

My Notes....

NATIONAL

INDIA VOTES IN FAVOUR OF UNSC RESOLUTION

India, which is chair the **UN Security Council's Counter-Terrorism Committee (CTC)** in 2022, **voted in favour of a resolution** to renew the mandate of the CTC Executive Directorate, as it called on nations to remain united against the “**tendency of labelling terror acts based on its motivation**”.

What

1. The **UN Security Council**, through its written **silence procedure**, renewed the mandate of the **Counter-Terrorism Committee Executive Directorate (CTED)** until 31 December 2025. An interim review will be **conducted in December 2023**.
2. **India** is chair the **Counter Terrorism Committee** of **Security Council** from 1 January 2022 for one year.
3. India said it is committed to **pursue all necessary measures** in collaboration with other member states towards the goal of **zero tolerance for terrorism**.
4. As the **Chair of CTC for 2022**, India will make determined efforts to **further enhance the role of CTC** in strengthening the **multilateral response to counter terrorism**, and more importantly, ensuring that global response to the **threat of terrorism** remains unambiguous, **undivided and effective**, India said in the explanation of vote.
5. India further called on Member States to remain “united against the tendency of labelling acts of terrorism **based on its motivation**”.
6. Such categorisation will lead the global community back to the pre-9/11 era of “**my terrorist**” versus “**your terrorist**”.

Flashback

1. The **CTC is assisted** by the **Executive Directorate (CTED)**, which carries out its policy decisions and conducts expert assessments of the **193 United Nations Member States**.
2. **CTED** conducts country visits on the Counter-Terrorism Committee's behalf to assess **Member States' counter-terrorism efforts**, including progress made, remaining shortfalls, and priority areas for technical assistance needs, as well as to identify terrorism-related trends and challenges and good practices employed in the implementation of relevant Security Council resolutions.
3. **India**, which wrapped up the first year of its two-year term as **non-permanent UNSC member**, chaired the **Taliban Sanctions Committee** and the **Libya Sanctions Committee** this year.

INDIA STATE OF FOREST REPORT 2021

Ministry for Environment, Forest and Climate Change on 13 January 2022 released the ‘**India State of Forest Report 2021**’ prepared by the **Forest Survey of India (FSI)** which has been mandated to assess the **forest and tree resources** of the country. In the current report, FSI has introduced a **new chapter** related to the **assessment of forest cover in the tiger reserves, corridors, and lion conservation area** of India.

Manor finding of the report

1. The **total forest and tree cover** of the country is **80.9 million hectare** which is **24.62 percent of the geographical area** of the country. As compared to the assessment of 2019, there is an **increase of 2,261 sq km** in the total forest and tree cover of the country.

2. Out of this, the increase in the forest cover has been observed as **1,540 sq km** and that in **tree cover is 721 sq km**. **Increase in forest cover** has been observed in **open forest followed by very dense forest**.
3. **Top three states** showing increase in forest cover are **Andhra Pradesh (647 sq km)** followed by **Telangana (632 sq km)** and **Odisha (537 sq km)**.
4. Area-wise **Madhya Pradesh has the largest forest cover** in the country followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra.
5. In **terms of forest cover** as percentage of total geographical area, the **top five States** are **Mizoram (84.53%)**, **Arunachal Pradesh (79.33%)**, **Meghalaya (76.00%)**, **Manipur (74.34%)** and **Nagaland (73.90%)**.
6. **Total mangrove cover** in the country is **4,992 sq km**. An increase of 17 sq Km in mangrove cover has been observed as compared to the previous assessment of 2019.
7. **Top three states** showing mangrove cover increase are **Odisha (8 sq km)** followed by **Maharashtra (4 sq km)** and **Karnataka (3 sq km)**.
8. **Total carbon stock in country's forest** is estimated to be 7,204 million tonnes and there an increase of 79.4 million tonnes in the carbon stock of country as compared to the last assessment of 2019. The **annual increase in the carbon stock is 39.7 million tonnes**.

Flashback

1. The **biennial assessment of forest cover** of the country using **mid-resolution Satellite data** is based on interpretation of **LISS-III data** from **Indian Remote Sensing satellite data (Resourcesat-II)** with a spatial resolution of 23.5 meters with the scale of interpretation 1:50,000 to monitor forest cover and forest cover changes at District, State and National level.
2. Satellite data for the entire country was procured from **NRSC** for the period October to December 2019.
3. The **ISFR-2021** provides information on **forest cover, tree cover, mangrove cover, growing stock, carbon stock in India's forests, forest fire monitoring, forest cover in tiger reserve areas**, above ground estimates of biomass using SAR data & climate change hotspots in Indian forests.

