

# CURRENT AFFAIRS

WEEKLY

WEEK-1  
JULY, 2020

MAINS

PRELIMS

- Kerala to start intercropping

## AGRICULTURE

- Ecological disaster at Baghjan

## CONSERVATION

- Animal Husbandry Infrastructure Development Fund (AHIDF)

- Credit Guarantee Scheme for Subordinate Debt (CGSSD)

- Purchasing Power Parities and the size of Indian Economy

## ECONOMY

- Earthquakes hit Mizoram for the fourth day

## GEOGRAPHY

- Garib Kalyan Rojgar Abhiyaan (GKRA)

## GOVERNANCE

- Chaolung Sukapha
- Russia marks WW2 Victory Day

## HISTORY

- China to join UN arms trade treaty
- Japan to rename areas of islands disputed with China

## INTERNATIONAL RELATIONS

- Secrecy of ballot is the cornerstone of free and fair elections: SC

## POLITY

- Detection of Fluorine in hot Extreme Helium Stars
- National Space Promotion and Authorization Centre (IN-SPACe)

## SCIENCE & TECHNOLOGY

## ➤ Pollinator Week

### AGRICULTURE

## ➤ Extention of the OBC Commission

### GOVERNANCE

## ➤ Tuberculosis still a big killer in India

### HEALTH

## ➤ The landscape of Cyber Security in India

### SCIENCE & TECHNOLOGY

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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- 1 (JULY, 2020)

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# **SECTION: A**

## **(MAINS)**

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**CURRENT AFFAIRS**

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# POLLINATOR WEEK

## CONTEXT

The Pollinator Week is observed every year from 22<sup>nd</sup> June to 28<sup>th</sup> June.

### ◎ BACKGROUND

- In 2007, the U.S. Senate created a National Pollinator Week to "recognize the importance of pollinators to ecosystem health and agriculture in the United States."
- The Pollinator Week (June 22-28) was initiated by non-profit Pollinator Partnership and the United States' Senate.
- Each year since then, recognition of National Pollinator Week has grown, with many states and local groups planning educational events.
- The week is often a time for light stories on pollinator-friendly gardening tips and social media posts of cute bees and butterflies.

- **Invertebrates:** Well-known invertebrate pollinators include bees, moths, flies, wasps, beetles and butterflies.
- **Vertebrates:** Monkeys, rodents, lemurs, tree squirrels and birds also facilitate pollination and are among the vertebrate pollinators.

### ◎ ANALYSIS

#### Understanding Pollination

- Pollination is the delivery of pollen to the female organs of a plant (stigma in flowers). Pollen is made by the male organs of a plant (stamens in flowers) and contains genetic information needed for plant reproduction.
- Pollen may be transferred to female organs on the same plant (self-pollination) or another plant of the same species (cross-pollination).
- As a result of pollination the plants produce seeds.
- Pollen can be dispersed by wind, water and animal pollinators such as insects, bats and birds.

#### What are Pollinators?

- Pollinators are animals that transfer pollen from the anthers to the stigma of a flower, enabling the flower to set seed and fruit (fertilization) and, through cross-fertilization, they play an important role in maintaining plant diversity.
- The important ecosystem service of pollination is provided by a variety of animals, chiefly insects. Bees, flies, butterflies, moths, wasps, beetles, thrips and some other insect orders encompass the majority of pollinating species.
- There are two categories of pollinators:

#### The Global situation

- More than 180,000 plant species, including 1,200 crop varieties, across the world depend on pollinators to reproduce. But the little creatures, like the bees and the butterflies, have increasingly been under threat. This is a week for them.
- There are 150,000 species across the world who visit flowers, of which bees, being dominant pollinators, account for 25,000-30,000 species, according to the Food and Agriculture Organization (FAO).
- Around 40 per cent of invertebrate pollinator species — particularly bees and butterflies — face extinction across the world, according to the FAO.
- The US saw a decline in its bee population as well: In 2017, there were 2.88 million honey bee colonies, a 12 per cent dip from the 3.28 million colonies in the country in 2012, according to the FAO.
- Similarly, around 16.5 per cent of vertebrate pollinators are threatened with extinction, according to the FAO.
- Of these, 45 species of bats, 36 species of non-flying mammals, 26 species of hummingbirds, seven species of sunbirds and 70 species of passerine birds, face extinction, according to the FAO's rapid assessment on pollinators' status.

#### India's case

- In India, wild honeybees of the genus *Apis* — including the Asian bee (*A. cerana*) and the little bee (*A. florea*) — declined steadily for the past 30 years, said *Pollinators Unknown: People's perception of native bees in an agrarian district of West Bengal, India, and its implication in conservation*, a 2017 study.
- Nearly 168 bees died every day due to poor waste management, pointed out *Decline in honey bee population in southern India: Role of disposable paper cups*, a 2014 study.
- Overall, 35,211 bees died every month, the study said.



- In India, most of the food crops need insect (mainly bee) pollinators for sufficient successful pollination.
- Oil seeds (such as Sunflower, niger, safflower), vegetables (Cucurbitaceous Vegetable Crops, legume crops) and many fruit crops are profoundly reliant on pollinators.
- A list of crops pollinated by bees is as follows
  - Fruits and nuts: Almond, apple, apricot, peach, strawberry, citrus and litchi.
  - Vegetable and Vegetable seed crops: Cabbage, cauliflower, carrot, coriander, cucumber, melon, onion, pumpkin, radish and turnip.
  - Oil seed crops: Sunflower, niger, rape seed, mustard, safflower, gingelly.
  - Forage seed crops: Lucerne, clover.

### Why Bees are so crucial?

- Among the pollinator groups, bees have been considered a priority group.
- Bees are synonymous with insect pollinators and they are publicly shared assets, most species and populations belonging to nobody, yet benefiting all of us through pollination – a perfect example of 'positive externality', in economic parlance.
- In general, bees are the main pollinators of angiosperms.
- The Food and Agriculture Organisation (FAO) of the U.N. estimates that of the slightly more than 100 crop species that provide 90 percent of food supplies for 146 countries, 71 are bee-pollinated (mainly by wild bees), and several others are pollinated by thrips, wasps, flies, beetles, moths and other insects.
- In India, Honeybees (*Apis* spp.) are always valued for honey and wax, earning them due importance and never appreciated for pollination services.

### Why Pollinator matters?

- Pollinators are crucial in the functioning of almost all terrestrial ecosystems including those dominated by agriculture because they are in the front line of sustainable productivity through plant reproduction.
- One-third of the world's crops require pollination to set seeds and fruits and the great majority of them are pollinated by bees.
- These pollinators also provide an important ecosystem service that is essential for sustaining wild floral biodiversity.

- Pollinators are responsible for one out of every three bites of food we eat and vital to the production of 75 percent of the world's top food crops—everything from apples to zucchini.
- They are also critical to the reproduction of nearly 90 percent of flowering plants (i.e., most plants on the face of the Earth).
- Further losses of pollinators not only jeopardize our food security, but also the survival of our ecosystems.

### Economic value of pollination for crops

- The role of pollinators in enhancing biodiversity and increasing crop yield is so significant that its economic value is worth billions of dollars.

Crop	Economic value (in Rs crore)
Rapeseed and mustard	19,355.70
Oilseeds	43,993.08
Fruits	17,095.45
Vegetables	19,498.20
Fibres (mainly cotton)	17,290.66
Spices and condiments	10,109.43

### What's triggering the Pollinator apocalypse?

There are several causes for the decline in the number of pollinators. Most of them are the result of an increase in human activities:

- Land-use change and fragmentation
- Changes in agricultural practices including use of chemical pesticides, fungicides and insecticides
- Change in the cropping pattern and crops like the cultivation of Genetically Modified Organisms (GMOs) and mono-cropping
- High environmental pollution from heavy metals and nitrogen
- Growth of invasive alien species

### © WAY FORWARD

The only way forward is to "stabilise carbon emissions and hold warming to 1.5 degrees Celsius above pre-industrial levels.

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# EXTENTION OF THE OBC COMMISSION

## CONTEXT

The Union Cabinet decided to extend the tenure of the OBC Commission by six months as its functioning was affected due to the coronavirus lockdown.

### ◎ BACKGROUND

- Constituted in October 2017, the Commission, headed by Justice G Rohini (retd), has interacted with all the states/UTs which have sub-categorised Other Backward Classes (OBCs).
- The Commission was of the view that it would require some more time to submit its report since repetitions, ambiguities, inconsistencies and errors of spelling or transcription appearing in the existing Central List of OBCs need to be cleared.
- It had, therefore, earlier sought extension of its term up to July 31 this year.
- However, due to the nationwide lockdown and travel restrictions owing to the COVID-19 pandemic, the Commission was not able to complete its task even during the extended time.
- Therefore, the term of the Commission is being extended for a period of 6 more months i.e. up to 31 January 2021.
- The communities in the existing OBC list that have not been able to get any major benefit of reservation -- in appointments on central government posts and in admissions in central educational institutions -- are expected to benefit once the recommendations of the Commission are implemented.
- The Commission is likely to make recommendations for benefit of such marginalised communities in the Central List of OBCs.

backward class in India and recommend measures for their welfare, upliftment and development.

- The Mandal Commission was constituted under this Article.

### Mandal Commission

- The Mandal Commission was constituted in 1979, under Article 34 of the Constitution to identify backward communities in India and recommend policy initiatives for their upliftment and welfare.
- The Commission listed 11 criteria, falling under social, economic and educational categories, to identify and classify communities and Backward classes.

- Article 15 and 16 of the Constitution of India which are applicable to the member of the Scheduled Caste communities, apply to the members of the OBC communities as well.
- The National Commission for Backward Classes places Backward Classes within the expression of the term 'Scheduled Castes'.

### Reservation for OBCs

- Reservation Policy in India is a process of reserving certain percentage of seats (maximum 50%) for a certain class such as Scheduled Castes, Scheduled Tribes, Backward classes, etc. in the public sector units, union and state civil services, union and state government departments and in all public and private educational institutions.

