullier) above sea level, and coastal plains.

➤ Tribe:

- The **Mongoloid Shompen Tribe**, about 200 in number, live in the forests of the biosphere reserve particularly along the rivers and streams.
- Another Mongoloid Tribe, **Nicobarese**, about 300 in number, used to live in settlements along the west coast.
 - After the tsunami in 2004, which devastated their settlement on the western coast, they were relocated to Afra Bay in the North Coast and **Campbell Bay**.



Note:

History

Highlights

- Kohima War Cemetery
- Tipu Sultan
- Netaji Subhas Chandra Bose

Kohima War Cemetery

Why in News

Recently, the United Kingdom-based **Commonwealth War Graves Commission (CWGC)** has listed five sites with unusual features. These sites are associated with **World War I** and **World War II**.

- Nagaland capital Kohima is included in the list because of the **Kohima War Cemetery**.

Commonwealth War Graves Commission

- **CWGC is an intergovernmental organisation of six member-states** (Australia, Canada, India, New Zealand, South Africa, United Kingdom) who **ensure the men and women who died in the wars will never be forgotten**.
- It was **formed in 1917** as the Imperial War Graves Commission. However the present name was given in 1960.
- Its headquarters is situated in **Maidenhead, UK**.

Key Points

- **About:**
 - Nagaland's capital Kohima probably has the **only cemetery on earth that sports a tennis court**.
 - The Kohima War Cemetery is one of **23,000 World War graves across the continents maintained by the CWGC**.
- **Formation of the Cemetery:**
 - On 3rd April 1944, a **Japanese force of 15,000 attacked Kohima and its 2,500-strong force**.
 - It led to two weeks of difficult, bloody fighting as the defending forces were pushed back to the former house of the British Deputy Commissioner.

- The **lawn of this house had a tennis court** where the British officers played for recreation.
- The surviving defenders, encamped around the garden tennis court, prepared for their final stand. As the Japanese forces prepared to attack, they were attacked in turn by the lead tanks of a relief force, saving the defenders and pushing the attackers back.
- Despite this setback, the Japanese force continued to fight for Kohima before they were finally forced to withdraw in May 1944.
- **Those who had fallen in the defence of Kohima were buried on the battlefield, which later became a permanent CWGC cemetery**, with further burials from the surrounding areas.
- **Designer Colin St. Clair Oakes incorporated the tennis court** into the design of the cemetery.
- **Other Cemeteries in the List:**
 - World War I **"crater cemeteries"** – **Zivy Crater and Litchfield Crater** – in the Pas de Calais region in France.
 - **Nicosia (Waynes Keep) Cemetery** or the "cemetery in no man's land" in Cyprus.

Significance of Kohima in World War II

- Present-day Nagaland and adjoining Manipur **comprised the only theatre of World War II in the Indian subcontinent**.
- In 1944, following hard fighting in the Burmese jungle, the Japanese forces in the region pushed across the Chindwin River and into India. In their path was the Fourteenth Army, made up of forces from across the Commonwealth.
- This invasion hinged upon two key points, (Manipur capital) Imphal and Kohima. Defeat for the Fourteenth Army here meant that the Japanese could strike further into India.

Note:



- **Kohima was of key strategic importance**, at the highest point of the pass through the jungle mountains to Dimapur, now Nagaland's commercial hub adjoining Assam.
- The fall of Dimapur would have meant leaving the Allied defenders of Imphal at the mercy of the Japanese soldiers fighting alongside **Subhash Chandra Bose's Indian National Army**.

World War II

- **About:**
 - It was a **conflict that involved virtually every part of the world during the years 1939–45**.
 - It ended six years and one day after Germany's invasion of Poland on 1st September, 1939, sparked the 20th century's second global conflict.
 - By the time it concluded on the deck of an American warship on 2nd September, 1945, WW II had claimed the lives of an **estimated 60-80 million people, approximately 3% of the world's population**.
 - The vast majority of those who died were civilians, including **6 million Jews killed in Nazi concentration camps during the Holocaust**.
- **Principal Belligerents:**
 - **Axis powers**—Germany, Italy, and Japan.
 - **Allies**—France, Great Britain, the United States, the Soviet Union, and, to a lesser extent, China.

Tipu Sultan

Why in News

Recently, naming a playground on Tipu Sultan in Mumbai sparked a controversy.



Key Points

- **Brief Profile:**
 - Born in November 1750, Tipu Sultan was **Haidar Ali's son** and a great warrior, also known as the **Tiger of Mysore**.
 - He was a **well educated man** fluent in Arabic, Persian, Kanarese and Urdu.
 - Mysore had grown in strength under the leadership of powerful rulers like **Haidar Ali (ruled from 1761 to 1782)** and his famous son **Tipu Sultan (ruled from 1782 to 1799)**.
 - Tipu introduced a **number of administrative innovations** during his rule, including his **coinage, a new Mauludi lunisolar calendar, and a new land revenue system** which initiated the growth of Mysore silk industry.
 - Embracing **western military methods** like artillery and rockets alongside traditional Indian weapons including war elephants, he ensured his forces could overwhelm his Indian rivals and match the British armies sent against him.
- **Maintenance of Armed Forces:**
 - He organised his army on the **European model** with Persian words of command.
 - Though he took the **help of the French officers to train his soldiers**, he never allowed them (French) to develop into a pressure group.
 - He was well aware of the importance of a naval force.

Note:

- In 1796, he set up a **Board of Admiralty** and planned for a fleet of 22 battleships and 20 large frigates.
- He **established three dockyards** at Mangalore, Wajedabad and Molidabad. However, his plans did not fructify.
- **Fought Against Marathas:**
 - In 1767, Tipu **commanded a corps of cavalry against the Marathas** in the Carnatic (Karnataka) region of western India, and he fought against the Marathas on several occasions between 1775 and 1779.
- **Role in Anglo-Mysore Wars:**
 - The British saw **Haidar and Tipu as ambitious, arrogant and dangerous** – rulers who had to be controlled and crushed.
 - **Four wars** were fought with Mysore.
 - **1767-69:** Treaty of Madras.
 - **1780-84:** Treaty of Mangalore.
 - **1790-92:** Treaty of Seringapatam.
 - **1799:** Subsidiary Alliance.
 - Only in the last – the **Battle of Seringapatam** – did the Company ultimately win a victory. **Tipu Sultan was killed** defending his capital Seringapatam.
 - Mysore was placed under the **former ruling dynasty of the Wodeyars** and a **subsidiary alliance was imposed** on the state.
- **Other Related Points:**
 - He was also a **patron of science and technology** and is credited as the '**pioneer of rocket technology**' in India.
 - He wrote a **military manual (Fathul Mujahidin)** explaining the operation of rockets.
 - Tipu was a **great lover of democracy and a great diplomat** who gave his support to the French soldiers at Seringapatam in setting up a Jacobin Club in 1797.
 - Tipu himself became a **member of the Jacobin Club** and allowed himself to be called **Citizen Tipu**.
 - He planted the **Tree of Liberty** at Seringapatam.

Subsidiary Alliance

- In 1798, it was introduced by **Wellesley in India**, the ruler of the allying Indian state was compelled to pay a subsidy for the maintenance of the British army in return for getting protection from the British against their enemies.

- Those native princes or rulers who would enter into the **Subsidiary Alliance were not free to declare war against any other power** or enter into negotiations without the consent of the British.
- The Subsidiary Alliance was a **policy of non-interference in the internal affairs** of the allied state, but this was a **promise seldom kept by the British**.
- The payment of the arbitrarily-fixed and artificially-bloated subsidy invariably disrupted the economy of the state and impoverished its people.
- On the other hand, the **British could now maintain a large army** at the cost of the Indian states.
 - They controlled the **defence and foreign relations of the protected ally**, and had a powerful force stationed at the very heart of his lands.
- Lord Wellesley signed his **first Subsidiary Treaty with the Nizam of Hyderabad in 1798**.
- The Nawab of Avadh was forced to sign a **Subsidiary Treaty in 1801**.
- **Peshwa Baji Rao II (Maratha)** signed the Subsidiary Treaty at Bassein in 1802.

Netaji Subhas Chandra Bose

Why in News

Recently, the government has decided to **install a grand statue of Netaji Subhas Chandra Bose** at India Gate to commemorate his **125th birth anniversary** and as part of the year long celebrations.

- The **Subhas Chandra Bose Aapda Prabandhan Puraskars**, for the years 2019, 2020, 2021 and 2022 in the investiture ceremony will also be conferred.