SC AGREES TO EXAMINE VALIDITY OF ILP SYSTEM

The **Supreme Court** on 3 January 2022 **agreed to hear a PIL** challenging the system of **Inner Line Permit (ILP)** in the **state of Manipur** and issued notice to the Centre and the state government on the plea alleging that extension of the **140-year-old Bengal Eastern Frontier Regulation, 1873** is "reminiscent of the colonial oppression and discrimination".

What

1. A bench headed by **Justice S Abdul Nazeer** sought a response on a **PIL** filed by **Amra Bangalee**, a Kolkata-based organisation with a unit in Assam, demanding **revocation of the ILP** in Manipur.
2. The extension of **Bengal Eastern Frontier Regulation** to the state of Manipur by way of **impugned 1950 order** and 2019 order was violative of **fundamental rights of the citizens** as it provides unbridled power to the state for restricting the entry and exit of non-indigenous persons
3. The present petition is being preferred challenging the system of **Inner Line Permit** in Manipur as imposed by way of the **Adaptation of Laws (Amendment) Order** promulgated by the President of India which extends **140-years old colonial legislation--the Bengal Eastern Frontier Regulation, 1873--**enacted by the British to create its monopoly over the newly set up tea plantations in Assam as well as to protect its commercial interests in the Hills areas from Indians.

4. The draconian ILP system is fundamentally opposed to the politics of **social integration**, development and technological advancement in areas beyond **Inner Line**, apart from hampering tourism within the state, which is a **major source of revenue generation** for these areas.
5. **Manipur is the fourth state** after **Arunachal Pradesh**, **Nagaland** and **Mizoram** where the **ILP regime** is applicable.
6. To visit **ILP-regime states**, outsiders, including people from other states of the country, **need permission**.

Flashback

1. The **ILP system** came into effect in Manipur on 1 January 2020. **ILP is a document that Indian citizens** from other states are required to possess in order to enter the state.
2. **In Manipur, four types** of permits are issued — **temporary, regular, special and labour permits**.
3. Initially, these permits were issued manually at seven counters at different entry points, including **Imphal airport**.
4. However, to do away with the hassle faced by travellers in applying for the permit, the state government launched an **online portal in February 2020**.

NEW RULE OF FLY ASH UTILISATION

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.

What

1. The obligations for achieving the **ash utilization targets** will be applicable from 1 April in a **three to five year cycle**.
2. As far as unutilised **accumulated ash (legacy ash)** is concerned, the ministry has given a window of 10 years to power plants for progressively utilizing it.
3. **Under new rules**, notified by the environment ministry, 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.
4. The amount, collected by the **Central Pollution Control Board (CPCB)** from the thermal power plants, will be used towards the safe disposal of the unutilised ash.
5. Though **fly ash utilization in India** has increased from **nearly 10% in 1996-97** to the highest level of 92% in 2020-21, over **17 million tonnes** remained unutilized during last financial year when 179 thermal power plants generated around 222 million tonnes of **fly ash**.
6. The government had issued the **fly ash utilization** order way back in 1999 and subsequently amended it several times.
7. The latest one to achieve the **target of 100% fly ash utilization** was issued after going through the suggestions on its draft, released last year.
8. The ministry has also notified **eco-friendly use of fly ash** such as making of bricks, blocks, tiles, fiber cement sheets, pipes, boards, and panels.

CENTRE GETS 6TH EXTENSION FOR CITIZENSHIP ACT

Ministry of Home Affairs (MHA) has been granted **extension for the sixth time** from the Parliamentary Committees on Subordinate Legislation in the Rajya Sabha and the Lok Sabha to frame the rules for the controversial **Citizenship (Amendment) Act (CAA), 2019**.

What

1. The **Citizenship Amendment Act** was passed by Parliament on 11 December 2019, and the Presidential approval came the next day.
2. In January, 2020, the Ministry notified that the Act will **come into force from 10 January 2020** but it later requested from the Parliamentary Committees in the Rajya Sabha and the Lok Sabha to give it some more time to implement rules as the country was going through its **worst ever health crisis** due to Covid-19 pandemic.
3. Earlier, the MHA had sought time from both the Parliamentary Committees for similar extensions **five times**. The latest six month extension sought by the MHA ended on 9 January 2022.
4. The legislation, which **grants citizenship to illegal immigrants** belonging to Hindu, Jain, Sikh, Parsi, Christian and Buddhist communities from **Pakistan, Bangladesh and Afghanistan**, was passed by Parliament.
5. The **objective of the CAA** is to **grant Indian citizenship to persecuted minorities** like Hindus, Sikhs, Jains, Buddhists, Parsis and Christians from Pakistan, Bangladesh and Afghanistan who had come to India till 31 December
6. They will not be treated as **illegal immigrants** and given Indian citizenship.

SUPREME COURT ALLOWS OBC AND EWS IN NEET

The **Supreme Court** on 7 January 2022, in an **interim order**, has announced that it will allow NEET-PG Counselling for 2021-2022 based on **existing EWS, OBC reservation**. The Supreme Court said that it will allow **27% reservation for Other Backward Class (OBC)** and **10% for Economically Weaker Section (EWS) category** in the **All-India Quota (AIQ) seats** for admission in the NEET for all medical seats as existing criteria this year.

