UDAN 5.0 Scheme

Why in News?

Recently, the government has launched the fifth round of the Regional Connectivity Scheme – UDAN (UDAN 5.0).

What is UDAN (Ude Desh ka Aam Nagrik) Scheme?

- **About:**
  - The scheme was **launched by the Ministry of Civil Aviation** for regional airport development and regional connectivity enhancement.
  - It is **a part of the National Civil Aviation Policy 2016.**
  - The scheme is applicable for a **period of 10 years.**
- **Objectives:**
  - Improve the air connectivity to remote and regional areas of India.
  - Development of remote areas and enhancing trade and commerce and tourism expansion.
  - Enable common people to access air travel with affordable rates.
  - Employment creation in the aviation sector.
- **Key Features:**
  - Under the scheme, **airlines have to cap airfares for 50% of the total seats** at Rs. 2,500 per hour of flight.
  - This would be achieved through:
    - A **financial stimulus in the form of concessions** from Central and State governments and airport operators and
    - **Viability Gap Funding (VGF)** – A government grant provided to the airlines to bridge the gap between the cost of operations and expected revenue.
      - **Regional Connectivity Fund (RCF)** was created to meet the viability gap funding requirements under the scheme.
  - The partner State Governments (other than **UTs and NER states where contribution will be 10%)** would **contribute a 20% share to this fund.**
- **Previous Phases of the Scheme:**
  - **Phase 1** was launched in 2017, with the objective of **connecting underserved and unserved airports** in the country.
  - **Phase 2** was launched in 2018, with the aim of e**xpanding air connectivity to more remote and inaccessible parts** of the country.
  - **Phase 3** was launched in November 2018, with the focus on enhancing air **connectivity to hilly and remote regions** of the country.
  - **Phase 4 of the UDAN scheme** was launched in December 2019, with a focus on **connecting islands and other remote areas** of the country.
- **Key Features of UDAN 5.0:**
  - It focuses on **Category-2 (20-80 seats)** and **Category-3 (>80 seats)** aircrafts.

- There is **no restriction on the distance between the origin and the destination** of the flight.
- **VGF to be provided will be capped at 600 km** stage length for both Priority and Non-Priority areas; earlier capped at 500 km.
- **No predetermined routes would be offered**; only Network and Individual Route Proposal proposed by airlines will be considered.
- The **same route would not be awarded to a single airline** more than once, whether in different networks or in the same network.
- **Exclusivity of operation provided to an airline will be withdrawn** if the average quarterly Passenger Load Factor **(PLF) is higher than 75% for four continuous quarters.**
    - This has been done to **prevent exploitation of the monopoly on a route.**
- **Airlines would be required to commence operations within 4 months** of the award of the route; earlier this deadline was 6 months.
- **Novation process** for routes from one operator to another has been **simplified and incentivized.**
    - Novation - The process of substituting an existing contract with a replacement contract, where the contracting parties reach a consensus.

What are Achievements under UDAN Scheme?

(As per the data released in Aug 2022 by the Ministry of Civil Aviation)

- The scheme has also been able to **provide a fair amount of air connectivity to Tier-2 and Tier-3 cities** at affordable airfares and has transformed the way travelling was done earlier.
- The number of operational **airports has gone up to 141 from 74 in 2014.**
- **68 underserved/unserved destinations** which include 58 Airports, 8 Heliports & 2 Water Aerodromes have been connected under UDAN scheme.
- With 425 new routes initiated, **UDAN has provided air connectivity to more than 29 States/UTs** across the country.
- **More than one crore passengers** have availed the benefits of this scheme.

[//](#)

UDAN SCHEME

Ude   Desh   Ka   Aam   Naagrik

Ministry of Civil Aviation

2016

FEATURES:

- Connecting Small and Medium cities with big cities through air service

- Providing affordable, economically viable, and profitable air travel

- Extending financial incentives to selected airlines to encourage operations from unserved and under-served airports.

ABOUT:

- A Regional Connectivity Scheme (RCS)

- Launched in October 2016 and operational for a period of 10 years

- Formulated in Pursuance of the National Civil Aviation Policy (NCAP)-2016

- Udan **5.0** is the latest project.

BENEFITS:

- Democratisation of the Aviation Sector

- Employment Generation

- Boost to Tourism Sector

- Connecting smaller airports, special helicopters and sea plane routes.

- **Lifeline UDAN:** Air transport of medical cargo and essential supplies across India at the time of the Covid-19.

- **Krishi UDAN:** To assist farmers in transporting agricultural products

- **International UDAN:** To connect India's smaller cities directly to some key foreign destinations.

Source: PIB

China's Outreach in Central Asia

For Prelims: C+C5, Buddhism, **Silk Route,** SCO, Russia-Ukraine, CSTO

For Mains: China's Outreach in Central Asia and India's Stand.

Why in News?

Recently, China has conducted a meeting of trade ministers of the grouping known as **C+C5** — China and the five Central Asian republics, namely **Uzbekistan, Kazakhstan, Tajikistan, Turkmenistan, and Kyrgyzstan.**

- It was the latest in a series of diplomatic engagements by China with the region since the **Russian invasion of Ukraine.**

What is the China-Central Asia Engagement?

- **C+C5:**
    - The **first C+C5 summit held in Jan 2022** marked the **30th anniversary of diplomatic relations** between China and Central Asian nations.
    - China's historical trade and cultural links with the region date back to the **ancient** Silk Route**.**

- **Significance for China:**
  - The region **provides China with a market for cheap exports** and overland access to markets in Europe and West Asia.
  - Central Asia is **resource-rich, with massive reserves of gas, oil, and strategic minerals** such as uranium, copper, and gold.
  - China has also prioritized its relationship with these countries to ensure **peace in** Xinjiang Autonomous Region, which forms its frontier with Central Asia.
- **BRI and Investments:**
  - China has been investing heavily in Central Asia through its **Belt and Road Initiative**, which includes projects in oil and gas, transportation, digital technology, and green energy.
  - While China's investments have provided opportunities for economic growth in the region, there has also been resentment towards China due to its **treatment of Muslims in Xinjiang and concerns about its increasing presence** and land acquisitions.
    - Despite this, Central Asian governments have not joined international campaigns against China's treatment of its Muslim minority.
  - China is now the region's **foremost trading partner, with talks underway for further transport and logistics projects** linking all countries in the region to China's seaports.