### The current scenario of Reservation in India is:

- 15% seats are reserved for Scheduled Castes (SC).
- 7.5% seats are reserved for Schedule tribes (ST).
- 27% seats are reserved for Other backward classes (OBC).
- Total constitutional reservation percentage is 49.5% and the rest 50.5% seats are open to all i.e. general, SC, ST And OBC.

### ◎ ANALYSIS

#### Who are Other Backward Classes?

- Communities that have been historically marginalised in India and continue to face oppression, and social, economic and educational isolation, but do not fall into the Scheduled Caste and Scheduled Tribes list, fall into the Other Backward Class category.
- Article 340** of the Constitution of India gives the President of India the power to constitute a committee to investigate the conditions of

- Reservation for OBCs, unlike that for Scheduled Castes and Scheduled Tribes, was not initially guaranteed in the Constitution — and extends only to jobs and education, not to elected representatives.

- It draws its roots from the Mandal Commission, which was set up in 1979, and its recommendation for 27% OBC quota accepted by the central government in 1990.
- In 2006, the reservation was extended to institutions of higher education.
- Upper-caste students and anti-quota groups have long opposed reservations, but the protests have been especially fierce against the implementation of OBC quotas, both in 1990 and in 2006.
- They argue that many OBC groups are upwardly mobile and socially dominant, don't need state support in jobs and education, and that the presence of quotas hinders merit-based selection.
- To be sure, economically well-off OBCs form what is known as a "creamy layer" — annual income of more than ~8 lakh — and are not eligible for quotas.

**Creamy layer**

- The concept of 'creamy layer' was introduced by the Supreme Court in 1993 through the judgement it delivered in the Indira Sawhney case.
- In its judgment, the top court ruled that the exclusion of such socially advanced members...will make the 'class' a truly backward class."
- After being introduced, the criterion of income has been periodically revised. In 2013, it was revised from Rs 4.5 lakh to Rs 6 lakh. In 2017 it was revised to Rs 8 lakh.

- The income criteria is usually reviewed every three years.

**What is the need?**

- If someone belongs to a Scheduled Caste (SC) or a Scheduled Tribe (ST), he is listed among the 28 parameters, but there is no sub-category for OBC in its current format.
- Currently, all 2,633 OBC castes compete for the same 27% quota. 25% of benefits from OBC reservations have been availed by only 10 sub-castes.
- There are 983 sub-castes who have availed almost no benefits from reservations.
- The communities that have got almost no benefits of reservations include profession-based castes such as Kalaigars, a community that traditionally polishes tins; and Sikligars and Saranias, communities that traditionally sharpen knives; apart from several other marginalised groups.
- No Census published since then has ever counted OBCs. The next census, in 2021, is slated to count OBCs for the first time in 90 years.

**CONCLUSION**

The Commission's recommendations are expected to benefit the communities in the existing list of OBCs which have not been able to get "any major benefit of the scheme of reservation for OBCs for appointment in central government posts and for admission in central government educational institutions."

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# TUBERCULOSIS STILL A BIG KILLER IN INDIA

## CONTEXT

India notified the highest number of 24.04 lakh tuberculosis cases last year as against an estimated 26.9 lakh cases by WHO, indicating that around three lakh patients missed out from the national TB programme, according to India TB Report 2020.

### ◎ BACKGROUND

- TB has existed in India for several thousand years. TB in India is an ancient disease. In Indian literature there are passages from around 1500 BCE in which consumption is mentioned, and the disease is attributed to excessive fatigue, worries, hunger, pregnancy and chest wounds.
- In 1880s it was widely believed that TB was an inherited disease. However, a scientist Robert Koch was convinced that the disease was caused by *Mycobacterium tuberculosis* and was infectious.
- In 1882, he published his findings on tuberculosis and later attempted at developing a drug to treat this disease, thereby finding the drug tuberculin which today is used for TB diagnosis.
- In 1905 he received the Nobel Prize in Physiology and Medicine for his work with Tuberculosis.
- Tuberculosis in India was first recognised through a resolution passed in the All India Sanitary Conference, held at Madras in 1912.
- The first open air institution for isolation and treatment of TB patients was started in 1906 in the Himalayas in 1908.
- The anti-TB movement in the country gained momentum with the TB Association of India was established in 1939.
- Even today, India bears a disproportionately large burden of the world's tuberculosis rates. And it continues to be the biggest health problem in India.

### ◎ ANALYSIS

#### Learning the truths about TB

- Tuberculosis (TB) is a contagious infection that usually attacks your lungs. It can spread to other parts of your body, like your brain and spine.
- **Caused by:** A type of bacteria called *Mycobacterium tuberculosis* causes it.
- **Symptoms of TB:** Typical symptoms of TB include-
  - a persistent cough that lasts more than 3 weeks and usually brings up phlegm, which may be bloody
  - weight loss
  - night sweats
  - high temperature
  - tiredness and fatigue
  - loss of appetite
  - swellings in the neck
- There are two TB-related conditions exist:
  - **Latent TB infection (LTBI):** Latent TB occurs when a person has the TB bacteria in their body. But the bacteria are present in extremely small numbers. People with latent TB are not infectious and do not feel ill. They cannot pass the TB bacteria on to other people.
  - **TB disease or Active TB:** TB disease is what happens when a person has latent TB and then becomes sick.

#### How does it spread?

- TB bacteria are spread through the air from one person to another when a person with TB disease coughs, speaks or sings.
- When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow.
- From there they can move through the blood to other parts of the body.

#### What is drug-resistant TB?

- Drug-resistant TB can occur when TB bacteria become resistant to the two most powerful antibiotics normally used to treat the illness.
- This means the TB is more difficult to treat and treatment will take much longer (usually at least 18 months).

#### Key-highlights of the India TB Report 2020

- The India TB Report 2020 stated that 79,144 deaths due to tuberculosis were reported in 2019, which is much lower than the WHO estimate of 4.4 lakh fatalities.
- The "missing cases" — the gap between estimated incidences and notified cases — has drastically reduced from over 10 lakh in 2017 to 2.9 lakh in 2019 through greater engagement with private healthcare sector along with other initiatives.

- Around 24.04 lakh TB patients were notified in 2019, registering 14 per cent increase over the previous year while the private sector saw an increase of around 35 per cent with 6.78 lakh tuberculosis patients notified.
- **State TB Index:** On the basis of the score in State TB Index-
  - Gujarat, Andhra Pradesh and Himachal Pradesh were the top three best-performing states for tuberculosis control under the category of states with 50 lakh population.
  - Tripura and Nagaland were best-performing in the category of states having less than 50 lakh population.
  - Dadra and Nagar Haveli, and Daman and Diu were selected as the best performing Union Territories.

### How is the situation worldwide?

- Worldwide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent (above HIV/AIDS).
- In 2018, an estimated 10 million people fell ill with tuberculosis (TB) worldwide. 5.7 million men, 3.2 million women and 1.1 million children.
- TB occurs in every part of the world. In 2018, the largest number of new TB cases occurred in the South-East Asian region, with 44% of new cases, followed by the African region, with 24% of new cases and the Western Pacific with 18%.
- In 2018, 87% of new TB cases occurred in the 30 high TB burden countries. Eight countries accounted for two thirds of the new TB cases: India, China, Indonesia, Philippines, Pakistan, Nigeria, Bangladesh and South Africa.

### India's target to end TB

- The global target for eliminating TB is 2030, but the target for India to eliminate TB is 2025, five years before the global target.
- India's **TB control Programme** renamed as the **National TB Elimination Programme** has set a target of reducing has set a target of reducing the country's TB incidence rate from 217 patients per lakh population in 2015 to 77 by 2023 and 44 by 2025.

### WHO's "END TB Strategy"

- WHO's "END TB Strategy" adopted by the World Health Assembly in 2014 aims to end the TB epidemic globally.
- It aims at 95% reduction by 2035 in the number of TB deaths compared with 2015, 90% reduction by 2035 in the TB incidence rate compared with 2015 and Zero TB-affected families facing catastrophic costs due to TB by 2035.
- The strategy also sets interim milestones for 2020, 2025 and 2030 as the United Nations sustainable development goals include ending the TB epidemic by 2030.

### Government initiatives to end TB

- **Nikshay Poshan Yojana (NPY):** Government of India introduced Nikshay Poshan Yojana (NPY) through Direct Benefit Transfer (DBT) as monthly financial assistance towards nutrition for TB patients in 2018. It aims to-
  - To determine the number (proportion) of TB patients who received the benefits
  - To explore the challenges encountered by the health care providers in delivering the NPY through DBT
  - To explore the ways the incentives were utilised by the patients.
- **TB Harega Desh Jeetega:** Launched in 2019, it is a nationwide campaign to spread disease awareness about TB and encourage people with TB symptoms to seek medical attention.
- **Saksham Pravah Project:** The project provides home-based counselling to MDR-TB patients and caregivers. Patients are encouraged to share fears and talk about the discrimination, depression, and familial discord they face.

### CONCLUSION

India bears the world's largest burden of tuberculosis (TB), accounting for one-fourth of all new infections. Its prevention and control is a challenge at multiple levels, requiring the united efforts of a diverse range of stakeholders. Though India has been proactive against TB in recent years, there is still a long way to go.

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# THE LANDSCAPE OF CYBER SECURITY IN INDIA

## CONTEXT

As the world gets absorbed by the COVID-19 pandemic, cyberattacks have become a critical area for all technology-focused organizations in India. In the evolving situation, India needs an updated cybersecurity situation.

## ◎ BACKGROUND

- Cybercrime is vastly growing in the world of technology today. Criminals of the World Wide Web exploit internet users' personal information for their own gain.
- They dive deep into the dark web to buy and sell illegal products and services. They even gain access to classified government information.
- Cybercrimes are at an all time high, costing companies and individuals billions of dollars annually. What's even more frightening is that this figure only represents the last 5 years with no end in sight.
- The evolution of technology and increasing accessibility of smart tech means there are multiple access points within users' homes for hackers to exploit.
- While law enforcement attempts to tackle the growing issue, criminal numbers continue to grow, taking advantage of the anonymity of the internet.

readiness roadmap for organisations and the government for cyber-readiness, this is yet to be announced.

