



Current Affairs From 09th April to 30th April 2019
GS-1

Populaion Study:India

Why in News?

India's [population](#) grew at an average annual rate of 1.2 per cent between 2010 and 2019 to 1.36 billion, more than double the annual growth rate of China, according to a report by the United Nations Population Fund.

Important Observations:

- India's population in 2019 stood at 1.36 billion, growing from 942.2 million in 1994 and 541.5 million in 1969.
- India's population grew at average annual rate of 1.2 per cent between 2010 and 2019, the UN sexual and reproductive health agency said in the State of World Population 2019 report.

TFR:

- According to the report, in India, total fertility rate per woman was 5.6 in 1969, dropping to 3.7 in 1994 and 2.3 in 2019.
- India recorded an improvement in life expectancy at birth. The life expectancy at birth in 1969 was 47 years, growing to 60 years in 1994 and 69 years in 2019.
- Giving a snapshot of India's population composition in 2019, the report said 27 % of the country's population was in the age bracket of 0-14 years and 10-24 years each, while 67 % of the country's population was in the 15-64 age bracket.
- Six per cent of the country's population was of the age 65 and above.
- Indicative of the improvement in the quality of India's health care system, the report noted that Maternal Mortality Ratio (MMR) in the country dropped from 488 deaths per 100,000 live births in 1994 to 174 deaths per 100,000 live births in 2015.

Data related to Women:

- The findings, relating to women aged between 15-49 years, were published for the first time as part of [United Nations](#) Population Fund's (UNFP) State of World Population 2019 report.



Current Affairs From 09th April to 30th April 2019

- The report includes, for the first time, data on women's ability to make decisions over three key areas: sexual intercourse with their partner, contraception use and health care.
- According to the analysis, the absence of reproductive and sexual rights has a major and negative repercussions on women's education, income and safety, leaving them "unable to shape their own futures".

Challenges faced by Women:

- Early marriage continues to present a major cultural obstacle to female empowerment and better reproductive rights, the UNFPA report said.
- Highlighting positive changes in the last half-century, the report shows that in 1969, the average number of births per woman was 4.8, compared with 2.9 in 1994, and 2.5 today.
- Looking ahead to future challenges, the UN agency highlights the threat to women's and girls' reproductive rights posed by emergencies caused by conflict or climate disasters.
- About 35 million women, girls and young people will need life-saving sexual and reproductive health services this year, as well as services to address gender-based violence, in humanitarian settings, it warns.

Monsoon Forecast:

India will likely see a "normal monsoon" this year. Rainfall will be 96% of the Long Period Average of 89cm, the India Meteorological Department said on Monday.

Terminology Used:

- Rainfall that's 96-104% of the LPA is considered "near normal" in the IMD lexicon.
- Normal percentage departure of realised rainfall is within $\pm 10\%$ of the Long Period Average
- Below Normal percentage departure of realised rainfall is $< 10\%$ of the Long Period Average
- Above Normal percentage departure of realised rainfall is $> 10\%$ of the Long Period Average



Current Affairs From 09th April to 30th April 2019

- All India Drought Year When the rainfall deficiency is more than 10% and when 20 to 40% of the country is under drought conditions, then the year is termed as All India Drought Year
- All India Severe Drought Year When the rainfall deficiency is more than 10% and when the spatial coverage of drought is more than 40% it is called as All India Severe Drought Year

Intense Thunderstorm activity over Northwest India

Analysis of Weather Conditions

Numerical model products, satellite information, and analysis of weather observations are indicating that a strong western disturbance is approaching and would adversely affect weather over Northwest India including Delhi-NCR during **15-17 April with peak activity on 16 April.**

What does it Mean?

- The western disturbance on approaching Northwest India will draw fresh moisture from Arabian Sea as well as from Bay of Bengal, with both the streams confluence over central India and neighbourhood.
- **The thermodynamic atmospheric conditions would become favorable for development of instability in the atmosphere and occurrence of widespread Thunderstorm activity over the region.**

What is Western Disturbance?

- A *Western Disturbance* is an [extratropical storm](#) originating in the [Mediterranean region](#) that brings sudden winter rain to the northwestern parts of the Indian subcontinent.
- It is a non-[monsoonal](#) precipitation pattern driven by the [westerlies](#).
- The moisture in these storms usually originates over the [Mediterranean Sea](#) and the [Atlantic Ocean](#).
- Extratropical storms are a global phenomena with moisture usually carried in the upper atmosphere, unlike their [tropical counterparts](#) where the moisture is carried in the lower atmosphere.
- In the case of the Indian subcontinent, moisture is sometimes shed as rain when the storm system encounters the [Himalayas](#).
- Western Disturbances are important for the development of the [Rabi crop](#), which includes the locally important staple [wheat](#).



Current Affairs From 09th April to 30th April 2019

Heat & Cold Wave

Why in News?

Heat waves and cold waves in the country have increased manifold in the past two years, according to data put out by the Ministry of Statistics and Program Implementation.

Detailed Observation:

- While the number of reported casualties declined in the case of heat waves, they have increased in the case of cold waves.
- Rajasthan experienced the highest number of heat and cold waves from 1970 to 2018.

Extremes of temperature

- While the number of heat waves increased 14 times in 2017 compared to 2016, the number of cold waves spiked 34 times in the same period. The numbers for 2018 dropped marginally.

Punishing heat and cold

- The number of heat-related deaths has come down despite an increase in heat waves since 2015. However, the number of deaths due to cold waves has risen in this period.
- Over 3,000 people died due to heat waves in 2015 and 2016.

Mapping hotspots and cold pockets

- Rajasthan and Andhra Pradesh & Telangana (considered a single entity) have been hit by the most number of heat waves.



Current Affairs From 09th April to 30th April 2019



Rajasthan, Uttar Pradesh and Bihar have had the highest number of cold waves from 1970 to 2018. South India has not been hit much by cold waves.

How is it Defined?

- According to the [Indian Meteorological Department](#) (IMD), a heat wave is qualified when air temperatures of at least 40 °C (104 °F) in the plains or greater than 30 °C (86 °F) in the hilly regions.
- For the IMD classification of heat waves, temperatures greater than 46 °C (114.8 °F) are considered and classified as severe heat waves.
- When normal minimum temperature is equal to 10°C or more. Cold Wave Departure from normal is -5°C to -6°C.
- Severe Cold Wave Departure from normal is -7°C or less.
- When normal minimum temperature is less than 10°C. Cold Wave Departure from normal is -4°C to -5°C. Severe Cold Wave Departure from normal is -6°C or less

Effect of Monsoon:

Earlier this year, the India Meteorological Department (IMD) had predicted the country would get normal monsoon rains in 2017.

The state-run weather body last week said India's annual monsoon rainfall is expected to be 98% of the long-period average (LPA), up from 96% projected earlier, raising prospects of higher farm output and economic growth.

Why are monsoon rains important for India?

- The monsoon is the lifeblood for India's farm-dependent \$2 trillion economy, as at least half the farmlands are rain-fed.
- The country gets about 70% of annual rainfall in the June-September monsoon season, making it crucial for an estimated 263 million farmers.
- About 800 million people live in villages and depend on agriculture, which accounts for about 15% of India's gross domestic product (GDP) and a failed monsoon can have a rippling effect on the country's growth and economy.



Current Affairs From 09th April to 30th April 2019

- Whereas, a normal to above-normal and well-distributed monsoon boosts farm output and farmers' income, thereby increasing the demand for consumer and automotive products in rural markets.

What happens in case of a poor monsoon?

- The monsoon has a direct impact on the country's agricultural GDP. The planting of key kharif, or summer, crops like rice, sugar cane, pulses and oilseeds begins with the arrival of monsoon rains in June.
- Summer crops account for almost half of India's food output and a delayed or poor monsoon means supply issues and acceleration in food inflation, a key metric which influences Reserve Bank of India's decision on interest rates.
- A deficit monsoon could also lead to a drought-like situation, thereby affecting the rural household incomes, consumption and economic growth.
- A poor monsoon not only leads to weak demand for fast-moving consumer goods, two-wheelers, tractors and rural housing sectors but also increases the imports of essential food staples and forces the government to take measures like farm loan waivers, thereby putting pressure on finances.
- Whereas a normal monsoon results in a good harvest, which in turn lifts rural incomes and boosts spending on consumer goods.
- It also has a positive impact on hydro power projects.

Agricultural Yield:

Why in News?

This summer's foodgrain production is likely to be higher than last year's, according to the Agriculture Ministry targets for the kharif season, riding on the back of the Indian Meteorological Department's [forecast](#) of a "near-normal" monsoon.

Expected Production:

- Rice production this summer is expected to hit 102 million tonnes, while total foodgrain production is being pegged at 147.9 million tonnes, according to the Ministry's presentation at its annual Kharif Conference on Thursday.
- These targets for kharif 2019 are higher than last year's targets, as well as the actual output in 2018.



Current Affairs From 09th April to 30th April 2019

- Second advance estimates show foodgrain production touching 142.24 million tonnes in the 2018 kharif season, with rice output of 101.96 MT.

Rabi harvest

- The Ministry is also targeting a higher rabi or winter season harvest in 2019, with foodgrain production set at 143.2 MT.
- The wheat production target is marginally higher than last year's target at 100.5 MT.
- With regard to coarse cereals, the Ministry has maintained its targets for jowar, bajra, small millets and barley at exactly the same level as last year, but hopes to increase the production of maize, projecting a 1.6 MT increase to hit a production of 28.9 MT from both kharif and rabi seasons together.
- This has pushed up the overall coarse cereal target to 48.3 MT in the coming year.

Cane farmers hit hard

- Sugarcane production is likely to set a new record again this year, with the Ministry projecting a harvest of 385.5 MT, a jump from last year's target of 355 MT.
- Record harvests over the last few years have caused a glut in production, leading to a crash in sugar prices, leaving cane farmers in the lurch as mills are unable to pay them their pending dues.
- Oilseeds production targets for 2019-20 remained steady at 36.1 MT, while cotton production targets increased minimally to 35.75 million bales, with each bale representing 170 kg.

Plate tectonics:

Why in News?

When the landmass that is now the Indian subcontinent slammed into Asia about 50 million years ago, the oxygen in the world's oceans increased, altering the conditions for life, scientists say.

The collision was already known to have changed the configuration of the continents, the landscape, global climate and more.



Current Affairs From 09th April to 30th April 2019

What does Study say?

- Scientist used microscopic seashells to create a record of ocean nitrogen over a period from 70 million years ago – shortly before the extinction of the dinosaurs – until 30 million years ago.
- In addition to being the most abundant gas in the atmosphere, nitrogen is key to all life on Earth.
- Every organism on Earth requires “fixed” nitrogen – sometimes called “biologically available nitrogen.”
- Nitrogen has two stable isotopes: 15N and 14N. In oxygen-poor waters, decomposition uses up “fixed” nitrogen.
- This occurs with a slight preference for the lighter nitrogen isotope, 14N, so the ocean’s 15N-to-14N ratio reflects its oxygen levels.
- That ratio is incorporated into tiny sea creatures called foraminifera during their lives, and then preserved in their shells when they die.
- By analysing their fossils researchers were able to reconstruct the 15N-to-14N ratio of the ancient ocean, and therefore identify past changes in oxygen levels.

Significance:

- Oxygen controls the distribution of marine organisms, with oxygen-poor waters being bad for most ocean life.
- Many past climate warming events caused decrease in ocean oxygen that limited the habitats of sea creatures, from microscopic plankton to the fish and whales that feed on them.
- Scientists trying to predict the impact of current and future global warming have warned that low levels of ocean oxygen could decimate marine ecosystems, including important fish populations.
- When the researchers assembled their unprecedented geologic record of ocean nitrogen, they found that in the 10 million years after dinosaurs went extinct, the 15N-to-14N ratio was high, suggesting that ocean oxygen levels were low.
- They first thought that the warm climate of the time was responsible, as oxygen is less soluble in warmer water.

The collision of India with Asia closed off an ancient sea called the Tethys, disturbing the continental shelves and their connections with the open ocean.



Current Affairs From 09th April to 30th April 2019

GS-2

Dowry Rulings:

Why in News?

The Supreme Court on Tuesday held that a woman, who fled the of cruelty of her marital home, can file a case of dowry harassment under Section 498 IPC against her husband and in-laws at the place where she is currently sheltered.

Details:

- In a judgment further expanding the jurisdiction of courts to provide relief to victims of dowry harassment, a Bench led by Chief Justice of India Ranjan Gogoi relaxed the rigours of the Code of Criminal Procedure (CrPC).
- Section 177 of the Code mandates that criminal cases can be filed and tried only in courts within whose jurisdiction the crime occurred.
- The judgment comes on a reference made by the Supreme Court in January 2014 on the question "whether a case of cruelty on account of dowry harassment punishable under Section 498A of the IPC can be registered, investigated and punished in a jurisdiction different from the one from which the aggrieved spouse has been forced out on account of such harassment."

Background:

- The appeal was by Rupali Devi whose efforts to file a dowry harassment from her parents' place of residence, where she had fled to, was dismissed by the Allahabad High Court.
- The High Court had taken the view that cruelty punishable under Section 498A of the IPC was not a "continuing offence", nor can it be investigated or punished in a jurisdiction outside the one in which the matrimonial house of the victim is situated.
- With this judgment, the apex court has established that cruelty under Section 498A is a continuing offence, considering the facts and circumstances of each case.

Pradhan Mantri Ujjwala Yojna (PMUY)



Current Affairs From 09th April to 30th April 2019

The hidden truth of the Pradhan Mantri Ujjwala Yojna (PMUY), being touted in the Bharatiya Janata Party's (BJP) election campaigning as one of the big successes of the incumbent government, is that most rural households with LPG (liquified petroleum gas) connections still use *chulhas* with firewood or dung cakes, to the detriment of rural health.

Financial reasons

- A new study from the Research Institute for Compassionate Economics (r.i.c.e) shows that 85% of Ujjwala beneficiaries in rural Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan still use solid fuels for cooking, due to financial reasons as well as gender inequalities.
- The resultant indoor air pollution can lead to infant deaths and harm child development, as well as contribute to heart and lung disease among adults, especially the women, cooking on these *chulhas*.
- The survey, conducted in late 2018, covered a random sample of 1,550 households in 11 districts of the four States, which collectively have two-fifths of the country's rural population.
- The trend is more acute among those who received an LPG connection from the government; almost 53% exclusively used the chulha, while 32% used both.
- Gender inequalities also play a role.
- Surveyors found that almost 70% of households do not spend anything on solid fuels, meaning that the relative cost of an LPG cylinder refill, even if subsidised, is far higher.
- Women are more likely to make dung cakes, and while men are more likely to cut wood, women are often the ones collecting and carrying it.

About the Yojana:

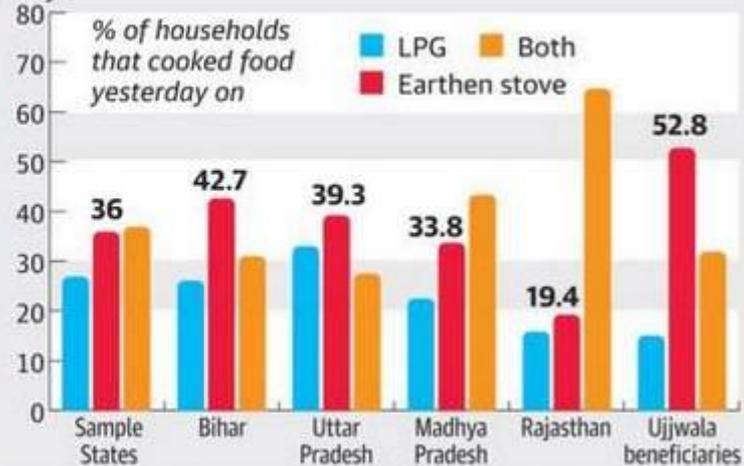
- The Ujjwala Yojna, launched in 2016, subsidises LPG connections for rural households by providing a free gas cylinder, regulator and pipe.
- Central [government](#) data shows that more than six crore households have received a connection through the scheme.
- The r.i.c.e study shows that in the four States surveyed, there has indeed been a substantial increase in LPG ownership due to the scheme, with 76% of households now owning an LPG connection.
- However, more than 98% of these households also own a *chulha*.



Current Affairs From 09th April to 30th April 2019

Awareness falling short

Only 27% of households in the sample States reported exclusively using liquefied petroleum gas to cook food a day before the survey



2018 Survey of rural sanitation and solid fuel use & Gupta-Vyas et al 2019, Persistence of solid fuel use in rural north India

VVPAT

Why in News?

A Bench led by Chief Justice of India Ranjan Gogoi increased the number of EVM-VVPATs subjected to physical verification in order to "ensure the greatest degree of accuracy, satisfaction in election process."

