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WEEK - 3
APRIL, 2020

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– Disclaimer –

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- 3 (APRIL, 2020)

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SECTION: A

(MAINS)

CURRENT AFFAIRS

INTERNATIONAL DAY FOR MONUMENTS AND SITES

CONTEXT

- **The International Day for Monuments and Sites or World Heritage Day is observed every year on April 18 to promote cultural heritage.**

⊙ BACKGROUND:

- On 18 April 1982 on the occasion of a symposium organised by ICOMOS in Tunisia, the holding of the "International Day for Monuments and Sites" to be celebrated simultaneously throughout the world was suggested.
- The International Council for Monuments & Sites (ICOMOS) is a non-governmental organization that works on preserving and conserving heritage sites worldwide.
- This project was approved by the Executive Committee who provided practical suggestions to the National Committees on how to organise this day.
- The idea was also approved by the UNESCO General Conference who passed a resolution at its 22nd session in November 1983 recommending that Member States examine the possibility of declaring 18 April each year "International Monuments and Sites Day".
- This has been traditionally called the World Heritage Day.

⊙ ANALYSIS:

What is World Heritage site?

- A World Heritage site is classified as a natural or man-made area or a structure that is of international importance, and a space which requires special protection.
- These sites are officially recognised by the UN and the United Nations Educational Scientific and Cultural Organisation, also known as UNESCO.
- UNESCO believes that the sites classified as World Heritage are important for humanity, and they hold cultural and physical significance.

UNESCO:

- UNESCO is the United Nations Educational, Scientific and Cultural Organization.
- Founded in 1945, it seeks to build peace through international cooperation in Education, the Sciences and Culture.
- UNESCO's programmes contribute to the achievement of the Sustainable Development Goals defined in Agenda 2030, adopted by the UN General Assembly in 2015.

What is World Heritage Day?

- World Heritage Day, every year is observed on April 18, to conserve the human heritage and appreciate the efforts of all organizations that work for the preservation of this heritage.
- **Theme:** Every Year ICOMOS proposes a theme for celebrating the 'World Heritage Day'. The theme for World Heritage Day for the year 2020 is **'Shared Culture', 'Shared heritage' and 'Shared responsibility'**, which is important as an expression for global unity with current world wide health crisis.
  - The theme reflects the global context of heritage as part of **cultural identity** at a time of rapid population shift, conflict, and environmental uncertainty.
  - The theme recognises that heritage – whether places, landscapes, practices, or collections – are frequently connected with and valued by multiple and diverse groups and communities.
  - At its core, the overarching theme is concerned with the relationships between cultures or cultural groups and their collective responsibility for the care and safeguarding of the significant attributes, meanings, and values of heritage.
- The main objective of celebrating this event is to preserve the heritage of the three categories i.e, natural, cultural and mixed for the next generation and put its relevant efforts in front of the world.
- Today, there are a grand total of 1,121 UNESCO World Heritage Sites worldwide, of which 869 are cultural, 213 are natural and 39 are a mixture.
- 53 of these are in danger. India has a total of 35 world heritage sites, of which 27 are cultural, 7 natural & one mixed site.

World Heritage Sites in India:

- UNESCO World Heritage Convention which was established in 1972, recognised various sites of cultural and natural importance around the world.

- After the latest addition to the UNESCO World Heritage Sites list, India has now 38 World Heritage Sites, and that makes India with the 6th largest number of World Heritage Sites in the world.
- There are 30 cultural sites, 7 natural sites and 1 mixed as recognised by UNESCO.

CULTURAL WORLD HERITAGE SITE					
S.No.	**Site**	**State**	**S.No.**	**Site**	**State**
1.	Taj Mahal	Agra	**16.**	Capitol Complex	Chandigarh, Punjab
2.	Khajuraho	Madhya Pradesh	**17.**	The Historic City of Ahmedabad	Ahmedabad
3.	Hampi	Karnataka	**18.**	The Pink City - Jaipur	Jaipur
4.	Ajanta Caves	Maharashtra	**19.**	The Victorian and Art Deco Ensemble of Mumbai	Mumbai
5.	Ellora Caves	Maharashtra	**20.**	Rock Shelters of Bhimbetka	Madhya Pradesh
6.	Bodh Gaya	Bihar	**21.**	Churches and Convents of Goa	Goa
7.	Sun Temple, Konark	Odisha	**22.**	Hill Forts of Rajasthan	
8.	Red Fort Complex	Delhi	**23.**	Champaner-Pavagadh Archaeological Park	Gujarat
9.	Sanchi	Madhya Pradesh	**24.**	Qutub Minar and its Monuments	New Delhi
10.	Chola Temples	Tamil Nadu	**25.**	Mountain Railways of India	
11.	Group of Monuments at Mahabalipuram	Tamil Nadu	**26.**	Chhatrapati Shivaji Maharaj Terminus (formerly Victoria Terminus),	Maharashtra
12.	Humayun's Tomb	New Delhi	**27.**	Nalanda Mahavihara (Nalanda University),	Bihar
13.	Jantar Mantar	Jaipur, Rajasthan	**28.**	Elephanta Caves,	Maharashtra
14.	Agra Fort	Uttar Pradesh	**29.**	Group of Monuments at Pattadakal	Karnataka
15.	Fatehpur Sikri	Uttar Pradesh	**30.**	Rani Ki Vav	Patan, Gujarat

NATURAL WORLD HERITAGE SITES					
S.No.	**Site**	**State**	**S.No.**	**Site**	**State**
1.	Kaziranga Wild Life Sanctuary	Assam	**5.**	Manas Wild Life Sanctuary	Assam
2.	Sundarbans National Park	West Bengal	**6.**	Keoladeo National Park	Rajasthan

NATURAL WORLD HERITAGE SITES					
3.	Great Himalayan National Park	Himachal Pradesh	**7.**	Nanda Devi and Valley of Flowers National Parks	Uttarakhand
4.	Kanchenjunga National Park	Sikkim	**8.**	Western Ghats	

CULTURAL AND NATURAL MIXED WORLD HERITAGE SITE	
Khangchendzonga National Park	Sikkim

Importance of heritage sites in India:

- **A sign of our proud history:** Our heritage sites provide layers and layers of information about our ancestors and our origin. Without heritage, there would be no history or culture to identify with.
- **Sense of place:** Heritage adds character and distinctiveness to an area, heritage is a fundamental in creating a 'sense of place' for a community.
- **Social inclusion:** Increased community values and greater social inclusion can be achieved through a focus on heritage matters.
- **Shared understanding:** The heritage places are an excellent local educational resource for people of all ages. Learning about the history of a place is a good way of bringing communities together through a shared understanding of the unique cultural identity heritage places give to an area.
- **Tourism:** Heritage tourism is huge and IT helps drive the economy of several people by providing them employment. Preserving heritage sites thus help sustain the local economy, creating jobs, and even generating capital.
- **Investment:** An attractive heritage environment assists in attracting external investment as well as maintaining existing businesses of all types.

Significance of World Heritage Day:

- World Heritage is the shared wealth of humankind. Protecting and preserving this valuable asset demands the collective efforts of the international community.
- This special day offers an opportunity to raise the public's awareness about the diversity of cultural heritage and the efforts that are required to protect and conserve it, as well as draw attention to its vulnerability.

⊙ CONCLUSION:

Heritage, whether tangible or intangible is our history. India has remains of civilizations dating back over 5000 years. These heritage sites are symbols of our history, which gives us a sense of pride. Cultural heritage is a mirror of our traditions. Areas where the heritage is understood and valued tend to be better looked after than those where heritage items have no link with the community. Such links help to foster civic responsibility and citizenship and contribute to everyone's quality of life.

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S-400 AIR DEFENCE MISSILE SYSTEMS

CONTEXT

- **As per a recent report, all the major military contracts, including the deliveries of S-400 air defence missile systems, between Russia and India will be on schedule and the coronavirus pandemic will have no effect on their timeframe, according to India's top diplomat.**

⊙ BACKGROUND:

- In October 2018, India had signed a USD 5 billion deal with Russia to buy five units of the S-400 air defence missile systems, notwithstanding warning from the Trump administration that going ahead with the contract may invite US sanctions.
- Last year, India made the first tranche of payment of around USD 800 million to Russia for the missile systems.
- India is the largest purchaser of Russian military hardware. India has ordered $15 billion worth of Russian arms in three years.
- The country has purchased around $70 billion in weapons from Russia since 1991.
- In February, it was stated by Moscow that it will begin the delivery of the S-400 surface-to-air missile systems to India by the end of 2021 and there will be no delay in execution of the project.

⊙ ANALYSIS:

What is S-400?

- Manufactured by Russian state-owned defence company, **Almaz-Antey**, the S-400 Triumf (also knows as the SA-21 Growler by NATO nations) is one of the most advanced missile defence systems on the market.
- The 'Triumf' interceptor-based missile system can destroy incoming hostile aircraft, missiles and even drones at ranges of up to 400 km, in an intensive jamming environment.
- **Missile type:** The S-400 can be equipped with four missile types:
  - The 40 km-range 9M96
  - The 150 km-range 9M96E2
  - The 200-250 km-range 48N6
  - The 400 km-range 40N6
- The system is intended to engage manned aircraft and missile threats, including medium-range ballistic missiles.
- The S-400 has so far been exported to China, and Turkey conducted its first tests with the system in November 2019.
- Russia plans to complete the delivery of the fifth regimental set in the first half of 2025.

The US factor:

- The United States had imposed sanctions on Russia under the stringent **Countering America's Adversaries Through Sanctions Act (CAATSA).**
- The law also provides for punitive action against countries purchasing defence hardware from Russia.

What is CAATSA?

- The Countering America's Adversaries Through Sanctions Act (CAATSA) is a U.S. federal law that imposes economic sanctions on Iran, Russia and North Korea.
- The bill came into effect on August 2, 2017, with the intention of countering perceived aggressions against the U.S. government by foreign powers.
- It accomplishes this goal by preventing U.S. companies from doing business with sanctioned entities.

- China has already had similar sanctions imposed.
- In India's case, such sanctions could threaten growing defence cooperation between the U.S. and India, which, ironically, is intended in part to counter China.
- Similarly, the U.S. has already suspended the sale of the F-35 to Turkey due to its pursuit of the **Russian-made system**.

Are there any strategic implications for NATO?

- The potential proliferation of the system to India and other nations such as Saudi Arabia and Turkey is not particularly surprising, but it has created political tensions inside of NATO.
- Besides being problematic given Russia is seen as the major existential threat to NATO, the system is also not interopeable with NATO platforms so contributes little Alliance security.
- The **SA-21** at its current position near **Hmeimim Air Base near Latakia** provides coverage over most points in Syria.