- While CERT-IN has responded to cyber threats, it has been late in conducting security checks, and often has released advisories once an attack has taken place.
- In the case of WhatsApp and Pegasus, CERT-IN only came in after others had warned of the possibility of individuals being compromised.

### What does India need?

- With countries resorting to digital warfare and hackers targeting business organisations and government processes, India needs comprehensive cybersecurity guidelines and standards for checking cyber vulnerabilities and cyber responses.
- In many cases, as it happens, the government itself uses legacy systems which are vulnerable to cyberattacks; countries like China and Singapore, in the meanwhile, have progressed towards creating cyber defence networks.
- India cannot afford to be complicit about cybersecurity.
- In 2018, when Wannacry disrupted the national health service systems in the UK, the country's health system was brought to a standstill.
- An attack explicitly directed towards these services can cause much more damage. India should not wait for an attack to upgrade its infrastructure.
- In India, the private sector has started playing a significant role in operating critical information infrastructure, particularly in power, transportation and healthcare.
- It is now more necessary than ever before to take cognisance of new directions and shifts in policies across the world.
- It will be necessary to undertake a thorough risk and gap assessment of the current cyber resilience of India's various economic sectors, as well as that of the governance structure that enforces and manages the cybersecurity policy and framework.

## ◎ ANALYSIS

### India's digital situation

- The digital economy today comprises 14-15% of India's total economy, and is targeted to reach 20% by 2024. India has more than 120 recognised 'data centres' and clouds.
- Although India was one of the few countries to launch a cybersecurity policy in 2013, not much has transpired in terms of a coordinated cyber approach.
- Unlike the US, Singapore, and the UK where there is a single umbrella organisation dealing in cybersecurity, India has 36 different central bodies—most ministries have their own—that deal with cyber issues, and each has a different reporting structure; each state government has its own CERT.
- Add to this the fact that while the National Cyber Security Strategy 2020 was to devise a cyber-

- National cybersecurity projects such as the National Cyber Coordination Centre (NCCC), National Critical Information Infrastructure Protection Centre (NCIIPC) and the Computer Emergency Response Team (CERT) need to be strengthened manifold and reviewed.

### The rise of digital mediums

- Financial services, payments, health services, etc are all connected to digital mediums; and thanks to Corona, this is expected to increase.
- The average data consumption per person a year is in the range of 15-20 gigabits. The growth rate in data generation is more than 35%.
- With more inclusion of artificial intelligence (AI), machine learning (ML), data analytics, cloud computing and Internet of Things (IoT), cyberspace will become a complex domain, giving rise to issues of a techno-legal nature.

### Cyber attacks in India

- In India, too, attacks have been happening with increasing frequency.
  - ▶ In 2016, banks had reportedly announced a leak of personal information of 3.2 million debit cards.
  - ▶ In 2018, Pune-based Cosmos Bank lost Rs 94 crore in a malware attack.
  - ▶ In 2019, the Kudankulam plant was attacked using malware.
  - ▶ And, CERT-IN has recently issued an advisory that there is a threat of a massive phishing attack.
- For three months in 2019, India faced the most cyber-attacks in the world.
- While the US was the most cyber-targeted nation in 2019, India held the top spot in April, May and June.
- The most cyber-attacked countries in 2019 were the US, India, UK, Singapore, Ukraine, UAE, Nigeria, Japan, South Korea and Spain respectively.

### The countries targeting India

- According to the data, 74,988 cyber-attacks targeting India originated in Slovenia. This was followed by Ukraine (55,772 attacks), Czech Republic (53,609 attacks), China (50,000 attacks), and Mexico (35, 201 attacks).
- The report says the attacks were carried out through 'botnets' that are used to inject malware into a victim's device, allowing those controlling the botnet to take control of the device, gather information of the device and even remotely make

the victim's device perform specific tasks such as sending information back to the person controlling the botnet.

- A 'botnet' is a set of devices, which have computing ability and can be connected to each other through the internet — for example, computers, drones, and smartphones can be connected to each other via the internet.

### Types of Cybercrime

- **DDoS Attacks:** These are used to make an online service unavailable and take the network down by overwhelming the site with traffic from a variety of sources. Large networks of infected devices known as Botnets are created by depositing malware on users' computers. The hacker then hacks into the system once the network is down.
- **Botnets:** Botnets are networks from compromised computers that are controlled externally by remote hackers. The remote hackers then send spam or attack other computers through these botnets. Botnets can also be used to act as malware and perform malicious tasks.
- **Identity Theft:** This cybercrime occurs when a criminal gains access to a user's personal information to steal funds, access confidential information, or participate in tax or health insurance fraud. They can also open a phone/internet account in your name, use your name to plan a criminal activity and claim government benefits in your name. They may do this by finding out user's passwords through hacking, retrieving personal information from social media, or sending phishing emails.
- **Cyberstalking:** This kind of cybercrime involves online harassment where the user is subjected to a plethora of online messages and emails. Typically cyberstalkers use social media, websites and search engines to intimidate a user and instill fear. Usually, the cyberstalker knows their victim and makes the person feel afraid or concerned for their safety.
- **PUPs:** PUPs or Potentially Unwanted Programs are less threatening than other cybercrimes, but are a type of malware. They uninstall necessary software in your system including search engines and pre-downloaded apps. They can include spyware or adware, so it's a good idea to install an antivirus software to avoid the malicious download.
- **Phishing:** This type of attack involves hackers sending malicious email attachments or URLs to users to gain access to their accounts or computer. Cybercriminals are becoming more established and many of these emails are not flagged as spam. Users are tricked into emails claiming they need to change their password or update their billing information, giving criminals access.

- **Online Scams:** These are usually in the form of ads or spam emails that include promises of rewards or offers of unrealistic amounts of money. Online scams include enticing offers that are “too good to be true” and when clicked on can cause malware to interfere and compromise information.

### Indian laws concerning Cyber Security

- **Information Technology Act, 2000:** The act provides legal recognition to e-commerce and e-governance and facilitates its development as an alternative to paper-based traditional methods. It aims to protect the advancement in technology by defining crimes, prescribing punishments, laying down procedures for investigation and forming regulatory authorities.
- **Crime and Criminal Tracking Network System (CCTNS):** It is a nationwide network infrastructure for evolution of IT-enabled state-of-the-art tracking system around “investigation of crime and detection of criminals”.
- **National Cyber Security Policy, 2013:** It provides for:
  - ▶ To build a secure and resilient cyberspace.
  - ▶ Creating a secure cyber ecosystem, generate trust in IT transactions.
  - ▶ Creation of a 24 x 7 National Critical Information Infrastructure Protection Center (NCIIPC).
  - ▶ Indigenous technological solutions.
  - ▶ Testing of ICT products and certifying them.
- **National Technical Research Organization (NTRO):** NTRO is a highly specialized technical intelligence gathering agency. It develops technology capabilities in aviation and remote sensing, data gathering and processing, cyber security, cryptology systems, strategic hardware

and software development, and strategic monitoring.

- **National Critical Information Infrastructure Protection Centre (NCIIPC):** Creation of National Critical Information Infrastructure Protection Centre, the national nodal agency in respect of protection of critical information infrastructure. It is placed under the National Technical Research Organization.
- **CERT-In:** CERT-In has been designated to serve as the national agency to perform the following functions:
  - ▶ Collection, analysis, and dissemination of information on cyber incidents.
  - ▶ Forecast and alerts of cybersecurity incidents
  - ▶ Emergency measures for handling cybersecurity incidents
  - ▶ Coordination of cyber incident response activities
  - ▶ Issue guidelines, advisories, vulnerability notes and white papers relating to information security practices, procedures, prevention, response and reporting of cyber incidents
- **National Cyber Coordination Centre (NCCC):** It is a critical component of India's cyber security against hackers and espionage as well as to track terrorist activity online.

### CONCLUSION

India needs an accountable national cyber security that provides clear mandates and empowering provisions. It should supervise and enforce policies across the country to strengthen the cyber security framework.

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## KERALA TO START INTERCROPPING

### ◎ CONTEXT:

The state government of Kerala would seek the mandate of the Left Democratic Front (LDF) to modify specific laws that govern the plantation sector to allow the management to intercrop food crops with cash crops such as tea, coffee, cardamom and rubber.

### Agriculture in Kerala

- The unique features of Kerala agriculture are predominance of cash crops, homestead system of cultivation, inter-cropping of annual and perennial crops, shrinkage of area under rice crop and dominance of small holders.
- During the past three decades the agricultural sector of Kerala has undergone wide-ranging changes in terms of ownership of land, cropping pattern, cultivation practices, productivity and intensity of cultivation.
- The salient features of the agricultural sector in Kerala are:
  - Average holding size- 0.12 ha
  - Predominance of small and marginal farmers (92%)
  - Less area under food crops with low productivity
  - Predominance of perennial and plantations crops like coconut, rubber, tea, coffee, cashew, pepper, spices etc.
  - High cost of production mainly due to high labour cost
  - Highly erratic monsoon rains

### Proposed Modifications

- Some provisions of the Kerala Land Reforms Act, Kerala Grants and Leases (Modification of Rights) Act and Kerala Land Utilisation Order might come up for legislative review if the LDF permitted.
- The proposed modification would also permit plantations to diversify into dairy and poultry farming.
- It would spur investment in precision farming characterised by high yield food crops, reduced use of toxic pesticides, chemical fertilisers and water.
- Plantations encompassed 8 lakh hectares in Kerala. An amendment of the law would free up an estimated 2 lakh hectares for inter-cropping.
- The Kerala Agriculture University had zoned Kerala into 23 agro-climatic sectors.
  - It had suggested that oranges, apples, avocados, grapefruit and winter vegetables as ideal intercrop for high altitude tea plantations in regions such as Munnar.
  - In rubber growing regions, it suggested the cultivation of rambutan, mangosteen and other tropical fruits in small plots interspersed among the trees.
  - It had also suggested jack fruit as shade trees in tea, coffee and cardamom plantations. The participants also mooted rejuvenation of cashew plantations and use of cashew mango to produce ethanol.