Note:

Subhas Chandra Bose Aapda Prabandhan Puraskar

- The annual **Subhas Chandra Bose Aapda Prabandhan Puraskar** has been instituted to **recognize and honour the invaluable contribution** and selfless service rendered by individuals and organisations in India in the field of **disaster management**.
- The award is announced every year on 23rd January.
- It carries a **cash prize of Rs. 51 lakh** and a certificate in case of an institution and Rs. 5 lakh and a certificate in case of an individual.

Key Points

- **Birth:**
 - Subhas Chandra Bose was born on 23rd January 1897, in Cuttack, Orissa Division, Bengal Province, to Prabhavati Dutt Bose and Janakinath Bose.
 - His Jayanti is celebrated as **'Parakram Diwas'** on 23rd January.
- **Education and Early Life:**
 - In 1919, he had cleared the **Indian Civil Services (ICS) examination**. Bose, however, resigned later.
 - He was highly influenced by **Vivekananda's teachings** and considered him as his spiritual Guru.
 - His political mentor was Chittaranjan Das.
 - He worked as the editor for Das's newspaper—Forward, and later started his own newspaper, Swaraj.
- **Association with Congress:**
 - He stood for **unqualified swaraj (independence)**, and opposed the Motilal Nehru Report which spoke for dominion status for India.
 - He actively participated in the **Salt Satyagraha of 1930** and vehemently opposed the suspension of **Civil Disobedience Movement** and signing of the Gandhi-Irwin Pact in 1931.



- In the 1930s, he was closely associated with left politics in Congress along with **Jawaharlal Nehru** and M.N. Roy.
- Bose won the congress **presidential elections at Haripura in 1938**.
- Again in **1939 at Tripuri**, he won the presidential elections against Gandhi's candidate **Pattabhi Sitarammayya**. Due to ideological differences with Gandhi, Bose resigned and left congress. Rajendra Prasad was appointed in his place.
- He founded a new party, **'the Forward Bloc'**. The purpose was to consolidate the political left and major support base in his home state Bengal.
- **Indian National Army:**
 - He reached **Japanese-controlled Singapore** from Germany in July 1943, issued from there his famous call, **'Delhi Chalo'**, and announced the formation of the **Azad Hind Government** and the **Indian National Army** on 21st October 1943.
 - The INA was **first formed under Mohan Singh** and Japanese Major Iwaichi Fujiwara and comprised Indian prisoners of war of the British-Indian Army captured by Japan in the Malayan (present-day Malaysia) campaign and at Singapore.
 - The INA included both the Indian prisoners of war from Singapore and Indian civilians in South-East Asia. It's strength grew to 50,000.
 - The INA fought allied forces in 1944 inside the borders of India in Imphal and in Burma.
 - In November 1945, a British move to put the INA men on trial immediately sparked massive demonstrations all over the country.
- **Death:**
 - He is said to have died in 1945 when his plane crashed in Taiwan. However, there are still many conspiracy theories regarding his death.

Note:

Geography

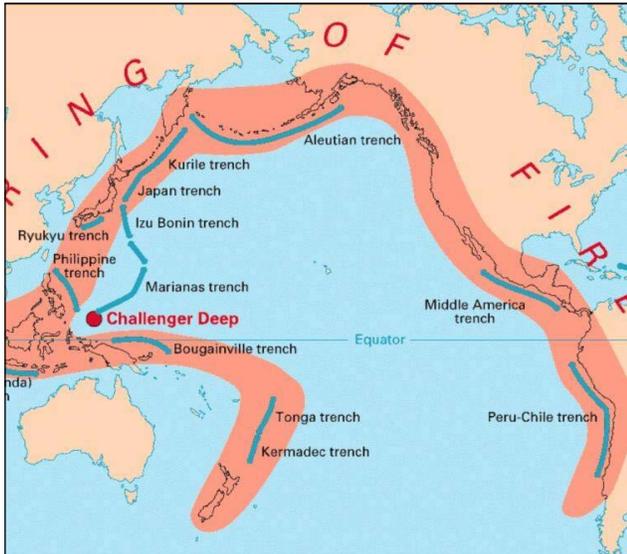
Highlights

- Pacific Ring of Fire
- Indonesia Relocating its Capital
- Unusually Colder and Wetter Winter

Pacific Ring of Fire

Why in News

The **Pacific 'Ring of fire'** is situated just over 60 kilometers from the island nation of Tonga, where recently **Hunga Tonga-Hunga Ha'apai volcano** erupted sending ash and smoke thousands of feet into the air.



Key Points

- **About:**
 - Also called Pacific rim or the Circum-Pacific Belt, is an area along the Pacific Ocean that is characterized by active volcanoes and frequent earthquakes.
 - It is home to about 75% of the world's volcanoes – more than 450 volcanoes. Also, about 90% of the world's earthquakes occur here.
- **Geographical Stretch:**
 - The Ring of Fire is stretched to approximately 40,000 kilometers tracing boundaries **between**

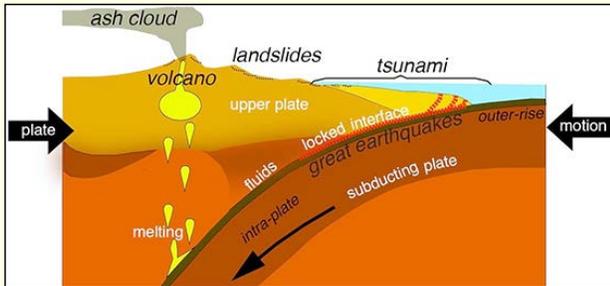
several tectonic plates including the Pacific, Juan de Fuca, Cocos, Indian-Australian, Nazca, North American, and Philippine Plates.

- The chain runs up **along the western coast of South and North America, crosses over the Aleutian Islands in Alaska**, runs down the eastern coast of Asia past New Zealand and into the northern coast of Antarctica.
- Bolivia, Chile, Ecuador, Peru, Costa Rica, Guatemala, Mexico, United States, Canada, Russia, Japan, Philippines, Australia, Papua New Guinea, Indonesia, New Zealand, and Antarctica **are some of the important places located in the ring of the fire.**
- **Causes of Volcanic Activity:**
 - Tectonic plates move towards each other **creating subduction zones**. One plate gets pushed down or is subducted by the other plate. This is a very slow process – **a movement of just one or two inches per year**.
 - As this subduction happens, **rocks melt, become magma and move to Earth's surface and cause volcanic activity.**
 - In the **case of Tonga, the Pacific Plate was pushed down below the Indo-Australian Plate and Tonga plate, causing the molten rock to rise above and form the chain of volcanoes.**
- **Recent Research:**
 - The Pacific Plate, which drives much of the tectonic activity in the **Ring of Fire, is cooling off.**
 - Scientists have discovered that the **youngest parts of the Pacific Plate (about 2 million years old) are cooling off** and contracting at a faster rate than older parts of the plate (about 100 million years old).
 - The younger parts of the plate **are found in its northern and western parts**; the most active parts of the Ring of Fire.

Note:

Subduction

- Subduction happens when tectonic plates shift, and one plate is pushed under another. This movement of the ocean floor produces a “mineral transmutation”, which leads to the melting and solidification of magma i.e., the formation of volcanoes.

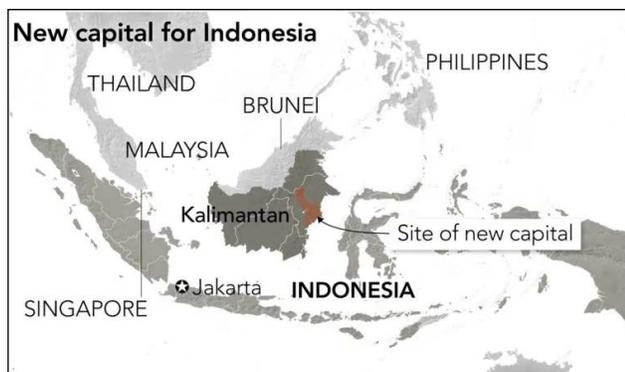


- In other words, when a “downgoing” oceanic plate is pushed into a hotter mantle plate, it heats up, volatile elements mix, and this produces the magma. The magma then rises up through the overlying plate and spurts out at the surface.
- A subduction zone is the biggest crash scene on Earth. These boundaries mark the collision between two tectonic plates.
- When two tectonic plates meet at a subduction zone, one bends and slides underneath the other, curving down into the mantle, the hotter layer under the crust.

Indonesia Relocating its Capital

Why in News

Recently, Indonesia’s parliament has passed a law approving the relocation of its capital from slowly sinking Jakarta to a site 2,000 kilometres away on jungle-clad Borneo island that will be named “Nusantara”.



