

CIVIL SERVICES MONTHLY

OCTOBER 2020

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- **Jagananna Vidya Kanuka Scheme**
- **RBI Monetary Policy 2020**
- **International Day for the Eradication of Poverty 2020**
- **Earth observation satellite EOS-01**
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KURUKSHTRA + YOJANA

Prelims related Current Affairs

Zombie fires

In News

The Zombie Fires in the Arctic region are becoming frequent. This says that the fire regimes in the Arctic are changing rapidly. These regions were once-frozen **Tundra**.

Zombie Fire

- A 'zombie fire' is a fire from a previous growing season that can smoulder under the ground which is made up of carbon-rich peat.
- When the weather warms, the fire can reignite, according to the scientists in the United States.

Issue

- The fires in the Arctics are spreading to areas which were formerly fire-resistant.
- The tundra — north of the **Arctic Circle** — is drying up and vegetation there like moss, grass, dwarf shrubs, etc are starting to catch fire.
- Wildfires on permafrost **in Siberia** south of the Arctic are not uncommon. But the team found that in 2019 and 2020, burning occurred well above the Arctic Circle, a region not normally known to support large wildfires.
- Also, the temperatures in Siberia this year had gone up. The region also recorded severe heat waves. Half of these regions burnt on ancient carbon-rich peat soils.
- These fires have the potential of turning carbon sink into carbon source which in turn increases Global Warming.

Permafrost

- Permafrost is any ground that **remains completely frozen—32°F (0°C) or colder**—for at least two years straight. These permanently

frozen grounds are most common in regions with high mountains and in Earth's higher latitudes—near the North and South Poles. Permafrost covers large regions of the Earth.

- **Permafrost locks in enormous amount of carbon from ancient biomass.** Thus, melting of these permafrost will emit more and more carbon into the atmosphere.

Ambedkar Social Innovation & Incubation Mission

In News

Union Minister for Social Justice and Empowerment launched the "Ambedkar Social Innovation and Incubation Mission (ASIIM) under Venture Capital Fund for Scheduled Castes (SCs), with a view to promoting innovation and enterprise among SC students studying in higher educational institutions.

ASIIM

- Under Ambedkar Social Innovation Incubation Mission initiative, one thousand SC youth will be identified in the next four years with start-up ideas through the Technology Business Incubators in various higher educational institutions.
- They will be funded 30 lakh rupees in three years as equity funding to translate their start-up ideas into commercial ventures.
- Successful ventures would further qualify for venture funding of up to five Crore rupees from the Venture Capital Fund for SCs.

BrahMos surface-to-surface supersonic cruise missile

In News

Indian scientists and engineers conducted successful test flight of BrahMos surface-to-surface supersonic cruise missile featuring indigenous booster and airframe section along with many other 'Made in India' sub-systems.

BrahMos

- The flight test of the missile which has a strike range of more than 400 km.
- The BrahMos Land-Attack Cruise Missile (LACM) was cruising at a top speed of Mach 2.8.
- The BrahMos missile can be launched from land, sea platforms as well as fighter jets.
- It is jointly developed by the DRDO and NPOM, a leading aerospace enterprise of Russia, the BrahMos missile is a medium-range ramjet supersonic cruise missile capable of being launched from submarines, warships, fighter jets or land.
- It is the fastest supersonic cruise missile in the world.
- The name BrahMos is a portmanteau formed from the names of two rivers, the Brahmaputra of India and the Moskva of Russia.
- A hypersonic version of the missile, BrahMos-II, is also presently under development with a speed of Mach 7-8 to boost aerial fast strike capability.
- In 2016, as India became a member of the Missile Technology Control Regime (MTCR), India and Russia are now planning to jointly develop a new generation of Brahmos missiles with 600 km-plus range and an ability to hit protected targets with pinpoint accuracy.

Indian Coast guard Vessel Kanaklata Barua

In News

Indian Coast Guard ship Kanaklata Barua, the last in the series of five Fast Patrol Vessels (FPVs), was commissioned yesterday.

- The ship is named in honour of Kanaklata Barua, a freedom fighter who was martyred while leading a procession carrying the Indian national flag during the 1942 Quit India movement.

Details

- The ship has been designed and built indigenously by Garden Reach Shipbuilders and Engineers (GRSE) Ltd, Kolkata, a fine example of

'Atmanirbhar Bharat' and is fitted with state-of-the-art navigation and communication equipment, sensor and machinery.

- The 49 m ship displaces about 310 tons, propelled by three MTU 4,000 series engines designed to attain a maximum speed of 35 knots.
- The ship is designed to carry one Rigid Inflatable Boat (RIB) high-speed boats and one Gemini boat for swift boarding and Search and Rescue operations.
- ICGS Kanaklata Barua is a replacement of a similarly named vessel which was in commission from 1997 to 2018.
- Indian Coast Guard being largest in South-Asian region deals with the dynamic situation and is vital in protecting wide-ranging multi-interest of the nation.
- The ship, will be deployed extensively for EEZ surveillance, Coastal Security and other duties as enshrined in the Coast Guard charter of duties, to safeguard the maritime interests of the Nation.

Gandhi Jyanti

In News

The birth anniversary of Mahatma Gandhi is celebrating every year on October 2 as Gandhi Jyanti.

- The UN General Assembly announced on 15 June 2007 that it adopted a resolution which declared that 2 October will be celebrated as the International Day of Non-Violence.
- This year, Gandhi Jayanti will be observed amid the coronavirus pandemic on Mahatma Gandhi's 151st birth anniversary.

Mahatma Gandhi/ Mohandas Karamchand Gandhi

- Mahatma Gandhi was **born on 2nd October, 1869 at Porbandar in Gujarat**. He was also known as the **"Father of the Nation."**
- He is remembered for his unforgettable contribution to the struggle for freedom.
- His aim was to build a new society that practices nonviolent and honest behavior.
- **Mohandas Karamchand Gandhi** was an Indian lawyer, anti-colonial nationalist, and political ethicist, who employed nonviolent

resistance to lead the successful campaign for India's independence from British rule, and in turn inspired movements for civil rights and freedom across the world.

Lal Bahadur Shastri

In News

Nation is paying tributes to former Prime Minister Lal Bahadur Shastri on his 116th birth anniversary

- **Born in Uttar Pradesh in 1904**, Lal Bahadur Shastri shares his birthday with Mahatma Gandhi.
- He was the **second prime minister of India** and served from 1964 to 1966.
- Lal Bahadur Shastri died in Tashkent on January 11, 1966, at the age of 61, soon after signing the **Tashkent Pact with Pakistan**.

Lal Bahadur Shastri (2 October 1904 – 11 January 1966)

- Shastri was born to Sharada Prasad Srivastava and Ramdulari Devi in Mughalsarai on 2 October 1904.
- He studied in East Central Railway Inter college and Harish Chandra High School, which he left to join the non-cooperation movement.
- Shastri's thoughts were influenced by reading about Swami Vivekananda, Gandhi and Annie Besant.
- He led the country during the Indo-Pakistan War of 1965. His slogan "Jai Jawan, Jai Kisan" ("Hail to the soldier; Hail to the farmer") became very popular during the war.
- He promoted the White Revolution – a national campaign to increase the production and supply of milk – by supporting the Amul milk co-operative of Anand, Gujarat and creating the National Dairy Development Board.
- Shastri also promoted the Green Revolution in India in 1965. This led to an increase in food grain production, especially in Punjab, Haryana and Uttar Pradesh.

Laser Guided Anti-Tank Guided Missile

In News

DRDO successfully test fires the indigenously developed Laser Guided Anti-Tank Guided Missile (ATGM).

- The weapon was test fired from an MBT Arjun Tank at KK Ranges in Armoured Corps Centre and School (ACC&S) in Ahmednagar, Maharashtra.
- **The Arjun is a third-generation main battle tank developed by DRDO.**

Details

- The ATGM employs a tandem HEAT warhead to defeat explosive reactive armour (ERA) protected armoured vehicles in ranges from 1.5 to 5 km.
- ATGM has been developed with a capability to launch from multiple platforms.
- It is currently undergoing technical evaluation trials from 120 mm rifled gun of MBT Arjun.
- This Laser Guided Missile has been developed by Armament Research and Development Establishment, Pune in association with High Energy Materials Research Laboratory, Pune and Instruments Research and Development Establishment, Dehradun.

The Crimean Congo Hemorrhagic Fever (CCHF)

In News

The Palghar administration asked authorities to remain alert against a possible spread of the Congo fever in the Maharashtra district.

- The Crimean Congo Hemorrhagic Fever (CCHF), commonly known as the Congo fever, spreads in humans through ticks.

Details

- This viral disease is transmitted from one animal to another by a specific type of tick.
- The disease is transmitted to humans through contact with the blood of infected animals and by eating the meat of infected animals.
- If the disease is not diagnosed and treated in time, 30 per cent of patients die.

- The CCHF is a widespread disease caused by a tick-borne virus (Nairovirus) of the Bunyaviridae family. The virus causes severe viral haemorrhagic fever outbreaks, with a case fatality rate of 10 to 40 per cent, as per the World Health Organisation (WHO).
- There is no vaccine available for either people or animals against the disease.

The Crimean Congo Hemorrhagic Fever (CCHF)

- CCHF is caused by infection with a tick-borne virus (Nairovirus) in the family Bunyaviridae.
- The disease was first characterized in the Crimea in 1944 and given the name Crimean hemorrhagic fever.
- It was then later recognized in 1969 as the cause of illness in the Congo, thus resulting in the current name of the disease.
- Crimean-Congo hemorrhagic fever is found in Eastern Europe, particularly in the former Soviet Union, throughout the Mediterranean, in northwestern China, central Asia, southern Europe, Africa, the Middle East, and the Indian subcontinent.

Mission lantana

In News

A special drive to uproot the invasive lantana bushes in the famous **Sajjangerh wildlife sanctuary** in Rajasthan's Udaipur district has helped in ecological restoration of grasslands and saved biodiversity.

- The campaign was accompanied by the plantation of native species on the cleared patches of land.

Mission lantana

- The small sanctuary in the southern Aravalli hills, is home to a large number of herbivores.
- Lantana camara, a thicket forming shrub, has covered vast tracts of land in the sanctuary, stopping the natural light and nutrition for flora and fauna.

- The toxic substance in its foliage and ripe berries affected the animals, while its expansion stopped the natural growth of grass and other shrubs.
- The herbivores not getting sufficient forage, the prey base for carnivorous animals was declining, leading to ecological disturbances in the food chain.
- Lantana, first introduced in 1807, had spread to wildlife reserves, river banks and the Project Tiger areas where it had obliterated native grass and reduced biodiversity.

World's First Asteroid Mining Robot

In News

China to send world's first asteroid mining robot into space to identify and extract resources.

- The Beijing-based company, Origin Space, will be sending out the world's first mining robot named 'asteroid mining robot' into space by November 2020.
- The asteroid mining robot will be launched into space by a Chinese Long March series rocket.
- The robot will, however, not do any actual mining.

Integrated Defence Staff

In News

Integrated Defence Staff celebrated its 20th Raising Day on 1st October 2020.

- Headquarters Integrated Defence Staff, popularly known as HQ IDS, was raised on 1st October 2001.

Integrated Defence Staff

- IDS is an organisation responsible for fostering coordination and enabling prioritisation across the different branches of the Indian Armed Forces.
- It is composed of representatives from the Indian Army, Indian Navy, Indian Air Force, Ministry of External Affairs, Defence Research and Development Organisation, Ministry of Defence and Ministry of Finance.
- The IDS is headed by Chief of Integrated Defence Staff along with Deputy Chiefs of Integrated Defence Staff.

- The body advises and assists the Chief of Defence Staff.
- The Cabinet Committee on Security (CCS) established the post of Chief of Defence Staff, a four-star general, a tri-service Chief, that shall lead the defence forces as well as play the role of head of the Department of Military Affairs.
- Roles of the IDS includes, facilitating the efficient functioning of multi-service bodies such as
 - The Defence Satellite Control Centre (Integrated Space Cell)
 - Providing secretarial and domain expertise to the Minister of Defence in all proposals of capital defence procurements
 - Providing the building of cooperation through intra-service deliberations for procurements, joint doctrines, joint training and common procedures.

Kalpana Chawla cargo spacecraft

In News

NASA launched a commercial cargo spacecraft bound for the International Space Station (ISS) named after Indian Origin deceased NASA Astronaut “Kalpana Chawla”.

- The S.S. Kalpana Chawla launched from the **Mid-Atlantic Regional Spaceport (MARS)** at NASA's Wallops Flight Facility in Virginia.

Details

S.S. Kalpana Chawla will deliver approximately 3,630 kilograms of cargo to the station.

It includes:

- The test of a biologic drug that could be used for the treatment of leukemia.
- A plant growth study that will cultivate radishes as a model for future crops in space.
- A compact toilet for astronauts to use on deep-space exploration missions.

- A 360-degree virtual reality camera that will be used to film during a spacewalk for an immersive cinematic production.
- Cargo aircraft also carries a component of new spacesuit that we'll be testing in microgravity on the space station.
- An advanced particulate monitor to measure airborne particulates and several things.

Bongosagar

In News

India and Bangladesh are to hold a mega military exercise in Bay of Bengal as part of the annual 'Bongosagar' exercise whose first edition was held in October 2019.

Details

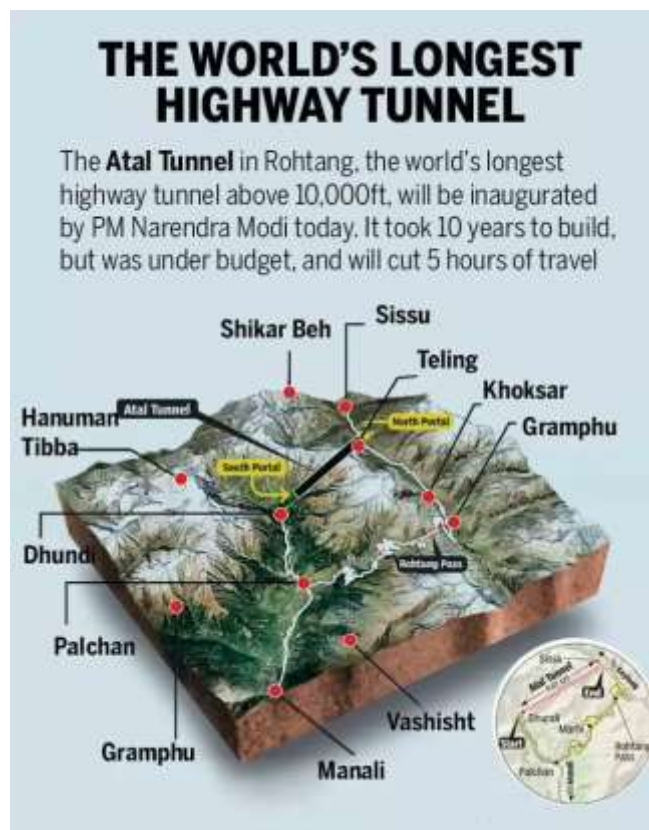
- It is aimed at developing inter-operability and joint operational skills.
- Ships from both navies will participate in surface warfare drills, seamanship evolutions and helicopter operations.
- The exercise will be followed by the third edition of **Coordinated Patrol (CORPAT)** in Northern Bay of Bengal on October 4 and 5. Conduct of CORPAT has strengthened understanding between both the navies and instituted measures to stop conduct of unlawful activities.
- The Indian Navy will deploy anti-submarine warfare corvette Kiltan and guided-missile corvette Khukri in the 'Bongosagar' exercise.
- The Bangladeshi navy will be represented by guided-missile frigate Abu Bakr and guided-missile corvette Prottoy.
- Maritime patrol aircraft as well as a number of helicopters from both navies would also be participating in the exercise.

Atal Tunnel: World's longest highway tunnel

In News

Prime Minister has inaugurated Atal Tunnel in Manali, “world’s longest highway” tunnel.

- The 9.02 kilometres long tunnel connects Manali in Himachal Pradesh to Lahaul-Spiti throughout the year.
- Currently, the area remains cut off for about 6 months each year owing to heavy snowfall and inclement weather.
- The Atal tunnel has huge strategic significance as it will greatly assist in the movement of armed forces.



Atal Tunnel

- Atal Tunnel or the Rohtang tunnel has been built in the Pir Panjal range of Himalayas.
- The tunnel is located at an altitude of 10,000 Feet from the Mean Sea Level (MSL).
- The tunnel is set to reduce road distance by 46 kilometres between Leh and Manali.
- Atal tunnel also reduces the journey time by around 4 to 5 hours.
- The decision to construct a strategic tunnel below the Rohtang Pass was taken on June 03, 2000 during the tenure of the then Prime Minister Atal Bihari Vajpayee.



Multi-Mode Hand Grenades

In News

The Ministry of Defence signed a contract with a Nagpur-based private entity for supply of indigenously designed and developed Multi-Mode Hand Grenades (MMHG) to the Indian Army.

- These grenades will be replacing the World War-II vintage 'Mills Bomb' type 36M hand grenades now used by the Army.

The Multi-Mode Hand Grenade

- It uses preformed cylindrical mild steel pre-fragments to achieve uniform distribution.
- DRDO's facility Terminal Ballistic Research Laboratory (TBRL) has developed the MMHG.
- The MMHG can be used in two different structures resulting in two different modes — defensive and offensive.
- The grenades being used by the forces in India till now have been mainly the defensive mode grenades, which means that they are to be hurled when the thrower is in a shelter or has a cover and the target is in an open area and can be harmed by fragmentation.

- On the other hand, the offensive grenades do not fragment, and the adversary is harmed by the blast or is stunned while the thrower is safe.
- The product has a shelf life of 15 years from the date of manufacturing if stored under normal circumstances.

Animal Bridge

In News

India will see the first five animal overpasses on the under-construction Delhi-Mumbai Expressway.



Details

- These overpasses will be on the lines of “animal bridges” in Netherlands for safe passage of wildlife.
- These bridges have been planned to abide by the concerns of not disturbing the wildlife movement on a section of Ranthambore Wildlife Corridor that comes on way connecting Ranthambore and Mukundra (Darrah) wildlife sanctuaries in Rajasthan.

- The animal bridges will help prevent man-animal conflict and also avoid collisions between animals and vehicles.

Shaurya: Nuclear capable hypersonic missile

In News

India successfully test fired its indigenously developed nuclear capable, surface-to-surface tactical hypersonic missile ‘Shaurya’.

About ‘Shaurya’

- Shaurya is the land variant of India’s K-15 missile, has a strike range of 700 km to 1000 km.
- It is capable of carrying payloads of 200 kg to 1000 kg.
- It is 10 metres long, 74 cm in diameter and weighs 6.2 tonnes. Its two stages use solid propellants.
- Shaurya is one of the top 10 missiles in the world in its class.
- It is known for its high-performance navigation and guidance systems, efficient propulsion systems, sophisticated control technologies and canisterised launch.
- The missile can be launched from silos and canisters mounted on a truck and fixed on the ground. A truck itself can become a launching platform.
- Shaurya missiles can be kept in locations where the enemies would not be able to detect them. Besides, it cannot be detected by satellite imaging.

World Space Week, 2020

In News

The World Space Week is celebrated between October 4, 2020 and October 10, 2020. These dates commemorate two events:

- October 4, 1957: Launch of the first human-made Earth satellite, Sputnik 1, thus opening the way for space exploration
- October 10, 1967: The signing of the Treaty on Principles Governing the Activities of States in the Exploration and Peaceful Uses of Outer Space, including the Moon and Other Celestial Bodies.

Details

- The week is being celebrated under United Nations resolution that was passed in 1999.
- World Space Week is an international celebration of science and technology, and their contribution to the betterment of the human condition.
- This year the week is being celebrated under the theme: Satellites Improve Life
- In 2021, the week is to be celebrated under the theme “Women in Space”.

Goals of World Space Week

- Provide unique leverage in space outreach and education
- Educate people around the world about the benefits that they receive from space
- Encourage greater use of space for sustainable economic development
- Demonstrate public support for space programs
- Excite young people about science, technology, engineering, and math
- Foster international cooperation in space outreach and education

World Teachers’ Day

In News

World Teacher's Day is celebrated on October 5 every year since 1994.

- The theme for World Teachers' Day 2020 is **'Teachers: Leading in crisis, reimagining the future'**

Details

- World Teachers’ Day is co-convened in partnership with **UNICEF, the International Labour Organization and Education International**.
- The day commemorates the anniversary of the adoption of the 1966 ILO/UNESCO recommendation concerning the status of teachers. This recommendation sets benchmarks regarding the rights and responsibilities of

teachers and standards for their initial preparation and further education, recruitment, employment, and teaching and learning conditions.

- The recommendation concerning the Status of Higher-Education Teaching Personnel was adopted in 1997 to complement the 1966 recommendation by covering teaching and research personnel in higher education.
- With the adoption of the **Sustainable Development Goal 4 on education**, and the dedicated target (SDG 4.c) recognizing teachers as key to the achievement of the Education 2030 agenda.

Ravi Chopra Committee

In News

The Supreme Court appointed Ravi Chopra Committee has alleged that the **Chardham road project** (to connect pilgrimage spots in Uttarakhand) has violated court order.

Details

- The Supreme Court had ruled that width of roads constructed under Chardham project shall be **5.5 metres**. This was ruled based on the recommendation of Ministry of Road Transport and Highway (MoRTH) for mountain roads.
- To the contrary, the GoI had sanctioned road width of **10-12 metres**. The MoRTH has allowed the 700 km road project to continue with 10-metre width. This according to the Committee is a contravention of the SC.

Chardham Project

- The Char Dham project consists of widening and repairing **900-kilometres** of national highways leading to revered shrines of **Kedarnath, Badrinath, Gangotri and Yamunotri**.
- It is a proposed two-lane expresses National Highway.



New species of Pipeworts

In News

Scientists from Agharkar Research Institute, Pune, an autonomous institute of the Department of Science & Technology, discovered two **new species of pipeworts** from the **Western Ghats of Maharashtra & Karnataka**.



Details

- The species reported from Sindhudurg district of Maharashtra has been named *Eriocaulon parvicephalum* (due to its minute inflorescence size).
- The other reported from Kumta, Karnataka is called *Eriocaulon karaavalense* (named after Karaavali, Coastal Karnataka region).

Pipeworts

- Pipeworts (*Eriocaulon*) is a plant group which completes its life cycle within a small period during monsoon. It exhibits great diversity in the Western Ghats.

- Around 111 species of pipeworts are found in India.
- Most of these are reported from the Western Ghats and the eastern Himalayas, and around 70% of them are endemic to the country.

Facts

- One species, *Eriocaulon cinereum*, is well known for its **anti-cancerous, analgesic, anti-inflammatory, and astringent properties**.
- *E. quinquangulare* is used **against liver diseases**.
- *E. madayiparense* is an **anti-bacterial** from Kerala.

2020 Nobel Prize

In News

The Nobel Prize, 2020 for Physics has been awarded.

Highlights

- The Royal Swedish Academy of Sciences awarded one half of the 2020 Nobel Prize in Physics to Roger Penrose and the other half jointly to Reinhard Genzel and Andrea Ghez for furthering the understanding of black holes, the most “enigmatic” objects in the universe.
- Andrea becomes the fourth woman to receive the Nobel Prize in the category of physics.
- The prize money of 10 million USD is to be shared between the three scientists.
- Three scientists share the Medicine Nobel for the discovery and identification of the Hepatitis C virus.

The only Indian who has received Nobel Prize for Physics was Sir C V Raman in 1930. He discovered the Raman Effect.

For Physics

- A black hole is formed when stars collapse and can be defined as a space in the universe with an escape velocity so strong that even light cannot escape it.
- Escape velocity is the speed at which an object must travel to override a planet or an object’s gravitational force. Example, for a

spacecraft to leave the surface of the Earth, it needs to be travelling at a speed of about 40,000 km per hour.

- Since light cannot get out, black holes are invisible and can only be tracked with the help of a space telescope or other special tools.
- And the reason light cannot escape is mainly that the gravity inside a black hole is very strong as a result of a lot of matter being squeezed into a small space.

For Medicine

- This year's Nobel Prize in Physiology or Medicine rewards an effort that eventually made blood transfusion safer for everyone.
- American scientists Harvey Alter and Charles Rice, and Michael Houghton of the UK, have been recognised for their discovery of a new virus that was the cause of a vast majority of chronic hepatitis cases, or cases of serious liver inflammation, in patients who required blood transfusion. This virus was eventually called Hepatitis C virus.
- The identification of the virus was made in the 1970s and 1980s. Hence, a cure has been found for the disease, and effective anti-viral drugs are now available.
- Tests have been developed to identify blood that has this virus, so that infected blood is not given to any patient.

World Post Day

In News

World Post Day is celebrated each year on 9 October, the anniversary of the establishment of the **Universal Postal Union in 1874** in the Swiss Capital, Bern.

Details

- It was declared World Post Day by the Universal Postal Union (UPU) Congress held in Tokyo, Japan in 1969.
- The proposal was submitted by **Shri Anand Mohan Narula**, a member of the Indian

delegation. Since then, World Post Day has been celebrated all over the world to highlight the importance of the postal services.

- The UPU was the start of the global communications revolution, introducing the ability to write letter to others all over the world.

Universal Postal Union

- UPU, established by the **Treaty of Bern of 1874**, is a specialized agency of the United Nations that coordinates postal policies among member nations, in addition to **the worldwide postal system**.
- The UPU contains four bodies consisting of the Congress, the **Council of Administration (CA)**, the **Postal Operations Council (POC)** and the **International Bureau (IB)**.
- It also oversees the **Telematics and Express Mail Service (EMS)** cooperatives.
- The UPU's headquarters are located in Bern, Switzerland.

Nobel Prize for Literature 2020

In News

The 2020 Nobel Prize for Literature has been awarded to American poet Louise Glück.

Details

- Glück, 77, was honoured “for her unmistakable poetic voice that with austere beauty makes individual existence universal,” the Academy said.
- A professor at Yale University, Glück made her debut in 1968 with her collection titled 'Firstborn'. She is seen as one of the most prominent poet and essayist in American contemporary literature.
- She won the Pulitzer Prize in 1993 for her collection The Wild Iris and the National Book Award for her latest collection, Faithful and Virtuous Night, in 2014.
- She is the fourth woman to win the Nobel Literature Prize in the past decade — after Olga Tokarczuk, Svetlana Alexievich and Alice Munro — and only the 16th since the Nobel prizes were first awarded in 1901.

Jagananna Vidya Kanuka Scheme

In News

The Andhra Pradesh Chief Minister Y S Jagan Mohan Reddy has launched Jagan Anna Vidya kanuka scheme.

Jagananna Vidya Kanuka

- Jagananna Vidya Kanuka kits containing three pairs of uniforms, a school bag, a pair of shoes and two pairs of socks, school belt and books.
- Students from classes 1 to 10 in government schools will get the kits.
- The stitching charges of the uniform are to be credited to the Mother's accounts.
- As many as 3.17 lakh students in the 43 mandals in the district will be benefited by the scheme.

Objective

The state government intends to build proficiency rate and Gross Enrollment Ratio (GER) in schools through these activities.

Exercise Sagar Kavach

In News

The two-day half-yearly coastal security exercise, Sagar Kavach, along the Kerala and Karnataka coasts concluded.

- It was conducted by the Navy, the Coast Guard along with other stakeholders like Coastal Police, Police Special Branch, Intelligence Bureau, Customs, Immigration, Department of Port, Department of Fisheries, Director General of Lighthouses, and fishing community.
- During the exercise, attacks were simulated at important government and private places to evaluate the security mechanism of concerned agencies.
- The exercise has the objective of integrating coastal population and fishing communities with coastal security set up and serve as 'eyes and ears' of security forces.

- In this exercise, communication between different agencies, timely flow of information, collection and dissemination of intelligence were also evaluated.

Matla Abhiyan Exercise

- Matla Abhiyan Exercise was conducted.
- The Matla Abhiyan Exercise is a five-day coastal security exercise that was conducted by the Indian Navy in Matla river.
- Two Indian boats undertook the patrol in the Sunderban Delta during the exercise.
- The sailors interacted with the local fishermen spreading awareness about the coastal security, marine police stations.
- The river forms a wide estuary in and around the Sundarbans.

Mukhyamantri Saur Swarojgar Yojana

In News

The Uttarakhand Chief Minister launched Mukhyamantri Saur Swarojgar Yojana in Dehradun.

Aim

- The Saur Swarojgar Yojana aims at creating self-employment for nearly 10,000 youths, migrants in the state who lost their jobs due to the COVID-19 pandemic.
- The beneficiaries will be allocated solar plants of 25 kilowatts each. 10,000 people will get self-employment under this scheme.

Target audience

Youth and migrants who have returned home after leaving their jobs in various parts of the country due to the COVID-19 pandemic.

Significance

- It will provide employment and promote production of green energy.
- The installed solar power plants will help in integrated farming of fruits vegetables and herbs on the same land.
- The state government has also planned to promote farming seeds of climate based spongy and medicinal plants in the same land.

Details

- A total of 1.5-2 nalis (land measurement unit) of land and Rs 10 lakh at the rate of Rs 40,000 per unit are required to set up each of these plants, which will generate 38,000 units of electricity per annum and will be bought by Uttarakhand Power Corporation Ltd for 25 years.
- Cooperative banks will grant loans at an interest rate of eight per cent per year for 15 years to set up the solar plants on private land or on land taken on lease.
- A committee has been constituted under the chairmanship of the District Magistrate to allocate projects at the district level to the applicants found suitable by the technical committee.

Nobel Peace Prize, 2020

In News

The Nobel Prize for Peace, 2020 has been awarded to the World Food Programme.



Details

The WFP has been honoured with the prize for its role towards contributing better conditions for

peace in conflict affected areas. It has been a driving force in preventing hunger in war zones.

Quick facts about Nobel Peace Prize

- From 1901 to 2019, 100 Nobel Peace Prizes have been awarded.
- A total of 24 organisations have been awarded.
- Two Peace Prizes have been divided between three persons.
- Seventeen women have been awarded the Nobel Peace Prize as of now.
- One Peace Prize Laureate, Le Duc Tho, has declined the Nobel Peace Prize.

The Nobel Prize

The Nobel prize, which consists of a gold medal, a diploma and a cheque for 10 million Swedish kronor (\$1.1 million, 950,000 euros), will be presented to the winner on 10 December, the anniversary of the 1896 death of Swedish industrialist and philanthropist Alfred Nobel, who created the prizes in his will.

International Day of the Girl Child

In News

Every year on 11 October, the International Day of the Girl, UNICEF launches an annual campaign with girls to amplify their voices and stand up for their rights.

Theme for 2020

“My voice, our equal future”, let’s seize the opportunity to reimagine a better world inspired by adolescent girls – energized and recognized, counted and invested in.

Details

International Day of the Girl 2020 will focus on their demands to:

- Live free from gender-based violence, harmful practices, and HIV and AIDS
- Learn new skills towards the futures they choose
- Lead as a generation of activists accelerating social change

History

The day began as Plan international in Canada. It was begun by an NGO. Later the NGO requested the United Nations to mark the day internationally.

India

India celebrates both International Day of the Girl and also National Girl Child Day. The National Girl Child Day is celebrated on January 24 every year.

Beijing Declaration

It was adopted at the fourth World Conference on women, 1995. During the conference leaders from all over the world agreed on a plan to achieve global equality.

A platform for action

- The Beijing Declaration and Platform for Action is the most progressive blueprint ever for advancing the rights of not only women but girls.
- The Platform for Action remains a powerful foundation for assessing progress on gender equality.
- It calls for a world where every girl and woman can realize all her rights, such as to live free from violence, to attend and complete school, to choose when and whom she marries, and to earn equal pay for equal work.

The Platform for Action specifically calls on the global community to:

1. Eliminate all forms of discrimination against girls.
2. Eliminate negative cultural attitudes and practices against girls.
3. Promote and protect the rights of girls and increase awareness of their needs and potential.
4. Eliminate discrimination against girls in education, skills development and training.
5. Eliminate discrimination against girls in health and nutrition.
6. Eliminate the economic exploitation of child labour and protect young girls at work.

7. Eradicate violence against girls.
8. Promote girls' awareness of and participation in social, economic and political life.
9. Strengthen the role of the family in improving the status of girls.

World Mental Health Day

In News

World Mental Health Day is observed on 10 October every year, with the overall objective of raising awareness of mental health issues around the world and mobilizing efforts in support of mental health.

Details

- The day was first initiated by World Federation for Mental Health.
- In some countries like Australia, the day is a part of Mental Health Week.
- Theme for World Mental Health Day 2020 is 'Mental Health for All: Greater Investment – Greater Access'.
- In 2019 the day was celebrated under the theme “Mental Health Promotion and suicide prevention”.
- World Mental Health Day is supported by WHO through raising awareness on mental health issues using its strong relationships with the Ministries of health and civil society organizations across the globe.

World Federation for mental health

- It was founded in 1948 to prevent mental and emotional disorders.
- The organisation aims to prevent mental disorders, spread mental health awareness and adopt best recovery practices.

History

- First observed on 10 October, 1992, World Mental Health Day was just observed as an annual activity of the World Federation for Mental Health and had no specific theme.
- In 1994, a theme for the day was used for the first time. The very first theme of the day was “Improving the Quality of Mental Health Services throughout the World.”

Significance of World Mental Health Day

- A healthy emotional life is primarily a matter of how a person's mind processes, understand information, experiences and knowledge regarding mental health.
- Being emotionally fit is the key to success in all aspects of life.

RBI Monetary Policy 2020

In News

The Monetary Policy Committee of the Reserve Bank of India kept the repo rate unchanged at four per cent.

Key Highlights

- RBI governor said India's GDP would contract by 9.5 per cent in the current fiscal due to the disruptions caused by the coronavirus pandemic.
- On inflation, the RBI expects a steady decline. CPI inflation is projected at 6.8 per cent for Q2:2020-21, at 5.4-4.5 per cent for H2:2020-21 and 4.3 per cent for Q1:2021-22.
- The six-member MPC met this week following the induction of three new independent members, Shashanka Bhide, Ashima Goyal and Jayanth R Varma.
- MPC is the statutory committee that fixes the key policy interest rate and monetary policy stance of the country as well as the inflation target.