### What is intercropping?

- Intercropping is a farming method that involves planting or growing more than one crop at the same time and on the same piece of land.
- It means having more than one type of crop growing in the same space at the same time.

- The rationale behind this farming practice is that different crops planted are not likely to share insects and disease-causing agents while the goal is to produce even greater yield than would be if space was utilized by one crop.
- However, the careless congregation of plants is not considered as intercropping.

### Types of Intercropping

- While intercropping involves the planting of more than one crop on the same piece of land at the same time, there are different methods of maximizing yield from this type of farming.
  - **Row intercropping** involves planting more than one crop simultaneously, with at least one of the crops planted in a row.
  - **Strip intercropping** is a more industrialized version of row planting and involves the planting of different crops in alternate strips, with rows big enough to allow for harvesting with machinery.
  - **Mixed intercropping** involves growing more than one crop simultaneously without any distinct row arrangement. Plants are bunched together naturally but in an orderly manner.
  - **Relay intercropping** involves the planting of more than one crop on the same piece of land with the planting of the second crop after the first crop has flowered or completed its development or just before harvesting the first crop.

### Significance of intercropping

- **Suppress weeds:** Besides improving yield, it helps to suppress weeds since the crops take up much space that would have allowed the weeds to grow. Some weeds also find it difficult to grow alongside some crops.
- **Increase fitness:** Growing two crops alongside each other can be of great benefit, especially if their interactions increase the fitness of one or both plants.
- **Pest control:** Crop diversity has proved to be one of the ways of improving pest management by reducing homogeneity of the crop. Pests can be controlled through intercropping by trap cropping, repellant intercropping, or push-pull cropping.
  - Trap cropping involves planting a crop that is more attractive to pest compared to the production crop.
  - Repellant intercropping involves growing crops with certain repellant effect.
  - Push-pull cropping is a mix of trap and repellant cropping.

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## ECOLOGICAL DISASTER AT BAGHJAN

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- © **CONTEXT:** Assam's pollution watchdog has told Oil India Ltd (OIL) to shut down production and drilling at all installations in Upper Assam's Baghjan oilfield following some irregularities.

### About OIL

- Oil India Limited is the second largest hydrocarbon exploration and production Indian public sector company with its operational headquarters in Duliajan, Assam, India.
- A Navratna PSU, OIL is a fully integrated Exploration & Production (E&P) company in the upstream sector.
- OIL was drilling a well at Baghjan which led to a massive blowout. Baghjan is about 17 km from Doomdooma town in Tinsukia district, Assam.

- The Baghjan oil field has been in operation since 2003 and is one of the high yielding gas and oil fields of OIL.
- The Baghjan oilfield has 21 functioning wells — four of them are gas wells (including the one that reported the blowout) and 17 are oil wells.

### The ecological disaster

- The ecological disaster at Baghjan in Tinsuika district was precipitated by the blowout at well number 5, reported on May 27.
- On June 9, the well—located close to the Dibru-Saikhowa national park—caught fire, leading to the deaths of two OIL firefighters.
- Around 11,000 people from the surrounding villages are now in relief camps set up by the administration.
- It affected the flora, fauna and wetlands which is close to the **Maguri-Motapung wetland** and the ecologically fragile **Dibru-Saikhowa National Park**.

#### Dibru-Saikhowa National Park

- Dibru-Saikhowa National Park is located in the Tinsukia district of the state of Assam.
- This was declared a **wildlife Sanctuary in 1986** by the government of Assam by uniting two Reserve forest, viz., Dibru and Saikhowa including some other areas.
- Dibru-Saikhowa wildlife Sanctuary was declared as a **National park in 1999**.
- Dibru-Saikhowa National Park is one of the **19 biodiversity hotspots** in the world. It is also a biosphere reserve.
- The park is bounded by the Brahmaputra River and Arunachal hills in the north and Dibru and Patkai hills on the south.
- It mainly consists of semi wet evergreen forests, tropical moist deciduous forest, bamboo, cane brakes and grasslands. Situated in the flood plains of Brahmaputra, at an altitude of about 118 m above sea level.

#### Maguri-Motapung wetland

- Located less than 10 km south of Dibru-Saikhowa National Park is Maguri Motapung beel.
- Spread over 9.6 sq. km, Maguri Motapung beel was declared an important bird and biodiversity area in 1996.
- It is host to over 110 bird species, including eight listed as threatened on the IUCN Redlist, such as the swamp grass babbler, the ferruginous duck, the white-winged wood duck and the falcated duck.
- Other rare and migratory birds that visit this wetland include the lesser adjutant, the swamp francolin, the lesser teal and the bar-headed goose.
- It is also home to 84 species of fish, including the golden *mahseer*.

### Is it first time?

- Though rare, blowout happens in the oil industry all over the world. Blowout is the worst thing that can happen to an oil industry.
- ONGC offshore rig ( drilling inside the sea bed), 160 km from Mumbai had a massive blowout in 2005, another blow out at Rudrasagar, Sivsagar of a well belonging to ONGC, a blow out at Dikom, Dibrugarh district in the year 2005 when OIL drilled a well, are few examples.
- During Dikom blowout, global experts were brought in to contain the blowout which took 45 days.

- So Baghjan is the second blowout for OIL after a long 15 years.

### The closure notice

- As per the closure notice from PCBA, OIL has been operating the Baghjan oil field installation "without obtaining prior consent to establish/consent to operate from Pollution Control Board Assam, which is a serious violation of the provisions of the **Water Act, 1974, Air Act, 1981 as well as Environment Protection Act, 1986**".
- It is mandatory to obtain prior permission / clearance from MoEF&CC as well as State PCB for production, drilling, pumping of crude oil and laying pipeline activities as per EIA notification, 2006 and various provisions under the Section 25/26 of the **Water (Prevention of Control of Pollution) Act, 1974** and Section **21 of the Air (Prevention of Control of Pollution) Act, 1981** and Authorization under the **Hazardous & other waste (Management & Transboundary Movement) Rules, 2016** as amended upto date.

## ANIMAL HUSBANDRY INFRASTRUCTURE DEVELOPMENT FUND (AHIDF)

### ◎ CONTEXT :

In pursuance of recently announced Atma Nirbhar Bharat Abhiyan stimulus package for ensuring growth in several sectors, the Cabinet Committee on Economic Affairs has approved setting up of Animal Husbandry Infrastructure Development Fund (AHIDF) worth Rs. 15000 crore.

### ◎ ABOUT:

- AHIDF would facilitate much needed incentivisation of investments in establishment of such infrastructure for dairy and meat processing and value addition infrastructure and establishment of animal feed plant in the private sector.
- **Eligibility:** The eligible beneficiaries under the Scheme would be
  - Farmer Producer Organizations (FPOs)
  - MSMEs
  - Section 8 Companies
  - Private Companies and individual entrepreneur with minimum 10% margin money contribution by them. The balance 90% would be the loan component to be made available by scheduled banks.
- Government of India will provide 3% interest subvention to eligible beneficiaries. There will be 2 years moratorium period for principal loan amount and 6 years repayment period thereafter.

### Dairy Infrastructure Development Fund (DIDF)

- Government had earlier approved the Dairy Infrastructure Development Fund (DIDF) worth Rs. 10,000 crores.
- It aims to incentivize investment by cooperative sector for development of dairy infrastructure.

### Credit Guarantee Fund

- A Rs.750 crore Credit Guarantee Fund would be set up and managed by NABARD.
- Credit guarantee would be provided to those sanctioned projects which are covered under MSME defined ceilings.
- Guarantee Coverage would be upto 25% of Credit facility of borrower.

### Why India's farming sector needs a boost?

- The livestock sector—within it, dairy—needs to play a larger role in the nation's goal to **double farmer's income** by FY23.
- Milk is the largest crop in India in terms of value—at ₹6.5 lakh crore, it's more than the total value of paddy and wheat put together.
- Further, promoting dairy will also lead to a more equitable income, and this aspect needs to be appreciated.
- Milch animal holding is far more equitable than land holding. About 85% of the total farmers are small and marginal. While they together own about 47% of farmland, they own about 75% of milch animals.
- The productivity of milch animals in India is around one-eighth of the global average. Land prices in India are very high, which makes running large dairy farms unviable.
- So, dairy farming in India will continue to be dominated by small and marginal farmers.

### Benefits of the Fund

- **Focused investment:** Investment incentivization in AHIDF would leverage 7 times private investment.
- **Higher productivity in farming:** It would also motivate farmers to invest more on inputs thereby driving higher productivity leading to increase in farmers income.
- **Livelihood creation:** The measures approved through AHIDF would also help in direct and indirect livelihood creation for 35 lakh.

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## CREDIT GUARANTEE SCHEME FOR SUBORDINATE DEBT (CGSSD)

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### ◎ CONTEXT:

The government launched Rs 20,000-crore 'Credit Guarantee Scheme for Subordinate Debt (CGSSD)' to support distressed small businesses.

### ◎ ABOUT:

- Under the Credit Guarantee Scheme for Subordinate Debt (CGSSD), the government will provide a **subordinate debt facility** to the promoters of **micro, small and medium enterprises** that are either distressed or classified under non-performing assets.
- In case of default, creditors giving subordinate debt are paid after primary debt is settled in full.
- The scheme will provide a guarantee cover worth Rs 20,000 crore to more than two lakh MSMEs, the Ministry of Micro, Small & Medium Enterprises said in an official release.
- The scheme will be operationalised through the **Credit Guarantee Fund Trust for MSEs (CGTMSE)**.
- Under the CGSSD programme, the government will provide the guarantee cover to promoters who can take debt from banks to further invest in stressed MSMEs as equity.

