

CURRENT AFFAIRS

WEEKLY

WEEK - 4
APRIL, 2020

BIODIVERSITY

- Trimeresurus Salazar

CULTURE

- National List of Intangible Cultural Heritage (ICH)

ECONOMY

- COVID-19 Rural Poor Stimulus Facility
- Extant Foreign Direct Investment (FDI) Policy
- New Development Bank
- Special Drawing Rights
- White Paper to Strategize revival of Post-COVID 19 Indian Economy

ENVIRONMENT

- Protection of Indigenous Amazonians
- Snow Leopard

GOVERNANCE

- World Freedom Index 2020

HEALTH

- Classical Swine Fever

HISTORY

- Remembering Peshawar's Qissa Khwani Bazaar Massacre

SCIENCE & TECHNOLOGY

- Artificial Neural Networks based Global Ionospheric Model
- Discovery of Li-rich Giant Stars
- Feluda

MAINS

- Tale of China's Illegal Trade

BIODIVERSITY

- Global Report on Food Crises

- Migration Crisis

ECONOMY

- Pandemic & Panchayat

ECONOMY

- No Rhyme or Reason for 100% Reservation: SC

POLITY

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The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

CURRENT AFFAIRS ANALYST

WEEK- 4 (APRIL, 2020)

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SECTION: A
(MAINS)

CURRENT AFFAIRS

TALE OF CHINA'S ILLEGAL TRADE

CONTEXT

China recently started a process to classify a step to rein in animals and birds from illegal trading in wildlife. However, experts are raising concerns over China's measures to prevent illegal wildlife trade.

◎ BACKGROUND:

- China, the most populous country in the world has drawn criticism from several quarters over its handling of wet animal markets after the outbreak of the novel coronavirus disease (COVID-19).
- The epicentre of COVID-19 was in the Chinese city of Wuhan, an important hub in the lucrative trade in wildlife – both legal and illegal.
- The outbreak is believed to have originated in a market in which a variety of animal-derived products and meats are widely available, including peacocks, porcupines, bats and rats.
- It's also a market where regulatory and welfare standards are rudimentary at best.
- The China's government recently (April 8) circulated a list of animals that could be traded legally, seeking comments from the public. The public can send in their comments to the ministry until May 8.
- The list — titled '*National Catalogue of Livestock and Poultry Genetic Resources*' — was created based on the decisions taken during a meeting of the Standing Committee of the National People's Congress.
- It was drafted for "eliminating the bad habit of excessive eating of wildlife and effectively safeguarding the lives and health of the public".

reaping a deadly harvest in the pursuit of profits.

India's story:

- India is only 2.4 per cent of world's land area, but contributes about 8 per cent of known global wildlife, including over 45,000 species of plants and 91,000 species of animals.
- The illegal trade in wildlife is driving species all over the globe to the brink of extinction. In India, the trade is expanding rapidly, driven by demand for rare species—headed for the pet market—as well as for species believed to have medicinal properties.
- The main consumer markets are China and South East Asia, but wildlife—alive or as body parts—is also smuggled to the Gulf, Europe and Northern America. Beyond India, the main transit countries are Nepal, Bangladesh, Bhutan, Sri Lanka and Myanmar.

Legal and policy framework to regulate and restrict the wildlife trade:

- Current laws prohibit trade in over 1,800 species of wild animals, plants, and their derivatives under the **Wildlife (Protection) Act, 1972**.
- The Indian Penal Code (IPC) and **The Prevention of Cruelty to Animals Act 1960** empower authorities to penalize and jail those who harm wildlife.

◎ ANALYSIS:

What is illegal wildlife trade?

- Trade becomes illegal when it contravenes environmental regulations such as government legislation and international agreements put in place to prevent over-exploitation.
- Though it is to be noted that even legal trade can be ecologically unsustainable, and regulations are regularly changed to protect wildlife endangered by a sudden spike in demand.
- Today's interconnected world was built on international trade, but not all of it is legal.
- Every year, up to \$23 billion worth of elephant tusks, rhino horns, tiger bones, bear bile and other wildlife by-products illicitly change hands, according to UN estimates.
- Poachers, traffickers and highly-organized criminal gangs decimate already endangered wildlife species,

Illegal wildlife trade's role in deadly diseases:

- Domesticated animals like cattle, sheep, dogs and goats shared the highest number of viruses with humans, with eight times more animal-borne viruses than wild mammal species.
- COVID-19, the disease caused by the coronavirus, likely jumped from bats to endangered pangolins and then to humans at a wildlife market for bushmeat in Wuhan, China.
- Three-quarters of new human diseases, such as SARS, Ebola and HIV, come from animals.
 - These are known as zoonotic diseases and wildlife trafficking plays a key role in their transmission from animals to humans.
 - Zoonotic diseases are responsible for over 2 billion cases of human illness and over 2 million human deaths each year, including from Ebola, Mers, HIV, bovine tuberculosis, rabies, and leptospirosis.

- Wildlife trafficking has also led to the dramatic decline of many species, including rhinos, elephants and pangolins.

How this trade is growing at a higher rate?

- Despite concerted efforts, illegal wildlife trade has escalated dramatically over the last decade.
- Human population growth, increasing wealth and access to wildlife, and improved global transport links have all played a part.
- In parts of Asia where the tradition of wildlife consumption is culturally embedded, demand for particular high-value species has soared.
- At the other end of the supply chain, rural poverty in the countries that harbour these species is driving desperate people to plunder their own natural resources for scant reward.
- It is the intermediaries who pocket the lion's share of the profits; the trade is so lucrative that organised crime syndicates are now actively involved in wildlife trafficking.

Implication of wildlife trafficking:

- **Threat to species:** Illegal wildlife trade has the potential to be very damaging. Populations of species on earth declined by an average 40% between 1970 and 2000 - and the second-biggest direct threat to species survival, after habitat destruction, is wildlife trade.
- **Overexploitation:** It can cause overexploitation to the point where the survival of a species hangs in the balance. Historically, such overexploitation has caused extinctions or severely threatened species and, as human populations have expanded, demand for wildlife has only increased. This overexploitation is a big concern as it:
 - harms human livelihoods
 - harms the balance of nature
- **Invasive species:** Invasive species are as big a threat to the balance of nature as the direct overexploitation by humans of some species. Many invasive species have been purposely introduced by wildlife traders; examples include the *American Mink, the Red-eared Terrapin and countless plant species*.
- **Incidental killing of non-target species:** With wildlife trafficking, non-target species such as dolphins and

seabirds get caught. Incidental killing cause damage and death to a variety of animals besides the intended ones.

- **Infectious disease:** Human encroachment into biodiverse areas increases the risk of spillover of novel infectious diseases by enabling new contacts between humans and wildlife.

Regulation of wildlife trade:

- **CITES:** To address the problem, in 1973 the United Nations General Assembly signed the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**, aimed at **stemming the illegal trade in wild animals and rare commodities**.
 - CITES is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.
 - It was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN (The World Conservation Union).
 - A State or regional economic integration organization for which the Convention has entered into force is called a Party to CITES. Currently there are 183 Parties.
 - India is a member to CITES.
- **TRAFFIC:** It is the wildlife trade monitoring network, is a joint program of WWF and IUCN – the International Union for Conservation of Nature.
 - Created in 1976, it works to ensure that trade in wild plants and animals is not a threat to the conservation of nature.
- **World Wildlife Day:** UN World Wildlife Day is held each year on the anniversary of the signing. The day helps raise awareness of the many challenges facing the world's wild animals and plants and the efforts to stamp out illegal trading.

CONCLUSION:

There are ways through which we can reduce, if not completely stop, poaching. If the government of all countries agree to ban the possession of wildlife traded or harvested illegally, by national law; this would reduce the demand and hence reduce the trade itself.

GLOBAL REPORT ON FOOD CRISES

CONTEXT

The annual report of acute food security and malnutrition 'Global Report on Food Crises' has revealed the scope of food crises as COVID-19 poses new risks to vulnerable countries.

◎ BACKGROUND:

- In India, millions of informal and migrant labourers lost their livelihoods overnight when Prime Minister Narendra Modi's government ordered a national lockdown.
- Many governments around the world have put their populations on lockdown causing severe slow-downs in international trade and food supply chains.
- Panic buying by people going into confinement has already demonstrated the fragility of supply chains as supermarket shelves emptied in many countries.
- Without wages or access to government programmes, many workers are unable to eat.
- Already, 135 million people had been facing acute food shortages, but now with the pandemic, 130 million more could go hungry in 2020.
- This emerging crisis is unlike regional problems caused by political or military strife. It is not local storm damage. It is a global emergency and it does not hit all of us equally. The poor lose more.

◎ ANALYSIS:

Key findings of the Global Report

- The report by the Global Network Against Food Crises indicates that at the close of 2019, 135 million people across 55 countries and territories experienced acute food insecurity* (IPC/CH Phase 3 or above).
- Additionally, in the 55 food-crisis countries covered by the report, 75 million children were stunted and 17 million suffered from wasting in 2019.
- This is the highest level of acute food insecurity* and malnutrition documented by the Network since the first edition of the report in 2017.
- Additionally, in 2019, 183 million people were classified in Stressed (IPC/CH Phase 2) condition -- at the cusp of acute hunger and at risk of slipping into Crisis or worse (IPC/CH Phase 3 or above) if faced with a shock or stressor, such as the COVID-19 pandemic.
- More than half (73 million) of the 135 million people covered by the report live in Africa; 43 million live in the Middle East and Asia; 18.5 million live in Latin America and the Caribbean.
- **Key-drivers:** The key drivers behind the trends analysed in the report were:

- conflict, (the key factor that pushed 77 million people into acute food insecurity)
- weather extremes (34 million people)
- economic turbulence (24 million)

About the Global Network

- The **Global Network against Food Crises** seeks to better link, integrate and guide existing initiatives, partnerships, programmes and policy processes to sustainably address the root causes of food crises.
- The Global Report on Food Crises is the flagship publication of the Global Network and is facilitated by the Food Security Information Network (FSIN).
- The Report is the result of a consensus-based and multi-partner analytical process involving 16 international humanitarian and development partners.

The situation in India:

- As per the Global Hunger Report 2019, India's position in the index is 102 out of 117 countries. Neighbouring Pakistan and Bangladesh are better than India in this index.
- **Undernourishment:** The portion of undernourished in the population is 14.5 percent.
- **Stunting:** 37.9 percent children under five years are stunted and 20.8 percent children under 5 year are wasted.
- **Anaemia:** Another serious food related issue is anaemia. More than 50 percent of women and children are struggling with anaemia.
- **Cardiovascular disease:** Another study regarding diet related deaths by Lancet shows 310 deaths per one lakh in 2017. In 2016, 28.1 percent of the total deaths are caused by cardiovascular diseases. Cardiovascular disease is one of the leading cause for deaths due to lack of a complete diet.
- **Poor nutritional quality:** According to the National Sample Survey, 68 percent population of rural India are not able to access 2200 calories (benchmark nutritional norms to define poverty) in 2011-12 and 65 percent of the urban population are not able to consume 2100 calories in same year. This data shows that India's condition is bad as it is and that lockdown will only worsen the health condition of people further.
- **Lack of availability of food:** Availability of food is another pertinent problem in India. Per person food

absorption has been declining slowly after economic reforms in the country.