Smog Tower

In News

Delhi government gave nod for the installation of the second smog tower in the world at Connaught Place within ten months.

Details

- The first smog tower in the world was set up in China.
- In China, the smog tower sucks the polluted air from below and releases clean air from above.

- In India, smog tower will suck the polluted air from above and release clean air from the bottom.

Smog Tower

- Delhi's first smog tower came up at Lajpat Nagar central market.
- The 20-feet-tall tower is fitted with exhaust fans to suck in polluted air and can remove up to 80% of the particulate matter (PM 2.5 and PM10) - the primary pollutant in Delhi's air.
- Smog towers are structures designed to work as large-scale air purifiers. They are usually fitted with multiple layers of air filters, which clean the air of pollutants as it passes through them.
- The smog tower sucks the polluted air, which is purified by the multiple layers before re-circulated into the atmosphere. To purify the air; the highly effective H14 grade Highly Effective Particulate Arrestance (HEPA) filter would be used. This filter can clean up to 99.99% Particulate Matter (PM) present in the air with the help of pre-filter and activated carbon.
- The smog tower installed in Lajpat Nagar is cylindrical in design and built like a pole with a big inlet and four outlet units. The giant air purifier is fitted with exhaust fans to suck in polluted air with the help of a big inlet unit. It is painted in four colours – orange on the top, white in the middle, green colour just above the bottom and blue at the bottom. The tower will run on electricity.

Rustom-II Drone

In News

The Defence Research and Development Organisation successfully flight-tested the indigenously developed Rustom-II medium altitude long endurance drone.

Details

- Achieved eight hours of flying at an altitude of over 16,000.
- The drone is expected to achieve 18 hours of continued flying at a height of 26,000 feet by the end of 2020 itself.

- Capable of carrying varied combinations of payloads, including synthetic aperture radar, electronic intelligence systems and situational awareness systems.
- It boasts of a satellite communication link to relay vital information on a real-time basis.
- DRDO is developing Rustom-II drone to match the specifications of the Israeli Heron unmanned aerial vehicle which is already being used by the Indian Air Force (IAF) and Indian Navy.
- The technical upgradation and arming of Heron drone is at contract negotiating committee level.
- The Heron upgrade involves installing a satellite communication link so that there is no time gap in relaying situation on ground as well as installing hard points on the wings for missiles and laser guided bombs.
- While the Israelis have kept their armed drone program under cover, the Heron has a proven weaponized version.
- India has also decided to go in for American MQ-9B Sky Guardian armed drone instead of Sea Guardian surveillance drone with cost and numbers being worked out.
- The MQ-9B has a 40 hour endurance with a maximum altitude of 40,000 feet. It also has a payload capacity of over 2.5 tonnes, which includes air to surface missiles and laser guided bombs.

World Migratory Bird Day

In News

The World Migratory Bird Day is celebrated twice a year, that is, on second Saturdays of May and October.

- Earlier in May, the day was celebrated on May 9, 2020.
- Both the days are celebrated under the same theme.
- This year, the day is celebrated under the theme: Birds Connect Our World.

Details

- The idea of celebrating World Migratory Day was designed by the US Fish and Wildlife Service in 1993.
- World Migratory Bird Day (WMBD) is an awareness-raising campaign highlighting the need for the conservation of migratory birds and their habitats.
- It aims to draw attention to the threats faced by migratory birds, their ecological importance, and the need for international cooperation to conserve them.
- The campaign is organised by two international wildlife treaties administered by the United Nations Environment Programme. These are:
 - (i) African-Eurasian Migratory Waterbird Agreement
 - (ii) Convention on the conservation of Migratory species of wild animals.

Vijaya Raje Scindia

In News

Prime Minister released a commemorative 100 rupee coin in the honour of Vijaya Raje Scindia.

- Vijaya Raje Scindia is also popularly known as the Rajmata of Gwalior.
- Rajmata Scindia dedicated her life for the future of the nation and renounced all her happiness for the future generations of the country.



Vijaya Raje Scindia (12 October 1919 – 25 January 2001)

- Vijaya Raje Scindia was born in 1919 at Sagar in present-day Madhya Pradesh. Vijaya Raje Scindia, born Lekha Divyeshwari Devi and known popularly as the Rajmata of Gwalior, was a prominent Indian political personality.

- In the days of the British Raj, as consort of the last ruling Maharaja of Gwalior, Jivajirao Scindia, she ranked among the highest royal figures of the land.
- In later life, she became a politician of considerable influence and was elected repeatedly to both houses of the Indian parliament.
- She was also an active member, of the Jana Sangh and co-founder of Bharatiya Janata Party.

Kasturi Cotton

In News

Union Minister for Textiles unveiled a brand and a logo for Indian cotton.

- The branding - Kasturi Cotton - would initially be applicable to long staple cotton that is grown in India and meets prescribed standards.

Background

- Creating a brand of Indian cotton was a long pending requirement of the trade.
- Leading cotton exporting countries of the world, like Egypt and the US, have their own cotton brands.

Significance

- Kasturi Cotton may help Cotton Corporation of India (CCI) increase exports, as Centre's MSP procurement expected to increase.
- The fine parameters of the Kasturi brand will help Indian cotton realise at least 5% more value than the prevailing market price
- The government has promised to double the income of farmers.

International Day for Disaster Risk Reduction

In News

Every year, the United Nations marks the International Day for Disaster Reduction on October 13.

- The day is also called World Calamity Control Day.

Details

- The day is celebrated to spread how people and communities all over the world are reducing their exposure to disasters.
- This year, in 2020, the day is marked under the theme: Disaster Risk Governance.
- The International Day for Disaster Risk Reduction was started in 1989, after a call by the United Nations General Assembly for a day to promote a global culture of risk-awareness and disaster reduction.
- The United Nations Adopted Sendai Framework for Disaster Risk Reduction in 2015.

The seven strategic targets and 38 indicators were set to measure the progress on reducing disaster losses. Every year had a target to be achieved starting from 2016.

- 2016: Target 1: To reduce global disaster mortality by 2030. The aim is to reduce the global mortality rate in 2020-30 as compared to 2005-15.
- 2017: Target 2: To reduce number of people affected globally
- 2018: Target 3: To reduce disaster economic losses in terms of GDP
- 2019: Target 4: To reduce disruption of basic services due to disaster
- 2020: Target 5: To increase the number of countries that have National Disaster Risk Reduction Strategies by 2020
- 2021: Target 6: To enhance international cooperation through sustainable and adequate support
- 2022: Target 7: To increase availability of multi-hazard warning systems and assessments.

Nobel Prize for Economics, 2020

In News

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2020 was awarded jointly to Paul R. Milgrom and Robert B. Wilson for improvements to Auction Theory and also for inventing new auction formats.

- The theory formulated by Milgrom allowed calculating common and private values that vary from bidder to bidder.

Details

- Milgrom and Wilson, both are the professors at Stanford University in California.
- The prize has been awarded 51 times to 84 Laureates between 1969 and 2019. By rule, nobel prize cannot be shared by more than three laureates.
- The Nobel Economic Prize was established in 1968 by a donation from the central bank of **Sweden Sveriges Riksbank** to the Nobel Foundation.
- It is not one of the prizes that were established by Alfred Nobel in 1895. But still it is administered and referred to Nobel Prize.
- According to the Royal Swedish Academy of Sciences, the economists invented new formats for auctioning many interrelated objects on behalf of a seller motivated by doing good for society rather than simply achieving the highest price possible.

Psychological capsule for soldiers

In News

Amidst the rising cases of youths joining terror groups, the Indian Army has introduced a change in its training for the soldiers who are getting posted in the hinterland and the Line of Control (LoC).

Aim

To make the soldiers more sensitive towards the civil population with a new psychological capsule and tweak in drills of engagement.

Details

- Army have introduced a capsule in January to make the soldiers more sensitive towards civilians.

- This capsule has been developed in conjunction with the Defence Institute of Psychological Research (DIPR).
- A selected lot up to 250 soldiers/officers from trainees to go through this psychology capsule.
- The aim of the training at Corps Battle School, Khrew, is to not just improve the operational reflexes with the help of the cognitive learning of the soldiers but also to make him go through the capsule to not be hostile towards the locals and obviate collateral damage.
- In the general sensitisation capsules, there is an increasing focus on convincing local youth caught in encounters to surrender.
- All soldiers deployed to the valley and the LoC under the 15 Corps area have to undergo a sensitisation programme at CBS (Corps Battle School).
- All personnel posted to the LoC undergo a 14-day capsule and those deployed in the valley a 28-day capsule.
- There are four tenets on which the orientation is based upon: good faith and just conduct, minimum Force, avoid collateral damage, impartiality, and necessity of operations.
- Apart from the training drills, the soldiers are also being sensitized of the imminent dangers of the use of UAVs for airdrops along the LoC and taking the help of the family members of the terrorists to persuade them to surrender.

World Students' Day

In News

The United Nations declared October 15 as World Students' Day in 2010 to honour Dr APJ Abdul Kalam.

- The theme of World Students' Day 2020 is 'Learning for people, planet, prosperity, and peace'.

Details

- World Students' Day is marked on A. P. J. Abdul Kalam's birthday, 15 October.
- Popularly known as the 'Missile Man of India', Kalam was born in Rameswaram, Tamil Nadu on October 15, 1931. He served as the 11th President of India from 2002 to 2007.

- Kalam was not just a politician and aerospace scientist, but also a teacher. He wanted the world to remember him as a teacher.
- Kalam died on July 27, 2015, doing what he loved - teaching. He was delivering a lecture to the students of IIM Shillong when he suffered a stroke and fell down the stage.

STARS' project

In News

The Union Cabinet has approved World Bank supported Strengthening Teaching-Learning and Results for States -STARS project.

- The Project seeks to support States in developing, implementing, evaluating and improving interventions with direct linkages to improved education outcomes.
- The project envisions improving the overall monitoring and measurement activities in the Indian school education system through interventions in selected states.

Details

- The total project cost is 5 thousand 718 crore rupees with the financial support of World Bank amounting to 500 million US dollar.
- STARS project would be implemented as a new Centrally Sponsored Scheme under Department of School Education and Literacy.
- The project will cover six States, Himachal Pradesh, Rajasthan, Maharashtra, Madhya Pradesh, Kerala and Odisha.
- The project will strengthen the school education system as per the new National Education Policy 2020.

ZojiLa Tunnel

In News

Union Road Transport and Highways ministry will start ZojiLa Tunnel works, at ZojiLa in Kargil district.

- The tunnel is strategically important for all weather movement of troops on National Highway No. 1 as and when required.



Details

- The tunnel will provide all-weather connectivity between Srinagar valley and Leh (Ladakh plateau) on NH-1, and will bring about an all-round economic and socio-cultural integration of Jammu & Kashmir.
- The project involves construction of a 14.15 Km long tunnel at an altitude of about 3,000 m under ZojiLa pass, presently motorable only for 6 months in a year, on NH-1 connecting Srinagar and Leh through Dras & Kargil.
- It is one of the most dangerous stretch in the world to drive a vehicle.

Special Kisan Rail

In News

Union Transport Minister flagged off the fourth Special Kisan Rail 'Nagpur-Adarsh Nagar New Delhi' from Nagpur Railway Station.

- At present three other Kisan Rail - Nasik to Danapur in Patna, Ananthpur to New Delhi and Bengaluru to Hazrat Nizamuddin operating carrying fruits and vegetables.

Details

- This train will carry the first consignment of 205 tonnes of oranges from citrus producing districts in Vidarbha.

- The train will have station- stops at Katol, Narkhed, Pandhurna, Betul, Itarsi.
- The Kisan Rail is operated by the Nagpur division of the Central Railway.
- The Kisan Railway would reduce the cost of transporting agricultural produce and increase the income of farmers thereby bringing an economic transformation in farmers of Vidarbha.
- The government also announced a 50% subsidy on the transportation cost of notified fruits and vegetables that will be carried by Kisan Rail.
- This subsidy can be availed by individual farmers, food processors, cooperative societies, retailers, state and cooperative marketing agencies till December 11.
- The notified fruits include banana, guava, mango, citrus, pineapple, pomegranate, papaya, and jack fruit and the list of vegetables include onion, potato, tomato, French beans, brinjal, capsicum, carrot, cauliflower and okra.
- The subsidy will be borne by the food processing industries ministry (MoFPI), which is implementing Operation Greens from Tomato, Onion and Potato (TOP) to all fruits & vegetables (TOTAL) under the AtmaNirbhar initiative.
- Union ministry also inaugurated the Central Railway's Santra Kisan Railway website which has booking facility for agricultural produce.

International Day of Rural Women

In News

The International Day of Rural Women is observed globally on 15 October each year.

- The day recognizes the crucial role of women and girls in ensuring the sustainability of rural households and communities, improving rural livelihoods and overall well-being.
- The theme for this International Day of Rural Women is **“Building rural women’s resilience in the wake of COVID-19,”** to create awareness of these women’s struggles, their needs, and their critical and key role in our society.

Background

- The first ever International Day of Rural Women was celebrated on October 15, 2008.
- It recognised the critical role and contribution of rural women, including indigenous women, in enhancing agricultural and rural development, improving food security and eradicating rural poverty.

Mahila Kisan Diwas

In News

The Department of Agriculture, Cooperation and Farmers Welfare organized Mahila Kisan Diwas on 15th October 2020.

- An e-book on ‘Inspiring Stories of Progressive Women Farmers’ was released and two short films on ‘Mahila Krishak and her Contribution in Agriculture’ and ‘Global Examples of Successful Women Farmers’ were launched.

Highlights

- The ‘Mahila Kisan Diwas’ or the Day of Women Agriculturists was celebrated on October 15 for the first time in India in 2017.
- The day is organized in association with the Ministry of Women and Child Development.
- This was being done to recognize the contribution of women in agriculture as 80% independent women in India were associated with the farm sector, while women lead 18% of all agricultural households.
- The tagline for the commemoration has been decided as- ‘Sashakt Mahila, Sashakt Bharat’ (empowered women, empowered India).

INS Sindhuvir

In News

India will be delivering a Kilo Class submarine INS Sindhuvir to Myanmar Navy as part of defence cooperation.

- It is a move that comes in the backdrop of China's increasing efforts to expand its military influence in the region.

Highlights

- The ship was scheduled to be delivered to Myanmar Navy by March 2020.
- This will be the first submarine of Myanmar Navy.
- This is in accordance with India's vision of SAGAR Security and Growth for All in the Region.
- It is also in line with India's commitment to build capacities and self-reliance in all our neighbouring countries.

Strategic importance

Myanmar is one of India's strategic neighbours and shares a 1,640-kilometer-long border with a number of northeastern states including militancy-hit Nagaland and Manipur.

Kilo-class submarine

- Kilo class, Soviet designation Project 877 Paltus, is a class of diesel-electric attack submarines designed and built in the Soviet Union for the Soviet Navy.
- The class was built until the mid-1990s, when production was switched to the more advanced Project 636 Varshavyanka variant, also known as Improved Kilo-class by the West.
- These attack submarines are mainly intended for anti-shipping and anti-submarine operations in relatively shallow waters.
- Original Project 877 boats are equipped with Rubikon MGK-400 sonar system, which includes a mine detection and avoidance sonar MG-519 Arfa.

Nagarnar Steel Plant

In News

The **Cabinet Committee on Economic Affairs** has given its 'in-principle' approval to the demerger of **Nagarnar Steel Plant (NSP)** from **National Minerals Development Corporation (NMDC) Ltd.**

- The Cabinet also approved **strategic disinvestment** of the demerged company (NSP)

by selling the entire Government of India stake in it to a strategic buyer.

- The processes of demerger and disinvestment would be initiated together and disinvestment of the demerged company (NSP) is expected to be completed by September 2021.

Nagarnar Steel Plant (NSP)

- NSP is a three million ton per annum (mta) Integrated Steel Plant being set up by NMDC at Nagarnar, Bastar District, Chhattisgarh.
- NMDC is a listed CPSE under the Ministry of Steel and Government of India has 69.65 % shareholding in the Company.
- NMDC involved in the exploration of iron ore, copper, rock phosphate, limestone, dolomite, gypsum, bentonite, magnesite, diamond, tin, tungsten, graphite, etc.

MACS-6478

In News

New wheat variety called MACS 6478 helps farmers in a village in Maharashtra double their yield.

- This wheat variety is developed by Scientists from Agharkar Research Institute (ARI), an autonomous institute of the Department of Science and Technology (DST).
- The chapati from the flour of this wheat also scores high on quality.

Details

- The newly developed common wheat or bread wheat, also called high yielding Aestivum, matures in 110 days and is resistant to most races of leaf and stem rust.
- The amber colored medium sized grain contains 14% protein, 44.1 ppm zinc and 42.8 ppm iron which is higher than other cultivated varieties.
- The chapati quality of flour of this wheat is excellent, having score of 8.05 with good bread quality scoring 6.93.
- Maharashtra State seed agency for seed multiplication, 'Mahabeej' is carrying out

certified seed production of MACS 6478 for use by farmers.

- The farmers of Maharashtra are now getting a yield of 45-60 quintal per hectare with the new variety as against earlier average yield ranging 25-30 quintal per hectare when they cultivated Lok 1, HD 2189 and other old varieties.

World Food Day

In News

The World Food Day is celebrated by the United Nations Food and Agriculture Organization on October 16 every year.

- This year, the World Food Day is celebrated under the theme: **Grow, Nourish, Sustain. Together. Our Actions are our Future**
- Theme highlights the need to work in such a way that every person gets the required amount of nutritious food to lead active and healthy lives.

Details

- The Food and Agriculture Organization of the UN (FAO) designated 16 October as World Food Day in 1979.
- World Food Day is also commemorated as the anniversary of the Food and Agriculture Organization of the United Nations.
- World Food Day 2020 holds significance as this year marks the 75th anniversary of FAO, which works in over 130 countries worldwide.
- The goal of FAO is to achieve food security for all and make sure that people have regular access to enough high-quality food.

International Day for the Eradication of Poverty 2020

In News

International Day for the Eradication of Poverty is observed every year on October 17 across the world.

- It is the day to mark worldwide poverty, hunger, violence, fear, and find ways to mitigate it.

Theme

- This year's theme is 'Acting together to achieve social and environmental justice for all.'
- The theme for the Day this year addresses the challenge of achieving social and environmental justice for all.
- The growing recognition of the multi-dimensionality of poverty means that these two issues are inseparably intertwined, and that social justice cannot be fully realized without aggressively rectifying environmental injustices.

World Statistics Day 2020

In News

The third World Statistics Day will be celebrated around the globe on 20 October 2020 with the theme "Connecting the world with data we can trust".

- This theme reflects on the importance of trust, authoritative data, innovation and the public good in national statistical systems.

World Statistics Day 2020 campaign

- The celebration of World Statistics Day 2020 is a global collaborative endeavour, organized under the guidance of the United Nations Statistical Commission.
- The Statistics Division of the United Nations Department of Economic Affairs is the global coordinator of the campaign.

India's first seaplane project

In News

The first of the five seaplane services in Gujarat, connecting Sabarmati River in Ahmedabad to the Statue of Unity in Kevadia in Narmada district, will be inaugurated on October 31, the birth anniversary of Sardar Vallabhbhai Patel.

- The other spots are, Dharoi dam in Mehsana district, to connect Ambaji and Shatrunjay dam in

Palitana of Bhavnagar district as well as Tapi in the next phase.

What is India’s first seaplane project?

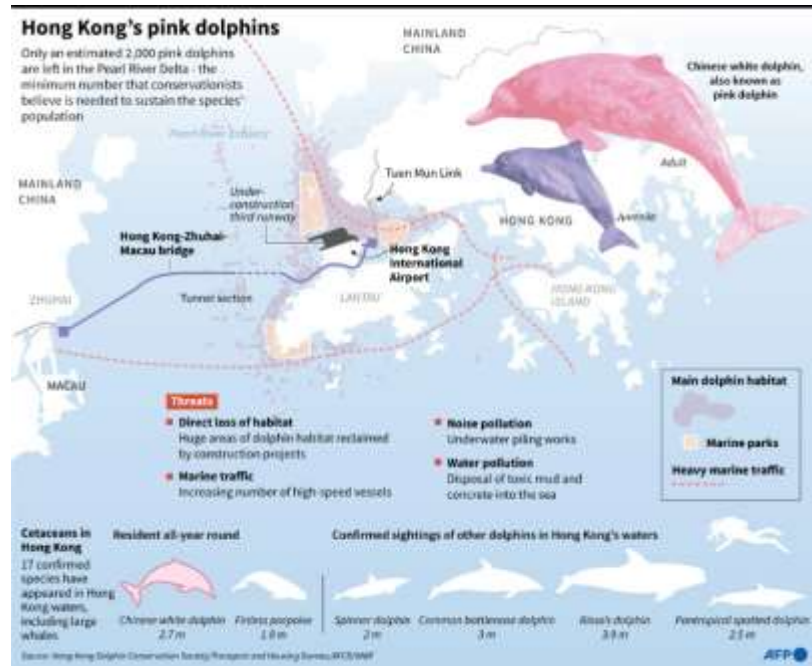
- The project is part of a directive of the Union Ministry of Civil Aviation.
- As per the directive, the Airports Authority of India (AAI) requested state governments of Gujarat, Assam, Andhra Pradesh and Telangana and the administration of Andaman & Nicobar to propose potential locations for setting up water aerodromes to boost the tourism sector.
- A seaplane is a fixed-winged aeroplane designed for taking off and landing on water.
- It offers the public the speed of an aeroplane with the utility of a boat.
- There are two main types of seaplane: Flying boats (often called hull seaplanes) and floatplanes.
- The bottom of a flying boat’s fuselage is its main landing gear. This is usually supplemented with smaller floats near the wingtips, called wing or tip floats. The hull of a flying boat holds the crew, passengers, and cargo; it has many eatures in common with the hull of a ship or a boat.

Chinese pink dolphin

In News

Chinese pink dolphins are making a comeback in the **Pearl river estuary**.

- The Pearl River estuary includes Hong Kong, Macau as well as the mainland Chinese cities of Shenzhen, Guangzhou and Dongguan.
- IUCN Status: Vulnerable.



Details

- Pink dolphins have seen a decline in their numbers in the past 15 years by 70-80 per cent.
- Dolphins use echolocation to find their way in water. The estuary is one of the busiest shipping lanes in the world.
- Ships often disturb the dolphins in finding their way and even kill them.
- But dolphin numbers in the waters between Hong Kong and Macau have seen a rebound this year because the novel coronavirus disease pandemic has stopped ferries.
- According to the WWF, **there are only an estimated 2,000 pink dolphins left in the Pearl River Delta - the minimum number that conservationists believe are needed to sustain the species'.**
- Dolphins, and especially these estuarine dolphins, have **a slow birth rate, a slow growth rate, a slow reproductive rate.**

Moderate Resolution Imaging Spectroradiometer (MODIS)

In News

The Moderate Resolution Imaging Spectroradiometer or **MODIS on NASA’s Aqua satellite** has captured fires burning across a vast swathe of Bolivia.

- The fires have been burning in the **Pantanal**, the largest tropical wetland in the world which is located in the eastern part of Bolivia.
- Fires also blazed in the **dry Chiquitano forest** in southeast Bolivia and the **Beni savanna** and **Amazon rainforest areas** in the north.

Reason

- The NASA attributed the fires to a prolonged drought as well as a recent heat wave that “has turned vegetation to tinder”.
- The drought has been blamed on warm temperatures in the Atlantic Ocean that have caused moisture to shift to the Northern Hemisphere.

MODIS

- MODIS is a payload imaging sensor that was launched into Earth orbit by NASA in 1999 on board the Terra (EOS AM) satellite, and in 2002 on board the Aqua (EOS PM) satellite.
- The instruments **capture data in 36 spectral bands** ranging in wavelength from 0.4 μm to 14.4 μm and at varying spatial resolutions.
- The instruments image the entire Earth every 1 to 2 days.
- They are designed to provide measurements in large-scale global dynamics including changes in **Earth's cloud cover, radiation budget and processes occurring in the oceans, on land, and in the lower atmosphere.**
- With its low spatial resolution but high temporal resolution, MODIS data are useful to track changes in the landscape over time.

COVIRAP

In News

The Indian Council of Medical Research recently approved the covid-19 test called **COVIRAP**.

- Developed by researchers at the IIT-Kharagpur, is a low-cost portable unit for rapid diagnostics of coronavirus, which produces results in under an hour.

Details

- The testing facility can be housed anywhere and an air-conditioned lab is not required.
- The COVIRAP method requires very little equipment, and is ideal for use in rural areas with limited facilities. It can be operated by rural youth with minimal training.
- This new testing method implements a highly reliable and accurate molecular diagnostic procedure, conducted in an ultra-low-cost portable device unit and costs only around ₹500 per test.
- Each test requires a kit, three master-mixes which are made by the team. After several steps of mixing and heating, an image of the testing strips is grabbed by a smartphone camera of a custom-made mobile application, and a definite result is produced.
- Their test results have confirmed that the method and results are of highest standards and are comparable to high-end RT-PCR tests.
- It can also check for other diseases, including influenza, malaria, tuberculosis, and dengue, among others.

CuRED

In News

The Ministry of Health and Family Welfare launched “CSIR Ushered Repurposed Drugs” portal called CuRED. Portal will provide the details about drugs repurposed by CSIR.

Background

The CSIR has been exploring multiple combination clinical trials of antivirals with host-directed therapies for a potential treatment of COVID-19 since the beginning of the pandemic.

CuRED

- It will provide information about CSIR repurposed drugs.
- The website, CuRED, will provide details about clinical trials of diagnostics and devices in which the scientific body is involved.
- Five clinical trials, involving Withania somnifera, Tinospora cordifolia plus Piper longum

(in combination), Glycyrrhiza glabra, Tinospora cordifolia and Adhatoda vasica (individually and in combination) and AYUSH-64 formulation are undergoing safety and efficacy trials.

- A key clinical trial by CSIR is that of Sepsivac (Mw) against COVID-19 in partnership with Cadila.
- The phase-two clinical trial of this drug has been completed successfully and a more extensive phase-three trial is on the anvil.
- The phase-two trial of phytopharmaceutical AQCH on COVID-19 patients with Sun Pharma and DBT is underway.

Atlantification

In News

Scientists have uncovered “hotspots” where some parts of the Barents Sea are starting to more closely resemble the Atlantic. They call this phenomenon “Atlantification”.

What is Atlantification?

- In the seas above Scandinavia, there is a point where the Arctic Ocean collides with the warmer, saltier waters of the Atlantic.
- This Arctic region – known as the Barents Sea – has undergone rapid change in recent decades. Air temperatures here have risen at more than four times the global average rate since the start of the industrial era.
- There is growing evidence, suggest that the unique structure of the Arctic Ocean could be shifting in this region. Scientists have uncovered “hotspots” where some parts of the Barents Sea are starting to more closely resemble the Atlantic. They call this phenomenon “Atlantification”.

Reasons for it

- In the background of all of this is global climate change.
- The Arctic sea ice extent and thickness have been dropping for decades as global temperatures rise.

- As the Arctic loses ice and the ocean absorbs more solar radiation, global warming is amplified.
- That affects ocean circulation, weather patterns and Arctic ecosystems spanning the food chain, from phytoplankton all the way to top predators.

Earth observation satellite EOS-01

In News

India would launch its latest earth observation satellite EOS-01 and nine international customer spacecraft onboard its PSLV-C49 rocket from the spaceport of Sriharikota in Andhra Pradesh on November 7.

- EOS-01 is intended for applications in agriculture, forestry and disaster management support.
- The customer satellites are being launched under commercial agreement with New Space India Limited (NSIL), Department of Space.

Earth Observation Satellite

- An Earth observation satellite or Earth remote sensing satellite is a satellite used or designed for Earth observation (EO) from orbit, including spy satellites and similar ones intended for non-military uses such as environmental monitoring, meteorology, cartography and others.
- The most common type are Earth imaging satellites, that take satellite images, analogous to aerial photographs; some EO satellites may perform remote sensing without forming pictures, such as in GNSS radio occultation.
- Starting with IRS-1A in 1988, ISRO has launched many operational remote sensing satellites.
- Today, India has one of the largest constellations of remote sensing satellites in operation.
- Currently, *thirteen* operational satellites are in Sun-synchronous orbit and *four* in Geostationary orbit.

Centers of Excellence for tribal welfare

In News

The Union Tribal Minister launched two **Centers of Excellence (CoE) for Tribal Welfare** in a

collaboration between Ministry of Tribal Affairs (MoTA) and Art of Living (AoL).

- Art of Living has a vast network of volunteers who will make this program successful. AoL is running 750 schools all over India.

Details

- First CoE in the field of training 10000 tribal farmers in Aurangabad district of Maharashtra on sustainable natural farming based on Go-Adharith farming techniques. Farmers will be helped in getting the Organic certification and the marketing opportunities will be made

available to them to make each of them Atmanirbhar Tribal Farmers.

- Second CoE in the field of 'Strengthening Panchayati Raj Institutions' in 5 districts covering 30 Gram Panchayats and 150 villages of Jharkhand.
- Strengthening of tribal PRIs will also help to educate them about their constitutional rights. This will empower the PRIs in matters relating to decision making and development of their community.
- These steps will fulfil the dream of Aatmnirbhar Bharat.

Mains Related Current Affairs

General Studies-I

Indian Heritage and Culture, History and Geography of the World and Society

Kamchatka Disaster

In News

An 'ecological disaster' is unfolding on a **black volcanic beach** of the Kamchatka Peninsula in the Russian Far East.

- Kamchatka is a UNESCO world heritage site.



Crisis

- The surfers on the Khalaktyrsky beach outside Petropavlovsk-Kamchatsky, had reported of burning eyes, throat ache, headache, fever and a fear of losing eyesight on emerging from the water.
- Then, millions of sea animals began to die in large numbers. Their bodies started to litter the

beach in the region. These included octopuses, seals, sea urchins, stars, crabs and fish.

Why this happening?

- Administrators has shown that **levels of phenols and oil compounds have spiked** into the sea water.
- While, satellite photos showing a river in **yellow colour** which is flowing in the area into the Pacific Ocean.
- Also, there are fears that **rocket fuel** stored in the military testing grounds may have leaked. There is a **training camp of the Russian military** upstream.
- Another theory being speculated is that ships carrying oil in the vicinity had leaked it into the sea water.

Rise in temperature

- Temperatures in 2020 on the **Antarctic Peninsula**, the northernmost tip of the Antarctic continent, have been the highest in nearly three decades.
- This was an alarming development since it could indicate that the ocean in the area was once again warming.

UNESCO World Heritage Site

- The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.
- This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, **adopted by UNESCO in 1972**.

Mission

- Encourage countries to sign the World Heritage Convention and to ensure the protection of their natural and cultural heritage.

- Encourage States Parties to the Convention to nominate sites within their national territory for inclusion on the World Heritage List.
- Encourage States Parties to establish management plans and set up reporting systems on the state of conservation of their World Heritage sites.
- Help States Parties safeguard World Heritage properties by providing technical assistance and professional training.
- Provide emergency assistance for World Heritage sites in immediate danger.
- Support States Parties' public awareness-building activities for World Heritage conservation.
- Encourage participation of the local population in the preservation of their cultural and natural heritage.
- Encourage international cooperation in the conservation of our world's cultural and natural heritage.

Criteria to select a World Heritage Site

- The site should contain most important natural habitat of biological diversity.
- It contains threatened species of Universal value in the point of conservation.
- It should be an outstanding example of ongoing biological and ecological processes.
- It should bring out the evolution and development of freshwater and Terrestrial coastal and marine ecosystems and communities of animals and plants.
- The site should be of outstanding examples to represent the history of the earth.
- It should have ongoing your logical processes that develop landforms, geomorphic and physiographic features.
- It should contain natural phenomenon of a static importance and natural beauty.
- This site should be associated with events that project Universal significance.

- It should be an example of traditional land use, sea use human settlement for human interaction with environment and has become vulnerable due to the impacts of Irreversible changes.
- It should be an outstanding example of architectural landscape that illustrates human history in significant stages.
- It should hold testimonies Of Cultural tradition
- it should exhibit developments in monumental Arts town planning and landscape design.
- It should be a Masterpiece of human creativeness.

Low pressure area

In News

A low-pressure area has formed over the **north Andaman Sea** and its neighbourhood. It is expected to have a landfall in north Andhra Pradesh.

- Fishermen have been asked not to venture into the **Gulf of Mannar, the Comorin sea and the Andaman sea.**

Low pressure area

- A low-pressure area, is a region where **the air pressure is lower than that of surrounding** locations.
- Low-pressure systems form under areas of wind divergence that occur in the upper levels of the atmosphere. The formation process of a low-pressure area is known as **cyclogenesis**.
- A low-pressure area is commonly associated with inclement weather, while a high-pressure area is associated with light winds and fair skies.
- Low-pressure areas are places where the **atmosphere is relatively thin**.
- Winds blow inward toward these areas. **This causes air to rise**, producing clouds and condensation.
- Low-pressure areas tend to be well-organized storms.

Equatorial Low Pressure Belt or 'Doldrums'

- Lies between 10°N and 10°S latitudes.

- Width may vary between 5°N and 5°S and 20°N and 20°S.
- This belt happens to be the zone of convergence of trade winds from two hemispheres from sub-tropical high-pressure belts.
- This belt is also called the Doldrums, because of the extremely calm air movements.
- The position of the belt varies with the apparent movement of the Sun.

Sub-Polar Low Pressure Belt

- Located between 45°N and S latitudes and the Arctic and the Antarctic circles (66.5° N and S latitudes).
- Owing to low temperatures in these latitudes the sub polar low pressure belts are not very well pronounced year long.
- On long-term mean climatic maps, the sub polar low-pressure belts of the northern hemisphere are grouped into two centers of atmospheric activity: the Iceland low and the Aleutian depression (Aleutian low).
- Such belts in the southern hemisphere surround the periphery of Antarctica and are not as well differentiated.