What

1. The **apex court** has listed petitions challenging **₹8 lakh income criteria for EWS** on 5 March for final adjudication.
2. **EWS criteria for academic year 2021-22** for NEET-PG will be as notified, and for future it will be subject to final adjudication.
3. The bench said that **detailed reasons for the interim order** will follow and the counselling for the **NEET-PG** for the **academic year 2021-22** will proceed as per the criteria already notified.
4. The bench said that **validity of criteria of ₹8 lakh for determination of EWS** for future years will be subject to final adjudication of the batch of petitions and listed the pleas for final hearing on 5 March.
5. Justifying the application of **₹8 lakh income criteria for the EWS category**, Govt. said the decision was arrived at after due deliberation by the **Ministry of Social Justice and Empowerment**.

Flashback

1. The **10% reservation** was introduced through the **103rd Constitution Amendment** and enforced in **January 2019**.
2. It added **Clause (6) to Article 15** to empower the Government to introduce special provisions for the **EWS among citizens** except those in the classes that already enjoy reservation.
3. It allows reservation in **educational institutions, both public and private**, whether aided or unaided, excluding those run by minority institutions, up to a **maximum of 10%**.
4. It also added **Clause (6) to Article 16** to facilitate reservation in employment. The new clauses make it clear that the **EWS reservation will be in addition to the existing reservation**.

INDIA'S FIRST CTM PLANT INAUGURATED

Union Ministry for Heavy Industries on 15 January 2022 dedicated **India's first BHEL-built 'coal to methanol' (CTM)** pilot plant to the nation in Hyderabad, as part of the ongoing '**Azadi Ka Amrit Mahotsav**' celebrations. The government has already highlighted the **importance of the manufacturing sector** through schemes like **Make in India** and **Aatmanirbhar Bharat**.

What

1. The **capital goods industry** is the **backbone of the manufacturing sector** as it provides **critical inputs** such as machinery and equipment to a broad set of user-industries.
2. The **0.25 TPD (tonnes per day) capacity CTM** pilot plants that has been indigenously designed, developed and installed by BHEL is currently producing **methanol with purity of more than 99 per cent** from **high-ash Indian coal**.
3. Significantly, this conversion of **high-ash Indian coal to methanol** through the **gasification route** is the **first-of-its-kind** technology demonstration in India.
4. **Methanol** is a **clear liquid chemical** used in thousands of everyday products, including plastics, paints, cosmetics, and fuels.
5. **Methanol** is also an **energy resource** used in the marine, automotive, and electricity sectors and an **emerging renewable energy resource**.

INTERNATIONAL

1ST JOINT STATEMENT ON NUKE WAR, ARMS RACE

The **permanent member nations** of the **United States Security Council** has called for the further **prevention of nuclear weapons stressing** that a nuclear war will have far-reaching consequences, cannot be won, and must never be fought. **China, France, Russia**, the UK and the **US** consider the avoidance of war between the **Nuclear-Weapon States** and the **reduction of strategic risks** as our foremost responsibilities, the permanent five-member nations said in a joint statement.

What they said

1. They affirm that a **nuclear war** cannot be won and must never be fought. As nuclear use would have **far-reaching consequences**.
2. The **nuclear weapons**--for as long as they continue to exist--should serve defensive purposes, **deter aggression**, and prevent war. We believe strongly that the further spread of such weapons must be prevented.
3. They committed to our **Nuclear Non-Proliferation Treaty (NPT) obligations**, including our **Article VI obligation "to pursue negotiations in good faith** on effective measures relating to cessation of the nuclear arms race at an early date and

Flashback

1. The **NPT** is a **landmark international treaty** whose objective is to prevent the spread of **nuclear weapons and weapons technology**, to promote cooperation in the peaceful uses of nuclear energy and to further the goal of achieving nuclear disarmament and general and complete disarmament.
2. The Treaty represents the only binding commitment in a **multilateral treaty** to the goal of disarmament by the nuclear-weapon States.
3. **Opened for signature in 1968**, the Treaty entered into force in 1970. On 11 May 1995, the Treaty was extended indefinitely.
4. A total of **191 States have joined the Treaty**, including the five nuclear-weapon States.

to nuclear disarmament, and on a treaty on general and **complete disarmament** under strict and effective international control.

4. The **permanent nations** underlined the desire to work with all states to create a security environment more conducive to progress on **disarmament** with the ultimate goal of a world without nuclear weapons with **undiminished security for all**.
5. Nations intended to continue seeking **bilateral and multilateral** diplomatic approaches to **avoid military confrontations, strengthen stability and predictability**, increase mutual understanding and confidence, and prevent an arms race that would benefit none and endanger all.