How COVID-19 is worsening the situation?

- Already, India is struggling with severe hunger problems, the lockdown will push further deprivation amongst the people.
- Workers think that they will die of hunger before the virus kills them.
- While historically, hunger and poverty has been used as tools of 'disciplining' a population, civil society as an institution to criticise policies and demand rectification also has its hand tied because of the lockdown.
- Most media outlets are far from responsible journalism and are busy communalising the pandemic.
- Workers are scattered, scrambling to make ends meet and there is literally no way for activists to come out and protest against the enormity of injustice with the poor.

What is acute food security?

- Acute food insecurity is when a person's inability to consume adequate food puts their lives or livelihoods in immediate danger.
- It draws on internationally accepted measures of extreme hunger, such as:
 - The Integrated Food Security Phase Classification (IPC)
 - The Cadre Harmonise
- It is more severe than / not the same as chronic hunger, as reported on each year by the UN's annual State of Food Security and Nutrition in the World report.
- Chronic hunger is when a person is unable to consume enough food over an extended period to maintain a normal, active lifestyle.

Important terms:

- **Hunger:** It is a short-term physical discomfort as a result of chronic food shortage, or in severe cases, a life-threatening lack of food.
- **World hunger:** Hunger aggregated to the global level. Related terms include food insecurity and malnutrition.
- **Malnutrition:** It is a condition resulting from insufficient intake of biologically necessary nutrients.

What causes Hunger?

Worldwide, the number of hungry people has dropped significantly over the past two decades, but 821 million people continue to struggle with hunger every day. Many factors contribute to the state of hunger, the reasons are complex and varied, and often interconnected.

- **Poverty:** Poverty is the main cause of hunger in the world. This is true in rich and poor countries alike. It is true no matter whether people live in urban or rural areas.
- **Job Instability:** Hunger is mainly caused by poverty that results from a lack of jobs or because jobs pay too little. Hunger rates rise when the national or local economy is in a slump. People lose jobs and cannot find work. Once the economy improves some people continue to struggle to find work.
- **Food Shortages and Waste:** Food shortages in developing countries are common. The people most affected are smallholder farmers and their families who depend on their own surplus to survive between harvests. Another reason for food shortages is up to 40 percent of food grown in some countries is spoilage. Smallholder farmers do not have adequate storage facilities to protect their supplies against pests and weather.
- **Poor infrastructure:** Poor infrastructure causes hunger by making it difficult, sometimes impossible, to transport food to areas of a country where there are shortages.
- **Unstable Markets:** People who live on \$1.90 per day spend most of their income on food. Under stable conditions they can scarcely afford enough food to protect themselves and family members against hunger. Any fluctuation that pushes food prices up creates additional hardship.
- **Nutritional Quality:** All people who are hungry are malnourished. They are not getting enough protein, so they lose weight and in severe cases their bodies begin wasting. Another form of malnutrition is known as "hidden hunger," and it has more to do with the quality of food than the quantity.
- **Discrimination:** Progress against hunger and poverty seldom happens without economic growth in countries, but economic growth alone does not ensure that prosperity is broadly shared. Every country, regardless of its wealth, has discrimination woven into its social fabric. Disadvantaged groups tend to be left the furthest behind.
- **Climate Change:** Despite having contributed little to cause climate change, the poorest developing countries are already experiencing the effects. Climate change is damaging food and water security in significant ways.
- **War and Conflict:** Hunger is both a cause and effect of war and conflict. Wide-scale poverty and hunger lead to frustration and resentment with governments that appear to ignore hungry people's plight.

◎ CONCLUSION:

The pandemic has sparked not only a health emergency, but a global economic rout, with businesses struggling to survive, millions left jobless, and millions more facing starvation.

MIGRATION CRISIS

CONTEXT

India's effort to contain the coronavirus pandemic has gone into disarray after thousands of migrant workers started flouting lockdown rules to head to their homes, fearing starvation following the imposition of a complete lockdown. The condition of seasonal migrants has raised important questions for the government and regulatory authorities.

◎ BACKGROUND:

- The ongoing COVID-19 pandemic has created havoc across the world, putting extraordinary pressure on not just public health systems, but also on crisis communications.
- With social media being the primary medium for information consumption, clear, end-to-end crisis communication with diverse target groups becomes key in dealing with such a pandemic.
- On 11 March 2020, the World Health Organisation's (WHO) declared COVID-19 a pandemic as the number of cases worldwide had surged 13-fold.
- At that time, only 62 cases were reported in India, a mere 0.05 percent of the global count.
- While many European countries and the WHO had understood the severity of the crisis and the need to combat the situation, India was still sitting on the fence trying to play defensively, biding time before facing the avalanche.
- However, today the situation is entirely different and scaring.
- With about 736 districts in 28 states and eight union territories, and varied shades of dialects and cultures within the states, migration in India becomes a complex exercise.

- Uttar Pradesh and Bihar are the biggest source states, followed closely by Madhya Pradesh, Punjab, Rajasthan, Uttarakhand, Jammu and Kashmir and West Bengal; the major destination states are Delhi, Maharashtra, Tamil Nadu, Gujarat, Andhra Pradesh and Kerala.

Who is a migrant?

- A person who moves from one place to another to live and usually to work, either temporarily or permanently. Migrants may move to take up employment or to be reunited with family members.
- **Migrant Worker:** According to the **Migrant Workers' Convention**, "a person, who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which the worker is not a national."

Main drivers of migration:

- While marriage is a common driver of internal migration in India, especially among women, a significant share of internal movements are driven by long-distance and male-dominated labor migration.
- A major chunk of migrants move in search of employment. Other top reasons for migration among Indian men (often with other members of the household) include family, business, and education.
- Internal migrants have widely varying degrees of education, income levels, and skills, and varying profiles in terms of caste, religion, family composition, age, and other characteristics.
- These flows can be permanent, semi-permanent, or seasonal.

Types of internal migration:

Labor migration flows include permanent, semi-permanent, and seasonal or circular migrants.

- **Permanent migrants:** They move from one place to another and have no plans to return to their original home
- **Semi-permanent migrants:** They have precarious jobs in their destination areas, or lack the resources to make a permanent move. While they may reside in their destination cities for years or decades, they likely have homes and families in their sending district.

◎ ANALYSIS:

What is migration?

- More than half of the world's population lives in urban areas, and the number is steadily growing every year. India, where the majority of the population is still dependent on agriculture, is no exception to this trend.
- Urbanization in India is a consequence of demographic explosion and poverty-induced rural-urban migration.
- India is geographically diverse and is no stranger to the effects of environmental change.
- Sea level rise, irregular precipitation, glacial melt and extreme events endanger a large number of lives and livelihoods.
- Migration is an established household adaptation to cope with environmental and economic stresses.

- **Seasonal or circular migrants:** They are likely to move from place to place in search of employment, or to continue returning to the same place year after year. Such circular flows encompass migrants who may stay at their destination for six months or more at a time and hence need social services at their destination.

Why it's a good thing?

- Internal migration spurred primarily by employment and marriage helps shape the economic, social, and political life of India's sending and receiving regions.
- Internal migration, both within a state and across states in India, improves households' socioeconomic status, and benefits both the region that people migrate to and where they migrate from.

Vulnerabilities of the migrant workforce:

- **Issues in unorganized sector:** In an unorganized and chaotic labour market, migrant workers regularly face conflicts and disputes at worksites. The common issues they face are non-payment of wages, physical abuse, accidents and even death.
- **Insensitive legal machinery:** The existing legal machinery is not sensitive to the nature of legal disputes in the unorganized sector. Many informal sector disputes never make their way to labour courts or keep languishing in courts for lack of proof.
- **No say in the big decisions:** The cities were built on the hard labour and exploitation of migrant workers, but they never entered the consciousness of the architects; instead, they are considered part of the problem in cities.
 - Due to their mobile nature, they don't find any place in the manifestos of trade unions. They spend their whole day on worksites and silently sneak into perilous shelters at night, without the cities even noticing them.
- **Political exclusion:** The political class ignores them because they don't count as votes, especially in the case of inter-state migrants.
- **Language barrier:** Many migrants—especially those who relocate to a place where the local language and culture is different from that of their region—also face harassment and political exclusion.
- Other challenges include restricted access to basic needs such as identity documentation, social entitlements, housing, and financial services.
- **International labor standards:**
 - The International Labour Organization (ILO) has played a significant role in promoting International Labour Standards which has formulated international labor standards at various conferences.
 - India is a founder member of the ILO, already has ratified 37 of the 181 conventions.

- The constitution of India upholds all the fundamental principles envisaged in the seven core international labor standards.
- Out of the seven core labor conventions, India has ratified three; they are
 - forced labor
 - equal remuneration
 - discrimination

Legal provisions for labours in India:

- The principles of free migration are enshrined in clauses (d) and (e) of Article 19(1) of the Indian Constitution and guarantee all citizens the fundamental right to move freely throughout the territory of India, as well as reside and settle in any part of India.
- The Constitution of India guarantees the minimum rights at the workplace to enable people to claim and realize a fair share of the wealth. These rights ensure a process of translating economic growth into social equality.
- According to the **Directive Principles of State Policy** of the Constitution of India, the state is required to secure for the citizens, both men and women to right to an adequate means of livelihood, equal pay for equal work for both men and women, protection against abuse and exploitation of worker's, etc.
- India has formulated various laws upholding the principle of equality between men and women, and also provides law for fixing the hours and minimum wages of laborers and to improve their living conditions. Relevant Labor Laws for the Welfare of Workers:
 - **The Industrial Employment (Standing Orders) Act, 1946:** It requires that employers have terms including working hours, leave, productivity goals, dismissal procedures or worker classifications, approved by a government body.
 - **Industrial Disputes Act, 1947:** The Act regulates Indian labor law with an objective to maintain a Peaceful work culture in the Industry in India" which is explicitly provided under the Statement of Objects & Reasons of the statute.
 - **The Contract Labour (Regulation and Abolition) Act 1970:** It aims at regulating the employment of contract labor placing it par with labor employed directly.
 - **Payment of Wages Act 1936:** The Payment of Wages Act 1936 requires that employees receive wages, on time, and without any unauthorized deductions.
 - **Minimum Wages Act 1948:** The Minimum Wages Act 1948 sets wages for the different economic sectors that it states it will cover. It leaves a large number of workers unregulated.

- **Payment of Bonus Act 1965:** The Payment of Bonus Act 1965, which applies only to enterprises with over 20 people, requires bonuses be paid out of profits based on productivity.
- **Workmen's Compensation Act 1923:** The Workmen's Compensation Act 1923 requires that compensation be paid if workers are injured in the course of employment for injuries, or benefits to dependants.
- **The Employees' Provident Fund and Miscellaneous Provisions Act 1952:** It created the Employees' Provident Fund Organisation of India. It functions as a pension fund for old age security for the organized workforce sector.
- **The Unorganised Workers' Social Security Act 2008:** It enacted with an objective to extend the coverage of the life and disability benefits, health and maternity benefits, and old age protection for unorganized workers.
- **The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013:** It seeks to protect and provides a mechanism for women to report incidents of sexual harassment at their place of work.

What needs to be done?

- The emergence of COVID 19 in India has raised the alarm and exposed the loopholes not only in the public healthcare sphere, but also in the allied legal frame work pertaining to risk communication and crisis management.
- Amendment to outdated Acts: The government has enforced the lockdown under the provision of the colonial Epidemic Disease Act, 1897 and the more recent National Disaster Management Act, 2005. However, both these acts do not elaborate explicitly on crisis communications, one of the most important tools of crisis management in such times.

- But these legislations need to be urgently amended and expanded to chart out a national crisis management framework, keeping in mind the exponential growth of digital communication channels.

- **Global protocols:** Additionally, the WHO should alter the IHR and properly establish global protocols for mitigating crisis/risk communications.
- The policymakers should take leads from the **Hyogo Framework**, which sets out a workplan of crisis management and details out the communication framework during crisis.

Hyogo Framework:

- In 2005, as an outcome of the World Conference on Disaster Reduction, the international community working on DRR adopted the 'Hyogo Framework for Action'.
- It states, "Develop early warning systems that are people centered, in particular systems whose warnings are timely and understandable to those at risk, which take into account the demographic, gender, cultural and livelihood characteristics of the target audiences, including guidance on how to act upon warnings."

- Similar broad and all-encompassing guidelines need to be embedded in the legal framework in order to make it more contemporary.

While amending laws will take time, the Government of India and all it's ministry concerned must proactively engage with their counterparts in the states as well as civil society organisations to strengthen their communication channels and messaging, before the country gets swamped by the impact of COVID-19's increased community spread.

PANDEMIC & PANCHAYAT

CONTEXT

Prime Minister Narendra Modi addressed elected representatives in local governments on April 24, 2020 to mark the National Panchayati Raj Day. He addressed them when India's local governments have taken the centrestage in this disruptive stage of the fight against the novel coronavirus disease (COVID-19) pandemic.

◎ BACKGROUND:

- In the ongoing 40-day national lockdown, India has not had much to celebrate as number cases positive to the SARS-COV-2 virus have spiked.
- But if anyone wants to seek a silver lining, it is there in almost every village: The ubiquitous panchayat elected member.
- In a crisis without precedent, both in spread and scale, everybody needs to speak to the panchayat member.
- Whether how to quarantine returning migrants to villages, or how to identify the hungry and immediately reach food relief to them, a chief minister needs these elected members more than his elected members of the legislative assembly.
- At least 16 states have now COVID-19 emergency strategy that puts the panchayats at the core of implementation.
- An Indian has more per capita elected member due to these local governments than a hospital bed or a doctor or a government welfare officer.
- With more than three million of them, India's local government, or the Panchayati Raj, is the largest experiment in direct democracy in the world.
- And they are in the forefront of the country's fight against the pandemic. They are proactive in readying the infrastructure to treat people, to arrange massive movements of food grains for community kitchens and also to maintain that crucial hygiene and "social distancing" at village level.
- They have emerged as the bridge between the decision makers and the community that would have to adapt or implement such decisions.

◎ ANALYSIS:

What is Panchayati Raj System?

- Panchayati Raj is the oldest system of local government in the Indian subcontinent.
- Panchayati Raj Institutions as units of local government have been in existence in India for a long time, in different permutations and combinations.
- However, it was only in 1992 that it was officially established by the Indian Constitution as the third level of India's federal democracy through the 73rd Amendment Act.

- **The Panchayat Raj System** was first adopted by the state of Rajasthan in Nagaur district on 2nd October 1959. The second state was Andhra Pradesh.
- The Panchayati Raj Institution (PRI) consists of three levels:
 - ▶ Gram Panchayat at the village level
 - ▶ Block Panchayat or Panchayat Samiti at the intermediate level
 - ▶ Zilla Panchayat at the district level
- The word "Panchayat" means assembly (ayat) of five (panch) and raj means "rule".
- Traditionally Panchayats consisted of elderly and wise people chosen by the local community, who used to settle disputes between individuals and villages.
- The Panchayati Raj system is also recognised as a form of direct democracy (i.e they exercise all powers of a government at a village level), as opposed to the popular notion that it is a type of representative democracy.
- In modern India, Mahatma Gandhi was one of the leading advocates of Gram Swaraj i.e village self-governance where the village would be responsible for its own affairs.
- The Panchayati Raj system of governance can be found all over South Asia in countries such as Pakistan, Bangladesh and Nepal, where it goes by the same name.

National Panchayati Raj Day:

- The first National Panchayati Raj Day was celebrated in 2010. Since then, the National Panchayati Raj Day is celebrated on April 24 every year in India.
- Every year on this National Panchayati Raj Day Union Ministry of Panchayati Raj organises National Conference and awards best performing Gram Panchayats with 'The Panchayat Shashaktikaran Puraskar/Rashtriya Gaurav Gram Sabha Puraskar'.

Understanding the structure:

• Gram Panchayat:

- ▶ Gram Panchayat consists of a village or a group of villages divided into smaller units called "Wards".
 - Each ward selects or elects a representative who is known as the Panch or ward member.
- ▶ The members of the Gram Sabha elect the ward members through a direct election.

- The Sarpanch or the president of the Gram Panchayat is elected by the ward members as per the State Act. The Sarpanch and the Panch are elected for a period of five years.

• Block Panchayat:

- Panchayat Samiti (also called Taluka Panchayats or Block Panchayats) is the intermediate level in Panchayati Raj Institutions.
- The Panchayat Samiti acts as the link between Gram Panchayat (Village) and District Panchayat (Zilla).
- The block council consists of all of the Sarpanchas and the Upa Sarpanchas from each Gram Panchayat along with members of the legislative assembly (MLA), members of parliament (MPs), associate members (like a representative from a cooperative society) and members from the Zilla Parishad who are a part of the block.
- The Gram Panchayat members nominate their Sarpanch and Upa Sarpanch amongst their ranks, which extend to the selection of the chairperson and vice-chairperson as well.
- The Executive Officer (EO) is the head of the administration section of the Panchayat Samiti.

• District Panchayat:

- The District Panchayat also known as the District Council or Zilla Parishad is the third tier of the Panchayati Raj system.
- Like the Gram Panchayat, it is also an elected body.
- Chairpersons of Block Samitis also represent the District Panchayat. Like the Block Panchayat, the MP and MLA are also members of the district panchayat.
- The government appoints the Chief Executive Officer to carry out the administration of the district Panchayat along with the the Chief Accounts Officer, the Chief Planning Officer and one or more Deputy Secretaries who work directly under the Chief Executive Officer and assist him/her.
- The Zilla Parishad chairperson is the political head of the district panchayat.

Salient features of Panchayat:

- The Gram Sabha is a body consisting of all the people registered in the electoral rolls who belong to a village comprised within the area of the Panchayat at the village level.
- **Permanent:** Gram Sabha is the smallest and the only permanent unit in the Panchayati Raj system. The powers and functions of Gram Sabha are fixed by state legislature according to the law on the subject.
- **Reservation:** Seats are reserved for Scheduled Castes (SCs) and Scheduled Tribes (STs) and chairpersons of the Panchayats at all levels are reserved for SCs and STs in proportion to their population.

- **Women:** One-third of the total number of seats are to be reserved for women. One-third of the seats reserved for SCs and STs, are also reserved for women. This policy extends to the office of the chairperson at all levels as well (Article 243D). The reserved seats may be allotted by rotation to different constituencies in the Panchayat.

- There is a uniform policy with each term being five years. Fresh elections must be conducted before the expiry of the term. In the event of dissolution, elections compulsorily within six months (**Article 243E**).

Major Committees on Panchayat:

Balwanth Rai Mehta Committee

- The committee was appointed in 1957 to study the Community Development Programme and National Extension Scheme.
- It submitted its report in November 1957 in which it identified **lack of people's participation** as a main cause of failure of both programmes. The committee made the following recommendations:
 - Three- tier structure for PRIs – Zilla Parishad, Mandal Parishad and Gram Panchayat. It was the first committee to propose a three tier structure for PRIs.
 - indirect elections for Zilla Parishad and Mandal Parishad and direct elections for Gram Panchayat.
 - transfer of powers and responsibilities to these institutions and transfer of resources to discharge these responsibilities.
 - all social-economic development programs must be channelized through these institutions.
 - tenure of five years

G. L. Vyas Committee:

- Appointed in 1974 by Rajasthan government to suggest measures for improving performance of PRI's, recommended the following:
 - Statutory recognition should be given to Gram Sabha
 - Compulsory attendance of sarpanch in Gram Sabha meetings
 - Meetings to be held in non agricultural seasons
 - Village level workers must attend Gram Sabha meetings and maintain a record of meetings.

Sadik Ali Committee:

- The Committee was appointed in 1964 by the Rajasthan Government to study the reasons for failure of the institution. The Committee identified the following reasons:

- Meetings of Gram Sabha were not announced
- When meetings were arranged they were not used to discuss people's problems but were used as a platform to promote government policies and initiatives.
- Meetings were mostly organized during peak agricultural seasons.
- No records of Gram Sabha were maintained as a consequence of which there was absolutely no progress.

Ashok Mehta Committee:

The Committee was appointed in 1977 to suggest measures for improvement of LSG in India. Recommendations of the Committee:

- two tier Structure for PRIs – Zilla Parishad and Mandal Panchayat
- Open participation of political parties in elections
- Social Audit by district level agencies
- Compulsory taxation to powers
- Reservations for SC, ST and women
- Separate ministry of Panchayati Raj Institutions' in state

L. N. Singhvi Committee:

The Committee was appointed in 1986 on Revitalization of PRI's for democratic Development (CRPDD). Recommendations of the Committee:

- Constitutionalization of Panchayati Raj Institutions
- Gram Sabha is an embodiment of direct Democracy therefore it should be made compulsory

Role & Functions:

- Panchayats have the responsibility to prepare plans for economic development and social justice with respect to the subjects as per the law put in place, which also extends to the various levels of Panchayat including the subjects as illustrated in the Eleventh Schedule (Article 243G).
- Panchayats are directly in charge of the crisis management at the local level.
- Besides the elected members, a panchayat also commands the local development work force like the ASHA workers and also the ever expanding women self-help groups.
- More than 10 million such workers (including the elected panchayat members) are implementing pandemic-related works like as urgent as cooking food for thousands.

E-panchayat:

- E-panchayat is one of the Mission Mode Projects (MMPs) under **National e-Governance Programme (NeGP)**.
- It is aimed at making Panchayats more efficient, transparent and symbols of modernity by leveraging ICT to become modern institutions of self governance at the cutting edge level by ensuring greater openness through transparency, disclosure of information, social audit, efficient delivery of services, improving internal management of Panchayats, procurement etc.

Why is the Panchayat suddenly such a sought-after institution?

- The government have often ignored this elected third-level government as another corrupt department.
- In the last 28 years, since the Indian Constitution made them an elected government with clear functions like that of the other two — the Union and state — the country has accumulated vast local experience of managing complex development challenges.
- While as a country we have abandoned the Five-year plan, each Panchayat has to make at least five such plans for five years: One each for sanitation, water security, education, development under the **Mahatma Gandhi National Rural Employment Guarantee Act and overall village development**.
- Panchayats implement close to 80 percent of the rural development schemes evolved by the governments, making them a unique elected body that also function as an executive.
- At their disposal is a **dedicated fund under the Finance Commission**, like that of states and also close to Rs 90,000 crore annually for implementing various rural-development schemes.
- And Panchayat members, in elections every five years, get voted out the most, as a general trend, compared to members of Parliament and legislative Assemblies.

CONCLUSION:

When the history of India's first pandemic in the 21st century will be written, these grassroots governance system will emerge the winner. But, it is also time to give these governments their constitutional rights. While we have transferred functions to Panchayats as mandated by the Constitution, we are yet to fully transfer the right funds and functionaries to them to effective function like an elected government. It is time we make them the government.

NO RHYME OR REASON FOR 100% RESERVATION: SUPREME COURT

CONTEXT

The Supreme Court has quashed a January 2000 order of the erstwhile state of Andhra Pradesh that provided 100 per cent reservation to Scheduled Tribe (ST) candidates for the post of teachers in schools in the scheduled areas.

◎ BACKGROUND:

- In November 1986, the then Governor of Andhra Pradesh had also issued an order under the same Schedule of the Constitution, directing that the posts of teachers in educational institutions in scheduled tribe areas be reserved for Scheduled Tribes only.
- The order was quashed by the Andhra Pradesh Administrative Tribunal in 1989. A challenge to the tribunal's order in the high court was later withdrawn by the government.
- However, in January 2000, the state government issued another order reserving 100 percent teacher posts in schools in scheduled areas, for ST candidates. Out of these, about 33 percent seats were reserved for women.
- The government order said the reservation was "to promote educational development of Tribals, to solve the phenomenal absenteeism of Teachers in the Schools situated in Scheduled Areas and with a view to protect the interests of local tribals".
- This order was set aside by the Andhra Pradesh Administrative Tribunal, but later upheld by the Andhra Pradesh High Court.
- The Supreme Court was now hearing appeals against this order.
- The five-judge bench took note of the fact that the state government issued the 100 percent reservation order despite its earlier order having been set aside. It then validated the apprehension of the petitioners that the state government "may again by way of misadventure, resort to similar illegal exercise as was done earlier".
- Therefore, the court agreed to not quash the appointments to the posts made since 1986 on the condition that the states of Andhra Pradesh and Telangana would not attempt to bring in a similar quota in the future.
- The court also imposed Rs 5 lakh on Telangana and Andhra Pradesh governments as cost of appeal.

◎ ANALYSIS:

What are Scheduled Areas?

- The Fifth Schedule under **Article 244(1) of the Constitution of India** contains provisions regarding

administration of Scheduled Areas other than in Northeast India.

- The 'Scheduled Areas' are defined as 'such areas as the President may by order declare to be Scheduled Areas' – as per paragraph 6(1) of the **Fifth Schedule** of the Constitution of India.
- The specification of "Scheduled Areas" in relation to a State is by a notified order of the President, after consultation with the Governor of that State.
- The President may increase the area of any Scheduled Area in a State after consultation with the Governor of that State; and make fresh orders redefining the areas which are to be Scheduled Areas in relation to any State.
- The same applies in the case of any alteration, increase, decrease, incorporation of new areas, or rescinding any Orders relating to "Scheduled Areas".
- At present, Scheduled Areas have been declared in the States of **Andhra Pradesh (including Telangana), Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha and Rajasthan.**

What are the criterias for declaring Scheduled Area?

- The criterias for declaring any area as a "Scheduled Area" under the Fifth Schedule are:
 - Preponderance of tribal population
 - Compactness and reasonable size of the area
 - A viable administrative entity such as a district, block or taluk
 - Economic backwardness of the area as compared to the neighbouring areas
- These criteria are not spelt out in the Constitution of India but have become well established.

The judgement:

- The five-judge bench comprising Justices Arun Mishra, Indira Banerjee, Vineet Saran, M.R. Shah and Aniruddha Bose ruled that the Governor did not have the power to provide 100 per cent reservation.
- The Governor of then undivided Andhra Pradesh had cited Schedule V of the Constitution, which provides

for administration of Scheduled Areas in states other than Assam, Meghalaya, Tripura and Mizoram, to pass the government order.

- The governments of both Andhra Pradesh and Telangana were fighting off the legal challenge to the order.
- In its ruling, the court held 100 per cent reservation unconstitutional as it was “discriminatory” against not just ‘open’ category candidates, but also against Scheduled Castes and Other Backward Classes.
- Asserting that the state government’s “action defies logic” and that “merit cannot be denied in toto by providing reservations”, the court concluded that reservation in the case violated **Articles 14 (equality before law), 15(1) (discrimination against citizens) and 16 (equal opportunity) of the Constitution.**
- There was no rhyme or reason with the State Government to resort to 100% reservation.

100% reservation unconstitutional:

- The Supreme Court ruled that the Governor’s powers under para 5 of Schedule V are subject to the fundamental rights guaranteed under Part III of the Constitution.

- It then relied on several precedents, including the judgment in **Indra Sawhney v. Union of India (1992)**, which capped reservations at 50 per cent, except in extraordinary cases.
 - In this case, “there were no such extraordinary circumstances to provide a 100 percent reservation in Scheduled Areas”.
- The court also took note of a Presidential Order issued in 1975 under Article 371-D (Special provisions for Andhra Pradesh) of the Constitution, which said employment to people in the state were limited to only their districts.
- The 2000 government order violated this by not allowing general category, scheduled castes and other backward classes candidates apply for these posts in their districts under the scheduled areas.

CONCLUSION:

Today, there are socially and economically advanced classes within Scheduled Castes and Scheduled Tribes. There is voice by the actually deprived persons, but they still do not permit benefits to trickle down to the needy. Thus, there is a struggle within, as to worthiness for entitlement within reserved classes of Scheduled Castes and Scheduled Tribes and Other Backward Classes.

SECTION: B
(PRELIMS)

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TRIMERESURUS SALAZAR

- ◎ **CONTEXT:**
- Recently, a team of researchers has discovered a new species of venomous snake in Arunachal Pradesh and named it *Trimeresurus Salazar*.
- ◎ **ABOUT:**
- The venomous snake was discovered in the thick evergreen forests of the Pakke Tiger Reserve in Arunachal Pradesh during a field expedition by researchers in July 2019.
 - The new species is named after J.K. Rowling's fictional Hogwarts School of Witchcraft and Wizardry's co-founder, Salazar Slytherin.
 - The new species belongs to the group of green pit vipers from which it differs from its closely related species in bearing a rusty red or orange lateral stripe along the head and the entire body.
 - The Salazar pit viper belongs to a genus of "charismatic venomous serpents with morphologically as well as ecologically diverse species."
 - The comparison of DNA sequences and skull morphology of closely related species highlights the distinctness of the new species.
 - This pit viper has orange to reddish stripe near its lips. It has more teeth compared to the other venomous snakes.
 - This new pit viper happens to be the fifth variety of reptile to have been discovered in Arunachal Pradesh in a little more than a year.

What are Pit Vipers?

- Pit vipers are some of the most beautiful, and most dangerous, snakes in the world. They exist on several different continents, and within a wide variety of habitats.
- All of the snakes in this group are members of the **Viperidae** family of snakes -- vipers for short. But not all of the Viperidae are pit vipers.
- They are masters of the hunt, armed with some amazing "tools" for finding and killing their prey.
- Pit vipers are widespread throughout the world. These venomous snakes can be found across parts of Europe, Asia, and both North and South America.
- They have adapted to survive in a wide variety of habitats, ranging from deserts to jungle.
- About 15 pit viper snakes are found in India, seven of which have been found in northeast before.

Pakke Tiger Reserve:

- Pakke Tiger Reserve lies in the foothills of the Eastern Himalaya in the East Kameng district of Arunachal Pradesh.
- It is considered one of the best protected national parks in the country. Pakke is also known for its amazing sightings of four resident hornbill species.
- While the new discovery is indeed exciting for herpetology experts, it also raises concern on the loss of habitat in the region.
- It is where a highway between Sejosa and Bhalokpong is threatened to cut through Pakke Tiger Reserve, where a lot of reptiles thrive.

NATIONAL LIST OF INTANGIBLE CULTURAL HERITAGE (ICH)

- ◎ **CONTEXT:**
- The Ministry of Culture has launched the National List of Intangible Cultural Heritage (ICH) of India.

© **ABOUT:**

- The National ICH List is an attempt to recognize the diversity of Indian culture embedded in its intangible heritage.
- It aims to raise awareness about the various intangible cultural heritage elements from different states of India at national and international level and ensure their protection.
- This initiative is also a part of the Vision 2024 of the Ministry of Culture.
- Following UNESCO's 2003 Convention for Safeguarding of Intangible Cultural Heritage, this list has been classified into five broad domains in which intangible cultural heritage is manifested:
 - Oral traditions and expressions, including language as a vehicle of the intangible cultural heritage
 - Performing arts
 - Social practices, rituals and festive events
 - Knowledge and practices concerning nature and the universe
 - Traditional craftsmanship
- The present items in the list have been collated from the projects sanctioned under the scheme for 'Safeguarding the Intangible Cultural Heritage and Diverse Cultural Traditions of India' formulated by the Ministry of Culture in 2013.
- As of now the list has more than 100 elements, It also includes the 13 elements of India that have already been inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.

Intangible Cultural Heritage Sites in India:

- India houses a repository of unique Intangible Cultural Heritage (ICH) traditions, 13 of which have also been recognized by UNESCO as Intangible Cultural Heritage of Humanity.
- **Intangible Cultural Heritage** is a UNESCO program initiated in 2001 to recognise and protect various cultures and practices.
- These cultural vehicles are called "Human Treasures" by the UN. UNESCO divides the list into three different categories:
 - The representative list comprises cultural "practices and expressions that help demonstrate the diversity of this heritage and raise awareness about its importance."
 - The safeguarding list is composed of cultural elements that are threatened and in need of urgent measures to keep them alive.
 - The best practice list is comprised of the best examples by communities and governments of the protection and recognition of intangible cultural heritage.

About Ministry of Culture:

- The Ministry of Culture deals with the preservation and conservation of the country's rich cultural heritage and promotion of art and culture.
- This Ministry is responsible for the protection, development and promotion of both tangible and intangible heritage and culture
- With regard to tangible heritage, the Ministry takes care of all the centrally protected monuments of national importance, through **Archaeological Survey of India**.

Archaeological Survey of India:

- The Archaeological Survey of India (ASI), under the Ministry of Culture, is the premier organization for the archaeological researches and protection of the cultural heritage of the nation.
- Maintenance of ancient monuments and archaeological sites and remains of national importance is the prime concern of the ASI.

- Besides it regulate all archaeological activities in the country as per the provisions of the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**.
- It also regulates **Antiquities and Art Treasure Act, 1972**.

COVID-19 RURAL POOR STIMULUS FACILITY

◎ CONTEXT:

- With the COVID-19 pandemic and economic slowdown threatening the lives and livelihoods of the world's most vulnerable people, the UN's International Fund for Agricultural Development (IFAD) launched a multi-donor COVID-19 Rural Poor Stimulus Facility (RPSF) to support farmers and rural communities to continue growing and selling food.

◎ ABOUT:

- IFAD's new multi-donor fund, **the COVID-19 Rural Poor Stimulus Facility**, will mitigate the effects of the pandemic on food production, market access and rural employment.
- As part of the broader UN socio-economic response framework, the Facility will ensure that farmers in the most vulnerable countries have timely access to inputs, information, markets and liquidity.
- On top of its own contribution, IFAD aims to raise at least \$200 million more from Member States, foundations and the private sector.
- The planned interventions fall into four main categories:
 - Providing inputs and basic assets for production of crops, livestock and fisheries
 - Facilitating access to markets to support small-scale farmers in selling their products in conditions where market functions are restricted
 - Targeting funds for rural financial services to ensure sufficient liquidity and to ease repayment requirements so as to maintain services, markets and jobs
 - Promoting the use of digital services to deliver key information on production, weather, finance and markets

About IFAD:

- International Fund for Agricultural Development (IFAD) is an international financial institution and specialized United Nations agency based in Rome, the UN's food and agriculture hub.
- Founded in 1977, the organization invests in rural people, empowering them to increase their food security, improve the nutrition of their families and increase their incomes.

The issue:

- About 80 percent of the world's poorest and most food-insecure people live in rural areas. Even before the outbreak, more than 820 million people were going hungry every day.
- A recent United Nations University study warned that in a worst-case scenario, the economic impact of the pandemic could push a further half-billion people into poverty.
- A majority of the world's most impoverished people are already suffering the consequences of climate change and conflict.
- An economic downturn in rural areas could compound these effects, generating more hunger and increasing instability, especially in fragile states.
- The COVID-19 crisis could undo the progress the world has made in reducing rural poverty (SDG1) and threatens to aggravate already declining food security (SDG2).

Significance of the initiative:

- The Rural Poor Stimulus Facility aims to improve the food security and resilience of poor rural people by supporting production, market access and employment.
- The ultimate goal of the RPSF is to accelerate the recovery of poor and vulnerable rural people from the COVID-19 crisis.

EXTANT FOREIGN DIRECT INVESTMENT (FDI) POLICY

◎ CONTEXT:

- The Government of India has reviewed the extant Foreign Direct Investment(FDI) policy for curbing opportunistic takeovers/acquisitions of Indian companies due to the current COVID-19 pandemic and amended para 3.1.1 of extant FDI policy as contained in Consolidated FDI Policy, 2017.

◎ ABOUT:**Present Position**

- **Para 3.1.1:**

- A non-resident entity can invest in India, subject to the FDI Policy except in those sectors/activities which are prohibited.
- However, a citizen of Bangladesh or an entity incorporated in Bangladesh can invest only under the Government route.
- Further, a citizen of Pakistan or an entity incorporated in Pakistan can invest, only under the Government route, in sectors/activities other than defence, space, atomic energy and sectors/activities prohibited for foreign investment.

Revised Position

- **Para 3.1.1:**

- 3.1.1(a) A non-resident entity can invest in India, subject to the FDI Policy except in those sectors/activities which are prohibited.
 - ▶ However, an entity of a country, which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route.
 - ▶ Further, a citizen of Pakistan or an entity incorporated in Pakistan can invest, only under the Government route, in sectors/activities other than defence, space, atomic energy and sectors/activities prohibited for foreign investment.
- 3.1.1(b) In the event of the transfer of ownership of any existing or future FDI in an entity in India, directly or indirectly, resulting in the beneficial ownership falling within the restriction/purview of the para 3.1.1(a), such subsequent change in beneficial ownership will also require Government approval.

Reason behind the decision:

- Indian corporates had expressed concerns about possible takeovers of distressed firms by Chinese companies.
- The fear is partly due to the concerns arising from other countries where Chinese investments in the time of COVID-19 are seen as an attempt to take over national assets at a time of crisis.
- There is an increasing interest among Chinese firms to invest in Indian MSMEs as the changing global supply chain dynamics - which began to gather strength in face of retaliatory tariffs during the US-China trade war - necessitate alternate supply sources to serve global locations.

- Indian MSMEs in engineering sector have been seen as an attractive target for such firms.
- The government amended the rules by including individuals and companies of all countries that share land borders with India, effectively bringing Chinese individuals and companies under the new protocol.
- The decision is likely to impact foreign investments, particularly from China which pumped in \$2.34 billion in FDI between April 2000 and December 2019.

Impact of the move:

- From now onwards, government approval will be necessary a company or an individual from a country that shares land border with India can invest in any sector.
 - India shares land borders with six countries – Bangladesh, Myanmar, China, Bhutan, Nepal and Pakistan.
- Until now, government permission was mandatory only for investments coming from Bangladesh and Pakistan.

NEW DEVELOPMENT BANK

◎ CONTEXT:

- India's Finance and Corporate Affairs minister Nirmala Sitharaman attended the 5th Annual Meeting of Board of Governors of New Development Bank through video-conference.

◎ ABOUT:

- The NDB is a multilateral development bank established by Brazil, Russia, India, China and South Africa (BRICS)
- The BRICS bank aims to achieve the objective of financing infrastructure and sustainable development projects in BRICS and other emerging economies and developing countries.
- The NDB was initially India's idea, which it shared with other BRICS members in 2012.
- After two years of negotiations, the bank was created at the 2014 BRICS summit in Fortaleza, Brazil.
- NDB has so far approved 14 projects of India for an amount of \$4,183 million.

Key-highlights of the meet:

- India asked the New Development Bank (NDB) to enhance emergency facility to \$10 billion to deal with the challenges posed by the outbreak of COVID-19 pandemic.
- The country appreciated the efforts of the multilateral lending agency on fast tracking of financial assistance of about \$5 billion to BRICS countries, including an emergency assistance of \$1 billion to India to combat COVID-19 pandemic.
- Lauding efforts of the NDB in establishing itself as a credible Global Financial Institution, India said it should take appropriate actions to join G-20 forum along with other **Multilateral Development Bank (MDBs)/ International Financial Institutions (IFIs)**.

Measures taken by India to respond to COVID-19 crisis

- Creating a COVID-19 Emergency Fund
- Allocation of \$2 billion (Rs 15,000 crore) by the government for strengthening the healthcare system.
- Announcement of a scheme of social support measures amounting to \$25 billion (Rs 1.70 lakh crore) to alleviate the hardship of the poor and the vulnerable.
- Insurance cover of \$67,000 (Rs 50 lakh) per person to over 2.2 million frontline health workers and others provision of relief to firms in statutory and regulatory compliance matters.
- Easing of monetary policy by the Reserve Bank of India.
- Supplying critical medicine to the needy countries to tackle the COVID-19

SPECIAL DRAWING RIGHTS

- ◎ **CONTEXT:**
- India will not support a general allocation of new 'Special Drawing Rights' by the International Monetary Fund as it might not be effective in easing coronavirus-driven financial pressure.

- ◎ **ABOUT:**
- The Special Drawing Rights (SDR) is an international reserve asset, created by the International Monetary Fund in 1969 to supplement its member countries' official reserves.
 - The SDR serves as the unit of account of the IMF and some other international organizations.
 - The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. SDRs can be exchanged for these currencies.
 - The value of the SDR is based on a basket of five currencies:
 - the U.S. dollar
 - the euro
 - the Chinese renminbi
 - the Japanese yen
 - the British pound sterling

The SDR interest rate (SDRi):

- The SDRi provides the basis for calculating the interest rate charged to members on their non-concessional borrowing from the IMF and paid to members for their remunerated creditor positions in the IMF.
- It is also the interest paid to members on their SDR holdings and charged on their SDR allocation.

- ◎ **BACKGROUND:**
- The SDR was created as a supplementary international reserve asset in the context of the Bretton Woods fixed exchange rate system.
 - The collapse of Bretton Woods system in 1973 and the shift of major currencies to floating exchange rate regimes lessened the reliance on the SDR as a global reserve asset.
 - Nonetheless, SDR allocations can play a role in providing liquidity and supplementing member countries' official reserves, as was the case amid the global financial crisis.

Why India is opposing SDR allocation?

- The new SDR allocation would provide all 189 members with new foreign exchange reserves with no conditions.
- Such a major liquidity injection could produce potentially costly side-effects if countries used the funds for "extraneous" purposes.
- In the current context of illiquidity and flights to cash, the efficacy of an SDR allocation is not certain.
- Currently, most countries rely on national reserves as a first line of defense.
- Consequently, extraneous demands for these reserves, not related to domestic monetary and financial stability, would be costly, and hence cannot be supported.

About IMF:

- The International Monetary Fund (IMF) was conceived in July 1944 at the United Nations Bretton Woods Conference in New Hampshire, United States.
- The IMF promotes international financial stability and monetary cooperation.
- It also facilitates international trade, promotes employment and sustainable economic growth, and helps to reduce global poverty.
- The IMF is governed by and accountable to its 189 member countries. It is accountable to its member country governments.

WHITE PAPER TO STRATEGIZE REVIVAL OF POST-COVID 19 INDIAN ECONOMY

◎ CONTEXT:

- The Technology Information, Forecasting and Assessment Council (TIFAC), by virtue of its mandate of thinking for future, is preparing a 'white paper' to strategize revival of post-COVID 19 Indian economy.

◎ ABOUT:

- TIFAC is exploring the best methods to revive the Indian economy and reduce the impact on it post COVID 19.
- This document would mainly focus on strengthening Make in India initiatives, commercialization of Indigenous technology, developing a technology-driven transparent Public Distribution System (PDS), efficient rural health care delivery, reduction of import, adoption of emerging technology domains like AI, Machine Learning, Data Analytics and many more.
- It will be soon submitted to the decision-making authorities of the Government.

What is white paper?

- A whitepaper is a persuasive, authoritative, in-depth report on a specific topic that presents a problem and provides a solution.
- These policy documents are produced by the Government that set out their proposals for future legislation.

◎ BACKGROUND:

- The entire globe has come under one umbrella to fight against COVID-19. The pandemic outbreak is affecting the human life of both developed and emerging economies, with the impact spread over almost all sectors ranging from manufacturing to trade, transport, tourism, education, healthcare, and so on.
- The extent of the economic impact will depend on how the pandemic outbreak unfolds and also the containment strategy of any Nation.
- India, so far, has taken a set of well thought out steps to control this pandemic, lockdown at the initial stage being a significant one.

About TIFAC:

- TIFAC is an autonomous organization set up in 1988 under the Department of Science & Technology to look ahead in technology domain, assess the technology trajectories, and support innovation by networked actions in select areas of national importance.
- TIFAC continues to strive for technology development in the country by leveraging technology innovation through sustained and concerted programmes in close association with industry and academia.
- All Government departments, research institutions, civil society bodies, and, more importantly, citizens of India have joined hands to offset the impact of COVID 19 to the maximum extent possible. This recent effort by TIFAC will help in showing a way ahead to strengthen the Indian economy post-COVID-19.

PROTECTION OF INDIGENOUS AMAZONIANS

◎ CONTEXT:

- Over 200 organisations sign statement on protection of indigenous Amazonians. They demanded a ban on all industrial activity and proselytisation in indigenous territory in addition to proper health services and law enforcement.

◎ ABOUT:

- The Amazon basin is the largest tropical rainforest in the world, covering a size approximately equal to the lower 48 United States.
- 6-8 million square kilometers of forest house approximately 10% of the world's biodiversity and 15% of its freshwater.
- These "**lungs of the world**" provide ecological services for the planet, but also a source of livelihood for hundred of indigenous groups and forest dependent peoples.
- **Amazon tribes:** It is also the ancestral home of 1 million Indians. They are divided into about 400 tribes, each with its own language, culture and territory.
- **Countries:** The Amazon is a vast region that spans across eight rapidly developing countries: Brazil, Bolivia, Peru, Ecuador, Colombia, Venezuela, Guyana, Suriname and French Guiana, an overseas territory of France. Brazil is home to approximately 65% of the Amazon basin.
- The forests of the Amazon basin have been used for food and resources for thousands of years by native peoples; products such as rubber, palm fruits, and Brazil nuts, as well as countless medicines have been derived from the forest.

What's the demand?

- Governments and other entities should enact urgent policies to ensure that the novel coronavirus (SARS-COV-2) does not result in massive deaths within indigenous communities, especially in the Amazon, over 200 international organisations demanded on April 21, 2020.
- These demands include:
 - A moratorium on all industrial activities on or surrounding indigenous lands including mining, oil drilling, logging, and agribusiness operations
 - The barring of all religious proselytisation
 - The affirmation of the right of indigenous peoples to self-determination and self-protection during the pandemic
 - Adequate and culturally-appropriate public health services
 - Rigorous law enforcement on organised crime threats in and around indigenous territories
 - The creation of urgent action working groups to deal with the health, food, and security emergencies that have arisen during this pandemic

Threat arising from Coronavirus:

The threats posed by COVID-19 to indigenous communities vary over the enormous expanse of the Amazon rainforest. They are compounded by ongoing invasions of indigenous territories and the targeting of indigenous leaders with violence and intimidation.

- **Amazon:** Around 7,349 cases of COVID-19 have been reported in the **Pan Amazon region** as of April 20, 2020, resulting in 383 deaths.
- In Brazil, illegal loggers, miners, land grabbers and hunters have fanned out into the Brazilian Amazon's federally-protected forests, putting indigenous peoples and traditional communities in grave danger.
- More than 25,000 illegal miners have invaded **Yanomami territory** where they are suspected of transmitting the coronavirus to a 15-year old Yanomami boy, who died of the disease.

- In Ecuador, the effects of the COVID-19 pandemic have exposed profound weakness in public health infrastructure, particularly for historically marginalised communities such as indigenous peoples.
- There are 10,128 cases of COVID-19 in Ecuador, with 1,333 deaths reported.
- The COVID-19 emergency in the Ecuadorian Amazon has been compounded with the unprecedented flooding of indigenous communities and the recent rupture of two oil pipelines.
- These pipelines spilled crude oil into the Coca and Napo rivers and polluted the water sources of more than 90,000 people, including 2,000 indigenous families.

The road ahead:

COVID-19 is advancing into indigenous territories, with initial cases of infections being documented in the Shipibo community of Nuevo Bethel in the central Amazon region. Without guidance from public health agencies, many indigenous groups are taking preventative measures on their own to stop the coronavirus from entering their communities. These include voluntary social distancing, use of proper hygiene practices, suspension of major protests, events, travel and even the closing of traffic between villages to prevent the disease's progression.

SNOW LEAPORD

◎ CONTEXT:

- In the latest sighting of rare species, a pair of snow leopards has been sighted in Nanda Devi National Park in Uttarakhand.

◎ ABOUT:

- Snow leopards (*Panthera uncia*) are considered medium-sized cats, standing about 24 inches at the shoulder and weighing around 30-55kg.
- **Status:** The snow leopard is listed as Vulnerable on the IUCN-World Conservation Union's Red List of the Threatened Species.
 - In addition, the snow leopard, like all big cats, is listed on Appendix I of the Convention on International Trade of Endangered Species (CITES), which makes trading of animal body parts (i.e., fur, bones and meat) illegal in signatory countries.
 - It is also protected by several national laws in its range countries.
- **Habitat:** Snow leopards can be found throughout high mountain ranges, including the Himalayas and the southern Siberian mountains in Russia. They can also be found in the Tibetan Plateau and across a range that stretches from China to the mountains of Central Asia.
 - In India, their geographical range encompasses a large part of the western Himalayas including the states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim and Arunachal Pradesh in the eastern Himalayas.

Taxonomy	
Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Carnivora
Family	Felidae
Genus	Panthera

Threats to Leopard:

- **Poaching:** Poaching is the biggest threat for snow leopards that happens in the dark. Between 2008 and 2016 alone, one snow leopard has reportedly been killed and traded every day - 220 to 450 cats per year. The true extent of the problem is thought to be even bigger.
- **Mining:** The snow leopard also faces threats from mining and other developmental activities that could destroy the mountain ecosystem it relies on.

- **Threat to food:** Leopard's main prey species (wild sheep and goat) are also threatened by unsustainable or illegal hunting. If their populations decline, so do the snow leopard's.
- **Climate change:** Temperatures are on the rise across the world and the changes impact the entire ecosystem: vegetation, water supplies, animals – and they threaten to make up to a third of the snow leopard's habitat unusable.

Conservation of snow leopards in India:

- The Government of India has identified the snow leopard as a flagship species for the high altitude Himalayas.
- It has developed a centrally-supported programme called Project Snow Leopard for the conservation of the species and its habitats.
- Currently, India has 516 snow leopards, out of which 86 are in Uttarakhand. The rest are living in regions of Himachal Pradesh, Jammu and Kashmir, Sikkim, and Arunachal Pradesh.
- These instances clearly show nature is rejuvenating during the nationwide lockdown in the wake of the ongoing pandemic.

WORLD FREEDOM INDEX 2020

◎ CONTEXT:

- India has dropped two places on a global press freedom index to be ranked 142nd out of 180 countries in the annual Reporters Without Borders analysis.

◎ ABOUT:

- Published every year since 2002 by **Reporters Without Borders (RSF)**, the World Press Freedom Index is an important advocacy tool based on the principle of emulation between states.
- The Index is a point of reference that is quoted by media throughout the world and is used by diplomats and international entities such as the United Nations and the World Bank.
- Because it is well known, its influence over governments is growing. Many heads of state and government fear its annual publication.

What does the index measure?

- The Index ranks 180 countries and regions according to the level of freedom available to journalists.
- It is a snapshot of the media freedom situation based on an evaluation of pluralism, independence of the media, quality of legislative framework and safety of journalists in each country and region.
- It does not rank public policies even if governments obviously have a major impact on their country's ranking.
- Nor is it an indicator of the quality of journalism in each country or region.

Key-highlights of the index:

- Among the nations with the top ranks are Scandinavian countries Norway, Finland and Denmark, while countries like North Korea (180), Vietnam (175) and Syria (174) were some of the lowest ranked.
- India ranked better than its neighbours Pakistan (145) and Bangladesh (151), but worse than Sri Lanka (127) and Nepal (112).
- Pakistan: Pakistan dropped three places from its 2019 ranks due to the influence of the military establishment under Prime Minister Imran Khan's rule, which the report states "cannot stand independent journalism."

- China: In this regard, China, ranked at 177, has also been critiqued for how Covid-19's spread was facilitated by censorship and pressure on a whistleblower, yet the country continues to further tighten control over the media.
- United States: With a rank of 45, the US improved three points since 2019 but arrests, physical assaults, public denigration and the harassment of journalists continued in 2019 under President Donald Trump's administration.
- North Korea: At the lowest rank of 180, North Korea scored the worst in terms of press freedom due to its leader Kim Jong-un's totalitarian regime that has kept its citizens in a "state of ignorance".
- In the year 2020 so far, across the world, 10 journalists have been killed, 229 imprisoned and 116 citizen journalists imprisoned while one media assistant was killed and 14 media assistants imprisoned across the world.

Where does India stand?

- Between 2013-14, India's rank remained at 140, while it marginally improved to 133 and 136 in the subsequent years but dropped to 140 in 2019 following Prime Minister Modi's resounding success in the Lok Sabha elections.
- With no murders of journalists in India in 2019, as against six in 2018, the security situation for the country's media might seem, on the face of it, to have improved.
- However, at 142nd position, there have been constant press freedom violations.

The road ahead:

The coming decade will be decisive for the future of journalism, with the Covid-19 pandemic highlighting and amplifying the many crises that threaten the right to freely reported, independent, diverse and reliable information.

CLASSICAL SWINE FEVER

◎ CONTEXT:

- Amid Coronavirus outbreak, 1300 pigs died of Classical Swine Fever (CSF) in Assam.

◎ ABOUT:

- Classical swine fever (CSF), also known as hog cholera, is a contagious viral disease of domestic and wild swine.
- It is caused by a virus of the genus Pestivirus of the family Flaviviridae, which is closely related to the viruses that cause bovine viral diarrhoea in cattle and border disease in sheep.
- There is only one serotype of CSF virus (CSFV).
- CSF is a disease listed by the OIE World Organisation for Animal Health (OIE) Terrestrial Animal Health Code and must be reported to the OIE (OIE Terrestrial Animal Health Code).

Transmission and spread:

- **Direct contact:** The most common method of transmission is through direct contact between healthy swine and those infected with CSF virus. The virus is shed in saliva, nasal secretions, urine, and feces.
- **Contact with contaminated items:** Contact with contaminated vehicles, pens, feed, or clothing may spread the disease.
- Animals that are chronic carriers of the disease (persistently infected) may show no clinical signs of illness but may shed the virus in their feces.

- Offspring of infected sows can become infected in the uterus, and can shed the virus for months.
- CSF virus can survive in pork and processed pork products for months when meat is refrigerated and for years when it is frozen.
- Pigs can become infected by eating CSF-infected pork meat or products.
- The disease has been spread through legal and illegal transport of animals, and by feeding swill containing infective tissues to pigs.

Geographical distribution:

- CSF is found in Central and South America, Europe, and Asia and parts of Africa. North America, Australia and New Zealand are currently free of the disease.
- In the 1990's large CSF outbreaks occurred in The Netherlands (1997), Germany (1993-2000), Belgium (1990, 1993, 1994) and Italy (1995, 1996, 1997).

How CSF is different from swine flu?

- CSF is a different disease to swine flu. The virus does not affect people and there is no impact on human health.
- Swine flu is an infection caused by a virus. It's named for a virus that pigs can get. People do not normally get swine flu, but human infections can and do happen.
- In 2009 a strain of swine flu called H1N1 infected many people around the world.
- The virus is contagious and can spread from human to human.

REMEMBERING PESHAWAR'S QISSA KHWANI BAZAAR MASSACRE'

◎ CONTEXT:

- It's been 90 years of Peshawar's Qissa Khwani Bazaar massacre. The massacre was perpetrated by British soldiers against non-violent protesters of the Khudai Khidmatgar movement on April 23, 1930.

◎ ABOUT:

- The Khudai Khidmatgar was a non-violent movement against British occupation of the Indian subcontinent led by **Abdul Ghaffar Khan**.
 - Abdul Ghaffar Khn was a Pashtun freedom fighter, in the North-West Frontier Province.
- Over time, the movement acquired a more political colour, leading to the British taking notice of its growing prominence in the region.
- Following the arrest of Khan and other leaders in **1929**, the movement formally joined the **Indian National Congress** after they failed to receive support from the **All-India Muslim League**.
- Members of the Khudai Khidmatgar were organised and the men stood out because of the bright red shirts they wore as uniforms, while the women wore black garments.

The Massacre:

- **Abdul Ghaffar Khan** and other leaders of the Khudai Khidmatgar were arrested on **April 23, 1930** by British police after he gave a speech at a gathering in the town of **Utmanzai** in the North-West Frontier Province.
- A respected leader well-known for his non-violent ways, Khan's arrest spurred protests in neighbouring towns, including Peshawar.
- Protests spilled into the Qissa Khwani Bazaar in Peshawar on the day of Khan's arrest. British soldiers entered the market area to disperse crowds that had refused to leave.

- In response, British army vehicles drove into the crowds, killing several protesters and bystanders.
- British soldiers then opened fire on unarmed protestors, killing even more people.

What happened after the massacre?

- The British ramped up the crackdown on Khudai Khidmatgar leaders and members following the Qissa Khwani Bazaar massacre.
- In response, the movement began involving young women in its struggle against the British, a decision in line with tactics adopted by revolutionaries across the undivided India.
- Women were able to move undetected with more ease than men.
- According to accounts by Khudai Khidmatgar activists, the British subjected members of the movement to harassment, abuse and coercive tactics adopted elsewhere in the subcontinent. This included physical violence and religious persecution.
- Following the recruitment of women in the movement, the British also engaged in violence, brutality and abuse of women members.
- British also adopted their tactic of sowing divisions on religious grounds in the North-West Frontier Province as well, in an attempt to weaken the Khudai Khidmatgar.
- In a move that surprised the British government, in August 1931, the Khudai Khidmatgar aligned themselves with the Congress party, forcing the British to reduce the violence they were perpetrated on the movement.
- The Khudai Khidmatgar opposed Partition, a stance that many interpreted as the movement not being in favour of the creation of the independent nation of Pakistan.

Post 1947, the Khudai Khidmatgar slowly found their political influence decreasing to such an extent that the movement and the massacre 90 years ago in the Qissa Khwani Bazaar has been wiped out from collective memory.

ARTIFICIAL NEURAL NETWORKS BASED GLOBAL IONOSPHERIC MODEL

◎ CONTEXT:

- Researchers from Indian Institute of Geomagnetism (IIG), Navi Mumbai, an autonomous institute of the Department of Science & Technology, Govt. of India, have developed a global model to predict the ionospheric electron density with larger data coverage, a crucial need for communication and navigation.

◎ ABOUT:

- The new **Artificial Neural Networks based global Ionospheric Model (ANNIM)** is developed using long-term ionospheric observations to predict the **ionospheric electron** density and the peak parameters.
- ANNs replicate the processes in the human brain (or biological neurons) to solve problems such as:
 - pattern recognition
 - classification
 - clustering
 - generalization
 - linear and nonlinear data fitting
 - time series prediction
- Currently, very few attempts have been made to model the global ionosphere variability using ANNs.

How they did it?

- The researchers developed a **neural network-based global ionospheric model** by using:
 - an extensive database consisting of nearly two decades of global **Digisonde** (an instrument that measures real-time on-site electron density of the ionosphere by sending the radiofrequency pulses)
 - Global Navigation Satellite System (GNSS) radio occultation
 - topside sounders observations
- These datasets were processed with various quality control measures to eliminate spurious data points (outliers) and prepared for the training.
- Day number, Universal Time, latitude, longitude, F10.7 index (responsible for Photo-ionization), Kp (represents the disturbed space weather conditions), magnetic declination, inclination, dip latitude, zonal and meridional neutral winds were taken as inputs in the study.
- The target (output) of ANNs is the electron density as a function of altitude for any given location and time.
- The data was trained with the ANNs using high-performance computer at IIG to develop the ANNIM.

What is Ionosphere?

- A dense layer of molecules and electrically charged particles, called the ionosphere, hangs in the Earth's upper atmosphere starting at about 35 miles (60 kilometers) above the planet's surface and stretching out beyond 620 miles (1,000 km).
- Ionosphere overlaps the mesosphere, thermosphere, and exosphere. It is a very active part of the atmosphere, and it grows and shrinks depending on the energy it absorbs from the sun.
- In the ionosphere, charged particles are affected by the magnetic fields of both Earth and the sun.
- This is where auroras happen. Those are the bright, beautiful bands of light that you sometimes see near Earth's poles.
- They are caused by high-energy particles from the sun interacting with the atoms in this layer of our atmosphere.

Why tracking the variability is important?

- Tracking the variability of the Ionosphere is important for communication and navigation.
- The ionospheric variability is greatly influenced by both solar originated processes and the neutral atmosphere origin, therefore, difficult to model.
- Scientists have tried to model the ionosphere using theoretical and empirical techniques; however, the accurate prediction of electron density is still a challenging task.
- In recent years, the Artificial Neural Networks (ANNs) are showing potential to handle more complex and non-linear problems.
- Keeping these aspects in mind, a novel machine learning approach was implemented by the IIG team in the ionospheric model development using global ionospheric observations.

How will it benefit?

- It can capture the general morphological features of the ionosphere during the disturbed space weather periods, such as geomagnetic storms which occurs when the magnetic cloud originated from Sun (known as Coronal Mass Ejection (CME)) interacts with the Earth's magnetosphere.

- The model may be utilized as a reference model in the ionospheric predictions and has potential applications in calculating the **Global Navigation Satellite System (GNSS)** positioning errors.

DISCOVERY OF LI-RICH GIANT STARS

◎ CONTEXT:

- Researchers at the Indian Institute of Astrophysics (IIA) have discovered hundreds of Li-rich giant stars indicating that Li is being produced in the stars and accounts for its abundance in the interstellar medium.

◎ ABOUT:

- Lithium (Li), is one of the three primordial elements, apart from Hydrogen and Helium (He), produced in the **big bang nucleosynthesis (BBN)** whose models predict primordial Li abundance ($A(\text{Li}) \sim 2.7 \sim \text{dex}$).

Big Bang Nucleosynthesis:

- The theory of big-bang nucleosynthesis (BBN) predicts rather successfully the primordial abundances of light elements.
 - It gives a detailed mathematical description of the production of the light "elements" deuterium, helium-3, helium-4, and lithium-7.
 - Specifically, the theory yields precise quantitative predictions for the mixture of these elements, that is, the primordial abundances at the end of the big-bang.
 - It predicts that roughly 25% the mass of the Universe consists of Helium. It also predicts about 0.01% deuterium, and even smaller quantities of lithium.
- Natural lithium is a mixture of two stable isotopes, lithium-6 and lithium-7. Lithium-7 accounts for over 92% of the natural abundance of the element.
 - Lithium is an alkali metal. It's silver-white in pure form and is so soft it can be cut with a butter knife. It has one of the lowest melting points and a high boiling point for a metal.

The discovery:

- Scientists have discovered a number of **super Li-rich giants** which have Li quantity which is equal to or in some cases, more than 10 times the present value, $A(\text{Li}) = 3.2 \text{ dex}$ (measured in logarithmic scale relative to hydrogen).
- They have also associated such Li enhancement with central **He-burning stars, also known as red clump giants**, thereby opening up new vistas in the evolution of the red giant stars.
- However, the present measurement of Li in the interstellar medium and very young stars is about 4 times more than the primordial value.
- Apart from reactions, in which high energy cosmic ray particles bombard with heavier nuclei such as carbon and oxygen-producing lighter particles such as Li, stars are also proposed as likely Li source in the Galaxy.
- In general, stars are considered as Li sinks. This means that the original Li, with which stars are born, only gets depleted over stars' life-time as Li burns at relatively very low temperatures of about $2.5 \times 10^6 \text{ K}$ – a range which is easily encountered in stars.

How they did it?

- Scientists followed a two-fold strategy:
 - by increasing the sample by systematically searching for high Li among low mass evolved stars in the Galaxy and determining the exact evolutionary phase of these high Li abundance stars.

- by employing data from large scale ground and space missions, they discovered hundreds of Li-rich giants.
- Though their study increased the number of Li-rich giants by many-fold Li-rich giants still accounts for only about 1 in 100 in the Galaxy.

Significance of the finding:

- This is an important discovery that will help to eliminate many proposed theories such as planet engulfment or nucleosynthesis during the red giant evolution in which helium at the center is not burning.
- Moreover, identification of sources of Li enrichment in our Galaxy has been a great interest to researchers to validate Big Bang Nucleosynthesis as well as a stellar mixing process.

FELUDA

◎ CONTEXT:

- Scientists at Delhi's CSIR-IGIB have developed a paper-based test strip for Covid-19, and named it after the fictional detective created by Satyajit Ray.

◎ ABOUT:

- The 'Feluda' test strip has been invented by a team led by two Bengali-origin scientists- Dr Souvik Maiti and Dr Debojyoti Chakraborty, at the Council of Scientific & Industrial Research's Institute of Genomics and Integrative Biology (CSIR-IGIB) in New Delhi.
- The simple paper-based test strip could also reduce Covid-19 testing costs — the real-time polymerase chain reaction test (RT-PCR) used currently requires machinery worth lakhs of rupees and its price is capped at Rs 4,500 in private labs, but the 'Feluda' test could cost as little as Rs 500.
- It can be used in a way similar to pregnancy test strips widely available over the counter.

How does it work?

- This strip will be similar to a pregnancy test strip, and will not require any specialised skill and machines to perform, as is the case with other PCR-based tests.
- This strip will just change colour, and can be used in a simple pathological lab. The most important part is it will be 100 per cent accurate.

CRISPR Technology:

- The test kit uses **CRISPR gene-editing technology** to get results, though the difference to the kits being developed at Stanford and MIT is in the proteins used.
- CRISPR technology recognises specific genetic sequences and cuts them in short time.
- The CRISPR reaction is specific, and can be done in 5-10 minutes. It is a powerful technique that worked in detecting the Zika virus too.
- Feluda uses cutting-edge gene-editing CRISPR-CAS-9 technology to target and identify genomic sequence of the novel coronavirus in suspected individuals. No other laboratory in India is developing test kit using CRISPR technology.

What are genome editing and CRISPR-Cas9?

- Genome editing (also called gene editing) is a group of technologies that give scientists the ability to change an organism's DNA.
- These technologies allow genetic material to be added, removed, or altered at particular locations in the genome. Several approaches to genome editing have been developed.

- A recent one is known as CRISPR-Cas9, which is short for clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9.
- The CRISPR-Cas9 system is faster, cheaper, more accurate, and more efficient than other existing genome editing methods.
- CRISPR-Cas9 was adapted from a naturally occurring genome editing system in bacteria. The bacteria capture snippets of DNA from invading viruses and use them to create DNA segments known as CRISPR arrays.
- The CRISPR arrays allow the bacteria to “remember” the viruses (or closely related ones). If the viruses attack again, the bacteria produce RNA segments from the CRISPR arrays to target the viruses’ DNA.
- The bacteria then use Cas9 or a similar enzyme to cut the DNA apart, which disables the virus.

How Feluda is different from others?

- Unlike Stanford and MIT, which use CAS-12 and CAS-13 proteins to detect the presence of the novel coronavirus, Feluda uses CAS-9 protein technology. And unlike the PCR test, there is no need for probes.
- A few other labs have been developing test kits, but they are largely based on PCR technology. The problem with PCR is that it is costly — one machine costs Rs 14-15 lakh, and imported probes have to be used, of which there is a shortage. It takes several hours.
- Feluda does not require any ‘level 2’ or ‘level 3’ lab to test, unlike most PCR-based tests. This can be done in any simple pathological lab.

MISCELLANEOUS

CURRENT AFFAIRS

CABINET APPROVES FIXATION OF NUTRIENT BASED SUBSIDY RATES FOR PHOSPHATIC & POTASSIC FERTILIZERS

- The Cabinet Committee on Economic Affairs (CCEA) gave its **approval for fixation of Nutrient Based Subsidy, NBS rates for Phosphatic and Potassic (P and K) Fertilizers** for the year 2020-21.
- The **approved rates for NBS will be** 18 rupees 78 paise per kg for Nitrogen, 14 rupees 88 paise per kg for Phosphorus, 10 rupees 11 paise per kg for Potash and 2 rupees 37 paise per kg for Sulphur.
- The **CCEA also approved the inclusion of a complex fertilizer namely Ammonium Phosphate under the NBS Scheme.**
- The **expected expenditure for release of subsidy** on Phosphorus and Potassium Fertilizers during 2020-21 will be over 22 thousand 186 crore rupees.
- The subsidy on the Phosphorus and Potassium will be **provided on the subsidy rates approved by the CCEA to the fertilizer companies.**

DEPARTMENT OF POSTS TO DELIVER ESSENTIAL ITEMS ANYWHERE IN THE COUNTRY IN ITS NEW INITIATIVE

- The idea of starting a road network with the existing fleet of departmental vehicles, primarily used for intra- city delivery was conceived and a National Road Transport Network was designed with 22 long routes of over 500 kilometres interspersed with 34 interstate or intra-state schedules touching over 75 cities across the country.
- This initiative will now ensure that there is a movement of essential items within the country as Department of Posts will be able to deliver parcels carrying essential items anywhere in the country.
- The Department of Posts has already taken a number of initiatives to ensure supplies of essential items including medicines , Covid- 19 testing kits, masks , sanitizers, PPEs and medical equipments including ventilators and defibrillators to all corners of the country.
- The Department has also been delivering cash at doorsteps of old, divyangjan and pensioners through Aadhar enabled payment system.
- This National Road Transport Network is yet another initiative of the Department to reach out to people across the country.

GOOGLE DOODLE HONOURS BELGIAN PHYSICIST JOSEPH PLATEAU ON HIS 218th BIRTHDAY

- Google Doodle honoured Belgian physicist Joseph Antoine Ferdinand Plateau, **inventor of the phenakistiscope, a device that led to the birth of cinema** by creating the illusion of a moving image.
- **Born in Brussels on October 14 in 1801**, Plateau was the son of an artist who specialised in painting flowers. After studying law, **Plateau became one of the best-known Belgian scientists of the nineteenth century**, remembered for his study of physiological optics, **particularly the effect of light and colour on the human retina.**

- Plateau's doctoral dissertation detailed how images form on the retina, noting their exact duration, colour, and intensity. Based on these conclusions, **he was able to create a stroboscopic device in 1832, fitted with two discs that rotated in opposite directions.**

HEALTH MINISTRY ASKS EVERYBODY TO TAKE A PLEDGE TO BEAT MALARIA ON WORLD MALARIA DAY

- World Malaria Day, **marked each year on 25 April**, is an occasion to highlight the need for continued investment and sustained political commitment for malaria prevention and control.
- Theme for World Malaria Day 2020: **Zero malaria starts with me**
- Malaria is transmitted by the **bite of infected female Anopheles Mosquito.**
- These parasites belong to the **Plasmodium genus** and cause malaria, a disease that is one of the leading causes of death in **children aged below five years.**
- This is particularly worrying for a country like India, which reportedly has the **fourth highest incidence of malaria in the world.**

HRD MINISTER LAUNCHES VIDYADAAN 2.0 FOR INVITING E-LEARNING CONTENT CONTRIBUTIONS

- Human Resources and Development Minister **launched national program VidyaDaan 2.0** for inviting e-learning Content contributions in New Delhi.
- The programme has been **launched due to the increasing requirement for e-learning content** for students in both school and higher education especially in the backdrop of situation arising out of COVID-19.
- VidyaDaan is a common national programme to develop and contribute e-learning content** and a chance to be recognized nationally.
- VidyaDaan is conceptualised as a common national program for individuals and organizations across the country** to contribute e-learning resources for both school and higher education to ensure continuity of quality learning.
- The **content will be used on the DIKSHA app to help millions of children** across the country to continue their learning anytime and anywhere.
- Contributions can be made **by educationists, subject experts, schools, colleges, Universities, Institutes, government and non-government organisations and individuals.**
- The DIKSHA Platform of the Ministry has been operating since 2017 with more than 30 States and Union Territories** leveraging DIKSHA for augmenting teaching and learning processes.

INDIA'S FIRST MOBILE VIROLOGY DIAGNOSTICS AND RESEARCH LABORATORY INAUGURATED IN HYDERABAD

- Unique and first of its kind facility in the country, a **Mobile Virology Diagnostics and Research Laboratory** has been inaugurated in Hyderabad at the ESI medical college.
- It has been developed by Defence Research and Development Organization- **DRDO** in association with **ESIC Hospital, Hyderabad and Private industry**.
- The **Bio safety level-3 laboratory** can test thousand samples for **Corona virus daily** and can scale up to 2000 in future. The laboratory also has a **facility to trial drugs and conduct research on Corona virus**.
- The laboratory has been **developed in less than two weeks**. The laboratory can expand its operations in future and can be moved easily to anywhere in the country.
- The Mobile Viral Research Lab is the **combination of a BSL 3 lab and a BSL 2 lab** essential to carry out the activities. The labs are **built as per WHO and ICMR Bio-safety standards** to meet international guidelines.

PRESIDENT GIVES ASSENT TO PROMULGATION OF ORDINANCE TO AMEND EPIDEMIC DISEASE ACT, 1897

- President has given his assent for promulgation of the Ordinance to **amend the Epidemic Disease Act 1897** to protect the **health care service personnel**.
- The ordinance provides for making such acts of violence **cognizable and non-bailable offences** and for **compensation for injury to healthcare service personnel**.
- Violence as defined in the ordinance will **include harassment and physical injury and damage to property**.
- **Indian Medical Association** hailed government's swift and timely efforts to ensure safety and security of the health professionals who are tirelessly working to safeguard people's life.

SPACEX LAUNCHES FALCON 9 LOADED WITH ISRAEL'S AMOS-17

- US carrier rocket **Falcon 9** loaded with **Israeli AMOS-17 communication satellite** successfully lifted off from a space center in Florida.
- **Falcon 9** launches **AMOS-17** off Pad 40 in Florida, marking this booster's third flight and **SpaceX's 25th reflight of an orbit class rocket**.
- The rocket was **launched from Cape Canaveral Air Force Station** in Florida.
- **Amos-17** is set to replace **Amos-5** satellite launched in 2011. **Communication with Amos-5 was lost in 2015**.
- **Amos-17, built by Boeing, will provide Ka, Ku and C-band signal transmission** and expand Israeli communications satellite operator **Spacecom's coverage in Africa, the Middle East and Europe**.

SWAMITVA SCHEME LAUNCHED IN PILOT MODE IN 6 STATES

- The Swamitva scheme helps to **map rural inhabited lands using drones and latest survey methods**.
- The **scheme will ensure streamlined planning, revenue collection and provide clarity** over property rights in rural areas.
- **This will open up avenues for applying for loans** from financial institutions by the owners.
- **Disputes related to property would also be settled** through the title deeds allotted through this scheme.
- The scheme was **launched on National Panchayati Raj Day** which is celebrated every year on **24th April**.

TDB APPROVES FINANCIAL SUPPORT TO MYLAB DISCOVERY SOLUTIONS FOR RAMPING UP PRODUCTION OF COVID-19 DIAGNOSTIC KITS

- The Technology Development Board (TDB) has **approved financial support to MyLab Discovery Solutions, Pune**, for ramping up **production of COVID-19 diagnostic kits**.
- Mylab Discovery Solutions is the **first indigenous company to develop real-time PCR based molecular diagnostic kit** which screens and detects COVID 19 from samples.
- The **support from TDB will ensure ramp up in the production of the kits** through automation of the facility.
- This aid is **supposed to increase the capacity to one lakh tests per day** from the current numbers of thirty thousand.
- The kit has been **approved by ICMR and CDSCO** and will be put to use in a short time, considering its urgent requirement.
- TDB is a statutory body under the Department of Science and Technology.

TOURISM MINISTRY TO ORGANIZE A SERIES OF WEBINARS ON OVERALL THEME OF 'DEKHO APNA DESH'

- The objective of these webinars is to **create awareness about and promote various tourism destinations of India**.
- These **include the lesser known destinations and lesser known facets** of popular destinations.
- In addition, thematic Webinars are also being organised on subjects such as **Accessible Tourism**.
- The 6th Webinar of the series was organized on 22nd of last month on the subject '**Making India an Inclusive Travel Destination For All**'.

UAE TO PARTICIPATE IN CELEBRATING WORLD IMMUNISATION WEEK

- The UAE will participate in celebrating the **annual World Immunisation Week** launched by the **World Health Organisation**, WHO, in the last week of April.
- The World Immunisation Week is **annually observed to help vaccinate approximately 20 million children around the world**, who are totally or partially deprived of vaccinations.
- However, this year, the world is facing a significant challenge that requires finding a vaccine for all humanity.
- **UAE is implementing a free National Immunisation Programme for citizens and residents**, which aims to benefit all individuals in the community.
- The UAE is one of the key supporters of the global efforts aimed at combating diseases, such as **Guinea worm, polio and malaria, and preventing their spread**.

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