India Meteorology Department

- IMD is an agency of the Ministry of Earth Sciences of the Government of India.
- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.
- IMD is headquartered in Delhi and operates hundreds of observation stations across India and Antarctica.
- IMD is also one of the six Regional Specialised Meteorological Centres of the World Meteorological Organisation.
- It has the responsibility for forecasting, naming and distribution of warnings for tropical

cyclones in the Northern Indian Ocean region, including the Malacca Straits, the Bay of Bengal, the Arabian Sea and the Persian Gulf.

Dr APJ Abdul Kalam

In News

India gave a fitting tribute to India's former President Dr. A P J Abdul Kalam on the occasion of his Birth Anniversary today.



Avul Pakir Jainulabdeen Abdul Kalam

- Dr. Kalam was born on 15th October 1931.
- He was born and raised in Rameswaram, Tamil Nadu and studied physics and aerospace engineering.
- He was an Indian aerospace scientist and politician who served as the 11th President of India from 2002 to 2007.
- He spent the four decades as a scientist and science administrator, mainly at the DRDO and ISRO and was intimately involved in India's civilian space programme and military missile development efforts.
- He came to be known as the Missile Man of India for his work on the development of ballistic missile and launch vehicle technology.
- He also played a pivotal organisational, technical, and political role in India's Pokhran-II nuclear tests in 1998, the first since the original nuclear test by India in 1974.

- Kalam was elected as the 11th President of India in 2002 and widely referred to as the "People's President".
- He was a recipient of several prestigious awards, including the Bharat Ratna, India's highest civilian honour.
- While delivering a lecture at the Indian Institute of Management Shillong, Kalam collapsed and died from an apparent cardiac arrest on 27 July 2015, aged 83.

Kala Sanskriti Vikas Yojana

In News

The Ministry of Culture is implementing Kala Sanskriti Vikas Yojana (KSVY) through which cultural organisations are given financial assistance for the promotion of art and culture.

Details

- Kala Sanskriti Vikas Yojana (KSVY) is an umbrella scheme under Ministry of Culture for the promotion of art and culture in the country.
- It is a Central Sector Scheme. Purely funded by Government of India.
- The artists/organizations who have already been sanctioned grant under KSVY schemes are encouraged to conduct various components of the schemes such as virtual workshops on art & craft, lecture-cum-demonstrations, webinars, online programs/festivals etc. through virtual mode on social media handles like Facebook, YouTube etc.

KSVY has the following sub-schemes through which financial assistance is provided to cultural organizations:

- Scheme of Financial Assistance for Promotion of Art and Culture.
- Scheme of Financial Assistance for Creation of Cultural Infrastructure.
- Scheme for Safeguarding the Intangible Cultural Heritage.

Background

Due to pandemic, there has been a substantial impact on the performing arts and cultural sector with in-person exhibitions, events, and performances either cancelled or postponed.

Buldhana Pattern of water conservation

In News

Maharashtra's 'Buldhana Pattern' of water conservation' has won national recognition and the NITI Aayog is in the process of formulating National Policy on water conservation based on it.

Details

- Synchronisation of national highway construction and water conservation was achieved for the first time in Buldhana district, by using soil from the water bodies, nallas and rivers.
- This consequently lead to the increase in capacity of water storage across the water-bodies in Buldana district and it came to be known as 'Buldhana Pattern'.
- With this activity in Maharashtra, 225 lakh cubic metre of soil was used in National Highway construction and the resultant widening / deepening resulted in increase of 22,500 Thousand Cubic Metre (TMC) of water storage capacity with no cost to state government.

Tamswada Pattern

- 'Tamswada Pattern' of water conservation project taken up in Nagpur and Wardha district in which rain water harvesting, conservation and groundwater recharge works were done in order to increase the water storage capacity of natural water bodies situated in these two districts of Eastern Vidarbha.
- The pattern was being implemented in 60 villages Nagpur and Wardha district while the work already completed in 40 villages.

Traditional Water Conservation Methods

Kul

- Kuls are diversion channels that carry water from a glacier to village.
- They are the lifeline of people of Spiti valley of Himachal Pradesh and in Jammu too.
- Kul starts at the glacie.
- The Kul leads to the village where the water is stored in a circular water tank.
- The water is drawn from here are per the need of the village.

Bamboo Drip Irrigation System

- This system of water conservation and usage of stream and spring water is done using bamboo pipes.
- Practised in Meghalaya, its primary purpose is to irrigate plantations.
- This 200-year-old system involves 18-20 litres of water entering the bamboo pipe system every minute to irrigate the fields downhill.

Johads

- Johad, a crescent shaped small check dam built from earth and rock to intercept and conserve rainwater, was thus reinvented.
- This helps to improve percolation and increases groundwater recharge.
- By recharging the aquifer below the surface, Johads have helped increase agriculture in the area.
- Usage of Johads has also helped increase the flow of river Arvari, making it a perennial river now. It earlier used to dry off after the monsoon.

Zabo

- Zabo means impounding water. Known locally as the Ruza system, this system is a unique combination of water conservation with animal care, forests and agriculture.
- Mostly practised in Nagaland, Zabo is used to deal with a lack of drinking water supply.

- During monsoon, rainwater that falls on the hilltops is collected into the pond like structures that are carved out on the hillsides. The water is then passed onto cattle yards below from where the water enters the paddy fields rich in manure.

Eri

- One of the oldest water conservation systems in India, Eri (tank) of Tamil Nadu is still widely used around the State.
- The traditional water harvesting system Eri plays an important part in the agriculture.
- They have several advantages such as prevention of soil erosion, recharge of groundwater, and flood control.
- Eri can either be fed through channels that divert river water, or rain-fed ones. They are usually interconnected to balance the water in case of excess or lesser supply.

Zing

- It is found in Ladakh, are small tanks that collect melting glacier water. A network of guiding channels brings water from the glacier to the tank.

Kuhls

- They are surface water channels found in the mountainous regions of Himachal Pradesh. The channels carry glacial waters from rivers and streams into the fields.

Khadin

- Khadin is a water conservation system designed to store surface runoff water for the purpose of agriculture.
- It entails an embankment built around a slope, which collects the rainwater in an agricultural field.
- This helps moisten the soil and helps in preventing the loss of topsoil.
- Additionally, spillways are provided to ensure that excess water is drained off.
- This system of water conservation is common in the areas of Jaisalmer and Barmer in

Rajasthan. A dug well is usually made a bit further from Khadin to additionally take advantage of groundwater recharging that happens around the structure.

Heeng (Asafoetida) Cultivation

In News

Scientists at **CSIR-Institute of Himalayan Bioresource**, Palampur (IHBT), are on a mission to grow heeng in the Indian Himalayas.

- The first sapling has been planted in Himachal Pradesh's **Kwaring village in Lahaul valley** recently.
- India imports the Asafoetida, or heeng, pungent flavoured herb, **from Iran, Uzbekistan and Afghanistan**.

What is Asafoetida?

- Ferula asafoetida is a herbaceous plant of the umbelliferae family.
- It is a perennial plant whose oleo gum resin is extracted from its thick roots and rhizome.
- The plant stores most of its nutrients inside its deep fleshy roots.

Where is it commonly cultivated?

- Asafoetida is endemic to Iran and Afghanistan, the main global suppliers.
- It thrives in dry and cold desert conditions.
- It is very popular in India.
- Some European countries too use it for its medicinal properties.

How is India entering into heeng cultivation?

- Heeng is not cultivated in India.
- India imports about 1,200 tonnes of raw heeng worth Rs 600 crore from Iran, Afghanistan and Uzbekistan every year.

Timeline/ History

- Between 1963 and 1989, India once attempted to procure asafoetida seeds. However, there are no published results of the same.
- In 2017, CSIR-Institute of Himalayan Bioresource Technology, approached ICAR – National Bureau of Plant Genetic Resources (NBPGR) with an experimental project idea to cultivate heeng in the Indian Himalayas.
- For research, heeng seeds were imported from Iran and they remained in the custody of NBPGR.
- After acquiring all regulatory approvals from Indian Council of Agriculture Research (ICAR), six accessions of heeng (EC966538 with Import Permit-318/2018 and EC968466-70 with Import Permit-409/2018) were introduced by IHBT, who have been carrying out further R&D since 2018.
- At CSIR-IHBT, the seeds were studied, and then put to test to see if they would germinate under a controlled laboratory set-up.
- In June 2020, the CSIR institute inked an MoU with the agriculture ministry of Himachal Pradesh. Jointly, the project will be spearheaded over the next five years in the state.

Which regions offer favourable conditions for asafoetida cultivation in India?

- The first asafoetida sapling, grown at IHBT's Centre for High Altitude Biology, was planted in Kwaring village of Lahaul valley on October 15.
- The geo-climatic conditions required for cultivation of certain heeng varieties are available in India.
- The agriculture ministry has identified four locations in the valley and has distributed heeng seeds to seven farmers in the region.
- Asafoetida best grows in dry and cold conditions.
- The plant can withstand a maximum temperature between 35 and 40 degree, whereas during winters, it can survive in temperatures up to minus 4 degree. During extreme weather, the plant can get dormant.
- Regions with sandy soil, very little moisture and annual rainfall of not more than 200mm are considered conducive for heeng cultivation in India.

What are the benefits of asafoetida?

- A range of medicinal properties of heeng, including relief for digestive, spasmodic and stomach disorders, asthma and bronchitis.
- The herb is commonly used to help with painful or excessive bleeding during menstruation and pre-mature labour.
- Being an anti-flatulent, the herb is fed to new mothers.

Institute of Himalayan Bioresource Technology

IHBT established in 1983 is a constituent laboratory of Council of Scientific and Industrial Research. This institute located in Palampur, Kangra district, Himachal Pradesh is engaged in various advanced research aspects of Himalayan Bio-resources and modern biology.

Dam Rehabilitation and Improvement Project (DRIP)

In News

The Union Cabinet approved the Phase II and Phase III of the Dam Rehabilitation and Improvement Project (DRIP) which aims to strengthen 736 dams in 19 states, including those managed by Centre's Bhakra Beas Management Board (BBMB).

Aim

The aim of the project is to improve the safety and operational performance of selected dams across the country, along with institutional strengthening with system wide management approach.

Objectives

- To improve the safety and performance of selected existing dams and associated in a sustainable manner.
- To strengthen the dam safety institutional set-up in participating states as well as at central level

- To explore the alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams.

To achieve the objectives, DRIP has following components:

- Rehabilitation and improvement of dams and associated appurtenances
- Dam safety institutional strengthening in participating States and Central agencies
- Exploration of alternative incidental means at few of selected dams to generate the incidental revenue for sustainable operation and maintenance of dams.

Details

- 12 dams in Punjab, managed by the state government, are among the total dams identified for the project.
- The dams included in the project consist of those managed by the central agencies and the ones managed locally by the state governments concerned.
- The dams included were identified by the respective state governments.
- The World Bank (WB) and the Asian Infrastructure Investment Bank (AIIB) will provide assistance for the project.
- It will be implemented over a period of 10 years duration in two phases, each of six years duration with two years overlapping from April 2021 to March 2031.

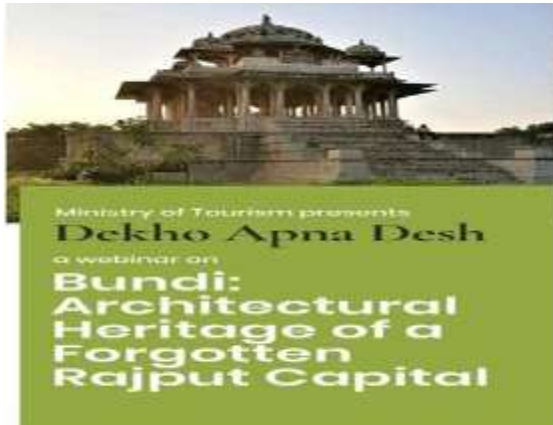
DRIP

- The project originally aimed to improve 223 dams in India. Later, the project aims to rehabilitate 736 dams.
- The project is being implemented by the Central Dam Safety Organization of Central Water Commission.
- India ranks third after China and USA in number of large dams. There are 5,264 large dams in India and 437 are under construction.

Bundi: Architectural Heritage of a Forgotten Rajput Capital

In News

The Ministry of Tourism's **Dekho Apna Desh** Webinar series titled "**Bundi: Architectural Heritage of a Forgotten Rajput Capital**" focused on Bundi, Rajasthan.



About Bundi

- Bundi erstwhile capital of **Hada Rajput** province known as Hadauti located in south-eastern Rajasthan, is one such place.
- Bundi is also known as City of stepwalls, blue city and also as **Chotti Kashi**.
- In ancient times, the area around Bundi was apparently inhabited by various local tribes, of which the Parihar Tribes, Meena was prominent.
- Later the region was governed by Rao Deva, who took over Bundi from Jaita Meena in 1242, renaming the surrounding area as Haravati or Haroti.

History

- Governed by Rao Deva for two decades, the Hadas of Bundi were the vassals of the Sisodias of Mewar and ruled by the title of Rao until 1569, when Emperor Akbar conferred the title of Rao Raja upon Rao Surjan Singh after the surrender of Ranthambore Fort and his submission.
- In 1632, Rao Raja Chhattar Sal became the ruler, he was one of the most valiant, principled and just kings of Bundi.

- He built the temple of Keshavarao at Keshoraipatan and Chathra Mahal at Bundi.
- He became king of Bundi after his grandfather Rao Ratan Singh, as his father Gopinath died while Ratan Singh was still ruling.
- Rao Chhattar Sal died fighting valiantly as the head of his Hada Rajput troops in the Battle of Samugarh in 1658 along with his youngest son Bharat Singh Rao Bhao Singh, the eldest son of Chhattar Sal succeeded his father to the throne of Bundi.

Post Mughal Period

- In 1804 Rao Raja Bishan Singh gave valuable assistance to Colonel Monson in his disastrous retreat before Holkar, in revenge for which the Maratha Empire and Pindaris continually ravaged his state and forced the kingdom to pay tribute up to 1817.
- Consequently, Bishan Singh made a subsidiary alliance with the British East India Company on 10 February 1818, which brought him under its protection.
- He was responsible for the creation of the pleasure palace of Sukh Niwas on the outskirts of Bundi.
- Maharao Raja Ram Singh grew up to be a much-respected ruler who initiated economic and administrative reforms and established schools for the teaching of Sanskrit.
- On the throne for 68 years, he was described as a grand specimen of the Rajput gentleman and "the most conservative prince in conservative Rajputana."
- At the time of the partition of India in 1947, the British abandoned their sovereignty over the princely states, which were left to decide whether to remain independent or to accede to the newly independent Dominion of India or to Pakistan.
- The ruler of the state of Bundi decided to accede to India, which later became the Union of India. This brought the internal affairs of Bundi under the control of Delhi.
- Bundi's last ruler signed the accession to the Indian Union on 7 April 1949.

Important and unique aspects

- Hoda Rajputs were fierce, fearless warriors often laying down their life at young age, fighting on behalf of their sovereign. Owing to this several times a Hoda child ascended the throne of Bundi. Therefore, the role of the royal queen, Diwan and of Dhai ma became very important in royal administrative and political affairs of Bundi.
- The City of Bundi thus grew outwards Taragarh hill.
- Garh Mahal became the focus and an imposing landmark on skyline of Bundi was visible from the valley below.
- Most houses in Bundi have Jharokhas with some screens on upper floors opening on to street, providing light and ventilation.
- Apart from enabling movement and connectivity, these streets also performed the important role as facades of settlement fabric of walled city.

Darwajas in Bundi can be classified as: -

1. Entrance gateways of Taragarh, the oldest darwajas
2. Four Darwajas of walled city
3. Darwajas of outer city wall
4. Darwajas on principal streets of walled city
5. small darwajas built

Water Architecture

- Best example of medieval Indian city exhibiting water harvesting methods adopted at settlement level as well as finest examples of water architecture.
- Location of Baoris and Kunds outside the walled city was also influenced by social considerations as access to baoris and kunds were located within walled city was controlled.
- Bundi was also known as Chotti Kashi owing to presence of over hundred temples within and around the hada capital.

- Despite being a Vassal State of Mughal empire, Hada rulers not only retained their hindu religious and cultural traditions but escalated their unflinching affiliation to them manifesting it in large number of temples built during four centuries of Hada hegemony.
- Temples constructed in early phase of Bundi's growth were in classical Nagara style, while in later phases new temple typologies emerged from amalgamation of architectural form of traditional haveli with the classical Nagara style.
- Jain temples formed third type of temple type constructed in an introvert form, integrating typical Jain temple features like serpentine Torna gateways at entrance, large cuboid opaque mass and central courtyard with and Nagara style shikars on its garbhagriha.
- A fourth temple type emerged in the form of raised or elevated temple. Absence of monumentality in their scale is a distinctive feature of temples in Bundi.
- The diversity in temple forms and liberty exercised in this creation departing from classical, established norms is indicative of freedom and involvement of local communities.

Architectural heritage of Bundi can be classified in six typologies: -

1) Garh (Fort)

- Taragarh

2) Garh Mahal (Royal Palace)

- Bhj Mahal
- Chattar Mahal
- Ummed Mahal

3) Baori (Step well)

- Khoj Darwaja ki Baori
- Bhawal di Baori

4) Kund (Stepped tank)

- Dhabhai ji ka Kund
- Nagar Kund & Sagar Kund
- Rani Kund

5) Sagar mahal (Lake Palace)

- Moti Mahal
- Sukh Mahal
- Shikar Burj

6) Chhatri (Cenotaph)

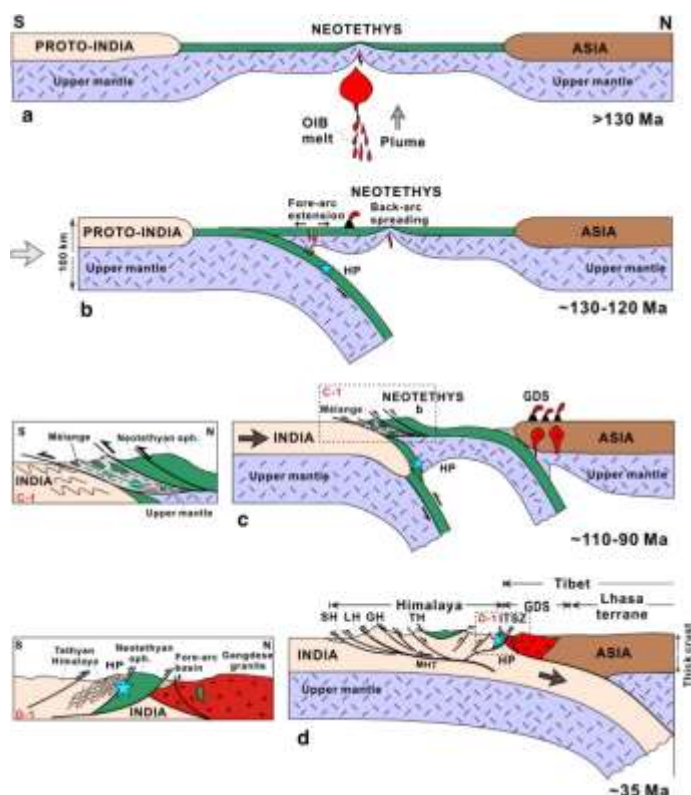
- Chaurasi

Indus Suture Zone (ISZ)

In News

The suture zone of the Himalayas or the Indus Suture Zone (ISZ) in the Ladakh region where Indian and Asian Plates are joined has been found to be tectonically active, as against current understanding that it is a locked zone.

- This could have major implications in terms of earthquake study, prediction, understanding the seismic structure of the mountain chains well as its evolution.



Details

- The suture zone of Himalaya that was conventionally thought to be locked is **tectonically active**.

- Scientists carried out the **mapping of the remote regions of Ladakh that forms the most hinterland part of the Himalaya**.

- The geologists observed that sedimentary beds are tilted and thrust broken, the rivers are associated with uplifted terraces, and the bedrock shows brittle deformation that occurred at much shallower depths.

- These deformed geological features were then dated in the laboratory at Dehradun using a technique called **Optically Stimulated Luminescence (OSL)** (method for carrying Luminescence dating of geological sediments) and data of seismicity and denudation rate reviewed.

- The combination of field and lab data suggested the region of the **Indus Suture Zone (ISZ) has been neo-tectonically active** since the last 78000-58000 years and a recent earthquake in 2010 of low magnitude 4.0 near the village of Upshi that occurred due to a thrust rupture.

- Himalaya were known to be made up of north dipping thrusts like the **Main Central Thrust (MCT)**, the **Main Boundary Thrust (MBT)**, and the **Main Frontal Thrust (MFT)**.

- As per the established models, all of these thrusts except MFT are locked.

Parampara Series 2020-National Festival of Music and Dance

In News

Vice President launches virtual festival of 'Parampara Series 2020-National Festival of Music and Dance'.

- This festival has been organized to coincide with the **World Day for Audio-visual Heritage**.
- 'Parampara' means 'tradition', the transmission of cultural treasure house from one generation to the next.

Details

- The 'Parampara Series 2020-National Festival of Music and Dance' is **organized by Natya Tarangini in partnership with the United Nations**.
- Natya Tarangini is organising the 'Parampara Series' continuously since past 23 years.
- The festival of music and dance make lives more fulfilling by rejuvenating and energising. They bring harmony into lives and nourish inner spirit by dispelling gloom and despair.
- India's diverse art forms of dance, music, and drama represent our common civilizational philosophy and values like harmony, unity and solidarity.
- There is also a distinct focus on devotion, spirituality and there is an entire gamut of expressions of nine 'Rasas' that constitute human existence.

General Studies-II

Governance, Constitution, Polity, Social Justice and International Relations

Babri Masjid demolition case

In News

A special court delivered the judgement in the 1992 Babri Masjid demolition case.

- In its verdict, the judge said the demolition wasn't pre-planned and was the handiwork of "unruly elements (arajak tattva)" among the Kar sevaks.
- The special court acquitted all 32 accused in the Babri Masjid demolition case after consulting the legal department.

Demolition of the Babri Masjid

- The demolition of the Babri Masjid (16th-century Babri Mosque in the city of Ayodhya, Uttar Pradesh) was illegally carried out on 6 December 1992 by a large group of activists of the Vishva Hindu Parishad and allied organisations.
- In Hindu tradition, the city of Ayodhya is the birthplace of Rama. In the 16th century a Mughal general, Mir Baqi, had built a mosque, known as the Babri Masjid at a site identified by some Hindus as Ram Janmabhoomi.
- The Archaeological Survey of India states that the mosque was built on land where a non-Islamic structure had previously existed.

A timeline:

- 1528: Babri Masjid built by Mir Baqi, commander of Mughal emperor Babur.
- 1885: Mahant Raghuraj Das files plea in Faizabad district court seeking permission to build a canopy outside the disputed structure. Court rejects the plea.
- 1949: Idols of Ram Lalla placed under central dome outside the disputed structure.
- 1950: Gopal Simla Visharad files suit in Faizabad district court for right to worship the idols of Ram Lalla.
 - Paramahansa Ramachandra Das files suit for continuation of worship and keeping the idols.
- 1959: Nirmohi Akhara files suit seeking possession of the site.
- 1961: UP Sunni Central Waqf Board files suit for possession of the site.
- Feb 1986: Local court orders the government to open the site to Hindu worshippers.
- Aug 1989: Allahabad HC orders status quo in respect of the disputed structure.
- Dec 6, 1992: Babri Masjid demolished.
- Dec 1992: Two FIRs filed in the case. One against unknown kar sevaks for demolition of the mosque. The other names BJP leaders L K Advani, M M Joshi and others for allegedly giving communal speeches before the demolition.
- Oct 1993: CBI files composite charge sheet accusing Advani and others of conspiracy.

- May 2001: Special CBI court drops proceedings against Advani, Joshi, Uma Bharti, Bal Thackeray and others.
- Nov 2004: CBI challenges before the Lucknow bench of Allahabad High Court the dropping of proceedings against BJP leaders on technical grounds. Court issues notices.
- May 2010: High court dismisses plea. Says no merit in CBI's revision petition.
- Sep 2010: In a 2:1 majority, HC rules three-way division of disputed area between Sunni Waqf Board, Nirmohi Akhara and Ram Lalla.
- May 2011: SC stays HC verdict on Ayodhya land dispute.
- Feb 2011: CBI moves Supreme Court against high court order in the mosque demolition case.
- Mar 2017: SC indicates it may consider reviving conspiracy charge against the BJP leaders in Babri Masjid demolition case.
 - SC suggests fresh attempts to resolve Ayodhya dispute.
 - Apr: SC favours time-bound completion of trial in the case and reserves order on CBI's plea.
 - SC restores criminal conspiracy charge against leaders including Advani, Joshi and Uma Bharti and clubs the trials in the matters pending against VIPs and kar sevaks.
- Nov 2019: SC grants entire disputed land in Ayodhya to deity Ram Lalla, directs govt to allot an alternative five-acre plot to Muslims to build mosque.
- Aug 2020: PM Narendra Modi conducts 'bhoomi puja' in Ayodhya, launches construction of Ram temple.
 - Supreme Court extends by a month the deadline for completion of trial in the Babri Masjid demolition case.
 - Sep 30: Special Judge S.K. Yadav delivers judgment in the mosque demolition case, all accused acquitted.

Annual Crime Report of India

In News

The National Crime Record Bureau (NCRB) has released its 2019 'Crime in India' report.

- The report indicated how the women in India are increasingly becoming unsafe.

Key Findings

- Crime against women increased 7.3 per cent from 2018 to 2019.
- Crimes against Scheduled Castes also went up 7.3 per cent from 2018 to 2019.
- In terms of absolute numbers, Uttar Pradesh reported the highest number of cases in both (against women and against SCs) these categories.
- Assam reported the highest rate of crimes against women (per lakh population), while Rajasthan had the highest rate of crimes against Scheduled Castes.
- A total of 4,05,861 cases of crime against women were registered during 2019, showing an increase of 7.3% over 2018.
- Majority of cases under crime against women under IPC were registered under 'cruelty by husband or his relatives' (30.9%), followed by 'assault on women with intent to outrage her modesty' (21.8%), 'kidnapping & abduction of women' (17.9%) and 'rape' (7.9%).
- The crime rate registered per lakh women population is 62.4 in 2019 in comparison with 58.8 in 2018.
- UP reported the highest number of crimes against women (59,853), accounting for 14.7 per cent of such cases across the country.
- It was followed by Rajasthan (41,550 cases; 10.2 per cent) and Maharashtra (37,144 cases; 9.2 per cent).
- Assam reported the highest rate of crime against women at 177.8 (per lakh population), followed by Rajasthan (110.4) and Haryana (108.5).

- Rajasthan reported the highest number of rapes with 5,997 cases, followed by UP (3,065) and Madhya Pradesh (2,485).
- In terms of rate of rape cases, Rajasthan was the highest at 15.9 (per lakh population), followed by Kerala (11.1) and Haryana (10.9).
- UP also had the highest number of crimes against girl children under the POCSO Act with 7,444 cases, followed by Maharashtra (6,402) and MP (6,053).
- The highest rate of these crimes were in Sikkim (27.1 per lakh population), MP (15.1), and Haryana (14.6).
- UP had the highest number of dowry cases (2,410), at a rate of 2.2 (per lakh population), followed by Bihar (1,120).
- According to the report, 150 acid attacks were reported in 2019, of which 42 took place in UP and 36 in West Bengal.
- The report, says a total of 45,935 cases were registered as crime against Scheduled Castes (SCs), showing an increase of 7.3% over 2018 (42,793 cases).
- Crime rate registered showed an increase from 21.2 (per lakh population) in 2018 to 22.8 in 2019.
- Crime head-wise cases revealed that simple hurt with 28.9% (13,273 cases) formed the largest chunk of cases of crimes/ atrocities against Scheduled Castes during 2019.
- It was followed by cases under SC/ST (Prevention of Atrocities) Act with 9.0% (4,129 cases), and cases under rape with 7.6% (3,486 cases).
- UP reported the most cases against Scheduled Castes – 11,829 cases, accounting for 25.8 per cent of the cases across the country.
- It was followed by Rajasthan (6,794 cases; 14.8 per cent) and Bihar (6,544; 14.2 per cent).
- However, the rate of such cases was highest in Rajasthan at 55.6 (per lakh population), followed by MP (46.7) and Bihar (39.5).

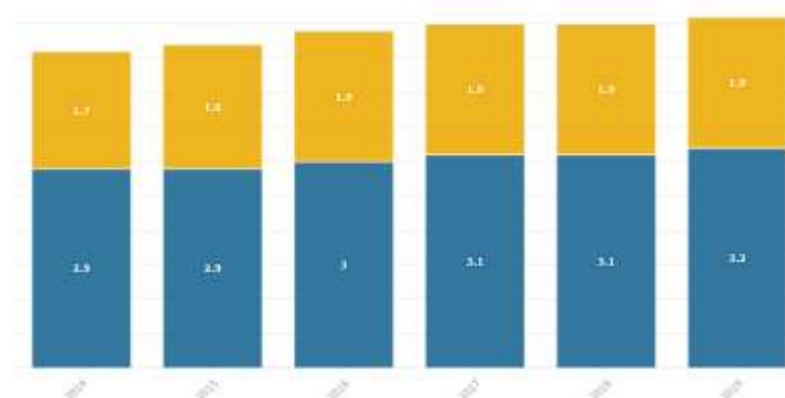
- Rajasthan also had the highest number of rapes against Dalit women (554), followed by UP (537) and MP (510).
- The rate of rape against Dalit women was highest in Kerala at 4.6 (per lakh population), followed by MP (4.5) and Rajasthan (4.5).

Cognizable crimes

- India recorded a 1.6% rise in the number of cognizable crimes between 2018 and 2019.
- These cognisable crimes include those covered under the Indian Penal Code (IPC) as well as those covered under various Special and Local Laws (SLL). While the first category saw a rise of about 3%, the number of cases under the second decreased by 0.6%.

In 6 years, number of cognisable crimes in India increased by 13%

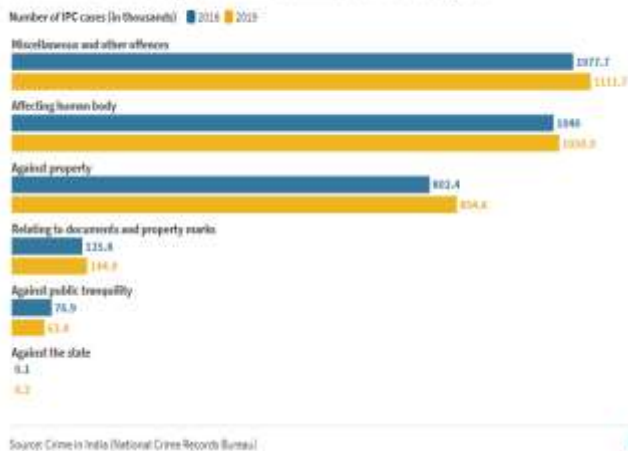
Number of registered cases ■ IPC ■ SLL



Sources: Crime in India (National Crime Records Bureau); Centre for Monitoring Indian Economy
IPC - Indian Penal Code; SLL - Special and Local Laws

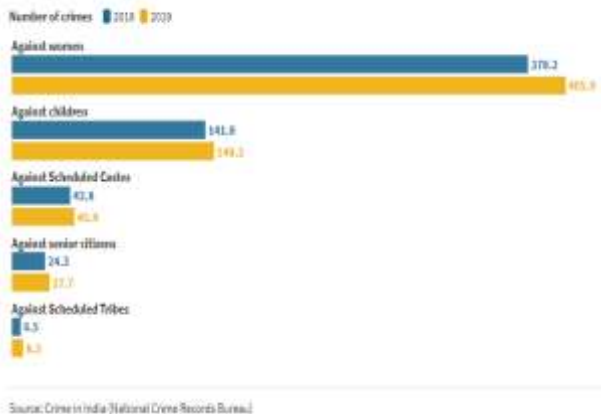
- Nearly every third case registered under the IPC in 2019, or about 1.1 million, was regarding offences affecting the human body such as murder, rape, causing death, kidnapping, etc.
- Offences against property, such as theft and criminal breach of trust, comprised about 26% or 0.9 million cases.
- Offences against property increased by 6.5% - it includes theft which increased by 8% and was the single most committed crime in India comprising 21% of all IPC crimes.

A look into different types of crimes committed in last two years



The crimes against women, children, senior citizens, and people belonging to the scheduled caste and scheduled tribe communities increased between 2018 and 2019 at varying degrees. Crimes against women increased by 7.3%.

Crimes against women and children increased by 7.3% and 4.5%

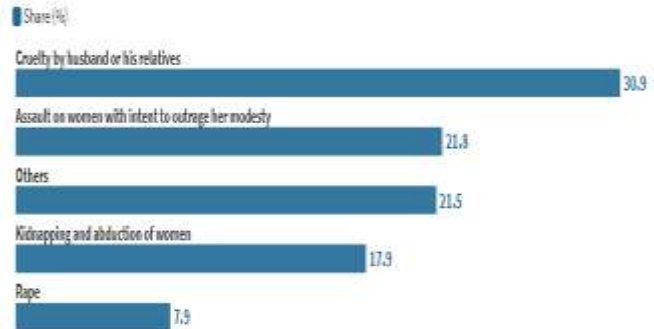


Cruelty by husband or his relatives was the single most committed crime against women in 2019, comprising 31% of all crimes against women.

- Rape comprised about 8% of crimes against women.

Rape comprised about 8% of crimes against women.

Crimes against women



Among crimes against children, kidnapping and abduction, and sexual offences were the two most committed crimes.