INDIA APPEALS AGAINST WTO DISPUTE PANEL

India has **appealed against** a ruling of the **World Trade Organization's (WTO)** trade dispute settlement panel which ruled that the **country's domestic support** measures for **sugar and sugarcane** are inconsistent with global trade norms. The appeal was filed by India in the **WTO's Appellate Body**, which is the final authority on such trade disputes.

What

1. **India** has stated that the **WTO's dispute panel ruling** has made certain "**erroneous**" findings about domestic schemes to support sugarcane producers and exports and the findings of the panel are completely "**unacceptable**" to it.
2. The panel in its ruling on 14 December 2021 recommended **India to withdraw its alleged prohibited subsidies** under the **Production Assistance, the Buffer Stock, and the Marketing and Transportation Schemes** within 120 days from the adoption of this report.
3. Ruling in **favour of Brazil, Australia and Guatemala** in their trade dispute against India over **New Delhi's sugar subsidies**, the WTO panel has stated that the support measures are inconsistent with WTO trade rules.
4. India said that the **dispute panel's findings** are **unreasonable** and not supported by the **WTO rules** and also evaded key issues which it was **obliged to determine**.
5. The panel's findings on **alleged export subsidies** undermine logic and rationale. India has appealed in the appellate body of the WTO against the panel's ruling.

Flashback

1. **In 2019, Brazil, Australia and Guatemala** dragged India into the **WTO's dispute settlement mechanism** alleging that New Delhi's domestic support measures to producers of sugarcane and sugar and export subsidies are inconsistent with global trade rules including various provisions of the **WTO's Agreement on Agriculture, Agreement on Subsidies and Countervailing Measures**, and the **General Agreement on Trade and Tariffs (GATT)**.
2. **Brazil is the largest producer and exporter of sugar** in the world. India is the **world's second largest sugar producer** after Brazil.
3. They had also flagged India's alleged **export subsidies**, subsidies under the production assistance and buffer stock schemes, and the marketing and transportation scheme.

TAPI PIPELINE INCOMPLETION

Political turmoil Afghanistan has compounded the completion of **Turkmenistan-Afghanistan-Pakistan-India Pipeline**, also known as **Trans-Afghanistan pipeline** incompleteness for three decades. The **major gas pipeline project** is known as **TAPI for Turkmenistan-Afghanistan-Pakistan-India**--has yet to be completed despite being "in progress" for the past three decades.

What

1. Earlier, the leaders of **Afghanistan, Pakistan, Turkmenistan, and India** in 2010, 2015 and 2018 discussed **TAPI**.
2. The **latest meeting over TAPI** was held in **2018**, in which several other projects including electric power facilities, a railway, and fiber optics were inaugurated.
3. **TAPI** was expected to be **inaugurated in 2020** but the construction of the project has remained unfinished so far despite the promises of funding by the **Asian Development Bank**.
4. The **TAPI project**, which has an estimated price tag of **USD 10 billion in 2018** endeavours to bring **33 billion cubic meters of Turkmen gas** to energy-starved South Asia for 30 years via a 1,800-kilometer pipeline that will stretch across Afghanistan.
5. After Turkmenistan was separated from the **Soviet Union** in December 1991, it sought to develop economic projects and transfer its most valuable resource to **South Asian nations** such as Pakistan and India through Afghanistan as originally envisaged under the **TAPI project**.

INDIA-UK FTA ANNOUNCED

The **UK government** on 13 January 2022 announced the launch of **free trade agreement (FTA) negotiations** with **India**, describing it as a "golden opportunity" to put British businesses at the "front of the queue" of the Indian economy.

What

1. British said an FTA would take the **country's historic partnership with India** to the next level, and highlighted Scotch whisky, financial services and **cutting-edge renewable technology** among some of the key sectors set to benefit.
2. An **India-UK FTA** is billed in the UK as creating huge benefits for both countries, with the potential to boost bilateral trade by up to **GBP 28 billion a year by 2035** and increase wages by up to GBP 3 billion across the UK.
3. The **Department for International Trade (DIT)** has said the UK wants an agreement that slashes barriers to doing business and trading with India's GBP 2 trillion economy and market of 1.4 billion consumers, including cutting tariffs on exports of British-made cars and Scotch whisky.
4. The **Indian government's plans** to install **175 GW of renewable energy capacity** by 2022 are also seen as a major opportunity for the **UK's renewables industry**, which hopes to benefit from a deal that slashes barriers such as import tariffs as high as **15 per cent on wind turbine parts**.
5. The UK is pitching the **India FTA as a major move** since its exit from the European Union (EU), in support of free and fair trade in the Indo-Pacific.
6. The launch of similar negotiations with **Canada, Mexico** and **the Gulf** are in the pipeline, besides membership of the GBP 8.4 trillion **Comprehensive and Progressive Agreement for Trans-Pacific Partnership trade bloc**.