Note:

- The move was first tipped by President Joko Widodo in April 2019, citing rising sea levels and severe congestion on densely populated Java island.
- Jakarta lies on the northwest coast of Java. The largest islands in Indonesia are Sumatra, Java, Kalimantan (Indonesian Borneo), Sulawesi, and the Indonesian part of New Guinea (known as Papua or Irian Jaya).

Key Points

- **Reasons for Relocation:**
 - Jakarta has long been plagued by serious infrastructure problems and flooding exacerbated by climate change, with experts predicting up to a third of the city could be underwater by 2050.
 - Jakarta is home to more than 30 million people in its greater metro area.
 - Moreover, Jakarta is the centre for administration, governance, finance and trade, it has inevitably led to relentless construction in the city, due to which the water is not able to seep into the ground in many areas, leading to increased run-off.
 - Jakarta has been Indonesia’s capital since the country became independent in 1949. The city has become overcrowded and extremely polluted for the last few decades.
 - Another important reason to shift the capital from Java island to Borneo island has been the growing inequality – financial and otherwise.
 - Java Island, especially Jakarta which is spread across more than 661.5 square kilometres, is immensely populated whereas East Kalimantan, spread across 127,346.92 square kilometres, is bigger than Jakarta, it is a lot less populated than the current capital.
- **Relocation Site:**
 - The new capital (Nusantara) will cover about 56,180 hectares in East Kalimantan province on the Indonesian part of Borneo, which the country shares with Malaysia and Brunei.
 - However, environmentalist critics of the capital’s move have warned it could damage ecosystems in the region, where mining and palm oil plantations already threaten rainforests that are home to Borneo’s endangered species.

Note: Indonesia is not the first country in the region to relocate from an overpopulated capital. Malaysia moved its government to Putrajaya from Kuala Lumpur in 2003, while Myanmar moved its capital to Naypyidaw from Rangoon in 2006.

Sea Level Rise (SLR)

- **About:** SLR is an **increase in the level of the world's oceans** due to the effects of climate change, especially global warming, induced by **three primary factors**:
 - **Thermal Expansion:** When water heats up, it expands. About half of the sea-level rise over the past 25 years is attributable to warmer oceans simply occupying more space.
 - **Melting Glaciers:** Higher temperatures caused by global warming have led to greater-than-average summer melting of large ice formations like mountain glaciers as well as diminished snowfall due to later winters and earlier springs.
 - That creates an imbalance between runoff and ocean evaporation, causing sea levels to rise.
 - **Loss of Greenland and Antarctic Ice Sheets:** As with mountain glaciers, increased heat is causing the massive ice sheets that cover Greenland and **Antarctica** to melt more quickly, and also move more quickly into the sea.
- **Rate of SLR:**
 - Sea level is primarily **measured using tide stations and satellite laser altimeters**.
 - According to the **Intergovernmental Panel on Climate Change (IPCC), 2021** report, sea-level rise has **tripled compared with 1901-1971**. The Arctic Sea ice is the lowest it has been in 1,000 years.
- **Consequences of SLR:**
 - **Coastal Flooding:** Globally, eight of the world's 10 largest cities are near a coast, which is threatened by coastal flooding.
 - **Destruction of Coastal Biodiversity:** SLR can cause destructive erosion, wetland flooding, aquifer and agricultural soil contamination with salt, and lost habitat for biodiversity.
 - **Dangerous Storm Surges:** Higher sea levels are coinciding with more dangerous **hurricanes** and typhoons leading to loss of life and property.
 - **Lateral and Inland Migration:** Flooding in low-lying coastal areas is forcing people to migrate to the higher ground causing displacement and dispossession and in turn a **refugee crisis worldwide**.
 - **Impact on Infrastructure:** The prospect of higher coastal water levels threatens basic services such as internet access.
 - **Threat to Inland Life:** Rising seas can contaminate soil and groundwater with salt threatening life farther away from coasts.

- **Tourism and Military Preparedness:** Tourism to coastal areas and military preparedness will also be negatively affected by an increase in SLR.
- **Steps taken to Tackle SLR:**
 - **Relocation:** Many coastal cities have planned to adopt relocation as a mitigation strategy. For example, Kiribati Island has planned to shift to Fiji, while the **Capital of Indonesia is being relocated from Jakarta to Borneo**.
 - **Building Sea Wall:** Indonesia's government launched a coastal development project called a Giant Sea Wall or "**Giant Garuda**" in 2014 meant to protect the city from floods.
 - **Building Enclosures:** Researchers have proposed **Northern European Enclosure Dam (NEED)**, enclosing all of the North Sea to protect 15 Northern European countries from rising seas. The **Persian Gulf**, the **Mediterranean Sea**, the **Baltic Sea**, the Irish Sea, and the Red Sea were also identified as areas that could benefit from similar mega enclosures.
 - **Architecture to Steer Flow of Water:** Dutch City Rotterdam built barriers, drainage, and innovative architectural features such as a "water square" with temporary ponds.
- **India's Case:**
 - **Vulnerability:**
 - India's **7,516-kilometre-long coastline** includes 5,422 kilometres of coastline on the mainland and 2,094 kilometres on the islands belonging to nine states and four Union Territories.
 - The coastline accounts for **90% of the country's trade** and it spans 3,331 coastal villages and 1,382 islands.
 - **Related Initiatives:**
 - **Coastal Regulation Zone**
 - **National Action Plan on Climate Change**

Unusually Colder and Wetter Winter

Why in News

In India, especially in North India, the winter of 2021-22 has been unusually cold and unusually long. The days, in particular, have **felt colder and chillier than normal**.

Note:

Key Points

➤ About:

○ Colder:

- Since December 2021, maximum temperatures across the North, Northwest and Central India regions have persistently remained below normal, resulting in “cold day” conditions. Technically, this means more than just a day that is cold.
 - A cold day is one in which **the maximum temperature falls below 16 degrees Celsius**, a phenomenon that is commonly seen during the winter months in the northern plains of India.

○ Wetter:

- Light to moderate intensity rainfall is also commonly seen during winters in neighboring regions of North India.
 - This January, however, has seen **widespread rain across the central, northwestern, northern, eastern, and northeastern** regions of India.
 - As many as 24 states or Union Territories have recorded **rainfall varying from excess to large excess this month**.
- #### ○ Less Fog than Normal:
- December and January are known for the formation of dense fog across North India.
 - In January 2022, the national capital remained affected by fog for 252 hours against a normal of 292 hours.
 - IMD officials said the ongoing winter has recorded the **lowest fog hours since 1991-92 over Delhi**.

➤ Causes:

○ Western Disturbances:

- Until 25th January 2022, **seven western disturbances had passed over India** — nearly all of them **strong enough to cause widespread rain, snowfall, and turbulent weather across large geographical areas** between Pakistan and Northeast India.
 - These systems caused hailstorms in northern Maharashtra, and heavy rainfall in Tamil Nadu.

○ La Niña:

- Frequent and higher numbers of **western disturbances are associated with La Niña**.
- **At present, moderate intensity La Niña conditions** — which manifests itself as cooler than normal sea surface temperatures in the equatorial Pacific Ocean — are prevailing.

○ Cold Winds from Far North:

- After a western disturbance crosses India, **cold winds from the far north of the country penetrate to lower latitudes**, and can reach up to even Telangana and Maharashtra, leading to colder weather, and sometimes to cold wave conditions.

○ Low-lying Clouds and Moisture:

- The presence of low-lying clouds and the availability of moisture along the Indo-Gangetic plains made it favorable for cold day conditions and the additional chill factor experienced during the day time.
- This was the longest and most intense spell of the season so far.

Western Disturbance

- **Western Disturbance (WD)**, labeled as an **extra-tropical storm** originating in the Mediterranean, is **an area of low pressure that brings sudden showers, snow and fog** in northwest India.
- The disturbance **travels from the “western” to the eastern direction**.
 - These travel **eastwards on high-altitude westerly jet streams** - massive ribbons of fast winds traversing the earth from west to east.
- **Disturbance means** an area of “disturbed” or reduced air pressure.
 - Equilibrium exists in nature due to which the air in a region tries to normalise its pressure.
- In the term “extra-tropical storm”, storm refers to low pressure. “Extra-tropical” means outside the tropics. As the WD originates outside the tropical region, the word “extra-tropical” has been associated with them.

La Niña

- **La Niña** events represent **periods of below-average sea surface temperatures across the east-central Equatorial Pacific**.
 - It is indicated by sea-surface temperature decreased by more than 0.9°C for at least five successive three-month seasons.
- The La Niña event is observed when the **water temperature in the Eastern Pacific gets comparatively colder than normal**, as a consequence of which, there is a strong high pressure over the eastern equatorial Pacific.
- In India, the La Niña is generally **responsible for cooler than normal winters and more than normal rainfall**.