### How will it be done?

- Promoter(s) of MSMEs meeting the eligibility criteria may approach any scheduled commercial banks to avail benefit under the scheme.
- They will be given credit equal to 15% of their stake (equity plus debt) or Rs. 75 lakh whichever is lower.



- Promoters in turn will infuse this amount in the MSME unit as equity and thereby enhance the liquidity and maintain debt-equity ratio.
- 90 percent guarantee coverage for this sub-debt will be given under the Scheme and 10 percent would come from the concerned promoters.
- There will be a moratorium of 7 years on payment of principal whereas maximum tenor for repayment will be 10 years.

### Significance of the Scheme

- The scheme will help in reviving the economic activity in the country, and in protecting the livelihoods of millions of people.
- The scheme would provide much required support to around 2 lakh MSMEs and will help in reviving the economic activity in and through this sector.
- It will also help in protecting the livelihoods and jobs of millions of people who depend on them.

## PURCHASING POWER PARITIES AND THE SIZE OF INDIAN ECONOMY

### ◎ CONTEXT:

The World Bank has released new Purchasing Power Parities (PPPs) for reference year 2017, under International Comparison Program (ICP), that adjust for differences in the cost of living across economies of the World. Globally 176 economies participated in 2017 cycle of ICP.

### ◎ ABOUT ICP

- The International Comparison Program (ICP) is the largest worldwide data-collection initiative, under the guidance of **UN Statistical Commission (UNSC)**, with the goal of producing **Purchasing Power Parities (PPPs)** which are vital for converting measures of economic activities to be comparable across economies.
- Along with the PPPs, the ICP also produces **Price Level Indices (PLI)** and other regionally comparable aggregates of GDP expenditure.
- India has participated in almost all ICP rounds since its inception in 1970.
- **The Ministry of Statistics and Programme Implementation** is National Implementing Agency (NIA) for India, which has the responsibility of planning, coordinating and implementing national ICP activities.
- India is also proud to have been a co-Chair of the ICP Governing Board along with Statistics Austria for the ICP 2017 cycle.
- The next ICP comparison will be conducted for the reference year 2021.

### What is Purchasing power parity?

- Purchasing power parity is used worldwide to compare the income levels in different countries. PPP thus makes it easy to understand and interpret the data of each country.
- Purchasing power parity (PPP) is an economic theory of exchange rate determination.
- It states that the price levels between two countries should be equal.
- PPP measures are widely used by global institutions, such as the World Bank, United Nations, International Monetary Fund and European Union.

### Worldwide Status

Results from the 2017 International Comparison Program are as given below

- The **Purchasing Power Parities (PPPs)** of Indian Rupee per US\$ at Gross Domestic Product (GDP) level is now 20.65 in 2017 from 15.55 in 2011.



- The **Exchange Rate of US Dollar** to Indian Rupee is now 65.12 from 46.67 during same period.
- The **Price Level Index (PLI)**—the ratio of a PPP to its corresponding market exchange rate—is used to compare the price levels of economies, of India is 47.55 in 2017 from 42.99 in 2011.
- In 2017, India retained and consolidated its global position, as the *third largest* economy, accounted for 6.7 percent (\$8,051 billion out of World total of \$119,547 billion) of global Gross Domestic Product (GDP) in terms of PPPs as against China (16.4%) and United States (16.3%), respectively.
- India is also third largest economy in terms of its PPP-based share in global **Actual Individual Consumption and Global Gross Capital Formation**.

## EARTHQUAKES HIT MIZORAM FOR THE FOURTH DAY

### ◎ CONTEXT:

An earthquake of magnitude 4.1 on the Richter scale struck Mizoram, the fourth in the northeastern state in as many days.

### ◎ ABOUT:

- An **earthquake** is an intense shaking of Earth's surface. The shaking is caused by movements in Earth's outermost layer.
- The Earth is made of four basic layers:
  - a solid crust
  - a hot, nearly solid mantle
  - a liquid outer core
  - a solid inner core
- The solid crust and top, stiff layer of the mantle make up a region called the **lithosphere**, which is actually made up of giant puzzle pieces called **tectonic plates**.
- Tectonic plates are constantly shifting as they drift around on the **viscous**, or slowly flowing, mantle layer below.
- This non-stop movement causes stress on Earth's crust. When the stresses get too large, it leads to cracks called **faults**.
- When tectonic plates move, it also causes movements at the faults. An **earthquake** is the sudden movement of Earth's crust at a fault line.
- The location where an earthquake begins is called the **epicenter**.
- An earthquake's most intense shaking is often felt near the epicenter. However, the vibrations from an earthquake can still be felt and detected hundreds, or even thousands of miles away from the epicenter.
- The energy from an earthquake travels through Earth in vibrations called **seismic waves**. Scientists can measure these seismic waves on instruments called **seismometer**.

### Why India's north-east is prone to earthquake?

- Geomorphologically, North East India is located in an earthquake prone zone (zone v) of the Indian subcontinent.
- In this region earthquake comes with land sliding flood and along with series of smaller magnitude earthquakes.
- Seismologists consider India's mountainous northeast region as the sixth major earthquake-prone belt in the world.
- The northeast has seen some of the biggest quakes in history.

- In 1897, a Shillong-epicentred quake measured 8.2 on the Richter scale, while in 1950, an earthquake in Assam measuring 8.7 on the Richter Scale forced the Brahmaputra river to change its course.

### Seismic zones in India

Seismic zones in the Indian subcontinent are divided into the following four seismic zones (II, III, IV, and V):

- **Seismic Zone II:** Area with minor damage earthquakes corresponding to intensities V to VI of MM scale (MM – Modified Mercalli Intensity scale). It covers the areas which are not covered by other three seismic zones discussed below.
- **Seismic Zone III:** Moderate damage corresponding to intensity VII of MM scale. It comprises Kerala, Goa, Lakshadweep islands, remaining parts of **Uttar Pradesh, Gujarat and West Bengal, Parts of Punjab, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamilnadu and Karnataka.**
- **Seismic Zone IV:** Major damage corresponding to intensity VII and higher of MM scale. It covers remaining parts of **Jammu and Kashmir and Himachal Pradesh, National Capital Territory (NCT) of Delhi, Sikkim, Northern Parts of Uttar Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan.**
- **Seismic Zone V:** Area determined by the presence of certain major fault systems. It is seismically the most active region, and comprises entire northeastern India, parts of **Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Rann of Kutch in Gujarat, part of North Bihar and Andaman & Nicobar Islands.**

### How vulnerable is Mizoram to earthquake?

- Mizoram is one of the North Eastern States of India, located in 21°56' and 24°31' N latitude and 92°16' and 93° 26' E longitudes with the geographical area of 21,081 sq. km.
- Mizoram is vulnerable to all-major natural hazards such as Cyclone, Earthquake, and Landslide etc.
- The State forms a part of the most severe seismic zone in the country, namely **Zone V of Seismic Zone Map of India** that is referred as **Very High Damage Risk Zone.**
- The seismic risk in the region is growing at an alarming pace with increasing inventory of vulnerable construction.

## GARIB KALYAN ROJGAR ABHIYAAN (GKRA)

◎ **CONTEXT:** The Government launched the 'Garib Kalyan Rojgar Abhiyaan (GKRA)' to boost employment and livelihood opportunities for migrant workers returning to villages, in the wake of COVID-19 outbreak.

◎ **ABOUT:**

- The "Garib Kalyan Rojgar Abhiyaan" is a programme to generate employment opportunities in rural India for migrant workers returning home amid the coronavirus outbreak and lockdown.
- The initiative was flagged off from village Telihar, Block Beldaur, district Khagaria, Bihar.
- This Abhiyaan of 125 days, will work in mission mode, will involve focused implementation of 25 categories of works/ activities in 116 districts, each with a large concentration of returnee migrant workers in following 6 states.

S. No.	State Name	Districts	Aspirational Districts
1	Bihar	32	12
2	Uttar Pradesh	31	5
3	Madhya Pradesh	24	4
4	Rajasthan	22	2
5	Odisha	4	1
6	Jharkhand	3	3
Total Districts		116	27

- **Nodal agency:** The **Ministry of Rural Development** is the nodal Ministry for this campaign and the campaign will be implemented in close coordination with the State Governments.
  - Central Nodal Officers of the rank of Joint Secretary and above will be appointed to oversee the effective and timely implementation of various schemes in the identified districts.
- **Work areas:** The government has identified 25 work areas for employment in villages, for the development of various works.
  - These 25 works or projects are related to meet the needs of the villages like rural housing for the poor, Plantations, provision of drinking water through Jal Jeevan mission, Panchayat Bhavans, community toilets, rural mandis, rural roads, other infrastructure like Cattle Sheds, Anganwadi Bhavans etc.

### Significance of the Scheme

- **Opportunity of employment:** The basket of a wide variety of works will ensure that each migrant worker is able to get an opportunity of employment according to his skill, in the coming 125 days.
- **Beneficial over a longer-term:** The Program will also prepare for expansion and development of livelihoods over a longer-term.

## CHAOLUNG SUKAPHA

### ◎ CONTEXT:

Assam Chief Minister Sarbananda Sonowal ordered the state police to arrest Kolkata-based political commentator Garga Chatterjee for making allegedly derogatory remarks by calling the founder of the medieval Ahom dynasty a Chinese invader.

### ◎ ABOUT:

- Sukapha was a **13<sup>th</sup>-century** ruler who founded the **Ahom kingdom** that ruled Assam for six centuries. Contemporary scholars trace his roots to **Burma**.
- He reached Brahmaputra valley in Assam from upper Burma with around 9,000 followers.
- In his authoritative book on Assam history — *A History of Assam*, Sir Edward Gait wrote that Sukapha is said to have left a place called **Maulung** in AD 1215 with eight nobles and 9,000 men, women and children — mostly men. He had with him two elephants, and 300 horses.