- In addition, various NATO assets that are engaged in the region against the Islamic State of Iraq and Syria (ISIL) would be in the range of the S-400.
- In the European theatre, from launch positions in north-western Russia and Kaliningrad respectively, 40N6-equipped S-400s could cover much of Finnish and Polish airspace.
- Turkey's decision to purchase S-400 systems holds greater political implications for NATO and the F-35 project.
- Not only does it signal a strengthened Russia on the global stage, but it also shows how the reluctance of the US - to sell their own missile defence systems - can be leveraged by rival nations.

Why everyone is showing interest in the S-400?

- There is a reason why every country that shows interest in the system is threatened with diplomatic retaliation from the US and NATO.
- The S-400, together with systems such as the **Nebo-M (Russian state of the art radar complex)**, may pose a threat to **fifth-generation air systems**, especially in the context of 'night one' operations against an intact integrated air defence system.
- "Multi-axis (kinetic and non-kinetic) attacks against such a system and the adversary's command, control, and communications infrastructure will be critical to degrading the threat posed by advanced air defence systems.
- S-400 is on par with anything that West has to offer.

Significance of the system:

- Key advantages of the system include:
  - its ability to track a high number of stealth targets
  - high modularity
  - high mobility, ensuring that the system can be deployed and engaging targets within a matter of minutes
- Overall, the S-400 – which has been in use since 2007 – is a huge step up from the S-300, and utilises a full suite of targeting apparatus, such as multifunction radar, command and control and autonomous detection, ensuring that the system is capable of providing a layered defence.
- While largely untested in an operational environment, the S-400 is potentially twice as effective in comparison to the capable S-300 system.

⊙ CONCLUSION:

The S-400 would give India's military the ability to shoot down aircraft and missiles at unprecedented ranges.

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WTO NEEDS TO CHANGE HOW IT DESIGNATES DEVELOPING COUNTRIES: US

CONTEXT

- **The United States is asserting pressure on the World Trade Organization to change how it designates developing countries, singling out China for unfairly getting preferential treatment.**

⦿ BACKGROUND:

- The United States, Europe and China have clashed over trade policy for several years and tensions could continue for decades without serious reform.
- One of the most contentious points is the future of the World Trade Organization (WTO) — an intergovernmental institution that regulates international trade practices.
- The United States has called the WTO "broken," saying countries such as China have taken advantage of it.
- According to it, the WTO "has been very unfair to the United States for many, many years.
- And without it, China wouldn't be China, and China wouldn't be where they are right now."
- The WTO needs to be updated, changed and reformed.

⦿ ANALYSIS:

Definition of developing countries:

- There are no WTO definitions of "developed" and "developing" countries.
- Members announce for themselves whether they are "developed" or "developing" countries.
- However, other members can challenge the decision of a member to make use of provisions available to developing countries.
- A developing country is also known as a low and middle income country (LMIC).
- It is less developed than countries classified as "developed countries" but these nations are ranked higher than "less economically developed countries."
- These countries are characterized by:
  - being less developed industrially
  - widespread poverty
  - low education and literacy levels
  - government corruption
  - a lower Human Development Index when compared to other countries
  - health risks such as having low access to safe water, as well as sanitation and hygiene problems
- However, developing countries do have the potential for high growth and security when evaluating factors including the standard of living, gross domestic product and per capita income.
- The term refers to the current state of a nation and is not used to determine changing dynamics or future progress.

WTO & Developing nations:

- About two thirds of the WTO's around 150 members are developing countries.
- They play an increasingly important and active role in the WTO because of their numbers, because they are becoming more important in the global economy, and because they increasingly look to trade as a vital tool in their development efforts.
- Developing countries are a highly diverse group often with very different views and concerns.
- The WTO deals with the special needs of developing countries in three ways:
  - the WTO agreements contain special provisions on developing countries
  - the Committee on Trade and Development is the main body focusing on work in this area in the WTO, with some others dealing with specific topics such as trade and debt, and technology transfer
  - the WTO Secretariat provides technical assistance (mainly training of various kinds) for developing countries

What does 'developing' actually mean?

- In the WTO, developing countries are entitled to "special and differential treatment" set out in 155 rules.
- However, none of those rules define what a "developing country" is. Instead, each member is able to "self-designate", subject to challenges from other members.
- Being recognised as a developing country was one of the three key principles China insisted on when negotiating to join the WTO in 2001.

- It faced resistance. Several members cited "the significant size, rapid growth and transitional nature of the Chinese economy".
- In response the WTO took what it called a "pragmatic approach," meaning that China got hardly any of the special treatment that would normally be accorded to a developing country.

About WTO:

- The World Trade Organization (WTO) is the only global international organization dealing with the rules of trade between nations.
- The WTO was born out of GATT, an international trade agreement signed by 23 countries in 1947.
- At its heart are the WTO agreements, negotiated and signed by the bulk of the world's trading nations and ratified in their parliaments.
- The goal is to help producers of goods and services, exporters, and importers conduct their business.
- The WTO is run by its member governments. All major decisions are made by the membership as a whole, either by ministers (who usually meet at least once every two years) or by their ambassadors or delegates (who meet regularly in Geneva).

Is it about more than benefits for China?

- After its accession, China acted as a member of the developing country group and pushed hard for its interests.
- In 2003 it joined India and Brazil in pushing developed countries to reform their agricultural trade policies while retaining flexibility for developing countries, a push that has yet to achieve success.
- In the meantime, it enjoys little preferential treatment for itself:
  - partly because it has eschewed special benefits, partly because most of the transition benefits that were available to it have expired
  - partly because some of the provisions available to it are essentially voluntary on the part of the country offering them
  - partly because many of the benefits available to developing countries are not available to developing countries with large export shares
- At times it has actively forgone important benefits, such as by not invoking its right to receive technical assistance under WTO's Trade Facilitation Agreement.
- However, on some other issues, the sheer size of China has made it difficult to accommodate China's claim for developing country treatment.

What does the US say?

- Since joining the WTO in 2001, China has continued to insist that it is a developing country and thus has the right to avail itself of flexibilities under any new WTO rules.
- The United States has never accepted China's claim to developing-country status, and virtually every current economic indicator belies China's claim.
- After years of explosive growth, China has the second largest Gross Domestic Product in the world, behind only the United States.
- China accounts for nearly 13 per cent of total global exports of goods, while its global share of such exports jumped five-fold between 1995 and 2017. It has been the largest global exporter of goods each year since 2009.
- Further, China's preeminent status in exports is not limited to goods from low-wage manufacturing sectors.
- China currently ranks first in the world for exports of high-technology products, with such exports alone increasing by 3,800 percent between 1995 and 2016.

⊙ CONCLUSION:

China says it "will never agree to be deprived of its entitlement to special and differential treatment as a developing member". At the same time, it says it "is willing to take up commitments commensurate with its level of development and economic capability". It remains far less developed than traditionally developed countries. In purchasing power terms, its standard of living is about one-third that of the United States. Although not practically important in terms of its obligations under the WTO, its developing country status is useful to it in other ways, giving it the opportunity to gain meaningful advantages in other international organisations such as the Universal Postal Union. It costs the rest of the world little to accommodate China's wish to be described as a developing country.

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DEADLY FLY ASH

CONTEXT

- **Recently, two people died as a result of a breach in the fly ash dyke of Reliance's Sasan Ultra Mega Power Project in Singrauli, Madhya Pradesh. The toxic slurry spread to an area of six kilometres and also destroyed agricultural fields.**

⊙ BACKGROUND:

- The Reliance Power's Ultra Mega Power Project's (UMPP) in Sasan area of Singrauli fly ash dyke collapsed.
- The flood of the toxic ash slurry from the collapsed dyke located in adjoining Harhawa village washed away six persons, including three kids, a woman and two men living in the adjoining villages.
- So far two bodies have been retrieved from the ash slurry which has mixed in a nullah and flown to the Rihand Dam around 7 km away on the MP-UP border. Four more persons are missing and feared dead.
- This is not the first fly ash dam collapse of power plants in Singrauli, which is considered the electric power hub of the MP.
- This is the third time such a breach or collapse has happened in the dam/dyke (which stores fly ash remains of coal lighted power plants) of any power plant in Singrauli district.
- In August 2019, a similar breach of ash dyke of the Essar Power Plant in Mahan area had caused major loss of crop and damage to houses in adjoining villages.
- Just two months later a similar incident in NTPC's Shahpur plant had washed away crops and cattle in adjoining villages.
- These incidents have exposed the negligence being shown by power generating companies in construction of safe and permanent ash dykes in Singrauli, which is around 700 km from Bhopal.

⊙ ANALYSIS:

What is fly ash?

- Fly ash is a byproduct from burning pulverized coal in electric power generating plants.
- **Content:** Depending on where the coal was mined, coal ash typically contains heavy metals including arsenic, lead, mercury, cadmium, chromium and selenium, as well as aluminum, antimony, barium, beryllium, boron, chlorine, cobalt, manganese, molybdenum, nickel, thallium, vanadium, and zinc.
- During combustion, mineral impurities in the coal (clay, feldspar, quartz, and shale) fuse in suspension and float out of the combustion chamber with the exhaust gases.
- As the fused material rises, it cools and solidifies into spherical glassy particles called fly ash.
- Fly ash is collected from the exhaust gases by electrostatic precipitators or bag filters. The fine powder does resemble portland cement but it is chemically different.
- Fly ash chemically reacts with the byproduct calcium hydroxide released by the chemical reaction between cement and water to form additional cementitious products that improve many desirable properties of concrete.
- All fly ashes exhibit cementitious properties to varying degrees depending on the chemical and physical properties of both the fly ash and cement.
- Compared to cement and water, the chemical reaction between fly ash and calcium hydroxide typically is slower resulting in delayed hardening of the concrete.
- Delayed concrete hardening coupled with the variability of fly ash properties can create significant challenges for the concrete producer and finisher when placing steel-troweled floors.

Fly ash utilization:

- The major sector that utilizes fly ash are buildings and road infrastructure projects. A few highways, flyovers or expressways here or there make for little use of flyash.
- Some power plants in Sonbhadra also use ash to fill up low-lying areas where construction is to occur. But the use here remains limited and sporadic.
- The cement companies are the other big consumers of flyash. In the Pozzolona Portland Cement (ppc) about 25-30 of the content is flyash.
- Flyash should be used in constructing roads and embankments, large user groups -- like highway authority and the central public works department -- hardly consider using flyash.
- Currently, 90 million tonnes of flyash is being generated annually in India.
- Around 217 million tonnes of fly ash were generated from 195 Thermal Power Plants (TPPs) in 2018-19, according to a January 2020 Central Electricity

Authority's (CEA) report on fly ash generation from TPPs.