Note:

Art and Culture

Highlights

- Thiruvalluvar

Thiruvalluvar

Why in News

The Prime Minister of India paid tributes to the Tamil poet and philosopher Thiruvalluvar on **Thiruvalluvar Day**.

- In the present time, the is usually observed either on 15th or 16th January in Tamil Nadu and is a part of **Pongal** celebrations.

Key Points

- **About:**
 - Thiruvalluvar, also called **Valluvar**, was a **Tamil poet-saint**.
 - The period when he lived is debated, as is his **religious identity**.
 - He is believed to have lived between the 3rd-4th century or 8th-9th century.
 - He is thought to be linked to **Jainism**. However, Hindus have also claimed that **Thiruvalluvar** belonged to hinduism.
 - Dravidian groups also count him as a saint, as **he dismissed the caste system**.
 - He had **contributed the Tirukkural or 'Kural' to the Sangam literature**.
 - Tirukkural is comprised of 133 sections of 10 couplets each is divided into three books:
 - Aram (virtue),
 - Porul (government and society), and
 - Kamam (love).
 - The Tirukkural has been compared to the great books of the world's major religions.

Sangam Literature

- The word '**Sangam**' is the **Tamil form of the Sanskrit word Sangha** which means a **group of persons or an association**.
- The Tamil Sangam was an academy of poets who flourished in three different periods and in different places under the **patronage of the Pandyan kings**.
- It was compiled during the **3rd century BC to 3rd century CE** & was composed in poetic format around themes of **love and war**.
- According to the **Tamil legends**, there were three Sangams (Academy of Tamil poets) held in the ancient South India popularly called **Muchchangam**.
 - The **First Sangam**, is believed to be held at Madurai, attended by gods and legendary sages. No literary work of this Sangam is available.
 - The **Second Sangam** was held at Kapadapuram, only Tolkappiyam survives from this.
 - The **Third Sangam** was also held at Madurai. A few of these Tamil literary works have survived and are a useful sources to reconstruct the history of the Sangam period.
- The Sangam literature which was largely consolidated from the **third Sangam**, throws information on conditions of life of people around the **beginning of the Christian era**.
 - It deals with secular matters relating to the public and social activities like government, war charity, trade, worship, agriculture, etc.
 - Sangam literature consists of the earliest **Tamil works (such as the Tolkappiyam), the ten poems (Pattupattu)**, the eight anthologies (**Ettutogai**) and the eighteen minor works (**Padinenkilkanakku**) and the three epics.



Note:



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Security

Highlights

- *International Counter Terrorism Conference 2022*

International Counter Terrorism Conference 2022

Why in News

Recently, the International Counter Terrorism Conference 2022 was organised by the **Global Counter Terrorism Council (GCTC)**.

- GCTC is an **International Think-Tank Council** with an overarching mission of reducing the vulnerability of people worldwide to terrorism by preventing, combating and prosecuting terrorist acts and countering incitement and recruitment to terrorism.
- Earlier, in the 13th BRICS Summit held in 2021, **BRICS counter terrorism action plan** was adopted.

Key Points

➤ Issues Raised by India:

- **Emergence of New Religiophobia:**
 - Emergence of new “**religiophobia**”, especially against **Hindus, Buddhists and Sikhs**, is a matter of serious concern and needs to be recognised, just like **Christianophobia, Islamophobia and anti-semitism**, to bring a balance in discussions on such issues.
 - **Religiophobia:** An irrational or obsessive fear or anxiety of religion, religious faith, religious people or religious organisations.
- **Labeling Terrorism:**
 - In the past two years, several Member States have been trying to **label terrorism into categories** such as racially and ethnically motivated violent extremism, violent nationalism, right wing extremism, etc.
 - Calling it a “**dangerous**” tendency, India said this goes against some of the accepted principles

agreed to by all UN Member States in the recently adopted **Global Counter-Terrorism Strategy**.

- Global Counter-Terrorism Strategy states that terrorism in all its forms and manifestations should be condemned and there cannot be any justification for any act of terrorism, whatsoever.

➤ India's Efforts to Counter Terrorism:

○ **India's Annual Resolution on Counter-Terror:**

- India's annual resolution on the issue of counter-terrorism was adopted by consensus in the First Committee of the **United Nations General Assembly (UNGA)**.
- India, a victim of state-sponsored **cross-border terrorism**, has been at the forefront in highlighting the serious threat to international peace and security emanating from acquisition of weapons of mass destruction by terrorist groups.

○ **Comprehensive Convention on International Terrorism:**

- Amid growing fears that terrorists will again nest in Afghanistan and increase attacks in Africa, **India's foreign minister has recently urged for the adoption of the convention**.
 - In 1996, with the **objective of providing a comprehensible legal framework** to counter terrorism, **India proposed to the UNGA** the adoption of the “Comprehensive Convention on International Terrorism” (CCIT).
 - CCIT seeks a **universal definition of terrorism**, prosecution of terrorists under special laws, making cross-border terrorism an extraditable offence worldwide, among others.

○ **Financial Action Task Force (FATF):**

- India is a member of FATF whose objective is to set standards and promote effective imple-

Note:

mentation of legal, regulatory and operational measures for **combating money laundering, terrorist financing and other related threats** to the integrity of the international financial system.

➤ **Terrorism in India:**

- **Unlawful Activities (Prevention) Amendment Act** is the primary anti- terrorism law in force in India.

- The **National Security Guard (NSG)** is a paramilitary force that is primarily responsible for counterterrorism and anti-hijacking operations.
- India faces terrorism from secessionists in Kashmir, the north-east and to an extent in Punjab, from left-wing extremist groups in central, east-central and south-central India.
- India is one of the countries which is **most affected by terrorism in the world.**



Note:



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- It is also significant because today, the start-up space is evolving rapidly with India leading the world with over 70 unicorns (crossing the valuation of USD 1 billion).

Initiatives to Tackle Plastic Pollution

- On **World Environment Day (5th June), 2018** the world leaders vowed to **"Beat Plastic Pollution"** & eliminate its use completely.
- The **Group of 20 (G20)** environment ministers, agreed to adopt a **new implementation framework** for actions to tackle the issue of **marine plastic waste** on a global scale.
- **India's Plastic Waste Management Rules, 2016** state that every local body has to be responsible for setting up infrastructure for **segregation**, collection, processing, and disposal of plastic waste.
 - **Plastic Waste Management (Amendment) Rules 2018** introduced the concept of Extended Producer Responsibility (EPR).
 - **A new national framework on plastic waste management** is in the works, which will introduce third-party audits as part of the monitoring mechanism.
- **India Plastics Pact**, the first in Asia, was launched in September 2021 in **collaboration with Confederation of Indian Industries (CII) and World Wide Fund for Nature (WWF)** to set time-bound commitments to reduce plastics from their value chains.

India Emerges as the largest Exporter of Gherkins

Why in News

Recently, India has become the largest exporter of gherkins in the world. India exported cucumber and gherkins (Pickling Cucumber) to the tune of 1,23,846 metric tonnes with a value of USD 114 million during April-October (2020-21).

- **APEDA (Agricultural and Processed Food Products Export Development Authority)** has undertaken several initiatives for the development of infrastructure and enhancing the quality of processed gherkins, product promotion in the international market and implementation of food safety management systems in the processing units.

Key Points

➤ About Gherkins:

- Gherkin is a term generally used to refer to a savoury pickled cucumber. Gherkins and commercial cucumbers belong to the same species (*Cucumis sativus*), but are from different cultivar groups.
- Gherkin cultivation, processing and exports started in India during the early 1990s with a modest beginning in Karnataka State in South India and later extended to the neighbouring states of Tamil Nadu and Andhra Pradesh.
 - In these regions **ideal soil type and the desirable temperatures of not less than 15 degrees Centigrade** and not more than 35 degrees Centigrade make these regions desirable for Gherkins cultivation.



- Nearly **15% production of the world's gherkin requirement** is grown in India.
- Gherkins is currently **exported to more than 20 countries**, with major destinations being **North America, European countries and Oceanic countries** such as USA, France, Germany, Australia, Spain, South Korea, Canada, Japan, Belgium, Russia, China, Sri Lanka and Israel.

➤ Significance:

- Gherkins are grown in contact with small and marginal farmers. Currently there are more than 1,00,000 small and marginal farmers who are engaged in the production of gherkins.
- This is the industry, which has showcased the **true and successful model of contract farming**, with which the industry is able to have a good quality control over the final produce as per the requirement of the international market.
 - Contract farming can be defined as an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices.