- Gait wrote that in AD 1235, Sukapha and his people settled in **Charaideo** in upper Assam after wandering about for years, defeating those who protested his advance, and temporarily staying at different locations.
- It was in Charaideo that Sukapha established his first small principality, sowing the seeds of further expansion of the Ahom kingdom.
- Assam celebrates "**Asom Divas**" to commemorate Sukapha and his rule, on **December 2** every year.

### Learning about Ahoms

- Historically, they are believed to be from beyond the **Patkai mountains**, with their forefathers forming group of states in and around Yunnan province and Upper Burma.
- The name 'Assam' comes from the word 'Asama' or invincible which is a local name for the Ahoms.
- The Ahom kingdom in the Brahmaputra valley included most of the present day Assam.
- They ruled for 600 years between 13<sup>th</sup> and 19<sup>th</sup> century CE, before being ousted by Britishers in 1826.
- Located around 400 kms from Assam's capital Guwahati, is the town of Charaideo. This was the first capital of the Ahom dynasty.

### What's the matter?

- Garga Chatterjee, who describes himself as a Bengali nationalist and federalist, indirectly targeted Ahom community as well as greater Assamese society with blatant accusation of being Chinese invaders
- Chatterjee made the comments after tensions surged between India and China after a violent face-off.
  - Twenty Indian soldiers were martyred in the violent face-off at Galwan Valley in eastern Ladakh.
  - This was the first instance of casualties on the Line of Actual Control since 1975.

## RUSSIA MARKS WW2 VICTORY DAY

◎ **CONTEXT:** Russia has marked 75 years since victory over Nazi Germany in World War Two despite cancelling its traditional military parade because of the coronavirus outbreak.

- ◎ **ABOUT:**
- Victory Day marks the end of **World War II** and the victory of the Allied Forces in 1945. The day marks Germany's surrender to the Soviet Union in 1945.
  - It became the end of the Great Patriotic War for the USSR, which lost about 25 million citizens in the four years of fighting.
  - Interestingly, until its 20<sup>th</sup> anniversary (May 9, 1965), Victory Day was not a major holiday.
  - Apart from the anniversaries in 1965 and 1985, Victory Day celebrations in the Soviet Union did not feature a military parade.
  - This tradition started in 1995.

### World War II

- World War II was a global war that lasted from 1939 to 1945. It was a battle between two groups of countries- the Allies and the Axis.

- The major Allied Powers were Britain, France, Russia, China and the United States.
- The major Axis Powers were Germany, Italy and Japan.
- Before World War 2 began, Germany was ruled by Adolf Hitler. Together with the Nazi Party, he wanted Germany to rule Europe.
- To gain more land and power, on 1 September 1939 German troops invaded Poland. After Hitler refused to stop the invasion, Britain and France declared war on Germany – World War II had begun.
- The war resulted in the extension of the Soviet Union's power to nations of eastern Europe, enabled a communist movement to eventually achieve power in China, and marked the decisive shift of power in the world away from the states of western Europe and toward the United States and the Soviet Union.

### Role of Indian Military

- The British Indian Armed Forces during World War-II were one of the largest Allied Forces contingents which took part in the North and East African Campaign, Western Desert Campaign and the European Theatre against the Axis powers.
- This campaign witnessed sacrifice by over 87,000 Indian servicemen beside 34,354 being wounded.
- The Indian Military not only fought on all fronts, but also ensured delivery of goods along the Southern, Trans-Iranian Lend-Lease route, along which weapons, ammunitions, spare parts for equipment and food went to the Soviet Union, Iran and Iraq.

### Key-highlights

- The parade was reviewed by Russian President Vladimir Putin, war veterans and guests, including Defence Minister Rajnath Singh.
- This year, 14,000 troops and several hundred military machines took part in the parade, including 30 historic T-34 tanks.
- Modern vehicles also participated, including AFV Terminator, T-72, and T-14 Armata tanks, 9K720 Iskander missile systems, and many other cutting-edge military hardware, Sputnik International reported.
- Planes and helicopters also participated in an air parade, with Su-25s colouring the sky in white, blue, and red — the colours of the Russian flag.

### What's so special this time?

- A 75-member Tri-service contingent of the Indian Armed Forces participated in the 75<sup>th</sup> anniversary of the Victory Day Parade at the iconic Red Square in Moscow.
- The Tri-Service contingent of the Indian Armed Forces comprised 75 all ranks and marched along with contingents of Russian Armed Forces and 17 other countries, according to an official statement.

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## CHINA TO JOIN UN ARMS TRADE TREATY

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### ◎ CONTEXT:

China's top legislative body has voted in favour of the country's bid to join the UN-sponsored ATT, which seeks to regulate international trade in conventional military equipment.

### ◎ ABOUT:

- The ATT was established in December 2014. Key principles of membership include-
  - self-defence rights
  - the intent to settle disputes through peaceful means

- to refrain from issuing threats or use of force against the territorial integrity of any country
- to respect human rights
- The treaty requires member countries to keep records of international transfers of weapons and to prohibit cross-border shipments that could be used in human rights violations or attacks on civilians.
- The treaty has a global membership of 106 countries, with Namibia the most recent to join in April.
- Major military exporters including France, Germany, Israel, Spain, and the United Kingdom are members of the treaty.

### Is US behind China's decision?

- It comes after US President Donald Trump announced plans last year to pull the United States out of the agreement -- which entered into force in 2014.
- The US Senate never ratified the 2013 Arms Trade Treaty after former president Barack Obama endorsed it, and Trump has said he would revoke his predecessor's signature.
- It is among a number of international agreements reached under the Obama administration that Trump has moved to pull out of.

### China's participation in conventional arms control

- China actively implements the **UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (PoA)** and participates in the work of the **Group of Governmental Experts (GGE)** on the **United Nations Register of Conventional Arms (UNROCA)** for successive sessions.
- China serves as the contracting party of the **United Nations Convention on Certain Conventional Weapons (CCW)** and its annexed Protocols and actively fulfills its obligations under the convention, submitting reports of the PoA, the UNROCA and the CCW in time.
- Besides, China also participated in the negotiation processes of the ATT and participated in the follow-up conferences of the parties as an observer.

### India's take on the treaty

- From the beginning of the ATT process, India has maintained that such a treaty should make a real impact on illicit trafficking in conventional arms and their illicit use especially by terrorists and other unauthorised and unlawful non-state actors.
- India has also stressed consistently that the ATT should ensure a balance of obligations between exporting and importing states.
- Further, India cannot accept that the Treaty be used as an instrument in the hands of exporting states to take unilateral force majeure measures against importing states parties without consequences.
- India has been an active participant in the ATT negotiations. Underlying our participation in these extended negotiations was the principle that member states have a legitimate right to self-defence and our belief that there is no conflict between the pursuit of national security objectives and the aspiration that the Arms Trade Treaty be strong, balanced and effective.
- This is consistent with the strong and effective national export controls that India already has in place with respect to export of defence items.



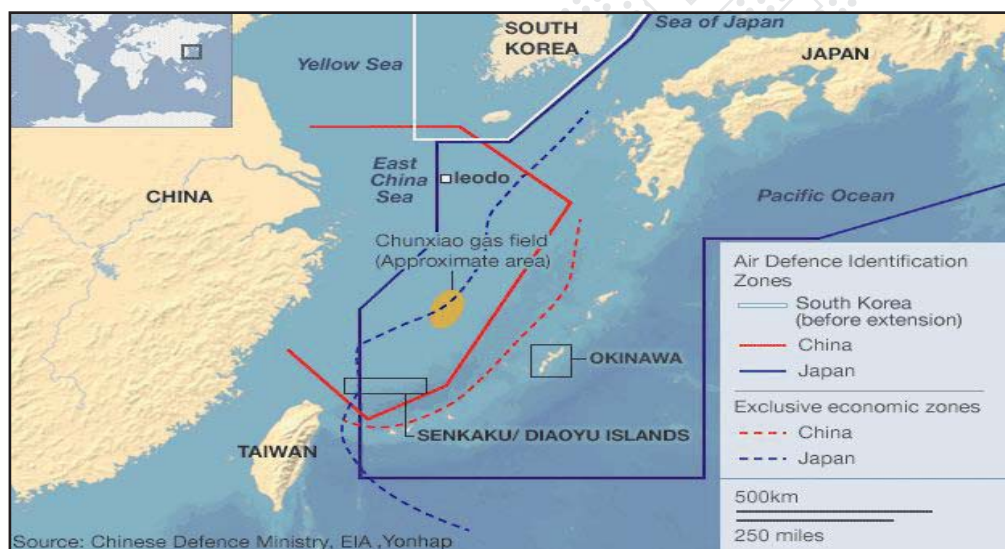
## JAPAN TO RENAME AREAS OF ISLANDS DISPUTED WITH CHINA

### ◎ CONTEXT:

Japan's Ishigaki city Assembly passed a bill to rename an administrative area covering a group of islands in the East China Sea, immediately triggering backlash from China and Taiwan, both of which also claim the uninhabited islets as their own.

### ◎ ABOUT:

- The disputed islands are known as the Senkaku in Japan and the Diaoyu in China.
- Ties between China and Japan have been strained by a territorial row over a group of islands, known as the Senkaku islands in Japan and the Diaoyu islands in China.
- There are total eight uninhabited islands and rocks in the East China Sea.
- They have a total area of about 7 sq km and lie north-east of Taiwan, east of the Chinese mainland and south-west of Japan's southern-most prefecture, Okinawa. The islands are controlled by Japan.



### The changed names

- The assembly changed the name of the southern Japan area containing the Senkaku Islands from "Tonoshiro" to "Tonoshiro Senkaku," which both Beijing and Taipei see as an attempt to cement Tokyo's claim by inserting the Japanese name "Senkaku."
- The renaming takes effect on Oct. 1 and it is aimed at resolving administrative confusion between a locale in downtown Ishigaki, which shares the name "Tonoshiro" with the isles.