- This meant that every day, TPSs generated around 461,284 tonnes of fly ash. Of this amount, around 77 per cent was utilised.
- The fly ash is utilised mostly in the cement and building industries including road construction, concrete and bricks manufacturing and filling of low-lying areas. Together, these activities account for around 60 per cent of the fly ash utilisation.
- However, all these activities have come to a halt due to the ongoing lockdown, leading to accumulation of fly ash, according to experts.
- According to government and pollution control norms, ash ponds are supposed to be reinforced with concrete walls and should not used beyond their capacity. The artificial ponds store ash, which is the byproduct of coal-fired power plants.

What are the reasons behind such incidents?

- The latest incident has been caused by the serious lapse on the part of the Reliance Power administration and strictest possible action will be initiated in the matter.
- The break in the ash dump yard wall pushed the water leading to break in the boundary wall affecting some thatched houses and minor land parcel.
- This is sheer negligence in implementation of industrial safety norms which took precious lives, and affected livestock, agriculture and environment.
- The incident mirrors seriousness of competent authorities in implementation of orders as they knew about the vulnerability of the condition of ash dike.

Why coal ash is a challenge?

- The coal ash is a "hazardous cocktail" of heavy metals known to cause liver and kidney ailments.
- A 2012 study by India's Centre for Science and Environment found mercury levels in blood samples in the region - home to over 10 coal-fired power plants - to be six times more than what is considered safe.
- The ash in the soil can significantly hit agricultural output for at least two seasons.
- Fly ash particles (a major component of coal ash) can become lodged in the deepest part of your lungs, where they trigger asthma, inflammation and immunological reactions.
  - In addition, respirable crystalline silica in coal ash can also lodge in the lungs and cause silicosis or scarring of lung tissue, which can result in disabling and sometimes fatal lung disease and cancer.
  - Lastly, the presence of heavy metals in coal ash, such as lead, arsenic and hexavalent chromium, and the radioactivity of some ashes may increase the harm caused by inhalation.
- If eaten, drunk or inhaled, these toxicants can cause cancer and nervous system impacts such as cognitive deficits, developmental delays and behavioral problems.
- They can also cause heart damage, lung disease, respiratory distress, kidney disease, reproductive problems, gastrointestinal illness, birth defects, and impaired bone growth in children.

What about recycling?

- Coal ash recycling poses health risks, especially where the ash is exposed to water: for example
  - when sprinkled as cinders on snowy roads
  - spread as agricultural fertilizer
  - used as a landfill or to fill abandoned mines
- These uses risk leaching into ground water or surface water.

⊙ CONCLUSION:

Generation of fly ash and its unscientific disposal has continued despite such killing incidents. Singrauli comes second in the list of the top ten critically polluted industrial clusters of the country, a ranking in which Ghaziabad district of UP occupies the first position, owing to the massive air and water pollution in the belt. The thermal power plants in the region should formulate road maps for proper utilization of fly ash and should also install fly ash brick and block manufacturing units by thermal power plants, which could be useful for building and other construction activities within a specified radius.

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SYRIA RESPONSIBLE FOR 2017 CHEMICAL WARFARE ATTACKS: OPCW

CONTEXT

- **The world's chemical weapons watchdog for the first time explicitly blamed Syria for toxic attacks in the country, saying President Bashar al-Assad's regime used sarin and chlorine three times in 2017.**

⊙ BACKGROUND:

- In February, 2017, forces loyal to President Bashar al-Assad launched an assault on the Eastern Ghouta that reportedly left more than 1,700 civilians dead.
- The attacks on March 24, 25 and 30 in Lataminah killed civilians and medics as well as wounding dozens of people.
- Lataminah, at the time of the attack, was an important logistical hub for opposition groups, who had in previous weeks launched devastating attacks against the regime-held city of Hama.
- Both Lataminah and Khan Sheikhoun were used as a supply point for militias opposed to the Assad regime.
- With extensive help from the Russian Air Force, both towns have now been recaptured by Syrian and allied forces.
- The latest findings were the first to be released by the new Investigation and Identification Team (IIT).
- The IIT was established by OPCW member states last year after Russia - whose forces are backing the Syrian military - vetoed a UN Security Council resolution to extend the joint mission's mandate.
- It was tasked with identifying the perpetrators of chemical weapons use in Syria, as determined by the separate OPCW Fact-Finding Mission.
- The use of chemical weapons is a war crime and is prohibited in a series of international treaties. These include:
  - The Hague Declaration concerning Asphyxiating Gases
  - The 1925 Geneva Protocol
  - The Chemical Weapons Convention (CWC)
  - The Statute of the International Criminal Court (ICC)

⊙ ANALYSIS:

What OPCW has found?

- As per the Organisation for the Prohibition of Chemical Weapons (OPCW), 106 people were affected by the incidents in the opposition-held village of Latamina.
- The government has denied ever using chemical weapons.
- However, a joint UN-OPCW mission had also accused government forces of using Sarin in an attack on the town of Khan Sheikhoun, which reportedly killed more than 80 people, just days after the incidents in nearby Latamina.
- It also concluded that government forces had used chlorine as a weapon on other occasions during the civil war.
- For its first report, the IIT focused on incidents in Latamina, about 40 km (25 miles) north-west of the city of Hama, in late March 2017.
- On the basis of the information obtained, the IIT concluded there were reasonable grounds to believe that:
  - On 24 March, an Su-22 military plane belonging to the 50th Brigade of the 22nd Air Division of the Syrian air force, departing from Shayrat airbase, dropped an M4000 aerial bomb containing Sarin in southern Latamina, affecting 16 people
  - On 25 March, a Syrian air force helicopter, departing from Hama airbase, dropped a cylinder on the Latamina hospital. The cylinder broke through the roof, ruptured and released chlorine, affecting 30 people
  - On 30 March, an Su-22 belonging to the 50th Brigade of the 22nd Air Division of the Syrian air force, departing from Shayrat airbase, dropped an M4000 aerial bomb containing Sarin in southern Latamina, affecting 60 people

Regulation of chemical weapons:

- Although toxic chemicals had been used as tools of war for thousands of years, with the use of techniques such as poisoned arrows, arsenic smoke, or noxious fumes, their use was long stigmatised by an association with both unnecessary cruelty and unfair play, something beneath the standards of 'civilised' battle.
- Because of this, international efforts to ban chemical weapons took a prominent position in many early disarmament agreements.

- **First Agreement:** The first international agreement limiting the use of chemical weapons dates back to 1675, when France and Germany came to an agreement, signed in Strasbourg, prohibiting the use of poison bullets.
- Almost exactly 200 years later, in 1874, the next agreement of this sort was concluded: the Brussels Convention on the Law and Customs of War.
- **Brussels Convention**: The Brussels Convention prohibited the employment of poison or poisoned weapons, and the use of arms, projectiles or material to cause unnecessary suffering, although the agreement never entered into force.
- **Hague Peace Conference:** Before the turn of the nineteenth century, a third agreement came into being. The chemical disarmament efforts of the twentieth century were rooted in the 1899 Hague Peace Conference.
  - The contracting parties to the 1899 Hague Convention declared their agreement to 'abstain from the use of projectiles, the sole object of which is the diffusion of asphyxiating or deleterious gases'.
- **Second Hague Convention:** A second Hague Convention, in 1907, reiterated earlier bans on employing poison or poisoned weapons.
- Despite the above measures, the world witnessed the use of toxic chemicals in warfare to an unprecedented extent during World War I, with the first large-scale attack using chemical weapons taking place at Ieper, Belgium, on 22 April 1915. By the war's end, some 124,200 tonnes of chlorine, mustard and other chemical agents had been released, and more than 90,000 soldiers had suffered painful deaths due to exposure to them. Close to a million more people left the battlefields blind, disfigured or with debilitating injuries.
- **The Geneva Protocol:** The 1925 Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, commonly known as the 1925 Geneva Protocol, bans the use of chemical and bacteriological (biological) weapons in war.

What are nerve agents?

- Nerve agents are a group of human-made substances that target part of the body's nervous system to shut down its organs and overload the brain.
- Chemical weapons that use nerve agents like tabun, sarin and VX are known to kill people with gruesome efficiency.
- Just 10mg of VX, for instance, can kill a human in just 10 minutes. A smaller dose can take up to an hour to be lethal.
- Any nerve agent can affect a person through the skin, breathing, ingestion, or all three routes, depending on the substance and how it's used.
- Special bombs can weaponise the agents as a liquid, firing them out as a breathable gas.

How it was found?

- These toxins were first discovered by accident in the 1930s during research on agricultural insecticides.
- In their search, German scientists made two organic compounds containing phosphorus that were very effective at killing insect pests.
- However, they soon discovered that, even in minuscule amounts, the substances caused distressing symptoms in humans exposed to them.
- The two substances—too toxic to be used as commercial insecticides in agriculture—became known as tabun and sarin.

Effect of Nerve Agents:

- Nerve agents can be absorbed through inhalation or skin contact.
- Unlike traditional poisons, nerve agents don't need to be added to food and drink to be effective.
- They are quite volatile, colorless liquids (except for VX, which is said to resemble engine oil). The concentration in the vapor at room temperature is lethal.
- The symptoms of poisoning come on quickly, and include chest tightening, difficulty breathing, and very likely asphyxiation. Associated symptoms include vomiting and massive incontinence.
- The chemicals work by disrupting the central nervous system.
- The body uses a molecule called acetylcholine to send messages between cells—when an acetylcholine molecule arrives, it causes an electrical impulse to be sent.
- The body constantly has to remove those acetylcholine molecules from the receptors; otherwise there would be a dangerous build-up.
- It uses an enzyme called acetylcholinesterase to do that. However, a nerve agent stops acetylcholinesterase from doing its job.

Do antidotes exist?

- Nerve agents are damaging to the human body because they cause a build-up of acetylcholine.
- This causes constant triggering of the neurons and therefore, constant contraction of muscles.
- These spasms can be treated with antidotes that shut-off acetylcholine receptors in the brain.

- Antidotes do exist, but they have to be administered quickly, or the effect of the nerve agent cannot be reversed.
- Usually, two antidotes (atropine and pralidoxime chloride) are used which interfere with the acetylcholine binding to the neuron receptors.
- These antidotes work in the exact opposite way of anti-depressants which encourage the uptake of neurotransmitters through the synapse.
- Chemicals like Prozac encourage neurons responsible for feelings of happiness (such as dopamine and serotonin) to be transmitted through these receptors.
- Decontamination can also drastically reduce the lethality of chemical weapons as the longer a substance is left on skin and clothes the more of it can enter the bloodstream.

About OPCW:

- The Chemical Weapons Convention entered into force on 29 April 1997.
- The event marked the birth of an international chemical weapons disarmament regime headed by the Organisation for the Prohibition of Chemical Weapons (OPCW).
- As the implementing body for the Chemical Weapons Convention, the OPCW, with its 193 Member States, oversees the global endeavour to permanently and verifiably eliminate chemical weapons.