Details:

- The Supreme Court on Monday increased voter verified paper audit trail (VVPAT) verification to five random Electronic [Voting](#) Machines (EVMs) in each Assembly segment/constituency.
- In case of general elections, VVPAT slips of five EVMs in each Assembly segment of a Parliamentary Constituency would be subject to physical counting.
- In State Assembly elections, the VVPAT verification would extend to five random EVMs in each Assembly constituency.
- The [Supreme Court](#) order would be implemented in the Lok Sabha polls, scheduled to commence from April 11.

Background:



Current Affairs From 09th April to 30th April 2019

- Earlier, under the ECI guideline 16.6, only the VVPAT slips from one EVM in every Assembly segment/constituency was subjected to physical verification.
- Now, with five such EVMs under physical scrutiny, the apex court said the election would see "fool-proof."
- The Supreme Court's decision is a far shot from what 21 Opposition parties wanted.

What is VVPAT?:

Q WHAT IS VVPAT?

A. Voter Verifiable Paper Audit Trail (VVPAT) helps voters to physically confirm the choice they have made. It consists of:

- A printer that gives a record of voters' selection
- A display unit that shows any error

Q HOW IT WORKS?

A. The printed VVPAT slip is displayed for 7 seconds before it is automatically cut and delivered to a sealed ballot compartment

Q WHAT THE VVPAT SLIP CONTAINS?

A.

- A candidate serial number
- Name of the candidate
- Corresponding symbol.

VVPAT paper roll is designed for printing **1,500** ballot slips for each election

Islamic Revolutionary Guard Corps (IRGC):

Why in News?

President Donald Trump on Monday announced the United States is designating Iran's elite military force, the Islamic Revolutionary Guard Corps (IRGC), a terrorist organisation.



Current Affairs From 09th April to 30th April 2019

The new measure would criminalise contact with the Guards and "enable our prosecutors to bring charges to those that bring material support to the IRGC."

About IRGC:

- The Islamic Revolutionary Guard Corps was formed after the 1979 Islamic revolution with a mission to defend the clerical regime.
- The **Islamic Revolutionary Guard Corps (IRGC)** is a branch of [Iran's Armed Forces](#) founded after [1979 Revolution](#) on 22 April 1979 by order of [Ayatollah Khomeini](#).
- Whereas [the regular military \(or Artesh\)](#) defends [Iran's](#) borders and maintains internal order, according to the Iranian constitution, the Revolutionary Guard (*pasdaran*) is intended to protect the country's [Islamic Republic system](#).
- The Revolutionary Guards state that their role in protecting the Islamic system is preventing foreign interference as well as coups by the military or "deviant movements"

Belt and Road Initiative:

The story so far:

Six years ago, Chinese President Xi Jinping launched a mammoth infrastructure project straddling many countries and continents. Of the projects, the most ambitious is the \$60+ billion China-Pakistan Economic Corridor, aimed at linking China's Xinjiang province with the Arabian Sea.

What is it?

- The Belt and Road Initiative (BRI), also known as the One Belt One Road Initiative, is the most emblematic of China's economic and industrial might, as of its ambitions for global, political and strategic influence.
- BRI partnerships encompass infrastructure investments in the construction, transport, aviation, telecommunications and energy sectors stretching across many countries in Asia and Africa.
- With the rise of populist forces in many countries in recent years, the world's open trading system has come under a protectionist strain.
- Perhaps, there are signs in the BRI of the beginnings of a different kind of globalisation.



Current Affairs From 09th April to 30th April 2019

Why did China push for it?

- The BRI is, above all, a response to slowing domestic economic growth earlier this decade, accentuated by a slump in Chinese exports to developed countries following the 2007-08 economic meltdown.
- As infrastructure spending at home became less sustainable, Beijing shifted the emphasis in a big way to boosting the global competitiveness of domestic businesses.
- But the more common narrative is that the large infrastructure investments in the least developed and developing countries have enabled Beijing to leverage its influence around the world, potentially altering the established rules of the global order.

How many major BRI projects are in the works?

- It is hard to put a precise number on them because projects are negotiated informally between investor and recipient countries.
- But they are clearly in the thousands, unprecedented in the history of development cooperation, in terms of the volume of investment and potential benefits. Let us begin with the Greek harbour of Piraeus.
- Backed by Chinese investment, the port has climbed from the world's 93rd container port in 2010 to 38th in 2017.
- By far the most ambitious BRI project is the \$60+ billion China-Pakistan Economic Corridor.

CPEC:

- Once the Gwadar city port in coastal Balochistan is built, its strategic location, near the Strait of Hormuz, will connect the Arabian Sea and the Gulf of Oman, the arterial route to world oil transport.
- The force of Balochi opposition to the China-Pakistan Economic Corridor, as to most other projects, essentially comes down to a demand to reallocate its promised benefits rather than an outright roll-back.
- India has opted to stay out of the BRI owing to concerns of national sovereignty and integrity, choosing instead to stick with the Shanghai Cooperation Organisation.



Current Affairs From 09th April to 30th April 2019

- New Delhi's reservations are entirely understandable, given that the China-Pakistan Economic Corridor, a core BRI endeavour, passes through the Pakistan-occupied Kashmir.

Where does the BRI go from here?

- Many BRI projects are said to have overshot their original estimated cost. The burgeoning debt burden recipient countries have thus accumulated has led to questions over the long-term viability and benefits of such ventures.
- While these may be legitimate concerns, it is equally true that it is still early days in the evolution of the BRI.
- Another concern for the BRI is its current dependence on the U.S. dollar to fund the bulk of its projects.
- That may leave China with the option of adopting a co-financing strategy. Such cooperation with multilateral banking institutions would be a welcome balancing act. Western critics have attacked the initiative as new colonialism, or Marshal Plan for the 21st century.
- One day, the BRI might remain Chinese in all but name. That may be the next phase of globalisation in the making.

National Green Tribunal (NGT)

Why in News?

The National Green Tribunal (NGT) has constituted a Central Monitoring Committee to ensure the implementation of action plan meant for reducing pollution stretches across the country.

Details:

A Bench headed by NGT Chairperson Justice Adarsh Kumar Goel said, "Having given due consideration to the serious issue and inadequacy of success achieved so far, we find it necessary to constitute a Central Monitoring Committee to undertake a national initiative by way of preparation and enforcement of a national plan to make river stretches pollution-free."

Members:



Current Affairs From 09th April to 30th April 2019

- Senior representatives of NITI Aayog, Secretaries of the Ministry of Water Resources, Ministry of Urban Development, Ministry of Environment, Forest and Climate Change will be a part of the committee, apart from the Chairman, Central [Pollution Control](#) Board and Director General, National Mission for Clean Ganga, the NGT said.

Function of Committee:

- The Committee has been asked to coordinate with the respective States to oversee the action plans and ensure execution of the same in a time-bound manner.
- Additionally, the Union Environment Ministry was directed to consider a policy for giving "environmental awards" to institutions and States that comply with orders and ensure reduction in pollution.

Other steps taken:

- The CPCB, along with the respective State pollution control boards and pollution control committees, was directed to launch a nationwide programme on biodiversity monitoring and indexing of the rivers to "assess the efficacy of river cleaning programmes."
- "Further, for the safety of human health and maintaining sanctity of the rivers, regular hygienic surveys of the rivers should be carried out with reference to fecal coliform and fecal streptococci, as indicated in the primary water quality criteria for bathing water.

Electoral Bond:

Why in News?

Refusing the government's advice to steer clear of the electoral bonds scheme of political funding, the [Supreme Court](#) on Friday passed interim directions, directing political parties to provide full information on each and every political donor and contributions made through electoral bonds in sealed cover to the Election Commission of India (ECI).

Details:



Current Affairs From 09th April to 30th April 2019

- A Bench led by Chief Justice of India Ranjan Gogoi said the issue of electoral bonds and their lack of transparency was a "weighty" one and required in-depth hearing.
- The court ordered the political parties to start providing forthwith the Election Commission of India (ECI) with details of each donor, every electoral bond through which contribution was received and the amount received on each bond till date.
- The parties have been given time to provide all the details before May 30. The information is to be provided to the ECI in sealed covers.
- The poll body would keep them secure.
- The government's position was starkly in contrast to the stand of the ECI.

ECI's Stand:

- The ECI had submitted to the apex court that electoral bonds have legalised anonymity of political donors and the parties receiving contributions.
- The ECI had said the right to vote meant the right to make an informed choice. The Commission said knowing the candidate was only "half the exercise."
- The voters should also know the source of funding of political parties who prop up these candidates.

About Electoral Bonds:

- The government had notified the Electoral Bond Scheme 2018 on January 2, 2018.
- As per provisions of the scheme, electoral bonds may be purchased by a person, who is a citizen of India or incorporated or established in India.
- A person being an individual can buy electoral bonds, either singly or jointly with other individuals.
- Only political parties registered under Section 29A of the Representation of the People Act, 1951 and which secured not less than one per cent of

Indo-US Relation:



Current Affairs From 09th April to 30th April 2019

Far from the din of elections, Indian officials are working closely with U.S. officials to ensure that two upcoming deadlines in early May, for the extension of the Iran oil sanctions waiver, as well as the final decision on withdrawing India's preferential Generalised System of Preferences (GSP) status, end positively for the government.

Lower quotas

- While the decision on the GSP could be deferred until after elections, the discussions on the Iran oil sanctions waiver have indicated an extension is likely, with India allowed a lower quantity of oil [imports](#) from Iran.
- India, Turkey and China remain the only countries with significant imports.
- According to informed sources, the U.S. is considering an extension of the six-month waiver, but reducing the quantity of oil India can import from the previous allowance of nine million barrels a month. .

What is the Generalized System of Preferences (GSP)?

- The Generalized System of Preferences (GSP) is a U.S. trade program designed to promote economic growth in the developing world by providing preferential duty-free entry for up to 4,800 products from 129 designated beneficiary countries and territories. GSP was instituted on January 1, 1976, by the Trade Act of 1974.

Outstanding issues

- According to the officials, out of the nine outstanding issues on trade, the two sides were able to narrow differences on all but two or three, which were irreconcilable, and led to the U.S. notice on cancelling GSP.
- These include the issue of certifying dairy products from "vegetarian" cows, and the price caps on medical devices like stents — both of which had originally triggered the GSP review in April 2018.

Case in WTO

- The U.S. also remains concerned about duties and regulations in the Information Technology industry, — an issue for which the European Union has filed a case against India at the World Trade Organisation (WTO) this week.



Current Affairs From 09th April to 30th April 2019

- In addition, officials said the U.S. is watching India's decision on 5G technology closely, particularly the fate of the bid by Chinese company Huawei, given the U.S.'s cases against it.

Government E Marketplace (GeM)

Government e Marketplace (GeM), the national public procurement portal offering end to end solution for all procurement needs of Central and State govt. departments and PSUs has closed the FY 2018-19 on a high note.

Success Achieved:

- The year witnessed a four-fold increase in total value of transactions on the portal and doubling of number of sellers in the marketplace.
- There has also been an overall growth in other dimensions like number of categories, products and buyers.
- Despite such phenomenal growth in transactions, average rejection rate of supplies remained below one percent, which is proof of high quality of products/services offered on the portal.
- During the year, GeM was awarded Digital India Platinum Award for 'Exemplary Online Service' by the Ministry of Electronics & IT (MeitY).
- It was also nominated for the prestigious UN-ITU WSIS.
- Another programme like SWAYATT- an initiative to promote Start-ups, Women and Youth Advantage Through e-Transactions, was launched in February 2019.

Impact:

- Since its inception on 9th August 2016, GeM has transformed public procurement in the country by leveraging technology and making procurement contactless, paperless, and cashless.
- GeM facilitates procurement at the right price, right quality and right quantity in a transparent and efficient manner.
- The platform reduces manual process inefficiencies and human interventions in procurement and enables increased coverage, access, and efficiency of faceless standardised public procurement.

MoU between India and Bolivia on Cooperation in the Field of Traditional Systems of Medicine and Homoeopathy

The Union Cabinet chaired by Prime Minister Narendra Modi has given ex-post facto approval to the Memorandum of Understanding (MoU) between India and Bolivia in



Current Affairs From 09th April to 30th April 2019

the Field of Traditional Systems of Medicine and Homoeopathy. The MoU was signed in Bolivia in March, 2019.

Impact:

- The MoU will provide a framework for cooperation, and will be mutually beneficial between the two countries for promotion of traditional systems of medicine and homoeopathy. I
- It will lead to promotion and propagation of Traditional Systems of Medicine and Homoeopathy in Bolivia, and will boost the importance of AYUSH (Ayurveda, Yoga, Unani, Siddha and Homoeopathy) systems of Medicine in Bolivia.
- The MoU will further facilitate exchange of experts for training for the practitioners and Scientists undertaking collaborative research, which will lead to new innovations in drug development and practice in Traditional Systems of Medicine.

STA-1 status for India:

Why in News?

India has become the third Asian country after Japan and South Korea to get the Strategic Trade Authorisation-1 (STA-1) status after the U.S. issued a federal notification to this effect, paving the way for high-technology product sales to New Delhi, particularly in civil space and defence sectors.

India is the 37th country to be designated the STA-1 status by the United States.

Background:

- The federal notification, issued on August 3, gains significance as the Trump Administration made an exception for India, which is yet to become a member of the Nuclear Suppliers Group (NSG).
- Traditionally, the U.S. has placed only those countries in the STA-1 list who are members of the four export control regimes: Missile Technology Control Regime (MTCR), Wassenaar Arrangement (WA), Australia Group (AG) and the NSG.
- In its federal notification, the Trump Administration notes that India is a member of three of the four multilateral export regimes.
- Mainly because of the political opposition from China, India's membership application has been pending before NSG, which takes decision by consensus.



Current Affairs From 09th April to 30th April 2019

Export control regimes

- By placing India in the STA-1 list, the United States has acknowledged that for all practical purposes India adheres to the export control regimes of the NSG.
- This exception for New Delhi is intended to send a strong political message to China and the world, taking into account that America's closest ally Israel is yet to be given this status, primarily because it is not a member of these multilateral export control regimes.

Benefits to India:

- This action befits India's status as a Major Defence Partner and recognises" the country's membership in three of the four export control regimes — the MTCR, WA and AG, the federal notification said.
- This rule is another in the series of rules that implement reforms to which the U.S. and India mutually agreed to promote global non-proliferation, expand high technology cooperation and trade, and ultimately facilitate India's full membership in the four multilateral export control regimes.

Military modernisation

- To date, with the effective support of the U.S., India has been admitted to three of the four multilateral export control regimes, the MTCR on June 27, 2016, the Wassenaar Arrangement on December 7, 2017, and the Australia Group on January 19, 2018.
- "This recognition facilitates and supports India's military modernisation efforts with the U.S. as a reliable provider of advanced defence articles.
- In addition, to export control-related benefits for India as a result of prior amendments to the EAR in furtherance of the U.S.-India global strategic partnership, BIS places India in Country Group A:5, which provides the benefit of greater availability of License Exception Strategic Trade Authorisation (STA) for [exports](#) and reexports to, and transfers within India under the EAR.

India so far was listed in STA-2 category along with Albania, Hong Kong, Israel, Malta, Singapore, South Africa and Taiwan.

HOME EXPO INDIA 2019 BEGINS



Current Affairs From 09th April to 30th April 2019

The 8th edition of HOME EXPO INDIA 2019 opened at India Expo Centre and Mart, Greater Noida today. The three-day exhibition has been organized by the Export Promotion Council for Handicrafts (EPCH).

About the Expo:

- Select exhibitors, premium products and invited buyers are the attention of this year's home expo.
- Buyers from more than 50 countries including USA, Europe, Argentina, Brazil, Chile, Colombia, UAE, Lebanon, Iran, Nigeria, Ghana, South Africa, Vietnam and Romania will be visiting the home expo.
- Home Expo India covers sectors with maximum thrust and growth potential in home décor, furnishing, furniture, flooring, and textiles.
- About 500 companies in permanent marts will be exhibiting their collection under these categories at the state of the art India Expo Centre & Mart from 16 – 18 April, 2019.
- During Home Expo India, a thematic display of the North Eastern region and other artisans will also attract the visitors.

What is EPCH?

- EPCH is the nodal export promotion body for handicrafts in India and plays an important role with the main objective of boosting trade in handicrafts and also projects India's image in the global market as a reliable supplier.

Indo-China Relation:

Why in News?

China on Friday said its ties with India had a "bright future" and they were preparing for a summit between their leaders as a follow-up to last year's two-day across-the-board [Wuhan informal summit](#) between President Xi Jinping and Prime Minister Narendra Modi.

Differences between two nations:

- India and China were limiting the threshold of their differences so that overall development of ties remained unhampered.
- The Indian side wants to put our differences at a proper level in order not to interfere in the proper development of our relations.



Current Affairs From 09th April to 30th April 2019

- China understood India's "concerns" about the China [Pakistan](#) Economic Corridor (CPEC), but counselled New Delhi not to view the project—a flagship of the BRI—as an infringement of its "sovereignty".
- One of our fundamental differences is how to look at the Belt and Road Initiative.

India's stance against CPEC

- India has slammed CPEC, stating that it was an affront to its sovereignty as it passes through Pakistan occupied Kashmir (PoK).
- The Chinese top diplomat rubbished accusations that BRI projects were "debt traps".
- Instead, he said, the mega-connectivity project to revive the ancient Silk Road had generated benefits.
- The total trade volume between China and participating countries had surpassed 6 trillion dollars and investments had scaled 80 billion dollars, generating 300,000 jobs.

About Wuhan Summit:

- Thirty-seven heads of state or heads of government, including leaders from Russia, Italy, Hungary, Austria, Switzerland, Malaysia and Singapore, as well as high level representatives from France, Germany, UK, Spain the European Union and Republic of Korea, will attend the mega event.

Jat Quota Agitation:

Why in News?

Jat quota agitation that started a week ago, turned [> violent resulting in deaths of 10 people](#) and dozens, including security personnel, injured.

The Army has been called in to eight districts — Rohtak, Bhiwani, Jhajjar, Sonipat, Hisar, Panipat, Jind and Kaithal and over 5,000 security personnel have been deployed in affected districts.

Who are Jats?



Current Affairs From 09th April to 30th April 2019

- In Haryana, Jats are a politically influential community and constitute nearly 29 per cent of the population.
- Jats originally belonged to farming communities and now mostly live in Haryana, Punjab, Delhi, Rajasthan and UP.
- Their population in total is about 82.5 million. Over the years, they have become politically active in certain states, especially in Haryana and Punjab.

What are their demands

- Jats, Jat Sikhs, Rors, Tyagis and Bishnois, are seeking reservation under the Other Backward Classes(OBC) category.
- They had been promised that the Economically Backward Category(EBC) quota will be increased from 10% to 20% by the state government.
- In addition to this they were also promised the annual income ceiling from Rs 2.5 lakh to Rs 6 lakh to accommodate more people under the category.

Lokpal in India:

The story so far:

On March 19, Justice Pinaki Chandra Ghosh was appointed as India's first Lokpal.

The announcement came after a delay of five years as the Lokpal and Lokayukta Act, which envisaged appointment of a Lokpal at the Centre and Lokayuktas in the States to look into cases of corruption against certain categories of public servants, was passed in 2013.

Now that the Lokpal chairman and eight members have been appointed, there may arise many questions related to its functions, duties and powers.

Who are the public servants covered by the Act?

The Lokpal has jurisdiction to inquire into allegations of corruption against anyone who is or has been Prime Minister, or a Minister in the Union government, or a Member of Parliament, as well as officials of the Union government under Groups A, B, C and D.



Current Affairs From 09th April to 30th April 2019

Also covered are chairpersons, members, officers and directors of any board, corporation, society, trust or autonomous body either established by an Act of Parliament or wholly or partly funded by the Centre.

It also covers any society or trust or body that receives foreign contribution above ₹10 lakh.

What happens if a charge is made against the PM?

- The Lokpal cannot inquire into any corruption charge against the Prime Minister if the allegations are related to international relations, external and internal security, public order, atomic energy and space, unless a full Bench of the Lokpal, consisting of its chair and all members, considers the initiation of a probe, and at least two-thirds of the members approve it.
- Such a hearing should be held in camera, and if the complaint is dismissed, the records shall not be published or made available to anyone.

How can a complaint be made and what happens next?

- A complaint under the Lokpal Act should be in the prescribed form and must pertain to an offence under the Prevention of Corruption Act against a public servant.
- There is no restriction on who can make such a complaint.
- When a complaint is received, the Lokpal may order a preliminary inquiry by its Inquiry Wing, or refer it for investigation by any agency, including the CBI, if there is a *prima facie* case.
- Before the ordering of an investigation by the agency, the Lokpal shall call for an explanation from the public servant to determine whether a *prima facie* case exists.
- This provision, the Act says, will not interfere with any search and seizure that may be undertaken by the investigating agency.
- The Lokpal, with respect to Central government servants, may refer the complaints to the Central Vigilance Commission (CVC).
- The CVC will send a report to the Lokpal regarding officials falling under Groups A and B; and proceed as per the CVC Act against those in Groups C and D.

What is the procedure for preliminary inquiry?



Current Affairs From 09th April to 30th April 2019

- The Inquiry Wing or any other agency will have to complete its preliminary inquiry and submit a report to the Lokpal within 60 days.
- A Lokpal Bench consisting of no less than three members shall consider the preliminary inquiry report, and after giving an opportunity to the public servant, decide whether it should proceed with the investigation.
- It can order a full investigation, or initiate departmental proceedings or close the proceedings.
- It may also proceed against the complainant if the allegation is false. The preliminary inquiry should normally be completed within 90 days of receipt of the complaint.

What happens after the investigation?

- The agency ordered to conduct the probe has to file its investigation report in the court of appropriate jurisdiction, and a copy before the Lokpal.
- A Bench of at least three members will consider the report and may grant sanction to the Prosecution Wing to proceed against the public servant based on the agency's chargesheet.
- Now this power will be exercised by the Lokpal, a judicial body. In any case, the Lokpal will have to seek the comments of the 'competent authority' as well as the public servant's comments before granting such sanction.

Who are the functionaries of the Lokpal?

- The Lokpal will have a Secretary, who will be appointed by the Lokpal Chairperson from a panel of names prepared by the Central government.
- The Secretary will be of the rank of Secretary to the Government of India. The Lokpal will have to appoint an Inquiry Wing, headed by a Director of Inquiry, and a Prosecution Wing, headed by a Director of Prosecution.
- Until these officers are appointed, the government will have to make available officers and staff from its Ministries and Departments to conduct preliminary inquiries and pursue prosecution.
- The institution will also have to appoint other officers and staff.

Is there any norm for disclosure of assets?

- Yes. Public servants will have to declare their assets and liabilities in a prescribed form.



Current Affairs From 09th April to 30th April 2019

- If any assets found in their possession is not declared, or if misleading information about these are furnished, it may lead to an inference that assets were acquired by corrupt means.
- For public servants under the State governments, the States have to set up Lok Ayuktas to deal with charges against their own officials.

Oil Price Rise:

Oil prices jumped on Monday as the United States looked set to announce that all buyers of Iranian oil must end their imports or be subject to sanctions.

Why?

- News that the United States is preparing to announce on Monday that current buyers of Iranian oil would no longer be given waivers to sanctions was first reported on Sunday by the Washington Post.
- "Should Iran's sanction waivers indeed be lifted, that could boost oil prices towards the \$80 per barrel mark," said Han Tan, analyst at futures brokerage FXTM.

Background:

- Prior to the re-imposition of sanctions, [Iran](#) was the fourth-largest producer among the Organization of the Petroleum Exporting Countries (OPEC) at almost 3 million barrels per day (bpd), but April exports have shrunk well below 1 million bpd, according to ship tracking and analyst data in Refinitiv.
- The United States put the sanctions back on Iranian oil exports after President Donald Trump unilaterally pulled out of a 2015 nuclear accord between Iran and six world powers.
- Washington, however, granted Iran's eight main buyers of oil, mostly in Asia, waivers to the sanctions which allowed them limited purchases for six months.
- Analysts said the end to the exemptions would hit Asian buyers hardest..
- Iran's biggest oil customers are China and India, who have both been lobbying for extensions to sanction waivers.
- South Korea is a major buyer of Iranian condensate, an ultra-light form of crude oil on which its refining and petrochemical industry relies heavily.

Already tight:



Current Affairs From 09th April to 30th April 2019

- Removing the sanctions exemptions would reduce oil supply from a market that is already tight because of U.S. sanctions against Iran and fellow OPEC-member Venezuela.
- Additionally, OPEC, along with other global oil producers, have already imposed supply cuts since the start of the year aimed at tightening global oil markets and propping up prices.
- As a result, Brent prices have risen by more than a third this year, while WTI has climbed more than 40 percent over the same period.

70TH Anniversary of PLA(N)

Why in News?

IN Ships Kolkata and Shakti entered Qingdao, China to participate in the International Fleet Review (IFR) as part of 70TH Anniversary Celebrations of PLA (Navy) on 21 Apr 19.

Details:

- The participation of Indian Navy in PLA (N) IFR, for third consecutive time (2009, 2014 and 2019), is a demonstration of the Nation's commitment to enhance maritime cooperation between the two navies and bolster bonds of friendship between the two Countries.
- The *IN* has deployed its finest assets for the IFR with an aim to strengthen existing cooperation, enhance mutual trust, extend interoperability and build greater synergy to address common maritime concerns among participating navies.

Earlier Visits:

- The *IN* Ships had earlier called at Port Cam Ranh Bay, Vietnam for a good will visit prior entering Qingdao.
- The ships are also scheduled to visit Port Busan, South Korea and Singapore on their return journey to India as part of Eastern Fleet Overseas Deployment.

Objectives:

The Annual Overseas Deployment to the South China Sea is an important facet of Government of India's 'Act East' policy and Indian Navy's efforts to "Unite Nations Through the Oceans", through which India wishes to extend the 'Bridges of



Current Affairs From 09th April to 30th April 2019

Friendship' through enhanced cultural, economic and maritime interactions with countries of East and South-East Asia.

MOU signed between Ministry of AYUSH and Council of Scientific and Industrial Research

A Memorandum of Understanding (MOU) was signed between the Ministry of AYUSH and Council of Scientific and Industrial Research (CSIR), New Delhi today for cooperation in research and education in areas of traditional systems of medicine and its integration with modern science.

- Previously, CSIR jointly with Department of AYUSH (now Ministry) developed the Traditional Knowledge Digital Library (TKDL), a globally recognized proprietary database on Indian systems of medicine for preventing bio-piracy and misappropriation of our traditional knowledge.

About CSIR:

- The **Council of Scientific and Industrial Research** abbreviated as **CSIR** was established by the [Government of India](#) in September of 1942 as an autonomous body that has emerged as the largest research and development organisation in India.
- As of 2013, it runs 38 laboratories/institutes, 39 outreach centers, 3 Innovation Centers and 5 units throughout the nation, with a collective staff of over 14,000, including a total of 3987 scientists and 6454 technical and support personnel.
- Although it is mainly funded by the [Ministry of Science and Technology](#), it operates as an autonomous body through the [Societies Registration Act, 1860](#).
- The research and development activities of CSIR include [aerospace engineering](#), [structural engineering](#), [ocean sciences](#), life sciences, [metallurgy](#), chemicals, [mining](#), [food](#), [petroleum](#), [leather](#), and [environmental science](#).

What is TKDL?

- The **Traditional Knowledge Digital Library (TKDL)** is an [Indian digital knowledge repository](#) of the [traditional knowledge](#), especially about [medicinal plants](#) and formulations used in Indian systems of medicine.
- Set up in 2001, as a collaboration between the [Council of Scientific and Industrial Research](#) (CSIR) and the [MINISTRY OF AYUSH](#) the objective of the



Current Affairs From 09th April to 30th April 2019

library is to protect the ancient and traditional knowledge of the country from exploitation through [biopiracy](#) and [unethical patents](#), by documenting it electronically and classifying it as per [international patent classification](#) systems.

- Apart from that, the non-patent database serves to foster modern research based on traditional knowledge, as it simplifies access to this vast knowledge of remedies or practices

RTI plea :

Why in News?

As Jet Airways' employees protest their delayed salaries and demand financial support from lenders to revive the airline, the Central Information Commission has delivered a ruling in favour of the employees of another beleaguered aviation company which may empower the former.

Ruling of CIC:

- CIC ruled that the information must be released, keeping in mind the larger public interest of not just Cambata employees, but those of Jet Airways and the defunct Kingfisher Airlines as well.
- In his ruling last Thursday, Central Information Commissioner Bimal Julka ruled that the exemption given to "personal information" under the RTI Act referred to an individual human being and not a corporate entity.
- He added that the details sought were in the larger public interest of the company's employees.
- The RTI applicant had alleged that Cambata had wilfully defaulted in payment of statutory dues of Provident Fund, medical and life insurance and other employee benefits, apart from depriving workers of their salaries, resulting in extreme financial hardship.
- It had also not issued Form 16 to employees from 2014-15, he said.

VVPAT

Why in News?

Andhra Pradesh Chief Minister N. Chandrababu Naidu on Tuesday asserted that Indian democracy could not be left to the mercy of EVM programmers, adding



Current Affairs From 09th April to 30th April 2019

Opposition parties had filed a review petition in the Supreme Court pressing for the counting of at least 50% VVPAT slips.

About VVPAT:

- **Voter verifiable paper audit trail (VVPAT) or verifiable paper record (VPR)** is a method of providing feedback to voters using a ballotless voting system.
- A VVPAT is intended as an independent verification system for [voting machines](#) designed to allow voters to verify that their vote was cast correctly, to detect possible [election fraud](#) or malfunction, and to provide a means to audit the stored electronic results.
- It contains the name of the candidate (for whom vote has been cast) and symbol of the party/individual candidate. The VVPAT must be destroyed by the voter before leaving the room.
- The VVPAT offers some fundamental differences as a paper, rather than [electronic recording medium](#) when storing votes.
- A paper VVPAT is readable by the human eye and voters can directly interpret their vote.

Iran-US Relation:

Why in News?

Iranian lawmakers on Tuesday overwhelmingly approved a Bill that labels all U.S. military forces as terrorist, state TV reported, a day after Washington ratcheted up pressure on Tehran by announcing that no country would any longer be exempt from U.S. sanctions if it continues to buy Iranian oil.

About the Proposal:

- The Bill is a step further from the one last week, when lawmakers approved labelling just U.S. troops in West Asia as terrorist, in response to the U.S. terrorism designation for Iran's Revolutionary Guards earlier this month.
- On Tuesday, 173 out of 215 lawmakers at the Parliament session in Tehran voted for the new Bill. Only four voted against while the rest abstained; the chamber has 290 seats. The Bill confirms Iran's earlier label of the U.S. Central Command and all its forces as terrorist.



Current Affairs From 09th April to 30th April 2019

- The Bill also demands the Iranian government take unspecified action against other governments that formally back the U.S. designation. Saudi Arabia, Bahrain and Israel have all supported the Trump administration's designation.

Background:

- On Monday, President Donald Trump decided to do away with waivers as part of the administration's "maximum pressure" campaign on [Iran](#).
- Iran's Foreign Ministry promptly brushed off Mr. Trump's move to stop the oil waivers, saying the Islamic Republic "basically has not seen and does not see any worth and validity for the waivers."

Measles in US:

Why in News?

The United States recorded 695 cases of measles in 2019, the most of any year since the disease was declared eliminated in 2000, health authorities said.

The high number of cases in 2019 is primarily the result of a few large outbreaks — one in Washington State and two large outbreaks in New York that started in late 2018," the Centers for Disease Control and Prevention said in a statement on Wednesday.

Reasons for Resurgence:

- The resurgence of the once-eradicated, highly-contagious disease is linked to a growing anti-vaccine movement in richer nations — which the World Health Organization has identified as a major global health threat.
- Outbreaks in the United States have mostly been confined to tight-knit communities where vaccination rates are lower than the national average of more than 90%.
- People infected with the virus brought it to the United States from Israel and Ukraine and passed it on to members of their communities, many of whom had not been vaccinated.

Background:



Current Affairs From 09th April to 30th April 2019

- The measles [vaccines](#) are among the most extensively studied medical products we have, and their safety has been firmly established over many years in some of the largest vaccine studies ever undertaken.

About Measles:

- **Measles** is a highly contagious [infectious disease](#) caused by the [measles virus](#). Symptoms usually develop 10–12 days after exposure to an infected person and last 7–10 days.
- Initial symptoms typically include [fever](#), often greater than 40 °C (104 °F), cough, [runny nose](#), and [inflamed eyes](#).
- Small white spots known as [Koplik's spots](#) may form inside the mouth two or three days after the start of symptoms.
- A red, flat rash which usually starts on the face and then spreads to the rest of the body typically begins three to five days after the start of symptoms

Citizenship Bill:

Why in News?

A federation of 25 Himas or Khasi kingdoms that have a cosmetic existence today, plan to revisit the 1948 agreements that made present-day Meghalaya a part of India.

The revisiting in consultation with legal experts and academicians is aimed at safeguarding tribal customs and traditions from Central laws in force or could be enacted, such as the Citizenship (Amendment) Bill .

Details:

- The bill is one of the factors in our move to strengthen the Federation of Khasi States that were ruled by a Syiem (king-like head of a Hima).
- The 25 Khasi states had signed the Instrument of Accession and Annexed Agreement with the Dominion of India between December 15, 1947, and March 19, 1948.
- The conditional treaty with these states was signed by Governor General Chakravarty Rajagopalachari on August 17, 1948.



Current Affairs From 09th April to 30th April 2019

- The Khasi states, though, did not sign the Instrument of Merger unlike most other states in India.

Background:

- During the British rule, the Khasi domain was divided into the Khasi states and British territories.
- At that time, the British government had no territorial right on the Khasi states and they had to approach the chiefs of these states if they needed land for any purpose.
- After independence, the British territories became part of the Indian dominion but the Khasi states had to sign documents beginning with the Standstill Agreement that provided a few rights to the states," Mr Syiem said.
- Though the Constitution has provided self-rule to a considerable extent through tribal councils, there has been an increasing demand for giving more teeth to the Khasi states.

Cell Based Meat:

Why in News?

In what could be a boost for cell-based meat in India, the Centre has approved a ₹4.5 crore grant to two premier Hyderabad-based institutions for [research](#) into this technology that involves growing animal cells in a laboratory to produce slaughter-free meat.

About the Project:

- The grant, from the Department of Biotechnology, is for an 18-month project, which will look into developing methods to cultivate stem cells from tissue samples of sheep, to produce mutton.
- The project will be carried out jointly by the Centre for Cellular and Molecular Biology (CCMB), which operates under the aegis of the Council of Scientific and Industrial Research (CSIR), and the National Research Centre on Meat (NRCM), which was set up by the Indian Council of Agricultural Research (ICAR).
- The funding was among the highest by any government in the short history of cell-based meat.



Current Affairs From 09th April to 30th April 2019

- This funding has been given to CCMB to develop technology to take laboratory cell culture process to cell-based meat production which can be scalabl.
- This funding is one of the major initiatives by any government body across the world and much-needed encouragement for other agencies and industry to participate.”

GI tag:

Why in News?

The Delhi High Court has struck down the decision of the Central government restricting the famously aromatic basmati rice production to only seven States in the Indo-Gangetic plains.

The High Court’s verdict came on the Madhya Pradesh government's plea to include 13 districts in the State under the Geographical Indications (GI) category for basmati rice.

Background:

- The Ministry of [Agriculture](#) had through two Office Memorandums (OM) of May 2008 and February 2014 confined the GI certification for basmati to rice grown in the Indo-Gangetic plains in the States of Punjab, Haryana, Delhi, Himachal Pradesh, Uttarakhand and parts of Uttar Pradesh and Jammu and Kashmir.
- GI certification gives recognition and several protections to a basmati rice producer and help in maintaining the specific qualities of the rice grown in that particular region.
- The Madhya Pradesh government contended that the two OMs were outside the scope of the Seeds Act, 1966. It additionally argued that the OMs encroach upon its power to pass laws in relation to agriculture, which is a State subject.
- The 2008 OM of the Ministry set forth the standards of the ‘basmati’ variety of rice.

About GI Tag:

- A [geographical indication](#) (GI) is a name or sign used on certain products which corresponds to a specific geographical location or origin (e.g. a town, region, or country).



Current Affairs From 09th April to 30th April 2019

- [India](#), as a member of the [World Trade Organization](#) (WTO), enacted the [Geographical Indications of Goods \(Registration and Protection\) Act, 1999](#) has come into force with effect from 15 September 2003.
- GIs have been defined under Article 22(1) of the [WTO Agreement on Trade-Related Aspects of Intellectual Property Rights \(TRIPS\)](#) Agreement as:
"Indications which identify a good as originating in the territory of a member, or a region or a locality in that territory, where a given quality, reputation or characteristic of the good is essentially attributable to its geographic origin."
- The GI tag ensures that none other than those registered as authorised users (or at least those residing inside the geographic territory) are allowed to use the popular product name.
- [Darjeeling tea](#) became the first [GI tagged](#) product in India, in 2004-05, since then by october 2018, 321 had been added to the list.

Allegations against Judiciary :

The story so far:

The allegations made by a former Supreme Court employee against the Chief Justice of India have brought the focus on the mechanism that exists to examine charges of misconduct against members of the higher judiciary.

What exactly is the procedure involved and how was it devised?

How are allegations of misconduct against judges of High Courts and the Supreme Court dealt with?

- Allegations of misconduct against serving judges of the superior judiciary, that is, the various high courts and the Supreme Court, are dealt with through an 'in-house procedure'.
- Most complaints may pertain to judicial conduct, and may be at the behest of parties aggrieved by the outcome of their cases.
- However, some may concern the personal conduct of judges.
- Two purposes are served by the adoption of an internal procedure to deal with such complaints: when the allegations are examined by the judge's peers, outside agencies are kept out, and the independence of the judiciary is maintained.



Current Affairs From 09th April to 30th April 2019

- Second, awareness about the existence of a mechanism to examine such complaints will preserve the faith of the people in the impartiality and independence of the judicial process.
- in-house procedure envisages that false and frivolous allegations can be rejected at an early stage and only those that are not baseless, and may require a deeper probe, are taken up for [inquiry](#).

When was the in-house procedure adopted?

- A five-judge committee was formed to devise the procedure.
- The report of the committee was adopted by a resolution of the Full Court on December 15, 1999.
- This procedure has been adhered to since then. However, the in-house procedure was not in the public domain for many years.
- In 2014, a Supreme Court Bench directed the court's registry to make the in-house procedure public for the sake of transparency.
- The court was then dealing with a serious allegation made by a woman district and sessions court judge that she faced harassment from a sitting judge of the Madhya Pradesh High Court.

How does the in-house procedure work? What are the various steps?

- When a complaint is received against a High Court judge, the Chief Justice concerned has to examine it.
- If it is frivolous or concerns a judicial matter, she may just file the complaint and inform the Chief Justice of India.
- If she considers it serious, she should get a response from the judge concerned. If she is satisfied with the response and feels no further action is required, she may close the matter and keep the CJI informed.
- However, if the CJI feels a deeper probe is needed, she should send the complaint as well as the judge's response to the CJI, with her own comments, for further action.

What are the possible outcomes from the inquiry committee?

- If it finds that there is substance in the allegations, the committee can either hold that the misconduct is serious enough to warrant removal from office, or that it is not so serious as to warrant removal.



Current Affairs From 09th April to 30th April 2019

- In the former case, it will call for initiation of proceedings to remove the judge. The judge concerned would be advised to resign or take voluntary retirement.
- If the judge is unwilling to quit, the Chief Justice of the High Court concerned would be advised to withdraw judicial work from him, and the President of India and the Prime Minister would be informed of the situation.
- Such an action may clear the way for Parliament to begin the political process for impeachment.
- In case, the committee finds substance in the allegation, but it is not grave enough to warrant removal from office, the judge concerned would be advised accordingly, and the committee's report will be placed on record.

China Pakistan Economic Corridor (CPEC)

Why in News?

In an annex tagged with the Joint Communiqué of the Leaders' Roundtable of the BRF, which concluded in Beijing on Saturday, the Chinese foreign ministry website has not listed the BCIM as a project covered by the BRI—the giant connectivity initiative spearheaded by [China](#) to revive the ancient Silk Road across Eurasia and Africa.

Why so?

- India's decision to skip the Belt and Road Forum (BRF) may have led to the exclusion of the Bangladesh- China- India- [Myanmar](#) (BCIM) Economic corridor from the list of projects covered by the China-led Belt and Road Initiative (BRI) umbrella.
- Instead, South Asia is covered by three major undertakings—the China-Myanmar Economic Corridor (CMEC), the Nepal-China Trans-Himalayan Multi-dimensional Connectivity Network, including Nepal-China cross-border railway, as well as the China Pakistan Economic Corridor (CPEC).

Issues raised by India:

- Citing "sovereignty" concerns, India, for the second time, has not officially participated in the BRF, as CPEC—a flagship of the BRI—passes through Pakistan occupied Kashmir (PoK).

About BCIM:



Current Affairs From 09th April to 30th April 2019

- The 2800 km BCIM corridor proposes to link Kunming in China's Yunnan province with Kolkata, passing through nodes such as Mandalay in Myanmar and Dhaka in [Bangladesh](#) before heading to Kolkata.

Arms Trade Treaty (ATT):

Why in news?

Continuing Washington's drift from multilateralism, US President Donald Trump has announced that he was withdrawing the country from the Arms Trade [Treaty](#) (ATT).

Why such Move?

- While the US has rules in place to govern its arms transactions, those countries did not have any and would not be governed by the treaty either.
- Only 130 of the 193 members of the UN have signed the treaty, and of them only 101 ratified it putting it just over the threshold of 100 to come into effect.
- The official said the British government is being sued by an NGO, Campaign Against Arms Trade citing the treaty to stop arms sales to Saudi Arabia, a Washington ally, and implied that the US could face similar challenges if it continued to be a part of the ATT.

About ATT:

- Adopted by the UN General Assembly in 2013, the ATT covers all types of weapons and seeks to stop them from reaching regimes abusing human rights or parties in civil wars, armed and terrorist groups.

India and ATT:

- By pulling out of the ATT, the US joins India, which has not signed the treaty.
- One of the arguments made by India in 2013 against the treaty was that New Delhi had "strong and effective national export controls" on military hardware to ensure they don't fall into the wrong hands.
- Neither have Russia and China, which are major arms exporters, signed it.

ASW Water Craft:

Why in News?



Current Affairs From 09th April to 30th April 2019

The Ministry of Defence (MoD) on Monday signed a contract with Kolkata based defence shipyard Garden Reach Shipbuilders and Engineers Limited (GRSE) for the construction of eight Anti-Submarine Warfare Shallow Water Crafts (ASWSWCs).

About the Ship:

- The first ship is to be delivered within 42 months from contract signing date and subsequent balance ships delivery schedule will be two ships per year.
- Navy had issued the Request For Proposal (RFP) for design, construction and supply of the eight ASWSWCs to Defence Public Sector Undertaking (DPSU) shipyards and private shipyards in April 2014 in which GRSE emerged as the successful bidder.
- These ships displacing 750 tons, have a complement of 57 personnel and can reach speed of 25 knots.
- They are capable of full-scale sub surface surveillance of coastal waters and coordinated ASW operations with aircraft.
- These can also be deployed for search and rescue by day and night in coastal areas. In their secondary role, these will be capable to prosecute intruding aircraft, and lay mines in the sea bed, the statement added.

National Clean Air Programme

Why in News?

The Union Environment Ministry has constituted a committee to implement the National Clean Air Programme (NCAP), which aims to reduce particulate matter (PM) pollution by 20%-30% in at least 102 cities by 2024.

Members:

- The committee will be chaired by the Secretary, Union Environment Ministry and has among its members the Joint Secretary (Thermal), Ministry of Power; Director-General, The Energy Resources Institute (TERI), the Delhi-based think-tank; and Professor Sachidananda Tripathi, Indian Institute of Technology-Kanpur (IIT-K).
- The NCAP unveiled in January is envisaged as a scheme to provide the States and the Centre with a framework to combat air pollution.



Current Affairs From 09th April to 30th April 2019

- The committee would be headquartered in New Delhi and its remit includes ensuring "inter-ministerial organisation and cooperation, sharing information and resolving issues that could arise between ministries.
- The committee would also give overall guidance and directions to effectively implement the programmes.

About NCAP:

- The NCAP is envisioned as a five-year action plan with 2019 as the first year.
- There would be a review every five years.
- States in which the cities are located are expected to produce plans that include increasing the number of monitoring stations, providing technology support, conducting source apportionment studies, and strengthening enforcement.
- For achieving the NCAP targets, the cities would be expected to calculate the reduction in pollution, keeping 2017's average annual PM levels as the base year.
- The World Health Organisation's (WHO) database on air pollution over the years has listed Tier I and Tier II Indian cities as some of the most polluted places in the world. In 2018, 14 of the world's 15 most polluted cities were in India.
- The NCAP requires cities to implement specific measures such as "ensuring roads are pothole-free to improve traffic flow and thereby reduce dust" (within 60 days) or "ensuring strict action against unauthorised brick kilns" (within 30 days).
- It doesn't specify an exact date for when these obligations kick in.

Anti Tank Missile:

Why in News?

The Army is in the process of procuring Spike-LR Anti-Tank Missiles from Israel and Iгла-S Very Short Range Air Defence Systems (VSHORAD) from Russia through a set of new financial powers for emergency procurements sanctioned by the Defence Ministry earlier this month.

About the Emergency Power:

- Under the latest emergency financial powers, armed forces have been given a free hand to procure equipment worth up to ₹300 crore on a priority basis.



Current Affairs From 09th April to 30th April 2019

- Under the emergency route, the Army is looking to procure about 12 launchers and around 250 missiles for each system. Deliveries have to be completed in three months, but extendable to six months.

About the Missile:

- **Spike** is an Israeli [fire-and-forget anti-tank guided missile](#) and [anti-personnel](#) missile with a [tandem-charge HEAT warhead](#), currently in its fourth-generation.
- It was developed and designed by the Israeli company [Rafael Advanced Defense Systems](#).
- It is available in man-portable, vehicle-launched, and helicopter-launched variants.
- The weight of the missile is 14 kg (30 lb 14 oz), and the weight of the complete system is less than 45 kg (99 lb 3 oz)
- Maximum range is 4,000 m (2.5 mi) and it is used by infantry and light combat vehicles.
- It adds fiber-optic communication to and from the operator during flight.[]

GS-3

Groundwater on Mars:

Why in News?

Mars may still have an active groundwater system deep below the surface, and could be feeding surface streams in some areas on the Red Planet, a study has found.

Last year, researchers detected the presence of a deep-water lake on Mars under its south polar ice caps.

Details:

- Researchers at the University of Southern California (USC) in the US determined that groundwater likely exists in a broader geographical area than just the poles of Mars.



Current Affairs From 09th April to 30th April 2019

- They found that there is an active system, as deep as 750 metres, from which groundwater comes to the surface through cracks in the specific craters they analysed.
- Researchers studied the characteristics of Mars Recurrent Slope Linea, which are akin to dried, short streams of water that appear on some crater walls on Mars.
- Scientists previously thought these features were affiliated with surface water flow or close subsurface water flow, said Essam Heggy, member of the Mars Express Sounding radar experiment MARSIS probing Mars subsurface.
- The scientists concluded that fractures within some of Mars' craters, enabled water springs to rise up to the surface as a result of pressure deep below.

The study, published in the journal Nature Geoscience, suggests that groundwater might be deeper than previously thought in areas where such streams are observed on Mars.

IMF Forecast:

The International Monetary Fund (IMF) has projected that global growth will be 3.3% in 2019, down from 3.6% in 2018 and 4% in 2017, IMF Chief Economist Gita Gopinath told the press at the release of the **World Economic Outlook 2019** April report, at the start of the World Bank IMF Spring Meetings.

Causes:

- This lower projection is due to lower global expansion in the second half of 2018 caused by U.S.-China trade tensions, macroeconomic stress in Turkey and Argentina, tighter credit policies in China and financial tightening plus a normalisation of monetary policy in advanced economies.

India's Growth:

- India's growth is projected to pick up (from 7.1% in 2018) to 7.3% in 2019 and 7.5% in 2020, "supported by the continued recovery of investment and robust consumption amid a more expansionary stance of monetary policy and some expected impetus from fiscal policy," the report said.
- These forecasts are nevertheless less by 10 and 20 basis points from the January and October forecasts.



Current Affairs From 09th April to 30th April 2019

Future Prospects:

- The IMF expects growth to pick up in the second half of the year driven by an accommodative policy stance in advanced economies, the prospects of easing of trade tensions between the U.S. and China and ramped up fiscal and monetary stimulus by China to counter the trade war's effects.
- Global growth is therefore expected to return to 3.6%, but this is subject to a rebound in Argentina and Turkey and certain emerging market risks not manifesting.
- Brexit uncertainties and China's growth not being as high as expected (down from 6.6% in 2018 to 6.3% and 6.1% in 2019 and 2020 respectively) are risks that will impact these projections.

Moderation in expansion

- Beyond 2020, *global growth* is expected to level out at *3.6% over the medium term*, driven by a moderation in expansion in advanced countries (caused by weak productivity growth and slow labour force growth) and the stabilisation of emerging market expansion at 2020 levels.
- *Advanced economies* are expected to slow down to 1.6% growth by 2022 and remain at that rate thereafter.
- For *emerging markets and developing countries*, growth is expected to steady at 4.8% over the medium term and given that these groups are growing faster than advanced economies, their contribution to global growth is expected to increase from 76% to 85% over the next five years.
- However, there are "important differences" within emerging markets and developing economies.
- For instance, *China is expected to slow down* to 5.5% by 2024 as it moves towards increasing private consumption and services and regulatory tightening.
- India's growth is expected to stabilise at 7.75% over the medium term, driven by structural reforms and the easing of infrastructure bottlenecks.

Way Forward:

- Specifically, it says a continued *fiscal consolidation* is needed to bring down public debt, strengthening goods and services tax compliance and lowering subsidies.



Current Affairs From 09th April to 30th April 2019

- The report also notes “important steps” taken to speed up the resolution of *Non Performing Assets* (NPAs) and a simplified bankruptcy framework — measures that can be reinforced by stronger governance of public sector banks.
- The IMF also calls for laws around land reform to change, to expedite infrastructure development as well as changes to hiring and firing laws in order create jobs and “*absorb the country’s large demographic dividend*”.

SC Ruling on Power Sector:

Why in News?

The Supreme Court’s order on Tuesday quashing the February 12 circular of the RBI has come as a huge breather to the power sector which is staring at 66,000 mega watts (MW) of stressed power assets worth ₹1.8 lakh crore.

SC order has provided great relief to the power sector’s stressed assets.

Impact:

- This would provide time for bankers to finalise the resolution plan for about 13 GW of projects which are presently in their final stages, and a high-level empowered committee under the Chairmanship of the Cabinet Secretary to submit its report on corrective actions that the government intends to initiate to mitigate stress factors.
- The Supreme Court’s verdict will provide much needed respite and impetus to regulatory reform in the power sector,

Background:

- The RBI circular had mandated banks to either immediately resolve all bad loans above ₹2,000 crore or file for insolvency resolution under the IBC.
- Over ₹40,000 crore of payments is due from the government owned discoms.

Monetary Policy Committee:

Why in News?



Current Affairs From 09th April to 30th April 2019

The monetary policy committee of the Reserve Bank of India (RBI) for the second consecutive time cut the benchmark lending rate by 25 basis points to 6% on Thursday.

It cited concerns over growth as it lowered the GDP forecast to 7.2% for the current financial year from 7.4% projected in the February policy.

Observations Made:

- The central bank said the output gap remained negative and the domestic economy was facing headwinds, especially on the global front. (Output gap refers to the difference between the actual output of the economy and its maximum potential.)
- The need is to strengthen domestic growth impulses by spurring private investment that has remained sluggish," it said.
- The committee maintained the neutral policy stance, which means interest rates can move in either direction.
- With the inflation outlook remaining benign, the RBI will address the challenges to sustained growth of the economy while ensuring price stability on an enduring basis," Governor Shaktikanta Das said.

Inflation Forecast:

- The RBI lowered its inflation forecast to 2.9%-3% from 3.2%-3.4% for the first half of the current financial year and 3.5-3.8% in the second half, assuming a normal monsoon.
- "Domestic GDP growth is also estimated to slow in 2018-19, with high frequency indicators suggesting slackening of urban and rural demand as well as investment activity.

About MPC:

- The **Monetary Policy Committee** of India is responsible for fixing the benchmark [interest rate](#) in [India](#).
- The meetings of the Monetary Policy Committee are held at least 4 times a year and it publishes its decisions after each such meeting.
- The committee comprises six members - three officials of the [Reserve Bank of India](#) and three external members nominated by the [Government of India](#).



Current Affairs From 09th April to 30th April 2019

- They need to observe a "silent period" seven days before and after the rate decision for "utmost confidentiality".
- The [Governor of Reserve Bank of India](#) is the chairperson *ex officio* of the committee. Decisions are taken by majority with the Governor having the casting vote in case of a tie.
- The current mandate of the committee is to maintain 4% annual [inflation](#) until March 31, 2021 with an upper tolerance of 6% and a lower tolerance of 2%.

World Bank:

Why in News?

David Malpass, a top U.S. Treasury official in Trump administration, was on April 5 unanimously selected as the new President of the World Bank.

The World Bank's 25-member executive board unanimously approved 63-year-old Malpass, who is currently Under Secretary of Treasury for International Affairs, as the development lender's 13th President for a five-year term beginning April 9, according to a statement.

Since the bank's creation following World War II, all of its Presidents have been American men.

About the WB:

- The **World Bank** is an [international financial institution](#) that provides loans to [countries](#) of the world for capital projects. It comprises two institutions: the [International Bank for Reconstruction and Development](#) (IBRD), and the [International Development Association](#) (IDA).
- The World Bank is a component of the [World Bank Group](#).
- The World Bank's most recent stated goal is the [reduction of poverty](#).
- As of November 2018, the largest recipients of world bank loans were India (\$859 million in 2018) and China (\$370 million in 2018), through loans from IBRD.

About the Post:



Current Affairs From 09th April to 30th April 2019

- The World Bank President is Chair of Boards of Directors of the International Bank for Reconstruction and Development (IBRD) and International Development Association (IDA).
- The President is also ex officio Chair of Boards of Directors of the International Finance Corporation (IFC), Multilateral Investment Guarantee Agency (MIGA), and the Administrative Council of the International Centre for Settlement of Investment Disputes (ICSID).

New Species Discovered:

A group of jumping spiders that mostly occur in Eurasia and Africa, has been spotted for the first time in Ernakulam's Illithodu forests by arachnologists from Kochi's Sacred Heart College, Thevara.

The team also found that the spider belonging to the genus (a taxonomic classification above species) *Habrocestum* is a species new to science.

Details:

- The team came across the different-looking spiders — six of them, predominantly brownish-black in colour with white and creamy-yellow patches.
- A detailed examination of the spiders' physical features revealed that they belong to the genus *Habrocestum* that has been recorded mostly in Eurasia and Africa and never in India, till now.
- Comparisons with studies of European *Habrocestum* spiders revealed that the spiders from Illithode are a new species altogether, for they had distinctly different reproductive organs.
- The spider also has a single long spine on the underside of both its first legs, and this gave it its scientific name *Habrocestum longispinum* (after Latin 'longe' meaning long and 'spinae' for spine). "
- It measures just around 2 mm and seems to prefer dry habitats, dwelling in forest litter.

Significance:

- The study extends the range of these spiders to India.



Current Affairs From 09th April to 30th April 2019

- The discovery also lends support to the continental drift theory that suggests that the world's continents were one large, contiguous landmass where these creatures thrived many millions of years ago.

Manufacturing index:

Why in News?

Manufacturing activity slowed to a six-month low of 52.6 in March due to lower levels of new orders and production, according to a private sector survey.

The Nikkei India Manufacturing Purchasing Managers' Index came in at a lower reading in March from 54.3 in February. A reading over 50 implies expansion while one below that denotes a contraction in activity.

Improving conditions

- "Registering 52.6 in March, the Nikkei India Manufacturing Purchasing Managers' Index continued to signal improving operating conditions in the sector," the report said.
- "However, falling from 54.3 in February to a six-month low, the latest figure highlighted a loss of growth momentum."
- "Softer increases were registered for new orders, production, input buying and employment," the report added.
- The report said that the increase in new orders was the slowest in six months, with firms reporting that the effect of strong underlying demand, successful advertising, and the receipt of bulk orders was being curbed by competitive conditions and the upcoming elections.

Future Prospects:

- Although global headwinds and a general slowdown in trade present some concerns for the future health of Indian manufacturers' order books, so far companies have been able to weather the storm and secure healthy inflows of new work from abroad.
- A guarded attitude towards appointing new staff dragged job creation to an eight-month low, while buying activity growth moderated amid sufficient input stocks at some companies.



Current Affairs From 09th April to 30th April 2019

Non-performing assets:

Why in News?

There continues to be a high stock of non-performing assets (NPAs) in India, and there has been some progression. Further progress is welcome, IMF head of Monetary and Capital Markets Tobias Adrian said.

Mr. Adrian made these remarks at the release of the multilateral institution's April 2019 Global Financial Stability Report (GFSR) as part of the World Bank IMF Spring Meetings.

About GFSR:

- The GFSR provides an assessment of balance sheet vulnerabilities across financial and non-financial sectors in advanced and emerging market economies.

Recommendations:

- The level of capitalisation of some banks, particularly government-owned banks should be bolstered.
- This is also one of the recommendations of the Financial Sector Assessment Program for India that took place fairly recently.
- There were some steps taken by the authorities to boost capital buffers in banks and also governments in state-owned banks, that have had some positive impact.

Observations regarding investment:

- Portfolio flows to emerging markets are influenced by benchmark-driven investors — 70% of country allocations of investment funds are impacted by benchmark indices, the report said.
- This category of investors are more sensitive to global financial conditions and as they command increasing shares of portfolio flows, external shocks may propagate to medium-size, and frontier market economies faster than they did in the past.

Military Satellites:



Current Affairs From 09th April to 30th April 2019

Why in News?

Between now and early 2020, the space above India looks set to see an unprecedented rush of satellites meant solely or mainly for the country's military.

Starting May, the Indian Space Research Organisation (ISRO) plans to send up at least eight earth observation (EO) satellites of varied hues and at the rate of almost one a month.

Steps taken:

- Communication satellite GSAT-32 is also in the offing next year to replace GSAT-6A, which was lost in a failed launch and was meant to mainly serve the ground forces.
- Until now, such defence-use satellites were spaced out over a few years; or were put up only once a year as in the case of the Cartosat-2 series high-resolution imaging satellites.
- Looking at the last three launches, we could even say the train has already started. HysIS, launched in November; Microsat-R in January; and the EMISAT sent into orbit on April 1 are all for what is called "strategic use".

DRDO payloads

- While traditionally, payloads for ISRO's satellites come from the Space Applications Centre, the payloads of the Microsat-R and EMISAT were from the [Defence](#) Research and Development Organisation (DRDO).
- Soon after EMISAT's launch, ISRO Chairman and Secretary, Department of Space, K.Sivan, announced that the next mission would be the radar imaging satellite RISAT-2B, followed by a high resolution mapping satellite Cartosat-3.
- Both are understood to be useful militarily and seen as overdue assets.

Objects of desire

- Cartosat-3 will have 30 cm resolution, which is at a par with the world's best, according to public information already put out by ISRO.
- It means the satellite can clearly 'see' and capture images of guns, devices, objects or human movement at that scale from space.



Current Affairs From 09th April to 30th April 2019

- There are already half-a-dozen Cartosat-2 series satellites in orbit, though these possess a lower resolution capability than the upcoming Cartosat-3.
- Radar imaging satellites like India's RISAT series can provide almost an uninterrupted view of earth, day or night, rain or shine, a handy feature for the forces to detect border infiltration.
- A number of foreign satellites that have been flown to space on the PSLV are also for earth observation, space situational awareness and ship monitoring, which again may be useful as military information.
- Often, what is useful for civil purpose can also be useful for strategic purposes.

Bacterial Degradation:

Why in News?

Using a unique strain of bacterium isolated from soil contaminated with petroleum products, IIT Bombay researchers can selectively remove from the environment toxic, aromatic pollutants such as benzoate (sodium benzoate is used as a food preservative), benzyl alcohol and naphthalene, to name a few.

What makes the bacterial strain (*Pseudomonas putida CSV86*) unique is its preference for aromatic compounds and organic acid as a food source even when glucose is available. The strain can degrade aromatics and organic acids simultaneously.

Peculiar food choice

- Since breaking down aromatic compounds is difficult, bacteria generally prefer simple carbon sources such as glucose for obtaining energy.
- Even the bacteria that are known to degrade aromatic compounds tend to first prefer glucose and other simple carbon sources for energy and feed on aromatic compounds only when glucose gets exhausted.
- However, this bacteria strain displays a completely different order of food choices — it first feeds on aromatic compounds and organic acids and only when this gets exhausted does it start feeding on glucose.
- This is the first time a bacteria strain that preferentially utilises aromatic compounds even in the presence of glucose has been ever reported.

Significance:



Current Affairs From 09th April to 30th April 2019

- The bacterial strain is a very good candidate for bioremediation or waste-water treatment.
- We can increase the metabolic diversity and capacity by genetically engineering the strain.
- The team hopes to engineer the strain so it can be directly applied to the soil to preferentially degrade aromatic pesticides.
- The team is now trying to understand the molecular mechanisms and regulatory components involved in preferential degradation of aromatics over glucose using various molecular biology tools.

Black Hole:

Why in News?

A language professor has given a Hawaiian name — Powehi — to the [black hole depicted](#) in an image produced in a landmark experiment.

What does it mean?

- **The word apparently means “the adorned fathomless dark creation” or “embellished dark source of unending creation”.**
- The newspaper reports the word meaning “the adorned fathomless dark creation” or “embellished dark source of unending creation” comes from the Kumulipo, an 18th Century Hawaiian creation chant.
- Astronomers say giving it a Hawaiian name was justified because the project included two telescopes in Hawaii.
- Jessica Dempsey, a co-discoverer of the black hole, says the word is an excellent match for the scientific description she provided to Kimura.

Background:

- The world’s first image of a black hole revealed on Wednesday was created using data from eight radio telescopes around the world.

What are Black holes?

- A **black hole** is a region of [spacetime](#) exhibiting such strong [gravitational](#) effects that nothing—not even [particles](#) and [electromagnetic radiation](#) such as [light](#)—can escape from inside it.



Current Affairs From 09th April to 30th April 2019

- The theory of [general relativity](#) predicts that a sufficiently compact [mass](#) can deform [spacetime](#) to form a black hole.
- The boundary of the region from which no escape is possible is called the [event horizon](#). Although the event horizon has an enormous effect on the fate and circumstances of an object crossing it, no locally detectable features appear to be observed.
- In many ways a black hole acts like an ideal [black body](#), as it reflects no light.
- Moreover, [quantum field theory in curved spacetime](#) predicts that event horizons emit [Hawking radiation](#), with [the same spectrum](#) as a black body of a temperature inversely proportional to its mass. This temperature is on the order of billionths of a kelvin for [black holes of stellar mass](#), making it essentially impossible to observe.

India's ASAT Test:

Why in News?

India is concerned about the "threats" it faces in space, the Pentagon has said, defending the country for acquiring anti-satellite (ASAT) missile test capabilities.

Background:

- On March 27, India achieved a historic feat by shooting down its own low-orbit satellite with a ground-to-space missile, making the country a space power.
- The test made India the fourth country in the world after the US, Russia and China to have the ASAT capabilities.
- After India's test, NASA termed as a "terrible thing" the country's shooting down of one of its satellites, saying it created about 400 pieces of orbital debris, endangering the the International Space Station (ISS).
- NASA Administrator Jim Bridenstine had said about 60 pieces were tracked and out of which 24 are going above the apogee of the ISS.

About ASAT:

- **Anti-satellite weapons (ASAT)** are [space weapons](#) designed to incapacitate or destroy [satellites](#) for [strategic military](#) purposes.
- Several nations possess operational ASAT systems.



Current Affairs From 09th April to 30th April 2019

- Although no ASAT system has yet been utilised in [warfare](#), a few nations have shot down their own satellites to demonstrate their ASAT capabilities in a [show of force](#).
- Only the [United States](#), [Russia](#), [China](#), and [India](#) have demonstrated this capability successfully.

Indian Steel Industry:

Why in News?

India was a net importer of steel during the 2018-19 fiscal year, the first time in three years, as the country lost market share among its traditional steel buyers and imports jumped on demand for higher quality steel domestically.

Details:

- The country's finished steel exports fell by 34% in the fiscal year that ended in March to 6.36 million tonnes, according to preliminary government data given to *Reuters*.
- During the same period, finished steel imports rose 4.7% to 7.84 million tonnes.
- Imports from the four Asian countries also climbed as they diverted supply into India, the source said.
- Imports of value-added steel, primarily for the auto sector and high-end electrical steel, were the biggest source of imports..

Possible Reasons:

- India's exports during the fiscal year declined after rival steelmakers in China, Japan, South Korea and Indonesia, blocked from markets in the United States and Europe by tariffs and other protectionist measures, ate away at the country's markets in the Middle East and Africa, according to an Indian government official with close knowledge of the matter.

Steps Taken by Govt.:

The new Steel Policy enshrines the long term vision of the Government to give impetus to the steel sector.



Current Affairs From 09th April to 30th April 2019

- It seeks to enhance domestic steel consumption and ensure high quality steel production and create a technologically advanced and globally competitive steel industry.

Key features of the NSP 2017:

1. Create self-sufficiency in steel production by providing policy support & guidance to private manufacturers, MSME steel producers, CPSEs
 2. Encourage adequate capacity additions,
 3. Development of globally competitive steel manufacturing capabilities,
 4. Cost-efficient production
 5. Domestic availability of iron ore, coking coal & natural gas,
 6. Facilitating foreign investment
 7. Asset acquisitions of raw materials &
 8. Enhancing the domestic steel demand.
- The policy projects crude steel capacity of 300 million tonnes (MT), production of 255 MT and a robust finished steel per capita consumption of 158 Kgs by 2030 - 31, as against the current consumption of 61 Kgs.
 - The policy also envisages to domestically meet the entire demand of high grade automotive steel, electrical steel, special steels and alloys for strategic applications and increase domestic availability of washed coking coal so as to reduce import dependence on coking coal from about 85% to around 65% by 2030-31.

Wholesale Price Index (WPI)

Why in News?

Wholesale price-based inflation rose for the second consecutive month to 3.18% in March on costlier food and fuel, government data released on Monday showed.

The Wholesale Price Index (WPI) based inflation was at 2.93% in February. It was 2.74% in March 2018.

Sector wise Inflation:



Current Affairs From 09th April to 30th April 2019

- Inflation in food articles basket was 5.68% during March.
- Inflation in 'Fuel and power' category also spiked to 5.41%, from 2.23% in February.
- Retail inflation accelerated to 2.86% in March from 2.57% a month ago, data released last week showed.
- For April-September period, the RBI has projected retail inflation at 2.9-3%, mainly due to lower food and fuel prices as well as expectation of a normal monsoon.

How is WPI (Wholesale Price Index) calculated?

- In this method, a set of 435 commodities and their price changes are used for the calculation. The selected commodities are supposed to represent various strata of the economy and are supposed to give a comprehensive WPI value for the economy.
- WPI is calculated on a base year and WPI for the base year is assumed to be 100. To show the calculation, let's assume the base year to be 1970. The data of wholesale prices of all the 435 commodities in the base year and the time for which WPI is to be calculated is gathered.
- Let's calculate WPI for the year 1980 for a particular commodity, say wheat. Assume that the price of a kilogram of wheat in 1970 = Rs 5.75 and in 1980 = Rs 6.10
- The WPI of wheat for the year 1980 is,
 $(\text{Price of Wheat in 1980} - \text{Price of Wheat in 1970}) / \text{Price of Wheat in 1970} \times 100$
- i.e. $(6.10 - 5.75) / 5.75 \times 100 = 6.09$
- Since WPI for the base year is assumed as 100, WPI for 1980 will become $100 + 6.09 = 106.09$.
- In this way individual WPI values for the remaining 434 commodities are calculated and then the weighted average of individual WPI figures are found out to arrive at the overall Wholesale Price Index. Commodities are given weight-age depending upon its influence in the economy.

UPI Transaction:

Why in News?



Current Affairs From 09th April to 30th April 2019

While digital payments overall have been growing strongly, people are changing the way they transact, choosing bank-to-bank methods such as the Unified Payments Interface (UPI) over other instruments such as e-wallets.

Detailed Analysis:

- An analysis by *The Hindu* of data from the Reserve Bank of India (RBI), the National Payments Corporation of India (NPCI) and some industry players from April 2018 to March 2019 shows that not only is the UPI platform outperforming e-wallets in terms of the value of transactions done, but it is also eating away at e-wallets' market share in specific areas such as person-to-merchant (P2M) transactions.
- Payments made on the UPI platform saw a remarkable growth of over 400% in the April to March period, from a little more than ₹27,000 crore in April 2018 to ₹1.35 lakh crore in March 2019.

Completely interoperable

- "UPI is completely interoperable and as such, it is unique in the world, where you have an interoperable system on the 'send' and 'receive' side.
- "That is, you can send money from different accounts in different banks and receive it in different accounts in different banks.
- It was a solution designed to be mobile-first, and it shaped that ecosystem because customer adoption of mobile was growing very strongly."
- The rapid growth of UPI is accompanied by a reasonably strong growth in the value of transactions done using e-wallets, but the latter's growth has not taken off much following the fillip it received in the aftermath of demonetisation in November 2016.
- E-wallets saw total transaction value grow 210% in the November 2016 to March 2017 period, but this has since slowed to 123% in the April 2018 to February 2019 period.
- In absolute terms as well, transactions done using e-wallets in February 2019 (₹16,497 crore) are only 15% of the size of the total transaction value on the UPI platform.
- E-wallets accounted for 6.3% of all customer payments made to merchants in 2017-18 and UPI accounted for just 1.6%. In 2018-19, the share of e-wallet transactions fell to 1.87% and the share of UPI rose to 17%.



Current Affairs From 09th April to 30th April 2019

- While some of the growth can be attributed to the low base, the astronomical increase in transactions has meant that UPI is now competing seriously with the incumbent forms of digital payments such as credit cards and debit cards.

Ceasefire with NSCN/NK, NSCN/R & NSCN/K-Khango extended for a year

A Ceasefire is in operation between Government of India and National Socialist Council of Nagaland (Neopao Konyak/Kitovi) (NSCN/NK) and National Socialist Council of Nagaland/Reformation (NSCN/R).

It was decided to extend the Suspension of Operation with NSCN/NK & NSCN/R for a further period of one year with effect from 28th April, 2019 i.e., till 27th April, 2020.

National Socialist Council of Nagaland/K-Khango has also re-entered into a fresh Ceasefire Agreement with the Government of India with effect from 15th April, 2019 for a period of one year.

About NSCN:

- The **National Socialist Council of Nagaland** ([abbreviated NSCN](#)) is a Greater Naga Revolutionist, Christian [Naga nationalist insurgent group](#) operating mainly in [Northeast India](#), with minor activities in northwest [Myanmar](#) (Burma) until 2012.
- The main goal of the organisation is to establish a sovereign Naga state, "Nagalim", which would consist of all the areas inhabited by the [Naga people](#) in Northeast India and Northwest [Myanmar](#).
- According to the NSCN manifesto, their slogan is "Nagaland for Christ".
- The group is accused of kidnapping, assassination, forced conversion and committing terrorist activities.
- Two major factions of NSCN include NSCN (K), led by Khaplang; and NSCN (I-M), led by Isak Chishi Swu and Thuingaleng Muviah.
- On November 6, 2015 in response to an attack on an army convoy in Manipur [India](#) designated The NSCN (K) a terrorist organization under the [Unlawful Activities \(Prevention\) Act](#).
- India's [Ministry of Home Affairs](#) labels NSCN a major insurgent group.

Nirbhay' Sub-Sonic Cruise Missile

Why in News?



Current Affairs From 09th April to 30th April 2019

Defence Research & Development Organisation (DRDO) today successfully test fired indigenously designed & developed Long Range Sub-Sonic Cruise Missile "Nirbhay" from the Integrated Test Range (ITR), Chandipur Odisha.

About the Test:

- It is the sixth development flight trial with objective to prove the repeatability of boost phase, cruise phase using way point navigation at very low altitudes.
- The missile took off vertically turning horizontally into desired direction, booster separated, wing deployed, engine started, cruised all the intended waypoints.
- The missile demonstrated its sea-skimming capability to cruise at very low altitudes.
- The entire flight was fully tracked by a chain of Electro Optical Tracking Systems, Radars and Ground Telemetry Systems deployed all along the sea coast.
- All the mission objectives were met.

About the Missile:

THE DESI TOMAHAWK

NIRBHAY MISSILE:

- Indigenous cruise missile
- 1,000-km strike range
- Carries nuclear warhead
- Can loiter & cruise at Mach 0.7 (sub-sonic) at altitudes as low as 100-metre
- 1st test in Mar 2013 failed
- 2nd test in Oct 2014 was a partial success
- 3rd & 4th tests in Oct 2015 & Dec 2016 also flopped

CRUISE VS BALLISTIC:

- Ballistic missiles follow parabolic path, leave & re-enter atmosphere to hit target
- Ballistic missiles have longer ranges & predetermined targets
- Cruise missiles fly at low-altitudes, hugging terrain to evade radars
- Cruise missiles loiter before striking targets

INDIA'S BALLISTIC MISSILES:

- Agni-I (750-km), Agni-II (2,000-km) & Agni-III (2,000-km) inducted
- 2 years to induct Agni-IV (4,000-km) & Agni-V (5,000-km)
- Prithvi-II & Dhanush (150-350-km) inducted
- Submarine-launched ballistic missiles K-15 (750-km) & K-4 (over 3,000-km) being tested

BRAHMOS MISSILE:

- Cruise missile jointly produced by India & Russia
- Only 290-km range inducted. Extended range missile (450-km) undergoing trials
- Carries conventional (not nuclear) warhead
- Supersonic, flies at Mach 2.8



Current Affairs From 09th April to 30th April 2019

Geosynchronous Satellite Launch Vehicle (GSLV)

Why in News?

The Union Cabinet, chaired by the Prime Minister Shri Narendra Modi, has approved ongoing GSLV continuation programme Phase-4 consisting of five GSLV flights during the period 2021-2024.

The GSLV Programme - Phase 4 will enable the launch of 2 tonne class of satellites for Geo-imaging, Navigation, Data Relay Communication and Space Sciences.

Financial implications:

The total fund requirement is Rs. 2729.13 Crores and includes the cost of five GSLV vehicles, essential facility augmentation, Programme Management, and Launch Campaign along with the additional funds required for meeting the scope of the ongoing GSLV Continuation Programme.

Benefits:

- The GSLV Continuation Programme - Phase 4 will meet the launch requirement of satellites for providing critical Satellite Navigation Services, Data Relay Communication for supporting the Indian Human spaceflight programme and the next interplanetary mission to Mars.
- This will also ensure the continuity of production in Indian industry.

Implementation Strategy and targets:

The GSLV Continuation Programme - Phase 4 will meet the demand for the launch of satellites at a frequency up to two launches per year, with maximal participation by the Indian industry. All the operational flights would be completed during the period 2021-24.

Major impact:



Current Affairs From 09th April to 30th April 2019

- The operationalization of GSLV has made the country self-reliant in the launching capability of 2 tonne class of satellites for communication & meteorological satellites.
- The GSLV Continuation Programme will sustain & strengthen the capability and self-reliance in the launching of similar satellites for national requirements including next generation navigation satellites, data relay communication satellites and interplanetary missions.

Background:

- GSLV has enabled independent access to space for 2 tonne class of satellites to Geosynchronous Transfer Orbit (GTO).
- One of the very significant outcomes of the GSLV Continuation Programme is the mastering of the highly complex cryogenic propulsion technology, which is an essential technological capability to launch communication satellites to GTO.
- This has also paved the way for the development of a high thrust Cryogenic engine & stage for the next generation launch vehicle i.e. GSLV Mk-III.

GSLV Continuation Programme was initially sanctioned in 2003, and two phases have been completed and the third phase is in progress and expected to be completed by Q4 of 2020-21. The 'State of Working India' report

Why in News?

Since the November 8, 2016 demonetisation, at least five million people lost opportunities to work across the country, while the overall un^{employment} rate doubled between 2011 and 2018 to 6%, says a 'State of Working India' (SWI) report published by the Centre for Sustainable Employment (CSE) of the Azim Premji University (APU) that was released on Tuesday.

Salient Observations of Report:

- The rural Workforce Participation Rate (that is, the percentage of people working against the population within the working age) among men dipped from close to 72% in January-April 2016 (a few months before demonetisation) to slightly above 68% by December 2018.
- The corresponding figure for urban men reduced from 68% to nearly 65% in this time.



Current Affairs From 09th April to 30th April 2019

- “The numbers seem to suggest we are in a perfect storm-like situation.
- On the supply side, there is rising aspirations, youth bulge, higher levels of general educational degrees.
- On the demand side, there has been a collapse of public sector employment, weak link between growth in private industry and employment, and factors such as demonetisation and GST.

Youth most hit

- The report shows that the worst-hit in terms of lost employment opportunities were those in rural areas with pre-university or graduate certification, and those between the ages of 20 and 24 years.
- SWI relied primarily on data from CMIE rather than the Centre’s Periodic Labour Force Survey (PLFS), whose last report was in 2011-12.
- While a report on 2017-18 had been prepared, it ran into controversy as the Centre refused to release it.
- Leaked versions of the report pointed to soaring unemployment rates — reportedly highest in 45 years.
- Unemployment has been concentrated in a small age group: 80% of rural unemployment is among those aged between 15 and 29 years, while the corresponding figure is 77% for urban areas.
- These are all fresh graduates and unemployment levels among them can have serious consequences on the economy and society.

Urban guarantee scheme

- The report suggests tackling unemployment through a national urban employment guarantee scheme, modelled on the existing Mahatma Gandhi Rural Employment Guarantee scheme.
- APU researchers propose a programme that provides 100 days of guaranteed work at ₹500 daily in the city — from maintenance of public buildings to greening and environment-related works.

Trade deficit:

Why in News?



Current Affairs From 09th April to 30th April 2019

- India's exports rose to a five-month high of 11% in March on account of higher growth mainly in pharma, chemicals and engineering sectors, marking the outbound shipments at \$331 billion for FY 2018-19, official data showed Monday.
- Merchandise exports in March stood at \$32.55 billion as against \$29.32 billion in the same month last year.

Oil, gold imports

- Oil and gold imports rose by 5.55% and 31.22% to \$11.75 billion and \$3.27 billion, respectively in March 2019.
- Data showed that oil imports in April-March 2018-19 grew by 29.27% to \$140.47 billion, while non-oil imports were up by 2.82% to \$366.97 billion during that fiscal.

GDP Deflator:

What is it?

- The GDP deflator, also called implicit price deflator, is a measure of inflation.
- It is the ratio of the value of goods and services an economy produces in a particular year at current prices to that of prices that prevailed during the base year.
- This ratio helps show the extent to which the increase in gross domestic product has happened on account of higher prices rather than increase in output.
- Since the deflator covers the entire range of goods and services produced in the economy — as against the limited commodity baskets for the wholesale or consumer price indices — it is seen as a more comprehensive measure of inflation.

Real vs nominal

- GDP price deflator measures the difference between real GDP and nominal GDP.
- Nominal GDP differs from real GDP as the former doesn't include inflation, while the latter does.
- As a result, nominal GDP will most often be higher than real GDP in an expanding economy.
- The formula to find the GDP price deflator:



Current Affairs From 09th April to 30th April 2019

- GDP price deflator = $(\text{nominal GDP} \div \text{real GDP}) \times 100$

WPI, CPI

- A consumer price index (CPI) measures changes over time in the general level of prices of goods and services that households acquire for the purpose of consumption.
- However, since CPI is based only a basket of select goods and is calculated on prices included in it, it does not capture inflation across the economy as a whole.
- The wholesale price index basket has no representation of the services sector and all the constituents are only goods whose prices are captured at the wholesale/producer level.

Advantages of Using GDP Deflator

- Changes in consumption patterns or introduction of goods and services are automatically reflected in the GDP deflator.
- This allows the GDP deflator to absorb changes to an economy's consumption or investment patterns.
- Often, the trends of the GDP deflator will be similar to that of the CPI.
- Specifically, for the GDP deflator, the 'basket' in each year is the set of all goods that were produced domestically, weighted by the market value of the total consumption of each good.
- Therefore, new expenditure patterns are allowed to show up in the deflator as people respond to changing prices.

The theory behind this approach is that the GDP deflator reflects up-to-date expenditure patterns.

GDP deflator is available only on a quarterly basis along with GDP estimates, whereas CPI and WPI data are released every month.

Origin of Life:

Why in News?

Challenging a common perception, a new study suggests primitive ponds may have provided a suitable environment for creating the earth's first life forms, more so than oceans.



Current Affairs From 09th April to 30th April 2019

The findings published in the journal *Geochemistry, Geophysics, Geosystems* showed shallow water bodies could have held high concentrations of what many scientists believe to be a key ingredient for jump-starting life on the earth: nitrogen.

Nitrogen factor

- Our overall message is, if you think the origin of life required fixed nitrogen, as many people do, then it's tough to have the origin of life happen in the ocean.
- It's much easier to have that happen in a pond.
- Nitrogenous oxides were likely deposited in water bodies, including oceans and ponds, as remnants of the breakdown of nitrogen in earth's atmosphere.
- Atmospheric nitrogen comprises two nitrogen molecules, linked via a strong triple bond, that can only be broken by an extremely energetic event — namely, lightning.
- Scientists believe there could have been enough lightning crackling through the early atmosphere to produce an abundance of nitrogenous oxides to fuel the origin of life in the ocean.

New Theory:

- The new study found that ultraviolet light from the Sun and dissolved iron sloughed off from primitive oceanic rocks could have destroyed a significant portion of nitrogenous oxides in the ocean, sending the compounds back into the atmosphere as nitrogen.
- In the ocean, UV light and dissolved iron would have made nitrogenous oxides far less available for synthesising living organisms.
- In shallow ponds, however, life would have had a better chance to grow, mainly because ponds have much less volume over which compounds can be diluted.
- As a result, nitrogenous oxides would have built up to much higher concentrations, the study said.

Genome Sequencing:

Why in News?

In an indigenous genetic mapping effort, nearly 1,000 rural youth from the length and breadth of India will have their genomes sequenced by the Council of Scientific



Current Affairs From 09th April to 30th April 2019

and Industrial Research (CSIR). The project aims at educating a generation of students on the “usefulness” of genomics.

Details:

- Globally, many countries have undertaken genome sequencing of a sample of their citizens to determine unique genetic traits, susceptibility (and resilience) to disease.
- This is the first time that such a large sample of Indians will be recruited for a detailed study.
- The project is an adjunct to a much larger government-led programme, still in the works, to sequence at least 10,000 Indian genomes.
- Typically, those recruited as part of genome-sample collections are representative of the country’s population diversity. In this case, the bulk of them will be college students, both men and women, and pursuing degrees in the life sciences or biology.

Methodology

- Genomes will be sequenced based on a blood sample and the scientists plan to hold at least 30 camps covering most States.
- Every person whose genomes are sequenced will be given a report.
- The participants would be told if they carry gene variants that make them less responsive to certain classes of medicines.
- For instance, having a certain gene makes some people less responsive to clopidogrel, a key drug that prevents strokes and heart attack.
- The project would involve the Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) and cost ₹18 crore, with the sequencing to be done at the IGIB and the CCMB.

Earlier Efforts made:

- Ever since the human genome was first sequenced in 2003, it opened a fresh perspective on the link between disease and the unique genetic make-up of each individual.
- Nearly 10,000 diseases — including cystic fibrosis, thalassemia — are known to be the result of a single gene malfunctioning.



Current Affairs From 09th April to 30th April 2019

- While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.

Currency derivatives:

What are currency derivatives?

- Currency derivatives are exchange-based futures and options contracts that allow one to hedge against currency movements.
- Simply put, one can use a currency future contract to exchange one currency for another at a future date at a price decided on the day of the purchase of the contract.
- In India, one can use such derivative contracts to hedge against currencies like dollar, euro, U.K. pound and yen.
- Corporates, especially those with a significant exposure to imports or exports, use these contracts to hedge against their exposure to a certain currency.
- While all such currency contracts are cash-settled in rupees, the Securities and Exchange Board of India (SEBI), early this year, gave a go-ahead to start cross currency contracts as well on euro-dollar, pound-dollar and dollar-yen.

How can one trade in currency derivatives?

- The two national-level stock exchanges, BSE and the National Stock Exchange (NSE), have currency derivatives segments.
- It is just like trading in equity or equity derivatives segment and can be done through the trading app of the broker.
- While a dollar-rupee contract size is \$1,000, one can trade by just providing the 2-3% margin.

Why were such derivatives introduced on exchange platforms?

- Prior to the introduction of currency derivatives on exchanges, there was only the OTC – over the counter – market to hedge currency risks and where forward contracts were negotiated and entered into.
- It was kind of an opaque and closed market where mostly banks and financial institutions traded.



Current Affairs From 09th April to 30th April 2019

- Exchange-based currency derivatives segment is a regulated and transparent market that can be used by small businesses and even individuals to hedge their currency risks.

Are the derivatives popular?

- The currency segment was unveiled in 2008 and since then, the volumes had registered a steady rise.
- The growth in the segment can further be ascertained from the steady rise in the turnover over the years.

Algae based Purification:

Israeli startup Aqwind, which has taken the lowest life-forms in the world, bacteria and algae, and harnessed them to a low-cost way to clean dirty water enough for irrigation.

How does it work?

- Like Aqwind, other water treatment plants rely on bacteria to break down the organic matter in our sewage and are energy-heavy.
- But they need large amounts of energy to oxygenate the water for the bacteria to breathe.
- Aqwind, formerly known as Aquanos, added algae to the equation.
- Algae, as other plants do, breathe in carbon dioxide during the day and breathe out oxygen.
- Thus Aqwind reduced the energy requirement in water treatment by 70% to 90%, it explains.
- The first microbeings unleashed on our waste are anaerobic bacteria, which start the process of breaking down the organic material, and also produce the methane, which can be collected and sold.
- The algae come in en route to the second bacterial stage: breakdown by aerobic bacteria, who work on the waste while breathing oxygen produced by the algae. Which are breathing the carbon dioxide breathed out by the bacteria.
- It's a beautiful circle.
- The product of this process is water clean enough for agriculture, but isn't recommended for drinking.



Current Affairs From 09th April to 30th April 2019

Benefits of System:

- Not only that: the algae system is a net generator of energy.
- The system also produces methane, which can be used for power generation, explains Leshem, adding that existing wastewater treatment plants can be retrofitted to use the Aquanos algal system.
- The Aqwind system only uses about 50% of the electricity needed by the most efficient treatment plants; compared with inefficient ones, it saves around 90%, – making it suitable for low-income countries.

Could the system be matched with renewable energy resources such as solar panels?

- Theoretically yes, but it's a hair complicated; or the methane could be used to make electricity.
- In any case the energy solution has to be adapted to the system size served by the Aqwind system, which can run from a system for a single home to a city of say a million people.

POink — the POLLution INK.

Why in News?

A student of textile engineering, Srivastava and his colleagues, after scraping up money from alumni, family and friends, were looking to build a machine — in essence an efficient filter — that could trap the particulate matter in the exhaust from diesel generators and ensure clean air is emitted by the engine.

These carbonised emissions, so extracted, are then turned into ink that can be used as paint or ink for printers.

About the device:

- Their device, Chakr Shield, a retrofit emission control device for diesel generators, is the mainstay of their company, Chakr Innovations (CI), now in the third year of its existence.
- Fourteen out of the 20 most polluted cities in the world are in India, as per figures compiled and released last year by the World Health Organization (WHO). Delhi topped that list.



Current Affairs From 09th April to 30th April 2019

- The Chakr Shield fits in the exhaust pipe of a diesel generator and captures 70 to 90 per cent of the particulate matter generated as engine exhaust.
- The device draws inspiration from commercially available diesel particulate filters (DPF), fitted in diesel cars in Europe to trap fine, toxic diesel emissions. But it turns the concept on its head.

How does it Work?

- The typical DPF is made up of a system of sieves that captures ultra-fine diesel particulate matter emitted from the engine tailpipe.
- The air from the heat of the engine “burns” these fine particles and converts them into carbon dioxide or monoxide.
- “Thus hazardous fine particulate matter is converted into less hazardous gases [which are emitted from the engine exhaust].
- Chakr Shield does away with the sieves, and works by cooling the engine exhaust. When small particles are rapidly cooled, they coagulate and expand, due to a phenomenon called thermophoresis, becoming easier to capture. |

Ink as a byproduct:

- With an estimated market of 232 million tonnes, valued at about 54 billion Indian rupees (USD 830 million), the Indian ink industry has grown at an average of more than 8 per cent per year over the past 10 years, according to trade publication InkWorld Magazine.
- The global printer ink market is expected to witness an annual growth rate of 4.7 per cent until 2023, reaching nearly USD 24 billion, said market research agency Prescient & Strategic (P&S).
- The company is looking to improve the efficiency of its product as well as explore “parallel applications.”
- Activated carbon – products that employ charcoal or carbon with increased surface area (and thus a greater ability to absorb pollutants) – is one potential product. Such carbon can be used in water filters or similar applications.

Crying Snake:

Why in News?

A new species of ‘crying’ snake has been discovered in Lepa-Rada district of [Arunachal Pradesh](#).



Current Affairs From 09th April to 30th April 2019

The discovery of the non-venomous crying keelback, whose zoological name is *Hebius lacrima*, has been published in *Zootaxa*, the New Zealand-based scientific mega-journal for animal taxonomy.

Details:

- The name for this keelback was suggested because of a dark spot under its eyes looking like a black tear that interrupts a white stripe running along the upper jaw to the back of its head and beyond.
- The specimen that Mr. Purkayastha obtained from a paddy field on a hill slope on the outskirts of Basar town was an adult male 48.7 cm long..
- The crying keelback can be differentiated from all other species of the genus *Hebius* by the combination of a distinctive broad, white, interrupted stripe along its body; three rows of irregular dark blotches (not vertically aligned) on each side; six cream, elongated spots on its anterior part and a smooth dorsal scale row.
- The snake, preferring to live near streams along paddy fields, was found to feed on small fish, tadpole, frogs and geckos.

Globally snakes are represented by 3,709 species. The northeast is home to some 110 species, with Arunachal Pradesh accounting for 55.

Other Discoveries:

- Several animals, birds, amphibians and insects have been discovered in Arunachal Pradesh in a little more than two decades.
- Assam-based Anwaraddin Choudhury discovered the Arunachal macaque (*Macaca munzala*) in 1997 but it was recognised as a new primate species in 2004. Another primate species called the white-cheeked macaque (*Macaca leucogenys*) was discovered by a four-member team in 2015.
- Another team led by Aparajita Dutta discovered the leaf deer (*Muntiacus putaoensis*) in 2002.
- Another major discovery was that of the Himalayan forest thrush in 2016. It was given the scientific name *Zoothera salimalii* after legendary ornithologist Salim Ali.

NIA:

Why in News?



Current Affairs From 09th April to 30th April 2019

The National Investigation Agency (NIA) had specific intelligence on [Sunday's serial blasts in Sri Lanka](#).

While examining an Islamic State (IS) sympathiser in Tamil Nadu six months ago, investigators got to know of the terror plot and alerted the authorities concerned to pass on the information to Sri Lanka.

About NIA:

National Investigation Agency (NIA) is a central agency established by the [Indian Government](#) to combat terror in [India](#).

- It acts as the Central Counter Terrorism Law Enforcement Agency.
- The agency is empowered to deal with terror related crimes across states without special permission from the states.
- The Agency came into existence with the enactment of the National Investigation Agency Act 2008 by the [Parliament of India](#) on 31 December 2008.
- NIA was created after the [2008 Mumbai terror attacks](#) as need for a central agency to combat terrorism was realised.
- The conviction rate of this anti-terrorism agency is currently 95 per cent as it has managed to convict 167 accused in the 185 cases registered by it since its inception.

Vision:

- Agency aims to be a thoroughly professional investigative agency matching the best international standards.
- It aims to set the standards of excellence in counter terrorism and other national security related investigations at the national level by developing into a highly trained, partnership oriented workforce.
- It also aims at creating deterrence for existing and potential terrorist groups/individuals.



Current Affairs From 09th April to 30th April 2019

- It aims to develop as a storehouse of all terrorist related information

Job Growth data:

Job creation dropped by 1.73% from 15.30 lakh in February last year to 15.03 lakh this year, according to the latest payroll data of the Employees State Insurance Corporation (ESIC).

The ESIC has released payroll data for April 2018, covering the period from September 2017.

Salient Observation:

- The data also showed that from September 2017 to February 2019, nearly three crore new subscribers joined the ESIC scheme.
- The gross new subscribers addition remained the highest at 19.81 lakh in July 2018. It showed that 2.34 lakh women subscribers joined the scheme in February 2019 while around 12.69 men enrolled.

Three times enrollment in EPFO

- In contrast to the ESIC data, the latest payroll data released by the retirement fund body Employees' Provident Fund Organisation (EPFO) showed that net employment generation in the formal sector almost trebled to 8.61 lakh in February compared to 2.87 lakh last year.
- The EPFO has also been releasing payroll data from April 2018, covering the period starting September 2017.
- In February 2019, the highest number of 2.36 lakh jobs were created in the 22-25 years age group, followed by 2.09 lakh in 18-21 age group.
- The data showed that 80.86 lakh new jobs were created in the 18 months period from September 2017 to February 2019.
- ESIC provides health insurance and medical services to those insured, covering establishments that have 20 or more workers and all employees whose monthly wages are up to ₹21,000.

About ESIC:

- **Employees' State Insurance** (abbreviated as ESI) is a self-financing social security and [health insurance](#) scheme for Indian workers.



Current Affairs From 09th April to 30th April 2019

- This fund is managed by the Employees' State Insurance Corporation (ESIC) according to rules and regulations stipulated in the ESI Act 1948.
- ESIC is an autonomous corporation by a statutory creation under [Ministry of Labour and Employment, Government of India](#).

Bullfrog tadpoles:

Why in News?

- Indian bullfrogs introduced in the Andaman islands are invasive, and eat native wildlife including fish and lizards.
- Now, experiments reveal that the frogs take to this invasive behaviour early in their lives.
- Even in the developmental stages, the large bullfrog tadpoles eat other native frog tadpoles, finds a study.

Background:

- The Indian bullfrog *Hoplobatrachus tigerinus* (native to the Indian subcontinent) has rapidly invaded the Andaman islands after it was introduced there in the early 2000s.
- In human-dominated areas, it now shares space with other native (and often endemic) frog species.
- The bullfrogs are prolific breeders: they have short breeding seasons, and each egg clutch can contain up to 5,750 eggs. Its tadpoles are carnivorous and eat other tadpoles (including their own species).
- Indian bullfrog tadpoles – which grew to be the largest (around 20 millimetres) – also grew the fastest.
- The proportion of bullfrog tadpoles surviving was greater in the presence of both endemic frog tadpoles. This is worrying because other native frog species – many of which are only being described – could also be affected,
- Humans play a huge role in the invasive success of these frogs and urgent management actions including screening at ports of entry could help prevent their spread to other islands.

IEPF Authority:



Current Affairs From 09th April to 30th April 2019

In a major success, the IEPF Authority has been able to enforce The Peerless General Finance and Investment Company Limited to transfer deposits worth about Rs 1514 Cr to IEPF.

About IEPF Authority:

- IEPF Authority has been set up under the Ministry of Corporate Affairs, Government of India as a statutory body under Companies Act 2013 to administer the Investor Education and Protection Fund **with the objective of promoting Investor's Education, Awareness and Protection.**
- The Authority takes various initiatives to fulfil its objectives through Investor Awareness Programmes and various other mediums like Print, Electronic, Social Media, and Community Radio etc.
- The size of IEPF Fund has almost doubled within one year with accumulated corpus of about Rs 4138 Cr. The companies have also transferred about 65.02 Cr valuing Rs 21,232.15 Cr.
- Secretary Ministry of the Corporate Affairs is the Chairperson of the Authority. Joint Secretary Ministry of the Corporate Affairs is the Chief Executive Officer of the Authority.

New Bird Species in A&N Island:

Context:

- Distinguished by the green and brown plumage on its back, the diminutive Horsfield's Bronze Cuckoo (*Chalcites basalis*) is a native of Australia and New Guinea.
- However, researcher G. Gokulkrishnan had an unexpected encounter with the tiny bird — roughly about 15 cm and weighing 22 g and known for its repeated, loud and piercing whistle — early on July 7, 2017 in a tsunami ravaged coastal forest in the Great Nicobar Island of the Andaman and Nicobar island chain.
- The sighting was the first recorded instance of the bird in India.

Other visitors:

- Two other first time visitors were also recorded on the islands over 2017-18.
- The Zappey's Flycatcher (*Cyanoptila cumatilis*) a song bird that breeds in China and spends the winters in the Malay peninsula, Sumatra and Java, was spotted six times in different areas of Andaman and Nicobar Islands.
- Later that year researchers recorded the presence of the Javan Pond Heron (*Ardeola speciosa*), usually found in Thailand and Cambodia.



Current Affairs From 09th April to 30th April 2019

- "During their migration from north to south, these birds make a stop over at the Andaman and Nicobar islands.

East Asian Flyway

- In the past few years a few other birds of southeast Asian origin have been recorded in the Andaman and Nicobar Islands during migration.
- Researchers are intrigued by the fact that number of new sightings has increased post the tsunami.
- These birds also use Andaman and Nicobar Islands for a few week rest before they can fly along the East Asian-Australasian Flyway (EAAF).
- The EAAF extends from Arctic Russia and North America to the south Australian boundaries and includes the most of the east Asian regions including Andaman and Nicobar Islands.
- Andaman and Nicobar Islands, with just about 0.25 % the country's landmass, is home to about 350 species of exotic birds, according to an official estimate.

Bio-electricity from Plants and Microbes

Can we at all have a pollution-free and nature-friendly power plant?

[Biology](#) appears to suggest a way.

A group of researchers at the Wageningen University in the Netherlands, led by Dr. Marjolein Helder, has hit upon a method that generates electricity from living plants and the microbes that live beneath them in the soil, where the plants drop their roots.

How does it Work?

- The plant of course does photosynthesis, using sunlight, water and atmospheric carbon dioxide, generating food in the form of carbohydrates and oxygen for our breathing.
- The microbes in the soil use some of this organic material coming out of the plants into the ground, metabolise them and, in the process, generate carbon dioxide and hydrogen ions and electrons.
- While the plant above the ground does photochemistry, the bacteria beneath do electrochemistry, generating positive and negative ions.



Current Affairs From 09th April to 30th April 2019

- What Dr. Helder and colleagues have done is to place positive and negative electrodes in appropriate positions and obtain an electric current, just as we do with batteries.
- This method of producing electricity is through what is termed as plant microbial fuel cells (PMFC).

How feasible is It?

- Theory suggests that one should be able to generate 3.2 watts of electric power per square meter (3.2W/m²), using PMFCs.
- The best level obtained so far in practice is but a sixteenth of it, namely, 220 mW/m².
- Thus, improvement in efficiency needs to be done, both by adding such microbes in the soil which perform better, and by enhancing the area by miles and miles of grass lawns, farm lands and focus on paddy fields and similar acreages.
- These will also bring the cost–benefit ratio to acceptable proportions.

Hydro power:

Why in News?

Earlier this month, the Union Cabinet approved a new hydroelectricity policy that, among other things, included large hydro projects within the ambit of renewable energy.

Prior to the policy, only small hydro projects of a capacity of less than 25 MW were treated as renewable energy. Large hydro projects were treated as a separate source of energy.

About Renewable Energy:

- India's renewable energy sector had an installed capacity of 75,055.92 MW as of February 2019, according to data with the Central Electricity Authority.
- This made up about 21.4% of the overall energy mix, with the rest coming from thermal, nuclear and large hydro sources.
- With the inclusion of large hydro in renewable energy, the energy mix changes drastically.



Current Affairs From 09th April to 30th April 2019

- Renewable energy capacity would now be 1,20,455.14 MW or 34.4% of the overall energy mix.

No additional resources:

- It must be noted that this is a purely cosmetic change. No additional resources have been created through this policy.
- It is a reclassification of existing capacity.
- The policy has meant a drastic change in the renewable energy mix as well.
- Whereas earlier, wind energy contributed nearly 50% of all renewable energy capacity, it will now make up only 29.3%.
- Similarly, solar energy's share will fall from 34.68% to 21.61%.
- The hydro sector, however, will see its share grow from just over 6% to over 41%.

Huge imbalance

- There has been a huge imbalance in the thermal-hydro mix for the last few years because of a sharp growth in thermal and complete stagnation in hydro.
- The basic idea is to ramp up hydro because it provides grid stability which a renewable source like wind and solar do not. The key reasoning seems to be providing grid stability and a better energy mix."

Impact on PSUs

- Another benefit from the policy could be the effect on the stock prices of State-run hydroelectric companies such as NHPC and SJVN at a point when the government is looking to sell its stake in these companies.

IndAs :

Why in News?

The Reserve Bank of India (RBI) has deferred the implementation of the new accounting norms, Ind AS, indefinitely, as necessary amendments to the relevant law are yet to be made.

The move will bring huge relief to the banks which are yet to recognise stressed assets and make necessary provisions as that would require higher capital.



Current Affairs From 09th April to 30th April 2019

Earlier deadline

- While the original plan was to implement these accounting norms by April 1, 2018, it had to be deferred by a year due to pending legislative amendments to the Banking Regulation Act, 1949, as also the level of preparedness of many banks.
- Now, the implementation has been deferred definitely.
- Ind AS for non-banking financial companies came into effect last year.
- Ratings agencies had pegged capital requirement by public sector banks at ₹1.1 lakh crore in the first quarter of the next financial year, if the new accounting norms were implemented.

Benefits of IndAs:

- In recent times, the banking regulator had raised concerns over 'divergence' in asset classification and provisioning, which means the reported numbers of a bank were lower than what RBI's inspection report had found.
- The implementation of Ind AS would have taken care of such issues, bankers said.

Bond Market:

What are bonds?

- A bond is a debt instrument which acts as an IOU. It can be traded in [financial markets](#) like equities and other commodities.
- It is commonly used by governments to raise capital in order to fund domestic growth and development projects.
- Investors take on government debt, and in return, are assured a stream of revenue for the duration of the time it takes the bond to mature.
- Bonds issue coupons, which are interest payments made in part to the repayment of the capital that was borrowed. The final payment is made when the bond attains maturity. However, governments are not the only entities issuing bonds.



Current Affairs From 09th April to 30th April 2019

Who buys bonds and why?

- Unlike equities, which are vulnerable to the vagaries of the stock market, investing in bonds is a relatively safer proposition since the capital is returned on maturity.
- The downside is that the returns on bonds may not be comparable to those of equities. Government bonds, also known as G-Sec, are issued by governments with maturity terms ranging from medium to long term.
- Till recently, government bonds used to be bought and sold on the secondary market only by institutional investors like provident funds, mutual funds, insurance companies and banks.
- However, in 2017, the RBI changed the rules to allow retail investors, this is anybody with a PAN card, to buy government bonds in the primary market.
- The RBI is the institutional entity that has been mandated with selling sovereign debt securities, or government bonds.

Do only governments issue bonds?

- Corporations also issue bonds to fund expansions and projects, or tide over budgetary deficits.
- Bonds issued by corporations are generally safer than equities, but some bonds offer an option to convert the instrument into stocks. Non-convertible corporate bonds offer coupons and function like any other bond.

How do bonds work?

- Consider a bond that is issued by a company or government for Rs.100 with a coupon of 7% for a period of five years.
- This implies that every year, the issuer will pay interest of 7%, while the principal will be refunded after the bond matures. What drives the bond market is the fact that bondholders are free to sell their bonds before maturity.
- The face value of a bond is what it sold for initially. Since they are transferable through sale in the bond market, their value fluctuates. The returns accrued by holders is measured by the yield, which is the rate of interest paid as coupons.
- Yield is calculated as the coupon divided by the value of the bond. It is multiplied by 100 to be expressed in percentage. In effect, yield = $(\text{coupon}/\text{value}) * 100$



Current Affairs From 09th April to 30th April 2019

- In the example considered above, if the face value of the bond fell to Rs.80, the yield would rise to 8.75%, that is $(7/80)*100$). Correspondingly, if the value rose to Rs.120, the yield would drop to 5.83%, that is $(7/120)*100$).
- It should be noted that even if the value of a bond fluctuates, the amount that can be redeemed after the term of maturity is reached is the face value, which is Rs.100 in this case. Bond yield is inversely proportional to its current value. The greater the yield, the lower the current market price of the bond.

Bond yields as an economic indicator

- Conventional metrics used by economists to diagnose the health of a country's economy include inflation, lending rate of the central bank, growth rate, and national income.
- However, bond yields are also a very prescient means of gauging the trajectory of an economy.
- As investors sell government bonds, prices drop, and yields increase. A higher yield indicates greater risk.
- If the yield offered by a bond is much higher than what it was when issued, there is a chance that the company or government that issued it is financially stressed and may not be able to repay the capital.

NHB:

Why in News?

The Reserve Bank of India (RBI) has divested its entire stake held in National Housing Bank (NHB), the regulator for housing finance companies, and National Bank for Agriculture and Rural Development (Nabard) to the government, which now holds 100% in these entities.

Background:

- Divestment of RBI's stake in NABARD and NHB has its basis in the recommendation of Narasimham Committee II and the Discussion Paper prepared by RBI on Harmonizing the Role and Operations of Development Financials Institutions and Banks.

About NHB:



Current Affairs From 09th April to 30th April 2019

- **National Housing Bank (NHB)**, a Government of India owned entity, was set up on 9 July 1988 under the National Housing Bank Act, 1987.
- NHB is an apex financial institution for housing.
- NHB has been established with an objective to operate as a principal agency to promote housing finance institutions both at local and regional levels and to provide financial and other support incidental to such institutions and for matters connected therewith.

Function:

- NHB registers, regulates and supervises Housing Finance Company (HFCs), keeps surveillance through On-site & Off-site Mechanisms and co-ordinates with other Regulators.

China's Moon Mission:

Context:

Beijing plans to send a manned mission to the moon and to build a research station there within the next decade, state media reported Wednesday, citing a top space official.

China aims to achieve space superpower status and took a major step towards that goal when it became the first nation to land a rover on the far side of the moon in January.

Details:

- It now plans to build a scientific research station on the moon's south pole within the next 10 years, China National Space Administration head Zhang Kejian said during a speech marking "Space Day", the official Xinhua news agency reported.
- Beijing plans to launch a Mars probe by 2020 and confirmed that a fourth lunar probe, the Chang'e-5, will be launched by the end of the year.
- Originally scheduled to collect moon samples in the second half of 2017, the Chang'e-5 was delayed after its planned carrier, the powerful Long March 5 Y2 rocket, failed during a separate launch in July 2017.

Other Developments:



Current Affairs From 09th April to 30th April 2019

- China on Wednesday also announced its Long March-5B rocket will make its maiden flight in the first half of 2020, carrying the core parts of a planned space station.
- The Tiangong — or “Heavenly Palace” — will go into orbit in 2022, the China Manned Space Engineering Office said.
- It is set to replace the International Space Station — a collaboration between the United States, Russia, Canada, Europe and Japan — which is due to be retired in 2024.
- Beijing last week also said it would launch an asteroid exploration mission and invited collaborators to place their experiments on the probe.

China now spends more on its civil and military space programmes than do Russia and Japan, and is second only to the United States. Although opaque, its 2017 budget was estimated at \$8.4 billion by the Organization for Economic Cooperation and Development.

Ammunition Tunnel:

What is It?

Indian Army is planning to construct underground tunnels for storage of ammunition along the border with China and Pakistan and Public Sector Undertaking NHPC Limited is being roped in for the purpose, army sources said.

Details of Project:

- Indian Army is in the process of executing pilot projects for construction of semi underground and cavern type ammunition storage construction through NHPC Ltd..
- Major armies, including China and the U.S., already use underground ammunition storage, a second source observed.
- These tunnels will be built in high altitude areas in the Northern and Eastern borders.
- Initially, four pilot projects would be taken up at four different locations along the Northern border and in Jammu and Kashmir at a cost of ₹15 crore.
- As the conditions in the caverns are controlled, it ensures better safety of sensitive ammunition minimising accidental explosions.



Current Affairs From 09th April to 30th April 2019

- As part of the project, a number of caverns with storage capacity of 200 metric tonnes will be built in mountain folds in identified areas.
- The Army has debated the idea of underground storage of ammunition for a long time as it has several advantages compared to over ground storage.
- A range of ammunition used by the Army, ranging from bullets, rockets to anti-tank and surface to air missiles, can be stored in the caverns.

Advantages:

- Underground storage offers improved safety, easier camouflage from enemy observation and satellite imagery and protection from enemy strikes like those seen during the aerial engagement a day after the Balakot air strike when Pakistan Air Force jets targeted Indian army installations along the Line of Control (LoC).

Emperor Penguins:

Why in News?

The second largest Emperor penguin colony in the world has suffered a "catastrophic" breeding failure after nearly all chicks born over three years died as their icy Antarctic habitat shrinks.

- **Research Report:**
- The British Antarctic Survey (BAS) used satellite imagery to study the behaviour of the Halley Bay colony in the Weddell Sea due south of Cape Hope, which normally sees up to 25,000 penguin pairs mate each year.
- They found that in 2016, when abnormally warm and stormy weather broke up the sea-ice on which the penguins normally raise their young, almost all the chicks died.
- This pattern was repeated in 2017 and 2018.
- The BAS said the colony at Halley Bay has "all but disappeared".

About Emperor Penguin:

- The **emperor penguin** is the tallest and heaviest of all living [penguin](#) species and is [endemic](#) to [Antarctica](#).
- Feathers of the head and back are black and sharply delineated from the white belly, pale-yellow breast and bright-yellow ear patches.



Current Affairs From 09th April to 30th April 2019

- Like all penguins it is flightless, with a streamlined body, and wings stiffened and flattened into flippers for a marine [habitat](#).
- The only penguin species that breeds during the Antarctic winter, emperor penguins trek 50–120 km (31–75 mi) over the ice to [breeding colonies](#) which can contain up to several thousand individuals.

SC on RBI:

Why in News?

The [Supreme Court](#) on Friday gave the Reserve Bank of India (RBI) “a last opportunity” to withdraw a November 2016 Disclosure Policy to the extent to which it stonewalls revelation of every other kind of information under the Right to Information Act, including the list of wilful defaulters and annual inspection reports.

Details:

All for transparency

In RBI versus Jayantilal N. Misty, the Supreme Court in 2015 said:

- There is no fiduciary relationship between the RBI and the financial institutions
- RBI has a statutory duty to uphold the interests of the public at large,

the depositors and the country's economy and the banking sector

- RBI should act with transparency and not hide information that might embarrass the individual banks, and the RBI is duty-bound to comply with the provisions of the RTI Act





Current Affairs From 09th April to 30th April 2019

The 2015 judgment had rejected the RBI's argument that it could refuse information sought under the RTI on the grounds of economic interest, commercial confidence, fiduciary relationship or public interest.

SC's Observation:

- The court had observed that there was "no fiduciary relationship between the RBI and the financial institutions".
- The court, in 2015, reminded the RBI that it had the statutory duty to uphold the interests of the public at large, the depositors, the economy and the banking sector.
- This court was also of the opinion that the RBI should act with transparency and not hide information that might embarrass the individual banks.
- The RBI is duty-bound to comply with the provisions of the RTI Act and disclose the information... the submission made on behalf of the RBI that the disclosure would hurt the economic interests of the country was found to be totally misconceived..
- The court however said some matters of national economic interest like disclosure of information about currency or exchange rates, interest rates, taxes, the regulation or supervision of banking, insurance and other financial institutions, proposals for expenditure or borrowing and foreign investments could harm the national economy, particularly, if released prematurely.
- "However, lower-level economic and financial information like contracts and departmental budgets should not be withheld under this exemption," Justice Rao wrote, referring to the 2015 verdict of the apex court.

Global Forest Watch:

Context:

The world lost 12 million hectares (30 million acres) of tropical tree cover last year, researchers said on Thursday, warning the planet's health was at stake.

It was the fourth highest annual decline since records began in 2001, according to new data from Global Forest Watch, which uses satellite imagery and remote sensing to monitor tree cover losses from Brazil to Ghana.



Current Affairs From 09th April to 30th April 2019

Salient Observation Made:

- Data represented “heartbreaking losses in real places,” with indigenous communities most vulnerable to losing their homes and livelihoods through deforestation.
- The loss of huge swathes of forest around the world also has major implications for climate change as they absorb a third of the planet-warming greenhouse gas emissions produced globally.
- The study found much of the loss occurred in primary rainforest — mature trees that absorb more carbon and are harder to replace.
- The rate of destruction in 2018 was lower than in the two previous years.
- It peaked in 2016 when about 17 million hectares of tropical forest were lost due partly to rampant forest fires, according to the WRI.
- The study highlighted new deforestation hotspots, particularly in Africa, where illegal mining, small-scale forest clearing and the expansion of cocoa farms led to an increase in tree loss in countries such as Ghana and the Ivory Coast.

Positive News:

- Indonesia was a rare bright spot, with primary forest loss slowing for two years running, after the government imposed a moratorium on forest-clearing.
- Indonesia has the world’s third largest total area of tropical forest and is also the biggest producer of palm oil.
- Environmentalists blame much of the forest destruction on land clearance for oil-palm plantations.

GM Brinjal:

Why in News?

Genetically modified (GM) brinjal is being illegally grown in the Fatehabad district of [Haryana](#), according to anti-GM activists.

On Thursday, they demanded that the Central and the State regulatory agencies immediately take action to stop the cultivation, investigate the spread of the illegal variety and destroy all such crops, seeds and saplings as dangerous biohazards are entering the food chain.



Current Affairs From 09th April to 30th April 2019

About GM Brinjal:

- Brinjal has been genetically modified by inserting a protein gene from the soil bacterium *Bacillus thuringiensis* to give protection against certain pests.
- The result is Bt brinjal, which was developed in India by Maharashtra-based seed company Mahyco.
- It was on the verge of becoming India's first GM food crop, when the Genetic Engineering Appraisal Committee (GEAC) cleared it for commercialisation in 2009, before doubts about the long-term impact on consumer health and plant biodiversity led then-Environment Minister Jairam Ramesh to slap an indefinite moratorium on the crop.

Concerns:

- Many [controversies](#) surround the development and release of [genetically modified foods](#), ranging from human safety and environmental impacts to ethical concerns such as corporate control of the food supply and [intellectual property](#) rights.
- The brinjal is an important food crop for India, and the potential commercialization of a genetically modified variety has drawn support and criticism.
- Although it is a major food crop in India, brinjal production is relatively low with fruit and shoot borer [infestation](#) a major constraint to [yield](#).

Benefits:

- Proponents of the technology believe the Bt brinjal will have positive effects for the Indian economy and the health of the farmers.
- Field trials conducted on research-managed farms carried out by Mahyco and the [Indian Council of Agricultural Research](#) suggested a 42% [pesticide](#) reduction and a doubling of the yield was possible.
- The economic gain for consumers, developers and farmers was estimated to potentially be US\$108 million per year with an additional \$3–4 million saved due to health benefits associated with decreased pesticide use.