### What is Japan's claim?

- Japan says it surveyed the islands for 10 years in the 19<sup>th</sup> Century and determined that they were uninhabited.
- On 14 January 1895 Japan erected a sovereignty marker and formally incorporated the islands into Japanese territory.
- After World War Two, Japan renounced claims to a number of territories and islands including Taiwan in the 1951 Treaty of San Francisco.
- These islands, however, came under US trusteeship and were returned to Japan in 1971 under the Okinawa reversion deal.

**Claims made by China**

- China says that the islands have been part of its territory since ancient times, serving as important fishing grounds administered by the province of Taiwan.
- Taiwan was ceded to Japan in the Treaty of Shimonoseki in 1895, after the Sino-Japanese war.
- When Taiwan was returned in the Treaty of San Francisco, China says the islands should have been returned too. Beijing says Taiwan's Kuomintang leader Chiang Kai-shek did not raise the issue, even when the islands were named in the later Okinawa reversion deal, because he depended on the US for support.
- Separately, Taiwan also claims the islands.

**Why are they important?**

- They matter because they are close to important shipping lanes, offer rich fishing grounds and lie near potential oil and gas reserves.
- They are also in a strategically significant position, amid rising competition between the US and China for military primacy in the Asia-Pacific region

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## SECRECY OF BALLOT IS THE CORNERSTONE OF FREE AND FAIR ELECTIONS: SC

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**◎ CONTEXT:**

Secrecy of ballot is the cornerstone of free and fair elections. The choice of a voter should be free and the secret ballot system in a democracy ensures it, the Supreme Court has held in a judgment.

**◎ ABOUT:**

- In the democracy of India, at the time of every election, may it be President of India or local body, the method of secret ballot system is adopted.
- As per the secret ballot system, the voter is given the ballot paper by the presiding officer of the polling booth.
- The voter goes behind the curtain along with the ballot paper and marks the stamp against the name of the candidate whom he likes to vote.
- With this process, no one comes to know that to whom the voter has given his vote.

**Background**

- The judgment came on an appeal against the Allahabad High Court decision setting aside the voting of a no-confidence motion in a zila panchayat in Uttar Pradesh in 2018.
- The High Court found that some of the panchayat members had violated the rule of secrecy of ballot.
- It relied on CCTV footage to conclude that they had either displayed the ballot papers or by their conduct revealed the manner in which they had voted.

**Court's view**

- It is the policy of law to protect the right of voters to secrecy of the ballot.
- Even a remote or distinct possibility that a voter can be forced to disclose for whom she has voted would act as a positive constraint and a check on the freedom to exercise of franchise.
- The principle of secrecy of ballots is an important postulate of constitutional democracy.



- The Court referred to Section 94 of the Representation of People Act, which upholds the privilege of the voter to maintain confidentiality about her choice of vote.
- However, a voter can also voluntarily waive the privilege of non-disclosure.
- The privilege ends when the voter decides to waive the privilege and instead volunteers to disclose as to whom she had voted.
- No one can prevent a voter from doing. Nor can a complaint be entertained from any, including the person who wants to keep the voter's mouth sealed as to why she disclosed for whom she voted.

**Right to Vote in India**

- In India, the right to vote is provided by the Constitution and the Representation of People's Act, 1951, subject to certain disqualifications.
- Article 326 of the Constitution guarantees the right to vote to every citizen above the age of 18.
- Further, Section 62 of the Representation of Peoples Act (RoPA), 1951 states that every person who is in the electoral roll of that constituency will be entitled to vote.

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## DETECTION OF FLUORINE IN HOT EXTREME HELIUM STARS

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**◎ CONTEXT:**

A recent study by the Indian Institute of Astrophysics (IIA) detected the presence of singly ionised fluorine for the first time in the atmospheres of hot Extreme Helium Stars.

**◎ ABOUT:**

- An extreme helium star or EHe is a low-mass supergiant that is almost devoid of hydrogen, the most common chemical element of the universe.
- There are 21 of them detected so far in our galaxy. The origin and evolution of these Hydrogen deficient objects have been shrouded in mystery.
- Their severe chemical peculiarities challenge the theory of well-accepted stellar evolution as the observed chemical composition of these stars do not match with that predicted for low mass evolved stars.

**Key-findings of the research**

- The research which showed fluorine abundances determined from singly ionized fluorine (F II) lines suggest a very high enrichment of fluorine, about a factor of 100 to 10000 times higher than normal stars.
- Severe fluorine enrichment w.r.t normal stars (of the order of 800 – 8000) was observed in the cool EHes along-with the cooler classical hydrogen deficient stars, the RCB variables (R Coronae Borealis Stars) hinting at close evolutionary connection between them.
- The scientists explored the relationship of hot EHes (EHes having effective temperature  $\geq 14000\text{K}$ ), with the cooler EHes, based on their fluorine abundance and spotted it in the former, thus establishing an evolutionary connection across a wide range of effective temperature.
- High-resolution echelle spectra of 10 hot EHes were obtained from Hanle Echelle Spectrograph (HESP) mounted on the 2-m Himalayan Chandra Telescope at the Indian Astronomical Observatory (IAO) in Hanle, Ladakh, (remotely operated by IIA) including data from McDonald Observatory, USA, and ESO archives.

- By comparing the observed fluorine abundances with other abundances of the key elements, the scientists could determine the formation channels responsible for fluorine enrichment.
- The varied range of observed fluorine abundance across stars having similar atmospheric parameters points out the difference in the individual star's evolution and the ensuing nucleosynthesis.
- Particularly, the enrichment of fluorine in the atmospheres of carbon-rich EHes and absence of the same in carbon-poor EHes suggest that fluorine is profusely produced during the merger of a He-CO WD resulting in a carbon-rich EHe, whereas He-He WD merger that results in carbon-poor EHes does not account for fluorine overabundance.

### Fluorine

- Fluorine is an univalent poisonous gaseous halogen, it is pale yellow-green and it is the most chemically reactive and electronegative of all the elements.
- Fluorine readily forms compounds with most other elements, even with the noble gases krypton, xenon and radon.
- It is so reactive that glass, metals, and even water, as well as other substances, burn with a bright flame in a jet of fluorine gas.

### Why Fluorine is important?

- Clues to evolution of extreme helium stars require accurate determinations of their chemical composition, and the peculiarities, if any, become very important.
- Fluorine plays a very crucial role in this regard to determine the actual evolutionary sequence of these hydrogen deficient objects.

### Significance of the findings

- **Finding the formation:** The findings make a strong case that the main formation of hot Extreme Helium Stars objects involves a merger of a carbon-oxygen (CO) and a Helium (He) white dwarf.
- **Solving decade-old mystery:** The detection of enhanced fluorine abundances in the atmospheres of hot EHes solves a decade-old mystery about their formation. It firmly places hot EHes in an evolutionary sequence with cool EHes and other hydrogen-deficient stars and zeros in on the evolutionary scenario, which involves the merger of two double de-generate white dwarfs (WDs).

### White dwarfs

- A white dwarf is what stars like the Sun become after they have exhausted their nuclear fuel.
- Near the end of its nuclear burning stage, this type of star expels most of its outer material, creating a **planetary nebula**.
- Only the hot core of the star remains. This core becomes a very hot white dwarf, with a temperature exceeding 100,000 Kelvin.
- Unless it is accreting matter from a nearby star (see Cataclysmic Variables), the white dwarf cools down over the next billion years or so.

## NATIONAL SPACE PROMOTION AND AUTHORIZATION CENTRE (IN-SPACE)

### ◎ CONTEXT:

The Government of India has launched a new initiative by the name Indian National Space Promotion and Authorization Centre (IN-SPACE) to provide a level playing field for private companies to use Indian space infrastructure, which will be extended into the Indian Space Research Organisation (ISRO).

### ◎ ABOUT:

- The new Indian National Space Promotion and Authorisation Centre (IN-SPACE), which is expected to be functional within six months, will-
  - assess the needs and demands of private players, including educational and research institutions
  - explore ways to accommodate these requirements in consultation with ISRO
- IN-SPACE is supposed to be a facilitator, and also a regulator. It will act as an interface between ISRO and private parties, and assess how best to utilise India's space resources and increase space-based activities.
- Existing ISRO infrastructure, both ground- and space-based, scientific and technical resources, and even data are planned to be made accessible to interested parties to enable them to carry out their space-related activities.
- National Space, Promotion & Authorisation Centre (IN-SPACE) will help private players through encouraging policies, through a regulatory environment that is friendly as well as guiding private players in space activities.
- Indian Space Research Organisation (ISRO) will remain the basic body that decides what missions are to be undertaken but this new body will help fill the gaps.

### Indian Space Research Organization (ISRO)

- India decided to go to space when Indian National Committee for Space Research (INCOSPAR) was set up by the Government of India in 1962.
- With the visionary Dr Vikram Sarabhai at its helm, INCOSPAR set up the Thumba Equatorial Rocket Launching Station (TERLS) in Thiruvananthapuram for upper atmospheric research.
- Indian Space Research Organisation, formed in 1969, superseded the erstwhile INCOSPAR.
- The Indian Space Research Organization (ISRO) is the pioneer space exploration agency of the Government of India, headquartered at Bengaluru.
- The prime objective of ISRO is to develop space technology and its application to various national needs.

### What is the need to involve private sector?

- **Low rate of investment:** Indian space industry had a barely 3 percent share in a rapidly growing global space economy which was already worth at least \$360 billion.
  - Only 2 percent of this market was for rocket and satellite launch services, which require fairly large infrastructure and heavy investment.
  - The remaining 95 percent related to satellite-based services, and ground-based systems.
- **Less competitive:** Indian industry, however, is unable to compete, because till now its role has been mainly that of suppliers of components and sub-systems.
- **Lack of resources and technologies:** Indian industries do not have the resources or the technology to undertake independent space projects.