The Convention:

- The Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (the CWC), is comprised of a Preamble, 24 Articles, and 3 Annexes — the Annex on Chemicals, the Verification Annex, and the Confidentiality Annex.
- The Convention aims to eliminate an entire category of weapons of mass destruction by prohibiting the development, production, acquisition, stockpiling, retention, transfer or use of chemical weapons by States Parties.
- States Parties, in turn, must take the steps necessary to enforce that prohibition in respect of persons (natural or legal) within their jurisdiction.

⊙ CONCLUSION:

The detailed report will likely lead to fresh calls for accountability for the government of Syrian President Bashar al-Assad. Given the findings, it is now up to the Executive Council of OPCW and the Conference of the States Parties to the Chemical Weapons Convention, the United Nations Secretary-General, and the international community as a whole to take any further action they deem appropriate and necessary to prevent such attacks.

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SECTION: B

(PRELIMS)

CURRENT AFFAIRS

NIHANGS SHIKHS

⊙ CONTEXT

- **Recently, a group of Nihangs Shikhs attacked policeman in Pujab's Patiala district when they were asked to stop. The incident has brought into focus this order that has been at the forefront of the Sikh martial tradition for more than 300 years.**

⊙ ABOUT

- The Nihangs trace their origins to the founding of the **Khalsa Panth by the 10th Sikh Guru, Gobind Singh**, around 1699.
- Many claim the sect to be "guru di laadli fauj" (the guru's favourite army).
- The armed sect is believed to have emerged from the **Akaal Sena**, a band of soldiers of Guru Hargobind, the sixth guru.
- Later, the Akaal Sena metamorphosed into the 'Khalsa Fauj' of the 10th guru.
- Nihangs played a major role in defending the Sikhs during the repeated attacks of Afghan invader Ahmed Shah Abdali in the mid-18th century.
- They also occupied the prime position in the army of Maharaja Ranjit Singh.
- There are several theories about the origin of the Nihangs, including the one about their having been a part of the Akaal Sena and later Khalsa Fauj.
- But unlike the Udasi sect and the Nirmalayas who can be clearly traced back to the Sikh gurus, there is no concrete historical evidence of the origin of the Nihangs.
- They wear long blue robes and leather shoes called *jangi moze*, with a sharp metal fitting at the toe that can be used as a weapon.
- The most visible part of the attire is the turban, the size of which is a matter of pride — some Nihangs wear *pagdis* several times bigger than their heads, decorating these with the Khanda Sahib symbol of the Sikh faith.
- Simply put, Nihang is an order of Sikh warriors, characterised by blue robes, antiquated arms such as swords and spears, and decorated turbans surmounted by steel quoits.
- The Nihangs are fond of a popular drink called **shardai or sharbati degh (sacrament drink)** which contains grounded almonds, cardamom seeds, poppy seeds, black pepper, rose petals and melon seeds.
- When a small measure of cannabis is added to it, it is termed **sukhnidhan (treasure of comfort).**
- A higher dose of cannabis in it was known as **shaheedi deg**, sacrament of martyrdom. It was taken (while) battling enemies.

How Nihangs are different?

- As per an account by the East India Company's **Colonel James Skinner (1778-1841)**, Khalsa Sikhs were divided into two groups:
  - Those who put on blue attire which Guru Gobind Singh used to wear at the time of battle
  - Those who do not follow any restrictions on the colour of their dress.
- Though both of them follow the profession of soldiery and are brave without peer in the art of musketry and chakarbazi, and the use of quoits.
- Nihangs observe the Khalsa code of conduct in its strictest sense.
- Nihangs use the slogans 'chhardi kala' (forever in high spirits) and 'tiar bar tiar' (state of ever preparedness) for unforeseen events.

Role in Shikh's history:

- Nihangs had a major role in defending the Sikh panth after the fall of the **first Sikh rule (1710-15)** when Mughal governors were killing Sikhs, and during the onslaught of Afghan invader **Ahmed Shah Durrani (1748-65).**

- When the Khalsa army was divided into five battalions in 1734, one Nihang or Akali battalion was led by Baba Deep Singh Shahid.
- Nihangs also took control of the religious affairs of the **Sikhs at Akal Bunga (now known as Akal Takht)** in Amritsar.
- At Akal Takht, they held the **grand council (Sarbat Khalsa) of Sikhs** and pronounced the resolution (Gurmata) passed.
- Their clout came to an end after the **fall of Sikh Empire in 1849** when the British authorities of Punjab appointed a **manager (sarbrah)** for the administration of the Golden Temple in 1859.
- Today, Nihangs constitute a small community. About a dozen bands, each headed by a jathedar (leader), are still carrying on with the traditional order. Prominent among these are Budha Dal, Taruna Dal and their factions. With the advent of modernity, the balance between Bani (Guru Granth Sahib) and Bana (outer form) broke down, resulting in problems and unethical actions.

BUSINESS CORRESPONDENTS FOR BANKS (BC SAKHIS) AND BANK SAKHIS

⊙ CONTEXT

- **Self Help Groups (SHG) women working as Business Correspondents for banks (BC Sakhis) and Bank Sakhis are playing a vital role in disbursement of first tranch of ex-gratia of Rs.500/- to women PMJDY accounts amidst COVID-19 Lockdown.**

⊙ ABOUT

- **Business Correspondents (BCs)** are retail agents engaged by banks for providing banking services at locations other than a bank branch/ATM.
- BCs enable a bank to provide its limited range of banking services at low cost. They hence are instrumental in promoting financial inclusion.
- BCs have to do a variety of functions viz
  - identification of borrowers
  - collection of small value deposit
  - disbursal of small value credit
  - recovery of principal / collection of interest
  - sale of micro insurance/ mutual fund products/ pension products/ other third party products and receipt and delivery of small value remittances/ other payment instruments creating awareness about savings and other products, education and advice on managing money and debt counseling, etc.

Who is a Bank Sakhi?

- A "Bank Sakhi" is someone who has been a member of a self-help group involved in conducting banking and book-keeping activities of the group.
- As a Bank Sakhi, she provides a range of financial services on behalf of the bank to her community and is supported by the local SHG federation which provides capacity development, training, and financial awareness in the community.

⊙ BACKGROUND

- COVID – 19 pandemic has resulted in a national lockdown leaving a large number of people without access to wages and employment.
- Those worst hit by this unprecedented pandemic and lockdown are daily wage labourers, migrants, homeless, the poor and many who form the floating population.
- The Union Government had announced release of 500/- per month for 3 months in 20.39 Crore Women PMJDY accounts.

- Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), Ministry of Rural Development was given responsibility to transfer the fund with support of Department of Financial Services and Banks.
- Government of India also released other DBT funds like Rs.2000/- to PM Kisan Yojana accounts, MGNREGA wages payments to all rural population to address the financial stress being faced by the community.
- Due to release of DBT funds, there was expected rush at Bank premises for withdrawal of the amount.
- The instructions regarding withdrawal were already given in advance by many Banks as to how and who can come to the Bank for withdrawal as per last digit of account numbers.
- In most of the cases, the services of BC Sakhis (SHG women working as Business Corresspondents for banks) were utilized for making payments to the rural households.

⊙ CONCLUSION

- Around 8,800 BC Sakhi and 21,600 Bank Sakhi, around 50% of both cadre voluntarily started working amidst Lockdown across the country. They are playing a vital role in ensuring the disbursement of financial relief packages provided by Government of India. Because of them, rural community facing socio-economic distress felt fortunate to have access to banking services at their door step in the unbanked areas through BC Point to meet their daily requirements during the Lockdown period.

CURRENCY SWAP LINE

⊙ CONTEXT

- **India is working with the United States to secure a 'dollar swap line' that would help in better management of its external account and provide extra cushion in the event of an abrupt outflow of funds.**

⊙ ABOUT

- A swap line is a temporary reciprocal currency arrangement between central banks.
- Under the arrangement, central banks agree to keep a supply of their country's currency available to trade to another central bank at the going exchange rate.
- Banks use it for overnight and short-term lending only. Most swap lines are bilateral, which means they are only between two countries' banks.
- India already has a $75 billion bilateral currency swap line with Japan, which has the second highest dollar reserves after China.
- The Reserve Bank of India also offers similar swap lines to central banks in the SAARC region within a total corpus of $2 billion.

Challenges in Indian economy:

- The global shutdown of businesses around the world has wreaked havoc on financial markets as companies rush to secure cash to remain afloat while their sales dry up.
- Foreign institutional investors (FIIs) have been large sellers in the Indian equity and debt markets in March and April so far, as concerns over the economic effects of the COVID-19 pandemic has hit investor sentiment.
- Even as the stock markets have seen a pullback from earlier low levels, there is apprehension that the economic impact of COVID-19 will last for a significant length of time, and there is unlikely to be any V-shaped recovery in the economy or in the financial markets.
- This means that the government and the RBI cannot lower their guard on the management of the economy and the external account.

Significance of Currency Swap Line:

- **Additional support:** While India is largely expected to tide over any challenge posed by continued outflows of funds from the markets, a swap line with the US Federal Reserve provides additional comfort to the forex markets.
- **Ensure liquidity:** The purpose of a swap line is to keep liquidity in the currency available for central banks to lend to their private banks to maintain their reserve requirements.
- The liquidity is necessary to keep financial markets functioning smoothly during crises.
- **A significant monetary policy tool:** It is a significant monetary policy tool. It reassures banks and investors that it is safe to trade in that currency and it also confirms that the central banks would not let the supply of that currency dry up.

MSP FOR MFP SCHEME

⊙ CONTEXT

- **TRIFED under Ministry of Tribal Affairs has asked the State Nodal Departments and Implementing Agencies to initiate procurement of Minor Forest Produces (MFPs) at Minimum Support Price (MSP) from the available funds under MSP for MFP Scheme.**

⊙ ABOUT

- **'Minor Forest Produce (MFP)'** refers to all non-timber forest produce of plant origin. It is an important source of livelihoods for tribal people are non-wood forest products.
- MFP includes bamboo, canes, fodder, leaves, gums, waxes, dyes, resins and many forms of food including nuts, wild fruits, Honey, Lac, Tusser etc.
- The Minor Forest Produces provide both subsistence and cash income for people who live in or near forests.
- They form a major portion of their food, fruits, medicines and other consumption items and also provide cash income through sale.

The Scheme:

- The government introduced the scheme of "Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and development of value chain".
- The MSP for MFP scheme was started in 2013 to ensure fair and remunerative prices to MFP gatherers.
- The scheme is designed as a social safety net for improvement of livelihood of MFP gatherers by providing them fair price for the MFPs they collect. The scheme has been started with following objectives
  - To provide fair price to the MFP gatherers for the produce collected by them and enhance their income level
  - To ensure sustainable harvesting of MFPs.
- The Scheme will have a huge social dividend for MFP gatherers, majority of whom are tribals.
- It is a holistic scheme for development of MFP trade including its value chain and necessary infrastructure at local level.
- The MSP scheme seeks to establish a framework to ensure fair returns for the produce collected by tribals, assurance of buying at a particular price, primary processing, storage, transportation etc while ensuring sustainability of the resource base.