How are C5s Balancing their Relationships with Russia, China and West?

- **Heavily Dependent on Russia:**
  - The region is heavily reliant on Russia, which is also the **main provider of security through the** CSTO (Collective Security Treaty Organisation)**.**
  - However, the CSTO's unity is weakening, and the **conflict in Ukraine** has raised **concerns about the consequences of Russia's security** relationship with Central Asia.
    - In 2022 **Kyrgyzstan cancelled a CSTO military exercise** that was to be held on its territory last year, and **none of the five Central Asian countries have openly taken Russia's side** in the conflict.
  - Nevertheless, Russia has increased its trade with the **region as it seeks to reduce its dependence on European imports.**
- **China's Increasing Engagement:**
  - China has been increasing its engagement with Central Asia, leading some to speculate that Beijing is taking advantage of Russia's preoccupation with Ukraine to expand its influence in the region.
  - While Russia may be concerned about Chinese expansion, there was no visible indication of this.
- **Seeking towards West:**
  - Central Asian countries are seeking to develop trade relations with the West, including the European Union and the United States.
  - However, the region's **landlocked geography and limited transport infrastructure have hindered** this effort.

What is India's Stake in Central Asia?

- **Cultural and Ancient Ties:**
  - The Silk Route connected India with Central Asia from the 3rd century BC to the 15th century AD. From the export of Buddhism to the lasting influence of Bollywood, India has **shared old and deep cultural ties with the region.**
- **Security:**
  - In December 2022, officials from Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan arrived in India for the **first India-Central Asia meeting of national security advisors.**
    - It highlighted the India-Central Asia relationship, emphasizing their common shared interests, such as stabilizing the **security situation in Afghanistan and reinforcing territorial integrity.**
  - India has also attempted to boost its security presence in the region by **renovating military bases in Tajikistan.**
  - If operational, the airbases would offer **India a strategic advantage against its two adversaries: China and Pakistan.**
    - Tajikistan is located close to the Wakhan Corridor, which connects Afghanistan and

China, as well as **Pakistan Occupied Kashmir.**

- **Extended Neighborhood Policy:**
    - In 2022 India demonstrated its commitment to its **"Extended Neighborhood Policy (ENP),"** which calls to diversify its geopolitical partners and diplomatic goals, and its willingness to engage its Central Asian partners on a multitude of fronts.
        - The ENP was launched in 2014 and seeks to build a web of partnerships and economic cooperation with neighboring countries.
    - The policy emphasizes **India's commitment to promoting regional stability, peace, and prosperity** through mutually beneficial cooperation with its neighbors.
- **Shanghai Cooperation Organization (SCO):**
    - India joined **SCO**, as a full member in 2017.
        - SCO also includes Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan.
    - The grouping provides India with a forum to establish **security relationships with Astana, Bishkek, and Tashkent,** adding on to robust ties with Tajikistan.
- **Connectivity as a Challenge:**
    - While India has trading ties with the C5, it is **hobbled by the absence of a land route to Central Asia,** with **Pakistan denying it passage** and **Afghanistan being uncertain territory** after the Taliban takeover.
        - The **Chabahar port in Iran** offers an alternative route, but it is not fully developed yet.
    - There have been suggestions that **India should provide connectivity** for people and trade in **Central Asia through "air corridors",** as it had done for Afghanistan.

Way Forward

- India must prioritize building long-lasting and reliable partnerships with Central Asian states, particularly in the face of **ongoing geopolitical challenges.** Security will remain a focal point for bilateral relations, but it is important for India to establish links through **transit, trade, investment, and people-to-people** connections.
- **India should take advantage of the vulnerabilities that the region has been exposed to** due to crises such as Russia's war in Ukraine and the Taliban takeover in Afghanistan.
- **Joint counterterrorism efforts** can help New Delhi establish itself as a consistent partner and monitor adversaries from a closer range.
    - However, India must also **work on other issues to supplement the security aspect** and ensure that the relationship with Central Asia is not susceptible to geopolitical, economic, or domestic pressure.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. What is the importance of developing Chabahar Port by India? (2017)

(a) India's trade with African countries will enormously increase.
(b) India's relations with oil-producing Arab countries will be strengthened.
(c) India will not depend on Pakistan for access to Afghanistan and Central Asia.
(d) Pakistan will facilitate and protect the installation of a gas pipeline between Iraq and India.

Ans: (c)

Mains

Q. A number of outside powers have entrenched themselves in Central Asia, which is a zone of interest to India. Discuss the implications, in this context, of India's joining the Ashgabat Agreement. **(2018)**

Logistics Performance Index 2023

For Prelims: Logistics Performance Index (LPI), National Logistics Policy (NLP), PM Gati Shakti initiative.

For Mains: PM Gati Shakti, Significance of National Logistics Policy, Significance Investment in infrastructure for Economic Growth

Why in News?

India has climbed six places on the World Bank's Logistic Performance Index (LPI) **2023, now ranking 38th in the 139 countries index.**

- This is a significant improvement from its **previous ranking of 44th in 2018 and 54th in 2014.**
- Earlier, the Ministry of Commerce and Industry released the **Logistics Ease Across Different States (LEADS) Report 2022.**

What is LPI?

- The LPI is an interactive benchmarking tool **developed by the World Bank Group.**
  - It helps countries identify the challenges and opportunities they face in their performance of trade logistics and what they can do to improve their performance.
- It measures the **ease of establishing reliable supply chain connections** and the structural factors that make it possible. The LPI considers 6 parameters to evaluate logistics performance, namely:
  - **Customs performance**
  - **Infrastructure quality**
  - **Ease of arranging shipments**
  - **Logistics services quality**
  - **Consignment tracking and tracing**
  - **Timeliness of shipments**
- The LPI was reported by the World Bank **every two years** from 2010 to 2018 with a **break in 2020 due to the** COVID-19 pandemic and a restructuring of the index methodology, eventually came out in 2023.
  - LPI 2023 allows for **comparison across 139 countries and for the first time, LPI 2023 measures the speed of trade** with indicators derived from big datasets tracking shipments.