SEA DRAGON 22 EXERCISE

India is among the **six Indo-Pacific nations** participating in a multi-lateral **anti-submarine warfare exercise** in the **Pacific Ocean**. The US Navy's seventh fleet said in a statement on 6 January 2022 that the **Sea Dragon 22 exercise** began on 5 January along with the navies of **India, Australia, Canada, Japan** and **South Korea**.

What

1. **India, Japan, Australia and America** are also part of the **Quad**, and also participate in the **Malabar exercise**.
2. **Sea Dragon 22**, “primarily centering on **anti-submarine warfare** training and excellence, culminates in over 270 hours of in-flight training, ranging from tracking simulated targets to the final problem of tracking a live **US Navy submarine**.”
3. Each event will be graded and the nation scoring the highest total points will receive the **coveted Dragon Belt award**, which the **Royal Canadian Air Force** won last year.
4. The “continued growth and increasing complexity of this exercise affords an opportunity to practice **ASW tactics**, techniques, and procedures with allies and partners that we don’t often get a chance to work with.

ECONOMY

FRAMEWORK ON OFFLINE DIGITAL PAYMENTS

The **Reserve Bank of India** on 3 January 2022 released **framework** to enable **small value digital payments** in **offline mode** using cards, wallets and mobile device. As per the new rules payment system operators, will be able to allow offline payments in **face to face mode only**.

As per the rules

1. **Such payments** that will happen **without the use of internet** or the **telecom network** will be capped at **Rs 200 per transaction** and will be offered without additional factor authentication.
2. A **pilot testing** for initiating offline payments was carried out by some institutions from September 2020 to July 2021.
3. Last year in October, the RBI announced that a framework for carrying out **small value digital payments** in offline mode across the country would be introduced.
4. The **upper limit** of an offline payment transaction **will be Rs 200**. The **total limit for offline transactions** on a payment instrument will be **Rs 2,000** at any point in time.
5. The regulator also stated that **payment instruments** will be enabled for offline transactions based on **explicit consent of the customer**.
6. The RBI also said that the acquirer will incur **all liabilities** arising out of technical or transaction security issues at merchant’s end.

AIRTEL PAYMENTS BANK RECEIVES SCHEDULED BANK STATUS

Airtel Payments Bank on 5 January 2022 said it has been **categorised** as a **scheduled bank** by the **Reserve Bank of India (RBI)**. With this, **Airtel Payments Bank** can now pitch for government-issued **Requests for Proposals (RFPs)** and primary auctions and undertake both central and state government business, besides participating in government-operated welfare schemes.

What

1. **Airtel Payments Bank** is among the fastest-growing digital banks in the country, with a base of **115 million users**.
2. The Reserve Bank of India (RBI) announced the **inclusion of Airtel Payments Bank** in the **second schedule** of the Reserve Bank of India Act, 1934.

3. The central bank also said that **SBI, ICICI and HDFC banks** will continue to be identified as **Domestic Systemically Important Banks (D-SIBs)**, under the same bucketing structure as in the 2020 list of D-SIBs.
4. The additional Common Equity Tier 1 (CET1) requirement for D-SIBs was phased-in from 1 April 2016 and became fully effective from 1 April 2019.
5. The RBI had issued the Framework for dealing with D-SIBs on 22 July 2014. The **D-SIB framework** requires the central bank to disclose the names of banks designated as D-SIBs starting from 2015 and place these banks in **appropriate buckets** depending upon their **Systemic Importance Scores (SISs)**.

WORLD BANK RETAINS INDIA'S GROWTH OUTLOOK

The **World Bank** on 11 January 2022 retained **India's economic growth forecast at 8.3 per cent** for fiscal year 2021-22. The World Bank has **kept India's growth estimate unchanged** since June 2021 outlook as the recovery is yet to become broad-based.

What

1. In its **Global Economic Prospects**, World Bank said that the economic damage caused by second Covid wave has already been unwound with output back to pre-Covid time after relaxation of restrictions.
2. World Bank's projection of **8.3 per cent** is lower than the government's first advance estimates of gross domestic product (GDP) of **9.2 per cent** released last week and **9.5 per cent projected** by the **Reserve Bank of India (RBI)**.
3. The economy should benefit from the resumption of **contact-intensive services**, and ongoing but narrowing monetary and **fiscal policy support**.
4. However, sectors particularly sensitive to the pandemic, like **trade and hospitality** has lingered and remains below pre-pandemic levels.
5. The **growth outlook** will also be supported by **ongoing structural reforms**, a better than-expected financial sector recovery, and measures to resolve financial sector challenges despite ongoing risks.