- **Insufficient production:** Additionally, the demand for space-based applications and services is growing even within India, and ISRO is unable to cater to this. The need for satellite data, imageries and space technology now cuts across sectors, from weather to agriculture to transport to urban development, and more.

### How will it enhance the space game?

- IN-SPACE will ensure equal participation from private players through encouraging policies in a friendly regulatory environment.
- The new initiative will also hand-hold, promote and guide the private industries in space activities.
- With the aid of Indian National Space Promotion and Authorization Centre (IN-SPACE), Indian start-ups and technology entrepreneurs will be linked up with nuclear research facilities through technology development and incubation centres to foster synergies.

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## DECARBONIZING TRANSPORT IN EMERGING ECONOMIES

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- With an aim to develop a path to a low-carbon transport system for the country, NITI Aayog and the International Transport Forum (ITF) of OECD jointly launched the '**Decarbonizing Transport in Emerging Economies**' (DTEE) project in India.
- This is an ambitious 5-year project, which seeks to help India in developing a pathway towards a low-carbon transport system through the development of modelling tools and policy scenarios.
- **Current participants:** India, Argentina, Azerbaijan, and Morocco.
- India's transport sector, with the fourth-largest rail network in the world and the third-largest global aviation market, presents a huge opportunity, but also challenges in terms of emissions.

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## GOVERNMENT ANNOUNCES 2 PERCENT INTEREST SUBSIDY UNDER MUDRA YOJANA

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- The government approved a 2 percent interest subsidy scheme for **Shishu loan account holders** under the Mudra Yojana to help small businesses tide over difficulties created by the lockdown following outbreak of coronavirus disease.
- Under Shishu category, lenders provide collateral-free loans of up to Rs 50,000.
- The 2 per cent interest subvention is estimated cost of the exchequer approximately Rs 1,542 crore.

### What is Pradhan Mantri Mudra Yojana?

- The PMMY was launched by Prime Minister Narendra Modi on April 8, 2015, for providing loans up to 10 lakh to the non-corporate, non-farm small/micro enterprises.
- The scheme's objective is **to refinance collateral-free loans given by the lenders to small borrowers.**

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## INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING 2020

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- International Day Against Drug Abuse And Illicit Trafficking is observed as a mark to strengthen the resolve of an international society free of drug abuse.
- On this day, people, communities, organisations across the globe try to raise awareness about the problems that occur due to illicit drugs.
- The date of June 26 was chosen after the United Nations General Assembly passed a resolution regarding it on December 7, 1987.
- The theme of the day this year is "Better Knowledge for Better Care".
  - The main idea behind this theme is to stress upon the need of improving the understanding of the world drug problem.
  - The theme also deals with how better knowledge about this issue can lead to greater international cooperation for countering its impact on health, governance and security.

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## KUMHAR SASHAKTIKARAN YOJANA

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- The **Khadi and Village Industries Commission (KVIC)** launched its flagship "**Kumhar Sashaktikaran Yojana**" in Pokhran, a small town in the Jaisalmer district of Rajasthan where India conducted its first nuclear test – to restore the lost glory of the pottery site.

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- The KVIC distributed 80 electric potter wheels to 80 potter families in Pokhran which has a rich heritage in terracotta products.
- Pokhran has over 300 potter families engaged with pottery for several decades, but they started looking for other avenues due to heavy drudgery in the work and no market support.
- Pokhran was till now only known as the site of nuclear tests but very soon the exquisite pottery will be the new identity of this place.
- The main objective of Kumhar Sashaktikaran Yojana is to bring back the potters' community to the mainstream.

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## **KUSHINAGAR AIRPORT DECLARED AS AN INTERNATIONAL AIRPORT**

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- The Union Cabinet has given its approval for declaration of Kushinagar Airport in Uttar Pradesh as an international airport, stating that it will offer improved connectivity to the important Buddhist pilgrimage site.
- Kushinagar will be India's 29<sup>th</sup> international airport and will enhance the connectivity which will in turn increase tourism and hospitality in the region.

### **About Kushinagar**

- Kushinagar is located in the north-eastern part of Uttar Pradesh about 50 km east of Gorakhpur and is one of the important Buddhist pilgrimage sites.
- Kushinagar is a pilgrimage town in the Kushinagar district of Uttar Pradesh.
- It is an important Buddhist pilgrimage site, where Buddhists believe Gautama Buddha attained Parinirvana after his death. It is an international Buddhist pilgrimage centre.

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## **LONE WOLF TERRORISTS**

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The United Kingdom is facing a growing risk from so-called 'lone wolf' terrorists.

### **Who is a lone wolf' terrorist?**

- A lone actor, lone-actor terrorist, or lone wolf is someone who prepares and commits violent.
- In the United States, lone wolves may present a greater threat than organized groups, and terrorists have not been limited to Muslims
- Lone wolf attacks, in which extremist individuals translate their beliefs into violent actions, are hard to detect and prevent.
- In coordinated terror attacks, the chances of competent intelligence agencies detecting the perpetrators are much higher.

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## **NEW BIOMOLECULES TO FIGHT DRUG RESISTANCE IN KALA-AZAR**

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- A team of researchers at the Department of Biotechnology's National Centre for Cell Science (DBT-NCCS) in Pune has been exploring ways to tackle miltefosine resistance.
- The researchers worked with one of the species of Leishmania that causes infection, called Leishmania major.
- The only drug available against leishmaniasis, miltefosine, is rapidly losing its effectiveness because of emerging resistance to this drug due to a decrease in its accumulation inside the parasite, which is necessary for the drug to kill the parasite.

**What is Kala- azar?**

- Visceral Leishmaniasis (VL), which is commonly known as Kala-azar in India, is a neglected tropical disease affecting almost 100 countries including India.
- It is caused by a parasite called Leishmania, which is transmitted through the bite of sand flies.
- There are three main forms of leishmaniasis:
  - ▶ visceral, which affects multiple organs and is the most serious form of the disease
  - ▶ cutaneous, which causes skin sores and is the most common form
  - ▶ mucocutaneous, which causes skin and mucosal lesion.

**PAKISTAN TO REMAIN ON THE GREY LIST OF THE FATF**

Pakistan is likely to remain on the grey list of the Financial Action Task Force (FATF) for failing to comply with the global terrorist financing watchdog's deadline to prosecute and penalise terrorist financing in the country.

**What is FATF?**

- FATF is the **Financial Action Task Force**, an inter-governmental body established in Paris in 1989 by the Group of 7 (G7).
- It seeks to combat money laundering, terrorist financing and other threats to the international financial system.
- It is both a policy-making and enforcement body.
- FATF has 2 types of lists:
  - ▶ **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.
  - ▶ **Grey List:** Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

**SCIENTISTS OBSERVES CHANGES IN VERY HIGH ENERGY GAMMA-RAY EMITTING 'BLAZAR'**

Scientists from 9 countries in Europe and Asia including researchers from Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, observed the changes in a very high energy gamma-ray emitting blazar '1ES 0806+524' using seven optical telescopes in Europe and Asia.

**What is a blazar?**

- A blazar is a feeding super-massive black-hole (SMBH) in the heart of a distant galaxy that produces a high-energy jet viewed face-on from Earth.
- Blazars are one of the most luminous and energetic objects in the known universe with a jet composed of ionized matter travelling at nearly the speed of light directed very nearly towards an observer.

**SKILLS BUILD REIGNITE**

- MSDE-IBM Partnership has unveiled Free Digital Learning Platform "Skills Build Reignite" to reach more job seekers & provide new resources to business owners in India.

- The platform is created to address the current skills gap in the country.
- The SkillsBuild Reignite tends to provide job seekers and entrepreneurs, with access to free online coursework and mentoring support designed to help them reinvent their careers and businesses.
- Its special feature is the personalized coaching for entrepreneurs, seeking advice to help establish or restart their small businesses as they begin to focus on recovery to emerge out of the COVID 19 pandemic.
- Courses for small business owners include, for example, financial management, business strategy, digital strategy, legal support and more.
- Plus, IBM volunteers will serve as mentors to some of the 30,000 SkillsBuild users in 100 communities in at least five major regions worldwide to help reinvigorate local communities.

#### **Directorate General of Training (DGT)**

- Directorate General of Training (DGT), under the aegis of the Ministry of Skill Development & Entrepreneurship (MSDE), is responsible for implementing long term institutional training to the nation's youth through its network of training institutes and infrastructure.
- It plays a key role in the execution of vocational training schemes and in making 'Digital India' dream become a reality.

### **YUKTI 2.0**

- The Ministry of Human Resource Development launched an initiative 'YUKTI 2.0' to help systematically assimilate technologies having commercial potential and information related to incubated startups in our higher education institutions.
- YUKTI 2.0 is logical extension of earlier version of 'YUKTI', an initiative of MHRD, to identify ideas relevant in COVID pandemic.

#### **YUKTI**

- Earlier, the Minister had launched the YUKTI (Young India combating COVID with Knowledge, Technology and Innovation) web portal on 11 April, 2020.
- Ministry of HRD prepared the portal in view of coronavirus.
- The portal intends to cover the different dimensions of COVID-19 challenges in a very holistic and comprehensive way.
- Through this portal, the Ministry of Human Resource Development will endeavor to ensure that students, teachers and researchers in higher educational institutions are getting appropriate support to meet the requirements needed to advance their technologies and innovations.

### **WORLD'S FIRST YOGA UNIVERSITY NAMED AFTER SWAMI VIVEKANANDA**

- As part of the 6<sup>th</sup> International Yoga Day commemorations, the **world's first yoga university** outside India has been launched in Los Angeles, offering programmes that combine scientific principles and modern research approaches to the ancient Indian practice.
- The Vivekananda Yoga University (VaYU) would produce best modern day yoga practitioners who would not only spread peace but make planet Earth a better place to live.
- Eminent Indian yoga guru Dr. H R Nagendra, Chancellor of Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA) is the first Chairman of VaYU.

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