Note:

- Over 700 crore worth of Indian Gherkins are exported every year with an ever increasing demand because of the Quality Assurance given by the manufacturers.
- Apart from its export potential, the gherkin industry plays a key role in the creation of rural employment.

Agricultural and Processed Food Products Export Development Authority

- It is an authority established under an act of Parliament and under the administrative control of the Ministry of Commerce and Industry.
- It has been mandated with the responsibility of export promotion and development of the scheduled products viz. fruits, vegetables, meat products, dairy products, alcoholic and non-alcoholic beverages etc.
- APEDA has also been entrusted with the responsibility to monitor import of sugar.

Statehood Day of Himachal Pradesh

Why in News

Recently, the Prime Minister of India greeted people of Himachal Pradesh (H.P.) on its statehood day (25th January).



Key Points

History During British Rule	
State Animal:	Snow Leopard
State Bird:	Western Tragopan
State Flower:	Pink Rhododendron
State Language:	Hindi & Local Dialects
Major Rivers and Dams:	Sutlej (Bhakra Dam, Gobind Sagar reservoir, Koldam Dam), Beas (Pandoh Dam, Maharana Pratap Sagar Reservoir), Ravi (Chamera Dam), Parbati
Major Lakes:	Renuka, Rewalsar, Khajjiar, Dal, Beas Kund, Dasaur, Brighu, Prashar, Mani Mahesh, Chander Tal, Suraj Tal, Kareri, Sreolsar, Gobind Sagar, Nako
National Parks	Great Himalayan National Park, Pin Valley National Park, Khirganga, Inderkila, Simbalbara

- The British territories in the hill came under British Crown after **Queen Victoria's proclamation of 1858**.
- The states of **Chamba, Mandi and Bilaspur** made good progress in many fields during British rule.
- During the **first World War (1914-18)**, virtually all rulers of the hill states remained loyal and contributed to the British war effort both in the form of men and materials.

- **History During Post-Independence Period:** The history of present day Himachal Pradesh in the post-independence era has been outlined below:
 - The **Chief Commissioner's province of H.P.** came into being on 15th April, 1948.
 - H.P. became a **part C state (under Part VII) on 26th January, 1950** with the implementation of the Constitution of India.
 - Bilaspur was merged with Himachal Pradesh on 1st July, 1954.
 - After recommendation of the **State Reorganisation Commission**, Himachal Pradesh became **Union Territory on 1st November, 1956**.
 - Kangra and most of the other hill areas of Punjab were merged with H.P. on 1st November, 1966 though its status remained that of a Union Territory.

Note:

- On 18th December, 1970 the State of Himachal Pradesh Act was passed by Parliament and the **new state came into being on 25th January, 1971**. Thus H.P. emerged as the **eighteenth state of the Indian Union**.
- Himachal Pradesh has come a long way since then. It has seen a number of full-fledged governments which have led the state towards economic self reliance.

State Reorganisation Commission

- Having achieved India's independence from British rule, reorganization of more than 500 princely states into effective provincial units was one of the biggest tasks.
- In pursuance of the same, **S. K. Dhar commission (1948) and JVP Committee (1948)** advocated for **reorganization of states based on geographical contiguity, administrative convenience, financial self-reliance and potential for development**.
- However, with the sudden death of **Potti Sriramalu** following hunger **strike in demand for Andhra state** created a volatile situation.
- The **Fazl Ali Commission (1953)** was set up and its recommendation for reorganization of state based on **linguistic criteria (other criteria were also included)** was accepted.

Regional Rapid Transit System (RRTS)

Why in News

Recently, the officials of **Regional Rapid Transit System (RRTS)** estimated that RRTS will reduce CO₂ emissions by taking around 1.5 lakh private vehicles off the road.

- The corridor will **start from Sarai Kale Khan in Delhi, pass through Ghaziabad, and reach Modipuram in Meerut (Uttar Pradesh)**.
- The RRTS, the first of its kind in the national capital, will run **at a speed of 100 km per hour** and commuters will reach Meerut in 50-60 minutes.

Key Points

- **Background:**
 - The **Planning Commission** formed a Task Force in 2005 under the **Chairmanship of Secretary,**

Ministry of Urban Development (MoUD) to develop a multi modal transit system for **Delhi National Capital Region (NCR)**.

- This was included in the Integrated Transport Plan for **NCR 2032** with special emphasis on **Regional Rapid Transit System (RRTS)** connecting regional centres.
- The Task Force identified **8 corridors** and **prioritised three corridors** namely Delhi-Meerut, Delhi-Panipat and Delhi- Alwar for implementation.
- **About RRTS:**
 - RRTS is a **new, dedicated, high speed, high capacity, comfortable commuter service** connecting regional nodes in NCR.
 - RRTS is **different from conventional Railway** as it will provide reliable, high frequency, point to point regional travel at high speed along dedicated path way.
 - RRTS is **different from metro** as it caters to passengers looking to travel a relatively longer distance with fewer stops and at higher speed.
- **Intended Benefits:**
 - **Environment Friendly:** The corridor is estimated to reduce **2.5 lakh CO₂ tonnes/year** of total annual greenhouse gas emissions, making the city a cleaner and a much better place to live.
 - **Economic Development:** It is estimated to increase the **share of public transportation usage** along the corridor from **37% to 63%**.
 - High-speed connectivity will result in **balanced economic development** across the region, leading to economic benefits to all strata of society and many nodes of development rather than all economic activity happening at one place.

— 3 Times faster than Metro				
RRTS	Design Speed 180 Km/hr	Ops Speed 160 Km/hr	Average Speed 100 Km/hr 150 Km/hr for Non Stop	Time to Travel 100 Km – 1 Hour
Metro	Speed 90 Km/hr	Ops Speed 80 Km/hr	Average Speed 32 Km/hr	Time to Travel 100 Km – 3 hours

- **Sustainable Urbanization:** The project will serve as a **demonstration for developing high-capacity rapid urban transit corridors in other urban areas of India**.

Note:

- It will help in reducing traffic congestion and total emissions from the transport sector in NCR.

Ravidassias of Punjab

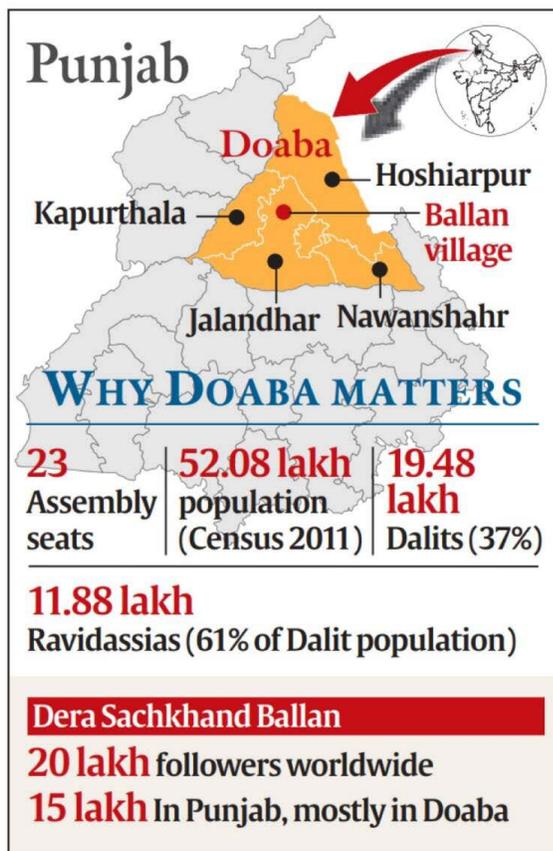
Why in News

Recently, the **Election Commission of India (ECI)** has postponed polling for the Punjab Assembly election, which underlines the importance of the **Ravidassia community in the state.**

- The State government and political parties raised concern that many devotees would be in Varanasi (in a memorial temple) to celebrate **Guru Ravidas's birth anniversary** on 16th February and miss out on voting.
- Guru Ravidas's birth anniversary is celebrated on **Magh Purnima**, the full moon day in the month of Magh according to the Hindu lunar calendar.

Key Points

- **About:**
 - The Ravidassias are a **Dalit community** of whom the bulk — nearly 12 lakh — live in the Doaba region.