Crimes against children



Crimes against senior citizens



National Crime Records Bureau

- NCRB is an Indian government agency responsible for collecting and analysing crime data as defined by the Indian Penal Code (IPC) and Special and Local Laws (SLL).
- NCRB is headquartered in New Delhi and is part of the Ministry of Home Affairs (MHA).
- NCRB was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It was set up based on the recommendation of the Task force, 1985 and National Police

Commission, 1977 by merging the Directorate of Coordination and Police Computer (DCPC), Inter State Criminals Data Branch of CBI and Central Finger Print Bureau of CBI.

Evolution of NCRB

1986	NCRB Created
1987	Motor Vehicle Coordination software (Lost and Found)
1990	Commencement of training for Foreign Police Officers
1991	Portrait Building System (PBS) developed (Colour PBS in 2011)
1993	7 IIF forms finalized
1995	FACTS and CCIS implementation (Windows based CCIS in 2001 & FACTS-5 in 2005)
1999	Tatash software for matching of missing and dead persons
2003	Counterfeit Currency (FICN) Software released
2004	Common Integrated Police Application (CIPA)
2005	Organized Crime System software
2009	CCTNS Approval
2013	CCTNS Pilot Launch & CAS STQC certified
2014	Revised Proforma and software for Crime in India, Motor Vehicle Coordination System (MVCS) Online version
2015	Digital India Award - Silver Medal in Open Championship category (Digitization of Crime in India since 1986)
2017	Digital Police Portal launched

Time Use Survey (TUS)

In News

India's first Pan India time use survey was released by the **Ministry of Statistics and Programme Implementation**.

What is time use surveys?

- A time use survey measures the amount of time people spend doing various activities, such as **paid work, childcare, volunteering, and socialising**.
- The primary objective of a time use survey (TUS) is **to measure participation of men and women in paid and unpaid activities**.
- TUS is an important source of information on the time spent in unpaid caregiving activities, volunteer work, unpaid domestic service producing activities of the household members.
- It also provides information on time spent on learning, socialising, leisure activities, self-care activities.

- The United States has been doing one TUS annually since 2003.
- Australia conducted its first full-scale national survey in 1992, Canada has been doing

it since 1961.

- Germany, Austria, and Israel have also conducted these surveys.

Significance

The findings of these surveys are deemed to be helpful in drafting policies on poverty, gender equity and human development.

Key Findings

- It is a sample survey conducted between January and December 2019.
- The report provides data on the participation rate of Indians in different activities in a day and the average time they spend in those activities.
- The data, point out the fact that the large chunk of paid work is done by men, while unpaid work is largely done by women.
- The participation rate of men in paid employment — which includes jobs, farming, fishing, mining amongst other economic activities — is at 57.3 per cent, compared to women whose participation rate is only 18.4 per cent.
- Indian men also spend more time at paid work, spending on average 7 hours 39 minutes compared to the 5 hours 33 minutes spent by women.
- The unpaid work like domestic services for household members which includes cooking food, cleaning, or unpaid caregiving like looking after a dependent child or an adult, the participation of women is very high.
- 81.2 per cent women participate in unpaid domestic services spending an average 4 hours 59 minutes each day.
- The participation rate of men in domestic services is low at 26.1 per cent, and the amount of time they spend conducting this service is around 1 hour 37 minutes.
- Indians are not inclined towards participating in unpaid volunteer work.
- The report says that 91.4 per cent of men participated in social activities, spending two hours and 27 minutes each day.

- The participation rate for women is at 91.3 per cent, and they also spend less time compared to men, at two hours and 19 minutes.
- The report shows that only 2.7 per cent of Indian men participate as unpaid volunteers or trainees, or participate in other unpaid work. They spend 1 hour 42 minutes conducting that activity per day.
- The participation of women in volunteer work is lesser at 2 per cent, spending 1 hour 39 minutes.

National Sample Survey (NSS)

- The NSS is responsible for conduct of large-scale sample surveys in diverse fields on All India basis.
- Primarily data are collected through nation-wide household surveys on various socio-economic subjects, Annual Survey of Industries (ASI), etc.
- NSS collects data on rural and urban prices and plays a significant role in the improvement of crop statistics through supervision of the area enumeration and crop estimation surveys of the State agencies.

The NSS has four Divisions:

- Survey Design and Research Division (SDRD)

This Division, located at Kolkata, is responsible for technical planning of surveys, formulation of concepts and definitions, sampling design, designing of inquiry schedules, drawing up of tabulation plan, analysis and presentation of survey results.

- **Field Operations Division (FOD)**

The Division, with its headquarters at Delhi/Faridabad, is responsible for the collection of primary data for the surveys undertaken by NSS.

- **Data Processing Division (DPD)**

The Division, with its headquarters at Kolkata, is responsible for sample selection, software development, processing, validation and tabulation of the data collected through surveys.

- **Survey Coordination Division (SCD)**

This Division, located at New Delhi, coordinates all the activities of different Divisions of NSS.

Data Governance Quality Index Survey

In News

The NITI Aayog and Development Monitoring and Evaluation Office (DMEO) recently conducted the Data Governance Quality Index Survey.

- A Survey conducted by DMEO, Niti Ayog to assess different Ministries /Departments' performance on the implementation of Central Sector Schemes (CS) and Centrally Sponsored Schemes (CSS).

Key Findings

- Department of Fertilizers under the Ministry of Chemicals and Fertilizers has been ranked 2nd amongst the 16 Economic Ministries / Departments and 3rd out of the 65 Ministries / Departments with a score 4.11 on a scale of 5 on Data Governance Quality Index (DGQI),
- In this survey, an online questionnaire was prepared under six major themes of DGQI: Data Generation; Data Quality; Use of Technology; Data Analysis, Use and Dissemination; Data Security and HR Capacity and Case Studies.
- Weightages were assigned to the themes and sub-weightages to each question within every theme to arrive at final DGQI scores ranging between 0 to 5 for every scheme.
- To avoid straight-forward irrelevant comparisons, Ministries / Departments were classified in 6 (six) categories: Administrative, Strategic, Infrastructure, Social, Economic and Scientific.
- Questionnaire was then shared with Ministries / Departments, which are implementing CS / CSS schemes.

Central Sector Schemes (CS)

- They are entirely and directly funded and executed by the central government.
- The schemes are formulated by the Centre, based on subjects from the Union List.
- In these schemes, the financial resources are not shifted to states.

Centrally Sponsored Schemes (CSS)

- These are the schemes that are implemented by state governments.
- The cost of these schemes is borne on a shared basis in the ratio of 50:50, 70:30, 75:25 or 90:10.
- Under the cost ratio, the larger portion is always borne by the Centre.
- CSS is a system under which the centre assists the state government financially to get schemes implemented.

Development Monitoring and Evaluation Office

- DEMO was constituted in September 2015 by merging the erstwhile Program Evaluation Office (PEO) and the Independent Evaluation Office (IEO).
- It is an attached office under NITI Aayog.
- It is aimed at fulfilling the organization's monitoring and evaluation (M&E) mandate and building the M&E ecosystem in India.
- The organization is entrusted with development M&E functions including:
 - To monitor progress and efficacy of strategic and long-term policy and programme frameworks and initiatives to help innovative improvements, including necessary mid-course corrections.
 - To actively monitor and evaluate the implementation of programmes and initiatives, including the identification of the needed resources so as to strengthen the probability of success and scope of delivery.

The objectives of DMEO are:

- To enable data-driven policy making; to enable a culture of deep learning from regular self-evaluation in all the tiers of the government.
- To institutionalize rigorous tracking of performance metrics and comprehensive program evaluations.
- To strengthen the whole ecosystem to mainstream rigorous outcome monitoring and evaluation.
- To introduce and expand use of cutting-edge technologies and data analytical tools for real time monitoring of government programs.
- To provide data and tools to drive effectiveness and efficiency of government programs.
- To help identify weaknesses and bottlenecks for necessary course correction.

Swaminathan Commission

In News

Government starts implementing recommendations of Swaminathan Commission and is working towards doubling the income of farmers by 2022.

Swaminathan Report: National Commission on Farmers

- The National Commission on Farmers was constituted on November 18, 2004 under the chairmanship of Professor M.S. Swaminathan.
- The reports contain suggestions to achieve the goal of "faster and more inclusive growth" as envisaged in the Approach to 11th Five Year Plan.

The NCF is mandated to make suggestions on issues such as:

- A medium-term strategy for food and nutrition security in the country in order to move towards the goal of universal food security over time;
- Enhancing productivity, profitability, and sustainability of the major farming systems of the country;
- Policy reforms to substantially increase flow of rural credit to all farmers;

- Special programmes for dryland farming for farmers in the arid and semi-arid regions, as well as for farmers in hilly and coastal areas;
- Enhancing the quality and cost competitiveness of farm commodities so as to make them globally competitive;
- Protecting farmers from imports when international prices fall sharply;
- Empowering elected local bodies to effectively conserve and improve the ecological foundations for sustainable agriculture;

Some of the main recommendations include:

- Distribute ceiling-surplus and waste lands;
- Prevent diversion of prime agricultural land and forest to corporate sector for non-agricultural purposes.
- Ensure grazing rights and seasonal access to forests to tribals and pastoralists, and access to common property resources.
- Establish a National Land Use Advisory Service, which would have the capacity to link land use decisions with ecological meteorological and marketing factors on a location and season specific basis.
- Set up a mechanism to regulate the sale of agricultural land, based on quantum of land, nature of proposed use and category of buyer.

Narco and Polygraph tests

In News

The Uttar Pradesh government decided to conduct polygraph and narcoanalysis tests as part of the investigation into the alleged gangrape and murder in Hathras.

- The tests would be conducted on “all people on the accused and victim side”, apart from “police officers involved in the case and other persons related to the case”.

Polygraph Test

- **A polygraph test or lie detector test** is based on the assumption that physiological responses that are triggered when a person is lying are different from what they would be otherwise.
- Instruments like cardio-cuffs or sensitive electrodes are attached to the person, and variables such as blood pressure, pulse, respiration, change in sweat gland activity, blood flow, etc., are measured as questions are put to them.
- A numerical value is assigned to each response to conclude whether the person is telling the truth, is deceiving, or is uncertain.
- Such a test was first done in the 19th century by the Italian criminologist Cesare Lombroso, who used a machine to measure changes in the blood pressure of criminal suspects during interrogation.

Narcoanalysis Test

- **Narcoanalysis or truth serum**, involves the injection of a drug, sodium pentothal, which induces a hypnotic or sedated state in which the subject’s imagination is neutralised, and they are expected to divulge information that is true.
- The drug, referred to as “truth serum”, was used in larger doses as anaesthesia during surgery, and is said to have been used during World War II for intelligence operations.

Legal Aspects

In ‘**Selvi & Ors vs State of Karnataka & Anr’ (2010)**, a Supreme Court Bench, ruled that no lie detector tests should be administered “except on the basis of consent of the accused”.

- Bench also said that, those who want it to be done as volunteer, they must have access to a lawyer, and have the physical, emotional, and legal implications of the test explained to them by police and the lawyer.
- Bench also clear that the ‘Guidelines for the Administration of Polygraph Test on an Accused’ published by the National Human Rights Commission in 2000, must be strictly followed. The subject’s consent should be recorded before a judicial magistrate.

- **The results of the tests cannot be considered to be “confessions”**, because those in a drugged-induced state cannot exercise a choice in answering questions that are put to them.
- But bench mentioned that, any information or material subsequently discovered with the help of such a voluntarily-taken test can be admitted as evidence.
- The SC cited **Article 20 (3) or Right against self-incrimination** which states that no accused can be compelled to be a witness against himself.
- With reference to victims, especially of sexual offences, the Bench said that irrespective of the need to expedite the probe in such cases, a victim of an offence cannot be forced to undergo these tests as it would be “an unjustified intrusion into mental privacy and could lead to further stigma for the victim”.

In the D.K. Basu vs. State of West Bengal case, 1997, the SC ruled that involuntary administration of the polygraph and narcos test will amount to cruel, inhuman, and degrading treatment in the context of Article 21 or the Right to Life and Liberty.

- It may also be violative of **the Right to Privacy** which is a part of the **Right to Life**.
- **The Indian Evidence Act, 1871** does not admit the results of these tests as evidence.

Girls at risk of school dropout

In News

Haryana’s **Sonipat district** launches helpline for girls at risk of school dropout.

- It is an initiative to address socio-emotional challenges of children and increase school enrollment in Sonipat.

Aim

- The toll-free helpline (1800180135) aims to provide counselling to **children with mental health problems due to COVID-19**, counsel

parents threatening to deny access to school education due to gender bias and extend career guidance.

- It will also help parents who are migrants from States like UP and Bihar apply for admissions for their children after their families were displaced during the lockdown.

Background

- Union Ministry of Human Resources and Development issued the guidelines for schools to re-open from October 15.

Helpline team

- Five resource persons will operate the helpline.
- A pool of 60 psychologists, psychiatrists, NCERT- and CBSE-certified career and academic counsellors.
- Various school principals in the district.

Issue

- **Dropping out of school** or school closures due to pandemic **will have the potential of exacerbating cases of early marriage**.
- Statistics show that if girls are in school, the chances of marriage become much less and the longer they are in education, the longer they are able to delay marriage.
- During the 2004 tsunami, girls in Indonesia, India and Sri Lanka were forced into marriage with tsunami widowers.
- School closures during 2014 West Africa Ebola outbreak and 2015 earthquake in Nepal, too, resulted in a spurt in child marriages.
- Up to 2.5 million additional girls are expected to marry over the next five years as a result of the economic impacts of the COVID-19 pandemic. This is in addition to the 58.4 million child marriages that take place every five years.
- Online classes have proved to be very challenging for most students where power cuts are common,

internet data unaffordable and access to phones is limited.

Contempt of court

In News

A division bench of Gujarat High Court held Advocate **Yatin Oza** (the President of the Gujarat High Court Advocates Associations) guilty of **contempt of court in a suo motu contempt proceedings** initiated by the High Court against him.

Issue

- Mr. Oza had targeted the HC Registry and had questioned the very credibility of High Court Administration.
- Mr. Oza had made public allegations of maladministration of justice within the HC.

What is Contempt of court?

It is a concept that seeks to protect judicial institutions from motivated attacks and unwarranted criticism, and as a legal mechanism to punish those who lower its authority.

How did the concept of contempt come into being?

- The concept of contempt of court is several centuries old.
- In England, it is a common law principle that seeks to protect the judicial power of the king, initially exercised by himself, and later by a panel of judges who acted in his name.
- Violation of the judges' orders was considered an affront to the king himself.
- Over time, any kind of disobedience to judges, or obstruction of the implementation of their directives, or comments and actions that showed disrespect towards them came to be punishable.

What is the statutory basis for contempt of court?

There were pre-Independence laws of contempt in India. Besides the early High Courts, the courts of some princely states also had such laws.

- When the Constitution was adopted, contempt of court was made one of the restrictions on freedom of speech and expression.
- Separately, Article 129 of the Constitution conferred on the Supreme Court the power to punish contempt of itself.
- Article 215 conferred a corresponding power on the High Courts.
- The Contempt of Courts Act, 1971, gives statutory backing to the idea.

What are the kinds of contempt of court?

The law codifying contempt classifies it **as civil and criminal**.

- Civil contempt is committed when someone wilfully disobeys a court order, or wilfully breaches an undertaking given to court.
- Criminal contempt is more complex. It consists of three forms:
 - (a) words, written or spoken, signs and actions that "scandalise" or "tend to scandalise" or "lower" or "tends to lower" the authority of any court.
 - (b) prejudices or interferes with any judicial proceeding.
 - (c) interferes with or obstructs the administration of justice.

The punishment for contempt of court is simple imprisonment for a term up to six months and/or a fine of up to ₹. 2,000.

What is not contempt of court?

- Fair and accurate reporting of judicial proceedings will not amount to contempt of court.
- Nor is any fair criticism on the merits of a judicial order after a case is heard and disposed of.

Suo Moto Cognizance

- In law, suo motu or **sua sponte** describes an act of authority taken without formal prompting from another party.
- The term is usually applied to actions by a judge taken without a prior motion or request from the parties.
- A Suo Moto cognizance is a Latin term.
- **Article 32** of the Indian Constitution and **Article 226** of the Indian Constitution lay down the provisions for filing Public Interest Litigation (PIL) in Supreme Court and High Courts respectively. This has given rise to the court's power to initiate legal action on their cognizance of a matter.
- Suo Moto's power of supreme court has been provided **under Article 131** of the Indian Constitution.
- Suo Moto's actions by Indian courts are a reflection of judicial activism.

Nagorno-Karabakh region

In News

Battles raged between Armenian and Azerbaijani forces over the disputed Nagorno-Karabakh region.

- The battles began on September 28 in a long-simmering territorial dispute over Nagorno-Karabakh, an ethnic Armenian enclave that broke away from Azerbaijan in the 1990s.
- **Christian-majority Armenia** is in a military alliance of former Soviet states led by Russia, which has a permanent base in the country but has not shown any appetite for a military escalation of the conflict.
- Turkey is a loyal ally of **Azerbaijan, a fellow Muslim** and Turkic country, and has been accused of dispatching mercenaries from Syria and Libya to join the fighting.

Nagorno-Karabakh

- Nagorno-Karabakh is a disputed territory, internationally recognized as part of Azerbaijan,

but mostly governed by the Republic of Artsakh (formerly named Nagorno-Karabakh Republic), a de facto independent state with an Armenian ethnic majority established on the basis of the Nagorno-Karabakh Autonomous Oblast of the Azerbaijan Soviet Socialist Republic.

- Azerbaijan has not exercised political authority over the region since the advent of the Karabakh movement in 1988.
- Since the end of the Nagorno-Karabakh War in 1994, representatives of the governments of Armenia and Azerbaijan have been holding peace talks mediated by the OSCE Minsk Group on the region's disputed status.



Conflict

The present conflict began in 1988, when the Karabakh Armenians demanded that Karabakh be transferred from Soviet Azerbaijan to Soviet Armenia. The conflict escalated into a full-scale war in the early 1990s.

Nagorno-Karabakh War (1988–1994)

- The Nagorno-Karabakh War, also known as the Artsakh Liberation War in Armenia and Nagorno-Karabakh, was an armed conflict that took place in the late 1980s to May 1994, in the enclave of Nagorno-Karabakh in southwestern Azerbaijan, between the majority ethnic

Armenians of Nagorno-Karabakh backed by the Republic of Armenia, and the Republic of Azerbaijan.

- As the war progressed, Armenia and Azerbaijan, both former Soviet Republics, entangled themselves in a protracted, undeclared war in the mountainous heights of Karabakh as Azerbaijan attempted to curb the secessionist movement in Nagorno-Karabakh.

Border clashes (1994–2016)

- The 2008 Mardakert clashes began on 4 March after the 2008 Armenian election protests. It involved the heaviest fighting between ethnic Armenian and Azerbaijani forces over the disputed region of Nagorno-Karabakh since the 1994 ceasefire after the Nagorno-Karabakh War.
- Armenian sources accused Azerbaijan of trying to take advantage of ongoing unrest in Armenia. Azerbaijani sources blamed Armenia, claiming that the Armenian government was trying to divert attention from internal tensions in Armenia.
- Following the incident, on March 14 the United Nations General Assembly by a recorded vote of 39 in favour to 7 against adopted Resolution 62/243, demanding the immediate withdrawal of all Armenian forces from the occupied territories of Azerbaijan.

2020

- Further clashes near Tavush took place in July 2020. Thirteen Azeris, including one civilian, and five Armenians were killed.
- In a minor border skirmish on 16 September, one Armenian soldier was killed; five days later, an Azerbaijani soldier was killed.
- On 27 September, serious clashes in Nagorno-Karabakh re-erupted, leading to Armenia declaring martial law and mobilization.
- On the same day, Azerbaijan's Parliament declared a state of war against Armenia and

established curfews in several cities and regions following the clashes.

- In terms of casualties, the clashes were the worst since 2016 and caused alarm in the international community, with most international actors urging both sides to return to the table and to the United Nations Security Council condemning the resumption of hostilities.

Television Rating Points

In News

Mumbai Police said that police are looking into a scam about manipulation of TRPs (Television Rating Points) by rigging the devices used by the Broadcast Audience Research Council (BARC) India, which has the mandate to measure television audience in India.

What is TRP?

- TRPs represent how many people, from which socio-economic categories, watched which channels for how much time during a particular period. This could be for an hour, a day, or even a week.
- **India follows the international standard of one minute.**
- The data is usually made public every week.

Importance of rating

- On the basis of audience measurement data, ratings are assigned to various programmes on television.
- Television ratings influence the programmes produced for the viewers.
- Better ratings would promote a programme while poor ratings will discourage a programme.
- Incorrect ratings will lead to production of programmes which may not be really popular while good programmes may be left out.

What is BARC?

- It is an industry body jointly owned by advertisers, ad agencies, and broadcasting companies, represented by The Indian Society of

Advertisers, the Indian Broadcasting Foundation and the Advertising Agencies Association of India.

- It was created in 2010, the I&B Ministry notified the Policy Guidelines for Television Rating Agencies in India on January 10, 2014 and registered BARC in July 2015 under these guidelines, to carry out television ratings in India.

How is TRP calculated?

- BARC has installed “**BAR-O-meters**” in over 45,000 empanelled households.
- These households are classified into 12 categories under the **New Consumer Classification System (NCCS)**.
- While watching a show, members of the household register their presence by pressing their viewer ID button — every person in household has a separate ID — thus capturing the duration for which the channel was watched and by whom, and providing data on viewership habits across age and socio-economic groups.

How can TRP data be rigged?

If broadcasters can find the households where devices are installed, they can either bribe them to watch their channels, or ask cable operators or multi-system operators to ensure their channel is available as the “landing page” when the TV is switched on.

SVAMITVA scheme

In News

Prime Minister will launch the physical distribution of Property Cards under the SVAMITVA Scheme to **transform rural India and empower millions of people**.

- The Scheme is being implemented across the country in a phased manner over a period of four years and will cover around six lakh 62 thousand villages of the country.
- The program is currently being implemented in six states - Haryana, Karnataka, Madhya

Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand.

SVAMITVA scheme

- SVAMITVA Scheme is a Central Sector scheme.
- Launched in April 2020.
- Aims to provide the record of rights to village household owners in rural areas and issue Property Cards.
- The Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the scheme.
- In the States, the Revenue Department / Land Records Department will be the Nodal Department and shall carry out the scheme with support of State Panchayati Raj Department.
- The demarcation of rural abadi areas would be done using Drone Surveying technology.

Objectives

- To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- Creation of accurate land records for rural planning.
- Determination of property tax, which would accrue to the GPs directly in States where it is devolved or else, add to the State exchequer.
- Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- To support in preparation of better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps.
- To reduce property related disputes and legal cases.

Significance

It will pave the way for using property as a financial asset by villagers for taking loans and other financial benefits.

Conclusion

This is the first time ever that such a large-scale exercise involving the most modern means of technology is being carried out to benefit millions of rural property owners.

United Nations Still Birth Report

In News

The United Nations launched a first-ever report on stillbirths titled “A Neglected Tragedy: The Global Burden of Stillbirths”.

- The report is jointly released by the UN Children's Fund (UNICEF), the World Health Organization, the World Bank and the UN Department of Economic and Social Affairs.

Stillbirth

A still birth means a baby born with no signs of life at 28 weeks of pregnancy.

Key Findings

- A stillborn baby is delivered every 16 seconds, which translates into nearly two million infants over the course of a year that never take their first breath.
- 84 percent of stillbirths occur in low and lower-middle income countries in 2019.
- The stillbirths remain a challenge for high-income countries, where a mother's level of education is one of the greatest drivers of inequity, and ethnic minorities may lack access to sufficient quality health care.
- The report warns that the COVID-19 pandemic will likely cause a further rise in the number of stillbirths over the next 12 months.
- A pandemic-induced 50-percent reduction in health services, could cause nearly 200,000 additional stillbirths in the upcoming year in 117 low-and middle-income countries.
- Poor quality of pregnancy and delivery care, a lack of antenatal and intrapartum services and

weak nursing and midwifery workforces are responsible for most of these occurrences.

- The report suggests that even before the pandemic, few women in low-and middle-income countries received timely, high-quality care to prevent stillbirths, with coverage ranging from less than 2 percent to only 50 percent in eight important maternal health interventions, including C-sections, malaria prevention and pregnancy hypertension management.
- Despite advances in health services from 2000 to 2019, the annual stillbirth reduction rate was just 2.3 percent, compared with a 2.9-percent reduction in neonatal mortality, and 4.3 percent in mortality among children aged one to 59 months.

Way forward

The report suggests that a sound investment is required in order to reduce the stillbirth rate.

National Commission for Protection of Child Rights

In News

The Supreme Court sought a response from the National Commission for Protection of Child Rights (NCPCR), to its request to eight States to “produce” children living in care homes for their “immediate repatriation” with their families.

- Eight States: Tamil Nadu, Andhra Pradesh, Telangana, Mizoram, Karnataka, Kerala, Maharashtra and Meghalaya. These States combinedly have 1.84 lakh children in care homes.
- This accounts for over 70% of the children in care homes.
- These States combinedly have 1.84 lakh children in care homes.

Supreme Court

- The court had directed **juvenile** authorities to proactively consider children should be kept in the child care institutions with the best interest, health and safety concerns.
- The court wondered whether the NCPCR could issue such general directions to the States

without considering the education, health, safety of the children, the consent of their parents and their economic situation.

Background

- **Amicus curiae** said the NCPDR direction violated the **Juvenile Justice Act of 2015**.
- The pandemic would make a child more vulnerable to domestic abuse.

Amicus curiae is someone who is not a party to a case who assists a court by offering information, expertise, or insight that has a bearing on the issues in the case. The phrase amicus curiae is legal Latin.

Significance

The court is **suo motu** monitoring the condition and welfare of children placed in care homes across the country during the pandemic.

In law, **Suo motu** describes an act of authority taken without formal prompting from another party. The term is usually applied to actions by a judge taken without a prior motion or request from the parties.

Care Home

- It is a place where the children being taken care for those who are orphans/abandoned children/children hailing from downtrodden/financially unstable families.
- If there is any child who is either being brought up by a single parent or comes from a family which is not able to bring up the child properly, then that child can avail the facilities of a care home.

National Commission for Protection of Child Rights

- NCPDR is a statutory body established by an Act of Parliament, the Commission for Protection of Child Rights (CPCR) Act, 2005.
- The Commission works under the aegis of Ministry of Women and Child Development.
- The Commission began operational on 5th

March, 2007.

- The Commission is mandated under section 13 of CPCR Act, 2005 "to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and the UN Convention on the Rights of the Child."
- As defined by the commission, child includes person up to the age of 18 years.

Report on RTI

In News

A report card brought out by the **Satark Nagrik Sangathan** and the **Centre for Equity Studies** to mark the **15th anniversary of the Right to Information (RTI)**.

- More than 2.2 lakh cases are pending at the **Central and State Information Commissions**, which are the final courts of appeal under the transparency law.

Key Findings

- The increasing backlog is exacerbated by the fact that most Commissions are functioning at reduced capacity.
- Maharashtra had the highest number of pending appeals, with over 59,000 cases, followed by Uttar Pradesh (47,923) and the CIC (35,653).
- At the current rate of disposal, the Odisha Commission would take more than seven years to dispose of all pending complaints.
- Odisha is functioning with just four commissioners, while Rajasthan has only three.
- Jharkhand and Tripura have no commissioners at all.
- The Central Information Commission (CIC) also has been headless since August. The CIC has no chief, and only five commissioners.
- Under the law, every commission should have a chief and up to 10 commissioners.
- The analysis also found that government officials face hardly any punishment for violating the law.

- Analysing data from 16 commissions in 2019-20, report found that penalties were imposed in only 2.2% of cases that were disposed of.
- Out of almost 90,000 cases disposed of by the 16 commissions between April 2019 to July 2020, show cause notices were issued in more than 15,700 cases, and penalties imposed in 1,995 cases.
- Gujarat accounted for more than 9,000 show cause notices, but only 163 penalties.
- Even as the backlog of appeals/complaints has been steadily increasing and currently stands at more than 36,500 cases in case of CIC as per the report.

Consequences

- Non-imposition of penalties in deserving cases by commissions sends a signal to public authorities that violating the law will not invite any serious consequences.
- This destroys the basic framework of incentives built into the RTI law and promotes a culture of impunity.

RTI

- Right to Information Act 2005 mandates timely response to citizen requests for government information.
- It is an initiative taken by Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions to provide a— RTI Portal Gateway to the citizens for quick search of information on the details of first Appellate Authorities, PIOs etc. amongst others, besides access to RTI related information/disclosures published on the web by various Public Authorities under the government of India as well as the State Governments.

Objective of the Right to Information Act:

- The basic object of the Right to Information Act is to empower the citizens, promote transparency and accountability in the working of

the Government, contain corruption, and make our democracy work for the people in real sense.

- It goes without saying that an informed citizen is better equipped to keep necessary vigil on the instruments of governance and make the government more accountable to the governed.
- The Act is a big step towards making the citizens informed about the activities of the Government.

Central information commission

- The Act provided for the constitution of the Central Information Commission (CIC) to be responsible for the implementation of the Act, exercising powers conferred on it under Section 18 of the Act.
- The CIC, under this Section, consists of one Chief Information Commissioner, who will head the Commission, and such number of Central Information Commissioners, as may be deemed necessary, but not exceeding ten.
- On 26 October 2005, Mr. Wajahat Habibullah became India's first Chief Information Commissioner.
- Under the CIC, the Chief Information Commissioner enjoys complete financial and administrative powers of a Department of the Government of India except in matters relating to the creation of posts, re-appropriation and writing-off losses for which it needs the specific concurrence of the Ministry of Finance.
- The general superintendence, direction and management of the affairs of the Commission are vested in the Chief Information Commissioner, who is assisted by the Information Commissioners.

State information commission

- The State Information Commission is constituted by the State Government with one State Chief Information Commissioner (SCIC) and not more than 10 State Information Commissioners (SIC) to be appointed by the Governor.
- The Commission and commissioners exercises its powers without being subjected to any other authority under RTI act 2005.
- The Appointments Committee is headed by the Chief Minister including the Leader of the

Opposition in the Legislative Assembly and one Cabinet Minister nominated by the Chief Minister.

- The qualifications for appointment as SCIC/SIC shall be the same as that for Central Commissioners.
- The Central Information Commission/State Information Commission has similar duties but at central level and jurisdictions.
- Have powers of Civil Courts similar to CIC such as – summoning and enforcing attendance, receiving evidence on affidavit; requisitioning public records, issuing etc.

Gujarat Disturbed Area Act (Amendment) bill, 2020

In News

President has given his assent to a Bill passed by the Gujarat Assembly last year, which made some important amendments to The Gujarat Prohibition of **Transfer of Immovable Property and Provisions of Tenants from Eviction from Premises** in Disturbed Areas Act, a controversial law that is popularly known as the '**Disturbed Areas Act**'.

What is the Disturbed Areas Act?

- Under the Disturbed Areas Act, a district Collector can notify a particular area of a city or town as a “disturbed area”.
- This notification is generally done based on the history of communal riots in the area.
- The transfer of immovable property in the disturbed area can take place only after the Collector expressly signs off on an application made by the buyer and the seller of the property.
- Violation of the Act's provisions invites imprisonment and a fine.
- The state government claims it is aiming to check **communal polarisation** of various parts of the state through the Act.

Why did the government amend the Act?

- The Bill to amend the Act was brought in after complaints were received from MLAs and other people about individuals who had skirted the provisions of the Act by taking advantage of legal loopholes in it.
- It was argued that this could potentially lead to the communal polarisation of a particular locality.
- In the earlier version of the Act, the district Collector had to ensure, on the basis of an affidavit by the seller, that she/he had sold the property of her/his own free will, and that she/he had got the fair market price for it.
- There were reports of anti-social elements selling and buying properties after either threatening people or luring them with higher prices, in areas marked as “disturbed”.
- It was reported that, these elements had got transfers done even without the Collector's prior permission by getting the transfer deed registered under the provisions of The Registration Act, in which the Collector's prior sanction under The DA Act was not required.
- This had resulted in clustering or polarisation of localities.
- To plug such loopholes, and to increase the punishment for the violation of the Act as deterrence, the amendment Bill was presented and passed in the Gujarat Assembly in July last year.

What are the key provisions in the Amended Act?

- The amended Act gives the Collector more powers to ascertain if there is a likelihood of “polarisation” or “improper clustering” of persons belonging to a particular community, thus disturbing the demographic equilibrium in the area. Also, the state government is now authorised to review a decision taken by the Collector.
- A provision has been made for the creation of a special investigation team (SIT) or committee to probe these aspects. In municipal corporation areas, the SIT will comprise the concerned

Collector, Municipal Commissioner, and Police Commissioner as members. In areas other than municipal corporations, the SIT will have the Collector, Superintendent of Police, and Regional Municipal Commissioner as members.

- The amended Act enables the state government to form an advisory committee that will advise it on various aspects of the DA Act, including adding new areas to the 'disturbed areas' list.

- The amendment has added a provision to the original Act that gives the state government supervisory authority to review the Collector's decision related to the Act, even if there is no appeal filed against the same.

- To check the registration of transfer of properties in disturbed areas without the Collector's prior approval, the amended Act has a provision to enlarge the scope of the term 'transfer', and include transfer of right, title or interest in or over such property in disturbed areas by way of sale, gift, exchange, and lease. To achieve this goal, the Act has amended the Registration Act under which no property in disturbed areas can be registered without prior sanction of the Collector.

- Redevelopment of the property is allowed only if it is for the owner's purpose. But if the owner is planning to bring new people on the redeveloped property, she/he has to take the permission of the Collector.

- The provisions of the Act will not be applicable to the government's rehabilitation schemes in a disturbed area, where it resettles displaced people.

- As per the government, earlier only those areas which had witnessed (communal) riots would be notified as 'disturbed areas'. However, now, the government can notify any area as 'disturbed area' where it sees the possibility of a communal riot, or where it sees the possibility of a particular community's polarisation.