What Aspects Led to India's Improved Logistics Performance?

- **Policy Interventions:**
  - **PM Gati Shakti Initiative:** In October 2021, government announced the PM Gati Shakti initiative, a **National Master Plan for multimodal connectivity.**
    - This initiative aims to reduce logistics costs and boost the economy by 2024-25.
  - **National Logistics Policy (NLP):** The PM launched the **National Logistics Policy (NLP) in 2022 to ensure quick last-mile delivery, end transport-related challenges, save time and money** for the manufacturing sector and ensure desired **speed in the logistics sector.**
  - These policy interventions are fructifying, which can be seen in India's jump in LPI and its

other parameters.

- **Infrastructure Improvements:**
    - According to the LPI report, **India's rank moved up five places in the infrastructure** score from **52nd in 2018 to 47th in 2023.**
    - The government has invested in trade-related soft and hard infrastructure, **connecting port gateways on both coasts** to the major economic centers located in the interior regions of the country.
        - This investment has paid off, with India climbing to the **22nd spot for international shipments in 2023 from 44th in 2018.**
- **Technology's Role:**
    - Technology has been a critical component of India's logistics performance improvement efforts.
    - Under a public-private partnership, the **government has implemented a supply chain visibility platform**, which has contributed to remarkable reductions in delays.
        - **NICDC Logistics Data Services Limited** applies radio frequency identification tags to containers and offers consignees end-to-end tracking of their supply chain.
    - The report also states that emerging economies like India are **leapfrogging advanced countries due to modernization and digitalization.**
- **Reduced Dwell Time:**
    - Dwell time is **how long a vessel spends at a specific port or terminal.** It may also refer to the **amount of time that a container or cargo spends at a port or terminal before being loaded** onto a vessel or after being unloaded from a vessel.
        - **India's very low dwell time (2.6 days)** is one example of how the country has improved its logistics performance.
    - According to the report, the average dwell time for containers between May and October 2022 was **3 days for India and Singapore**, much better than in some of the industrialized countries.
        - The dwell time for the **U.S. was 7 days and for Germany, it was 10 days.**
    - With the introduction of cargo tracking, **dwell time in the eastern port of Visakhapatnam fell from 32.4 days in 2015 to 5.3 days** in 2019.

What are India's Initiatives Related to Logistics?

- **Multimodal Transportation of Goods Act, 1993.**
- **Multi Modal Logistics Parks**
- **Dedicated Freight Corridor**
- **Sagarmala Projects**
- **Bharatmala Project**

UPSC Civil Services Examination Previous Year Question (PYQ)

Q. "Investment in infrastructure is essential for more rapid and inclusive economic growth." Discuss in the light of India's experience. **(2021)**

Source: TH

Mandal Commission

Why in News?

The second phase of the **caste survey** beginning in Bihar and several other political debates have brought Mandal Politics once again in news.

What is Mandal Politics and Mandal Commission?

- **About:**
  - Mandal politics refers to a **political movement that emerged in the 1980s,** advocating for the inclusion of socially and economically disadvantaged communities, particularly the Other Backward Classes (OBCs), in government jobs and educational institutions.
  - The movement was **named after the Mandal Commission.**
- **Mandal Commission:**
  - The Mandal Commission or **the** second Socially and Educationally Backward Classes Commission**,** was established in India in 1979 with a mandate to "identify the socially or educationally backward classes" of India.
    - It was **headed by B. P. Mandal** and submitted its report in 1980 and was **implemented in 1990.**
  - The Commission reported that 52% of the country's population was comprised of OBCs. Initially, the commission argued that the percentage of reservations in government service should match this percentage.
    - However, this would have gone against the Supreme Court ruling in **M.R. Balaji vs State of Mysore case (1963) which had laid down a limit of 50% on.** There was already a 22.5% reservation for SCs and STs.
  - Therefore, the figure of reservation for OBCs was capped at 27% which when added to keep the reservation below the 50% mark.
    - The Commission also identified backward classes among non-Hindus.
- **Recommendations of Mandal Commission:**
  - OBCs must be **provided a reservation of 27% in public sector** and government jobs.
  - They should be **provided with the same 27%** reservation in promotions at all levels of public services.
  - The reserved quota, if unfilled, should **be carried forward for a period of 3 years.**
  - OBCs should be provided age relaxation similar to SCs and STs.
  - Reservations to be made in PSUs, banks, private sector undertakings receiving government grants, colleges, and universities.
  - The government to make the necessary legal provisions to implement these recommendations.
- **Impact of Mandal Commission:**
  - Implementation of Mandal Commission by the government resulted in a widespread protest where students committed self-immolation in protest when the government showed its intent to implement it.
  - The implementation was finally challenged in **Indra Sawhney vs Union of India case.**

What did the SC Rule in Indira Sawhney Case?

- In this case the Supreme Court held the **27% reservations for OBCs as constitutionally valid** but with certain conditions:
  - The court held that the **reservation must be in the four walls of 50% cap** and should

not be extended in promotions.
- The concept of creamy layer **was also introduced** by the court to exclude well-off people from the community.
- The **carry forward rule** (by which unfulfilled vacancies are filled in the upcoming year) **should not breach 50% ceiling.**

