

CURRENT AFFAIRS OCTOBER 2021

RIGHT TO BURN FOSSIL FUELS

The **Like-Minded Developing Countries** — a group of developing countries which have a similar stand in the United Nations climate negotiations — has demanded that Developed countries must ensure net-zero emissions by 2030 to provide carbon space to the developing countries to burn fossil fuels like coal for their growth.

Why does India need a 'right to burn' fossil fuels?

- Low share in global emissions: India has neither historically emitted nor currently emits carbon anywhere close to what the global North has, or does, in per capita terms. Thus, it has no reason to commit to declining dependence on coal, at least in the near future.
 - o India's emissions are at relatively low 1.96 tons CO₂ per capita (17.6 tons CO₂ per capita for USA).
- Fulfilment of India's developmental imperatives like eradication of poverty, provision of basic needs for all citizens and access to energy for all, in the context of sustainable development need space for emissions.

CBI VS STATES

Central Government told the Supreme Court that West Bengal government does not have any "absolute" power to keep the Central Bureau of Investigation (CBI) from investigating crimes inside the State.

- Union Government was responding to a suit filed by the West Bengal Government against the Union of India under Article 131 of the Constitution.
 - o **Article 131** deals with original jurisdiction of the Supreme Court, where the apex court deals with any dispute between the Centre and a state; the Centre and a state on the one side and another state on the other side; and two or more states.
- The State has challenged the CBI's jurisdiction to register FIRs and conduct investigations in the State in numerous cases.

o West Bengal said it had withdrawn “general consent” to the CBI in 2018 and CBI’s actions were a direct attack on the federal structure of governance.

- Eight states have currently withdrawn consent to the CBI like Maharashtra, Punjab, Rajasthan, etc.
- This recent clash arises the question on Cooperative Federalism in India and there is need to ensure smooth functioning of federal system in India.
- Apart from CBI issue there are many other clashes between Centre & State like implementation of Centre-run schemes, implementation of GST and the actions taken by central agencies like the Enforcement Directorate and Narcotics Control Bureau etc.



About CBI



FEATURES

- It is the **main investigation agency of the central government** for cases relating to corruption and major criminal probes.
- It is **not a statutory body**.

CBI DIRECTOR

- The Lokpal Act 2013 prescribed that the CBI director shall be appointed on the recommendation of a committee comprising the **Prime Minister, Leader of the Opposition in the Lok Sabha and Chief Justice of India or a judge of the Supreme Court** nominated by him.

INVESTIGATION PROCEDURE

- The Central Government can authorize CBI to investigate such crime in a **State only with the consent of the concerned State Government**.
- The **Supreme Court and High Courts, however, can order CBI to investigate** such a crime anywhere in the country without the consent of the State.

What are the aspects of federalism are affected with respect to CBI vs States tussle?

- Police: Under **VII Schedule**, List II made 'Police' a state subject conferring exclusive domain to the state to make laws regarding the same. However, the **Delhi Special Police Establishment Act 1946** which establishes the CBI continues to function as a central agency carrying out its functions as 'Police'.

- o Sections 5 and 6 of the DSPE Act deal with the extension of powers and jurisdiction of special police establishment to other areas and the requirement of consent of the state governments.

- **General consent for the CBI**

- o Under DPSE Act, CBI must mandatorily obtain the consent of the state government concerned before beginning to investigate a crime in a state.

- o The consent of the state government can be either case-specific or general.

- o A “general consent” is normally given by states to help the CBI in seamless investigation of cases of corruption against central government employees in their states.

- o In the absence of which the CBI would have to apply to the state government in every case, and before taking even small actions.

AMENDMENTS IN FOREST CONSERVATION ACT

Recently, the Ministry of Environment, Forests and Climate Change (MoEFCC) issued a letter and consultation paper that documented proposed changes to the Forest Conservation Act, 1980 (FCA).

About Forest Conservation Act, 1980

- The Forest (Conservation) Act, 1980, came into force to provide for the conservation of forests in India.

- The Act prohibits state and other authorities, except with the prior approval of the Central Government, to give any order directing:

- o de-reservation of forest;
 - o use of forest land for non-forest purpose;
 - o assigning any forest land or its portion by way of lease to any private person or organization;
 - o Clearing of trees which have grown naturally in forested land.
- Any diversion of land for non-forest purpose requires approval under the Act as well as payment of stipulated compensatory levies such as **Net Present Value (NPV)**, **Compensatory Afforestation (CA)**, etc.
 - **Power to make rules:** The Act empowers Central Government to make rules for carrying out the provisions of this Act.
 - **Definition of Non-forest purpose:** It means the breaking up or clearing of any forest land for the cultivation of tea, coffee, spices, medicinal plants, etc. and for any purpose other than reforestation.
 - o Non-forest purposes don't include work relating or ancillary to conservation, development and management of forests and wildlife like establishment of check-posts, fire lines, wireless communications and construction of fencing, etc.
 - **Constitution of Advisory Committee:** The Central Government may constitute a Committee consisting to advise that Government for the grant of approval and any other matter connected with the conservation of forests.
 - **Penalties:** Contravention of any of the provisions of the Act is punishable imprisonment of upto fifteen days.
 - Offences by the Authorities and Government Departments are punishable as well.
 - **Appeal:** Any person aggrieved may file an appeal to the National Green Tribunal.