The Global Risks Report 2022 said India may face the following five risks:

1. **Fracture of interstate relations**
2. **Debt crisis**
3. **Widespread youth disillusionment**
4. **Failure of technology governance**
5. **Digital inequality**

SCIENCE AND TECHNOLOGY

BRAHMOS MISSILE AND MPATGM TEST FIRED

India on 11 January 2022 successfully test-fired the **sea-to-sea variant** of the **BrahMos supersonic cruise missile** from a navy warship off its western coast. The missile was launched from the Indian Navy destroyer **INS Vishakhapatnam** off the western coast. Defence Minister Rajnath Singh said that the successful launch of the **advanced version of the BrahMos missile** from the **INS Vishakhapatnam** had **"reconfirmed the robustness of the mission readiness"** of the Indian Navy.

What

1. The **Defence Research and Development Organisation (DRDO)** stated that the missile hit the designated target ship precisely during the test.

2. The **BrahMos** is a **Joint Venture** between **India and Russia** for the development, production and marketing of the **supersonic cruise missile**.
3. The **air version of the missile** was successfully test-fired from the supersonic fighter aircraft **Sukhoi 30 MK-I** on 8 December 2021.
4. The **surface-to-surface supersonic cruise missile** featuring indigenous booster and airframe Section along with many other 'Made in India' sub-systems was successfully flight tested for designated range on 30 September 2020.

About MPATGM

1. The DRDO on 11 January 2022 also successfully flight tested the final deliverable configuration of the **Man-Portable Anti-Tank Guided Missile (MPATGM)**.
2. The indigenously developed anti-tank missile is a low weight, "**fire and forget**" missile and is launched from a man-portable launcher, integrated with thermal sight.
3. The **test of the MPATGM** was to prove the consistent performance for the minimum range and all the mission objectives were met.
4. The missile has a **miniaturised infrared imaging seeker** and advanced avionics for onboard control and guidance. The missile performance has been proven for the maximum range in **earlier test trials**.

TEST OF CRYOGENIC ENGINE FOR GAGANYAAN

The **Indian Space Research Organisation (ISRO)** on 12 January 2022 successfully conducted the qualification test of **Cryogenic Engine** for **Gaganyaan programme** for duration of 720 seconds at ISRO Propulsion Complex (IPRC) in Tamil Nadu's Mahendragiri.

What

1. The **performance of the engine** met the test objectives and the engine parameters were closely matching with the predictions during the entire duration of the test.
2. This successful long-duration test is a major milestone for the **Human Space Programme – Gaganyaan**.
3. It ensures the **reliability and robustness of the cryogenic engine** for induction into the **human-rated launch vehicle** for Gaganyaan.
4. India's maiden human space mission "**Gaganyaan**" will be **launched in 2023**, the central government had said last year.
5. With this launch, **India will become the fourth nation** in the world to launch a Human Spaceflight Mission after **USA, Russia and China**.
6. The major missions viz., **Test vehicle flight** for the validation of **Crew Escape System performance** and the **1st Uncrewed mission of Gaganyaan (G1)** are scheduled during the beginning of **second half of 2022**.
7. This will be followed by the **second uncrewed mission** at the **end of 2022** carrying "**Vyommitra**" a **spacefaring human-robot** developed by ISRO and finally the **first crewed Gaganyaan mission in 2023**.

Flashback

1. The Prime Minister Independence Day address in 2018, wherein he said that an **Indian astronaut**, be it **a man or a woman**, will go on a **space odyssey by 2022** onboard 'Gaganyaan'.
2. The objective of the **Gaganyaan programme** is to **demonstrate the capability** to send humans to **low earth orbit (LEO)** onboard on Indian Launch Vehicle and bring them back to earth safely.
3. **More than 500 Industries** are involved in the **launch of Gaganyaan** with several research modules including the **indigenous health research module**.

2ND PHASE OF GREEN ENERGY CORRIDOR

The government on 6 January 2022 approved the **second phase** of the **Green Energy Corridor** with an outlay of Rs 12,031 crore to **facilitate grid integration** and power evacuation of **about 20 GW of renewable energy projects** in seven states. The Cabinet Committee on Economic Affairs approved the scheme on **Green Energy Corridor (GEC) Phase-II for Intra-State Transmission System (InSTS)** for addition of approximately 10,750 circuit kilometres (ckm) of transmission lines and approx.

What

1. The scheme will **facilitate grid integration** and power evacuation of about **20 GW of renewable energy (RE) projects** in seven states -- **Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu** and Uttar Pradesh.
2. The **second phase** will be implemented **during 2021-22 to 2025-26 fiscal years**.
3. The scheme (Phase-II) is targeted to be set up with total estimated cost of Rs 12,031.33 crore. The **Central Financial Assistance (CFA)** will be **33 per cent** of the project cost that is Rs 3,970.34 crore.
4. The **CFA** will help in **offsetting the intra-state transmission charges** and keep the power costs down. Thus, the government support will ultimately benefit the end users.
5. The scheme will help in achieving the target of **450 GW** installed RE capacity by 2030.
6. It will also contribute to **long-term energy security of the country** and promote ecologically sustainable growth by reducing the carbon footprint.
7. This scheme is in addition to **GEC Phase-I** which is already under implementation in **Andhra Pradesh, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan** and Tamil Nadu for grid integration and power evacuation of about **24 GW of RE**.
8. **GEC** is an **alternative transmission system** for renewable energy (RE) power projects.
9. During the first phase of GEC, **inter-state transmission projects** were constructed by state-owned **Power Grid Corporation of India (PGCIL)** and some projects were awarded to private players through competitive bidding.