Landmark Cases and Judgements regarding Reservation

Cases	Judgement	Fallout
State of Madras v. Champakam Dorairajan, 1950	Court ruled that caste-based reservations violate Article 15(1) of the Constitution. It said reservation was an exception to equality and hence violated the right to equality.	Led to the introduction of the First Amendment of the Constitution, which invalidated the judgment.
M. R. Balaji v. State of Mysore, 1963	The Mysore government's 68% reservation in college admissions was ruled as excessive and unreasonable, and was capped at 50%.	The Supreme Court in the Indra Sawhney case imposed the 50 % limit on reservations in 1992.
Devadasan v Union of India, 1964	The court ruled that if reservations go beyond 50% they would be invalid.	Reservation was rationalised and was termed a facet of equality.
State of Kerala v NM Thomas	Reaffirmed the idea that reservation is not an exception but is necessary to establish equality. It ruled that Article 16(1)'s conception of equality itself includes remedial action to ensure due representation for hitherto excluded classes.	The ruling is considered to be the first definite judicial endorsement of the philosophy of reservation
Indra Sawhney & Others v. Union of India, 1992	The court upheld separate reservation for OBCs but excluded the "creamy layer". It rejected economic reservation and set a ceiling of 50 % for all reservations.	The case was pressed again in 1999 and the Supreme Court reaffirmed the creamy layer exclusion and extended it to SCs and STs.
M. Nagraj & Others v. Union of India and Others, 2007	Upheld 77th Amendment which extended reservations for promotion in employment for SCs and STs.	The court ruled that promotions should satisfy the triple test of backwardness, representation and the need for efficiency. Backlog vacancies were excluded from the 50% limit.
I. R. Coelho (deceased) by LRS. v. State of Tamil Nadu, 2007	Tamil Nadu advised by Supreme Court to follow 50% reservation limit	Tamil Nadu reservations were put under the 9th Schedule of the constitution, which had already been upheld by the court.
P. A. Inamdar v. State of Maharashtra, 2005	Reservations cannot be enforced on private educational institutions which do not receive government funding.	Led to 93rd Constitution Amendment introduced Art 15(5).
Ashoka Kumar Thakur v. Union of India, 2007	Upheld the 93rd Amendment on reservation for admission to unaided educational institutions	Recommended reviews of backwardness every 10 years.
Ram Singh & Ors v Union of India, 2014	Struck down the inclusion of Jats in the Central list of OBCs	Proposed new ways to determine backwardness
Jaishri Laxmanrao Patil v Union of India, 2021	Maratha reservation struck down as unconstitutional	The 50 % ceiling on reservations was reaffirmed
Janhit Abhiyan vs Union Of India, 2022	Upheld 103rd Amendment which introduced 10% reservation for Economically Weaker Sections in education and public employment	A new reservation regime created

What are the Merits of Mandal Commission?

- **Increased Representation:** The Mandal Commission helped in increasing the representation of SEBCs in government jobs and educational institutions.
  - According to Ministry of Social Justice and Empowerment, OBC representation against total appointment through direct recruitment was consistently above 27% during 2014-2021.
- **Access to Education**: The reservation policy enabled many OBC students to gain access to higher education. This resulted in a significant increase in the number of OBC students in universities and colleges.
  - According to the Ministry of Social Justice during the period of 2014-2021, the enrolment of OBCs in Higher Educational Institutions has been consistently increasing since 2014-15.
- **Social Justice:** The Mandal Commission's recommendations were based on the principles of social justice and aimed at providing equal opportunities to all sections of society, especially those who have been historically disadvantaged.

What are the Demerits of Mandal Commission?

- **Limited Impact on Upliftment:** The impact has been limited to a very few communities. According to the **Justice Rohini G. Commission**, out of almost 6,000 castes and communities in the OBCs, only 40 such communities had gotten 50% of reservation benefits for admission in central educational institutions and recruitment to the civil services.
- **Politicisation:** The politicians have often used the **Reservation as their vote bank politics.** During 1980s, the Mandal Commission was highly politicized giving a new form of Politics- Mandal politics.
    - Even today, it is used as a political tool. Recently, a politician while campaigning in Karnataka has demanded to lift 50% limit on SC/ST/OBC reservation.
- **Negative Impact on Merit:** The reservation policy led to a negative impact on merit as **many deserving candidates were left out,** and the **seats were filled by candidates with lesser merit.**

Way Forward

- **Periodic Review of Reservation Policy**: The policy must be reviewed periodically to assess its impact as directed by the Supreme Court in Indira Sawhney vs Union of India case (1992).
- **Improve Early Level of Education:** The government must improve education at earlier levels so that the reservations at higher levels could easily be phased out.
- **Increase Job Opportunities in Private Sector:** The government should thrive to increase job opportunities in private sector to reduce dependence on public sector and reservation for employment.

Source: TH

State of the Global Climate 2022: WMO

For Prelims: WMO, **GHG**, **Glaciers**, **Ocean Acidification**, **Rainfall**, **Heatwave**

For Mains: State of the Global Climate 2022.

Why in News?

Recently, the **World Meteorological Organization (WMO)** has released the State of the Global Climate Report 2022.

- The report focuses on key climate indicators – **Greenhouse Gasses**, Temperatures, **Sea level rise**, **Ocean Heat and Acidification**, Sea ice and **Glaciers.** It also highlights the impacts of **climate change and extreme weather.**
- Earlier, the WMO released the **provisional State of the Global Climate report, 2022.**

What are the Findings of the Report?

- **Temperature**
    - Global mean temperature in 2022 was 1.15 °C above the 1850-1900 average.
    - The years 2015 to 2022 were the **eight warmest in the instrumental record** back to 1850.
    - This was despite three consecutive years of a cooling La Niña **– such a "triple-dip" La Niña** has happened only three times in the past 50 years.

- **Greenhouse Gasses:**
  - Concentrations of the three main GHG, Carbon dioxide, Methane, and Nitrous oxide, reached record highs in 2021.
  - The annual increase in methane concentration from 2020 to 2021 was the highest on record.
- **Sea Level Rise**:
  - Global mean sea level (GMSL) continued to rise in 2022, reaching a new record high for the satellite altimeter record.
  - For the period 2005-2019, total land ice loss from glaciers, Greenland, and Antarctica contributed **36% to the GMSL rise,** and ocean warming contributed 55%.
- **Ocean Heat:**
  - Ocean heat content reached a new record high in 2022.
  - Around 90% of the energy trapped in the climate system by greenhouse gases goes into the ocean, somewhat ameliorating even higher temperature increases but posing risks to marine ecosystems.
- **Ocean Acidification:**
  - CO_2 reacts with seawater resulting in a decrease of pH referred to as '**ocean acidification'**, threatening organisms and ecosystem services.
  - The **IPCC Sixth Assessment Report** concluded that "There is very high confidence that open ocean surface pH is now the lowest it has been for at least 26 [thousand years] and current rates of pH change are unprecedented since at least that time.
- **Sea Ice:**
  - Sea ice in **Antarctica** dropped to 1.92 million km2 in February 2022, the lowest level **on record and almost 1 million km2 below the long-term (1991-2020) mean.**
- **Glaciers:**
  - Glaciers are losing a lot of ice, with a thickness change of over (-) 1.3 meters on average between **October 2021 and October 2022,** which is much larger than the average of the past decade.
  - The **European Alps** saw **record glacier melt due to a lack of winter snow**, dust from the Sahara in March 2022, and heatwaves from May to early September.