Proposed Amendment in Forest Conservation Act 1980		
	Need for amendment in the Present Act	Proposed Amendments
Scope of the Act	<ul style="list-style-type: none"> Presently, identification of forest land is subjective and arbitrary to some extent. For instance, it includes lands bearing vegetation irrespective of ownership and classification even if they are considered forest based on some locally defined criteria. 	<ul style="list-style-type: none"> To define 'forests' in an objective manner.
Land Acquired before 1980	<ul style="list-style-type: none"> The unused land with vegetation acquired by various ministries, including Ministry of Road, Railway, Defense etc., before 1980 for construction/expansion purposes are protected under the Act. 	<ul style="list-style-type: none"> Exempt such lands acquired before 25.10.1980 from the purview of the Act.
Differences in land records of forests	<ul style="list-style-type: none"> There are several contrasting entries of the same land in revenue records and in the forest records, such as in case of plantations. This has created a scope of mis-interpretation and litigation. 	<ul style="list-style-type: none"> Revenue records to be statutorily required to reflect the occupier and the nature of land including forest. Lands identified as plantation, afforestation etc. after 12.12.1996 to remain outside the purview of the Act to encourage forestry activities.
Construction alongside road and railways	<ul style="list-style-type: none"> Alongside roads and railway lines, strip plantations have been developed and notified as forests which creates approval issues for construction of amenities and facilities. 	<ul style="list-style-type: none"> Exemption up to 0.05 ha for each such accesses may be allowed to alleviate the hardship of the residents/business owners.
Conservation of Pristine Land	<ul style="list-style-type: none"> There are no prohibitory (only regulatory) provisions in the Act for non-forestry use of pristine forest. 	<ul style="list-style-type: none"> Introducing an enabling provision in the Act to keep certain pristine forests showcasing rich ecological values intact for a specific period.
Development of infrastructure along the international border areas	<ul style="list-style-type: none"> Obtaining approval from central government for projects of national importance is difficult leading to delay in these projects. 	<ul style="list-style-type: none"> Such projects to be exempted from obtaining prior approval of Central Government To allow the states to permit non-forest use of such lands.
Misuse of provisions by mining companies	<ul style="list-style-type: none"> Forest land can be diverted under two provisions- <ul style="list-style-type: none"> 2(ii) For use of forest land for non-forestry purpose by paying only NPV. 2(iii) For assignment of lease which requires detailed examination of the proposal and payment of other compensatory levies such as CA in addition to NPV. However, mining leaseholder misuse provision 2(ii) and get away with paying the NPV money only. 	<ul style="list-style-type: none"> Delete 2(iii) of the Act and clarify that 2 (ii) can be invoked for any kind of lease assignment having an intention of using for non-forestry purpose.

New drilling technologies	<ul style="list-style-type: none"> New environmentally friendly technologies which enables exploration or extraction of oil & natural gas deep beneath without impacting the forest soil or aquifer are coming up. 	<ul style="list-style-type: none"> Such environmentally friendly technologies to be kept outside the purview of Act.
Private land covered under definition of forests	<ul style="list-style-type: none"> Presently, current definition of forest, as updated under the T N Godavarman case, includes private areas which restrict the right of an individual to use his/her own land for any non forestry activity. 	<ul style="list-style-type: none"> Allow owners of such lands for construction of structures and residential unit up to an area of 250 sq mtr as one time relaxation.
Activities related to conservation of forests and wildlife	<ul style="list-style-type: none"> Currently activities like establishment of zoos, safaris, Forest Training infrastructures etc. are not excluded from definition non-forestry purposes. 	<ul style="list-style-type: none"> Such activities to be excluded from "non-forestry activity" as activities which are ancillary to conservation of forests and wildlife.
Imposition of compensatory levies	<ul style="list-style-type: none"> Currently, the compensatory levies are imposed at the time of assignment as well as renewal of lease of land. 	<ul style="list-style-type: none"> Double imposition of any levy should be removed.
Penal Provisions	<ul style="list-style-type: none"> Present penal provisions are not sufficient to deter violation of the act. 	<ul style="list-style-type: none"> Offences to be made cognizable, non-bailable and punishable with imprisonment of upto one year. In case any authority in the State Government or Union territory Administration is involved the compensation shall be deposited in the National CAMPA rather than in State CAMPA.







Definition of Forest: T N Godavarman case

- Till 1996 concerned authorities used to apply the provisions of the Act only to the forests notified under the Indian Forest Act, 1927.
- However, following a Supreme Court judgment in T N Godavarman case, the definition of "forest" was expanded to include:
 - All areas recorded as "forest" in any government (Union and State) record, irrespective of ownership, recognition and classification.
 - All areas that conformed to the "dictionary" meaning of "forest."
 - Areas which are identified as "forest" by an expert committee constituted by the Supreme Court following the 1996 order.
- Thus, forest lands in India include unclassified forests, undemarcated forests, existing or deemed forests, protected forests, reserved forests, sanctuaries and national parks etc.