About TRIFED:

- The Tribal Cooperative Marketing Development Federation of India (TRIFED) came into existence in 1987.
- It is a national-level apex organization functioning under the administrative control of Ministry of Tribal Affairs, Govt. of India.
- TRIFED has its registered and Head Office located in New Delhi and has a network of 13 Regional Offices located at various places in the country.

Significance of MFP:

- MFP starts with the word "Minor" but is a major source of livelihood for tribals who belong to the poorest of the poor section of society. The Minor Forest Produce has significant economic and social value for the forest dwellers as an estimated 100 Million people derive their source of livelihood from the collection and marketing of Minor Forest Produce (Report of the National Committee on Forest Rights Act, 2011).
- It is important for tribals for food, shelter medicines and case income beside providing critical subsistence during the lean seasons, particularly for primitive tribal groups such as hunter gatherers, and the landless.

SOVEREIGN GOLD BONDS

⊙ CONTEXT

- **The Government of India, in consultation with the Reserve Bank of India, has decided to issue Sovereign Gold Bonds.**

⊙ ABOUT

- Sovereign Gold Bonds are government securities denominated in grams of gold. They are substitutes for holding physical gold.
- Investors have to pay the issue price in cash and the bonds will be redeemed in cash on maturity.
- The Bond is issued by Reserve Bank on behalf of Government of India.
- The quantity of gold for which the investor pays is protected, since he receives the ongoing market price at the time of redemption/ premature redemption. The SGB offers a superior alternative to holding gold in physical form.
- The risks and costs of storage are eliminated. Investors are assured of the market value of gold at the time of maturity and periodical interest. SGB is free from issues like making charges and purity in the case of gold in jewellery form.
- The bonds are held in the books of the RBI or in demat form eliminating risk of loss of scrip etc.

Key-details of the Scheme:

- The Sovereign Gold Bonds will be issued in six tranches from April 2020 to September 2020, according to a statement issued by the Ministry of Finance.
- The Bonds will be sold through:
  - Scheduled Commercial banks (except Small Finance Banks and Payment Banks)
  - Stock Holding Corporation of India Limited (SHCIL)
  - designated post offices
  - recognized stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited
- The minimum investment limit for Sovereign Gold Bond is 1 gram of gold, while the maximum limit of subscription is 4 kg for individual, 4 kg for HUF and 20 kg for trusts and similar entities, as notified by the government from time to time.

Comparing SGB with Physical gold & Gold ETFs:

Particulars	Physical Gold	Gold ETF	Sovereign Gold Bond
Returns/earnings	Lower than the real return on gold due to making charges	Less than actual return on gold	More than actual return on gold
Safety	Risk of theft, wear/ tear	High	High
Purity	The purity of Gold always remains a question	High as it is in electronic form	High as it is in electronic form
Gains	LTCG after three years	Long-term capital gain post after three years	LTCG post three years. (No capital gain tax if redeemed after maturity)
As loan collateral	Accepted	Not accepted	Accepted
Tradability or exit formalities	Restrictive	Tradable on Stock Exchange	Can be traded and redeemed from the 5th year with government
Storage expenditures	High	Minimal	Minimal

Advantages of Sovereign Gold Bonds

- **Absolute Safety**: These bonds do not carry risks associated with physical gold, except the market risks.
- **Extra Income**: One can earn a guaranteed annual interest at the rate of 2.50 percent (on the issue price).
- **Indexation benefit**: By transferring bond before maturity, one can get indexation benefits. In addition to this, there is also a sovereign guarantee on the redemption money as well as on the interest earned.

THE CONCEPT OF HELICOPTER MONEY

⊙ CONTEXT

- **With the Covid-19 pandemic here to stay for a long time and traditional monetary and fiscal policies limited in their efficacy, governments and central banks are looking at ways to avert an economic catastrophe. Some economists propose that non-repayable money transfer from the central bank to the government, which is 'helicopter money'.**

⊙ ABOUT

- Helicopter money is the term used for a large sum of new money that is printed and distributed among the public, to stimulate the economy during a recession or when interest rates fall to zero.
- It is also referred to as a helicopter drop, in reference to a helicopter scattering supplies from the sky.

- Coined by the American economist Milton Friedman in 1969, helicopter money refers to a last resort type of monetary stimulus strategy to spur inflation and economic output.
- It includes printing large sums of money and distributing it to the public so that people can spend more and boost the economy.
- It also requires both monetary and fiscal policies to be carried out together, meaning central banks and governments cooperating with each other.

Is it similar to quantitative easing?

- Helicopter money is an unconventional alternative to quantitative easing, but both aim to boost consumer spending and increase inflation.
- While helicopter money increases monetary supply by distributing large amounts of currency to the public, quantitative easing increases supply by purchasing government or other financial securities to spark economic growth.

Significance of helicopter money:

- **No debt:** Helicopter money does not rely on increased borrowing to fuel the economy, which means that it does not create more debt and interest rates can remain unchanged.
- **Economic growth:** It boosts spending and economic growth more effectively as it increases aggregate demand – the demand for goods and services – immediately.

Disadvantages of helicopter money:

- **Not reversible:** Unlike quantitative easing, using helicopter money as a tactic is not reversible. It is not a feasible solution to revive the economy.
- **No change on interest rate:** A country's central bank sets its interest rates to reach economic growth targets. However, a helicopter drop means that a central bank cannot use interest rates to recover any costs, because the money is not linked to a borrowed asset (loan).
- **Over-inflation:** Instead, the money is given directly to the public. This may lead to over-inflation and cause damage to the central bank's financials.
- **Significant devaluation of currency:** It could lead to a significant devaluation of the currency on the foreign exchange market.

ATMOSPHERIC METHANE CONCENTRATION AT RECORD LEVELS

⊙ CONTEXT

- **Global atmospheric concentration of methane 2019 levels are the highest since record-keeping began in 1983, according to a new preliminary estimate released by the United States National Oceanographic and Atmospheric Administration (NOAA).**

⊙ ABOUT

- Methane (CH_4) is a colorless, odorless, and highly flammable gas composed of one carbon atom and four hydrogen atoms.
- It can be produced naturally and synthetically, and when burned in the presence of oxygen, it produces carbon dioxide and water vapor.
- Methane is the primary component of natural gas and is used to produce heat and electricity around the world.
- Methane is also used in chemical reactions to produce other important gases like hydrogen and carbon monoxide and carbon black, a chemical compound that's found in some types of rubber used in car tires.

Key-highlights:

- Global atmospheric concentration of methane has hit an all-time high — to 1,875 parts per billion (ppb) in 2019 from 1,866 ppb in 2018.
- Not only is the 2019 figure the highest since record-keeping began in 1983, the increase during the year was the second-largest single-year leap in over two decades.
- In a paper published in 2019, NOAA scientists found that the increase in methane emissions between 2013 and 2018 was 50 per cent higher than in the previous five-year period.

Sources of methane:

- There are both natural and human sources of methane emissions.
  - The main natural sources include wetlands, termites and the oceans. Natural sources create 36% of methane emissions.
  - Human sources include landfills and livestock farming
- Cows and other grazing animals host microbes in their stomachs, gut-filling hitchhikers that help them break down and absorb the nutrients from tough grasses. Those microbes produce methane as their waste.
- The manure that cattle and other grazers produce is also a site for microbes to do their business, producing even more methane.
- Rice paddies are a lot like wetlands: When they're flooded, they're filled with calm waters low in oxygen, which are a natural home for methane-producing bacteria.

Why methane is a concern?

- **Most potent GHG:** Of all the greenhouse gases, methane is one of the most potent because of its ability to efficiently absorb heat in Earth's atmosphere.
- **Long-lasting:** Methane lasts for maybe a decade in Earth's atmosphere before it begins to react with a free radical called hydroxyl and turns into carbon dioxide, where it can stay there for centuries.
- **Sea level rise:** Greenhouse gases like methane heat up the atmosphere, and as much as 90 percent of that excess heat is absorbed by the oceans. This heat causes seawater to expand in volume. This effect, along with glacial melting, causes sea levels to rise.
- **Thermal expansion:** Scientists have known for a long time that carbon dioxide heats Earth's atmosphere and oceans, causing them to expand, but they only recently discovered that short-lived greenhouse gases like methane and CFCs (gases that contain chlorine or fluorine) also spur thermal expansion.

⊙ CONCLUSION

- While these preliminary numbers will be subject to further analysis before final estimates are released in November, the sheer magnitude of the increase, as well as the fact that the new data merely highlighted existing trends, is a cause of concern. Such climate 'feedbacks' are largely beyond human control and are expected to intensify with increasing temperatures.

EARTH'S SEISMIC NOISE

⊙ CONTEXT

- **In a latest development, scientists at the British Geological Survey (BGS) have reported a change in the Earth's seismic noise and vibrations amid the coronavirus lockdown.**

⊙ ABOUT

- In geology, seismic noise refers to the relatively persistent vibration of the ground due to a multitude of causes.

- It is the unwanted component of signals recorded by a **seismometer**.
  - Seismometer is the scientific instrument that records ground motions, such as those caused by earthquakes, volcanic eruptions, and explosions.
- This noise includes vibrations caused due to human activity, such as transport and manufacturing, and makes it difficult for scientists to study seismic data that is more valuable.
- Apart from geology, seismic noise is also studied in other fields such as oil exploration, hydrology, and earthquake engineering.

Why seismic noise levels are reducing now?

- As per the Belgian study, due to the enforcement of lockdown measures around the world to tackle the novel coronavirus pandemic, the Earth's crust has shown reduced levels of vibration.
- The scientists measured ground vibrations from earthquakes using seismometers.
- These are incredibly sensitive so they also pick up other sources of vibration too, including human activity, such as road traffic, machinery and even people walking past.
- All these things generate vibrations that propagate as seismic waves through the Earth.
- The scientists then compared the average daytime noise levels at seismic stations in the UK in the two week period since the start of the Covid-19 lockdown with the average noise levels for the beginning of the year.
- The results show reductions in noise levels at most of stations of between 10-50%."

Are these restrictions helpful?

- The seismic noise vibrations caused by human activity are of high frequency (between 1-100 Hz), and travel through the Earth's surface layers.
- Usually, to measure seismic activity accurately and reduce the effect of seismic noise, geologists place their detectors 100 metres below the Earth's surface.
- However, since the lockdown, researchers have said that they were able to study natural vibrations even from surface readings, owing to lesser seismic noise.
- Due to lower noise levels, scientists are now hoping that they would be able to detect smaller earthquakes and also see low amplitude parts of the ground motions caused by larger earthquakes that had slipped past their instruments so far.
- Moreover, the fall in noise will also profit seismologists who utilize generally happening history vibrations, such as those from crashing sea waves, to probe Planet's crust.
- A fall in human-induced sound could enhance the degree of level of sensitivity of detectors to natural waves at comparable frequencies. There's a substantial possibility definitely it could bring about much better measurements.

NATIONAL LEGAL SERVICES AUTHORITY (NALSA)

⊙ CONTEXT

- **As per the National Legal Services Authority (NALSA), as many as 11,077 undertrials have been released from prisons nationwide as part of the mission to decongest jails following the COVID-19 pandemic.**

⊙ ABOUT

- The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society.
- Public awareness, equal opportunity and deliverable justice are the cornerstones on which the edifice of NALSA is based.
- The principal objective of NALSA is:
  - to provide free and competent legal services to the weaker sections of the society

- to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities
- to organize Lok Adalats for amicable settlement of disputes

- Apart from the above mentioned, functions of NALSA include spreading legal literacy and awareness, undertaking social justice litigations etc.
- NALSA works in close coordination with the various State Legal Services Authorities, District Legal Services Authorities and other agencies for a regular exchange of relevant information, monitoring and updating on the implementation and progress of the various schemes in vogue and fostering a strategic and coordinated approach to ensure smooth and streamlined functioning of the various agencies and stakeholders.

How the Constitution of India ensures 'equality before law'?

- Towards fulfilling the Preambular promise of securing to all the citizens, Justice – social, economic and political, Article 39 A of the Constitution of India provides for free legal aid to the poor and weaker sections of the society, to promote justice on the basis of equal opportunity.
- Articles 14 and 22(1) of the Indian Constitution also make it obligatory for the State to ensure equality before law.
- In 1987, the Legal Services Authorities Act was enacted by the Indian Parliament, which came into force on 9th November, 1995.
- The Act was aimed to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society.

Equality before law:

- "Equality before law" means that among equals the law should be equal and should be equally administered, that like should be treated alike.
- The right to sue and be sued, to prosecute and be prosecuted for the same kind of action should be same for all the citizens of full age and understanding without distinction of race, religion, wealth, social status or political influence.

COVID-19 RESPONSE PUTS A MILLION KIDS AT RISK OF CONTRACTING MEASLES

⊙ CONTEXT

- **Around 117 million children worldwide risk contracting measles because dozens of countries are curtailing their vaccination programmes as they battle COVID-19.**

⊙ ABOUT

- Measles, or rubeola, is a viral infection that starts in the respiratory system. It still remains a significant cause of death worldwide, despite the availability of a safe, effective vaccine.
- **Symptoms:** Symptoms of measles generally first appear within 10 to 12 days of exposure to the virus. They include:
  - cough
  - fever
  - runny nose
  - red eyes
  - sore throat
  - white spots inside the mouth
  - widespread skin rash(it is a classic sign of measles)

- Measles is a highly contagious. It is caused by infection with a virus from the **paramyxovirus family**. Viruses are tiny parasitic microbes.
- Once a person gets infected, the virus invades host cells and uses cellular components to complete its life cycle.
- The measles virus infects the respiratory tract first. However, it eventually spreads to other parts of the body through the bloodstream.

Transmission of the disease:

- Measles can be spread through the air from respiratory droplets and small aerosol particles.
- An infected person can release the virus into the air when they cough or sneeze.
- These respiratory particles can also settle on objects and surfaces and infect a healthy person.
- The measles virus can live outside of the body for longer than you may think. In fact, it can remain infectious in the air or on surfaces for up to 2 hours.

Can it occur to animals?

- Measles is only known to occur in humans and not in other animals.
- There are 24 Trusted Source known genetic types of measles, although only 6 are currently circulating.

Why children are more prone to measles NOW?

- Currently 24 countries, including several already dealing with large measles outbreaks, have suspended widespread vaccinations, the World Health Organisation and the UN's children's fund UNICEF said.
- An additional 13 countries have had their vaccination programmes interrupted due to COVID-19.
- It was vital that immunisation capacity was retained during and after the current pandemic.
- Together, more than 117 million children could be impacted by the suspension of scheduled immunization activities.

⊙ CONCLUSION

- Measles, a highly contagious disease, affect around 20 million people every year, the majority of whom are aged under five. Despite a cheap and readily available vaccine, measles cases have surged in recent years, largely in part to what the WHO terms "vaccine hesitancy". International organization should be mindful enough of the impact of COVID-19, threatening outbreaks of measles, for which there already exists a safe and effective vaccine. The countries should prepare and plan now for intensive catch-up vaccinations once physical restrictions are lifted.

WORLD CHAGAS DISEASE DAY

⊙ CONTEXT

- **For the first time, the global community is preparing to celebrate 14 April as the first World Chagas Disease Day.**

⊙ ABOUT

- Chagas disease, also called American trypanosomiasis, has been termed as a "silent and silenced disease", not only because of its slowly progressing and frequently asymptomatic clinical course but also because it affects mainly poor people who have no political voice or access to health care.
- Once endemic in Latin American countries, Chagas disease is now present in many others, making it a global health problem.
- It was on 14th April in 1909 that the first patient, a Brazilian girl named Berenice Soares de Moura, was diagnosed for this disease by Dr Carlos Ribeiro Justiniano Chagas.

Transmission of the Disease:

- The disease can be transmitted by vectorial transmission (T. cruzi parasites are mainly transmitted by contact with faeces/urine of infected blood-sucking triatomine bugs).
- These bugs, vectors that carry the parasites, typically live in the wall or roof cracks of poorly-constructed homes in rural or suburban areas.
- Normally they hide during the day and become active at night when they feed on human blood.
- They usually bite an exposed area of skin such as the face, and the bug defecates close to the bite.
- The parasites enter the body when the person instinctively smears the bug faeces or urine into the bite, the eyes, the mouth, or into any skin break) contaminated food, transfusion of blood or blood products, passage from an infected mother to her newborn, and organ transplantation and even laboratory accidents.
- Without treatment, Chagas disease can lead to severe cardiac and digestive alterations and become fatal.

⊙ BACKGROUND

- The proposal to designate 14 April as World Chagas Disease Day was initiated by the International Federation of Associations of People Affected by Chagas Disease.
- On 24 May 2019, the World Health Assembly – WHO's decision-making body - endorsed the proposal, which was supported by several health institutions, universities, research centres, national or international nongovernmental platforms, organizations and foundations.

Significance of the day:

- Raising awareness and the profile of this neglected tropical disease, which is often diagnosed in its late stages, is essential to improve the rates of early treatment and cure, together with the interruption of its transmission.
- The day aims to raise the visibility and public awareness of people with Chagas Disease and the resources needed for the prevention, control or elimination of the disease.
- Celebrating World Chagas Disease Day on 14 April will provide a unique opportunity to add a global voice in favour of this and other neglected tropical diseases.

ASEAN SPECIAL SUMMIT

⊙ CONTEXT

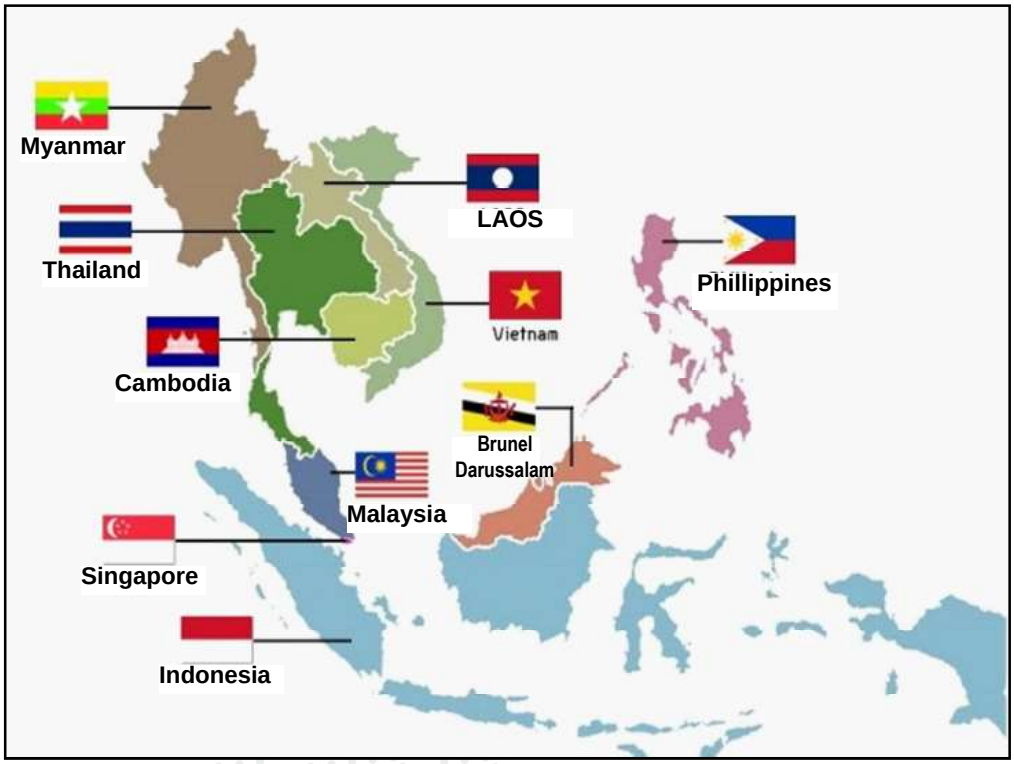
- **The online ASEAN Special Summit and ASEAN+3 Special Summit on Covid-19 response took place in Hanoi, Vietnam, chaired by Prime Minister Nguyen Xuan Phuc, chairman of ASEAN and of ASEAN+3.**

⊙ ABOUT

- The Association of Southeast Asian Nations (more commonly known as ASEAN) is an intergovernmental organization aimed primarily at promoting economic growth and regional stability among its members.
- There are currently 10 member states: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia and Vietnam.
- **Chairmanship of ASEAN rotates annually,** based on the alphabetical order of the English names of Member States.
- ASEAN aims to promote collaboration and cooperation among member states, as well as to advance the interests of the region as a whole, including economic and trade growth.
- It has negotiated a free trade agreement among member states and with other countries such as China, as well as eased travel in the region for citizens of member countries.

Key-highlights of the meeting:

- Leaders of the 10-nation bloc and their partners from three ASEAN partners, namely China, the Republic of Korea and Japan, discussed measures and initiatives to strengthen co-operation in the fight against the Covid-19 pandemic to ensure dynamic and sustainable development in the region in the long run.



- They are expected to adopt a joint statement of the ASEAN Summit and another of the ASEAN+3 Special Summit on COVID-19 response, in which they will affirm their commitment to preventing and eliminating the risk of the pandemic which is threatening people's lives, and in stabilising the socio-economic situation in each member state.
- Addressing the opening ceremony, Vietnam's PM stressed the significance of the meeting with COVID-19 spreading across the region and the world.
  - All ASEAN member countries have strived to fight the pandemic which has harmed the lives of all citizens and socio-economic development, particularly the services sector which accounted for 30 per cent of the total GDP of ASEAN, threatening sustainability and social security.
  - However, he noted that during this difficult time, the solidarity of the ASEAN Community has brightened, shouldering together to overcome difficulties.
  - This was demonstrated by the ASEAN Chairman's Statement on ASEAN Collective Response to the Outbreak of Coronavirus Disease 2019.
  - Member countries have enhanced co-operation in health care, national defence, economy and tourism; and supported each other.
  - ASEAN's efforts have brought encouraging results, putting the pandemic under control.
  - The number of COVID-19 cases in ASEAN stands at about 15,000 among more than 650 million citizens, lower than the global rate.

The origin:

- ASEAN was founded half a century ago in 1967 by the five Southeast Asian nations of Indonesia, Malaysia, Philippines, Singapore and Thailand.

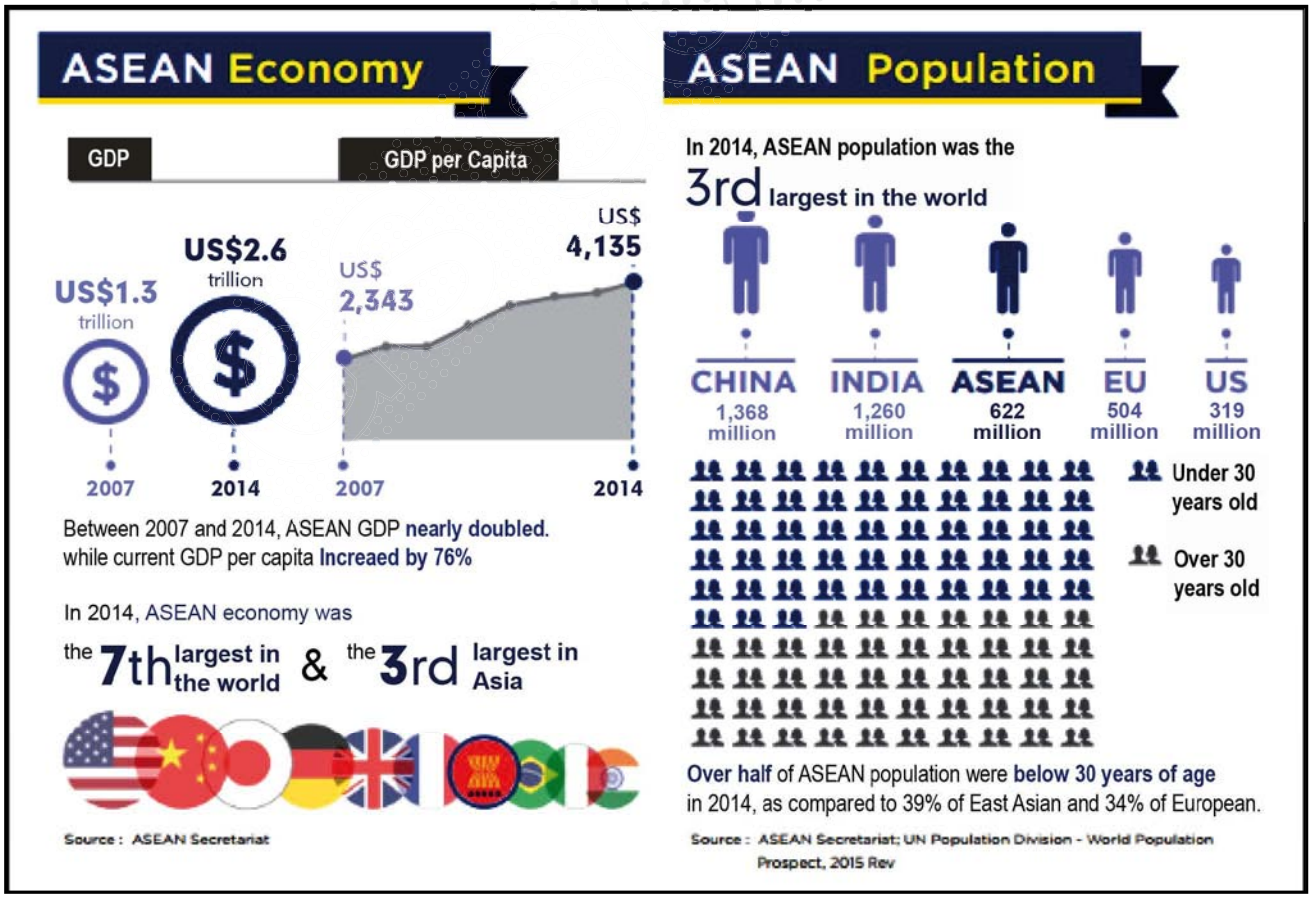
- This was during the polarized atmosphere of the Cold War, and the alliance aimed to promote stability in the region.
- Over time, the group expanded to include its current 10 members.
  - Regional cooperation was further extended with the creation of the ASEAN Plus Three forum in 1997, which included China, South Korea and Japan.
- And then the East Asia Summit, which began taking place in 2005 and has expanded to include India, Australia, New Zealand, Russia and the United States.

ASEAN Economic Community (AEC):

- In 2015, ASEAN established the ASEAN Economic Community (AEC), a major milestone in the organization's regional economic integration agenda.
- The AEC envisions the bloc as a single market with free flow of goods, services, investments and skilled labour, and freer movement of capital across the region.

Economic importance of ASEAN:

- If ASEAN were a country, it would be the seventh-largest economy in the world, with a combined GDP of $2.6 trillion in 2014.
- It is project that by 2050, ASEAN will rank as the fourth-largest economy of the world.
- Home to more than 622 million people, the region has a larger population than the European Union or North America.
- It also has the third-largest labour force in the world, behind China and India.



CollabCAD

⊙ CONTEXT

- **Atal Innovation Mission, NITI Aayog and National Informatics Centre (NIC) jointly launched CollabCAD.**

⊙ ABOUT

- CollabCAD is a collaborative network, computer enabled software system, providing a total engineering solution from 2D drafting & detailing to 3D product design.
- The aim of this initiative is to provide a great platform to students of Atal Tinkering Labs (ATLs) across country to create and modify 3d designs with free flow of creativity and imagination.
- This software would also enable students to create data across the network and concurrently access the same design data for storage and visualization.
- ATLs established across India, provide tinkering spaces to children to hone their innovative ideas and creativity.
- A customized version of CollabCAD for ATLs with features that are most relevant to school students to materialize their ideas and creativity into physical solutions has been developed to enable designing without constraints and, thus, allowing creativity and innovation to thrive.

What is 3D Printing?

- 3D printing or additive manufacturing is a process of making three dimensional solid objects from a digital file.
- The creation of a 3D printed object is achieved using additive processes. In an additive process an object is created by laying down successive layers of material until the object is created.
- Each of these layers can be seen as a thinly sliced horizontal cross-section of the eventual object.
- 3D printing is the opposite of subtractive manufacturing which is cutting out / hollowing out a piece of metal or plastic with for instance a milling machine.
- 3D printing enables you to produce complex shapes using less material than traditional manufacturing methods.
- Examples of 3D Printing include consumer products (eyewear, footwear, design, furniture), industrial products (manufacturing tools, prototypes, functional end-use parts), dental products, prosthetics, architectural scale models & maquettes, reconstructing fossils, etc.

2D Drafting:

- 2D Drafting is the creation of accurate representations of objects for manufacturing and engineering needs.
- It is used to fully and clearly define requirements for concepts or products so as to convey all the required information that will allow a manufacturer to produce that component.

Significance of the initiative:

- AIM's collaboration with NIC's CollabCAD is a great platform for students to utilize indigenous, state-of-the-art made-in-India software for 3D modeling/slicing to use 3D Printing.
- CollabCAD is an indigenous three dimensional computer aided design system which helps the used to build models in virtual 3d space and create and engineering drawings for shop floor.

POOL TESTING FOR CORONAVIRUS

⊙ CONTEXT

- **The Indian Council of Medical Research (ICMR) has issued an advisory for using 'pooled samples' for testing of COVID-19.**

⊙ ABOUT

- The ICMR advisory added that the pool testing algorithm involves the Polymerase Chain Reaction (RT-PCR) screening of a specimen pool, comprising multiple samples.
- In case a pool tests positive, then each sample will be individually tested.
- The RT-PCR test is used to determine whether an individual has contracted Covid-19, caused by the SARS-CoV-2 virus.
- The objective of pool testing is to increase the capacity of laboratories to screen more samples in the same amount of time without doubling the resources needed.

Where it can be used?

- The test is only prescribed to be used in areas with low prevalence of the infection, i.e., with a positivity rate of less than 2 per cent.
- This means that of 1,000 samples in an area, if less than 20 have tested positive for Covid-19, the area is said to have a low positivity rate, and will qualify for pool testing.
- When the disease progresses and probability of positives goes up, the usefulness of the test comes down. One needs to repeat the tests, and conduct all tests individually, if the result is positive.

What the ICMR has recommended?

- ICMR has advised that while more than two samples can be pooled together, the number should not exceed five samples to avoid sample dilution, which can lead to false negatives.
- This method can be used in areas where the prevalence of COVID-19 is low, which means a positivity rate of less than two percent.
- In areas with a positivity rate between two to five percent, sample pooling of PCR screening may be considered in a community survey of surveillance among asymptomatic individuals.
- Andaman and Nicobar Islands and Uttar Pradesh have already embarked on pooled testing to enhance the testing capacity within limited resources.

Significance of pool testing:

- This method is effective in two ways.
  - It increases the capacity of testing
  - It saves a lot of resources — time, cost and manpower
- This method is useful when a country has a lower number of positive cases. In case a pool tests negative, all individual samples within the pool are considered to be healthy and not infected by Covid-19.
- Significantly, pooled screening can also help in tracking down the asymptomatic cases of the disease, thereby tracking community transmission.

THE CONTACT TRACING TECHNOLOGY

⊙ CONTEXT

- **Global technology giants Apple and Google have announced that they are partnering on developing contact tracing technology to help governments and health authorities tackle the novel coronavirus pandemic.**

⊙ ABOUT

- The World Health Organization (WHO) defines contact tracing as the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission.
- Via contact tracing, people who have come into contact with a person carrying a disease are alerted and identified.
- In its 2015 guidelines for contact tracing during the Ebola epidemic in West Africa, the WHO underlined the importance of the practice:
- "Identifying people at the onset of symptoms and promptly isolating them reduces exposure to other persons, preventing subsequent EVD (Ebola Virus Disease) infections. Additionally, prompt isolation and admission of the symptomatic person to a treatment facility decreases the delay to supportive treatment, which improves the likelihood of survival."

How will the Coronavirus New Technology by Google and Apple work?

The new contact tracing technology will use Bluetooth signals to track if users have been in contact with anyone exposed to coronavirus.

- By May, both companies (Google and Apple) will release application programming interfaces (APIs) that would enable interoperability between Android and iOS devices using apps from public health authorities.
- The official apps will be available for users to download via their respective app stores, as per the press release.
- When this step is realised, phone-based matching via official apps will help alert people if they have come in contact with someone diagnosed with COVID-19.
- For this to work, COVID-19 patients would have to declare their status to the respective apps voluntarily.
- Following this, all people whose Android/iOS smartphones were detected nearby such patients, would get notified.
- This means, you will be notified even if you were around a stranger who has tested positive for the disease.

The privacy issue:

- The planned technology also throws the weight of the tech leaders into a global conflict between privacy advocates who favor a decentralized system to trace contacts and governments in Europe and Asia pushing centralized approaches that have technical weaknesses and potentially let governments know with whom people associate.
- To be effective, the Silicon Valley system would require millions of people to opt in the system, trusting the technology companies' safeguards, as well as smooth oversight by public health systems.

Significance of the technology:

- Contact tracing is considered essential for bringing epidemics under control, and is expected to help governments in relaxing lockdown orders.
- The technology will help to slow the spread of the coronavirus by allowing users to opt into logging other phones they have been near.

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MISCELLANEOUS

CURRENT AFFAIRS

AUSTRALIAN COMPANY TO BEGIN 1st HUMAN TRIAL OF COVID-19 VACCINE

- An Australian company has called out for volunteers in the country's first human trial of a COVID-19 vaccine, expected to take place in coming weeks.
- Clinical Research Company Nucleus Network revealed that it would test the effectiveness and safety of a Recombinant Spike Protein Nanoparticle vaccine, NVX-CoV2373, developed by US based biotechnology company Novavax, reports Xinhua news agency.
- It would take roughly 12-18 months from now before the vaccine could be released to the public.
- There was absolutely no chance that the volunteers could be infected with the disease by taking part.
- The World Health Organization estimated at least 20 other COVID-19 candidate vaccines are in development around the world.

E-GATE PASSES TO THE IMPORTERS AND CUSTOM BROKERS FROM 15th APRIL

- **Central Board of Indirect Taxes and Custom**, CBIC has taken a several measures to facilitate and expedite custom clearance by making it online, automated and paperless amid lockdown.
- CBIC has decided to **enable electronic communication of PDF based final electronic** out of charge copy of bill of entry and e-gate passes to the importers and custom brokers.
- This will come into effect from 16th April, 2020. CBIC has said that **electronic communication would reduce direct interface between the Custom authorities** and the importers or custom brokers.
- It also said that **copies of bill of entry and e-gatepasses will be emailed** to the concerned custom brokers.
- The e-gatepasses will be **used by the gate officer of the custodian to allow physical exit** of the imported goods.

GOVERNMENT REMOVES RESTRICTIONS ON THE EXPORT OF FORMULATIONS MADE FROM PARACETAMOL

- **Union Government has removed restriction on the export of formulations made from Paracetamol** including Fixed Dose Combinations with immediate effect.
- Though the formulations made from Paracetamol including FDCs have been made free for export, **Paracetamol Active pharmaceutical ingredient, API, will remain restricted for export**.

HAFTAR FORCES RAINS ROCKETS ON THE LIBYA CAPITAL

- The forces of Libyan military strongman Khalifa Haftar **rained rockets on the capital Tripoli after being ousted by government loyalists** from a string of towns to its west.
- The **UN-recognised Government of National Unity**, which has been battling an offensive against the capital for just over a year, **accused Haftar's forces of taking revenge against Tripoli's civilian population** following their losses.

- The unity government **recaptured the coastal cities of Sorman and Sabratha** and several inland towns.
- **Libya has suffered almost a decade of conflict** since longtime **dictator Moamer Kadhafi** was toppled and killed in a 2011 uprising backed by several Western powers.

ICMR ISSUES GUIDANCE ON USE OF TRUENAT BETA CoV TEST FOR COVID-19

- Indian Council of Medical Research, ICMR has issued guidance on the **use of Truenat beta CoV test** which has been **validated by the research body** for undertaking a screening test for COVID-19.
- ICMR has advised all the states which intends to initiate Truenat beta CoV test that the **proposed sites of Truelab Workstation do not require approval of ICMR**.
- The **states can appoint a core team of experts** for assessing facilities with the Truelab Workstation for feasibility of initiating COVID-19 testing in the existing setup.
- It has also been advised that based on the evaluation of the core team, **the designated officer of each state can accord approval for testing and the procurement of the cartridges** for existing machines and other logistics should be done through the Central TB Division.

INDIAN SCIENTISTS DEVELOP LOW COST DIAGNOSTIC TEST KIT FOR COVID-19

- A research institute in Kerala has developed a **new, faster and cheaper diagnostic test for COVID-19** which could be a major breakthrough.
- **Sree Chitra Tirunal Institute for Medical Sciences and Technology in Thiruvananthapuram**, under the Department of Science and Technology, has developed an innovative diagnostic test kit named, **Chitra Gene LAMP-N for the diagnosis of COVID-19**.
- This **detects the N-Gene of virus using reverse tranase loop-mediated amplification of viral nucleic acid** or RT-LAMP technique.
- This **new kit is considered as one of the first few confirmatory diagnostic test for N-gene of COVID-19** virus using the RT-LAMP technique in the world.
- The **test is highly specific that it can detect two regions of the gene** which will ensure that the test does not fail even if one region of the viral gene undergoes mutation during its current spread.
- **Another major advantage of the new test kit is that it is very fast**. According to the institute, the detection time is only 10 minutes and the sample to result time will be less than two hours.
- The institute has **also developed the specific RNA extraction kits along with Gene LAMP-N test kits** and the testing device.
- National Institute of Virology, Alappuzha had found that the new technique is giving cent per cent accurate result and **now the ICMR approval for the same is awaited.**

N.KOREA TEST FIRES MULTIPLE SHORT-RANGE ANTI-SHIP MISSILES

- North Korea launched **multiple short-range anti-ship cruise missiles into the sea** and **Sukhoi jets fired air-to-surface missiles** as part of its ongoing military exercises.
- The missile tests came on the eve of a **national holiday in North Korea to celebrate the birthday of Kim Il Sung**, the founder of the country and grandfather of the current leader, Kim Jong Un.

- The anti-ship missiles plunged into the sea more than 150 kilometres (93 miles) off the east **coast town of Munchon**, while the **Sukhois carried out firing tests**.
- The latest tests were **part of wintertime drills the North** has been carrying out in recent weeks after coronavirus concerns caused delays.
- North Korea has been conducting weeks of military drills, **including several launches of short-range ballistic missiles**. Last month, it **fired nine ballistic missiles in four rounds of tests**, according to analysts.

UKRAINIAN FORCES AND RUSSIA-BACKED REBELS EXCHANGE PRISONERS

- **Ukrainian forces and Russia-backed rebels exchanged 34 prisoners** aimed to create conditions that could lead to the **end of the six-year war in eastern Ukraine**.
- Ukraine took back 20 of its citizens in exchange of Fourteen rebels in the swap **with the two separatist entities in the rebel-controlled east**.
- Prisoner exchanges were **part of an agreement brokered last year at a summit of the leaders of Ukraine, Russia, Germany and France**.
- United Nations Secretary General Antonio Guterres welcomed the prisoner exchange and **urged all the parties to take further measures in this spirit**.

US ALLOWS H1B VISA EXTENSION, RELIEF FOR STRANDED INDIANS

- In a big relief for thousands of stranded Indian professionals in America due to the coronavirus pandemic, **the US government has decided to accept their H-1B visa applications for an extended stay in the country**.
- The H-1B visa is a **non-immigrant visa** that allows US companies to employ foreign workers in specialty occupations that require **theoretical or technical expertise**.
- The **US Department of Homeland Security (DHS)** in a new notification has said it recognises that there are immigration-related challenges as a direct result of the coronavirus pandemic.

US APPROVES SALE OF ANTI-SHIP MISSILES, TORPEDOES TO INDIA

- The Trump administration has notified the Congress of its determination **to sell Harpoon air-launched anti-ship missiles and Mark 54 lightweight torpedoes** worth 155 US million dollars to India to enhance its **deterrent capabilities against "regional threats"** and to bolster its homeland defence.
- The **US recognised India as a "Major Defence Partner" in 2016**. This designation allows India to buy **more advanced and sensitive technologies from America** at par with that of the US' closest allies and partners.
- The **Harpoon missile system will be integrated into the P-8I anti-submarine warfare aircraft** to conduct anti-surface warfare missions in defence of critical sea lanes while enhancing inter-operability with the United States and other allied forces.
- The proposed sale will **improve India's capability to meet current and future threats** from enemy weapon systems. **The MK 54 Lightweight Torpedo will provide the capability to conduct anti-submarine warfare missions**.

UTTAR PRADESH BECOMES FIRST STATE IN THE COUNTRY TO START POOL TESTING OF CORONA VIRUS SAMPLES

- Uttar Pradesh has become the **first state in the country to start pool testing of corona virus** samples.
- The move is **aimed at speeding up the screening process and also bring down the cost of testing samples**.
- State health department has also decided to carryout the **audit of any death in state due to COVID-19**.
- **This facility is being expanded in all districts and initially 5 samples will be pooled**. In the pool testing method, multiple swab samples are pooled together and tested.
- If the result of a collection of samples comes negative, then **that means all the samples in that group are negative**.
- However, **if the result of one collection is found positive, then each of those samples is tested individually**.

VISAKHAPATNAM AIRFIELD REMAINS OPEN DURING LOCKDOWN

- With the nationwide lockdown to prevent the spread of the virus during the ongoing COVID-19 pandemic, **INS Dega of Eastern Naval Command (ENC) ensured that the joint-user airfield at Visakhapatnam remains open round the clock**.
- The manning of the airfield has been **modified to ensure that all required safety services and airfield facilities continued** to be available.
- This ensured that **all special flights, as well as, the cargo flight of SpiceJet continued its operations unhindered**. So far, 15 sorties of the cargo flight have operated since the lockdown has been enforced.
- Further, the **Indian Navy continued to maintain its operational vigil carrying out regular Maritime Surveillance missions** by day and night.
- The **Dornier squadron of the ENC, INAS 311**, operating from the air station, has been undertaking **regular maritime surveillance missions**.

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