FIRST EVER POTENTIAL CLIMATE CHANGE HOTSPOTS MAPPED

The **India State of Forest Report (ISFR)** has for the **first time** mapped **climate change hotspots** in the country in **three future time period** scenarios of **2030, 2050 and 2085**. It observed that **Ladakh, Jammu & Kashmir, Himachal Pradesh** and **Uttarakhand** are projected to witness the highest temperature increase whereas **Andaman & Nicobar Islands, West Bengal, Goa, Tamil Nadu** and **Andhra Pradesh** may face least temperature rise over these short, medium and long time periods.

What

1. The report on the hotspots also shows that **northeastern states** and **Upper Malabar Coast** are projected to experience the **highest increase in rainfall** whereas part of the northeastern states like **Arunachal Pradesh** and **Sikkim** and **north-west parts** of the country such as **Ladakh, J&K and Himachal Pradesh** are projected to experience “**least increase and sometimes even decline**” in rainfall.
2. **Mapping of the climate change hotspots** over the forest areas of the country was done by the **Forest Survey of India** in collaboration with the **Birla Institute of Technology & Science (BITS)** Pilani (Goa campus).
3. The collaborative study was carried out with **objective to map climatic hotspots** over forest cover in India, using **computer model-based projection of temperature** and rainfall data for the three future time periods.

4. The data for this purpose was obtained from the **India Meteorological Department (IMD)**.
5. Idea behind the mapping was to ascertain the **impact of climate change on forests, species composition and related biodiversity**.
6. It will help policymakers take suitable **mitigation and adaptation measures** to protect the forest areas and biodiversity.

1ST WEATHER HAZARD AND VULNERABILITY ATLAS

India has got its **first climate vulnerability atlas**, based on **14 extreme weather events** and the risks they pose to the local population, livelihoods and economy of each district. It was launched by the Ministry of Earth Sciences (MoES), on 14 January 2022 on the **147th Foundation Day of IMD**.

What

1. The **Climate Hazards and Vulnerability Atlas of India**, developed by the scientists at **Climate Research and Services (CRS)** office of the **India Meteorological Department (IMD)**, Pune.
2. The **atlas** features **extreme rainfall, drought, coldwave, heatwave, dust storms, hail storm, thunderstorm, cyclones, snowfall, lightning, winds and fog**.
3. The **hazards and vulnerability values** have been calculated utilising the Met department's historical climate data.
4. Each weather phenomenon's **month-wise hazard levels** posed to the respective district has been enlisted in this one-of-its-kind atlas. In all, 640 maps are available in the online atlas.
5. The **atlas provides a range of vulnerability with risks** ranging from **nil, low, moderate, high and very high** categories for every Indian district.

MISCELLANEOUS

NATIONAL STARTUP DAY

16 January would now be celebrated as **National Startup Day**, Prime Minister announced on 15 January 2022. The move was announced **to help the startup culture** spread better across India. PM was interacting with various startups virtually as part of the **Startup India Innovation Week** when he made the announcement.

What PM said

1. The **innovators and entrepreneurs** not to keep their **dreams local**, adding that **hundreds of hackathons** organised by the government in record time had provided many solutions for the country.
2. You would also be feeling that different government departments and ministries are in touch with the **youth and start-ups**, encouraging their new ideas such as **new drone rules** or the **new space policy**.
3. The government's priority is to give as many youth as **possible the opportunity** for innovation.
4. PM said that as against **4,000 patents registered in 2013-14**, last year (2020-21), the comparative figure **was 28,000**. As against **70,000 trademarks registered** in 2013-14, over 2.5 lakh were registered last year.
5. The drive towards **innovation has improved India's ranking** on the **Global Innovation Index** from **81 to 46**.

- The government has set up **various schemes** and **institutional mechanisms** such as **'Start-Up India, Stand-India'** type of programmes and **'Make in India'** which ensure the hand-holding of young innovators.

JOINT VENTURE FOR SATELLITE BROADBAND SERVICE

Bharti Airtel has announced the formation of a **joint venture** with **Hughes Communications India Pvt Ltd (HCIPL)**, an innovator in satellite and networks to offer satellite broadband services in India. Hughes will hold a **67 per cent stake** in the joint venture, while **Airtel will hold a 33 per cent stake**.