What are the penal provisions for violation in the amended Act?

- The punishment for the violation of the Act was earlier imprisonment for six months and fine up to Rs 10,000.
- The amendment has increased the punishment to imprisonment between three and five years.
- The fine has also been increased to Rs 1 lakh, or 10% of the jantri rate (ready reckoner of property prices in different parts of the state) of the property, whichever is higher.

Which are the areas where the DA Act is currently applicable in Gujarat?

The DA Act is applicable in Ahmedabad, Vadodara, Surat, Himmatnagar, Godhra, Kapadvanj and Bharuch.

United Nations Relief and Works Agency (UNRWA)

In News

India has contributed one million dollars to the United Nations Relief and Works Agency (UNRWA) for Palestine Refugees in Near East, who have been facing extreme challenges due to the COVID-19 pandemic.

- This aid will support the Agency's programmes and services, including education, health care, relief and social services.

Details

- India's support for the Palestinian cause is an integral part of the nation's foreign policy.
- India shall continue supporting the UNRWA's activities in providing vital services and necessary humanitarian aid to Palestinian refugees.
- UNRWA has been facing a huge budgetary deficit and with an overwhelming majority of the 5.6 million refugees living under poverty line, the ongoing pandemic has broken the backbone of the basic infrastructure in the area they live.
- India has also sent medicines and other supplies to the Palestinian National Authority to help in dealing with the COVID-19 situation.

UNRWA and India

- India increased its annual financial contribution to UNRWA from USD 1.25 million in 2016 to USD 5 million in 2018 and 2019.
- It had also contributed USD 2 million to the agency in May 2020 which brings the total contribution for this year to USD three million so far.
- During a Virtual Ministerial Pledging Conference for UNRWA held on June 23 2020, India had announced that it will contribute USD 10 million US to UNRWA over the next two years.

India-Palestine development partnership

India is currently funding eight on-going developmental projects, including:

- Building a 215 Bed Super Specialty Hospital in Bethlehem
- Information Technology Park
- National Printing Press
- Turathi-Women Empowerment Project
- Diplomatic Training Institute
- Three schools in various governorates in Palestinian Territories

UNRWA

- It is a United Nations agency established by the General Assembly in 1949 and mandated to provide assistance and protection to some 5.6 million Palestine refugees registered with UNRWA across its five fields of operation.
- Its mission is to help Palestine refugees in Jordan, Lebanon, Syria, West Bank, including East Jerusalem and the Gaza Strip achieve their full human development potential, pending a just and lasting solution to their plight.
- UNRWA services encompass education, health care, relief and social services, camp infrastructure and improvement, protection, and microfinance among Palestinian refugees.

Definition

Palestine refugees are "persons whose regular place of residence was Palestine during the period 1 June 1946 to 15 May 1948, and who lost both home and means of livelihood as a result of the 1948 conflict."

Originalism

In News

US Supreme Court nominee Amy Coney Barrett, who is widely expected to be confirmed by Republican lawmakers before the November 3 election, has described "originalism" as her legal philosophy.

Amy Coney Barrett

Barrett, is slated to be the third judge to be appointed by President Donald Trump to the country's 9-member top court– where justices can potentially serve for life.

Details

- Originalism means interpreting the country's Constitution as per the intentions of its 18th-century founding leaders.
- In legal philosophy, this theory prescribes that while resolving disputes, judges should interpret the constitution as it was understood at the time it was ratified, irrespective of whether they personally agree or disagree with the outcome of a case decided this way.
- According to originalists, the meaning of the constitution is fixed at the time of its framing, either in the form of the meaning of the words used, or the intentions of the drafters. The job of the court is to stick to this original meaning.
- The word 'originalism' was coined in the 1980s, and has since been popular among US conservatives, who have sought to promote judicial restraint on the country's federal courts.
- Adherents of originalism believe that social change should be brought about by new laws made by elected representatives, and not through judicial activism, in which judges make new interpretations of the constitution.

'Living constitution' theory

- The legal philosophy which is said to be the opposite of originalism is 'living constitution' or 'modernism'.
- This theory, espoused by likes of the late Justice Ginsburg, believes that the constitution should be updated with times to encompass changing societal needs.

Krishi Upad Mandi (Amendment) Bill 2020

In News

Chhattisgarh Assembly passed an amendment Bill to invalidate the Centre's recently-notified agriculture legislations in one day session.

- The Assembly passed the Chhattisgarh Krishi Upad Mandi (Amendment) Bill 2020. It gives strength to the state government:
 - To regulate all agricultural produce markets
 - Introduces a new concept of deemed markets which includes cold storages and silos
 - Makes provision for establishment of an electronic trading place under the state control
 - Makes it mandatory for a purchaser to submit his records and stocks for inspection
 - Introduces jail term extending upto six months for violation of the legislation

Details

- The state government has introduced the concept of deemed market and given state agencies control over these. Deemed markets would include cold storage, silos, warehouse, electronic trading and transaction platforms.
- With the amendment, the state government hopes to limit the entry of any corporate or private entity as it would control all these operations.
- If a private entity enters into agreement with farmers, it would have to submit its accounts and stocks to state scrutiny.
- Another amendment has also given the state government the power to have an electronic

trading platform where the farmers of the state or another state can buy or sell their agricultural produce. This neutralises the Centre's provision of agriculture trade without boundaries.

- The state government may, establish an electronic trading platform for the sale of notified agriculture produce, farmer/Seller should sell his produce to the local market as well as other markets of the state and traders of other states through a transparent auction process on the basis of quality to get better price and timely online payment.

Why were the farm bills passed?

The farm bills were passed:

- To Spilt the monopoly of government-manage mandis. It also passed to permit farmers to sell directly to private buyers.
- To give a legal framework for farmers to enter into written contract with organization and produce for them.
- To allow agri-businesses to stock food articles. To remove the government's ability to thrust restrictions arbitrarily.

General Studies-III

Technology, Economic Development, Bio-diversity, Environment, Security and Disaster Management

Partnership for Maternal, Newborn & Child Health (PMNCH)

In News

The Accountability Breakfast 2020, held on 29 September during the UN General Assembly, will focus on securing global accountability for protecting women's, children's and adolescents' health and rights during the COVID-19 crisis and beyond.

- The event was hosted by **The Partnership for Maternal, Newborn & Child Health (PMNCH)**,

White Ribbon Alliance (WRA) and Every Woman Every Child (EWEC).

- The event was build on outcomes from the recent “**Lives in the Balance**” **COVID-19 summit**.
- The Accountability Breakfast aims to convert talk into action for the health and rights of women, children and adolescents.



Indian Government Initiatives during Covid-19 Pandemic:

- Government's policy of no denial for essential services, like-**Reproductive Maternal Newborn, Child and Adolescent Health (RMNCAH), Tuberculosis, chemotherapy, dialysis** and healthcare of the elderly, irrespective of the COVID status.
- The free testing and treatment for COVID across government health facilities and the inclusion of COVID in the medical conditions covered under the **Ayushman Bharat – PM JAY** insurance package.
- Government is now following a **zero-tolerance approach** for service denial to pregnant women and their newborn babies.
- Last year, “**Safe Motherhood Assurance (SUMAN)**” initiative was also launched.
- Government have been trying to utilize multiple contact points throughout the antenatal and childbirth period to help women make informed decisions around safe motherhood practices, choice of birth companion, identifying referral transport and post-partum contraception.

- Another important step towards **universalization of skilled birth care**, “is making available adequate number of nurse practitioners in India”.
- Improving the maternal and child health and their survival are central to the achievement of national health goals under the **National Health Mission (NHM)**. SDG Goal 3 also includes the focus on reducing maternal, newborn and child mortality.

Reproductive Maternal Newborn, Child and Adolescent Health (RMNCAH+A)

- It was launched in 2013 to influence the key interventions for reducing maternal and child morbidity and mortality.
- The RMNCH+A strategy promotes links between various interventions across thematic areas to enhance coverage throughout the lifecycle to improve child survival in India. The “plus” within the strategy focuses on:
 - Inclusion of adolescence as a distinct life stage within the overall strategy.
 - Linking maternal and child health to reproductive health and other components like family planning, adolescent health, HIV, gender, and preconception and prenatal diagnostic techniques.
 - Linking home and community-based services to facility-based services.
 - Ensuring linkages, referrals, and counter-referrals between and among various levels of health care system to create a continuous care pathway, and to bring an additive /synergistic effect in terms of overall outcomes and impact.

Safe Motherhood Assurance (SUMAN)

- It is an initiative of Ministry of Health & Family Welfare popularly known as Surakshit Matritva Aashwasan (SUMAN).
- It focuses on assured delivery of maternal and newborn healthcare services encompassing wider access to free and quality services.
- All Pregnant Women/Newborns visiting public health facilities are entitled to free services provided under the SUMAN initiative.

Partnership for Maternal, Newborn & Child Health (PMNCH)

- PMNCH is the world's largest alliance for women's, children's and adolescents' health (WCAH), bringing together over 1,000 partner organizations across 192 countries.
- PMNCH was launched in September 2005.
- PMNCH seeks to achieve universal access to comprehensive, high-quality reproductive, maternal, newborn and child health care.

The White Ribbon Alliance for Safe Motherhood

- WRA is a nonpartisan, non-profit and non-governmental membership organization that aims to decrease maternal and newborn death globally.
- White Ribbon Alliance formed because the voices of women at risk of dying in childbirth were not being heard.
- Founded in 1999 and same year it came to India as WRA India
- Headquarters: Washington, D.C., USA

'Every Woman Every Child' (EWEC) Movement

- It was launched by the United Nations during the United Nations Millennium Development Goals Summit in September 2010.
- Every Woman Every Child is an unprecedented global movement that mobilizes and intensifies international and national action by governments, the private sector, and civil society to address the major health challenges facing women, children, and adolescents around the world.
- The movement puts into action the Global Strategy for Women's, Children's and Adolescents' Health, which presents a road-map to ending all preventable deaths of women, children and adolescents within a generation and ensuring their well-being.
- The three overarching objectives of the Global Strategy are **Survive, Thrive and Transform**.

Cat Que virus

In News

In a study, scientists have noted the presence of antibodies against the Cat Que virus (CQV) in two human serum samples.



About the study

- The presence of the Cat Que virus has been largely reported in Culex mosquitoes in China and in pigs in Vietnam.
- For the study, 1020 human serum samples that showed acute febrile illness during 2014-2017 were collected. Of these samples, the majority (806) were collected from Karnataka, followed by Maharashtra (116), Kerala (51), Madhya Pradesh (20) and Gujarat (27).
- All these samples, however, were found to be negative for CQV when subjected to the real-time RT-PCR test.
- However, antibody positivity was recorded in two samples that were tested for the presence of antibodies. These two samples were taken from Karnataka in 2014 and 2017.

Why was this study undertaken?

The study, was undertaken to develop diagnostic tests for CQV prompted by the spread of similar species of Culex mosquitoes in India.

What is the Cat Que virus?

- For CQV, domestic pigs are considered to be the primary mammalian hosts.
- Antibodies against the virus have been reported in swine reared locally in China, which indicates that the virus has formed a “natural cycle” in the local area and has the ability to spread in pigs and other animal populations through mosquitoes.
- CQV belongs to the Simbu serogroup and infects both humans and economically important livestock species.
- It was first isolated in 2004 from mosquitoes during the surveillance of arbovirus activity in northern Vietnam.

How can humans get infected?

- Humans can get infected through mosquitoes.
- Other viruses that belong to the same genus as CQV and are similarly transmitted through mosquitoes include the **Cache valley virus** that can cause meningitis, **the La Crosse virus** that can cause paediatric encephalitis, **the Jamestown Canyon virus** that causes Jamestown Canyon encephalitis and **the Guaroa virus** that causes febrile illness.

Aerial Seeding

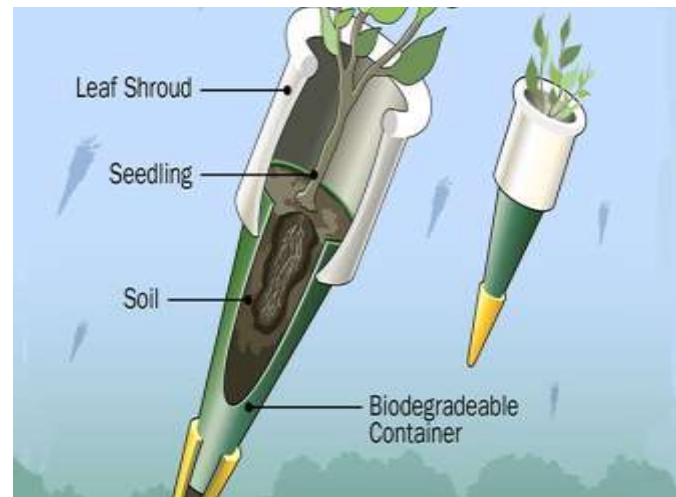
In News

The Indian Navy has partnered with Greater Visakhapatnam Municipal Corporation (GVMC) to undertake Aerial Seeding at Visakhapatnam.

- The initiative is aimed to enhance the green cover in and around Visakhapatnam.
- This initiative is taken to plant saplings in order to **prevent soil erosion, global warming and to protect environment.**

Details

- Two UH3H helicopters with 2 tons of seed balls undertook the aerial seeding.
- Naval helicopters will be airdropping a total of 50,000 seed balls weighing approx. 6.25 tonnes in 5 locations identified by GVMC.



What is aerial seeding?

Aerial seeding is a technique of plantation wherein seed balls – seeds covered with a mixture of clay, compost, char and other components – are sprayed on the ground using aerial devices, including planes, helicopters or drones.

How does this technique work?

- Seeds balls or seed pellets are dispersed in a targeted area by the low-flying drones, falling to the ground with the help of the coating of clay, compost, char and other material, that provides the required weight for seeds to drop on a predetermined location rather than disperse in the wind.
- These pellets will then sprout when there is enough rain, with the nutrients present within them helping in the initial growth.

What are the advantages of this technique?

- The efficient coverage of a large area in the least amount of time.
- Aerial seeding facilitates seeding in areas that otherwise would be impossible to seed with traditional methods, such as land that is too hard to reach by non-aircraft or ground conditions being far too wet.

- Aerial seeding may be used when existing crops are already planted.
- The process of the seed's germination and growth is such that it requires no attention after it is dispersed – the reason why seed pellets are known as the “fire and forget” way of plantation.
- They eliminate the need for ploughing and digging holes in the soil and the seeds do not need to be planted, since they are already surrounded by soil, nutrients, and microorganisms.
- The clay shell of these pellets along with the other items in the mixture also protects them from birds, ants and rats.

Xoo (Xanthomonas oryzae pv. oryzae)

In News

Scientists from **Centre for Plant Molecular Biology (CPMB)**, has uncovered the mechanism by which a bacterium called Xoo (*Xanthomonas oryzae* pv. *oryzae*) that causes a **serious bacterial leaf blight disease in rice** interacts with rice plant and cause disease.

Details

- Research group is working to identify and develop few molecules which are derived from either **the Xoo bacterium** or from the infected rice cell walls.
- The team is developing new disease control strategies which they can use as vaccines that activate the rice immune system and provide resistance to rice plants from subsequent infections by pathogens.
- Treatment of rice with cellulase, a cell wall degrading enzyme secreted by Xoo induces rice immune responses and protects rice from subsequent infections by Xoo.
- The **cellulase protein** has the features of a typical vaccine as it is a potent elicitor of rice immune responses. Pre-treatment of rice plants

with this protein provides resistance to rice against subsequent Xoo infection.

Xanthomonas oryzae pv. oryzae/ Xoo infection

- *Xanthomonas oryzae* pv. *oryzae* is a bacterial pathovar which causes a serious blight of rice, other grasses and sedges.
- The genus *Xanthomonas*, which mostly comprises phytopathogenic bacteria, is a member of the family Xanthomonadaceae.
- It is also known as Bacterial blight.
- Bacterial blight of rice has high epidemic potential and is destructive to high-yielding cultivars in both temperate and tropical regions especially in Asia.

Centre for Plant Molecular Biology, Osmania university, Hyderabad

- The CPMB is one of the 7 Centers of Excellence created in the country with initial financial assistance from the Department of Biotechnology, Government of India.
- Currently it is one of the leading Centers of the country in Plant Molecular Biology.

Research Mandate

- Isolation of genes for agronomically useful traits.
- Generation of transgenic crops.
- Production of pharmaceutically important compounds from medicinal plants.
- Genome analysis and development of bioinformatics tools for addressing complex traits.

Mission

- Application of tools in understanding molecular mechanisms for genetic enhancement of crop plants.
- Development of human resource in the frontier areas of Molecular Biology and Biotechnology.
- Establishment of industry linkage for product/process development.

Emission norms for tractors

In News

The central government has extended deadlines for the applicability of **new emission norms for construction equipment vehicles and tractors** to next year.

Details

- The ministry of road transport and highways (MoRTH), release the new emission norms for construction equipment vehicles and tractors will now come into force from April 2021 and October 2021.
- These norms were to be applicable from October.
- The ministry of road transport and highways has notified **amendment to Central Motor Vehicles Rules, 1989 (CMVR)** deferring the applicability date for **implementing the next stage of emission norms for tractors (TREM Stage-IV)** from October this year to October next year.
- For the construction equipment vehicles, the applicability of the next phase of emission norms are proposed to be applicable with effect from April 1, 2021.
- The amendment also attempts to avoid confusion between the emission norms of other motor vehicles which has BS as norms and those for agricultural machinery, construction equipment vehicles and such other equipment.
- The amendment includes separate emission norms for agricultural machinery (agricultural tractors, power tillers and combined harvesters) and construction equipment vehicles.
- There is also change in the nomenclature of emission norms from Bharat Stage (CEV/TREM) IV and Bharat Stage (CEV/TREM) V to TREM Stage-IV and TREM Stage-V for agricultural tractors and other equipment.

Motor Vehicles Act, 1988

- The Act came into force from 1 July 1989. It replaced Motor Vehicles Act, 1939 which earlier replaced the first such enactment Motor Vehicles Act, 1914.
- The act is amended by The Motor Vehicles (Amendment) act, 2019.
- The Act provides in detail the legislative provisions regarding licensing of drivers/conductors, registration of motor vehicles, control of motor vehicles through permits, special provisions relating to state transport undertakings, traffic regulation, insurance, liability, offences and penalties, etc.
- For exercising the legislative provisions of the Act, the Government of India made the Central Motor Vehicles Rules 1989.

Bharat stage emission standards

- BSES are emission standards instituted by the Government of India to regulate the output of air pollutants from compression ignition engines and Spark-ignition engines equipment, including motor vehicles.
- The standards and the timeline for implementation are set by the Central Pollution Control Board under the Ministry of Environment, Forest and Climate Change.
- The standards, based on European regulations were first introduced in 2000.

Rising Stressed loans

In News

According to **Fitch Ratings**, Indian banks may face a tough operating environment in the near term as stressed loans and write-offs increase due to the economic fallout of the COVID-19 pandemic.

- This could leave the **banks with high bad loan burden over the next few years** if restructured loans do not perform well.

Fitch Ratings

- Fitch Ratings is a leading provider of credit ratings, commentary and research for global capital markets.
- It is an American credit rating agency. It is one of the "Big Three credit rating agencies", the other two being **Moody's and Standard & Poor's**. It is one of the three nationally recognized statistical rating organizations designated by the U.S. Securities and Exchange Commission in 1975.

Fey findings

- Central bank data shows that Indian banks wrote off nearly 85 billion dollars over FY14 to FY19 of which state-owned banks contributed nearly 80%.
- The economic stress is set to be deeper and more broad-based.
- Execution risk remains high.
- Banks need to identify and agree upon a resolution plan by December including small retail loans and loans to micro-enterprises and SMEs.
- The authorities expect banks to implement resolution plans by June 2021.

Steps taken

- Reserve Bank of India permitted the banks to undertake a one-time restructuring exercise of loans affected by the pandemic. This exercise will provide relief in terms of bad loan recognition and provisioning.
- Safeguards are built by RBI in terms of tighter timelines, which provide penal provisioning and strict monitoring by the expert committee of loans beyond ₹1,500 crore.

Stressed Loan

- A stressed loan is one that is not performing (e.g., a loan with a serious delinquency of 90 days or more) or a loan that has been modified (e.g., change in the repayment term, interest rate or other important loan terms).

- These are signs of financial distress and increase the likelihood of default.
- A stressed loan is less likely to be repaid.
- Before the period of 90 days, they are called "Stressed Assets".
- Stressed assets= NPAs + restructured loans + Written Off Assets.

Types of stressed Assets

- **Sub-standard Assets:** If borrower fails to repay the installment, interest on principal or principal for 90 days the loan becomes NPA and it is termed as Special Mention Account (SMA). If it remains SMA for a period less than or equal to 12 months it is termed as Substandard Assets.
- **Doubtful Assets:** If the Sub-standard assets remains so for 12 months or more, then it would be termed as Doubtful Asset.
- **Loss Assets:** If the loan is not repaid even after it remains substandard for more than three years it would be called as loss Asset.
- **Written Off Assets:** Written off assets are those on which the bank or lender doesn't count the money borrower owes to it.

Persistent Organic Pollutants

In News

The Union Cabinet has approved the Ratification of seven (7) chemicals listed under Stockholm Convention on Persistent Organic Pollutants (POPs).

- The Cabinet further delegated its powers to ratify chemicals under the Stockholm Convention to Union Ministers of External Affairs (MEA) and Environment, Forest and Climate Change (MEFCC) in respect of POPs already regulated under the domestic regulations to streamlining the procedure.

Details

- POPs are identified chemical substances that persist in the environment, bio-accumulate in living organisms, adversely affect human health/

environment and have the property of **long-range environmental transport (LRET)**.

- Exposure to POPs can lead to cancer, damage to central & peripheral nervous systems, diseases of immune system, reproductive disorders and interference with normal infant and child development.
- POPs are listed in various Annexes to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries.

7 chemicals

The regulation inter alia prohibited the manufacture, trade, use, import and export seven chemicals namely:

1. Chlordecone
2. Hexabromobiphenyl
3. Hexabromodiphenyl ether and Heptabromodiphenylether (Commercial octa-BDE)
4. Tetrabromodiphenyl ether and Pentabromodiphenyl ether (Commercial penta-BDE)
5. Pentachlorobenzene
6. Hexabromocyclododecane
7. Hexachlorobutadiene

Stockholm convention

- Stockholm Convention is a global treaty to protect human health and environment from POPs, signed in 2001 and effective from May 2004.
- It aims to eliminate or restrict the production and use of persistent organic pollutants (POPs).
- India had ratified the Stockholm Convention on January 13, 2006.

Related conventions and other ongoing negotiations regarding pollution

- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
- Convention on Long-Range Transboundary Air Pollution (CLRTAP)
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

Ongoing negotiations

- Intergovernmental Negotiating Committee's work towards a Legally Binding Instrument on Mercury
 - Can be effectively addressed cross governmental scale by:
 - Having a clearly defined global goal to the standards of mercury
 - all governments must tackle the issue following along the same lines
 - and implementing capacity levels for buildings on the mercury emission use
- Intergovernmental Forum on Chemical Safety (IFCS)
- Strategic Approach to International Chemicals Management (SAICM)

Persistent Organic Pollutants

- Persistent organic pollutants (POPs)/ forever chemicals (FCs) are organic compounds that are resistant to environmental degradation through chemical, biological, and photolytic processes.
- Because of their persistence, POPs bioaccumulate with potential adverse impacts on human health and the environment.
- Many POPs are currently used as pesticides, solvents, pharmaceuticals, and industrial chemicals.
- Although some POPs arise naturally (e.g from volcanoes), most are man-made via total synthesis.

Way forward

- Ratification of POPs demonstrates India's commitment to meet its international

obligations with regard to protection of environment and human health.

- It also indicates the resolve of the Government to take action on POPs by implementing control measures, develop and implement action plans for unintentionally produced chemicals, develop inventories of the chemicals' stockpiles and review as well as update its National Implementation Plan (NIP).
- The ratification process would enable India to access Global Environment Facility (GEF) financial resources in updating the NIP.

Production-linked incentive (PLI) scheme

In News

The Ministry of Electronics and Information and Technology (MeitY) has approved 16 applicants, under the Production Linked Incentive (PLI) scheme.

Details

- The 16 companies approved under the scheme are expected to lead to the total production of over 10.5 lakh crore in the next five years.
- The approved domestic companies have proposed production of around Rs 1.25 lakh crore, while the companies approved under Specified Electronic Components segment have proposed production of over Rs 15,000 crore under the PLI scheme.
- Out of the total production of Rs 10.5 lakh crore in the next five years, around 60 percent will be contributed by exports.
- Domestic value addition is expected to grow from the current 15-20 percent to 35-40 percent in case of phones and 45-50 percent for electronic components.
- The scheme will provide an incentive of 4 to 6 percent on incremental sales over the base year of goods manufactured in India and covered under target segments to eligible

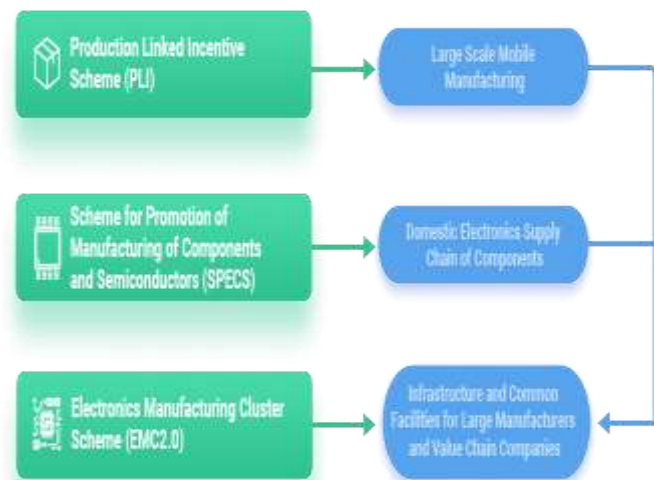
companies for a period of five years subsequent to the base year (FY20).

Causes

- The domestic electronics hardware manufacturing sector faces lack of a level playing field vis-à-vis competing nations.
- The sector suffers disability of around 8.5% to 11% on account of:
 - Lack of adequate infrastructure
 - Lack of domestic supply chain and logistics
 - High cost of finance
 - Inadequate availability of quality power
 - Limited design capabilities and focus on R&D by the industry
 - Inadequacies in skill development

Schemes for Electronics Manufacturing

In order to position India as a global hub for Electronics System Design and Manufacturing (ESDM) and push further the vision of the National Policy on Electronics (NPE) 2019, three schemes namely the Production Linked Incentive Scheme (PLI), Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECs) and Modified Electronics Manufacturing Clusters Scheme (EMC 2.0) have been notified.



Production Linked Incentive Scheme (PLI)

- PLI for Large Scale Electronics Manufacturing proposes a financial incentive to boost domestic manufacturing and attract large investments in the electronics value chain including mobile phones, electronic components and ATMP units.
- Production Linked Incentives of up to INR 40,951 crores will be awarded over a period of 5 years.

Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)

- The SPECS aims to strengthen the manufacturing ecosystem for electronic components and semiconductors.
- Target manufacturing of electronic components and semiconductors through the scheme will help meet domestic demand, increase value addition and promote employment opportunities in this sector.
- Incentives of up to INR 3,285 crore will be awarded under the Scheme over a period of 8 years.

Modified Electronics Manufacturing Clusters Scheme (EMC 2.0)

- EMC 2.0 Scheme seeks to strengthen the infrastructure base for the electronics industry and deepen the electronics value chain in India.
- The development of industry-specific facilities like Common Facility Centers, Ready Built Factory, Sheds/Plug and Play facilities will not only strengthen supply chain responsiveness and promote the consolidation of suppliers but also decrease time-to-market and lower logistics costs.
- EMC 2.0, provides financial incentives for creating quality infrastructure as well as common facilities and amenities for electronics manufacturers.
- Financial Incentives of up to INR 3,762 Crore will be disbursed over a period of 8 years.

National Policy on Electronics 2019

The vision of National Policy on Electronics 2019 (NPE 2019) is to position India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components and creating an enabling environment for the industry to compete globally.

Rudram

In News

India test fired the new generation anti-radiation missile called Rudram. The Missile has been generated to kill enemy radar.

- The Sanskrit name Rudram was given in keeping with tradition, because it includes the letters ARM (the acronym for anti-radiation missile) and the word in Sanskrit describes a “remover of sorrows” (one of its meanings).

What is an anti-radiation missile?

- Anti-radiation missiles are designed to detect, track and neutralise the adversary’s radar, communication assets and other radio frequency sources, which are generally part of their air defence systems.
- Such a missile’s navigation mechanism comprises an inertial navigation system — a computerised mechanism that uses changes in the object’s own position — coupled with GPS, which is satellite-based.
- For guidance, it has a “passive homing head” — a system that can detect, classify and engage targets (radio frequency sources in this case) over a wide band of frequencies as programmed.
- Once the Rudram missile locks on the target, it is capable of striking accurately even if the radiation source switches off in between.
- The missile has an operational range of more than 100 km, based on the launch parameters from the fighter jet.

How was Rudram developed?

- Rudram is an air-to-surface missile, designed and developed by the Defence Research and Development Organisation (DRDO).
- DRDO initiated development of anti-radiation missiles of this type around eight years ago, and its integration with fighter jets has been a collaborative effort of various DRDO facilities and formations of the IAF and Hindustan Aeronautics Ltd.
- While the system has been tested from a Sukhoi-30 MKI, it can be adapted for launch from other fighter jets too.

Impact based Cyclonic Warning Systems

In News

The Indian Meteorological Department will soon launch a dynamic impact-based cyclone warning system.

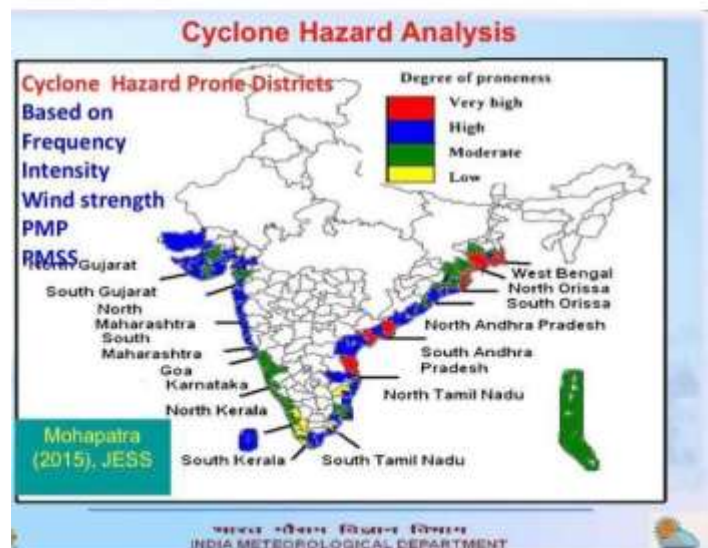
Details

- It will help in minimising economic losses and damage to property due to the cyclones that hit Indian coasts every year.
- The dynamic, impact-based cyclone warning will be commissioned from this cyclone season (October-December).
- The new system will have location or district-specific tailored warning mechanisms, factoring in the local population, infrastructure, settlements, land use and other relevant elements.
- All disaster management agencies will make extensive use of cartographic, geological and district-wise hydrological data under this mechanism.

A Few Facts about Tropical Cyclones(TCs)

During 1970-2019, 33% of hydromet. disasters are caused by TCs.
 One out of three events that killed most people globally is TC.
 Seven out of ten disasters that caused biggest economic losses in the world from 1970-2019 are TCs.
 It is the key interest of 85 WMO Members prone to TCs
 Casualties of 300,000 in Bangladesh in 1970 is still ranked as the biggest casualties for the last five decades due to TC;
 Cyclone Monitoring, forecasting and warning services deals with application of all available modern technologies into operational services.

भारत मीत विभाग
INDIA METEOROLOGICAL DEPARTMENT



Other initiatives

- IMD will also start an interactive display system for "observed and forecast cyclone track and intensity" on GIS platform during the cyclone season.
- The National Disaster Management Authority (NDMA) has, meanwhile, taken up a project - called National Cyclone Risk Mitigation Project (NCRMP) - to develop a web-based Dynamic Composite Risk Atlas (Web-DCRA) in collaboration with IMD and governments of coastal states.

Conclusion

With improved technology and increased use of satellite-guided data in recent years, IMD has managed to better forecast cyclones and issue timely warnings.

Bangalore Rose Onions and Krishnapuram Onions

In News

Government allows exports of Bangalore rose onions and Krishnapuram onions upto March 31, 2021.

- Bangladesh, Malaysia, UAE and Sri Lanka are the top importers of Indian onions.

Background

- The government had prohibited the export (September 2019) of all varieties of onion except those cut, sliced or in powder form, that were free for export earlier in the wake of higher prices and shortage of onion in the domestic market.
- This was done in the wake of rising prices and set the minimum export price (MEP) of onion at \$850 a tonne to curb its shipments.
- It will help bring down the prices in the domestic market due to floods in parts of major growing states of Maharashtra and Karnataka.
- The MEP was lifted in March this year and onions were made free for export.

Details

- For Krishnapuram onions, exporters need to take a certificate from Andhra Pradesh's horticulture kadapa.
- For Bangalore Rose Onions, exporters will have to get a certificate from Karnataka's horticulture commissioner.

Bangalore rose onion

- Bangalore rose onion grown in and around Bangalore in Karnataka. It got the Geographical Indication tag in 2015.
- Rose onions are not cultivated in any other place in India.[
- Bangalore rose onions are rarely used in India, but exported in large quantities to other countries such as Malaysia, Singapore, Indonesia, Bahrain, UAE, Bangladesh and Sri Lanka.
- The pungent property of these onions make them suitable to be used in pickles.

Krishnapuram Onions

- It is a variety grown exclusively for the international market.
- This variety is exclusively grown for export purposes to countries like Hong Kong, Malaysia and Singapore, and are not used in India due their small size and pungency.