- The **Dera Sachkhand Ballan**, their largest dera with 20 lakh followers worldwide, was **founded in the early 20th century by Baba Sant Pipal Das.**
- Once closely connected with Sikhism, the dera severed these decades-old ties in 2010, and announced they would follow the Ravidassia religion.
 - The announcement was **made on Guru Ravidas Jayanti in Varanasi.**
- From 2010, the Dera Sachkhand Ballan started **replacing the Guru Granth Sahib with its own Granth, Amritbani**, carrying 200 hymns of Guru Ravidas, in Ravidassia temples and gurdwaras.
- **Guru Ravidas:**
 - Guru Ravidas was a mystic poet saint of the **Bhakti Movement** from the 15th and 16th centuries, and founded the **Ravidassia religion.**
 - It is believed that he was **born in Varanasi in a cobbler's family.**
 - He gained prominence due to his belief in one God and his unbiased religious poems.
 - He dedicated his whole life to the **abolition of the caste system** and openly **despised the notion of a Brahminical society.**
 - His devotional songs made an instant impact on the Bhakti Movement and around 41 of his poems were included in '**Guru Granth Sahib**', the religious text of the Sikhs.

India- Russia PASSEX Exercise

Why in News

Recently, **India's INS Kochi** and Russian ships engaged in the international Passage Exercise (PASSEX).

- A passage exercise is normally undertaken whenever an opportunity arises, in contrast to pre-planned maritime drills.



Note:

- Earlier, Indian Naval ships conducted **PASSEX with the US Navy also.**

Key Points

➤ Russia's Importance for India:

○ In Indian Ocean Region:

- Russia's inclusion as a dialogue partner of the **Indian Ocean Rim Association (IORA)** has opened up a plethora of opportunities for collaboration with India including a possible maritime security architecture to create balance in the Indian Ocean Region (IOR) and on scientific and research endeavors.

- **In the Arctic Region:** India has scientific, environmental, commercial and strategic interests in the **Arctic region**, and the Russian Arctic can potentially address India's energy security objectives.

- **Hydrocarbons:** Russia has the largest proven natural gas reserves in the world, enough to last for about 80 years at current production rates.

- **Strategic Minerals:** The Russian Arctic also has **vast deposits of cobalt, copper, diamonds, gold, iron, nickel, platinum, high-value rare earth elements, titanium, vanadium and zirconium.**

- The Arctic accounts for 90% of Russia's nickel and cobalt production, 60% of copper, and over 96% of platinum metals.

- **Indian rare earth reserves are richer in lighter fractions and deficient in heavier ones.**

- Most of the rare earth products used in strategic industries viz. Defence, fibre optic communications, space and nuclear energy are also critical to various clean energy technologies, including wind turbines and electric vehicles.

- **The Russian Arctic, therefore, has the potential to mitigate India's critical deficiencies in rare earth and strategic minerals.**

- **Northern Sea Route:** For Indian ports, the **Northern Sea Route or NSR** does not offer any benefits and is longer than the current route, for Rotterdam.

- However, there are other avenues for cooperation on the NSR.

- Russia has **announced its intention, inter alia, to ensure year-round, safe, uninterrupted**

and cost-effective navigation in the waters of the NSR.

- India has indicated its **willingness to partner with Russia**, stating that "India and Russia will also be partners in opening of the NSR for international trade and commerce". In response, President Putin has stated that Russia welcomes India's interests in the NSR.

- **Russian Far East:** The Russian Far East or RFE is rich in natural resources.

- About **one-third of all coal reserves and hydro-engineering resources of the country are available here.** Forests of the region comprise about 30% of Russia's total forest area.

- **India's cooperation in the development of RFE including NSR has been endorsed** by the two countries.

- Addressing the **Eastern Economic Forum (EEF)** in 2019, India announced a USD 1 billion line of credit to further contribute to the development of RFE.

➤ Other Exercises of India and Russia:

- **Exercise TSENTR 2019** (Multilateral Military Exercise).

- **Indra Exercises** - Joint Tri-Services (Army, Navy, Air Force) Exercises.

- **ZAPAD 2021** (Multilateral Military Exercise).

INS Kochi

- It is an **indigenously designed second ship of the Kolkata-class stealth guided-missile destroyers**, was built under the code name of **Project 15A** for the Indian Navy.

- It was **constructed by Mazagon Dock Limited (MDL)** in Mumbai and was later commissioned to the **Indian Navy** services in 2015, after undergoing extensive sea trials. .

- Earlier, it **took part in many other naval services** including:

- **'Zayed Talwar:** It is a bilateral naval exercise between the Indian and UAE Navy.

- **'Al-Mohed Al-Hindi':** India and Saudi Arabia started their first-ever Naval joint exercise.

- **India- US PASSEX**

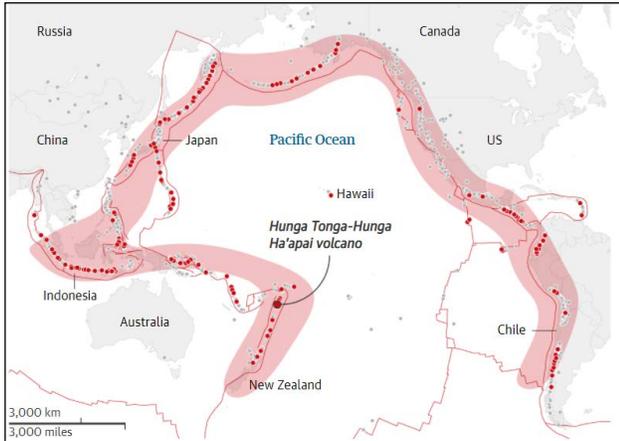
Note:

Volcanic Eruption in Tonga

Why in News

Recently, a volcano erupted in the southern Pacific Island of Tonga, which triggered **Tsunami waves** around the **Pacific**.

- The Tonga Islands occur along the **Ring of Fire**—a perimeter of heightened volcanic and seismic activity that encircles the Pacific Ocean basin.



Key Points

- **About:**
 - It is an **Undersea Volcanic Eruption** consisting of **two small uninhabited islands, Hunga-Ha'apai and Hunga-Tonga**.
 - The Hunga-Tonga-Hunga-Ha'apai volcano has **erupted regularly over the past few decades**.
 - During events in 2009 and 2014/15, hot jets of magma and steam exploded through the waves. But **these eruptions were small, dwarfed in scale by the January 2022 events**.
 - This is one of the massive explosions the volcano is capable of producing **roughly every thousand years**.
 - One of the reasons for it being highly explosive is the **Fuel-Coolant interaction**.
- **Impact:**
 - Huge volcanic eruptions **can sometimes cause temporary global cooling as sulfur dioxide is pumped into the stratosphere**. But in the case of the Tonga eruption, initial satellite measurements indicated the amount of sulfur dioxide released would only have a tiny effect of perhaps 0.01 Celsius global average cooling.

- The eruption altered **atmospheric pressure that may have briefly helped clear out the fog** in Seattle, in the United States.
- The waves crossed the Pacific, drowning two people in Peru and causing minor damage from New Zealand to Santa Cruz, California.
- The US Geological Survey estimated the **eruption caused the equivalent of a magnitude 5.8 earthquake**.

Volcano

- A volcano is **an opening or rupture in the earth's surface that allows magma** - which comes out as hot liquid and semi-liquid rock - volcanic ash and gases to escape.
- The volcanic hotspots are places which are found where Earth's tectonic plates come together.
- A **volcanic eruption is when lava and gas are released from a volcano** - sometimes explosively.

Undersea Volcano

- The undersea volcanic eruption happens in a **volcano which is located under the ocean surface**. There are an estimated one million undersea volcanoes, and most of them are located near the tectonic plates.
- Apart from lava, these openings also spew out ash. These deposit on the ocean's floor and lead to the **formation of sea mounds - underwater mountains that are formed on the ocean floor** but do not reach the water surface.

Fuel-Coolant Interaction

- If magma rises into sea water slowly, even at temperatures of about 1200 degrees Celsius, a **thin film of steam forms between the magma and water**. This provides a layer of insulation to allow the outer surface of the magma to cool. But this process doesn't work **when magma is blasted out of the ground full of volcanic gas**.
- When magma enters the water rapidly, **any steam layers are quickly disrupted, bringing hot magma in direct contact with cold water**.
- It is akin to **weapons-grade chemical explosions**.
- Extremely violent blasts tear the magma apart.
- A chain reaction begins, with new magma fragments exposing fresh hot interior surfaces to water, and the explosions repeat, **ultimately jetting out volcanic particles and causing blasts with supersonic speeds**.

Note:

Street for People Challenge and Nurturing Neighbourhoods Challenge

Why in News

The Ministry of Housing and Urban Affairs (MoHUA) announced **eleven winning cities** for the **Streets for People Challenge** and **ten winning cities** for the pilot stage of the **Nurturing Neighbourhoods Challenge**.