What

- The entity will be known as **HCIPL** and will combine the **Very Small Aperture Terminal (VSAT) business** of both companies, allowing them to offer **scalable enterprise networking solutions**.
- VSAT is a two-way ground station** that transmits and receives data from satellites.
- It is used to provide **satellite-based internet** and telecom access to individuals and enterprise customers.
- Airtel and Hughes Communications' agreement** was first announced in May 2019, and the company in a press release said that it has received **all statutory approvals**, including those from the **National Company Law Tribunal (NCLT)** and Department of Telecom (Government of India) and the **joint venture** has been formed.
- Combining the proven capabilities of both Hughes and Airtel, the partnership will bring synergies to the forefront – including **multi-orbit solutions** – for the benefit of customers across the length and breadth of India.
- The JV has a combined base of **over 2 lakh VSATs**, making it the largest satellite service operator in the country.

INDIA'S R-NAUGHT VALUE RECORDED AT 4

India's R-naught value which indicates the **spread of Covid-19** was recorded **at 4** this week, suggesting a **very high infection transmission rate**, according to a preliminary analysis by **IIT Madras** predicting the peak of the third wave from 1 February to 15 February 2022.

What

- R-naught or R0** indicates the number of people an **infected person** can spread the disease to. A pandemic is considered to end if this **value goes below 1**.
- Based on preliminary analysis by **computational modeling done by IIT Madras**, the R0 value was close to **2.9 nationally** in the past week (December 25 to December 31).
- R0 depends on **three things - transmissibility probability, contact rate** and the **expected time interval** in which infection can happen.
- Now, with the increase in **quarantine measures or restrictions**, maybe the contact rate will go down and then in that case R0 can decrease.

NEW VICE PRESIDENT OF AIIB

Former RBI Governor **Urjit Patel** has been appointed as a **Vice President** of the Beijing-based multilateral funding institution **AIIB** on 9 January 2022. **India is a founding member** of the **Asian Infrastructure Investment Bank (AIIB)** with the **second highest voting share** after China. It is headed by former Chinese vice minister for finance **Jin Liqun**.

What

1. **Patel, 58**, will be one of the **five Vice Presidents of the AIIB** with **three-year tenure**.
2. He will succeed outgoing Vice President **D J Pandian**, who is in charge of sovereign and non-sovereign lending of the **AIIB in South Asia**, the **Pacific Islands** and **South-East Asia**.
3. Patel had taken over as the **24th Governor of the Reserve Bank of India (RBI)** succeeding Raghuram Rajan on 5 September 2016.
4. **AIIB began operations in 2016** with **57 founding Members** (37 regional and 20 non-regional).
5. **In 2018**, AIIB was granted **Permanent Observer status** in the deliberations of both the **United Nations General Assembly** and the **Economic and Social Council**, the two development-focused principal organs of the global body.

TWO DRUGS NEWLY RECOMMENDED BY WHO

The **World Health Organization (WHO)** has recommended two drugs, **baricitinib** and **sotrovimab**, for treatment of Covid-19. **Baricitinib**, which is also used to treat **rheumatoid arthritis**, has been “strongly recommended” for patients with severe or critical Covid-19 in combination with corticosteroids. **Sotrovimab**, developed by GlaxoSmithKline with US partner Vir Biotechnology Inc, is an **investigational monoclonal antibody** for use in treating conditions caused by coronavirus.

What

1. **Baricitinib**, an **immunomodulator**, is an **alternative to tocilizumab**: either of these drugs is given to patients who have severe Covid-19, are clinically progressing on steroids and have high inflammatory markers.
2. **Sotrovimab** can be used in mild illness with patients of **Delta and Omicron** at risk of high progression.
3. **Baricitinib** is cheap and widely available in India and is given to control **hyper inflammation**, which usually starts between days 7 and 14.
4. **Sotrovimab is not available in India**. However, experts said that since Omicron now forms the major proportion of infections, the currently available **monoclonal antibodies should be used** only if there is clear proof that the person has been infected with the **Delta variant**.

IMPORTANT CURRENT AFFAIRS OF 16-31 DECEMBER 2021

1. **NITI Aayog's Health Index 2019-20**
2. **PARLIAMENT PASSES NDPS (AMENDMENT) BILL**
3. **BIOLOGICAL DIVERSITY BILL 2021**
4. **RECOMMENDATIONS ON PERSONAL DATA PROTECTION**
5. **INDIA'S FIRST GREEN HYDROGEN MICROGRID PROJECTS**
6. **OECD RELEASES RULES FOR GLOBAL MINIMUM TAX**
7. **INDIA SEMICONDUCTOR MISSION LAUNCHED**
8. **JAMES WEBB SPACE TELESCOPE LAUNCHED**
9. **INDIA'S FIRST RURAL 5G TECHNOLOGY TRIAL STARTS**

INDIA'S COVID-19 ARSENAL INCREASED