What are the Impacts of Such Record Highs In Climate Indicators?

- **Drought in East Africa:**
  - **Rainfall** has been **below-average in five consecutive wet seasons**, the longest such sequence in 40 years. As of January 2023, it was estimated that over 20 million people faced acute food insecurity across the region, under the effects of the drought and other shocks.
- **Record Breaking Rain in Pakistan:**
  - Total damage and economic losses were assessed at USD 30 billion.
    - July (181% above normal) and August (243% above normal) were each the wettest on record nationally.
  - The flooding in Pakistan affected some **33 million people**, **including about 8,00,000 Afghan refugees** hosted in affected districts.
- **Heat Waves in Europe:**
  - In some areas, **extreme heat** was coupled with exceptionally dry conditions. Excess deaths associated with the **heat in Europe exceeded 15, 000** in total across Spain, Germany, the UK, France, and Portugal.
  - China had its most **extensive and long-lasting heatwave since national records began,** extending from mid-June to the end of August and resulting in the hottest summer on record by a margin of more than 0.5 °C. It was also the second-driest summer on record.
- **Food Insecurity:**
  - As of 2021, 2.3 billion people faced **food insecurity**, of which 924 million people faced severe food insecurity.
  - Projections estimated 767.9 million people facing undernourishment in 2021, 9.8% of the global population.
  - Half of these are in **Asia and one third in Africa.**
- **Pre-Monsoon Heat Waves in India and Pakistan:**

- Pre-monsoon season Heatwaves in India and Pakistan in caused a **decline in crop yields.**
- This, combined with the **banning of wheat exports and restrictions on rice exports** in India after the start of the **conflict in Ukraine**, threatened the availability, access, and stability of staple foods within international food markets and posed high risks to countries already affected by shortages of staple foods.
- **Displacement:**
  - In Somalia, almost 1.2 million people became internally displaced by the catastrophic impacts of drought on pastoral and farming livelihoods and hunger during the year, of whom more than 60,000 people crossed into Ethiopia and Kenya during the same period. Concurrently, Somalia was hosting almost 35,000 refugees and asylum seekers in drought-affected areas.

What is the World Meteorological Organization (WMO)?

- The WMO is an **intergovernmental organization with a membership of 192** Member States and Territories.
  - India is a member of WMO.
- It originated from the **International Meteorological Organization (IMO),** which was established after the 1873 Vienna International Meteorological Congress.
- Established by the ratification of the WMO Convention on 23rd March 1950, WMO became the specialized agency of the United Nations for meteorology (weather and climate), operational hydrology and related geophysical sciences.
- WMO is headquartered in **Geneva, Switzerland.**

Source: DTE

PSLV C55 and TeLEOS-2 Satellite

Why in News?

Recently, **ISRO (Indian Space Research Organization)** has successfully launched the PSLV (Polar Satellite Launch Vehicle)**-C55/TeLEOS-2** mission from the Satish Dhawan Space Centre, Sriharikota in Andhra Pradesh.
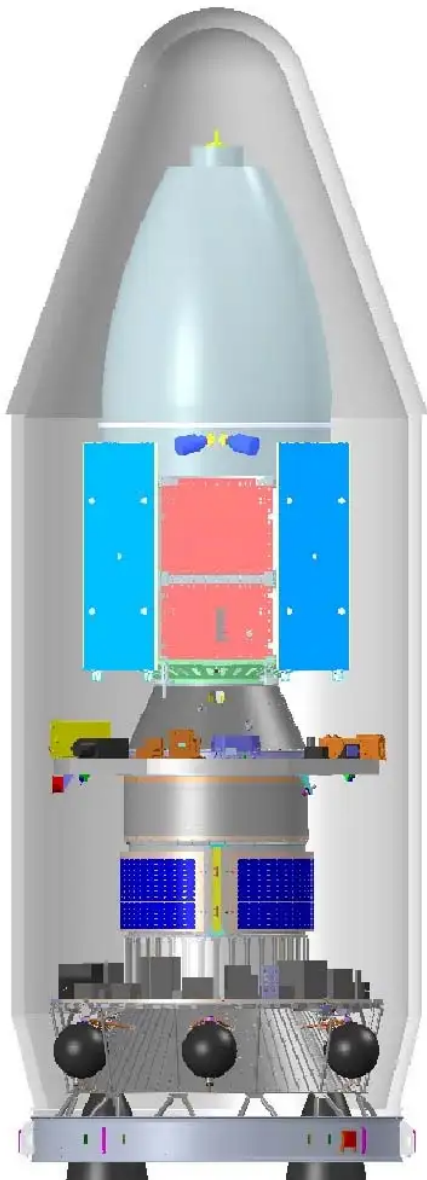
## What is the PSLV C55/TeLEOS-2 Mission?

- **About:**
    - This is the 57th flight of PSLV and 16th mission using the PSLV Core Alone configuration (PSLV-CA).
    - It is a dedicated commercial mission through **NSIL (NewSpace India Limited)** with **TeLEOS-2** as primary satellite and **Lumelite-4 as a co-passenger satellite**, both belonging to Singapore.
    - The scientists used **PSLV Orbital Experimental Module-2 (POEM-2) as an orbital platform** to carry out the scientific experiments through non-separating payloads carried by it.
- **TeLEOS-2:**
    - It is an **Earth Observation Satellite (EOS)** and will be the **primary satellite being carried by the rocket.**
        - In 2015, ISRO launched TeLEOS-1, which was launched into a low Earth orbit for remote sensing applications. **ISRO has so far launched nine satellites belonging to Singapore.**
    - TeLEOS-2 carries a **Synthetic Aperture Radar (SAR)** payload capable of imaging at **1m full-polarimetric resolution.** It will be able to provide all-weather day and night coverage.
        - SAR is a type of active radar imaging technology that **uses the motion of the**

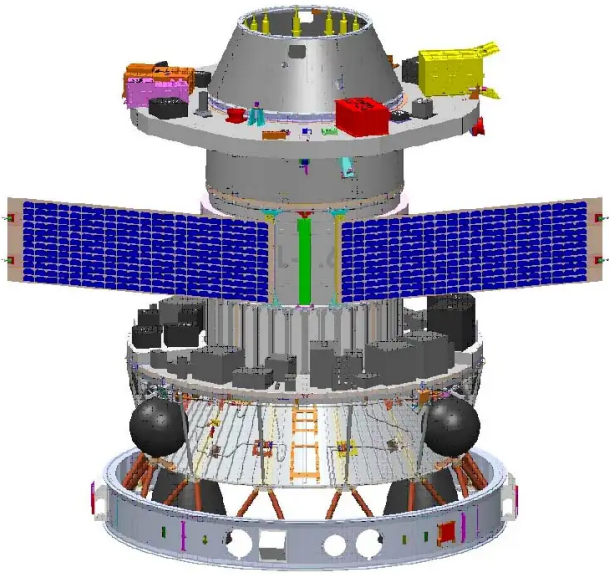**radar antenna to create a high-resolution 3D image** of the target area.
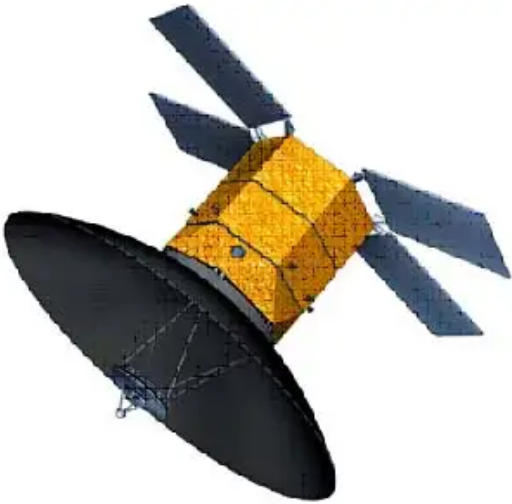
- **LUMILITE-4:**
  - It is an advanced **12U satellite developed for the technological demonstration** of the High-Performance Space-borne VHF Data Exchange System (VDES).
    - "12U" refers to a standardized form factor for CubeSats, which are small satellites with a modular design.
    - In the 12U form factor, the CubeSat measures 24 x 24 x 36 cm and has a volume of 20.7 liters.
  - It **aims to augment Singapore's e-navigation maritime safety** and benefit the global shipping community.
  - It is the co-passenger satellite being sent along with TeLEOS-2
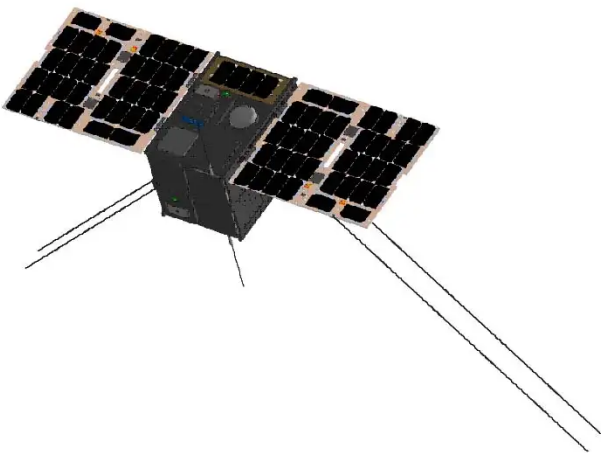
What is POEM?

- POEM is an **experimental mission by ISRO** which performs in-orbit scientific experiments during the 4th stage of the PSLV launch vehicle as an orbital platform.
  - The PSLV is a four-stage rocket where the first three spent stages fall back into the ocean, and the final stage (PS4) — after launching the satellite into orbit — ends up as space junk.
- POEM has a dedicated **Navigation Guidance and Control (NGC)** system for attitude stabilization, which stands for controlling the orientation of any aerospace vehicle within permitted limits.
  - The NGC will act as the platform's brain to stabilize it with specified accuracy.

Source: TH

India's Fighter Jets

Why in News?

The **Indian Air Force (IAF)**, one of the world's largest Air Forces, face challenges in modernizing its fleet, as delays in procurement have led to a **shortfall in its fighter squadrons.**

- An IAF representative informed the Parliamentary standing committee on Defence that the IAF has only **31 fighter squadrons, against the sanctioned strength of 42.**

What is Fighter Squadron?

- **About:**
    - A **fighter squadron is a military unit consisting of fighter aircraft and the pilots who fly them.**
        - It is a fundamental component of an air force and is responsible for **conducting air operations in a combat zone.**
    - A typical fighter squadron consists of **18 fighter aircraft.**
    - They are an essential component of any modern air force and are tasked with a wide range of missions, including air superiority, and ground attack.
- **Reasons for the Shortfall:**
    - **Delays in procurement have contributed to the shortfall,** as many of the IAF's fighter jets are ageing and need to be replaced.
- **Status of the Procurement of Fighter Jets:**
    - India has an ambitious plan to acquire over 500 fighter jets, with most of them being for the IAF.
        - Many of these jets are still in **various stages of development**, and their manufacturing and timely deliveries are critical.
    - The IAF has in total contracted 272 SU-30s.
    - A deal to procure 12 additional **SU-30MKI** aircrafts to replace the ones lost in accidents and 21 additional MIG-29s from Russia has been stuck, though both IAF and Russian officials state that it has only been delayed but is on track.

What Different Types of Aircrafts India Has?

- **Light Combat Aircraft (LCA):**
    - **Designed to replace ageing Mig 21** fighter planes
    - Developed by the **Aeronautical Development Agency (ADA)** under the Department of Defence Research and Development.
    - Manufactured by **Hindustan Aeronautics Limited (HAL).**
    - **Lightest, smallest and tailless multi-role supersonic fighter aircraft** in its class.
    - Can carry a range of **air-to-air, air-to-surface, precision-guided weapons.**
    - Air-to-air refueling capability, maximum payload capacity of 4000 kg, maximum speed of **Mach 1.8** and Range of 3000 km.
- **Multi-Role Fighter Aircraft (MRFA):**
    - Designed to perform various missions such as air-to-air combat, air-to-ground attack, and electronic warfare.
    - IAF pursuing the procurement of 114 MRFA to replace the aging fleet of Soviet-era MiG-21.
    - Procurement will be carried out under the **Make in India initiative.**
    - Selected vendor will have to set up a production line in India and transfer technology to local partners.
- **MiG-21:**
    - Supersonic jet fighter and interceptor aircraft designed by the erstwhile USSR in the 1950s.
        - Widely used combat aircraft in history, with more than 11,000 units built and over 60 countries operating it.
    - **IAF acquired its first MiG-21 in 1963** and has since **inducted 874 variants** of the aircraft
    - Involved in several wars and conflicts involving India. Involved in many accidents and crashes, earning it the nickname **"flying coffin".**
    - IAF plans to phase out the **MiG-21 by 2024 and replace it with more modern fighters.**
- **Advanced Medium Combat Aircraft (AMCA):**

- An Indian program to develop a 5thgeneration stealth, multirole combat aircraft for the IAF and the Indian Navy
- Designed and developed by the ADA of the **DRDO**, in collaboration with Hindustan Aeronautics Limited (HAL) and other public and private partners.
- Expected to have features such as a **stealth airframe, internal weapons bay, advanced sensors, data fusion, supercruise capability and swing-role performance**
- Started in 2008 as a **successor to the Sukhoi Su-30MKI**
  - **First flight planned for 2025** and production is expected to start after 2030.

- **Sukhoi Su-30MKI:**
  - **Twin-engine, two-seat, multirole fighter aircraft developed by Russia's Sukhoi** and built under license by India's HAL for the IAF.
  - Designed to perform air superiority, ground attack, electronic warfare, and maritime strike missions
  - Entered **service with the IAF in 2002 and has been deployed in several conflicts and exercises**

- **Twin-Engine Deck-Based Fighter (TEDBF):**
  - Manufactured for the Navy to replace the Navy's MiG-29K.
  - **First twin-engine aircraft project in India for dedicated carrier-based operations.**
  - Equipped predominantly with **domestic weapons.**
  - Maximum **mach number of 1.6,** service ceiling of 60,000 feet, maximum takeoff weight of 26 tons, unfolded wing.

- **Rafale:**
  - **French twin-engine and multirole fighter aircraft.**
  - **India procured 36 Rafale jets** for Rs 59,000 crore in 2016.
  - Equipped to perform **air supremacy, interdiction, aerial reconnaissance, ground support, in-depth strike, anti-ship strike, and nuclear deterrence missions.**
  - The weapons package of Rafale jets includes **Meteor missile, Scalp cruise missile, and MICA missile system.**
    - **Meteor missile** is the next generation of Beyond Visual Range air-to-air missile designed to revolutionize air-to-air combat, capable of targeting **enemy aircraft from 150 km away.**
    - SCALP Cruise Missiles **can hit targets 300 km away,** while **MICA missile system** is a versatile air-to-air missile capable of **hitting targets up to 100 km away.**
  - Flight hour capacity of **30,000 hours in operations.**

Note:

- In a more recent move, **INS Vikrant, India's first indigenous aircraft carrier**, was commissioned in Sept 2022 and is currently in the process of getting operationalised.
- Recently, the **Naval variant of India's indigenous** Light Combat Aircraft (LCA) made its maiden landing on board the INS Vikrant.

Source: TH

Hakki Pikki Tribal Community

Why in News?

More than **181 members of the** [Hakki Pikki](#) **tribal community from Karnataka** are stuck in violence-hit [**Sudan.**](#)

What are the Characteristics of the Hakki Pikki Tribe?

- **About:**
  - The **Hakki Pikki tribe is a semi-nomadic tribe** traditionally engaged in **bird catching** and hunting, **living in forest areas in west and south India.**
  - It is a [**Scheduled Tribe**](#) in Karnataka and their origin is said to be an ancestral relation with the legendary [**Ranapratap Singh.**](#)
- **Origination and Settlement:**
  - The Hakki Pikki tribe is believed to have originated from **Gujarat and Rajasthan** and **migrated to south India via Andhra Pradesh.**
  - The tribe is divided into four clans and has a population of **11,892 in Karnataka.**
    - The 4 clans are **Gujaratia, Panwar, Kaliwala and Mewaras** and can be **equated with castes in the traditional Hindu society.**
- **Society:**
  - The **usual age of marriage among the tribe is 18 for women and 22 for men**, and **cross-cousin marriages are preferred.**
    - The society is [**matriarchal**](#), and **Monogamy is the norm.**
  - Hakki Pikkis in Karnataka follow Hindu traditions and celebrate all Hindu festivals.
  - **Education levels** among the Hakki Pikkis are **still low.**
- **Livelihood:**
  - The forest is the main natural resource of the Hakki Pikki.
  - The tribe has faced challenges due to **stricter** [wildlife protection laws](#)**,** leading them to **shift from hunting to selling herbal oils, spices, and plastic flowers** in local temple fairs.
- **Migration to Africa:**
  - In recent years, **members of the Hakki Pikki tribe have been travelling to** [African countries](#) to sell their products as there is a **huge demand for** [Ayurvedic products](#) **in the continent.**
  - African countries offer better market opportunities, with the potential for higher returns on investment in raw materials such as hibiscus powder, oil extraction, gooseberry, Ayurvedic plants, etc.

To know more about Various Tribes of India – [Click Here](#)

What led to the Violence in Sudan?

- There was violence recently in the country due to tense negotiations between two forces, **Sudan Armed Forces (SAF) and the Rapid Support Forces (RSF).**
- The **negotiations were about merging the forces into a single national army**, as part of a political agreement for the military to **hand over power to civilian leaders.**
  - This created mounting tensions because **hardline factions within the military** were resistant to the incorporation and **led to violence.**

Source: IE

Starship

Why in News?

Recently, **SpaceX** launched an **uncrewed test flight** of its **Starship cruise vessel** from the Super Heavy rocket. However, the **vehicle exploded when the upper-stage Starship** failed to separate from the **lower-stage Super Heavy.**

- **SpaceX is a private company founded in 2002** by Elon Musk.

What is the Starship Project?

- SpaceX's **Starship spacecraft and Super Heavy rocket** – collectively referred to as **Starship** – represent **a fully reusable transportation system** designed to carry both crew and cargo to **Earth orbit, the Moon, Mars and beyond.**
  - Starship will be able to carry up to **150 metric tonnes fully reusable and 250 metric tonnes expendable.**
- **Starship Super Heavy** is powered by an array of Raptor engines, which are fueled by **liquid methane (CH_4) and liquid oxygen (LOX).**
  - A total of **33 Raptor engines power the first-stage booster.**
- It leverages tanker vehicles (essentially the Starship spacecraft minus the windows) to refill the Starship spacecraft in **low-Earth orbit.**
- Development and manufacturing of Starship takes place at **Starbase**, one of the world's **first commercial spaceports designed for orbital missions.**

What are the other Major Projects of Space X?

- **Falcon 9:**
  - **Falcon 9** is a **reusable, two-stage rocket for the reliable and safe transport of people and payloads into Earth orbit** and beyond.
- **Falcon Heavy:**
  - SpaceX claims **Falcon Heavy** to be the most powerful rocket in the world by a factor of two.
  - It is composed of **three Falcon 9 nine-engine** cores whose 27 Merlin engines **together generate more than 5 million pounds of thrust** at liftoff.
    - Merlin engines use a **rocket grade kerosene (RP-1) and liquid oxygen** as rocket propellants in a **gas-generator power cycle.**
- **Starlink and Starshield:**
  - **Starlink** provides high-speed, low-latency broadband internet across the globe.
    - Its high-speed, low-latency service is made possible via the **world's largest constellation of highly advanced satellites** operating in a low orbit around the Earth.
  - **Starshield leverages Starlink technology** and launch capability to support national security efforts.
    - While Starlink is **designed for consumer and commercial use, Starshield is designed for government use.**

What are India's Efforts in Commercialisation of Space?

- **Skyroot's Vikram S** series and **Dhawan engines**
- Draft Spacecom Policy **2020**
- **IN-SPACE**
- **NewSpace India Limited (NSIL)**
- **Indian Space Association (ISpA)**
- **Antrix Corporation Limited (ACL)**

Rapid Fire Current Affairs

The Black Sea Grain Deal

The **Group of Seven (G7)** agriculture ministers have issued an official statement calling for the **extension, full implementation, and expansion of the Black Sea Grain Initiative (BSGI) deal** that allows Ukraine to export over 27 million Tonnes of grain from its Black Sea ports.

The deal was **brokered by the** United Nations **and Turkey** in July 2022 but Russia, which invaded Ukraine in February 2022, has signaled that it will **not allow the deal to continue beyond 18th May 2023** because its demands to facilitate its own grain and fertilizer exports have not been met.

The G7 ministers strongly disapprove of Russia using food as a way to create problems and force Ukraine to do what they want. They promise to stand with Ukraine and help those who are most affected by Russia's use of food as a weapon. The G7 members have also pledged to provide support for the recovery and reconstruction of Ukraine, including expertise in demining agricultural land and reconstruction of agricultural infrastructure.

Read more: Black Sea Grain Initiative (BSGI)

Basava Jayanthi

The Prime Minister paid tribute to **Jagadguru Basaveshwara** on Basava Jayanthi. It is a festival celebrated in **honor of the philosopher, statesman, social reformer, and saint** in the **Shaivism Bhakti movement** during the **12th century.** Basaveshwara is well-known for his teachings of gender equality, social reforms, eradication of social discrimination, clarification of superstitions, and unnecessary rituals.

Basava Jayanthi is celebrated on the **third of the bright half or Shukla paksha** during the **month of Vaisakha by** Lingayats **in the State of Karnataka,** marking the birth anniversary of Basaveshwara.

Basaveshwara introduced the practice of wearing the **Ishtalinga necklace, which symbolizes Lord Shiva** and is worn by all **Lingayats**. The **Anubhava Mantapa** established by Basava laid down the foundation of social democracy.

Read more: Basava Jayanthi

Earth Day

Earth Day is **an annual event celebrated on 22nd April** to raise awareness about the need to protect our planet and its environment. In 2009, the United Nations **designated 22nd April as** 'International Mother Earth Day. The **theme for Earth Day 2023 is "Invest in our planet,"** which calls on businesses, investors, financial markets, and governments to lead the way in building a healthier and more equitable global system. The private sector can use its power to promote green innovation and practices, while governments can incentivize citizens, businesses, and institutions to work toward environmental conservation. Individual citizens can also contribute by voting for politics that prioritize the environment and by supporting environmentally conscious businesses.

Earth Day was first observed in **1970 as a response to environmental degradation** caused by issues such as smog**, polluted rivers, and** oil spills**.** Today, Earth Day is globally coordinated by **EARTHDAY.ORG, a non-profit organization** formerly known as **Earth Day Network.** It aims to build the world's largest environmental movement to drive transformative change for people and the planet.

The **landmark** Paris Agreement, which aims to reduce global greenhouse emissions, **was signed on Earth Day 2016**, demonstrating the significance of this day in driving meaningful change for our planet.

Read more: Earth Day

National Panchayati Raj Day

National Panchayati Raj Day is **observed on 24th April every year** to commemorate the **73rd constitutional amendment** that came into effect on the same day in 1993, which **accorded** panchayats **a constitutional status as the third tier of local self-governance in India.**

Although some states such as Rajasthan, Andhra Pradesh and West Bengal had already recognized panchayats as local self-governance institutions, the **73rd and 74th amendments made this a pan-India phenomenon.**

Panchayati Raj has been far more successful in giving **women a fair share of representation**, with **one-third of total seats reserved for women at the local level,** and some states providing **50% reservations to women** in elections for the local bodies. This increased representation of women at the local level has various policy outcomes, including increased spending on community-based welfare for women and financial independence for women through self-help groups in many places.

There is significant variation in the degree of fiscal autonomy granted to local government bodies across states, with some having greater devolution of financial powers than others. For instance, **Kerala and Maharashtra are ranked as the best in terms of following devolution, while Odisha and Assam are ranked the lowest among major states.**

Read more: National Panchayati Raj Day**,** Panchayati Raj Institution (PRI)