Key Points

- Streets for People Challenge:
 - It is a **city-led design competition**.
 - It supports cities across the country to develop a **unified vision of streets for people in consultation** with stakeholders and citizens.
 - Each city would launch their **own design competition with specific details on site, timeline, and awards**.
- Nurturing Neighborhoods Challenge:
 - It is a **three-year initiative** that will support cities to develop, pilot, and scale solutions that enhance the quality of life of young children, their caregivers and families in the public realm.
 - It will be open to all **smart cities**, other cities with more than **5,00,000 population, and capitals of states and Union territories**.
 - Cities will receive technical assistance and help in **capacity-building to:**
 - **Re-imagine** parks and open spaces
 - **Improve access** to early childhood facilities
 - **Adapt public spaces** with early childhood-oriented amenities
 - **Create accessible, safe, walkable streets** for young children and families.
- Other Recent Initiatives:
 - **India Cycles4Change Challenge**
 - **Climate-Smart Cities Assessment Framework (CSCAF) 2.0**

Saaṛṭhi Mobile App

Why in News

Recently, **Securities and Exchange Board of India (SEBI)** has launched Saaṛṭhi – a mobile app on investor education.

- 'R' represents '₹'.

Key Points

- **About:**
 - It aims to create awareness among investors about the basic concepts of the **securities market**.
 - The app will also explain about KYC process, trading and settlement, Mutual Funds (MF), recent market developments, investor grievances redressal mechanism, etc.
- **Need:**
 - A recent surge is seen in individual investors entering the market, and more importantly a large proportion of trading being mobile phone based.
 - According to **NSE (National Stock Exchange)** data, the share of Individual investors increased to 45% in 2021 from 39% in 2020.
 - The NSE is India's largest financial market.
- **Securities Market:**
 - Securities are **financial instruments issued to raise funds**.
 - The primary function of the securities markets is to enable the flow of capital from those that have it to those that need it.
 - Securities markets provide channels for allocation of savings to investments and thereby decouple these two activities.
 - As a result, the savers and investors are not constrained by their individual abilities, but by the economy's abilities to invest and save respectively, which inevitably enhances savings and investment in the economy.
 - **Eg. Equity, Debt securities, etc.**

Securities and Exchange Board of India (SEBI)

- SEBI is a statutory body established on 12th April 1992 in accordance with the provisions of the **Securities and Exchange Board of India Act, 1992**.
- Its basic function is to protect the interests of investors in securities and to promote and regulate the securities market.
- SEBI Board consists of a Chairman and several other whole time and part time members.
- SEBI also appoints various committees, whenever required to look into the pressing issues of that time.

Note:

Relocating the Amar Jawan Jyoti to National War Memorial

Why in News

In a historic move, Amar Jawan Jyoti merged with the National War Memorial flame.

Key Points

- **Amar Jawan Jyoti:**
 - Established in 1972, it was to mark India's victory over Pakistan in the **1971 War**, which resulted in the creation of Bangladesh.
 - The then Prime Minister Indira Gandhi had inaugurated it on Republic Day 1972, after India defeated Pakistan in December 1971.
 - The eternal flame at the Amar Jawan Jyoti underneath **India Gate** in central Delhi was an **iconic symbol of the nation's tributes** to the soldiers who have died for the country in various wars and conflicts since Independence.
 - The India Gate memorial was built by the British government in memory of the British Indian Army soldiers who lost their lives between 1914-1921.
- **Reasons for the Relocation:**
 - The names inscribed on the **India Gate** are of **only some martyrs** who fought for the **British in World War 1** and the **Anglo Afghan War** & thus is a symbol of our colonial past.
 - The names of all Indian martyrs from all the wars, including "1971 and wars before and after it are housed at the National War Memorial.
- **National War Memorial:**
 - Inaugurated in 2019, it is around 400 meters from India Gate.
 - The layout of the structure comprises four concentric circles, named:
 - the "Amar Chakra" or Circle of Immortality,
 - the "Veerta Chakra" or Circle of Bravery,
 - the "Tyag Chakra" or Circle of Sacrifice and
 - the "Rakshak Chakra" or Circle of Protection.

- The proposal for a National War Memorial was **first made in the 1960s**.
- The memorial is **dedicated to soldiers** who laid down their lives defending the nation during the **Sino-Indian war in 1962, Indo-Pak wars** in 1947, 1965 and 1971, Indian Peace Keeping Force Operations in Sri Lanka and in the Kargil Conflict in 1999.
- The National War Memorial also commemorates the soldiers who participated and made supreme sacrifices in **United Nations peace-keeping missions, Humanitarian Assistance Disaster Relief (HADR) operations, counterinsurgency operations and Low-Intensity Conflict Operations (LICO)**.



Rural Area Development Plan Formulation and Implementation

Why in News

Recently, the **Ministry of Panchayati Raj** has revised **Rural Area Development Plan Formulation and Implementation (RADPFI) guidelines, 2017** in a view to transforming rural India and ensuring rural prosperity.

Key Points

- **About:**
 - RADPFI 2021 guidelines is a **continuation to the Ministry's efforts towards promotion of Spatial rural planning** and would create pathways for rural transformation by developing a perspective for long term planning in villages.
 - It will **enable effective land use planning** in rural areas and in **improving the quality of life in rural areas**.

Note:

- **Features:**
 - It includes **Village Planning Scheme (VPS)** on the lines of Town Planning Schemes in urban areas.
 - Provisions linking **Gram Panchayat Development Programme (GPDP)** with Spatial Land Use Planning,
 - Spatial standards for Gram Panchayat development.
- **Objectives:**
 - It is aimed at ensuring ease of living in villages and help minimizing migration to big cities by providing all necessary infrastructure and facilities and also resources and opportunities for livelihood in rural areas.
- **Significance:**
 - It will augment development of vibrant economic clusters in rural areas, which would contribute to the socio-economic development of rural areas.
 - It will also supplement the efforts of the Central Government such as the **SVAMITVA Scheme** of Ministry of Panchayati Raj and **RURBAN Mission** of Ministry of Rural Development and facilitate better utilization of Geospatial information.

Schemes Related to Rural Development

- **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) 2005.**
- **Deen Dayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM).**
- **Pradhan Mantri Gram Sadak Yojana (PMGSY).**
- **Pradhan Mantri Awas Yojana – Gramin.**
- **National Institute of Rural Development and Panchayati Raj.**

Statehood Day of Manipur, Meghalaya and Tripura

Why in News

On the Statehood Day of Manipur, Meghalaya and Tripura (21st January), Prime Minister and other leaders praised the traditions and culture of the three northeast states.

- On 21st January, 1972, all the three states became full-fledged states under the **North Eastern Region (Reorganisation) Act, 1971.**



Key Points

- **Merger of Manipur with India:**
 - Before 15th August 1947, peaceful negotiations had brought almost all states whose territories were contiguous to the new boundaries of India, into the Indian Union.
 - The rulers of most of the states signed a document called the 'Instrument of Accession' which meant that their state agreed to become a part of the Union of India.
 - A few days before Independence, the Maharaja of Manipur, Bodhachandra Singh, signed the Instrument of Accession with the Indian government on the assurance that the internal autonomy of Manipur would be maintained.
 - Under the pressure of public opinion, the Maharaja held elections in Manipur in June 1948 and the state became a constitutional monarchy. Thus Manipur was the first part of India to hold an election based on universal adult franchise.
 - In the Legislative Assembly of Manipur there were sharp differences over the question of merger of Manipur with India. The Government of India succeeded in pressuring the Maharaja into signing a Merger Agreement in September 1949, without consulting the popularly elected Legislative Assembly of Manipur.
- **Merger of Tripura with India:**
 - Tripura was a princely state till the merger with the Indian union on 15th November, 1949.

Note:

- The last king Bir Bikram who was on the throne, immediately before India's independence, died on 17th May, 1947.
- After his demise, his minor son Kirri Bikram Manikya took the throne of Tripura kingdom, but he could not rule as he was minor.
- So his widow queen Kanchan Prabha took the charge of regency of Tripura and took over the administrative charges.
- She was instrumental for Merger of the Tripura kingdom in the Indian Union.
- **Merger of Meghalaya into India**
 - In 1947 the rulers of the Garo and Khasi region acceded to the newly independent country of India.
 - Meghalaya, a small hilly state located in the North Eastern Region of India, came into existence as an autonomous state within the state of Assam on 2nd April 1970 comprising the United Khasi and Jaintia Hills and the Garo Hills districts.
- **Changes Made in 1972:**
 - In 1972, the political map of Northeast India underwent a major change.
 - The two Union Territories of Manipur and Tripura and the Sub-State of Meghalaya got statehood.