STUBBLE BURNING

The Air Quality of the NCR region once again became severe due to increased instances of stubble burning and other factors responsible for its air pollution in the month of October/November.

- One of the main reasons behind air pollution, the contribution of stubble burning to Delhi Pollution reached 36% (PM2.5) for 2021, in comparison to 42% in 2020 and 44% in 2019.
- Overall, the Air Quality Index (AQI) of Delhi varied from very poor to severe as compared to the moderate/poor air quality of cities like Mumbai, Ahmedabad, Chennai, Kolkata (on SAFAR-AQI, System of Air Quality and Weather Forecasting and Research.)

AQI	Associated Health Impacts
Good (0-50) 	Minimal Impact.
Satisfactory (51-100) 	May cause minor breathing discomfort to sensitive people.
Moderate (101-200) 	May cause breathing discomfort to the people with lung disease such as asthma and discomfort to people with heart disease, children and older adults.
Poor (201-300) 	May cause breathing discomfort to people on prolonged exposure and discomfort to people with heart disease with short exposure.
Very Poor (301-400) 	May cause respiratory illness to the people on prolonged exposure. Effect may be more pronounced in people with lung and heart diseases.
Severe (401-500) 	May cause respiratory effects even on healthy people and serious health impacts on people with lung/heart diseases. The health impacts may be experienced even during light physical activity.

Initiatives to reduce Stubble Burning

Area	Initiatives
Administrative	<ul style="list-style-type: none"> • National Policy for Management of Crop Residues (2014) for crop residues management, to be adopted by states. • Set up of biomass power projects and mandating the use of biomass with 50% paddy straw as a supplement fuel by coal plants in NCR. • Set up of the CAQM for better coordination and solution to pollution problem in Delhi-NCR and adjoining areas. • Crop diversification and promotion of short duration High Yielding varieties of rice to reduce the use of PUSA-44 variety of paddy (one of the prime crops behind concern over paddy straw burning). • Capacity building and Awareness initiatives on ill effects of Stubble Burning.
Legal	<ul style="list-style-type: none"> • In 2015, the National Green Tribunal (NGT) banned crop residue burning in the states of Rajasthan, Uttar Pradesh, Haryana, and Punjab. • Burning crop residue is made a crime under Section 188 of the IPC (disobedience to order duly promulgated by a public servant) and under the Air and Pollution Control Act of 1981. • Imposition of Penalties/fines on stubble burning by state governments.
Technological Interventions	<ul style="list-style-type: none"> • Use of machines like Happy Seeder, Rotavators, Balers, Paddy Straw Chopper, Reaper Binder etc. to plant new crops or clear the stubble. • Use of Bio-Decomposer technology developed by IARI to dissolve the collected straw and turn it into manure. • Promotion of alternative uses of stubble instead of burning such as its use in cattle feed, compost manure, roofing in rural areas, mushroom cultivation, packing materials, fuel, paper, bio-ethanol and industrial production, etc.
Financial Incentives	<ul style="list-style-type: none"> • Government Subsidy on use of machinery for in-situ management of crop residue. • Bonus/Incentive to farmers who switch to other crops instead of rice by state governments. E.g. Rs 7,000 per acre by Haryana Government under Kheti Khaali, Fir Bhi Khushali.

ANTI-DEFECTION LAW

The Calcutta High Court has given West Bengal Assembly Speaker a deadline to pass an order in the defection case.

What is defection?

Defection may be defined as the practice of floor-crossing by a member of one political outfit to another (also, commonly referred as Horse Trading). For instance, in Lok Sabha, if MPs of Party A join Party B, they are said to have defected and thus will face the prevalent anti-defection proceedings.

EVOLUTION OF ANTI-DEFECTION LAW IN INDIA

Before 1967: India had witnessed only about 500 defections, mostly seen in the States

Between 1967 and 1972: More than half of the state legislators switched sides at least once.

1968: Committee on Defections under the Chairmanship of the then Union Home Minister, Shri Y.B. Chavan was appointed to study the problems of political defections in detail and suggest effective remedial measures.

1973: The government tabled the Constitution (32nd Amendment) Bill to tackle defections, which ultimately lapsed.

1985: Tenth Schedule was knitted into the Constitution along with the anti-defection law by the Constitution (52nd Amendment) Act.

About Anti-defection Law

The **Tenth Schedule** contains the following provisions with respect to the disqualification of members of Parliament and the state legislatures **on the ground of defection**.

- **Disqualification:** A member of a House belonging to any political party **becomes disqualified** for being a member of the House if
 - He **voluntarily gives up his membership** of such political party; or
 - He **votes or abstains from voting in such House contrary to any direction issued** by his political party without obtaining prior permission of such party and such act has not been condoned by the party within 15 days.
- **An independent member** of a House becomes disqualified to remain a member of the House if he joins any political party after such election.
- **A nominated member** of a House becomes disqualified for being a member of the House if he **joins any political party after the expiry of six months** from the date on which he takes his seat in the House.
- **Exceptions:** Legislators may change their party without the risk of disqualification in certain circumstances.
 - The law **allows a party to merge with or into another party** provided that at least two-thirds of its legislators are in favour of the merger.
 - If a person is **elected as the speaker of Lok Sabha or the Chairman of Rajya Sabha** then he could resign from his party, and rejoin the party once he demits that post.
 - It must be noted here that the provision of the Tenth Schedule pertaining to **exemption from disqualification in case of split** by one-third members of legislature party has been deleted by the 91st Amendment Act of 2003.

- **Deciding authority:** Any question regarding disqualification arising out of defection is to be decided by the presiding officer of the House.

- **Rule-making power:** The presiding officer of a House is empowered to make rules to give effect to the provisions of the Tenth Schedule.

MEDICAL TERMINATION OF PREGNANCY

Recently, the Union Government notified the **Medical Termination of Pregnancy (Amendment) Rules, 2021** under section 6 of the **Medical Termination of Pregnancy Act (MTP Act), 1971**.

- The new rules will amend the 2003 rules to define eligibility criteria for termination of pregnancy and other conditions based on the amendments to MTP Act by parliament in March 2021.
- The amendments allow for setting up a Medical Board with increase in limit for termination of pregnancy **up to 24 weeks** against previous upper limit of 20 weeks.

Salient Features of New Rules

- Defines powers and functions of State level Medical Board (set up through latest amendments to MTP Act, 1971 in 2021) such as:
 - o Examine the woman and her reports, when approached for medical termination of pregnancy,
 - o Allow or deny termination of pregnancy beyond 24 weeks of gestation period, ensuring safety of procedure for women and identify substantial risk to life or lifelong physical and mental handicaps foetal malformation within fixed timeframe,
 - o Co-opt other specialists in the Board and ask for any additional investigations if required, to decide termination of pregnancy.
- Identifies categories of women eligible for termination of pregnancy up to 24 weeks as:
 - o survivors of sexual assault or rape or incest; minors;
 - o change of marital status during the ongoing pregnancy (widowhood and divorce);
 - o women with physical disabilities (as per the 2016 Act criteria);
 - o mentally ill women including mental retardation;
 - o foetal malformation carrying substantial risk of life or of physical and mental abnormalities for serious handicap; and
 - o women with pregnancy in humanitarian settings or disaster or emergency situations as may be declared by the Government.
- Specifies Eligibility criteria of Registered Medical Practitioner to conduct termination of pregnancy up to 9 weeks, 12 weeks, 12-20 weeks etc.

FURLOUGH NOT PRISONER'S RIGHT, SAYS SUPREME COURT (SC)

- Reversing a Gujarat High Court order granting relief to a convict, SC discussed differences between 'furlough' and 'parole' and the principles relating to grant of them.
 - o Furlough and parole (covered under The Prisons Act of 1894) envisage a short-term temporary release from custody. Both were introduced with a view to humanising the prison system.
 - o While parole is granted to the prisoner to meet a specific exigency, furlough may be granted (after a stipulated number of years have been served) without any reason.
 - o Period of furlough granted to a prisoner is treated as remission of his sentence. Whereas parole is a system of releasing a prisoner with suspension of the sentence.
- SC stated that although furlough can be claimed without a reason, prisoner does not have an absolute legal right to claim furlough.
 - o Grant of furlough must be balanced against the public interest and can be refused to certain categories of prisoners.
 - o Prisoners convicted of multiple murders or under the anti-terror Unlawful Activities Prevention Act (UAPA) are not eligible for parole.
- Prisons Act of each state government (Prison is a state subject) defines the rules under which parole is granted in that state.

UNITED NATIONS HUMAN RIGHTS COUNCIL (UNHRC)

- India was re-elected to the United Nations Human Rights Council (UNHRC) for the 2022-24 term.
 - o India's current term was set to end on December 31 2021.
- The UNHRC consists of 47 Member States elected directly and individually by secret ballot by the majority of the members of the General Assembly.

o The members of the Council shall serve for a period of three years and shall not be eligible for immediate re-election after two consecutive terms.

POLICING POWER TO CENTRAL ARMED POLICE FORCES (CAPFS)

Recently, Ministry of Home Affairs (MHA)'s notification set the jurisdiction of the Border Security Force (BSF) at a uniform limit of 50 Km in almost all the states that share borders with Pakistan, Bangladesh and Myanmar.

- Existing provisions kept the BSF's operational area at 50 Km in Manipur, Mizoram, Tripura, Nagaland and Meghalaya, but limited only to 15 Km in West Bengal, Punjab and Assam.
- Similarly, in Gujarat where the existing jurisdiction was 80 Km, will now be reduced to 50 Km.

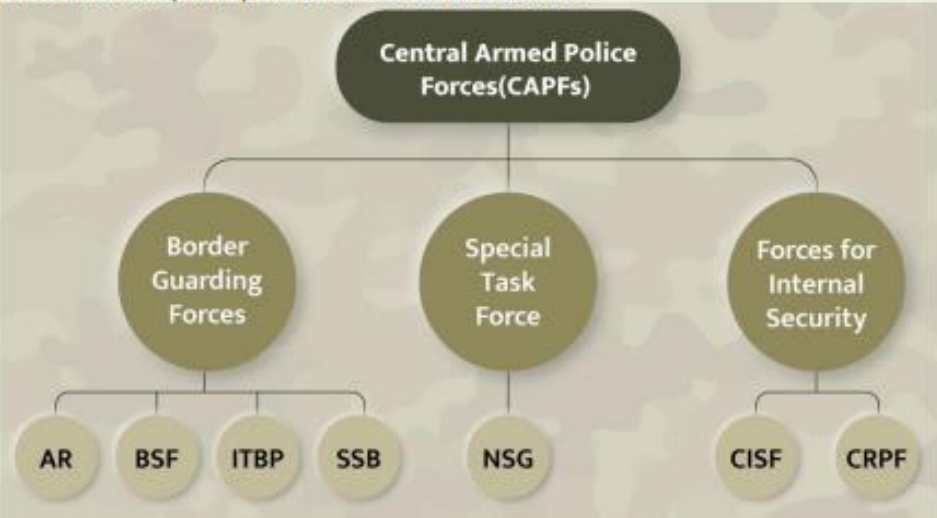


- Notification will enable the BSF to search, seize and arrest to prevent offences that fall under a variety of acts including the Criminal Procedure Code (CrPC), Passport (Entry into India) Act, 1920 and the Passport Act, 1967.

o However, jurisdiction has not been increased under the Arms Act, Customs Act and Narcotics Drugs and Psychotropic Substances Act.

- The notification, however, does not give the BSF the power to investigate crimes. Suspects and accused persons will still have to be handed over to the local authorities.

About Central Armed Police Forces (CAPFs)
 India has seven Central-level Armed Police Forces under the Ministry of Home Affairs (MHA) that constitute the CAPFs.



The AR are deployed in the North Eastern region to tackle insurgency and guard the India-Myanmar border; the BSF is deployed on the India-Bangladesh and India-Pakistan borders; the ITBP is deployed on the India-China border; and the SSB is deployed on the India-Nepal and India-Bhutan borders.

- Out of these seven CAPFs, four CAPFs namely Assam Rifles (AR), Border Security Force (BSF), Indo-Tibetan Border Police (ITBP) and Sashastra Seema Bal (SSB) are the Border Guarding Forces (BGFs).
- **Central Industrial Security Force (CISF):** To provide security and consultancy to the Public Sector and Private Sector under takings and also to provide security to the VIPs.
- **Central Reserve Police Force (CRPF)** came into existence as the Crown Representative's Police in 1939 at Neemuch (MP) to assist the princely States in maintenance of law & order.
 - o The mission of the CRPF is to be enable the government to maintain rule of law, public order and internal security effectively.
- **National Security Guard (NSG)** was conceptualized and created after studying and analyzing Special Force like SAS in the United Kingdom, GIGN in France.
 - o NSG Commandos are trained in high risk tasks like counter hijacking and counter-terrorist operations.

KALAMKARI PAINTINGS

Karuppur kalamkari paintings from Tamil Nadu recently received the geographical indication (GI) tag.

- Tamil Nadu, kalamkari paintings are done on pure cotton cloth, predominantly used in temples for umbrella covers, cylindrical hangings, chariot covers and asmanagiri (false ceiling cloth pieces)

About Kalamkari Painting

- It is a type of hand-painted or blockprinted cotton textile produced in parts of India for hanging on walls.
- Kalamkari literally means, Kalam - pen & kari - work, i.e., art work done using a pen.
- It is done on cotton or silk fabric with a tamarind pen using natural dyes.

About GI Tag

- It is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- A geographical indication right enables those who have the right to use the indication to prevent its use by a third party whose product does not conform to the applicable standards.
- Under Paris Convention for the Protection of Industrial Property, GIs are covered as an element of Intellectual property Rights.
- They are also covered under **Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement**.
- India, as a member of the World Trade Organization (WTO), enacted the **Geographical Indications of Goods (Registration & Protection) Act, 1999**.
- Tag is valid for 10 years only and it can be renewed from time to time for a period of 10 years each.

ABHYAS

- ABHYAS- High-speed Expendable Aerial Target (HEAT) was successfully flight-tested by DRDO from Integrated Test Range (ITR), Chandipur off the coast of Bay of Bengal in Odisha.
- Designed and developed by DRDO's Aeronautical Development Establishment (ADE), Bengaluru for autonomous flying.
 - o It is a drone that will be used as a target for various missile systems.

MILITARY EXERCISES IN NEWS

- **JIMEX:** The 5th edition of the bilateral maritime exercise JIMEX, between Japan and India, was conducted in the Arabian Sea recently.
- **Exercise AJEYA Warrior:** It is India - UK Joint Company Level Military Training exercise.
- **MITRA SHAKTI:** It is a joint military exercise between the Indian Army and the Sri Lankan Army.
- **EX YUDH ABHYAS:** It is an India – US joint training exercise.
- **Cambrian Patrol Exercise:** Organised by UK Army, is sometimes referred as the Olympics of Military Patrolling.
 - o Recently, an Indian Army team was awarded gold medal in this exercise.
- **Konkan Shakti:** It is an India-UK joint military exercise.

INFRASTRUCTURE FOR RESILIENT ISLAND STATES (IRIS)

- India, along with Australia, UK and **Small Island Developing States (SIDS)** will be launching a new grouping of IRIS on the sidelines of the upcoming **Conference of Parties (CoP26)**.
 - o It is aimed at creating a coalition for putting in place infrastructure that can withstand natural disasters and lessen economic losses in island nations.

- SIDS, comprising countries in the Caribbean, Pacific, Atlantic, Indian Ocean, Mediterranean and South China Sea regions, are among the most vulnerable to geophysical and hydro-meteorological hazards.

- o SIDS accounts for two-thirds of the countries that suffer the highest relative losses due to disasters

NIHANGS

- Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits.
- The order can be traced back to the creation of the Khalsa by Guru Gobind Singh (10th Sikh Guru) in 1699.
- The term 'Nihang' signifies the characteristic qualities of the clan — their freedom from fear of danger or death, readiness for action and non-attachment to worldly possessions.
- Nihangs had a major role in defending the Sikh panth after the fall of the first Sikh rule (1710-15), and during the onslaught of Afghan invader Ahmed Shah Durrani (1748-67).
- Gatka (martial arts in Punjab) is performed by Nihangs.

NASA'S LUCY MISSION LAUNCHED

- The solar powered mission is NASA's first mission to study Jupiter's Trojan asteroids to gain new insights into the solar system's formation 4.5 billion years ago.
 - o Trojans orbit the Sun in two loose groups, with one group leading ahead of Jupiter in its path, the other trailing behind.
- Asteroids can be divided into following categories
 - o Those found in the main asteroid belt, between Mars and Jupiter.
 - o Trojans asteroids that share an orbit with a larger planet.
 - o Near-Earth Asteroids, which has orbits that pass close to the Earth.

ICMR'S DRONE RESPONSE AND OUTREACH IN NORTHEAST (I-DRONE)

- It is a delivery model, launched by Ministry of Health and Family Welfare, to facilitate vaccine delivery to hard-to-reach terrains of India.
- i-Drone will overcome these challenges by deploying Unmanned Aerial vehicles (UAV)/drones to remote areas.
 - o Currently, the project has been granted permission for implementation in Manipur and Nagaland, as well as Andaman and Nicobar Islands.
- Recently, i-Drone used a made-in-India drone to facilitate COVID-19 vaccine delivery to tough and hard-to-reach terrains of the Northeast region.

WORLD HEALTH ORGANIZATION RECOMMENDS WORLD'S FIRST ANTIMALARIAL VACCINE

- WHO recommended widespread use of RTS,S/AS01 (RTS,S) or Mosquirix malaria vaccine among children in sub-Saharan Africa and in other regions with moderate to high Plasmodium falciparum malaria transmission.
 - o More than 2,60,000 African children under the age of five die from malaria annually.
- Malaria is caused by parasites that are transmitted to people through bites of infected female Anopheles mosquitoes. There are 5 parasite species that cause malaria in humans.
 - o 2 of these species – Plasmodium falciparum and Plasmodium vivax – pose the greatest threat.
- According to World Malaria Report 2020 (by WHO), India recorded largest reduction in cases in South-East Asia (SEA) from 20 million in 2000 to about 5.6 million in 2019.
 - o India, however, still accounted for 88% of malaria cases and 86% of malaria deaths in SEA in 2019.
 - o A WHO report also mentioned high Anti Malaria drug resistance in Tripura, Arunachal Pradesh and Mizoram.
- Initiatives taken in India

o Adopted 'National Framework for Malaria Elimination in India 2016–2030' outlining strategy for elimination of malaria by 2030.

o National Strategic Plan for malaria elimination 2017-22

100% FDI IN TELECOM SECTOR VIA AUTOMATIC ROUTE

• Recently, government raised foreign direct investment (FDI) limit in telecom sector through the automatic route to 100% from 49% earlier.

o Move is aimed at promoting ease of doing business in India.

• However, all foreign investments from countries with which India shares land borders or where the beneficial owner of an investment into India is situated, can invest only under government route.

WHO'S "SOLIDARITY" CLINICAL TRIAL FOR COVID-19

• India will roll out the next phase of World Health Organization's Solidarity trial - Solidarity PLUS - which aims to assess the effectiveness of new drugs in treating hospitalised Covid-19 patients.

o India is among the 52 countries taking part in WHO's Solidarity PLUS trial.

o In 2020 WHO initiated the Solidarity trial.

• India trial will study two drugs - Imatinib and Infliximab.

o Imatinib is used for treating certain cancers while infliximab is used for diseases of the immune system, including Crohn's disease and rheumatoid arthritis.

NOTIFICATION OF MASS EMISSION STANDARDS FOR E12 AND E15 FUELS

• The mass emission standards for **E 12 (12% Ethanol with Gasoline)** and **E15 (15% Ethanol with gasoline)** fuels are notified under the Central Motor Vehicles (Twenty Fifth Amendment) Rules, 2021.

- o This will enable the Automotive Industry to manufacture E 12 and E 15 compliant motor vehicles.
- o The compatibility of vehicle to the level of ethanol blend shall be displayed on vehicle by putting a clearly visible sticker.
- o This is in line with India's Ethanol Blending Program which sets a target of 20% Ethanol blending with gasoline by 2023-24.
- Different types of vehicles as per fuel
 - o Mono-fuel vehicle
 - ✓ Vehicle which operates on natural gas only.
 - ✓ Also known as Dedicated Natural Gas Vehicle.
 - o Bi-fuel vehicle
 - ✓ Bi-Fuel vehicle is a vehicle that has two independent fuel systems (one of them for natural gas) and can run on both fuels simultaneously.
 - o Flex fuel vehicles (FFVs)
 - ✓ FFV is any motor vehicle (or motor vehicle engine) engineered and designed to be operated on any mixture of two or more different fuels.
 - ✓ FFVs are capable of running on any blend of gasoline and ethanol up to 83%

GOVT LAUNCHES PNEUMOCOCCAL CONJUGATE VACCINE ON PAN-INDIA BASIS

- Union Minister for Health and Family Welfare launched the nationwide expansion of Pneumococcal Conjugate Vaccine (PCV) under the **Universal Immunization Programme (UIP)**.
 - o Pneumococcal disease is the name given to a group of diseases caused by a bacterium called *Streptococcus pneumoniae* (also known as pneumo-coccus).
 - ✓ Pneumococcal disease can occur in multiple organ systems, causing pneumonia, meningitis, bacteraemia/sepsis, sinusitis, bronchitis and middle ear infection.

o In India around 16 percent of deaths in Children occur due to pneumonia.

About UIP

o It is one of the largest public health programmes targeting close to 26.7 million newborns and 29 million pregnant women annually.

o Under UIP, immunization is being provided free of cost against 12 vaccine preventable diseases:

✓ **Nationally against 10 diseases:** Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Rotavirus diarrhea, Hepatitis B and Meningitis & Pneumonia caused by Haemophilus Influenzae type B;

✓ **Sub-nationally against 2 diseases -**

Pneumococcal Pneumonia and Japanese Encephalitis; of which Pneumococcal Conjugate vaccine is nationally expanded now (earlier in select districts of Bihar, Himachal and to be expanded in phases), while JE vaccine is provided only in endemic districts

• A conjugate vaccine is a type of vaccine which combines a weak antigen with a strong antigen as a carrier so that the immune system has a stronger response to the weak antigen.

DRAFT NOTIFICATION FOR REGULATION OF THE EXTENDED PRODUCER RESPONSIBILITY (EPR)

• Draft notification is issued in exercise of the powers conferred by Environment (Protection) Act, 1986, for bringing out regulations for EPR under Plastic Waste Management Rules, 2016.

o EPR means the responsibility of a producer for environmentally sound management of the product until the end of its life.

• Key highlights

o Quantity of waste that will have to be managed by producers, importers and brand owners (PIBO) who generate plastic packaging waste is specified.

o EPR shall be applicable to both pre-consumer and post-consumer plastic packaging waste.

NOBEL PRIZES

The Nobel Assembly and the Royal Swedish Academy of Science have announced the winners of Medicine, Physics and Chemistry Nobel for the year 2021.

About Nobel Prize

- The Nobel Prize is an international award administered by the Nobel Foundation in Stockholm, Sweden, awarded to people "who have conferred the greatest benefit to humankind" in the previous 12 months.
- They are awarded annually from a fund that Alfred Nobel (Swedish inventor and entrepreneur) set aside in his 1895 will for this purpose.
 - o Alfred Nobel's own inventions include a blasting cap, dynamite, and smokeless gunpowder.
- **Categories:** Instituted in 1901, Prizes were initially awarded in five categories: Physics, Chemistry, Physiology or Medicine, Literature and Peace. A sixth award, the Nobel Prize in Economic Sciences was instituted in 1968 by the Royal Bank of Sweden and was first awarded in 1969.
- **What do the winners receive?** The recipient of each prize receives three things:
 - o A Nobel diploma, each of which is a unique work of art
 - o A Nobel medal
 - o A cash prize of 10m Swedish krona (£836,000; \$1.1m)

They have to deliver a lecture to receive the money.

- **Who awards the prizes?** The Royal Swedish Academy of Sciences awards the Nobel Prize in Physics & Chemistry and the Nobel prize in Medicine is awarded by Nobel Assembly at Karolinska Institutet, Stockholm, Sweden.
- Prize winners are called **laureates**, to signify the laurel wreath given to victors of contests in ancient Greece. More than one, but no more than three, people can win each prize.

NOBEL PRIZE IN PHYSICS

Prize awarded for: Ground-breaking contributions to our understanding of complex physical systems.

Awardees

- One half of the prize was awarded to Syukuro Manabe and Klaus Hasselmann for their work in the physical modeling of Earth's climate, quantifying variability and reliably predicting global warming.
- Second half was awarded to Giorgio Parisi for the discovery of the interplay of disorder and fluctuations in physical systems from atomic to planetary scales.

NOBEL PRIZE IN CHEMISTRY

Prize awarded for: development of a precise new tool for molecular construction: organocatalysis.

Awardees

The Nobel Prize in Chemistry 2021 was awarded to Benjamin List and David MacMillan.

NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE

Prize awarded for: discoveries of receptors for temperature and touch.

Awardees

The 2021 Nobel Prize in Physiology or Medicine was jointly awarded to David Julius and Ardem Patapoutian.

NOBEL PEACE PRIZE 2021

- Awarded to: Journalists Maria Ressa and Dmitry Muratov.
- Contribution: For their efforts to safeguard freedom of expression, which is a precondition for democracy and lasting peace."

NOBEL PRIZE FOR LITERATURE 2021

- Awarded to: Tanzanian writer Abdulrazak Gurnah
- Contribution: For work that explores uncompromising and compassionate penetration of the effects of colonialism and the fate of the refugees in the gulf between cultures and continents.

NOBEL PRIZE IN ECONOMICS

The Sveriges Riksbank Prize in Economic Sciences 2021 was given to three economists for two ground-breaking works using 'natural experiments'.

- The Royal Swedish Academy of Sciences has awarded one half to David Card and the other half jointly to Joshua D. Angrist and Guido W. Imbens.

About the prize winning research

- Issues such as relation between immigration and employment levels, school education and future earnings of students etc. have remained relevant across time and geographies

GREEN DAY AHEAD MARKET (GDAM) PORTAL

- GDAM portal, launched by the Ministry of Power, will operate in integration with the conventional day-ahead market in the power sector, enabling electricity generation and distribution companies to buy or sell Renewable Energy (RE) through open access.
 - o DAM is an electricity trading market for delivery on the following day.
- Power Exchanges will allow participants to submit bids together for both conventional and renewable energy through separate bidding windows.

PRIVATE SECTOR PARTICIPATION IN SPACE

The Prime Minister recently launched the Indian Space Association (ISpA), an industry body consisting of various stakeholders of the Indian space domain.

- The industry association will act as an independent and a “single-window” agency for enabling the opening up of the space sector to start-ups and the private sector.
- ISpA will also work towards building global linkages for the Indian space industry to bring in critical technology and investments into the country to create more high-skill jobs.

BANNI BUFFALO

- Recently, India’s first Banni buffalo in vitro fertilization (IVF) calf was born in Gujarat.
- Banni buffaloes are distributed in the **Kachchh region** of Gujarat.
 - o Banni, which was evolved by the **Maldhari** community in this region, has good adaptability to harsh climatic conditions, drought resistance and survival on scanty fodder and shrubs.

TRENCH FARMING

- Recently, ASSOCHAM suggested adoption of ‘trench farming’ to grow herbs, vegetables in Ladakh.
- Trench is a simple structure for growing vegetables during extreme winters. Trench cultivation harnesses soil and solar heat to create suitable climatic conditions for growth of leafy vegetables like spinach, fenugreek, coriander, lai etc.

- o A suitable size of 30’ x 10’ x 3’ with transparent UV stabilized 200 micron polythene sheets are used as the technology is low-cost and portable.

- ✓ The farmers can relocate the trench tunnel to whatever location they want.
- Since farming season is very small in Ladakh, the farmers should be informed about alternatives to greenhouses, such as low tunnel technology or trench farming, to help them cultivate herbs and vegetables.
- Significance

- o The commercial cultivation of Indian and exotic vegetables and flowers can be taken up in large greenhouses to meet local demand in such hostile areas.
- o The produce could be supplied to the rest of the country at a premium since India imports some of these vegetables from other countries.

GLOBAL FOOD SECURITY (GFS) INDEX 2021

- India is ranked at 71st position in the GFS Index 2021 of 113 countries with an overall score of 57.2 points.
- Released by: London-based Economist Impact and is sponsored by Corteva Agriscience.
- GFS Index measures the underlying drivers of food security in 113 countries, based on the factors of:
 - o affordability
 - o availability
 - o quality and safety
 - o natural resources and resilience.
- Key Highlights
 - o India fared better than Pakistan (75th position), Sri Lanka (77th Position), Nepal (79th position) and Bangladesh (84th position).
- ✓ However, India lags behind Pakistan and Sri Lanka in terms food affordability.
 - o India's score improved only by 2.7 points to 57.2 in 2021 from 54.5 in 2012.
 - o Ireland tops the Index.
- Note: This index is different from **Global Hunger Index 2021** (released by Concern Worldwide and Welt Hunger Hilfe) where India ranked at 101 position of 116 countries.

VAYO NAMAN PROGRAMME



- It was organised by Ministry of Social Justice and Empowerment on the occasion of International Day of Older Persons (1st October).

- On the occasion following initiatives were launched:

- o An **Elderly Help Line** 14567.

- o **SAGE** (Seniorcare Aging Growth Engine) portal to encourage entrepreneurs in the area of elderly care.

- o **SACRED** (Senior Able Citizens for Re-Employment in Dignity) portal to connect the senior citizens with job providers in the private sector.

DIGISAKSHAM

- Ministry for Labour and Employment has launched DigiSaksham- a digital skills programme to enhance the employability of youth by imparting digital skills that are required in an increasingly technology driven era.

- o This is a joint initiative with Microsoft India.

- Free of cost training in digital skills including basic skills as well as advance computing will be provided to more than three lakh youths in the first year.

- o Jobseekers can access the training through National Career Service (NCS) Portal.