Directorate General of Foreign Trade (DGFT)

- DGFT is responsible for implementing the Foreign Trade Policy or Exim Policy with the main objective of promoting Indian exports.
- DGFT is a government organization in India responsible for the formulation of exim guidelines and principles for indian importers and indian exporters of the country. Before 1991, DGFT was known as the Chief Controller of Imports & Exports (CCI&E).
- DGFT perform its functions in coordination with state governments and all the other departments of Ministry of Commerce and Industry, Government of India.

Functions of DGFT

- To implement the Exim Policy or Foreign Trade Policy of India by introducing various schemes and guidelines through its network of DGFT regional offices thought-out the country.
- To Grant Exporter Importer Code Number to Indian Exporter and Importers. IEC Number is a unique 10-digit code required by the traders or

manufacturers for the purpose of import and export in India.

- DGFT IEC Codes are mandatory for carrying out import export trade operations and enable companies to acquire benefits on their imports/exports, Indian customs, export promotion council etc. in India.
- DGFT permits or regulate Transit of Goods from India or to countries adjacent to India in accordance with the bilateral treaties between India and other countries.
- To promote trade with neighboring countries.
- To grant the permission of free export in Export Policy Schedule 2.
- DGFT also play an important role in controlling DEPB Rates.
- Setting standard input-output norms is also controlled by the DGFT.
- Any changes or formulation or addition of new codes in ITC-HS Codes are also carried out by DGFT (Directorate General of Foreign Trade).

Minimum Export Price

- MEP is the price below which an exporter is not allowed to export the commodity from India.
- MEP is imposed in view of the rising domestic retail / wholesale price or production disruptions in the country. MEP is a kind of quantitative restriction to trade.
- MEP is intended to be imposed for short durations and is removed when situations change.
- The removal of MEP helps farmers / exporters in realising better and remunerative prices and would also help in earning valuable foreign exchange for the country.
- Generally, MEP imposition is restricted to essential commodities like potatoes, Onions, rice, edible oils etc.

Graded Response Action Plan

In News

The Environment Pollution Authority has recently directed Punjab, Delhi, Rajasthan and Haryana Governments to implement air pollution control measures under Graded Response Action Plan (GRAP).

- The action plan has been in effect for three years in Delhi and NCR.

Highlights

- Levels of pollution are expected to rise in coming winters.
- Diesel generator (DG) sets can no longer be used in Delhi and the NCR towns of Noida, Ghaziabad, Greater Noida, Faridabad, and Gurgaon. The only exception is, DG sets used for emergency and essential services.
- Pollution control authorities will begin night patrolling to check for dust and industrial emissions, as well as the burning of waste.
- Mechanised sweeping and frequent sprinkling of water on roads (to make the dust settle) have been directed.

GRAP

- GRAP was formulated in 2016 and notified in 2017.
- GRAP works only as an emergency measure.
- GRAP, which was first implemented in Delhi-NCR in 2017, include increasing bus and metro services.
- The plan does not include action by various state governments to be taken throughout the year to tackle industrial, vehicular and combustion emissions.
- The plan is incremental in nature — therefore, when the air quality moves from 'Poor' to 'Very Poor', the measures listed under its sections have to be followed.
- If air quality reaches the 'Severe+' stage, the response under GRAP includes extreme measures such as shutting down schools and implementing the odd-even road-space rationing scheme.
- GRAP draws its authority from EPCA. EPCA holds a meeting with representatives from all

NCR states, and a call is taken on which actions have to be made applicable in which town.

Significance

- GRAP has been successful creating a step-by-step plan for the entire Delhi-NCR region, and getting on board several agencies: all pollution control boards, industrial area authorities, municipal corporations, regional officials of the India Meteorological Department, and others.
- Three major decisions by EPCA and GRAP are the closure of the thermal power plant at Badarpur, bringing BS-VI fuel to Delhi before the deadline set initially, and the ban on Pet coke as a fuel in Delhi-NCR.

Actions under GRAP

Severe+ or Emergency

(PM 2.5 over 300 µg/cubic metre or PM10 over 500 µg/cu. m. for 48+ hours)

- Stop entry of trucks into Delhi (except essential commodities)
- Stop construction work
- Introduce odd/even scheme for private vehicles and minimise exemptions
- Task Force to decide any additional steps including shutting of schools

Severe

(PM 2.5 over 250 µg/cu. m. or PM10 over 430 µg/cu. m.)

- Close brick kilns, hot mix plants, stone crushers
- Maximise power generation from natural gas to reduce generation from coal
- Encourage public transport, with differential rates
- More frequent mechanised cleaning of road and sprinkling of water

Very Poor

(PM2.5 121-250 µg/cu. m. or PM10 351-430 µg/cu. m.)

- Stop use of diesel generator sets
- Enhance parking fee by 3-4 times
- Increase bus and Metro services
- Apartment owners to discourage burning fires in winter by providing electric heaters during winter
- Advisories to people with respiratory and cardiac conditions to restrict outdoor movement

Moderate to poor

(PM2.5 61-120 µg/cu. m. or PM10 101-350 µg/cu. m.)

- Heavy fines for garbage burning
- Close/enforce pollution control regulations in brick kilns and industries
- Mechanised sweeping on roads with heavy traffic and water sprinkling
- Strictly enforce ban on firecrackers

Environment Pollution (Prevention & Control) Authority

- EPCA is headed by retired IAS officer and including members from the Centre for Science and Environment.
- It was constituted in 1998 by the Supreme Court.
- The body monitor pollution, and assists the Supreme Court in several pollution-related matters.

Rashtriya Kamadhenu Aayog

In News

The Rashtriya Kamadhenu Aayog (RKA) began the nationwide campaign called “**Kamadhenu Deepawali Abhiyan**” for coming Diwali to bring out the 33 crores ‘**Gomaya Deeya**’ in 11 crore families in India.

Details

- The campaign will promote the use of cow products and conserve and protect cows in the country.
- The RKA will promote cow dung based Diyas, candles, dhoop, Agarbatti, Shubh-Labh,

swastika, wall-pieces, Samrani, Havan samagri, idols of goddess Lakshmi and Lord Ganesha.

- The initiative will ignite 3 lakh diyas in Ayodhya, 1 lakh in Varanasi.
- The initiative is being implemented by the Ministry of Fisheries, Animal Husbandry and Dairying.

Significance

- The use of cow dung to create innovative products will generate business opportunities to thousands of cow-based entrepreneurs and farmers.
- The use of cow-dung products will lead to a cleaner and healthier environment.
- The Cow-centric economy can also help in achieving Atmanirbharat Bharat goal by making its own humble contribution.
- Rejecting China made Diyas, the campaign will boost up Make in India concept.
- RKA has been consistently endeavoring to increase the use of various cow-panchgavya products to raise the income of farmers, go-Palaks, youth, women, self-help groups, and other stakeholders.

Why urgent attention needed?

- Even though, India is the largest producer of milk, the average milk yield in India is only 50% of the world average.
- Low productivity is largely due to deterioration in genetic stock, poor nutrition, and unscientific management.
- The trend needs to be reversed and popular perception about the cow and cow-based agriculture and cow-based industry needs to be corrected immediately for social and economic rejuvenation of society particularly poor in rural areas.

Rashtriya Kamadhenu Aayog

- The Government has constituted the "Rashtriya Kamdhenu Aayog" to organize animal husbandry on modern and scientific lines and to

take steps for preserving and improving breeds, and prohibiting the slaughter, of cows and calves and other milch and draught cattle.

- The Aayog was established in 2019 to protect and conserve development of cows and their progeny.
- The Aayog is a high powered permanent apex advisory body with mandate to help the Central Government to develop appropriate programmes for conservation, sustainable development and genetic upgradation of Indigenous breeds of cows.
- The Aayog will review existing laws, policies as well as suggest measures for optimum economic utilization of cow wealth for enhanced production and productivity, leading to higher farm income and better quality of life for the dairy farmers.
- It also aims at transmission and application of improved technology and management practices at the farmers' doorstep through coordination with dairy cooperatives, farmer producer companies and dairy industry as well as research institutions.
- Rashtriya Kamdhenu Aayog will function as an integral part of **Rashtriya Gokul Mission**.

World Economic Outlook report: IMF

In News

According to International Monetary Fund, **Indian economy is projected to contract by a massive 10.3 percent this year.**

Details from World Economic Outlook report

- Global growth would contract by 4.4 percent this year and bounce back to 5.2 percent in 2021.
- China is projected at 8.2 percent growth rate.
- America's economy is projected to contract by 5.8 percent in 2020 and grow by 3.9 per cent the next year.
- China is the only country, among the major economies, to show a positive growth rate of 1.9 percent in 2020.
- Losses (estimated) from climate change are somewhat smaller for colder regions (Europe, North America, and east Asia), these are likely

underestimations as they do not include a number of damages (rise in sea levels, natural disasters, damage to infrastructure from thawing of permafrost in Russia) and negative global spillovers from large economic disruptions in other parts of the world.

India

- India is likely to bounce back with an impressive 8.8 percent growth rate in 2021.
- India's Gross Domestic Product (GDP) contracted much more severely than expected in the second quarter.
- In 2019, India's growth rate was 4.2 percent.
- According to IMF, India is among those likely to suffer the greatest damage from global warming, reflecting its initially high temperatures.
- For India, the net gains from climate change mitigation-relative to inaction-would be up to 60-80 percent of GDP by 2100.

World Bank

- Recently, the World bank in its latest issue of the South Asia Economic Focus report said India's GDP this fiscal is expected to contract by 9.6%.
- There was a 25% decline in GDP in the second quarter of the year, which is the first quarter of the current fiscal year in India.
- The World bank said the spread of the virus and containment measures have severely disrupted supply and demand conditions in India.

Artemis Accords

In News

NASA issued a new moonshot rules which state **'No fighting or littering'** on the lunar surface and **no trespassing** at historic landmarks like **Apollo 11's** Tranquility Base.

- The space agency released a set of guidelines for its Artemis moon-landing program, based on the 1967 Outer Space Treaty and other agreements.
- So far, eight countries have signed these so-called Artemis Accords.
- Eight countries: US, Australia, Canada, Italy, Japan, Luxembourg, United Arab Emirates, and the United Kingdom.
- **The U.S. is the only country to put humans on the moon: 12 men from 1969 through 1972.**

List of Rules

- Everyone must come in peace.
- Secrecy is banned, and all launched objects need to be identified and registered.
- All members agree to pitch in with astronaut emergencies.
- Space systems must be universal so everyone's equipment is compatible, and scientific data must be shared.
- Historic sites must be preserved, and any resulting space junk must be properly disposed.
- Rovers and other spacecraft cannot have their missions jeopardized by others getting too close.
- Violators could be asked to leave.

Artemis Accords

- Via the Artemis program, NASA will land the first woman and the next man on the Moon by 2024, for space exploration and utilization.
- The Artemis Accords will describe a shared vision for principles, grounded in the Outer Space Treaty of 1967, to create a safe and transparent environment which facilitates exploration, science, and commercial activities for all of humanity to enjoy.

1967 Outer Space Treaty

- The Outer Space Treaty, formally the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, is a treaty that forms the basis of international space law.

- The treaty was opened for signature in the United States, the United Kingdom, and the Soviet Union on 27 January 1967, and entered into force on 10 October 1967.

The Outer Space Treaty's main points are that:

- It prohibits the placing of nuclear weapons in space
- It limits the use of the Moon and all other celestial bodies to peaceful purposes only
- It establishes that space shall be free for exploration and use by all nations, but that no nation may claim sovereignty of outer space or any celestial body.

The Outer Space Treaty does not ban military activities within space, military space forces, or the weaponization of space, with the exception of the placement of weapons of mass destruction in space.

AZD7442

In News

Swedish-British drug giant **AstraZeneca** recently said it was moving an antibody combination developed for Covid-19 treatment into late-stage human trials.

What is this therapy?

- AZD7442, is a combination of two **long-acting monoclonal antibodies (LAAB)**. AstraZeneca developed it using its proprietary technology with the aim of preventing Covid-19 infection for a long duration.
- LAABs mimic natural antibodies, and a combination of LAABs could be “complementary” to vaccines as a prophylactic agent, according to AstraZeneca. This means it could either be used on people for whom a vaccine may not be appropriate or it could be given as added protection for those at high-risk.

When did it come in?

- The first phase of human trials for this combination started in August to assess aspects like the safety and tolerability of the combination in healthy individuals.
- In the next few weeks, AZD7442 will advance into phase 3 clinical trials in more than 6,000 participants at sites in and outside the US.

Is it similar to other experimental therapies?

- This LAAB combination is similar to the experimental therapy developed by Regeneron Pharmaceuticals—a **cocktail that Trump has been treated** with after contracting Covid-19.
- Eli Lilly is another company that has worked on an antibody treatment.
- Regeneron and Lilly have both reportedly also sought emergency authorisation from the US Food and Drug Administration for these therapies.

How is this relevant for India?

- India accounts for the second-highest number of Covid-19 cases in the world.
- India continues to figure out how it will supply the shots to its priority groups, AstraZeneca has said it will be ready to supply up to 100,000 doses of this antibody cocktail by the end of 2020.
- Considering the potential for India’s biopharmaceutical industry to reproduce such therapies with agreements and tech transfers from the company, such a therapy could add to the country’s basket of drugs to curb the spread of this virus and effectively treat those infected. That is, provided that the ongoing trials and any localised trials in India show that the cocktail is worth it.

Centre to borrow Rs 1.10 lakh crore

In News

The Centre will borrow up to 1.10 lakh crore rupees **on behalf of the states to bridge the shortfall in GST collections**.

Background

- When the GST was introduced in July 2017, **states were promised a 14 percent incremental**

revenue over their last tax receipts in the first five years of the GST rollout.

- This was to be done through a levy of a cess or surcharge on luxury and sin goods, but the collections on this count have fallen short with the slowdown in the economy since last fiscal.
- Low collection of tax is upsetting the budgets of states which had given up their right to levy local taxes such as sales tax or VAT when GST was introduced in July 2017.
- To make up for the shortfall, borrowing from the market was proposed.

Details

- **The amount so borrowed will be passed on to the states as a back-to-back loan in lieu of GST compensation cess releases.**
- The borrowing will **not have any impact on the fiscal deficit** of the Government of India.
- The **amounts will be reflected as the capital receipts of the state governments** and as part of the financing of its fiscal deficits.
- It will avoid differential rates of interest that individual States may be charged for their State Development Loans and will be an administratively easier arrangement.
- It is noted that the General Government (States+Centre) borrowings will not increase by this step.
- The States that get the benefit from the Special Window are likely to borrow a considerably lesser amount from the additional borrowing facility of 2 per cent of Gross State Domestic Product under Aatma Nirbhar Package.

Other measures

- The surcharge on cars and other luxury goods and tobacco products varies from 12 percent to 200 per cent on top of the highest GST rate of 28 percent. It was due to expire in June 2022. **This has now been extended beyond 2022.**

- Interest on the borrowed amount would be the first charge on the cess, which gets collected beyond the five years. The next charge would be 50 percent towards the principal amount which gets borrowed, that is Rs 1.10 lakh crore and then the remaining 50 percent would be towards COVID-19 affected compensation.

GST Issue

- Under the GST structure, taxes are levied under 5, 12, 18 and 28 percent slabs. On top of the highest tax slab, a cess is levied on luxury, sin and demerit goods and the proceeds from the same are used to compensate states for any revenue loss.
- The payment of GST compensation to states became an issue after revenues from the imposition of cess started dwindling since August 2019.
- The Centre had to dip into the excess cess amount collected during 2017-18 and 2018-19.
- The Centre had released over Rs 1.65 lakh crore in 2019-20 as GST compensation. However, the amount of cess collected during the 2019-20 stood at Rs 95,444 crore.
- The compensation payout amount was Rs 69,275 crore in 2018-19 and Rs 41,146 crore in 2017-18.
- During April-July of the current fiscal, the total compensation due to states stands at over Rs 1.51 lakh crore.

Health Insurance Summit

In News

Insurance Regulatory and Development Authority of India (IRDAI) urged health insurance providers to develop disease-specific products and also focus on providing preventive care to policyholders.

Highlights

- A health insurance summit is organised by **Confederation of Indian Industry** in Mumbai.
- IRDAI Chairman said, insurance companies can bring together medical experts to make

aware policy holders on steps to be taken to prevent various diseases.

- He also said the insurance sector, has concentrated on tertiary care or hospitalisation and now there was a need to focus more on primary and secondary care, the outpatient care and more on to have preventive care.

Confederation of Indian Industry

- CII, based in New Delhi, is a non-government, not-for-profit, industry-led, and industry-managed organisation, founded in 1895.
- CII works to create and sustain an environment conducive to the development of India, partnering industry, Government, and civil society.
- It is a membership-based organisation, and membership is made up of the private as well as public sectors, including SMEs and MNCs, and sectoral associations in India.

Details

- Health insurers should come out with innovative **disease-specific products** like diabetics, heart or kidney related issues, based on the need of the public.
- Under such focussed products, insurance companies can bring together medical experts to make aware policyholders on steps to be taken to prevent various diseases.
- Currently a large proportion of health insurance is bought by the age group of 40-50 years and insurers should try to attract the young population.
- Another way to attract the young population to buy health insurance is to have outpatient care as part of the health insurance system.
- Insurance companies can introduce the concept of family physician, annual health check-up, vaccination as part of the health insurance policy.

- Health insurers to tap medium and small industries or informal sector in the country.
- IRDAI urged insurance companies to tap markets in smaller cities, towns and rural areas where there is ample scope for health insurance.
- Insurance companies can also emphasised on having collaboration between various stakeholders in the health ecosystem to have a protocol for treatment of diseases.

Insurance Regulatory and Development Authority

- IRDAI is an autonomous, statutory body tasked with regulating and promoting the insurance and re-insurance industries in India.
- It was constituted by the Insurance Regulatory and Development Authority Act, 1999, an Act of Parliament passed by the Government of India.
- The agency's headquarters are in Hyderabad, Telangana, where it moved from Delhi in 2001.
- IRDAI is a 10-member body including the chairman, five full-time and four part-time members appointed by the government of India.

Norms on non-essential imports from China

In News

Director-General of Foreign Trade (DGFT), India, has banned the import of air conditioners (all types) and refrigerants in a bid to increase domestic manufacturing.

- With the move, India has further tightened norms on **non-essential imports** from China.

Highlights

- The move is aimed at providing a big boost to domestic production.
- The government, wants local manufacturers to step up production and sale, in line with Aatmanirbhar Bharat mission.
- All of them (ACs and refrigerants) have been moved from “free” to “prohibited” category.

- The country had earlier put the import of television sets under a restricted list and had asked importers to seek licenses from the DGFT.
- The domestic market of air conditioners in India is huge and is believed to be around \$5-6 billion.

Directorate General of Trade Remedies (DGTR), has recommended anti-dumping duty of five years on Choline Chloride imports from China, Malaysia and Vietnam, after a flurry of complaints by domestic manufacturers.

Background

- In 2019-20, India imported 469 million USD worth air-conditioners. These were mainly from China and Thailand.
- The Chinese imports accounted to 241 million USD and those from Thailand were around 189 million USD. The window air-conditioner imports were around 35 million USD.

Impact

In the April-August period, Indian imports from China have declined over 27 per cent to \$21.58 billion as compared to the corresponding period in the previous year.

Important Information

- India had in August introduced an import embargo on 101 items to boost indigenisation of defence production in the country.
- Some items like artillery guns, light combat helicopters, assault rifles, corvettes, radars, wheeled Armoured Fighting Vehicles (AFVs), transport aircraft, and other high technology weapons are few which will no longer be imported from foreign countries.
- The aim is to increase indigenous manufacturing of all such equipment to boost self-reliance.

Director-General of Foreign Trade

- It is the agency of the Ministry of Commerce and Industry, responsible for administering laws regarding foreign trade and foreign investment in India.
- DGFT provides a complete searchable database of all exporters and importers of India.
- The Director-General advises the central Government in the formulation of Foreign Trade Policy and is responsible for carrying out that Policy.
- Normally a member of the Indian Administrative Service having rendered 30 or more years is appointed to the post of the Director-General of Foreign Trade.
- The Director-General heads an attached office under the administrative control of the Ministry of Commerce and Industry of the Government of India.
- The Director-General is an Ex-Officio Additional Secretary to the Government of India.

The "State of Climate Report"

In News

The World Meteorological Organization of United Nations recently released the "State of Climate Report".

Highlights

- Two million deaths, \$3.6 trillion in economic losses and 11,000 disasters over the past 50 years, taken place due to extreme weather conditions.
- The "2020 State of Climate Services" said those numbers represent a five-fold increase in the number of recorded disasters.
- Extreme weather and climate events have increased in frequency, intensity and severity as result of climate change.
- Climate-fueled disasters (wildfires, floods) are destroying lives and livelihoods in every corner of the world

- Early warning is critical to saving lives, reducing risk, and increasing resilience.
- 1 in 3 people in the world are not covered by early warning systems.
- COVID-19 generated a large international health and economic crisis from which it will take years to recover.
- It is crucial to remember that climate change will continue to pose an on-going and increasing threat to human lives, ecosystems, economies and societies for centuries to come.

Key Findings of the Reports

- The number of people who need international humanitarian help could rise 50% by 2030.
- More than 108 million were affected by disasters such as floods, storms, droughts and wildfires.
- The average number of deaths in the last 50 years has decreased by 50 years.
- Only 40% of World Meteorological Organization has Multi-Hazard Early Warning System.
- The International Monetary Fund said that the pandemic-related recession will shrink the global economy by 4.4% for 2020 — the worst downturn since the Great Depression.

Recommendation

The report has made some strategic recommendations:

- To focus investment on early warning information system.
- To invest in African Least Developed Countries.
- To track finance flows.
- To ensure sustainable financing for early warnings.
- The Green House Gases are at their highest level in 3 million years.

- All countries should reduce their emissions by 45% from that of the 2010 levels. This is the only way to limit global heating to 1.5 degrees Celsius.
- Only 70 countries have agreed to carbon neutrality by 2050.

Life expectancy report: Lancet

In News

The study, published in the Lancet journal, noted that life expectancy in India has risen from 59.6 years in 1990 to 70.8 years in 2019.

- The Indian Institute of Public Health Gandhinagar, said the increase in “healthy life expectancy” in India has not been as dramatic as the growth of life expectancy since “people are living more years with illness and disability”.

Key Findings: Global Scenario

- The current global crisis of chronic diseases and failure of public health to stem the rise in highly preventable risk factors such as high blood pressure, tobacco use and air pollution have left populations vulnerable to acute health emergencies such as Covid-19.
- The main improvement seen in almost every country, including in India, is a decline in infectious diseases and more rise in chronic diseases.
- While many parts of the world have also controlled infectious diseases through immunisation and better medical care, some countries still struggle to manage these epidemics.
- The interaction of Covid-19 with the continued global rise in chronic illness and related risk factors, including obesity, high blood sugar, and outdoor air pollution, over the past 30 years has created a perfect storm, fuelling Covid-19 deaths.
- In the South Asia region, non-communicable diseases (NCDs) now contribute to more than half of the years lost due to ill-health, disability or early death, which was dominated by infectious, maternal, neonatal, and nutritional diseases 30 years ago.

Indian Scenario

- India has gained more than a decade of life expectancy since 1990.
- In India maternal mortality used to be very high, but now it is coming down.
- Cardiovascular diseases used to be number five, and now it is number one, and cancer rates are increasing.
- 58 per cent of the disease burden in India is now due to non-communicable diseases, up from 29 per cent in 1990.
- The premature deaths due to NCDs have more than doubled from 22 to 50 per cent.
- The largest contributors to increasing health loss in India over the last 30 years were NCDs like ischaemic heart disease, COPD, diabetes, stroke, and a group of musculoskeletal disorders.
- In 2019, the top five risk factors for death in India were air pollution (contributing to an estimated 1.67 million deaths), high blood pressure (1.47 million), tobacco use (1.23 million), poor diet (1.18 million), and high blood sugar (1.12 million).

Trans fat free India by 2022

In News

Government is aiming to make India Trans Fat free by 2022, a year ahead of target set by World Health Organization.

- Due to the unprecedented challenges faced by the world on account of the Covid pandemic, there has been a renewed focus on food, nutrition, health, immunity and sustainability.
- The key focus of this year is the elimination of trans-fat from the food supply chain.

Highlights

- Transfat, which is present in partially hydrogenated vegetable oils such as vanaspati, shortening and margarine, is a major contributor

to the rise in non-communicable diseases in India.

- Trans-fat is a modifiable risk factor for cardiovascular diseases (CVD).
- Eliminating CVD risk factor is especially relevant during COVID-19 as people with CVD are predisposed to have serious conditions having an impact on mortality.

Eat Right India movement

- Eat Right India movement by FSSAI, targets to promote safe and healthy food for everyone in an environmentally sustainable way.
- It is a part of its mandate to provide safe and wholesome food for all citizens.
- This will improve the food safety ecosystems and lift the hygiene and health of our citizens.

Other initiatives

- Fit India Movement, along with Swachh Bharat Abhiyan, Jal Jeevan Mission and other efforts of the Environment Ministry will improve the health of Indians and heal the environment.
- The government also launched the 'Eat Right Creativity Challenge' for schools which is a poster and photography competition and aims to promote healthy dietary habits.

What are trans fats?

- Trans fats, or trans-fatty acids, are a form of unsaturated fat.
- They come in both natural and artificial forms.
- Natural, or ruminant, trans fats occur in the meat and dairy from ruminant animals, such as cattle, sheep, and goats. They form naturally when bacteria in these animals' stomachs digest grass.
- These types typically comprise 2–6% of the fat in dairy products and 3–9% of the fat in cuts of beef and lamb (1, 2).
- Dairy and meat eaters needn't be concerned.
- However, artificial trans fats — otherwise known as industrial trans fats or partially

hydrogenated fats — are hazardous to your health.

- These fats occur when vegetable oils are chemically altered to stay solid at room temperature, which gives them a much longer shelf life.

Global Hunger Index 2020

In News

India ranked 94 among 107 countries in the Global Hunger Index (GHI) 2020 and continues to be in the “serious” hunger category.

- Last year, India’s rank was 102 out of 117 countries.

About Global Hunger Index

- The Global Hunger Index is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels.

GHI scores are based on the values of four component indicators:

1. Undernourishment (share of the population with insufficient caloric intake)
2. Child wasting
3. Child stunting
4. Child mortality

- **Child Wasting:** Wasting is children who have low weight for their height, reflecting acute undernutrition. Stunting is children under the age of five who have low height for their age, reflecting chronic undernutrition.
- **Child Stunting:** Share of children under age five who have low height for their age, reflecting chronic undernutrition.
- **Child Mortality:** The mortality rate of children under the age of five.

Based on the values of the four indicators, the GHI determines hunger on a 100-point scale

where 0 is the best possible score (no hunger) and 100 is the worst. Each country’s GHI score is classified by severity, from low to extremely alarming.



Highlights

- Bangladesh (rank 75), Myanmar (rank 78) and Pakistan (rank 88) too are in the 'serious' category but ranked higher than India.
- Nepal in 73rd and Sri Lanka in 64th position are in 'moderate' hunger category.
- Seventeen nations, including China, Belarus, Ukraine, Turkey, Cuba and Kuwait, shared the top rank with Global Hunger Index scores of less than five.
- Out of the total 107 countries, only 13 countries fare worse than India including countries like Rwanda (97), Nigeria (98), Afghanistan (99), Liberia (102), Mozambique (103), Chad (107) among others.
- Bangladesh, India, Nepal, and Pakistan showed that stunting is concentrated among children from households facing multiple forms of deprivation, including poor dietary diversity, low levels of maternal education, and household poverty.

India

- Poor implementation processes, lack of effective monitoring, siloed approach in tackling malnutrition and poor performance by large states behind the low ranking.
- 14 per cent of India's population is undernourished.
- India recorded a 37.4 per cent stunting rate among children under five and a wasting rate of 17.3 per cent.
- The under-five mortality rate stood at 3.7 per cent.
- India experienced a decline (period from 1991 to 2014) in under-five mortality, driven largely by a decrease in deaths from birth asphyxia or trauma, neonatal infections, pneumonia, and diarrhoea.

- Child mortality, caused by prematurity and low birth weight, increased particularly in poorer states and rural areas.
- Prevention of prematurity and low birthweight is identified as a key factor with the potential to reduce under-five mortality in India.
- The performance of large states like Uttar Pradesh, Bihar, Jharkhand and Madhya Pradesh need to be improved to see an overall change of India's ranking.



Five measures to prevent exacerbation of hunger because of the pandemic:

- Safeguard and promote access to nutritious, safe and affordable diets.
- Invest in improving maternal and child nutrition through pregnancy, infancy, and early childhood.
- Re-activate and scale-up services for the early detection and treatment of child wasting.
- Maintain the provision of nutritious and safe school meals for vulnerable children.
- Expand social protection to safeguard access to nutritious diets and essential service.

Conclusion

- Hunger and undernutrition cannot and should not be fixed by mere calorie provision.

- All stakeholders must pay attention to making balanced healthy diets which are climate-friendly, affordable and accessible to all.

India's first 'saviour sibling'

In News

Doctors successfully conducted India's first 'saviour sibling' experiment.

- The girl was conceived by her parents a year back through IVF to save her brother born with Thalassemia.

Saviour Sibling

- Saviour Sibling refers to babies that are created to serve an older sibling as a donor of organs, bone marrow or cells.
- Stem cells from the umbilical cord blood or blood of the saviour sibling are used for treatment of serious blood disorders like thalassemia, sickle cell anaemia.

Details

- The one-year old Saviour Sibling named Kavya saved her 6-year-old brother Abhijeet (suffering from Thalassemia) by donating her bone marrow.
- Abhijeet parents were advised bone marrow transplant as the last resort to treat the child, but they could not find the required HLA (human leukocyte antigen) match.
- Due to unavailability of matching HLA donors for the transplant, Abhijeet's parent opted for IVF with HLA matching.
- Kavya was conceived by her parents through in-vitro fertilisation (IVF) after going through several rounds of pre-genetic testing, so as to be a donor to her elder brother.

HLA (human leukocyte antigen)

- HLA system or complex is a group of related proteins that are encoded by the major histocompatibility complex (MHC) gene complex in humans.
- These cell-surface proteins are responsible for the regulation of the immune system.

- HLA genes are highly polymorphic, which means that they have many different alleles, allowing them to fine-tune the adaptive immune system.
- The proteins encoded by certain genes are also known as antigens, as a result of their historic discovery as factors in organ transplants.

Thalassemia

- Thalassemia is an inherited (i.e., passed from parents to children through genes) blood disorder caused when the body doesn't make enough of a protein called hemoglobin, an important part of red blood cells.
- When there isn't enough hemoglobin, the body's red blood cells don't function properly and they last shorter periods of time, so there are fewer healthy red blood cells traveling in the bloodstream.
- Red blood cells carry oxygen to all the cells of the body. Oxygen is a sort of food that cells use to function.
- When there are not enough healthy red blood cells, there is also not enough oxygen delivered to all the other cells of the body, which may cause a person to feel tired, weak or short of breath. This is a condition called anemia.
- People with thalassemia may have mild or severe anemia. Severe anemia can damage organs and lead to death.

In-vitro fertilisation (IVF)

- IVF is a process of fertilisation where an egg is combined with sperm outside the body, in vitro ("in glass").
- IVF is a type of assisted reproductive technology used for infertility treatment and gestational surrogacy.

Food Consumption report by World Wildlife Fund

In News

The World Wildlife Fund (WWF) has published the report "Bending the Curve: The Restorative Power of Planet-Based Diets".

- The report offered a detailed analysis of food consumption patterns in 147 countries and six regions and the national dietary guidelines (NDGs) across 75 countries.
- For each country and region, the impacts of diets were assessed on various environmental and health indicators.

The dietary patterns assessed were:

- **Current diet:** Average diet currently consumed by the citizens of a country
- **National dietary guidelines:** Dietary guidelines put forward by the government department concerned of each country
- **Flexitarian:** Plant-based, but allows for moderate animal-source food consumption, including meat.
- **Pescatarian:** Replacing meat with two-thirds fish and seafood and one-third fruit and vegetables.
- **Vegetarian:** Replacing meat with two-thirds legumes and one-third fruit and vegetables.
- **Vegan:** Replacing all animal-source foods with two-thirds legumes and one-third fruit and vegetables.

Key Findings

- WWF report said that the human beings need an urgent and localized response to transform the existing food systems.
- Premature deaths in low and middle-income countries due to unhealthy diets, under-consumption as well as over-consumption are an emerging concern.
- Food consumption patterns vary widely and can best be characterised by massive inequality.
- Different consumption patterns are observed in the richest and poorest countries, with European countries consuming approximately

600 grams per day more food (1,800 g / day) than African countries (1,200 g / day).

- Although under-nutrition and obesity affect almost all countries, the rate of underweight people is up to 10 times higher in the poorest countries as compared to other countries. The rate of overweight / obese people is up to five times higher in the richest countries.
- India needs to be extra careful in figuring out the changes in the diet because there could be an increase in biodiversity loss due to a shift to a healthier and planet-friendly diet and extensively increased consumption.
- India has to first increase consumption of fruits, vegetables and dairy to meet its nutritional requirements.
- Some countries may see greenhouse gas (GHG) emissions decrease, while others may see them increase. Some countries will need to radically transform current diets while others may need instead to work to hold on to traditional dietary patterns and resist a transition to a more Western diet.
- One in three people either eat too little or too much.
- The current consumption pattern is not balanced across the globe.

Need of the hour

- A shift to plant-based diet may be the need of the hour.
- Some countries will need to reduce their consumption of animal-source foods, others may need to increase them.
- The shift will not only improve human health by preventing over-consumption of any food, but will also reverse the biological loss that has occurred till now and improve environmental health.
- By shifting the diets to more plant-based will cut down carbon emissions by 30 per cent; wildlife loss by 46 per cent; agriculture land use

by 41 per cent and premature deaths by 20 per cent.

Planet-Based Diets Impact & Action Calculator

- The WWF launched a new platform known as Planet-Based Diets Impact & Action Calculator.
- With this, one can calculate their consumption and find out the impact caused by his / her diet on the environment.
- The platform also shows national level impacts. This will help people living anywhere in the world to make a conscious decision by finding out if their diet is good for them as well as their environment.
- The platform has a unique tool that allows users to customise diets based on calorie intakes of 13 different food groups.

India's Sex Ratio

In News

C.Rangarajan (former Chairman, Prime Minister's Economic Advisory Council) and J K Satia (Professor Emeritus, Indian Institute of Public Health) argue that there is an urgent need to reach young people both for reproductive health education and services as well as to cultivate gender equity norms.

Details

- This is because fertility has been declining in India for some time now.
- The Sample Registration System (SRS) Statistical Report (2018) estimated the Total Fertility Rate (TFR), the number of children a mother would have at the current pattern of fertility during her lifetime, as 2.2 in the year 2018.
- Fertility is likely to continue to decline and it is estimated that replacement TFR of 2.1 would soon be, if not already, reached for India as a whole.
- But the most troubling statistics in the SRS report are for sex ratio at birth. Biologically normal sex ratio at birth is 1,050 males to 1,000 females or 950 females to 1,000 males.

- The SRS reports show that sex ratio at birth in India, measured as the number of females per 1,000 males, declined marginally from 906 in 2011 to 899 in 2018.
- There is considerable son preference in all states, except possibly in Kerala and Chhattisgarh.
- The UNFPA State of World Population 2020 estimated the sex ratio at birth in India as 910, lower than all the countries in the world except China.
- This is a cause for concern because this adverse ratio results in a gross imbalance in the number of men and women and its inevitable impact on marriage systems as well as other harms to women.

Suggestions

- Increasing female education and economic prosperity help to improve the ratio.
- In view of the complexity of son preference resulting in gender-biased sex selection, government actions need to be supplemented by improving women's status in the society.
- Rollout campaigns on sensitisation towards women and children, making women safety cells, ensuring the safety of women on public transport systems, making cyber-crime cells are some other initiatives that need to be taken.

Conclusion

- There is an urgent need to reach young people both for reproductive health education and services as well as to cultivate gender equity norms.
- This could reduce the effect of population momentum and accelerate progress towards reaching a more normal sex-ratio at birth. India's population future depends on it.

Sample Registration System

The SRS is a demographic survey for providing reliable annual estimates of infant mortality

rate, birth rate, death rate and other fertility and mortality indicators at the national and sub-national levels.

It is brought by the Office of Registrar General.

Total Fertility Rate

The TFR of a population is the average number of children that would be born to a woman over her lifetime if:

- She was to experience the exact current age-specific fertility rates (ASFRs) through her lifetime.
- She was to survive from childbirth until the end of her reproductive life.

United Nation Population Fund

The UNFPA is a UN agency aimed at improving reproductive and maternal health worldwide. It is headquartered in New York.

Global Nitrous Oxide Pollution

In News

Human emissions of nitrous oxide (N₂O) are increased by 30 per cent between 1980 and 2016.

- It is a greenhouse gas, which is 300 times more potent than carbon dioxide (CO₂).
- The research was conducted through an international collaboration between the International Nitrogen Initiative (INI) and the Global Carbon Project of Future Earth, a partner of the World Climate Research Programme.
- The research combines both natural and anthropogenic (man-made) sources.

Nitrous Oxide (N₂O)

- Nitrous oxide is a dangerous gas for the sustainable existence of humans on Earth.
- It has the third-highest concentration — after CO₂ and methane — in our atmosphere among greenhouse gases responsible for global warming.
- N₂O can live in the atmosphere for up to 125 years.

Key Findings

- Its (N₂O) global concentration levels increased from 270 parts per billion (ppb) in

1750 to 331 ppb in 2018 — a jump of 20 per cent.

- The growth has been the quickest in the past five decades because of human emissions.
- The study analysed 21 natural and human sources of N₂O, found that 43 per cent of the total emissions came from human sources.
- N₂O is also the only remaining threat to the ozone layer, for it accumulates in the atmosphere over a long period of time, just like CO₂.
- This is in addition to the fact that “right now, our emissions trajectory is higher than even the worst-case scenario anticipated.
- The increase in N₂O emissions means that the climatic burden on the atmosphere is increasing from non-carbon sources as well, while the major focus of global climate change negotiations is currently centred on carbon, its emissions and mitigation.

Climate crisis and global food security

- It found that a major proportion of the N₂O emissions in the last four decades came from the agricultural sector, mainly because of the use nitrogen-based fertilisers.
- The growing demand for food and feed for animals will further increase global nitrous oxide emissions. There is a conflict between the way we are feeding people and stabilising the climate.
- Most N₂O emissions have come from emerging countries like India, China and Brazil.

Conclusion

- There are well-established practices and technologies to mitigate nitrous oxide emissions. Industrial and agricultural policies in Europe reduced such emissions considerably. Still, further efforts will be required, in Europe as well as globally.

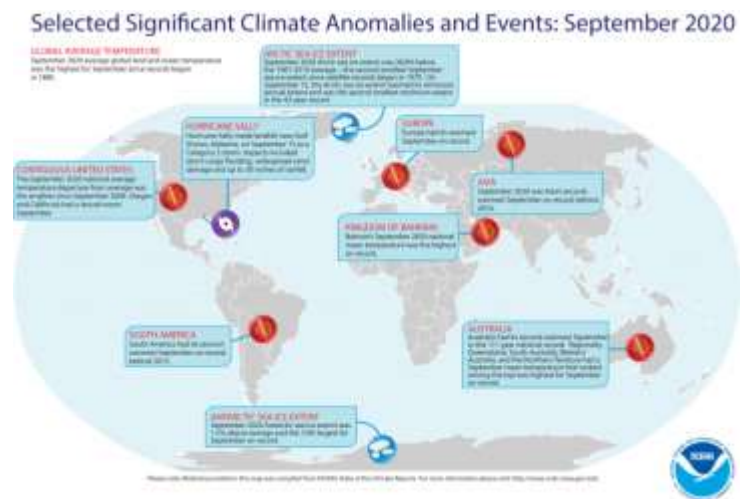
- Reducing greenhouse gas emissions also has the co-benefits of reduced air and water pollution.
- It is possible to slow down N₂O emissions if countries implement the 2019 United Nations resolution on sustainable nitrogen management.
- India had led the first-ever nitrogen resolution adopted in the fourth UN Environment Assembly with the help of INI.

Hottest September since 1880

In News

The September of 2020 was the hottest September since 1880, according to the United States National Oceanic and Atmospheric Administration or NOAA.

- The average global temperature in September was 1.75 degrees Fahrenheit (°F) — 0.97 of a degree Celsius (°C) — above the 20th-century average of 59.0 °F (15.0 °C).



Details

- September's temperature surpasses the average global temperatures for both September 2015 and 2016 by 0.04 of a °F (0.02 of a °C), which previously tied for the hottest Septembers on record.
- The year-to-date (January-September 2020) average global temperature was the second

hottest on record at 1.84 degrees F (1.02 degrees C) above the 20th-century average. This is only 0.07 of a degree F (0.04 of a degree C) shy of the record set for the same YTD in 2016.

- Arctic sea ice was at near-record lows. An analysis of satellite data by NASA and the National Snow and Ice Data Center showed that 2020's minimum extent of Arctic sea ice – the smallest area of the floating sea ice cover of the year – likely reached September 15, was the second-lowest extent (behind 2012).
- It's been a record-hot year-to-date so far for some parts of the globe: Europe, Asia and the Gulf of Mexico had their warmest January-through-September period on record; South America and the Caribbean region had their second highest. No land or ocean areas had record-cold year-to-date temperatures.

India's first Cloud innovation centre

In News

To address societal challenges through digital innovation, **NITI Aayog** recently announced the establishment of a **Frontier Technologies Cloud Innovation Center (CIC)** with **Amazon Web Services (AWS)**—the first of its kind in India. Cloud Innovation Center (CIC) is part of the AWS CIC Global Program.

- **This is the first AWS CIC in India**, the 12th around the world, and the first AWS CIC that will address societal challenges at a national level.
- The CIC joins a global network of AWS Public Sector Cloud Innovation Centers across Australia, Bahrain, Canada, France, Germany, South Korea, and the United States.

Mandate

The centre will work to accelerate innovation in the areas of agriculture, healthcare and skill development.

Highlights

- The CIC programme provides an opportunity for government agencies, non-profits, and educational institutions, to come together on pressing challenges, apply design thinking, test new ideas, and access the technology expertise of AWS.
- Any nonprofit, education, or government organization can apply to work on a challenge.
- Public sector organizations around the world use cloud technology to innovate in a fast and agile manner, address problems at scale, and transform public services for citizens.
- Cloud Innovation Centers (CIC) program is designed to be a catalyst for innovation in public sector, by bringing together technology experts to address challenges.
- Local enterprises, startups, researchers, and universities in India will experiment and build prototypes on AWS Cloud, and contribute along with the global CIC community dedicated to accelerating societal innovation.

Significance

The NITI Aayog Frontier Technologies Cloud Innovation Center (CIC) with AWS will bring together government stakeholders, startups, and local organizations in India to innovate and create new approaches to solving problems.

Way forward

India is expecting to achieve transformational economic and societal impact, and look forward to sharing global experiences to accelerate digital innovation in the country.

New Space Centre

In News

The North Atlantic Treaty organisation is to setup a new Space Centre in Ramstein, Germany. The centre is to serve as a co-ordination Centre for space observation.

- The new space center would gather information about possible threats to satellites

and could be developed into a command center for defensive measures.

Details

- The centre is being setup based on Article 5 of the North Atlantic Treaty organisation.
- NATO also envisages setting up a think tank for space activities. Kalkar in Germany and Toulouse in France are being considered as possible locations for the institution.

- France's President announced plans to build a military space centre in July last year.
- He pointed out that the growing reliance on satellites for logistics, surveillance and communication, and with military powers developing and testing anti-satellite systems, space could become a new theatre for war.
- Attacks on satellite systems could cripple communications networks and critical infrastructure as well as cause considerable damage on the ground.

- The US, Russia, China and India have developed anti-satellite systems in recent years, with Russia having carried out various anti-satellite missile tests and India following suit.
- Of the approximately 2,400 satellites now orbiting the Earth, some 60% belong to NATO members or to companies located in member countries.

Article 5 of NATO

- The article empowers the organisation to take collective defence action. It provides criteria under which NATO can take defensive measures.
- Article 5 has been invoked by NATO in situations such as Syrian crisis, Russia-Ukraine crisis and 26/11 attack on US.
- The article says that an armed attack against one or more of the NATO countries in North America or Europe is considered as an attack against all of them. Under this scenario based on

Article 51 of the United Nations, article 5 can be invoked.

- Article 51 of the charter of United Nations says that a member has right to act in self-defence and shall assist parties so attacked by taking forthwith. The article also allows the member countries to use armed forces in such situations. However, this shall be carried on only on the interest of restoring and maintaining security of North Atlantic area.

Note: India is yet to sign the treaty.

INS Kavaratti

In News

Anti-submarine warfare (ASW) ship INS Kavaratti commissioned into the Indian Navy at the Naval Dockyard in Visakhapatnam.

Corvette

It is a small warship. They are generally used for coastal patrolling and as missile boat and fast attack craft.

Features

- The ship is propelled by four diesel engines to achieve speeds in excess of 25 knots and has an endurance of more than 3,400 nautical miles.
- The corvette, with a displacement of 3,300 tonnes, has a length of 109.1 metres and measures 13.7-m at beam.
- Kavaratti, like its predecessors also boasts of "firsts", such as rail-less Helo Traversing System, Foldable Hangar door.
- Kavaratti has a common raft mounted gear box and diesel engines, which give the ship very low radiated underwater noise.
- About 90% of Kavaratti is indigenous and the ship is "well equipped" to fight in nuclear, chemical and biological warfare conditions.

Highlights/ Characteristics

- It is the last of four indigenously-built ASW under 'Project 28' or Kamorta-class corvettes of

the Navy. It's a class of ASWs currently in service with the Navy.

- 'Project 28' was approved in 2003. The other three warships under this project are INS Kamorta (commissioned in 2014), INS Kadmat (2016) and INS Kiltan (2017).
- INS Kavaratti has up to 90% indigenous content. The use of carbon composites to build it has been described as a 'commendable feat achieved in Indian shipbuilding.'
- The warship has been designed by the Navy's in-house organisation, the Directorate of Naval Design (DND).
- Kolkata's Garden Research Shipbuilders and Engineers (GRSE), meanwhile, has built it.
- It has state-of-the-art weapons and a sensor that can detect and take action against hostile submarines. It also has a good endurance for long-range deployments.
- It has completed sea-trials of all its systems fitted onboard and, hence, will be commissioned as a combat-ready platform.
- INS Kavaratti derives its name from the eponymous INS Kavaratti, which was an Arnala class missile corvette. The older INS Kavaratti operated during the 1971 Bangladesh liberation war.

Project 28/ Kamorta-class corvette

- The Kamorta-class corvette are a class of anti-submarine warfare corvettes currently in service with the Indian Navy.
- They are the first anti-submarine warfare stealth corvettes to be built in India.
- Project 28 was approved in 2003, with construction of the lead ship, INS Kamorta commencing on 12 August 2005.
- The project's objective was to enhance localisation and development of warship construction industry in India.
- The corvettes are named after the islands in the Lakshadweep archipelago.

- The platform and major internal systems of this class of corvettes are indigenously designed and built.
- The Kamorta class corvettes are intended to succeed the Kora-class corvette by precedence and Abhay-class corvette by role.

New organ discovered

In News

The scientists in Netherlands have discovered a new organ in human throat during a research on prostate cancer.

- Researchers at the Netherlands Cancer Institute have identified a set of **salivary glands** deep in the upper part of the throat and have named them "**tubarial salivary glands**".
- The discovery may be important for cancer treatment.

Salivary glands

The salivary glands in mammals are exocrine glands that produce saliva through a system of ducts. Humans have three paired major salivary glands (parotid, submandibular, and sublingual) as well as hundreds of minor salivary glands. Salivary glands can be classified as serous, mucous or seromucous (mixed).



Details

- So far, this nasopharynx region — behind the nose — was not thought to host anything but microscopic, diffuse, salivary glands.
- The newly discovered glands are about 1.5 inches (3.9 centimeters) in length on average

and are located over a piece of cartilage called the torus tubarius.

- According to the researchers, the glands probably lubricate and moisten the upper throat behind the nose and mouth.
- Until now, there were three known large salivary glands in humans: one under the tongue, one under the jaw and one at the back of the jaw, behind the cheek.
- The new organ was discovered while scientists were studying prostate cancer cells using PSMA PET-CT technology — a combination of CT scans and positron emission tomography (PET) — which is good in detecting salivary gland tissues. In this technique, a radioactive “tracer” is injected into the patient that binds to the protein PSMA, which is elevated in prostate cancer cells.
- Doctors using radiotherapy for treating cancers in the head and neck try to avoid the main salivary glands as damaging them could make eating, speaking or swallowing difficult for patients. However, in this case, the newly discovered glands were getting hit by radiation as doctors were not aware of their existence in the human body. Thus, the new discovery may result in fewer side effects for cancer patients.

State of Global Air report 2020

In News

The State of Global Air 2020 report said that India has the highest burden of infant deaths (1,16,000) due to air pollution followed by 67,900 (Nigeria); 56,500 (Pakistan); 22,900 (Ethiopia) and 1,200 (Democratic Republic of Congo).

Key Findings

- According to the report, India recorded the highest PM 2.5 exposure in the world in 2019. India was followed by Nepal and Niger.
- India is one of the Top 10 countries that has highest Ozone exposure.

- In the past 10 years the Ozone concentration in India has increased by 17 %. Globally Ozone exposure has increased from 47.3 part per billion to 49.5 parts per billion.
- India had the highest number of Infant deaths due to air pollution.
- Air pollution is the fourth highest risk in creating death out of 87 health risk factors.

Highlights

- US-based Health Effects Institute and Global Burden of Disease released the first such report analysing the impact of high air pollution on infant health.
- It is based on a growing body of research and evidence that suggests mothers’ exposure to polluted air during pregnancy is linked to increased risks to infants weighing under 2,500 grams at birth or those born before 37 weeks of gestation, as opposed to 38 to 40 weeks.
- Low weight and premature birth are linked to a higher risk of lower respiratory tract infections, diarrhoea, other serious infections as well as brain damage and blood disorders, jaundice that can be potentially fatal.
- It is thought that air pollution may affect a pregnant woman, her developing foetus, or both through pathways similar to those of tobacco smoking.
- Of all neonatal deaths attributable to air pollution globally, household air pollution accounted for about 64% of them. The rest were due to outdoor air pollution.
- The highest percentage of deaths attributable to household air pollution (80%) was estimated to be in the sub-Saharan region. The lowest was in high-income regions (less than 2%).
- Long-term exposure to outdoor and household air pollution contributed to over 1.67 million annual deaths from stroke, heart attack, diabetes, lung cancer, chronic lung diseases, and neonatal diseases in India last year, making air pollution the largest risk factor for deaths among all health risks.

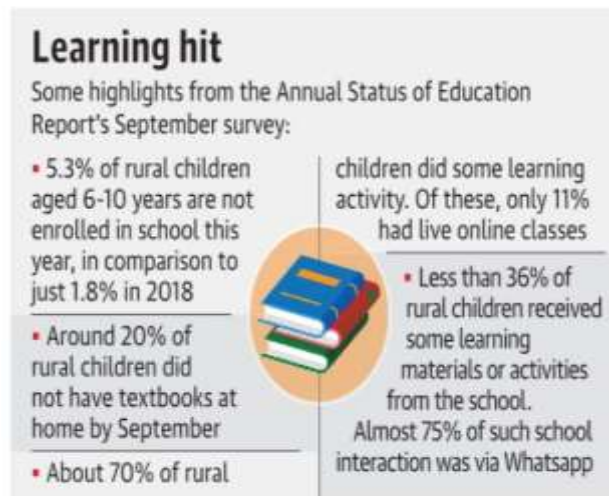
- The report also said that air pollution could lead to both a higher number of Covid-19 infections and deaths.
- Evidence increasingly suggests that people living in areas with high air pollution are likely to experience more severe outcomes from Covid 19.
- Even before the Covid-19 pandemic, India carried a heavy burden of chronic respiratory and other diseases and India has also experienced high exposures for a long time.
- Exposures to air pollution have been shown to affect the human body's immune defence making an individual more susceptible to respiratory infections such as pneumonia.

Annual Status of Education Report (ASER) 2020

In News

The findings of the Annual Status of Education Report (ASER) 2020 (Rural) Wave 1 – the first-ever phone-based survey – come amid the Covid-19 outbreak, which led to a spike in digital learning.

- ASER 2020 was conducted in 26 states and four Union Territories.
- The survey covered 118,838 households, where phone calls were made to parents of children aged between five and 16 years.
- Altogether, 8,963 teachers' responses were also recorded in the survey.



Aim

The report aims to provide reliable estimates of children's enrolment and basic learning levels for each district and state in India

ASER 2020 explore the following areas

- Children's enrollment
- Children not currently enrolled
- Household resources
- Learning support at home
- Access to learning materials

Key Findings

- Around 50% of the teachers surveyed in the rural areas did not receive any form of training and 68.8% received perfunctory training based on brief instructions.
- As compared to data from ASER 2018, data from ASER 2020 show a small shift in enrolment from private to government schools, across all grades and among both girls and boys.
- The proportion of boys enrolled in government schools rose from 62.8% in 2018 to 66.4% in 2020.
- The proportion of girls enrolled in government schools rose from 70% to 73% during the same period.
- ASER 2020 shows that 5.5 per cent children are not currently enrolled for the 2020-21 school year, up from 4 per cent in 2018. This difference is the sharpest among the youngest children

(ages 6 to 10), possibly because they have not yet secured admission to school. While 1.8 per cent children in this age group were not enrolled in 2018, that has spiked to 5.3 per cent.

- Among enrolled children, 61.8 per cent live in families that own at least one smartphone.
- Almost 75 per cent of children said they received some form of learning support from family members, with older siblings playing a key role.

ASER Survey

- This is an annual survey (published by education non-profit Pratham) that aims to provide reliable estimates of children's enrolment and basic learning levels for each district and state in India.
- ASER has been conducted every year since 2005 in all rural districts of India. It is the largest citizen-led survey in India.
- It is also the only annual source of information on children's learning outcomes available in India.

Ethanol Blended Petrol Programme

In News

Cabinet approves Mechanism for procurement of ethanol by Public Sector Oil Marketing Companies under Ethanol Blended Petrol Programme.

Highlights

- Cabinet Committee on Economic Affairs has approved the fixing higher ethanol price derived from different sugarcane based raw materials under the Ethanol Blended Petrol (EBP) Programme for the forthcoming sugar season 2020-21 during Ethanol Supply Year (ESY) 2020-21 from 1st December 2020 to 30th November 2021.
- Also, the prices of ethanol obtained from C heavy molasses, B heavy molasses have been increased. The increase in price was around Rs 2

to 3 per litre. Additionally, the oil companies will now have to pay transportation charges and GST while procuring ethanol.

- Remunerative price to ethanol suppliers will help in reduction of cane farmer's arrears, in the process contributing to minimizing difficulty of sugarcane farmers.

Background

- Government has been implementing Ethanol Blended Petrol (EBP) Programme wherein OMCs sell petrol blended with ethanol up to 10%. This programme has been extended to whole of India except Union Territories of Andaman Nicobar and Lakshadweep islands.
- This was to reduce the energy dependence of India from oil imports and also to boost agriculture. Also, Ethanol Procurement Policy was adopted under the EBP programme.
- In 2018, for the first time, Government of India notified administered price of ethanol based on the raw material used in production.

Why Sugarcane in specific?

The dues of sugarcane farmers have increased due to lower capability of sugar industry to pay the farmers. Thus, the Government of India has increased the prices of ethanol obtained from sugarcane to help sugar cane farmers.

Ethanol Blended Petrol Programme

- Ethanol Blended Petrol (EBP) programme was launched in January, 2003. The programme sought to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.
- Under the programme, the GoI has set target of 10% blending target by 2022 and 20% by 2030.
- The Oil Marketing Companies are bound to sell ethanol based petrol based on Bureau of Indian Standards Specifications.

Post-Covid World

The world economy experienced a major crisis in 2020 due to the covid -19 pandemic. This is the biggest shock to the world economy since the Great Depression of the 1930s and World War II.

The Barbell Strategy

- Back in March 2020, very little was known about covid-19 beyond the fact that there had been a major outbreak in Wuhan, China, and that it was suddenly killing a lot of people in northern Italy. There were also signs that it was rapidly spreading to other countries.
- Epidemic experts consulted by governments around the world provided wide-ranging assessments. Some advocated herd immunity, while others predicted millions of deaths unless something drastic was done.
- Indian policy- makers, consequently, were making decisions under extreme uncertainty while being aware that it would not be possible to course correct later with 1.35 billion people. The central Government opted for what is known in financial markets as a “barbell” strategy – i.e. hedge first for the worst- possible outcome while progressing step-by-step with a Bayesian updating of information.
- The initial total lockdown, therefore, should be seen as a hedge against the worst possible outcomes. It was bolstered by advice from some experts who argued that a strong initial lockdown could stall the epidemic at an early stage (this was not an unreasonable idea given the available information). It should be noted that this initial lockdown also gave the space to arrange a large-scale medical response in terms of equipment, quarantine and testing capacity.
- As time has passed, the central government then unlocked the economy step-by-step as information as well as medical capacity both

improved. Lockdowns and other responses were increasingly left to local governments.

- The same barbell strategy was used in the economic response. The Indian economic response during the lockdown phase was oriented more towards providing a cushion to the most vulnerable segments of society and of the business sector (such as medium and small enterprises). This explains the emphasis on food availability, cash transfers to Jan Dhan accounts, government guarantees on loans to small enterprises, moratoria and postponement of financial deadlines.
- With the economy mostly unlocked by early October, there is now a case for an appropriate demand stimulus with infrastructure investment taking center-stage. Both monetary and fiscal space exists for this push despite the widening of the fiscal deficit. Demand – driven inflation is not a major issue as almost all price increases are due to appreciate and a current account surplus feeding foreign exchange reserves (standing at US\$545bn in end September), there is space for allowing the transmission of an expansionary monetary impulse to reignite India’s financial system.

Adapting to a Post-Covid World

- The covid-19 pandemic is the biggest global disruption in generations. The post-covid world that emerges from this crisis will not be a mildly-altered version of pre-covid world this new world will have its own geo-politics, supply chains, technological innovations, institutional structures, consumer preference and so on. All of these factors will interact in multiple, unpredictable ways. Therefore, it is very difficult to make grand predictions about how exactly the post-covid world will function.
- Rather than invest in a rigidly master-planned response, it is better to invest in a two things: flexibility and resilience.
- The agriculture sector reforms free-up farmers to sell their produce as they wish while those involved in the supply chain can invest in storage without fear of being labelled “hoarders ” . This will the farm sector and farm-related industries to adapt their activities to change in

demographics, climate change, consumer tastes and so on. India has the world's second largest stock of cultivable land there is one reason it shouldn't be an export powerhouse in agriculture.

- Similarly, dozens of central labour laws have been reduced to four internally consistent codes. On one hand they strengthen laws related to safety and working conditions, on the other hand they allow employers greater flexibility.
- Again, this is important for an unpredictable, evolving post- covid world where the economy needs to be able to efficiently redeploy the workforce according to changing conditions. other recently announced reforms related to bilateral netting and trade finance factoring are also directly aimed at improving the flexibility of the financial system.
- The other ingredient of the longer term post-covid framework is the emphasis on resilience. This is the key to understand the vision of "Aatmanirbhar Bharat" or self reliant India.
- The main idea of self-reliance is that India should become more resilient by leveraging its internal strengths. It should also be unapologetic about pursuing its national interests. For example, the Indian government decided to opt out the regional comprehensive economic partnership (RCEP) as it felt that the trade arrangement did not serve national interest. Similarly, India's globally competitive pharmaceutical industry was found to be too dependent in critical imported inputs with supply lines that can be easily disrupted (as happened during the recent pandemic). Hence, an effort is being, made to bring some of the input production back to India.
- Looking ahead, a resilient and flexible response to the unpredictable problems and opportunities of the post- Covid world will require reforms in two further areas- administrative structure and the legal system.
- In both cases, an archaic rigid system is unable to deal with the needs of the twenty-first

century. Some progress is now being made on administrative reforms, the use of online applications and the rationalisation of defunct government bodies. A similar effort, in partnership with the judiciary, needs to be made for upgrading a legal process with 36 million pending cases. Such a debate may help build a nonpartisan national consensus on how to proceed on this critical area of reform.

Conclusion

- Based on a "barbell strategy", India's economic and health response has been somewhat different than that of other countries in term of sequencing and emphasis of various measures. The cycle has not yet fully played out but, as the economy get fully unlocked, the emphasis will shift towards stimulating demand using infrastructure investment.
- The long term response, however, is aimed at making the Indian economy more resilient and flexible in order to deal with the opportunities and problems of the post-covid world.

Revival of Economy

With the world facing unprecedented shock due to Covid-19 and with sudden stop of economic activities, there are expectations that there could be a permanent loss of output. In India, with the pandemic situation still evolving, the growth forecasts by all the agencies have been negative with the median forecasts at close to -10%. While there are no official forecasts, off late, the Reserve Bank of India expects the GDP to contract by 9.5% 'with risks to the downside'.

- The pre-covid-19 situation, the GDP growth was already in a slowdown phase even in 2019-20. It has registered a growth of 4.1%, which was the lowest in over a decade.
- The fiscal situation was even more precarious with the Central Government invoking the escape clause in the FRBM (Amendment) Act of 2018 for two consecutive years that allows the governments to run 0.5% more fiscal deficit than specified in the Act.

- The Union Budget 2020-21 suggested a fiscal deficit of 3.8% for 2019-20 and 3.3% for 2020-21.
- The data from the comptroller of Government accounts suggests that even for 2019-20, the fiscal deficit is expected to be 4.6% against the provisional estimates of 3.8%.
- On the part of state governments, most of the studies suggest that the fiscal position at the states only deteriorated since 2015-16 despite higher devolution to the states.
- In the last quarter of 2019-20, GDP growth was at 3.1% and the first quarter of 2020-21 registered the sharpest decline of -23.9%.
- While the pandemic by itself could not have led such sharp slowdown, it is the most stringent lockdown that India has adopted in the first quarter which has led to sudden stop in the economic activities.
- With the gradual opening up of the activities there appears to be some green shoots noticeable since the end of September 2020. Now, the policy responses and its impact on growth is something that may be interesting to look into.
- The RBI has reduced the policy interest rates sharply and also pumped in more liquidity to the market.
- RBI has introduced loan moratorium and other measures such as increasing Ways and Means Advances (WMA) to the state Governments, Credit Guarantee Schemes the Loan restricting Committee, among many other sectoral interventions.
- With the monetary policy twist, there is a significant improvement in the monetary policy transmission in the recent period.
- The central government outlined Rs 20 lakh crore stimulus package with accompanied large scale structural reforms as part of Aatmanirbhar Bharat package.
- The package talks of four Ls: land, labour, liquidity and laws, with more structural reforms in all these areas. The package also aims to help

the country become self-reliant and provide support to MSMEs, the agricultural and allied sectors, migrant workers, civil aviation, defence, energy, housing and social sector that are adversely affected by the pandemic as well as lockdown.

- The Prime Minister also suggested five pillars of this package and they are: Economy, Infrastructure, system, Vibrant Demography and Demand.
- The Aatmanirbhar Bharat Package includes wide-ranging interventions such as direct benefit transfer, food security, rural jobs under MGNREGS, Credit Guarantee schemes for MSMEs and Kisan Credit Card (KCC) scheme.
- The package includes the monetary stimulus provided under liquidity measures which is to the tune of Rs 8.01 lakh crore. The extent of support in comparison with the rest of the world suggests India's intervention is wide-ranging and comparable to most of the countries except Japan and US.
- Aatmanirbhar Bharat Abhiyan include a range of interventions from credit guarantee, food security, jobs, anti-poverty program (PMGKY), etc.
- However, one of the criticisms with regard to this package is that the fiscal cost of this package is just about 15% of GDP as most of them include the monetary stimulus and credit guarantees. This stands against the demand for large fiscal stimulus that needs to be front-loaded in order to contain the sharp contraction in the GDP growth.

Self-Reliance India

The national manufacturing policy was released by the government in 2011. The Main objectives of the policy were:

- (a) increasing the manufacturing sector growth to 12-14% over the medium term
- (b) increasing the share of manufacturing in GDP to 25% by 2022
- (c) creating 100 million additional jobs in manufacturing domestics value addition and technological depth in manufacturing.

India's industrial policy has involved over the years, and relevant changes have been introduced based on the exigencies of time.

At the time of independence, resource constraints determined where resources were allocated, and special emphasis was placed on the capital goods sector. Development was to be led by the public sector, to create a sound industrial base for future.

The industrial policy 1991 was in response to a challenge, and appropriate changes were introduced to facilitate the transition from a state – regulated economy to a liberalized and globalized economy, overtime, the thinking that started dominating policy circles was that the government, instead of directly intervening in sectors, must play the role of a facilitator to ensure competition and efficiency.

Rethink due to covid-19

- The thinking that the government must reduce its role in directing investments and facilitate market forces in different sectors requires a relook in the light of the covid-19 pandemic.
- The risks of this approach have come to the fore due to the fact that India is dependent on a few countries for not only medical supplies, devices and pharmaceuticals, but also for other sectors like electronics, machinery and chemical.
- The government has also announced the *aatmanirbhar bharat abhiyan* or self-reliant India movement. The idea behind it is rebuilding economic capabilities and capacities via a number of measures and incentives to reduce dependence on imports, specially imports of critical components.
- Typically, an industrial policy comprises of various policy tools like direct and indirect subsidies, protection from foreign competition, preferential access to capital, guaranteed public

procurement, and mandates from government on production, and import- export decisions.

An industrial policy in the post-covid world may have the following components:

1. Making an India for the world, which requires focusing on a few sectors to build comparative advantage, so that in due course, India is a major player in global market in these sectors. This will enable us to reduce critical dependence on any country and developing self-reliance for the items like bulk drugs/APIs, power equipment consumer goods and defence related products. While initially we may be assemblers, we will eventually graduate to becoming components manufacturers also. at the same time, employment generation must be a key aspect behind all sectoral initiatives undertaken by the government.

2. The slogan of 'make in India' for the world requires defining world –class quality standards. Quality of products and services is a key driver of competitiveness. Over the years, standards and technical regulation ecosystem in India has not kept pace with global trends. This has resulted in challenges for Indian exporters in accessing global markets as well as for domestic producers, who face cheap or inferior imports. Domestic standards and technical regulation ecosystem is also critical for linkages with global and regional value chains. Some measures that may be undertaken in this direction are:

- a. Industry should be encouraged to drive formation and development of voluntary standards, by using industry driven standards setting bodies if needed.
- b. Regular participation of identified experts in international standards setting bodies such as international organization for standardization (ISO), international electrotechnical commission (IEC) and codex.
- c. Enhancing testing, inspection and certification infrastructure domestically, private sector participation.

3. Improving infrastructure and reducing logistics costs, which will work from the supply side and help in reducing production costs, thus making Indian manufactured products more competitive globally.

4. Ease of doing business (EoDB) is another key area which requires reform.

a. The real EoDB must lie within the operations of state governments and district authorities that lie closest to where business is done. State governments can be encouraged to rank districts on the lines of EoDB at the district-level, highlighting the importance of competitive federalism leading to better outcomes.

b. There should be an institutional mechanism for regulatory impact assessment, which will provide an objective evaluation of new regulations. This exercise will aim to achieve substantial net reduction in overall burden of regulatory compliances on industry.

c. Stable and predictable policy regime creates a conducive environment for businesses to thrive, and this also lies at the centre of EoDB.

5. Technological advancement of industry in India has not kept pace with that of many other manufacturing nations. There is a strong need to encourage Indian industry to upgrade to advanced technologies and ease transfer of technology from global and Indian innovators to Indian industry. Industry 4.0 offers opportunities, such as increased productivity, reduced waste and increased efficiency but there are also concerns about the cost of adoption and possible job losses. Measures to support digitisation and facilitate access to advanced technology will aid industry to leapfrog and catch up with global peers.

a. Digitisation forms the basis for the next wave of disruptive technologies, and India is digitising at an unprecedented pace. Adoption of digitisation can

be aided via measures like establishment of a National Digital Grid, robust data protection regime and facilitating market access for application of advanced technologies across sectors, including agriculture, smart cities, transport services, logistics, utility distribution etc.

b. Sustained growth in productivity via technological attainment is fundamental to acquiring global competitiveness. While emphasis on innovation and indigenous development of technology is critical, several smart technologies for production of goods and services have been developed elsewhere and would also continue to be developed. There is economic sense in acquiring these advanced and smart technologies for catch up and for further development. This can be done by first identifying certain strategic sectors where technologies can be targeted for acquisition. A Technology Deployment Fund can be created with private sector participation to support acquisition of technologies.

6. Implementing measures that prepare businesses for the new post-Covid 19 economic conditions and realities.

a. Firms can be incentivised to shift to alternate means of doing business, which include, improving web presence, advertising via social media, enhancing customer service functions online, and engaging in e-commerce.

b. Business support organisations like chambers of commerce and sector associations can play the role of being mediators among businesses. They can bring firms together and match business opportunities, which in turn can reduce costs for both buyers/sellers and create economies of scale.

Recent Measures Undertaken by the Government in this Direction

In the wake of the covid-19 pandemic, the government has proactively undertaken various measures around the parameters spelt above.

This is still a work in progress as the economic impact of covid-19 is still evolving both domestically and globally.

1. Boosting Domestic Manufacturing

a. Make in India 2.0 is focussing on domestic manufacturing of 15 champion sectors like Textile and Apparels, Food processing, gems and Jewellery, Pharmaceuticals, Chemicals, Automotive industry, Electronics, Leather and Footwear etc. in consultation with line Ministries.

b. A number of production linked incentive (PLI) schemes in the manufacturing of mobiles and electronics, APIs and medical devices have been approved. More sectors will be considered for suitably incentivising industry.

c. Phased Manufacturing Programme (PMP) is in operation for cellular Mobile Handsets and e-vehicles. NITI Aayog has identified LED Lights, Network Products, Medical Devices, Pharmaceutical Drugs, and Man-made fibre for implementation of PMP.

d. Twenty sectors have been identified in consultation with industry, where attention would be given to make India self – reliant.

e. To incentivize Make in India and domestic manufacturing, DPIIT has revised its Public Procurement (Preference to Make in India) Order with changes that will promote greater domestic value addition.

f. In order to address the issue of import surge, cheap imports, and to support domestic manufacturing, the government has effected various import restrictions in recent months. The restriction vary from (i) moving items from 'Free; to Restricted category like palm oil, palmoline, tyres, TV sets; (ii) import monitoring system; (iii) fixing import quotas mainly for agricultural products like peas, urad dal, etc. (iv) random

selection of samples for lab testing, like for toys, dolls etc.

2. Encouraging Foreign Direct Investment (FDI) to Boost Domestic Manufacturing, Investment and Technology Enhancement

a. It has been the continuous endeavour of the Government of India to put in place an enabling and investor-friendly FDI Policy. The intent has been to make the FDI policy more investor-friendly, aligning it with national interest and remove the policy bottlenecks that have been hindering investment inflows into the country.

b. The government is working to develop strategies to attract FDI, particularly for foreign firms looking to diversify their manufacturing base, and to boost investment. A two-fold approach has been adopted to attract investors from focus countries; (i) Organizing one to one meetings to know their investment/expansion plans in India and extending necessary facilitation wherever required; and (ii) Resolving the issues with reference to their existing operations.

c. The Government has approved the creation of an Empowered Group of Secretaries (EGoS) and Project Development Cells (PDCs) in Ministries/Departments of Government of India to facilitate and streamline investments into India. The objectives of the EGoS will be to bring synergies and ensure timely clearances from different Departments/Ministries, investment support and facilitation, along with policy stability. PDCs in administrative Ministries will create a pipeline of investible projects.

3. Infrastructure and Logistics

a. The government has unveiled a National Infrastructure Pipeline (NIP) covering projects worth Rs 111 lakh crore (as per the final report of the Task Force) with about Rs 44 lakh crore worth of projects under implementation.

b. The government is in the process of finalising a National Logistics Policy which aims to bring down logistics cost significantly.

Conclusion

India's share in global value chains (GVCs) is low vis-à-vis other comparable economies. The above measures encompassing infrastructure development leading to supply-chain resilience, PMP and PLI schemes in a number of products, promoting Make in India and the sustained drive towards quality and boosting domestic capacity will pave the way for India to make its mark in GVCs in the times to come. It will also enable India to take advantage of the opportunity created by multinational companies (MNCs) looking to diversify their supply chains and manufacturing centres. Thus, the outcomes will not only be confined within the domestic boundaries, but will also facilitate the realisation of the dream of 'Make in India for the world', as reiterated by the prime Minister.

SANKALP for Employment

The humungous reverse migration of workers during the Covid-19 lockdown, presents an unprecedented challenge for many states, the demographic dividend notwithstanding.

- With Uttar Pradesh, Bihar, Odisha, Madhya Pradesh, West Bengal and Jharkhand expecting the number of returnee migrant workers to run in millions, the preparedness of their home states to provide local employment is being put to test.
- In the wake of this challenge, the governments of many of the states have announced elaborate arrangements. Registering the returnees and their skills levels and collating job opportunities in projects funded by the central or state governments are some of the measures announced.
- It is evident that building adequate capacities at the grassroots levels for identifying employment

opportunities early and anticipating skill requirements at the level of districts is critical for an outcome focused skill training system.

- India has 487 millions workers and over a million join the labour force every month.
- However, about two-thirds of Indian employers report that they struggle to find workers with the right skill.
- India ranks 78 on a list of 122 countries as per Human Capital Development report of the World Economic Forum.
- With at least 20 government departments running skill development programmes in recent years, India should be doing better than that.
- The outcome of skill development, unlike education, varies with employers and society.
- Return on investment in skill development depends on the trainees' easy access to training apprenticeship opportunities and a smooth transition to the world of work. Therefore, the skill training ecosystem must take an integrated view of existing and potential demand, trainees, training providers and employers.
- Considering the demographic, economic, cultural and resource diversity of India, putting such an ecosystem in place would continue to be an in-progress project for a long while.

SANKALP

- The World Bank supported programme of, ministry of skill development and Entrepreneurship: SANKALP (Skill Acquisition and Knowledge awareness for Livelihood Promotion) has been rolled out to promote, inter alia, decentralization of skill planning and implementation.
- At present, the Ministry of Skill Development and Entrepreneurship of the Government of India (MSDE) is responsible for national skill training policy and management and is aided by many institutions.
- At the level of states, State Skill Development Missions (SSDM) were launched in nearly all the states to manage their skill development.
- Most States have also created designated district committees (generally called DSCs but

known by different appellations across states) to manage skill development.

- DSCs are composed of district level government officials of various departments. Besides, DSC can also co-opt local Chambers of Commerce and Industry, civil society organisations etc.
- The DSCs are expected to deliberate upon and plan for access to viable skill training and employment for district human resources based upon its economic profile, market conditions and institutional infrastructure.
- DSCs are expected to, reduce supply-demand mismatch, facilitate inclusion for all marginalized sections of society, manage labour migration issues and provide for robust monitoring.

Agriculture: Saviour of Economy

To sustain agricultural growth and boost rural economy in post-Covid era, it is critical to have a robust infrastructure in place to support farm and farm-processing based activities. Government soon launched and implemented farmer-friendly schemes, reforms and financial incentives to ensure timely agricultural operations in fields.

Among peer nations, Indians suffered the most with a significant shrink of 23.9 percent in GDP in the first quarter of FY 2020-21. The grim situation induced a slump never seen before. However, one sector-Agriculture and allied activities-emerged as the only bright spot clocking a 3.4 percent GDP growth at constant prices.

Being an agrarian economy, agriculture is the core sector which generates employment so that the entire circle of economic circulation goes on. To keep the wheel rotating, agriculture was the first to get relaxations for manufacture and transport of agricultural inputs, seeds, machinery, etc. Supply chains related to

agricultural goods and services were allowed to function and operate with protective measures in place.

Government Schemes

- A special scheme **Pradhan Mantri Garib Kalyan Yojana** launched to take care of vulnerable population during distress period. Cash and food assistance to persons engaged in informal sector, mostly migrant labourers, was also arranged out of PM-CARES fund.
- Under the economic stimulus package, credit support for small farmers was ensured through various institutional mechanisms.
- **NABARD** is extending an additional refinance support of Rs. 30,000 crore for crop loan requirement of Regional Rural Banks and Rural Co-operative Banks, which are the main sources of credit for small and marginal farmers.
- Nearly 25 lakh new Kisan Credit Cards were sanctioned with a loan limit of Rs. 25,000 to gain access to institutional credit at a concessional rate of interest.
- Almost 2.5 crore farmers are likely to be covered from a credit flow of nearly Rs. 2.0 lakh crore. Interest subvention and loan moratorium of three months was availed by over three crore farmers.
- To address the issue of livelihood of migrant workers in their home states, Prime Minister launched a special employment scheme with an outlay of Rs. 50,000 crore. Named as 'Garib Kalyan Rozgar Abhiyaan', the scheme was implemented on a mission mode in 116 districts of six most affected states, viz., Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan, Jharkhand and Odisha. Workers were engaged in 25 public infrastructure works ranging from rural housing to rural mandis, rural roads and community toilets.
- This scheme, while focusing on development of durable rural infrastructure, also worked to provide modern facilities like internet in the villages. A total of 25,000 returnee migrant workers across six identified states were initially chosen for the campaign.
- To further facilitate migrant workers, Government has launched a '**PM Shramik Setu**

Portal' and 'PM Shramik Setu App' that help connect job seekers with prospective employers as per their skills. Jobs are provided in centre or state-run schemes mostly pertaining to rural development and ancillary works. Workers can apply online to avail benefits and job offers.

- In Uttar Pradesh, one of the states with most number of migrant workers, a unique 'Aatmanirbhar Uttar Pradesh Rozgar Abhiyan was launched to provide employment opportunities to 1.25 crore migrant workers who face challenge of livelihood. The scheme aims to promote local entrepreneurship by creating partnerships with industrial associations. The state government has already mapped the skill of workers to provide jobs as per their expertise/trade.
- The employment schemes are additional to the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** that guarantees 100 days of wage employment in rural areas in a financial year to unskilled workers. To engage many workers, Government has raised its outlay to a record level of more than Rs. 1 lakh crore this fiscal.

Investment in Infrastructure

- A new Central Sector Scheme, **Agriculture Infrastructure Fund**, was launched with the primary objective to attract investment in post-harvest infrastructure which has earlier been a weak link in the agricultural supply chain.
- The Agriculture Infrastructure Fund will enable farmers to make modern facilities of storage in their villages. This modern infrastructure will go a long way in setting up agro-based industries.
- Under the scheme, banks and financial institutions will provide loans to Farmer Producer Organizations (FPO), Self-Help Groups, Farmers Credit and Co-operative Societies and to individual farmers, agri-entrepreneurs and start-ups as well.
- All loans will have interest subvention of three percent per annum up to a limit of Rs. 2

crore and subvention will be available for maximum period of seven years.

- A Moratorium for repayment may vary subject to minimum of six months and maximum of two years. Loans will be disbursed in four years, starting with sanction of Rs. 10,000 crore in current year and Rs. 30,000 crore each in next three financial years.
- Public Sector Banks have already signed MoUs with the Department of Agriculture, Cooperation and Farmers Welfare, Government of India for disbursement of loans on agreed terms.
- This fund will catalyse the creation of post-harvest management infrastructure and community farming assets, such as cold storage, collection centres, processing units, pack houses, sorting and grading units, ripening chambers, etc.
- These post-harvest structures will enable farmers to get greater value for their produce, as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.
- In a major step towards boosting rural economy, Indian railways launched a special **Kisan Rail's scheme** to specifically cater the transportation needs of farmers for their perishable produce. It will help build a seamless national cold supply chain for perishables inclusive of milk, meat and fish.
- The **Kisan Rail scheme** will benefit farmers of the entire country as they will be able to sell their produce in urban areas. It is an air-conditioned train and it is like cold storage on rail tracks. People living in cities will get fresh vegetables. Fare of trains in comparison to trucks is also low', said Prime Minister.
- The first Kisan Rail made its inaugural run from Devlali in Maharashtra to Danapur in Bihar on August 7, 2020. Encouraged by response, the second Kisan Rail chugged off from Anantpur in Andhra Pradesh to Delhi on September 10, 2020.
- Kisan Rails are multi-commodities, multi-consignors and multi-consignors trains with en-route stoppages to facilitate loading/unloading at stations.

Role of Handloom Households in Rural Economy

- In Himachal Pradesh, majority of population is living in rural areas having agriculture as their livelihood. Land holding is very small and scope of industrialisation is low hence, there is a large scope of developing the economy through skill development in this state.
- In the rural areas people are engaged in agriculture, handloom, tailoring and rural artisan works etc. An attempt has been made in this paper to study the income and employment of handloom households in rural areas of Himachal Pradesh.
- Himachal Pradesh is famous for a number of handloom and handicraft products, some of the main ones being carpets, shawls, wooden works, paintings and leather works. Himachal Pradesh State Handicrafts & Handloom Corporation Limited is established with the objective to assist and promote the interests of the poor weavers and artisans of the state.
- The aim of Corporation is to ensure their welfare by imparting training, design inputs, raw material, reviving the languishing crafts and providing them marketing facilities through its chain of emporia located within and outside the state.
- Handloom employs over four million weavers and allied production workers, bulk of whom belong to SC, ST, OBC and women. It is the second largest employer next to agriculture.
- Government needs to facilitate the access to training materials, toolkits, modern equipment's and technology, and invest in teacher training, better remuneration for teachers and trainers.
- Moreover, to focus on the effective utilisation of the existing talents, utilisation of local raw materials, up-gradation of the available skills and product designs, credit facilities, generation of employment opportunities and provision of some subsidies on latest modern machines to the poor traditional households are the policy issues for promotion of skills in Himachal Pradesh.

- In Himachal Pradesh majority of population lives in rural areas. There is a big scope of developing the economy through skill development in this state. Skill development is characterised by a range of approaches coming from different traditions especially in rural areas of this state. In the rural areas. People are engaged in agriculture. Handloom, tailoring and rural artisan works etc.
- There are various schemes aimed at improving employability of the vulnerable groups. In the area of skill development, the programmes so far have been state-driven and in some cases, the industry retain the employee to make them job competent. The need is to have demand-driven skill development, which meets the requirement of the industry
- The National Policy on Skill Development and Entrepreneurship, 2015 envisages inclusion irrespective of any divide through equal access to skill development by marginalised groups like SCs, STs, OBCs, minorities, women, school dropouts, differently abled and those living in difficult geographical locations to enhance entrepreneurship their employability, and access to decent employment opportunities.
- The vision of Make in India has given major impetus to skill development over the last year. The Government plans to skill more than 150 million youths by 2022: To understand the various skills gaps. And requirements of the industry including the need of Vocational Education, the NSDC is playing an active role and has formed various sector skill councils comprising experts from the industry and other stakeholders.

Nation Marching from Enterprise to Self-reliance

Today nation is taking rapid strides towards self-reliance, with start-ups, entrepreneurship, and skill development playing a dividend in India's favour.

- The Prime Minister announced the launch of Self-reliant India during the Coronavirus pandemic crisis, its foundation-laying started six and a quarter years ago, which was visible from

time to time in the policies, programmes, and campaigns of the central government.

- India has a large working population of young people and the workforce, which shows that the demographic of 15 to 59 years are more than the dependent population. The average of the working population is steadily increasing.
- The Economic Survey 2018-19 also points out that India's demographic dividend will be at its peak around the year 2041 when the share of working people in the age group of 20 to 59 is expected to reach 59 percent of the total population.
- If the demographic dividend favours a country, then the country's economy gets a boost, the growth rate picks up, and per capita income also increases.
- The government has set up the National Skill Development Corporation to provide skill-related training to 500 million individuals by 2022. It is promoting the private sector in skill training programs besides providing funds for them.
- There is no doubt that skill and knowledge are the driving force of socio-economic development for any nation.
- Several important initiatives are being taken by the Ministry of Skill Development and Entrepreneurship to bridge the gap between demand and supply of skilled workers.
- Pradhan Mantri Kaushal Vikas Yojana (PMKVY) has proved to be a milestone in this direction. Through this scheme, the youth are provided with short-term training in industry-relevant skills.
- According to the local market's requirement, vocational training is also imparted to illiterate, neo-literates and school dropout youths through 233 public education institutes operating in the country.
- About 34.14 lakh youth have been trained through short term training conducted under Pradhan Mantri Kaushal Vikas Yojana (PMKVY).

Out of this, 28.36 lakh youth have got employment.

- Similarly, under the Recognition of Prior Learning program, the skills of 33.20 lakh youth have been certified, out of which around 27.36 lakh youth have got jobs.
- To promote start-ups, the government, in 2019, has changed its definition. According to it, now a start-up will be treated as a start-up for ten years after its establishment and continue to get benefits.
- To provide financial assistance to start ups, the government has created a 'Funds of Funds for start-ups' with a corpus of Rs.10,000-crore in the Small Industries Development Bank of India.
- The Ministry of Skill Development and Entrepreneurship has also launched an Aatma Nirbhar Skilled Employee-Employer Mapping (ASEEM) portal under the Self-reliant India Campaign (Aatma Nirbhar Bharat Abhiyan).
- This portal provides real-time data of skilled workforce based on demand and supply.
- The Directorate General of Training, Ministry of Skill Development, and Entrepreneurship started on long-term training related to the latest technology. The Directorate General of Training has launched free digital learning platform (Skills Build Reignite) in June 2020 through MoU with IBM.
- In the time of Artificial Intelligence and Cloud Computing, the National Skill Development Institute is also offering all-round training of digital skills.
- In the field of entrepreneurship and skills, Indian genre like yoga has also been added. So far, more than 98 thousand people have been trained to get employment as yoga instructors.
- The Pradhan Mantri Yuva Udyamita Vikas Abhiyan (PMYUA) is under implementation by the Ministry of Skill Development and Entrepreneurship to promote young entrepreneurs.
- Through this, training, mentoring and other support for setting up enterprises is provided to young entrepreneurship is being implemented on a pilot basis in select districts of 10 states and two UTs.

- The National Entrepreneurship Award (NEA) has also been instituted in 2016 to promote entrepreneurship. The award aims to encourage the spirit of Entrepreneurship and inspire the youth.
- The award is given to honour young first-generation entrepreneurs and ecosystem builders who create a constructive environment for entrepreneurship and women entrepreneurs.
- The government has also taken several measures to encourage women entrepreneurs to begin start-ups.
- Together with GIZ, a German institution, the government has launched a pilot project for the economic empowerment of women entrepreneurs and women start-ups. It is being implemented in Rajasthan and Telangana and the north-eastern states-Assam, Meghalaya, and Manipur.
- The government has been providing loan facilities to entrepreneurs for setting up and promoting business through various schemes. It also includes the Stand Up India scheme along with the Mudra scheme.
- Agriculture, horticulture and animal husbandry, have immense potentials of entrepreneurship and start-ups. Recently, the government has passed three laws related to agricultural reforms in Parliament.
- With these agrarian reforms, farmers have access to many facilities and the freedom to sell their products to anyone, anywhere. They have also paved the way for setting up new start-ups and entrepreneurs in the field agriculture.
- Freedom to sell agri-produce anywhere besides the mandis, e-platforms for agricultural marketing will provide opportunities to young entrepreneurs to thrive in agriculture sector.
- The warehousing, cold storage, and processing units are set to expand in the private sector due to abolishing the storage limit of produce like cereals, potato es, and onions

through the Essential Commodities Amendment Act.

- Under Aatma Nirbhar Bharat Abhiyan, the Prime Minister has made the provision of an agricultural infrastructure fund with a corpus of Rs. 1 lakh crore, which aims to transform the condition and direction of this field. Infrastructure facilities such as warehouses, cold storages, and food processing units will be set up in rural areas with this fund.
- The Prime Minister has made a provision of Rs.10 thousand crores in the AatmaNirbhar Bharat Abhiyan to formalize micro food enterprises.
- With this amount, two lakh micro-food enterprises are supported with the global reach and commitment to the resolution of 'Vocal for Local'.
- This fund will benefit entrepreneurs who want to make their enterprises conform to the standards of the Food Safety and Standards Authority of India or they want to establish their own brands.
- Along with the existing food entrepreneurs, farmer producer organisations, self-help groups and cooperative societies have also been assisted in this scheme.

Financial and Institutional Support for Rural Start-ups

Government Support to Startups

The startup movement has gained momentum under Hon'ble Prime Minister's clarion call for "Digital India" and "Startup India". The startup India initiative envisions building a strong ecosystem for nurturing innovation and entrepreneurship in the country. In India, Central and State governments are playing an active role in startup ecosystem development.

The key objectives of the Government are as follows:

1. Spur entrepreneurial activity to accelerate job creation.
2. Create enabling environment by reducing regulatory burden and introducing new policies.
3. Build capacity through infrastructure creation and training

4. Provide funding support and fiscal incentives
5. Facilitate all members of the Startup ecosystem to connect and collaborate.

Institutional and Financial Support for Rural Startups

As per Startup Genome, Bengaluru and Delhi are among the top 40 startup ecosystems in the World.

1. Incubation Centres: There are more than 400 incubators and accelerators in India. Through the Atal Innovation Mission (AIM), around 47 incubation centres have been funded so far. While many of these incubation centres are in Tier 2-3 cities, only a few are in rural areas. Among other sectors, agriculture is one of the focus areas of AIM. The agricultural universities (e.g TNAU) and NABARD have taken the lead in setting up agri incubation centres. ICAR has one agri-focused incubation centre as well.

2. Fund of Funds: Right from IFCI's first venture capital fund in 1976 to the SIDBI startup Fund of Funds of Rs 10000 crore, a large chunk of the beneficiaries have been urban startups. As on February 18, 2020, the SIDBI Fund of Funds has invested Rs 913 crora in 47 Alternative Investment Funds (AIFs).

3. Venture Capital Funds: The first set of venture capital funds that invested in a few rural startups space included impact funds like Aavishkar (set up in 2001), Acumen and Rural Innovations Network. Later, access to external capital increased significantly as some of the global foundations, impact investors and philanthropies started investing in agri-rural startups.

- SIDBI had a rural oriented VC fund with a corpus of Rs 60 crore and has made a few investments in agri SMEs from Samridhi fund. NABARD has been very supportive of agri/rural VC funds as it started contributing to VC funds which had agriculture/rural as one of their core

focus areas. So far, NABARD has supported 19 such funds. These funds have delivered mixed performance so far with lot of unrealised exists.

- In 2019, NABARD started its own venture growth equity fund, NABVENTURES Fund I with a target corpus of Rs 500 crore and a green shoe of additional Rs 200 crore. During the pandemic, NABVENTURES has made three agritech and one agri/rural fintech investment in startups.

Seed Fund: A national Seed Fund was announced in Budget 2020-21 to support ideation and development of early stage startups. Recently, RBI has allowed lending to startups as part of priority sector lending. NABARD and SIDBI are setting up credit guarantee schemes, which may inter alia enable startups to raise loans for their business purposes.

Presently, the agritech startups touch only 10 percent of the farmers. Beyond funding, the startups, need guidance, direction and exposure. It is important that the key people managing the ecosystem components are entrepreneurs/startups investors themselves with first hand exposure of running businesses. This is even true for incubators/ accelerators as without high quality people, only wasteful infrastructure is created.

Elements that feed the Rural Startup Ecosystem:

Education: Education and vocational skilling need to be integrated a practice followed by many countries. We need to train rural youth in basic English language skills. Many of the rural youth lack the "soft skills" such as ability to experiment with new ideas, ability to spot business opportunities, sales & marketing ability etc. that could make them more productive and employable in corporate. These skills help in entrepreneurship as well. Job creation through encouragement of tech-enabled businesses in rural areas Mobile internet based digital services can be the engine of employment growth for educated rural youth. New opportunities are emerging in agritech, agri based ecommerce, IT-linked agri-extension, seed technology,

biotechnology, farm monitoring, agri/rural fintech etc. enabling the educated rural youth to explore new ideas, undertake research and set-up start-ups.

Way Forward

A. Incubation/acceleration of rural startups: In the near term, there is scope for more accelerators and incubators in rural India focused largely on agritech, foodtech, affordable housing tech, rural healthtech/edutech, fintech, payments etc. These need to be housed in a few large clusters alongside other universities, mandis, processing facilities, agri parks etc.

- Some of the incubators may specialise in internet services, hardware, futuristic technology, technology based agriculture, rural technologies to have focused attention on future technologies.
- In order to conserve capital for creation of new infrastructure, the existing infrastructure of colleges and universities may be leveraged for running incubation/acceleration centres.

B. Creation of a National Rural Seed-cum-Impact fund to invest in startups benefiting large number of farmers/rural population: A government backed National Rural Impact Fund with a corpus of Rs 1,000 crore (in the form of an AIF with GOI contribution of 40 percent) may be set up for investments in rural start-ups providing frugal innovations which is affordable even by a small and marginal farmer and start-ups whose solution are aimed at supporting FPOs at the seed stage. This will create maximum social impact and large agribusiness corporate (both domestic and foreign), foundations and family offices should come forward to participate in the fund. The Government of India may provide a catalytic first loss guarantee to the extent of 10-20 percent in order to attract other contributions in the Fund.

C. Creation of a National Agri/Rural Startups Fund: The GOI may consider setting up National Rural startups Fund, an AIF, with a large corpus of Rs. 25000 crore. This fund would make direct investments in agri/food/rural startups at all stages (early, mid and late). Like the National Investment and Infrastructure Fund (NIIF) fund, the Government of India may restrict its contribution to 49 percent and the balance amounts could be raised from both domestic and global investors. With the creation of this fund, there may not be a need for large startups to dilute stakes to foreign investors. Agriculture is an area of national importance and ownership of systemically important rural startups should be kept in domestic hands.

D. Creation of a National rural fund of fund: The government of India may consider setting up a National Rural Funds, an AIF, with an initial corpus of Rs.2,000 crore. This fund would make indirect investments in the third party AIFs that would in turn invest in agri/food rural startups at the seed (post incubation/ acceleration) to early stages. The funds would take equity stakes in supported funds' asset management companies and would co-invest as well.

E. Creation of National venture debt fund: Practically, no bank lend to startups including agri startups actually need working capital debt and not equity. The creation of a national venture debt funds, an AIF with an initial corpus of Rs.1,500 crore (40 percent contribution from government of India) would solve this problem. The funds should invest in financially sound startups, which have matured to reach revenues of Rs.200 crore, or more and which have already raised sizeable amount of venture capital money.

The insurance companies, FIs and banks in the public sector may provide partial credit guarantee for the venture debt provided to start ups.

Conclusion

- Rural areas have lot of untapped entrepreneurial potential. Agriculture and rural businesses are the areas of maximum social

impact but remain underinvested in India from an equity/ start-up investment standpoint.

- There are only a few specialist funds (not more than 2-3) focused on the agri-food-rural ecosystem.
- Further, rural areas remain underinvested in terms of healthcare, education, infrastructure etc and are ripe for launch of tech-based innovative businesses.
- Internet penetration in rural area will result in rise of super apps/constellation of apps which will change the face of rural banking, shopping, trading, ecommerce etc.
- The government recognizes the importance of entrepreneurship and acts on many levels to build a sustainable ecosystem. The policy making stance for startups needs to shift from indirect investing through government funds to direct investments through a government owned VC funds with ability to invest through multiple equity and equity linked instruments (including venture debt). Further, the direct investments need to be managed on commercial terms and not social term in order to generate returns and make the overall program sustainable for future round of investments.

Rural Women Entrepreneurs: Empowering a New India

- According to the Periodic Labour Force Survey, 2018-19, 59.7 percent of women in rural India are self-employed, 11 percent are regular wage or salary earners while 29.3 percent are casual workers. In comparison, 57.4 percent men in rural India are self employed, 14.2 percent are regular wage or salary earners and 28.3 percent are casual workers.
- While the share of nature of work among men and women in rural areas is not different, there is a huge difference in the type of self-employment between men and women. 84 percent of self-employed men in rural India are own account workers or employers while only 37 percent of women fall in this category. Most self-

employed women in rural India (63 percent) work as helpers in household enterprises.

- Among states, according to the PLFS survey, Jammu and Kashmir, Mizoram, Himachal Pradesh, Rajasthan and Arunachal Pradesh had the highest share of self-employed female workers in rural India. In comparison, Chandigarh, Kerala, Bihar and Assam were some states with the lowest share of rural women who were self-employed.
- While Bihar and Chandigarh had a higher share of rural women who worked as casual labour, Assam and Kerala had more women who had regular wages and salary. States that had a higher share of agriculture gross state value add as a share of the state's GDP, were also associated with a higher share of self-employment that was indicated through a correlation coefficient of 0.30.
- The correlation between a state's per capita income with its share of self-employed women in rural area was found to be -0.25 percent. This means that states that had a higher share of self-employed women are likely to have a lower per capita income relatively.
- According to the numbers reported in the PLFS 2017-18 survey, self-employed women in rural areas earned the lowest wage among men and women from rural and urban areas. On an average, wages earned by self-employed urban men were 4 times that of self-employed rural women, those of self employed men in rural areas was 2.5 times that of self employed women in rural areas, while self-employed women in urban areas earned 1.7 the wages earned by self-employed women in rural areas.
- This is reflected in the number of hours worked in a week by self-employed women in rural areas which is almost 19-21 hours less than urban self-employed males and 10-12 hours less than self-employed rural males. Self-employed women in urban areas worked on a couple of hours more than those in rural areas, indicating that like their rural counterparts, they are also expected to do the larger share of domestic chores.
- In addition to the social conditioning where women are expected to be the primary caregivers and do majority of the household chores. These impediments

range from poor education levels to lack of financial support to information asymmetry.

- Over the years, the government has taken active steps towards improving the literacy rates among women in rural India. Yet, there is a gender gap in the literacy rates of men and women in both urban and rural areas.
- As per the PLFS report, compared to the India's average literacy rate of 78.1 percent, only 65.7 percent women in rural areas above the age of seven were literate as of 2019. Moreover, improvement in literacy rates of women in rural areas, has not translated into a higher share of participation in the labour force.



VISIT US AT

N New Delhi: 982-155-3677
Corporate Office
Office No. B-7, Lower Ground floor, Apsara
Arcade Near Karol Bagh, Metro Gate No. 7,
New Delhi - 110060

A Anand: 720-382-1227
Head Office
T9-3rd Floor Diwaliba Chambers, Vallabh Vidyanagar,
Near ICICI Bank, Bhai Kaka Statue,
Anand - 388120

G Gandhinagar: 6356061801
Office No. 122, 1st Floor,
Siddhraj Zori, KH, O, Sargasan Cross Road,
Gandhinagar, Gujarat 382421

R Rajkot Branch: 762-401-1227
3rd Floor, Balaji House 52 Janta Society
Opp LIC Of India Tagore Road
Rajkot 360001

M Mumbai Branch: 990-911-1227
415, Pearl Plaza Building, 4th Floor,
Exactly opp Station Next to Mc Donalds.
Andheri West, Andheri West,
Mumbai, Maharashtra,

B Bhubaneswar : 720-191-1227
1899/3902, First Floor, Lane No. 2, Near Laxmi
Narayan Temple, Nilakantha Nagar, Nayapalli,
Bhubaneswar - 751006, Odisha.

K Kanpur : 720-841-1227
2nd Floor, Clyde House, Opposite Heer Palace Cinema,
The Mall Road, Kanpur Cantonment,
Kanpur - 208004, Uttar Pradesh.

R Ranchi: 728-491-1227
3rd Floor, SMU Building, Above Indian
Overseas Bank, Purulia Road, New Barhi Toli,
Ranchi - 834001, Jharkhand.

K Kolkata : 728-501-1227
31/3, Bankim Mukherjee Sarani, New Alipore,
Block J- Siddharth Apartment, 3rd Floor,
Opposite Corporation Bank,
Kolkata - 700053, West Benga

C Chandigarh : 726-591-1227
2nd Floor, SCO-223, Sector-36-D,
Above Chandigarh University Office,
Chandigarh - 160036.

P Patna : 726-591-1227
3rd Floor, Pramila mansion, Opposite Chandan
Hero Showroom, Kankarbagh
Patna - 800020, Bihar

S Surat: 720-391-1227
Office No. 601, 6th Floor, 21st Century Business
Centre, Besides World Trade Centre,
Near Udhna Darwaja, Ring Road
Surat - 395002

A Ahmedabad: 726-599-1227
Office No. 104, First Floor Ratna Business Square,
Opp. H.K. College, Ashram Road,
Ahmedabad - 380009

D Dehradun Branch: 721-119-1227
Near Balliwala Chowk,
General Mahadev Singh Road,
Kanwali, Dehradun,
Uttarakhand- 248001.

R Raipur Branch: 728-481-1227
D-117, first floor, Near Shri Hanuman Mandir,
Sector-1, Devendra Nagar, Raipur,
Chhattisgarh- 492009.

V Vadodara: 720-390-1227
102-Aman Square, Besides Chamunda
Restaurant, Behind Fatehgunj Petrol Pump,
Vadodara, Gujarat- 390002

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