Basal Stem Rot: Fungi

Why in News

Researchers from Kerala have identified **two new species of fungi** from the **genus *Ganoderma*** that are associated with coconut stem rot disease.

Key Points

- **About:**
 - The two fungi species are ***Ganoderma keralense* and *G. pseudoapplanatum***.
 - The **butt rot or basal stem rot of coconut** is known by several names in different parts of India: Ganoderma wilt (Andhra Pradesh), Anaberoga (Karnataka) and Thanjavur wilt (Tamil Nadu), to mention a few.
 - The infection begins at the roots, but symptoms include **discolouration and rotting** of stem and leaves. In the later stages, flowering and nut set decreases and finally the coconut palm (*Cocos nucifera*) dies.
 - A reddish brown oozing is seen. This oozing has been reported only in India.

- Once infected, recovery of the plants is not likely. Not surprising then, that this causes a huge loss: By some estimates made in 2017, in India, around 12 million people are said to depend on coconut farming.
- Another sign of infection is **presence of shelf-like "basidiomata,"** which are the fruiting or reproductive structures of the fungus, on the tree trunks.
- **Fungi:**
 - Fungi can be **single celled or very complex multicellular organisms**.
 - They are found in just about any habitat but **most live on the land**, mainly in soil or on plant material rather than in sea or freshwater.
 - A group called the **decomposers grow in the soil** or on dead plant matter where they play an important role in the cycling of carbon and other elements.
 - Some are **parasites of plants causing diseases** such as mildews, rusts, scabs or canker.
 - A very small number of fungi cause diseases in animals. In humans these include skin diseases such as **athletes' foot, ringworm and thrush**.

Subhash Chandra Bose Awards for Disaster Management

Why in News

The **Gujarat Institute of Disaster Management (GIDM)** and **Professor Vinod Sharma**, the founder co-ordinator of the National Centre of Disaster Management, have been selected for the **Subhash Chandra Bose Aapda Prabandhan Puraskar for 2022** for their excellent work in **disaster management**.

- The GIDM was established in 2012 and since then it has been working to enhance the Disaster Risk Reduction (DRR) capacity of Gujarat.
- Professor Vinod Sharma has worked tirelessly towards bringing DRR to the forefront of the national agenda.

Key Points

- **About the Awards:**
 - The central government has **instituted the annual award**—Subhash Chandra Bose Aapda Prabandhan Puraskar—to **recognise** and honour the invaluable contribution and selfless service rendered by **individuals and organisations in India in the field of disaster management**.

Note:

- The award is **announced every year on 23rd January**, the birth anniversary of freedom fighter **Netaji Subhash Chandra Bose**.
- It carries a cash prize of Rs. 51 lakh and a certificate in the case of an institution and Rs. 5 lakh and a certificate in the case of an individual.

➤ **Disaster Risk Management:**

- Disaster Risk Management implies the **systematic process of using administrative decisions, organisation, operational skills, and capacities to implement policies, strategies and coping capacities of the society and communities to lessen the impact of natural hazards and related environmental and technological disasters**.
- These comprise all forms of activities including **structural and non- structural measures to avoid (prevention) or to limit (mitigation and preparedness) adverse effects of hazards**.
- There are **three key stages of activities** in disaster management:
 - **Before a disaster:** To reduce the potential for human, material, or environmental losses caused by hazards and to ensure that these losses are minimised when disaster strikes;
 - **During a disaster:** To ensure that the needs and provisions of victims are met to alleviate and minimise suffering; and
 - **After a disaster:** To achieve rapid and durable recovery which does not reproduce the original vulnerable conditions.
- The **Sendai Framework for Disaster Risk Reduction 2015-2030** was adopted at the Third UN World Conference in Sendai, Japan, in 2015.



- The Sendai Framework is the **successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters**.
- The different phases of disaster management are represented in the disaster cycle diagram.

Bangladesh top Destination for Indian Pomegranates

Why in News

Bangladesh has emerged as the top destination for exported Indian pomegranates over the last few years.

- Last fiscal (2020-21), India had exported 68,502.9 tonnes of the fruit, of which 36,906.77 tonnes (more than 50%) had gone to Bangladesh.

Key Points

- **About:**
 - Pomegranate (*Punica granatum*) is **grown in tropical and subtropical regions of the world**.
 - It **grows well under semi-arid conditions** and can be grown upto an altitude of 500 m. above mean sea level. It **thrives well under hot, dry summer and cold winters** provided irrigation facilities are available.
 - **Grown mostly in Maharashtra, Karnataka and Gujarat**, pomegranate has emerged as a **major export crop for drought-prone areas of the state**.
 - Over the years, Indian exports have become stagnant at around 50,000-60,000 tonnes as **concerns over the quality of the fruit eclipsed the growth potential**.
 - **While the European Union is a major market** where the fruit fetches premium prices, the standards governing quality are higher there.
 - **Non-availability of export-ready fruit** has, over the years, seen European markets slipping slowly out of Indian exporters' hands.
- **Reasons for Export Growth in Bangladesh:**
 - **Ease of transportation and relatively relaxed import norms** have helped Indian growers take their fruit to Bangladesh even as the share of export to European countries has dropped.
 - The fruit **can be exported to Bangladesh round the year** and thus the produce can be sent even when the European season is over.

Note:

Gallantry Awards

Why in News

On the eve of the **73rd Republic Day**, six personnel of the Indian Army were awarded the **Shaurya Chakra**, the **third-highest peacetime Gallantry Award** in the country, in recognition of their distinguished service.

- Of them, five were awarded posthumously.
- The gallantry awards are **announced twice in a year** — first on the occasion of the Republic Day and then on the occasion of the Independence Day.



Key Points

- **Gallantry Awards in India:**
 - Post-Independence, first three gallantry awards namely **Param Vir Chakra, Maha Vir Chakra and Vir Chakra were instituted** by the government of India on 26th January, 1950 which were deemed to have **effect from 15th August, 1947**.
 - Thereafter, **other three** gallantry awards — the **Ashoka Chakra Class-I, the Ashoka Chakra Class-II and the Ashoka Chakra Class-III** — were instituted in 1952, which were deemed to have effect from 15th August, 1947.
 - These awards were renamed as **Ashoka Chakra, Kirti Chakra and Shaurya Chakra** respectively in January 1967.
 - **Order of precedence** of these awards is the Param Vir Chakra, the Ashoka Chakra, the Mahavir Chakra, the Kirti Chakra, the Vir Chakra and the Shaurya Chakra.
- **People Eligible for the Awards:**
 - **All officers of all ranks of the Army, Navy and the Air Force** or of any of the reserve forces, territorial army and any other lawfully constituted armed forces.

- In addition to the above-mentioned personnel, **matrons, sisters, nurses, alongside the staff of the nursing services and other services** pertaining to hospitals and nursing and civilians, both male and females, serving regularly or temporarily under the orders, directions or supervision of any of the above-mentioned forces.

➤ **Wartime Highest Gallantry Awards:**

- **Param Vir Chakra:**
 - It is **India's highest military decoration** awarded for displaying distinguished acts of valor during wartime whether on land, at sea or in the air.
- **Maha Vir Chakra:**
 - It is the **second highest gallantry award** for acts of conspicuous gallantry in the presence of the enemy whether on land, at sea or in the air.
- **Vir Chakra:**
 - It is the country's **third-highest wartime gallantry award** after Param Vir Chakra and Maha Vir Chakra.

➤ **Peacetime Highest Gallantry Awards:**

- **Ashoka Chakra:**
 - It is the **highest military award during peacetime** for valor, courageous action or sacrifice.
 - It is awarded for **most conspicuous bravery** or some act of daring or pre-eminent act of valor or self-sacrifice otherwise than in the face of the enemy.
- **Kirti Chakra:**
 - It is the **second highest peacetime gallantry award** and is awarded for valor, courageous action or self-sacrifice away from the field of battle.
- **Shaurya Chakra:**
 - It is awarded to the personnel of the armed forces for instances of **extraordinary gallantry**.

➤ **Other Awards:**

- **Sena Medal:**
 - It is awarded for **acts of exceptional devotion to duty or courage in the Army**.
- **Nao Sena Medal:**
 - It is awarded for individual acts of **exceptional devotion to duty or courage in the Navy**.
- **Vayu Sena Medal:**
 - It is awarded for individual acts of exceptional devotion to duty or **courage in the Air Force**.



Note:

