

Easy to PICK – “UPSC Monthly Magazine” Jan-2018

# JANUARY

# 2018

# PT-MAINS

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## Jangalmahal Utsab

**Context:** Jangalmahal Utsab was recently inaugurated at the Jhargam district in West Bengal.

**About the festival:**

The festival is organised in the state to promote tribal art and culture. Different folk songs and dances such as Tusu, Bhadu, Ahira and Jhumur are performed by the locals of the Jangalmahal area during the festival.

**Facts for Prelims:**

The world Jangalmahal is used to refer four districts of the state — Purulia, Bankura, Jhargam and West Midnapore. These four districts were once affected by Maoist insurgency.

## Jal Mahotsav

**Context:** India's biggest water carnival through 'Jal Mahotsav' is organised every year in Hanuwantiya Island in Madhya Pradesh. The third such 'Jal Mahotsav' concluded this year on January 2.

**About Jal Mahotsav:**

**What is it?** The festival, held between October and January, is a celebration of Madhya Pradesh's natural beauty and its culture. It is also a great place to try out a variety of adventure sports like parasailing, paramotoring, water zorbing, and many others. The festival also represents the culture of Madhya Pradesh – a culture that stands for rich skill set of its artisans and rich heritage.

**Where is it held?** Hanuwantiya Island, located on the banks of the Indira Sagar dam in Madhya Pradesh, plays host to India's largest water carnival – Jal Mahotsav.

## 26th World Book Fair

**Context:** The 26th edition of the annual book fair will be held in New Delhi.

**Theme:** ‘Environment and Climate Change’.

**Guest of honour country:** This year’s book fair will host European Union as the Guest of Honour Country.

**Organizers:** Organised by National Book Trust, in association with ITPO.

**About the fair:** New Delhi World Book Fair is not just an opportunity for a reader but it also provides a huge platform to the publishers who exhibit their numerous books at the event. Starting from 200 participants in 1972 the number of participants has gone up to 886 by 2016. The theme of the 2017 edition was -“Writings on Women by Women”.

## Medaram's Jatara

**About the Medaram's Jatara:**  
**Sammakka-Sarakka/Saralamma**

**What is it?** Sammakka-Sarakka Jatara held by forest dwelling

Koya tribe of Telangana and surrounding States, is the biggest Tribal festival in Asia which is attended by one crore people on an average.

**Why is it held?** The event is held bi-annually to honour the twin goddesses Sammakka and her daughter Sarakka. Several communities in Telangana society support Jatara as it is also a mythical narrative of two tribal women leaders who fought against the Kakatiya rulers who tried to annex their land and forests. According to the myth it was Sammakka's curse

which caused gradual decline and death of Kakatiya rule.

**Facts for Prelims:**

**Where is Medaram located?** Medaram is a remote place in the Eturnagaram Wildlife Sanctuary, a part of Dandakaranya, the largest surviving forest belt in the Deccan.



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## Flamingo festival



### Context:

The three-day annual Flamingo Festival is being held at Pulicat lake.

### About the festival:

- Flamingo Festival is held every year to promote tourism in Pulicat and Nellapattu. Flamingo Festival is being organised for the past 12 years. Migratory birds from Siberia have been visiting this place for breeding and the colourful birds are a treat to the eye of bird watchers.
- Usually around 80 different avian species migrate to Pulicat for breeding. They hunt in shallow waters of the lake and breed in Pulicat. Once the breeding season concludes, they fly away to their native land with their offspring in tow. The conducive atmosphere for this seasonal avian guests is being conserved at Nelapattu bird sanctuary.

some hundreds of pelicans and other birds. Located about 20 km north of the Pulicat Lake on the Andhra Pradesh-Tamil Nadu border, the sanctuary is spread in about 459 hectares.

- About Pulicat lake: It is the second largest brackish water lake or lagoon in India, after Chilika Lake. It straddles the border of Andhra Pradesh and Tamil Nadu states with over 96% of it in Andhra Pradesh. The lake encompasses the Pulicat Lake Bird Sanctuary. The barrier island of Sriharikota separates the lake from the Bay of Bengal and is home to the Satish Dhawan Space Centre. Two rivers which feed the lagoon are the Arani river at the southern tip and the Kalangi River from the northwest, in addition to some smaller streams. The Buckingham Canal, a navigation channel, is part of the lagoon on its western side.

### Facts for Prelims:

- About Nelapattu Bird Sanctuary: It is considered one of the biggest habitat for

## Madhubani paintings

**Context:** The folk painting of Madhubani will soon be seen decorating the walls of various government buildings in Bihar, the eastern Indian state where the art hails from. The idea behind painting the town in Madhubani is to give visitors a firsthand experience of how the paintings are blended with the region’s culture.

### About Madhubani paintings:

Madhubani, which means ‘forest of honey’, is a style of folk painting old enough to find mention in some of the ancient Indian texts like the holy Ramayana. It is also known as Mithila, for its origin is said to be the Mithila region in Bihar.

- Traditionally, the Madhubani paintings are created using fingers and twigs, and items like matchsticks have come to be used in their creation in recent times.
- Their various styles include Bharni, Katchni, Tantrik, Godna, and Kohbar,

which would historically be painted only by women from the upper strata in the caste system, who would make them on mud walls on special

occasions.

- The norms have now changed and the paintings can be enjoyed by anyone and in various forms. Madhubani is now found on apparel, paper, canvas, and other products, which boast of designs inspired by Hindu deities such as Krishna, Rama, Lakshmi, Shiva, Durga, Saraswati, all of whom have been painted in Madhubani since ancient times. Other subjects of Madhubani paintings include peacocks, fish and human connection with nature.



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## National Youth Festival

**Context:** National Youth Festival is being celebrated on 12<sup>th</sup> January, that is, on the occasion of birth anniversary of Swami Vivekananda, the youth icon of India.

### About the National Youth Festival:

- **What is it?** National Youth Festival (NYF) is the biggest Youth Festival of its kind in the Country. The Festival is organised by Ministry of Youth Affairs & Sports in collaboration with State Govt. of Uttar Pradesh at Gautam Buddha University.
- **Objective:** The objective of organizing NYF is to provide a platform to bring the youth of the country together in an attempt to provide them opportunity to showcase their talents in various activities.
- **Theme:** The Theme of the Festival is ‘Sankalp Se Siddhi’, to capitalize on the demographic dividend of young India, to capture the vibrancy and fresh perspective of youth and to pledge to accomplish the Goal of New India.
- **Significance of the festival:** The Festival also provides an arena, by creating a Mini-India, where youth interact in formal and informal settings and exchange their social and cultural uniqueness. This blend of diverse socio-cultural milieu creates ‘Ek Bharat Shrestha Bharat’. The entire programme is designed to enhance the awareness about government initiatives and exhorting the youth to express their perceptions and concepts of how to make their initiatives more effective.

### Facts for Prelims:

- This is the 22nd National Youth Festival. The 1st National Youth Festival was held in 1995 in Bhopal.
- This is the first time that the National Youth Festival is being organized in NCR.



## Indian harvest festivals

**Context:** The Harvest season is on and festivities have gripped the nation from the north to down south.

### *Various festivals across the nation:*

- Makar Sankranti: The festival of Makar Sankranti is being celebrated today when the Sun enters the Makar zodiac and the days begin to lengthen compared to nights.
- Pongal: In South India and particularly in Tamil Nadu, it's the festival of Pongal which is being celebrated over 4 days at harvest time.
- Magha Bihu: In Assam and many parts of the North East, the festival of Magha Bihu is celebrated. It sees the first harvest of the season being offered to the gods along with prayers for peace and prosperity. People in Assam celebrate this festival wearing colourful and bright clothes.
- Uttarayan: Gujarat celebrates it in the form of the convivial kite festival of Uttarayan.
- Maghi: In Punjab, Makar Sankranti is celebrated as Maghi. Bathing in a river in the early hours on Maghi is important.
- Saaji: In Shimla District of Himachal Pradesh, Makara Sankranti is known as Magha Saaji. Saaji is the Pahari word for Sankranti, start of the new month. Hence this day marks the start of the month of Magha.

Kicheri: The festival is known as Kicheri in Uttar Pradesh and involves ritual bathing.

## Rashtriya Sanskriti Mahotsav-2018

**Context:** To celebrate the idea of unity in diversity, the Ministry of Culture is organising the 7th edition of the Rashtriya Sanskriti Mahotsav. The Mahotsav will cover a profusion of art forms from classical and folk, music and dance, theatre to literature and the visual arts and would offer the chance to experience the best in established and emerging virtuosity. A handloom and handicrafts-utsav is part of the proposed event. The gastronomic culture of several partnering states will be showcased through a food festival.

### Facts for Prelims:

- The Ministry of Culture is organising the event under the Ek Bharat Shreshtha Bharat matrix.
- The event will be held in Karnataka. The State paired with Karnataka is Uttarakhand.

### Ek Bharat Shreshtha Bharat:

The Ek Bharat Shreshtha Bharat programme was launched by the Prime Minister on 31st October, 2016 to promote engagement amongst the different states/UTs so as to enhance mutual understanding and bonding between people of different states, thereby securing stronger unity and integrity of the nation.



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## Purandara Dasa

**Context:** There is much speculation about where Purandara Dasa, regarded as the pitamaha of Carnatic music, was born. Now, an expert committee constituted by Kannada University, Hampi, has come to the conclusion that it was most likely a small village called Kshemapura (now called Keshavapura) at Araga hobli in Tirthahalli taluk of Shivamogga district in Karnataka. The committee has found enough evidence to believe this place, which was a major province of the Vijayanagara empire, was the birthplace of the saint.

### Background:

Till now, some have been arguing that the saint-poet was born in Purandaragadh, near Pune in Maharashtra, and finally settled in Hampi.

### About Purandaradasa:

- Purandara Dasa (1484–1564) was a Haridasa, great devotee of Lord Krishna (an incarnation of Lord Vishnu) and a saint. He was a disciple of the celebrated Madhwa philosopher-saint Vyasatirtha, and a contemporary of yet another great Haridasa, Kanakadasa.
- Purandaradasa was the pioneer who blended the rich musical streams, namely the Dravidian and Aryan music, into a single stream known as Carnatic music. In honor of his significant and legendary contributions to Carnatic Music, he is widely referred to as the Pitamaha of Carnatic Music.

## INTACH to document heritage sites along Mahanadi river

Indian National Trust for Art and Cultural Heritage (INTACH) today launched a programme for documentation of the tangible and intangible heritage sites along both sides of Mahanadi river. It will be a road map for the conservation workers, historians, students and researchers. Seven teams of culture enthusiasts will cover nearly 1000 kilometres on both side of the river Mahanadi under the project.

### Background:

Civilisation has grown on the banks of the river and there are numerous tangible heritages like temples, palaces, forts dot it. Moreover, intangible heritage like folklore, songs and dances, tribal art and craft have also thrived along the river.

### Facts for Prelims:

- The 850km length of the Mahanadi river is divided almost equally between Chhattisgarh, where it is born, and downstream Odisha.
- Mahanadi rises from Raipur district of Chhattisgarh and flows for about 851 km before its outfall into the Bay of Bengal. Its main tributaries are the Seonath, the Jonk, the Hasdeo, the Mand, the Ib, the Ong and the Tel.
- Near the city of Sambalpur, it is dammed by the largest earthen dam in the world, the Hirakud Dam.

### About INTACH:

INTACH is an autonomous non-governmental Indian non-profit society that seeks to preserve Indian culture and heritage. It was founded in 1984.

## Chhau Dance

**Context:** A traditional Indian Chhau dance show will be staged at National Palace Museum in Taipei City as part of efforts to strengthen cultural exchanges between Taiwan and the South Asian nation. Jointly organized by NPM and India-Taipei Association, “Chhau Nritya: Dancing Tales from India” will be presented by Sarberiya Milan Sangha Chhau Nritya Party—a troupe sponsored by New Delhi-headquartered India Council for Cultural Relations.

the Seraikella Chau of Jharkhand, and the Mayurbhanj Chau of Odisha. The dance is traditionally an all males troupe, regionally celebrated particularly during spring every year.



### About Chhau dance:

- Originating in eastern India, Chhau features dancers in colorful masks and costumes performing movements inspired by animals, birds, martial arts and tribal and folk customs. The practice was added to UNESCO's Representative List of the Intangible Cultural Heritage of Humanity in 2010. Chhau shows typically depict episodes from classic Hindu epics.
- It is found in three styles named after the location where they are performed, ie. the Purulia Chau of Bengal,

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## Why is Maharashtra on the boil?

### Context:

On January 1, members of the Dalit community on their way to Bhima-Koregaon, a village near Pune, were attacked, allegedly by Hindutva forces. Following this, a State-wide bandh was called.

### Why is Koregaon-Bhima important?

- The Koregaon Ranstambh (victory pillar) is a memorial for British East India Company soldiers killed in a battle on January 1, 1818, in which a small group of infantrymen — about 500 of them Mahars (a Scheduled Caste community) — held off a numerically superior force from the army of Peshwa Bajirao II. The Mahars fought alongside the British, some accounts say, because the Peshwa had scorned their offer to join his army.
- After Dr. Ambedkar visited the site on January 1, 1927, it became a place of pilgrimage for Dalits, an assertion of pride. In recent years, attendance has been in the lakhs, with Dalits coming from all over India. This year, the bicentenary, saw an especially large influx.

### Memorials:

Sambhaji, Shivaji's son and successor, was captured by the Mughals; according to legend, he was tortured and his mutilated corpse thrown into the Bhima river. Govind Mahar, a Dalit, gathered the dismembered parts of his body and performed the last rites; later, Mahars of the village erected a memorial to Sambhaji. Govind Mahar's tomb stands near Sambhaji's in Vadhu-Budruk village, near Bhima-Koregaon.



## Haj subsidy

**Context:** The government has abolished the subsidy being given to Haj pilgrims every year. The government said it will use the subsidy funds to empower the minorities.

### Background:

The policy to support Muslims in making the pilgrimage to Mecca in Saudi Arabia, can be traced back to 1932, when the British enacted the Port Haj Committees Act. In the ensuing decades, the Act has undergone numerous changes. And in recent years it has called for significant criticism from various parties. In 2012, a Supreme Court order directed the Haj subsidy to be gradually phased out in the coming ten years. In 2017, a Central Haj Committee meeting decided to do away with the subsidy by the following year.

### What are the criticisms against the Haj subsidy?

The Haj subsidy has come under heavy criticism, particularly because of the monopoly formed by Air India in carrying out the pilgrimage. Allegedly, the government subsidies have resulted in major profits for Air India, benefiting the airlines far more than the pilgrims. According to several critics of the subsidy, if booked months in advance, it is possible to buy cheaper air tickets, thereby doing away with the need for subsidy. Some of the political parties have also called the subsidy as minority appeasement.

### What are the other religious pilgrimages that are offered government subsidy in India?

The Haj is not the only religious pilgrimage being funded by the State. A number of other religious tours are supported by the government. For instance, the state and central governments spend considerable amounts on the pilgrim facilities at the four Kumbh melas in Haridwar, Ujjain, Nashik and Allahabad. The Kailash Manasarovar yatra from North India to the mountains of Tibet is yet another pilgrimage which is organised by the government with arrangements being made for security and health facilities.

### What is the Haj subsidy?

- The Haj subsidy refers to discounted airfares given by the government-owned airlines, Air India. It also includes assistance to Muslim pilgrims for domestic travel to reach specially designed Haj departure airport terminals, lodging, medical care and meal. Originally, the subsidy was given on air fares of flights between Bombay and Jeddah. Later, additional flight legs were added to the subsidy list. Since 1984, all the traffic for Haj from India to Saudi Arabia has been shared between Air India and Saudi, both of which are the government funded carriers of their respective countries.
- After the 2012 Supreme Court order to phase out the subsidy in the next ten years, the government had been steadily declining the amount of subsidy offered to Haj pilgrims each year.

## Online portal ‘NARI’

**Context:** In a path breaking initiative to empower women, the ministry of Women & Child Development has launched an online portal NARI.

**About NARI:**

What is it? It is an online portal developed by the Ministry of Women and Child Development which will provide information to women on issues affecting their lives.

Aim: The portal aims to provide women citizens with easy access to information on government schemes and initiatives for women.

Details: The portal contains information about schemes being run by both Central as well as the States Governments. It provides links to the Ministries, Departments and autonomous bodies offering these schemes as well as easy access to online applications and grievance redressal.

## Iceland becomes first country to legalise equal pay

A new law making it illegal to pay men more than women has taken effect in Iceland. The legislation makes Iceland the first country in the world to legalise equal pay between men and women.

### Key facts:

- Under the new rules, companies and government agencies employing at least 25 people will have to obtain government certification of their equal-pay policies. Those that fail to prove pay parity will face fines.
- The move is part of a bid to eradicate the gender pay gap by 2022 in the Nordic nation where 38% of parliamentarians are female – above the global average – including Prime Minister Katrin Jakobsdottir.

### Background:

Iceland, an island country in the North Atlantic Ocean that is home to approximately 323,000 people, has a strong economy, based on tourism and fisheries. For the past nine years, it has been ranked by the World Economic Forum (WEF) as the world's most gender-equal country.

### Facts for Prelims:

The WEF Global Gender Gap Report uses markers such as economic opportunity, political empowerment, and health and survival to gauge the state of gender equality in a country.

- According to the latest WEF report, the top five best performers in the global gender gap are Iceland, Norway, Finland, Rwanda and Sweden. Yemen, on the other hand, is currently the lowest-ranked of the 144 countries measured in the report. India is ranked 108.

Fifty-two countries fell below the global average in 2017, including China, Liberia and the United Arab Emirates, while 60 saw their overall gender gap decrease. Hungary was the only European country to be ranked lower than the global average, having scored poorly on political empowerment.



## Haryana becomes first state to launch High Risk Pregnancy portal

Haryana has achieved the distinction of becoming the first state in the country to launch High Risk Pregnancy (HRP) Portal. The Union ministry of health and family welfare and Niti Ayog have acknowledged the portal as a good practice to be implemented.

### *About the HRP portal:*

- **What is it?** This innovative web application has been designed to track every high risk pregnant woman till 42 days after delivery, so that she receives adequate treatment during the ante-natal period for healthy outcome of pregnancy. This portal not only helps in early identification of high-risk pregnant cases up to the grass-roots level but also ensures their timely referral to the civil hospitals for further management and delivery by specialists.
- **Background:** The High Risk Pregnancy Policy has been implemented across the state since November, 2017, for identifying 100 per cent name-based high-risk pregnancy cases, and ensuring their delivery by specialists at civil hospitals. This initiative is aimed at increasing the pace of decline in Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR) and Still Birth Incidence as morbidity and mortality is quite high in high risk pregnant cases.

### *Facts for Prelims:*

Birth companion strategy: Haryana is also implementing birth companion strategy under which one female attendant would be allowed during delivery in the labour room. The presence of a female birth companion during delivery is a step towards improving the quality of care in labour rooms for improving the maternal and neonatal outcome and for respectful maternity care.

## Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)

**Context:** Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) has crossed one crore mark in antenatal check-ups.

- The programme has been successful in reaching out to the difficult and remote areas of India, since out of the 1 crore checkups across the country, more than 25 lakh check-ups were conducted in high priority districts identified by the Health Ministry for focussed attention.
- While all States/ UTs have made significant efforts to reach out to pregnant women, Maharashtra has reported the largest number of check-ups among the Non-Empowered Action Group (EAG) States and Rajasthan has reported the largest number of check-ups among the Empowered Action Group States.

1990 with 556 women dying during child birth per hundred thousand live births as compared to the global MMR of 385/lakh live births. As per RGI- SRS (2011-13), MMR of India has now declined to 167/lakh live births against a global MMR of 216/lakh live births (2015). India has registered an overall decline in MMR of 70% between 1990 and 2015 in comparison to a global decline of 44%.

- While India has made considerable progress in the reduction of maternal and infant mortality, every year approximately 44000 women still die due to pregnancy-related causes and approximately 6.6 lakh infants die within the first 28 days of life. Many of these deaths are preventable and many lives can be saved if quality care is provided to pregnant women during their antenatal period and high risk factors such as severe anemia, pregnancy- induced hypertension etc are detected on time and managed well.

### About PMSMA:

The Pradhan Mantri Surakshit Matritva Abhiyan has been launched by the Ministry of Health & Family Welfare (MoHFW), Government of India.

- The program aims to provide assured, comprehensive and quality antenatal care, free of cost, universally to all pregnant women on the 9<sup>th</sup> of every month. PMSMA guarantees a minimum package of antenatal care services to women in their 2nd/3rd trimesters of pregnancy at designated government health facilities.
- The programme follows a systematic approach for engagement with private sector which includes motivating private practitioners to volunteer for the campaign; developing strategies for generating awareness and appealing to the private sector to participate in the Abhiyan at government health facilities.

### Background:

- Data indicates that Maternal Mortality Ratio (MMR) in India was very high in the year

## INSV Tarini

**Context:** An all-woman Indian Navy team on Indian Naval Sailing Vessel (INSV) Tarini has successfully crossed the notoriously rough Drake Passage, as they rounded Cape Horn off the Southern tip of South America, sometimes called the Mount Everest of sailing.

### **INSV Tarini:**

INSV Tarini is a 56 foot sailing vessel built in India by M/s Aquarius Shipyard Pvt Ltd, Goa. It was inducted into the Indian Navy recently in February 2017. It has Raymarine navigation suite and an array of satellite communication systems for perfect navigation anywhere in the world. It showcases the ‘Make in India’ initiative on the International forum.

Atlantic Ocean (Scotia Sea) with the southeastern part of the Pacific Ocean and extends into the Southern Ocean.

The passage between Cape Horn and Livingston Island is the shortest crossing from Antarctica to any other landmass. There is no significant land anywhere around the world at the latitudes of Drake Passage, which is important to the unimpeded flow of the Antarctic Circumpolar Current which carries a huge volume of water through the Passage and around Antarctica.

### **Navika Sagar Parikrama:**

- The voyage of Navika Sagar Parikrama began from Goa coast in September 2017 and will be finishing around March 2018. The expedition will be covered in five legs, with stop-overs at 4 ports: Fremantle (Australia), Lyttleton (New Zealand), Port Stanley (Falklands), and Cape Town (South Africa).
- The project is considered essential towards promoting Ocean Sailing activities in the Indian Navy along with showcasing the Government’s support for empowering women.

### **Significance:**

It also aims to showcase ‘Nari Shakti’ on the world platform and help revolutionise societal attitudes and mindset towards women in India by raising visibility of their participation in challenging environs. The voyage aims to showcase the ‘Make in India’ initiative by sailing onboard the indigenously built INSV Tarini. The crew would monitor and report marine pollution on the high seas.

### **Facts for Prelims:**

- The Drake Passage is the body of water between South America’s Cape Horn and the South Shetland Islands of Antarctica. It connects the southwestern part of the

## Stree Swabhiman Initiative

**Context:** Ministry of Electronics and Information Technology has announced an initiative by common services centres (CSCs) on women's health and hygiene. The initiative is named 'Stree Swabhiman'.

### About Stree Swabhiman:

- *'Stree Swabhiman' aims to create a sustainable model for providing adolescent girls and women an access to affordable sanitary products by leveraging CSCs.*
- *Under the 'Stree Swabhiman' project, sanitary napkin micro manufacturing units are being set up at CSCs across India, particularly those operated by women entrepreneurs. The initiative is driven by awareness and personalised outreach by women entrepreneurs who produce and market sanitary napkins themselves.*

### About CSCs:

Common Services Centers (CSCs) are a strategic cornerstone of the Digital India programme. They are the access points for delivery of various electronic services to villages in India, thereby contributing to a digitally and financially inclusive society.

**CSCs enable the three vision areas of the Digital India programme:**

- Digital infrastructure as a core utility to every citizen.
- Governance and services on demand.

Digital empowerment of citizens.

## Arunachal declared open defecation-free State

Arunachal Pradesh has emerged as the second State in the Northeast, after Sikkim, to be declared Open Defecation Free. Arunachal has 21 districts and the State attained the feat much before the national deadline of October 2, 2019.

### **Background:**

Arunachal Pradesh has managed to do this before the deadline of October 2, 2019. The state government had cut short the national ODF target by one year and ten months ahead of the national target and set 31 December, 2017, as the final target to achieve ODF status in Arunachal Pradesh.

### **Significance of the mission:**

Poor sanitation spreads infectious diseases that kill hundreds of thousands of children each year, and stunt the physical and cognitive development of those who survive. Announcing a goal of accelerating the reduction in open defecation was a great idea, articulating a worthy goal for serious public policy efforts

### **About SBM:**

Swachh Bharat Mission (SBM) aims to eliminate open defecation by 2019. The goal also includes conversion of insanitary toilets to pour flush toilets, eradicating of manual scavenging and Municipal Solid Waste Management (MSWM).



## Urban heat island

**Context:** Every winter, the whole of north India is covered by dense fog. But a phenomenon called urban heat island is burning holes in this grey shroud over New Delhi and other cities on the Indo-Gangetic Plain, says a new study.

### Impacts:

The urban heat island effect is so strong in Delhi, the largest city in the region, that it saw 50% less fog than surrounding areas. In Delhi, the heat island effect also appears to be suppressing the very formation of fog. Scientists found that while areas outside Delhi have seen a 20 per cent increase in fog in the period 2012-2016 compared with 2000-2004, Delhi itself did not see an increase.

### Reasons behind this:

The analysis found a correlation between the size of the urban population and that of the fog hole. Population size has been shown to be related to the intensity of urban heat islands since they are an indicator of urban growth.

### Way ahead:

The findings from the study are important since dense and polluted winter fog envelopes north

India, Pakistan, Nepal and Bangladesh every year from December to January severely affecting air quality and disrupting air, rail and road traffic. The study will be very useful in understanding the process of why fog occurs and ultimately to predict its occurrence.

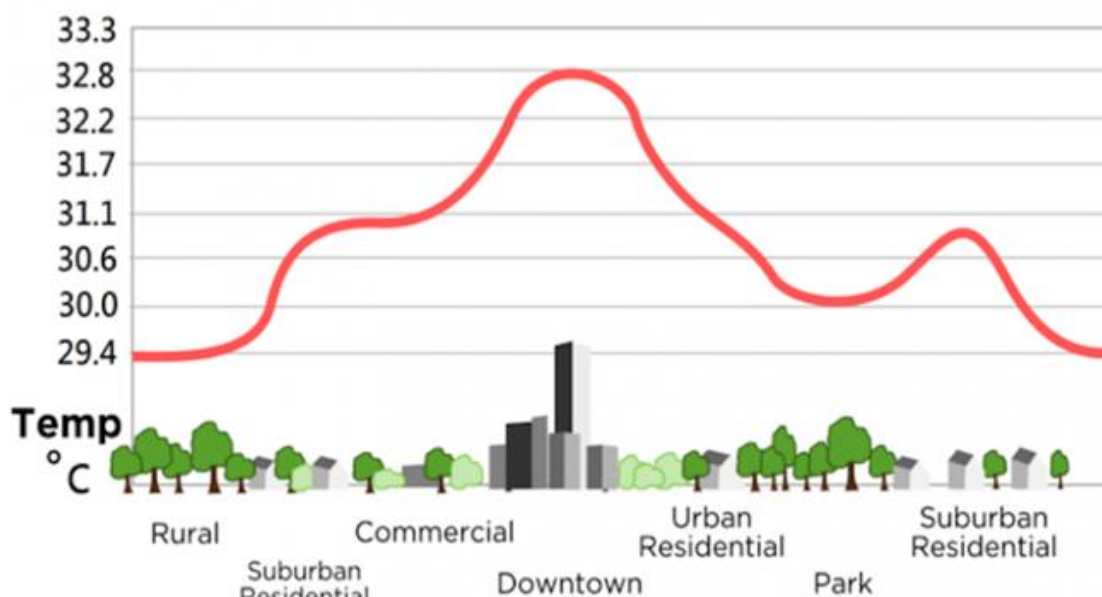
### Concerns:

Urban heat islands can have worse air and water quality than their rural neighbours. UHIs often have lower air quality because there are more pollutants (waste products from vehicles, industry, and people) being pumped into the air. These pollutants are blocked from scattering and becoming less toxic by the urban landscape: buildings, roads, sidewalks, and parking lots. Water quality also suffers. When warm water from the UHI ends up flowing into local streams, it stresses the native species that have adapted to life in a cooler aquatic environment.

### What is urban heat island effect?

The urban heat island is a phenomenon when the heat gets trapped near the earth's surface as a result of a decline in green cover, rapid urbanisation, energy-intensive activities, and concrete structures.

## URBAN HEAT ISLAND PROFILE



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## Government names nine new smart cities

Government has named nine new smart cities. The number of cities picked under the project now stands at 99.

The nine cities chosen in the fourth round are - Bareilly, Moradabad and Saharanpur in Uttar Pradesh, Erode in Tamil Nadu, Bihar Sharif in Bihar, Silvassa in Dadra and Nagar Haveli, Diu in Daman and Diu, Kavarati in Lakshadweep and Itanagar in Arunachal Pradesh. Silvassa topped the list of winners in this round.

### **About Smart City mission- Key facts:**

Under the scheme that was launched in 2014, around 100 cities in the country will be developed.

- **Selection of cities:** The selection is based on the scores cities get for carrying out urban reforms in areas including sanitation and governance. Cities that score the highest will be picked for the project, to be implemented over a 10-year period.
- **Development:** These cities will be developed to have basic infrastructure through assured water and power supply, sanitation and solid waste management, efficient urban mobility and public transport, IT connectivity, e-governance and citizen participation. Bottom-up approach has been the key planning principle under Smart City Mission.
- **Funding:** Under the scheme, each city will get Rs 500 crore from the Centre for implementing various projects. An equal amount, on matching basis, will have to be contributed by the state or urban local bodies. The mission will provide central funding of Rs 48,000 crore to the selected cities.
- **Implementation:** The implementation of the Mission at the City level will be done by a Special Purpose Vehicle (SPV) created for the purpose. The SPV will plan, appraise, approve, release funds, implement, manage, operate, monitor and evaluate the Smart City development projects. Each smart city will have a SPV which will be headed by a

full time CEO and have nominees of Central Government, State Government and ULB on its Board.



## Smart Star-Rating for Garbage Free Cities

Ministry of Housing and Urban Affairs has launched the ‘Protocol for Star Rating of Garbage-Free Cities’ in Goa.

### **About the star rating initiative:**

- **What is it?** The star-rating initiative, developed by the Swachh Bharat Mission – Urban will be rating cities on a 7- star rating system based on multiple cleanliness indicators for solid waste management.
- **Indicators:** These include Door to Door Collection, bulk generator compliance, source segregation, sweeping, scientific processing of waste, scientific land filling, plastic waste management, construction and demolition management, dump remediation & citizen grievance redressal system etc.
- **Vision:** Vision statement of the star-rating protocol states that “All cities achieve “Garbage Free” status wherein at any point of time in the day, no garbage or litter is found in any public, commercial or residential locations (including storm drains and water bodies) in the city (except in litter bins or transfer stations); 100% of waste generated is scientifically managed; all legacy waste has been remediated and city is scientifically managing its municipal solid waste, plastic waste and construction & demolition waste. Additionally, there must be a steady reduction in the waste generated by the city and visible beautification of the city to achieve a clean & aesthetically pleasing city”.
- **Rating:** Cities can be rated as 1, 2, 3, 4, 5 and 7 star based on their compliance with the protocol conditions specified for each of the rating. Further city should be ODF (Open Defecation Free) before it could be given rating of 3 star or above. While cities may self-declare themselves as 1-star, 2-star or 4-star, MoHUA will carry out an additional verification through an independent third party to certify cities as 3-star, 5-star or 7-star. Cities will need to get recertified themselves every year to retain

their star-status.

**Significance of the initiative:** The most significant feature of the rating protocol is that it provides stakeholders with a single metric to rate a city’s cleanliness, rather than separately evaluating multiple factors which contribute to a city’s overall cleanliness and garbage free status. The distinctive feature of Star Rating System will be that many cities can have higher stars as compared to only one city can be “Cleanest city” under Swachh Survekshan.



## ‘Reward Work, Not Wealth’ report

A report titled ‘Reward Work, Not Wealth’ has been released by the international rights group Oxfam. The report reveals how the global economy enables wealthy elite to accumulate vast wealth even as hundreds of millions of people struggle to survive on poverty pay.

### Highlights of the report:

- The richest 1% in India cornered 73% of the wealth generated in the country last year. Besides, 67 crore Indians comprising the population’s poorest half saw their wealth rise by just 1%. The wealth of India’s richest 1 per cent increased by over Rs. 20.9 lakh crore during 2017, an amount equivalent to total budget of the central government in 2017–18, Oxfam India said. This presents a worrying picture of rising income inequality.
- Globally, 82% of the wealth generated last year worldwide went to the 1%, while 3.7 billion people that account for the poorest half of population saw no increase in their wealth. 2017 saw an unprecedented increase in the number of billionaires, at a rate of one every two days. Billionaire wealth has risen by an average of 13% a year since 2010—six times faster than the wages of ordinary workers, which have risen by a yearly average of just 2%.
- The survey also showed that women workers often find themselves at the bottom of the heap and nine out of 10 billionaires are men. In India, there are only four women billionaires and three of them inherited family wealth.

### Concern:

The billionaire boom is not a sign of a thriving economy but a symptom of a failing economic system. Those working hard, growing food for the country, building infrastructure, working in factories are struggling to fund their child’s education, buy medicines for family members and manage two meals a day. The growing divide undermines democracy and promotes corruption and cronyism.

### What needs to be done?

- Oxfam makes several recommendations to start fixing the problem of income inequality. On the government’s part, it has asked for things like promoting inclusive growth by encouraging labour-intensive sectors that will create more jobs, imposing higher tax on the super-rich, implementing policies to tackle all forms of gender discrimination and sealing the “leaking wealth bucket” by taking stringent measures against tax evasion. The report reveals that the top 1% is evading an estimated \$200bn in tax. More significantly, developing countries are losing at least \$170 billion each year in foregone tax revenues from corporations and the super-rich.
- The recommendations for corporations are far more eyebrow-raising, be it “Limit returns to shareholders and promote a pay ratio for companies’ top executives that is no more than 20 times their median employees’ pay” or refraining from rewarding shareholders through dividends or buybacks or even paying bonuses to executives until “all their employees have received a living wage”.

### Way ahead:

The survey found that, in India, it will take 941 years for a minimum wage worker in rural India to earn what the top paid executive at a leading Indian garment firm earns in a year, the study found. In the US, it takes slightly over one working day for a CEO to earn what an ordinary worker makes in a year. Therefore, the survey stressed that the gap between the rich and the poor needs to be urgently addressed.

## ‘Perihelion’: Earth closest to sun

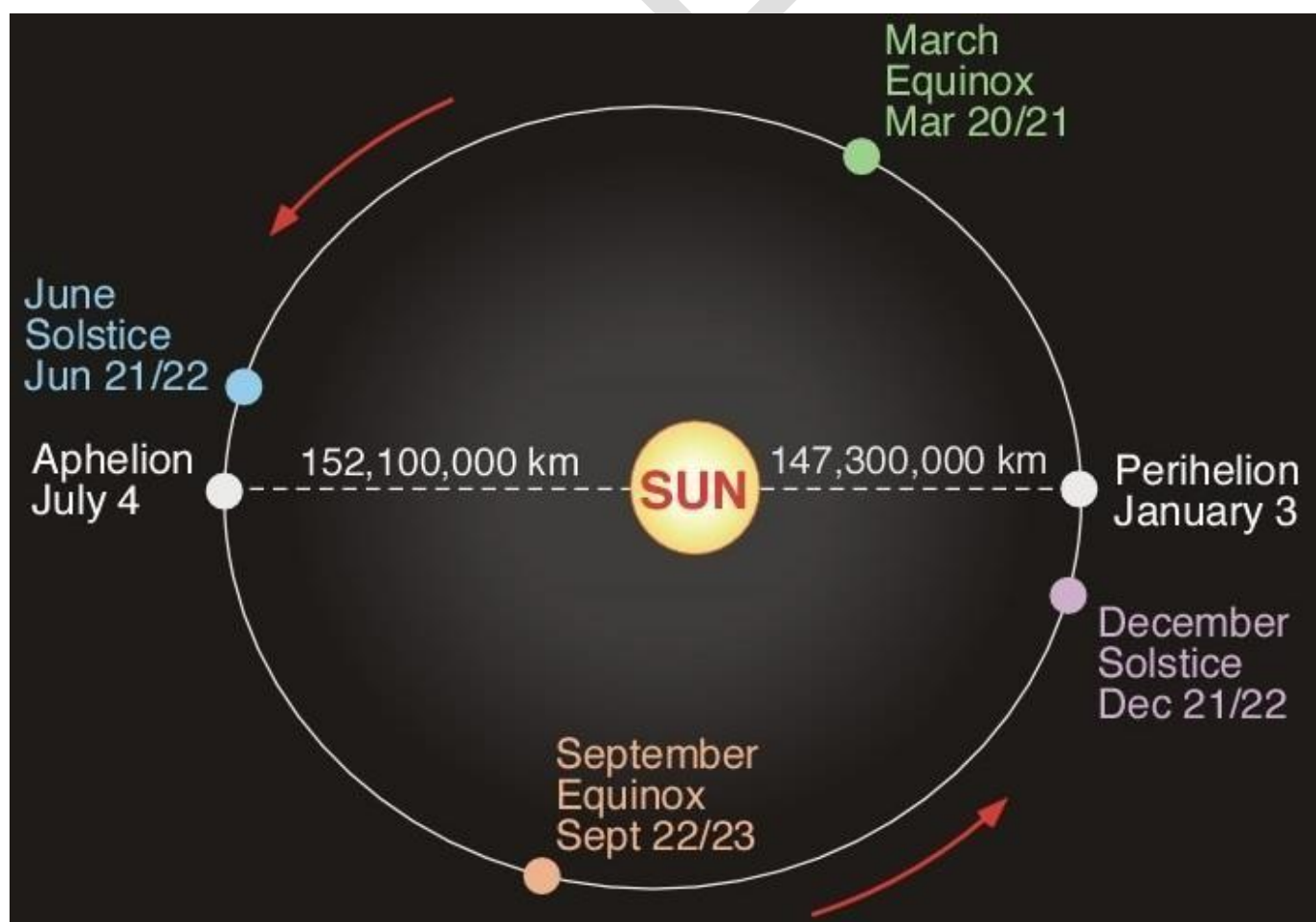
**Context:** On January 3, the Earth will be at closest to the sun in a phenomenon called ‘Perihelion’. The event, however, cannot be observed. At 11.05 am on January 3<sup>rd</sup>, the earth will be at the closest point to the sun in its annual elliptical orbit, at a distance of 14,70,97,237 km approximately.

### What you need to know?

Perihelion is an important event for research and educational purposes although the public cannot observe it. Commonly it is believed that the distance of the earth from the sun decides the season or temperature on the earth. But this is not true. The axial tilt (approx. 23.5 degrees) of the earth on its axis while revolving around the Sun regulates seasons on the earth with one of the hemispheres facing away or towards the Sun.

- So, while the earth is closest to Sun this time in January, it is winter in India and countries in Northern Hemisphere, it is summer in the Southern Hemisphere.

On July 6, the earth will be at ‘Aphelion’ at 15,20,95,571 km from the sun, i.e. it will be at the farthest point from the sun.



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## “Bomb Cyclone”

**Context:** A massive winter storm called a “bomb cyclone” is hammering the eastern coast of the US, bringing snow, ice, flooding, and strong winds.

### What is a Bomb cyclone?

The term is used by meteorologists to indicate a mid-latitude cyclone that intensifies rapidly. A bomb cyclone happens when atmospheric pressure in the middle of the storm drops at least 24 millibars over 24 hours, quickly increasing in intensity. The lower the pressure, the stronger the storm.

### How it works?

Deep drops in barometric pressure occur when a region of warm air meets one of cold air. The air starts to move and the rotation of the earth creates a cyclonic effect. The direction is counterclockwise in the Northern hemisphere leading to winds that come out of the northeast.

### What's the difference between hurricanes, cyclones and typhoons?

- Hurricanes, cyclones and typhoons are all tropical storms. They are all the same thing

but are given different names depending on where they appear. When they reach populated areas they usually bring very strong wind and rain which can cause a lot of damage.

Hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific. Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean.



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## Ozone layer hole

### Context:

The hole in ozone layer has shrunk thanks to the ban of CFCs, NASA has confirmed, after finding that chlorine levels are rapidly declining in the Earth's stratosphere.

### Background:

- Last year, satellite images showed the hole had begun to close and could be completely healed by 2060. But it was not clear whether the closure was a direct result of the Montreal Protocol, which was signed by all countries of the world in 1985, phasing out chlorofluorocarbons (CFCs).
- Now long-term satellite observations by NASA have shown a 20% decrease in levels of chlorine in the Earth's atmosphere since 2005, proving for the first time that the worldwide action is having a dramatic impact on the planet.

### Factors responsible for the depletion of ozone:

Depletion of ozone is due to many factors, the most dominant of which is the release of chlorine from CFCs (Chlorofluorocarbons) which destroys the ozone. CFCs are released by products such as hairsprays, old refrigerators etc.

### What are CFCs?

Chlorofluorocarbons, or CFCs, are compounds made up of combinations of the elements chlorine, fluorine and carbon; aerosols, refrigerants and foams contain CFCs. When these CFCs enter the air, they rise up into the atmosphere to meet up with and destroy ozone molecules. First used in 1928, CFCs have since become more common as various other CFC compounds were created. Some of the better-known CFCs are the Freon compounds, which were used as cooling ingredients in refrigerators and air conditioners. CFCs have lifetimes from 50 to 100 years.

### How CFCs destroy the ozone?

Once in the atmosphere, CFCs drift slowly upward to the stratosphere, where they are

broken up by ultraviolet radiation, releasing the chlorine that catalytically destroys ozone. The process is as follows:

- UV radiation breaks off a chlorine atom from a CFC molecule.
- The chlorine atom attacks an ozone molecule (O<sub>3</sub>), breaking it apart and destroying the ozone.
- The result is an ordinary oxygen molecule (O<sub>2</sub>) and a chlorine monoxide molecule (ClO).
- The chlorine monoxide molecule (ClO) is attacked by a free oxygen atom releasing the chlorine atom and forming an ordinary oxygen molecule (O<sub>2</sub>).
- The chlorine atom is now free to attack and destroy another ozone molecule (O<sub>3</sub>). One chlorine atom can repeat this destructive cycle thousands of times.

### Applications of CFCs:

CFCs have some interesting properties which can be fully exploited; therefore there are plenty of uses for these molecules. CFCs are not flammable; therefore they were used as propellants that would push other molecules out of the aerosol sprays. For the same reason CFCs were used to form foamed plastics. Also low flammability enabled people to use these molecules to dry clean hot electronic components of devices such as air conditioning.

### What is ozone layer?

A layer of ozone envelops the Earth and keeps damaging ultraviolet, or UV, radiation from reaching living things on the planet's surface. The ozone layer exists mainly in the stratosphere, a layer of the atmosphere that reaches from 10 to 50 kilometers (about 6 to 30 miles) above the Earth's surface.

### What is ozone hole?

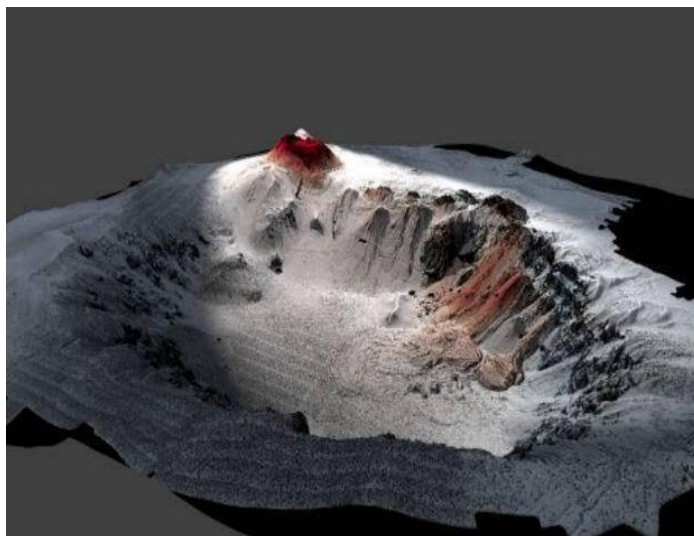
The ozone hole is a region of depleted layers of ozone above the Antarctic region, whose creation is linked to increased cases of skin cancer.

## Havre

**What is it?** It is the world’s largest deep ocean volcanic eruption happened in New Zealand. It was recently confirmed by the researchers.

### About Havre:

Named as Havre, the deep ocean volcanic eruption was first discovered in 2002. A solidified volcanic rock known as pumice raft — 400 square kilometres in size — found floating in the ocean near New Zealand in 2012 showed that underwater eruption had occurred. The eruption involved 14 aligned vents causing a “massive rupture”.



## Nuna

**Context:** A recent study suggests new information regarding Australia’s history, indicating that a small area of the country was once part of Canada — forming a supercontinent named Nuna.

Research shows that about 1.7 billion years ago, Georgetown rocks were deposited into a shallow sea when the region was part of North America. Georgetown then broke away from North America and collided with the Mount Isa region of northern Australia around 100 million years later. This was a critical part of global continental reorganisation when almost all continents on Earth assembled to form the supercontinent called Nuna.

### About Nuna:

Nuna, also known as Columbia, was estimated to be around 12900 km from North to South at the widest part, reports Space Daily. Nuna was made up of more than just Canada and parts of Australia, however, with the eastern coast of India attached to western North America as well. At this point in our planet’s history, South America was rotated in such a way that the western edge of Brazil ended up lined up with eastern North America. The stitching together of these combined land masses gave us the supercontinent known as Nuna. Nuna predates Pangea dating back to 1.5- 2.5 billion years ago.



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## No viable alternative to hanging, Centre tells court

**Context:** Considering the “dynamic progress” made in modern science to adopt painless methods of causing death, the court had asked the government to explore viable methods other than hanging to execute condemned prisoners.

### Centre's response:

The centre has said that there is no viable method at present other than hanging to execute condemned prisoners.

### Need for review:

The court has favoured a re-look at the practice of hanging to death as “the Constitution of India is an organic and compassionate document which recognises the sanctity of flexibility of law as situations change with the flux of time”. The court notes that a condemned convict should die in peace and not in pain. A human being is entitled to dignity even in death.

Also, execution was not only “barbaric, inhuman and cruel”, but also against the resolutions adopted by the United Nations Economic and Social Council (ECOSOC).

### Background:

- The court is hearing a writ petition which has sought the court's intervention to reduce the suffering of condemned prisoners at the time of death. The petitioner notes that a convict should not be compelled to suffer at the time of termination of his or her life. When a man is hanged to death, his dignity is destroyed, the petition says.
- The petitioner has also referred to Article 21 (Right to Life) of the

Constitution and said it also included the right of a condemned prisoner to have a dignified mode of execution so that death becomes less painful.

### Law commission's observations:

The Law Commission in its 187th Report had noted that there was a significant increase in the number of countries where hanging has been abolished and substituted by electrocution, shooting or lethal injection as the method of execution. It had categorically opined that hanging is undoubtedly accompanied by intense


physical torture and pain.

### Alternatives:

The present procedure can be replaced with intravenous lethal injection, shooting, electrocution or gas chamber in which death is just a matter of minutes. While in hanging, the entire execution process takes over 40 minutes to declare prisoner to be dead, the shooting process involves not more than few minutes. In case of intravenous lethal injection, it is all over in 5 minutes.

### Constitutionality of death penalty:

Constitutionality of death penalty has been well-settled by the apex court, including in *Deena versus Union of India* and earlier in the *Bachan Singh case* reported in 1980. Section 354 (5), which mandates death by hanging, of the Code of Criminal Procedure has already been upheld.



### Till the last breath

Hanging is the most commonly used method of execution in countries that retain death penalty. How countries carry out executions:

**Hanging:** 58 countries including India, Bangladesh, Iran, Iraq, Japan, Malaysia, Pakistan, South Korea, Sri Lanka and the U.S.

**Lethal Injection:** China, Guatemala, Maldives, Taiwan, Thailand, the U.S., Vietnam

**Stoning:** Iran, Mauritania, Nigeria, Saudi Arabia, Sudan, U.A.E, Yemen

**Beheading:** Saudi Arabia

No capital punishment in

**103**

countries

## Republic Day 2018

India is celebrating its **69<sup>th</sup> Republic Day** this year. Republic day in India is celebrated every year on 26th of January to honour the Constitution of India as it came into force on the same day in the year 1950.

In a first, the Republic Day celebrations will have 10 chief guests. The heads the **ASEAN leaders** from Thailand, Vietnam, Indonesia, Malaysia, the Philippines, Singapore, Myanmar, Cambodia, Laos and Brunei – will be hosted in this year’s celebrations. The significance of the ASEAN leaders attending the event is that ASEAN completes 50 years of formation and that India completes 25 years of its partnership with the grouping.

### Why January 26th?

- The Constitution came into effect on January 26, 1950, a date specially chosen to coincide with the anniversary of ‘Purna Swaraj Diwas’. January 26, 1930 was marked as ‘Purna Swaraj Diwas’, or the day the nation would attain complete freedom from its colonisers by the Congress.
- The members of the drafting committee felt that the birth of the constitution should be observed on a day that held some significance in their fight for independence. When India was ultimately granted freedom by the British in 1947, but on August 15 and not January 26, the date was instead assigned to celebrating India’s Republic Day.
- This was the day the Indian Independence Act was consequently repealed and India was established as a democratic republic, no longer a dominion of the British Crown.

## All India Whips’ Conference

**Context:** The 18th All India Whips’ Conference was recently inaugurated at Udaipur, Rajasthan. The conference is hosting around 90 Delegates belonging to 19 States and Centre.

### **Significance of the conference:**

The purpose of this conference is to strengthen the parliamentary democracy, its institutions and ultimately serve the people at large. The conference provides a platform to Whips of various political parties – ruling as well as opposition at the Centre as well as the States to exchange their views and experiences and discuss the challenges facing them in discharge of their Parliamentary duties and evolve norms for efficient working of parliamentary machinery.

### **Importance of whips in our political system:**

In the parliamentary form of Government, Whips of various political parties are the vital links of the internal organization of parties, inside the legislatures. The efficient and smooth functioning of Parliament and State Legislatures depends, to a considerable extent, upon the office of the Whip. The Whips can be rightly said to be the managers of the parties within the legislatures.

### **Facts for Prelims:**

- It was 18th All India Whips’ Conference and was held at Udaipur, Rajasthan.
- First All India Whips Conference was organized at Indore in 1952, in the very first year of general elections to the First Lok Sabha.

Organizing the All India Whips Conference is one of the functions assigned to the Ministry of Parliamentary affairs, under Government of India (Allocation of Business) Rules, 1961 made under article 77(3) of the Constitution.

### **Who is a whip?**

A whip is an important member of a political party’s parliamentary body, having a central role in ‘Floor Management’ in both the Houses of

Parliament and is responsible for discipline within the party. Their main job is ensuring that their members in Parliament and legislature vote in line with the party’s official policy on important issues and make sure that the members turn out for important votes.



## Mahadayi Row

**Context:** The row between Goa, Karnataka and Maharashtra over the sharing of the Mahadayi (Mandovi) river has escalated. With Karnataka headed for elections and the Mahadayi Water Disputes Tribunal setting a February date for the final hearing, political parties in both States have upped the ante.

### What is the Mahadayi row?

- Karnataka seeks to divert water from tributaries of the river through the Kalasa-Bhanduri Nala project towards the parched Malaprabha river basin (a tributary of River Krishna), which is being strongly opposed by Goa. This has led to a long-drawn farmers' agitation in Karnataka, which has

been revitalised as the State goes to the polls later this year.

Goa's main contention is that Karnataka cannot divert water from an already-deficit Mahadayi basin to the Malaprabha river basin: 115 tmcft was available in the basin, while the requirement for the three States is 145 tmcft. It has said that any attempt to divert water from one river basin to the other will cause irreparable environmental damage. Karnataka claims 199.6 tmcft is available and the river is water-surplus. Of this, Karnataka wants 24.15 tmcft



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## Model code

**Context:** The Election Commission (EC) has set up a 14-member committee to suggest changes to Section 126 of the Representation of the People (RP) Act, which prohibits poll campaign in the last 48 hours leading to voting, in the wake of media expansion. The committee, chaired by Deputy Election Commissioner Umesh Sinha, will submit its report within three months.

### Terms of reference:

- Apart from suggesting modifications to the election law, the committee will also study the impact of new media and social media during the “silence period” and its implication in view of Section 126 and suggest changes to the model code of conduct (MCC) accordingly.
- It has also been tasked to examine the difficulties faced in regulating media platforms during the prohibitory 48 hours in a multi-phase election.

### Need for review:

Election Commission is of the considered view that due to multifold expansion of digital and electronic media, the extant Model Code of Conduct, Section 126 of the RP Act, 1951, and other related provisions require revisiting to cater to the requirement and challenges of the present and emerging situations.

interest of free and fair elections. However, the code does not have any specific statutory basis. It has only a persuasive effect. It contains what is known as “rules of electoral morality”. But this lack of statutory backing does not prevent the Commission from enforcing it.

- 
- **Evolution:** The Commission issued the code for the first time in 1971 (5th Election) and revised it from time to time. This set of norms has been evolved with the consensus of political parties who have consented to abide by the principles embodied in the said code and also binds them to respect and observe it in its letter and spirit.
- **What it contains?** The salient features of the Model Code of Conduct lay down how political parties, contesting candidates and party(s) in power should conduct themselves during the process of elections i.e. on their general conduct during electioneering, holding meetings and processions, poll day activities and functioning of the party in power etc.

### Model Code of Conduct (MCC):

- **What is MCC?** These are the guidelines issued by the Election Commission of India for conduct of political parties and candidates during elections mainly with respect to speeches, polling day, polling booths, election manifestos, processions and general conduct.
- **Aim:** To ensure free and fair elections.
- **When it comes into force?** The Model Code of Conduct comes into force immediately on announcement of the election schedule by the commission. The Code remains in force till the end of the electoral process.
- **Status:** The need for such code is in the

## Election Commission recommends disqualification of 20 AAP MLAs

The Election Commission has recommended that 20 MLAs of the Aam Aadmi Party in Delhi be disqualified as they held offices of profit while being legislators. President Ram Nath Kovind will make the final decision based on the recommendation.

### **Background:**

In June 2016, the Congress had approached the Election Commission, alleging that 21 MLAs of the AAP had been appointed parliamentary secretaries in March 2015. In September 2016, the Delhi High Court set aside their appointments as parliamentary secretaries.

### **What are the basic criteria to disqualify an MP or MLA?**

Basic disqualification criteria for an MP are laid down in Article 102 of the Constitution, and for an MLA in Article 191. They can be disqualified for: a) Holding an office of profit under government of India or state government; b) Being of unsound mind; c) Being an undischarged insolvent; d) Not being an Indian citizen or for acquiring citizenship of another country.

### **What is the underlying principle for including ‘office of profit’ as criterion for disqualification?**

Makers of the Constitution wanted that legislators should not feel obligated to the Executive in any way, which could influence them while discharging legislative functions. In other words, an MP or MLA should be free to carry out her duties without any kind of governmental pressure.

### **What is an ‘office of profit’?**

If an MLA or an MP holds a government office and receives benefits from it, then that office is termed as an “office of profit”. A person will be disqualified if he holds an office of profit under the central or state government, other than an office declared not to disqualify its holder by a law passed by Parliament or state legislature.

## President of India appoints Governor of Madhya Pradesh

The President of India has appointed Smt Anandiben Patel as the Governor of Madhya Pradesh with effect from the date she assumes charge of her office.

### *Governors of States in India:*

- Governor is the head of the Executive power of any state in India, just like the President who is the head of the executive power in the Union. But, Governor is the nominal head of a state, unlike the Chief Minister who is the real head of a state in India. According to an amendment in the Constitution of India, brought about in 1956, the same person can be the Governor of two or more states.
- Appointment and removal: The governors and lieutenant-governors are appointed by the president for a term of 5 years. The term of governor's office is normally 5 years but it can be terminated earlier by: Dismissal by the president on the advice of the prime minister of the country, at whose pleasure the governor holds office or Resignation by the governor. There is no provision of impeachment, as it happens for the president. Article 157 and Article 158 of the Constitution of India specify eligibility requirements for the post of governor.
- Powers: Like the President of India, the Governor of any state in India is vested with certain executive, legislative and judicial powers. He or she also possesses certain discretionary or emergency powers. But one major difference in the powers enjoyed by the President and those enjoyed by the Governor is, the Governor does not have any diplomatic or military powers.

## National Voters Day

**Context:** The Election Commission of India celebrated the 8th National Voters Day on January 25<sup>th</sup>.

**Theme:** This year's celebrations revolved around the theme 'Accessible Elections', which expressed ECI's pursuit of working towards making the electoral process more inclusive and friendly for Persons with Disabilities (PwDs).

**VoICE India:** on the occasion, the President also inaugurated the first edition of VoICE India – a biannual magazine which brings forth best practices, innovations and knowledge derived from practical experience and success stories of the election machinery that exists in every corner of India.

**National Voters' Day:**

- National Voters' Day or **Rashtriya Matdata Diwas** is celebrated on

**January 25** every year with an aim to encourage youngsters, who have reached the age of 18, to participate in the electoral process. The National Voters' Day is celebrated at all polling stations across the country to mark the importance of voting.

The Election Commission of India is an autonomous constitutional authority responsible for administering election processes in the country and administers elections to the Lok Sabha, Rajya Sabha, state legislatures and the offices of the President and Vice President in India. It was on January 25, 1950 that the Election Commission of India was established.

## Telecom ombudsman

**Context:** A Parliamentary panel has expressed concern over delay in setting up of an ombudsman to deal with consumer grievances in the telecom sector despite the regulator TRAI recommending it twice.

### **Need for an ombudsman:**

As per the current trends, on an average around 10 million complaints are lodged with the TSPs each quarter and currently complaints are characterised by high volumes, low-value and from users in diverse geographic locations. Therefore, arrangements like ombudsman are required to address to consumers in a speedy manner. This is also necessary keeping in view of the major changes that has taken place in the Indian telecom sector in the recent past.

### **What has been proposed?**

- A three-stage grievance redress mechanism for telecom sector is proposed that includes — resolution by telecom service providers (TSPs), resolution by Consumer Grievance Redressal Forum (CGRF) — and determination by Telecom Ombudsman.
- The ombudsman can be established under rules framed by the Centre, similar to the institution of the insurance ombudsman under the Redress of Public Grievances Rules, 1998 (RPG Rules). The government may, by notification, make rules for carrying out the purposes of this Act. Alternatively, the government can choose to create the ombudsman office through a legislation to be passed by Parliament.

### **Role of ombudsman:**

- According to the recommendations, the consumer should in the first instance approach the complaint centre of the TSP to seek a solution. It will be the duty of the TSP to look into the request and address the consumer's concerns within the time frames stipulated by the Authority.
- In case, the TSP fails to resolve the complaint in a manner that is satisfactory to

the consumer; or does not provide a response; or fails to do so within the prescribed time lines laid down by TRAI, the customer will have the option to seek further redress through an independent mechanism. This would consist of a process of a resolution based on fact finding by Consumer Grievance Redressal Forum (CGRF), followed by, if necessitated, determination by the telecom ombudsman.

### **Funding:**

A portion of the existing, not in addition, licence fee, is recommended as the funding mechanism for Ombudsman. And in addition to this fixed fee, there will be a variable component payable by each telecom service provider (TSP) depending on the volume of complaints being filed against it and admitted before the ombudsman's office.



## Brahmaputra Board

**Context:** The 9th meeting of High Powered Review Board of Brahmaputra Board was recently held at Borgos, Kaziranga in Assam. The meeting was chaired by Sri Nitin Jairam Gadkari, Union Minister for Water Resources, River Development and Ganga Rejuvenation.

- High Powered Review Board (HPRB) approved restructuring of Brahmaputra Board and advised that funds should be largely spent for works and limited funds should be spent for establishment costs including salary and wages. HPRB also ratified the project for protection of Majuli Island from flood and erosion for an amount of Rs. 237 crore.
- A Mathematical Model Study prepared by IIT, Guwahati called Brahma-ID was also launched on this occasion. This project has been sponsored by Brahmaputra Board for an amount of Rs. 3.00 crore.

Valley and covers all the States of the North Eastern Region, Sikkim and part of West Bengal falling under Brahmaputra river basin.

- **Funding:** For its works and establishments, Brahmaputra Board is provided fund through grant-in-aid by the Central Government.
- **Composition:** The Board consists of 21 Members (4 full time Members and 17 part time Members), representing seven states of the North Eastern Region, North Eastern Council, concerned Ministries and Departments of the Government of India. Since creation of Ministry of Development of North Eastern Region (DoNER) and inclusion of Sikkim and part of West Bengal within the jurisdiction of Board, some other representatives of various concerned departments or bodies are also invited as Special Invitees in the meetings of the Brahmaputra Board.



**BRAHMAPUTRA BOARD**  
**MINISTRY OF WATER RESOURCES,**  
**RIVER DEVELOPMENT AND GANGA REJUVENATION**  
**GOVERNMENT OF INDIA**



### About the Brahmaputra Board:

- **What is it?** The Brahmaputra Board is an autonomous statutory body which is responsible for preparation and implementation of plans related to flood management, erosion control, drainage management and water resource development in the Brahmaputra valley. The board was set up under the Ministry of Irrigation (later renamed as Ministry of Water Resources) as per the Brahmaputra Board Act 1980. The Board started functioning from January 11, 1982 and its headquarters are located at Guwahati, Assam.
- **Jurisdiction:** The jurisdiction of the Board includes both the Brahmaputra and Barak

### Objectives and functions of Brahmaputra Board:

The key objectives of Brahmaputra board include preparation and implementation of Master Plans for management of flood, bank erosion and drainage congestion and development and utilization of water resources of the Brahmaputra Valley in association with States.

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## President appoints Vinay Sahasrabuddhe as ICCR President

President Ram Nath Kovind has appointed Rajya Sabha MP Vinay Sahasrabuddhe as President of the Indian Council of Cultural Relations (ICCR).

### *About the Indian Council for Cultural Relations:*

- **What is it?** ICCR is an autonomous organisation of the government of India, tasked with strengthening India's external cultural relations through exchanges with other countries and their people. The Indian Council for Cultural Relations (ICCR) was founded in **1950** by **Maulana Abul Kalam Azad**, independent India's first Education Minister.
- **Objectives:** Its objectives are to actively participate in the formulation and implementation of policies and programmes pertaining to **India's external cultural relations**; to foster and strengthen **cultural relations** and mutual understanding between India and other countries; to promote cultural exchanges with other countries and people; and to develop relations with nations.

## TRAI issues interconnect rules

The Telecom Regulatory Authority of India (TRAI) has issued the Telecommunication Interconnection Regulations, 2018, that are effective from February 1. It lay down the ground rules for telcos to enter into initial interconnect pacts, provision points of interconnection (POIs) needed to complete calls, undertake augmentation of such points and the associated charges. It has termed interconnection the “lifeline of telecommunication services”.

### New regulations:

- Phone companies have to ink interconnect pacts on a non-discriminatory basis within 30 days of receiving a request from any licensed carrier. Also, a telco receiving an interconnection request has to offer a draft interconnect pact within five days to the requestor, who, in turn, can submit suggestions/objections in the next five days. Currently, there is no explicit timeline for inking of interconnect agreements.
- Telcos flouting TRAI’s interconnection regulations would “be liable to pay an amount, by way of financial disincentive”, capped at “Rs 1lakh per day per licensed service area. A telco seeking POIs will be liable to furnish a six-month bank guarantee from the date of initial interconnection for the total number of ports sought, if such a demand is made by the telco offering interconnection.
- However, interconnection levies such as set-up charges and infrastructure charges “may be mutually negotiated” between service providers as long as they are “reasonable, transparent and non-discriminatory”. But TRAI has mandated a detailed process for disconnection of POIs, directing a telco to initially issue a show cause notice of 15 working days citing reasons for the same.

### About TRAI:

- **What is it?** It is the independent regulator of the telecommunications business

in India. It was established in 1997 by an Act of Parliament to regulate telecom services and tariffs in India.

- **What was it for?** The TDSAT was set up to resolve any dispute between a licensor and a licensee, between two or more service providers, between a service provider and a group of consumers. In addition, any direction, TRAI orders or decisions can be challenged by appealing to TDSAT.

## Council for Trade Development and Promotion

**Context:** Shri Suresh Prabhu, Union Minister for Commerce and Industry recently chaired the 3rd meeting of the Council for Trade Development and Promotion.

### *About the Council for Trade Development and Promotion:*

- The Council for Trade Development and Promotion was constituted in July 2015 under the chairpersonship of the Union Minister for Commerce and Industry, in pursuance to the provisions of Foreign Trade Policy statement 2015- 20.
- **Objective:** The objective was to ensure a continuous dialogue with the governments of states and Union Territories on measures for providing an international trade enabling environment in the states and to create a framework for making the states active partners in boosting India's exports.
- **Composition:** The State Ministers of Commerce and Industry, Secretaries of concerned central departments/Ministries and heads of other export related organizations/trade bodies are Members of the Council.

## Central Water Commission

**Context:** Central Water Commission has received Central Board of

Irrigation and Power (CBIP) Special Recognition Award 2018 for Excellence in Health & Safety of Large Dams.

The award has been given in recognition of the contribution made by the Central Water Commission (CWC) for promoting the health and safety of large dams in India through the World Bank aided Dam Rehabilitation and Improvement Project (DRIP).

### About DRIP:

- The Ministry of Water Resources (MoWR), Government of India, with assistance from the World Bank, is implementing the DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP), which would be a six-year project. The Central Dam Safety Organisation of Central

Water Commission, assisted by a Consulting firm, is coordinating and supervising the Project implementation.

- **Goals:** The project originally envisaged the rehabilitation and improvement of about 223 dams within four states namely, Kerala, Madhya Pradesh, Odisha, and Tamil Nadu and later Karnataka, Uttarakhand (UNVNL) and Jharkhand (DVC) joined DRIP and total number of dams covered under DRIP increased to 250. The project will also promote new technologies and improve Institutional capacities for dam safety evaluation and implementation at the Central and State levels and in some identified premier academic and research institutes of the country.
- **The project development objectives of DRIP are:** (i) to improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner, and (ii) to strengthen the dam safety institutional setup in participating states as well as at central level.

- **About CWC:** Central Water Commission is a premier Technical Organization of India in the field of Water Resources and is presently functioning as an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India.
- **Functions:** The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development. It also undertakes the investigations, construction and execution of any such schemes as required.



## The Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)

**Context:** A one-day National Conference on Welfare of Laboratory Animals was recently organised by CPCSEA, Ministry of Environment, Forest and Climate Change, with the theme of “Implementation of 3Rs (Replacement, Reduction and Refinement) while using animals in academic research and regulatory testing in India.

The conference laid emphasis on the issue of ethical use of animals in academics and regulatory testing in India. The discussions were focussed on evaluating the possibilities of exemption of animal experiments in academics and regulatory testing.

### About CPCSEA:

- **What is it?** The Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA) is a statutory Committee, which is established under
- Section 15(1) of the Prevention of Cruelty to Animals Act 1960. All establishments engaged in research and education involving animals, are required to comply with the various guidelines, norms and stipulations set out by CPCSEA.
- **Background:** India is one of the pioneering countries to institute Prevention of Cruelty to Animals Act in 1960 whereas such Act was instituted in France in 1963 and in USA in 1966. The detailed rules for experimentation on animals were first enacted by the Ministry of Agriculture in 1968 and were implemented by CPCSEA.

### The main functions of CPCSEA are:

- Registration of establishments conducting animal experimentation or breeding of animals for this purpose.
- Selection and appointment of nominees in the Institutional Animal Ethics Committees of registered establishments.
- Approval of Animal House Facilities on the basis of reports of inspections conducted by CPCSEA.
- Permission for conducting experiments involving use of animals.

### CPCSEA Functions

- Inspection & Approval of Animal House Facilities
- Registration of Institutional Animal Ethics Committee (IAEC) for animal experiments or breeding
- Appointment of CPCSEA nominees in IAECs
- Permission for experiments on large animal
- Inspection & prohibition of experiments, if violations
- Action against establishments, if non-compliance

- Recommendation for import of animals for use in experiments.

Action against establishments in case of violation of any legal norm/stipulation.

## National Trust

**Context:** The Union Cabinet has approved the proposal to amend Section 4(1) and Section 5(1) of the National Trust for the Welfare of Person with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999 to fix the term of the Chairperson and Members of the Board of National Trust for three years. The proposed amendments are aimed at eliminating any chance of prolonged continuation in the same post by any incumbent.

**What necessitated this move?**

Section 4(1) of the National Trust Act, 1999 **The Board shall consist of:**

- A Chairperson to be appointed by the Central Government from amongst the persons having expertise and experience in the field of autism, cerebral palsy, mental retardation and multiple disability.
- Nine persons to be appointed in accordance with such procedure as may be prescribed from amongst the registered organisations out of which three members each shall be from voluntary organisations, associations of

provides that the Chairperson or a Member of the Board of National Trust would continue in office beyond the prescribed term of three years until his successor shall have been duly appointed. In case of resignation of the Chairperson, section 5(1) of the Act provides for him to continue in office until his successor is duly appointed by the Government. The wording of the above provisions of the Act in its present form has resulted in continuation of a Chairman for an indefinite period as no suitable successor could be found eligible for appointment.

**About National Trust:**

- **What is it?** The National Trust is a Statutory Body under Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice & Empowerment. The National Trust was envisaged with a core mission of providing opportunities for

capacity development of Persons with Disabilities and their families, fulfilling their rights, facilitating and promoting the creation of an enabling environment and an inclusive society.

- **Functions:** The National Trust has been set up to discharge two basic duties – legal and welfare. Legal duties are discharged through Local Level Committee (LLC) set up at district level under the chairmanship of the District Collector / District Magistrate and providing legal guardianship. Welfare duty is discharged through the schemes and activities. The schemes and activities of the National Trust inter-alia include training, awareness and capacity building programmes and shelter, care giving and empowerment. parents of persons with autism, cerebral palsy, mental retardation and multiple disability and from associations of persons with disability, members; Provided that initial appointment under this clause/shall be made by the Central Government by nomination.
- Eight persons not below the rank of Joint Secretary to the Government of India nominated by the Government to represent the Ministries or Departments of Social Justice and Empowerment, Women and Child Development, Health and Family Welfare, Finance, Labour, Education, Urban Affairs and Employment and Rural Employment and Poverty Alleviation, Members, ex officio.
- Three Persons to be nominated by the Board representing the associations of trade, commerce and industry engaged in philanthropic activities, members.
- The Chief Executive Officer, who, shall be of the rank of Joint Secretary to the Government of India, Member- Secretary, ex officio.

## Central Advisory Board of Education (CABE)

**Context:** The 65th Meeting of the Central Advisory Board of Education (CABE) was recently held under the Chairmanship of Union Human Resource Development Minister Shri Prakash Javadekar. A number of decisions were taken at the meeting, in part flowing from the agenda, and in part stemming from concerns raised by the State Governments.

The board has decided to launch ‘Operation Digital Board’ in all schools in five years. This will be undertaken jointly by Centre, State, CSR, and community. This will improve the quality of education. Students will be empowered with 360 degree information with interesting learning experience and teacher accountability will also increase.

### **About the Central Advisory Board of Education (CABE):**

The Central Advisory Board of Education (CABE) is the highest advisory body to advise the Central and State Governments in the field of education. The Central Advisory Board of Education, the oldest and the most important advisory body of the Government of India in education was first established in 1920 and dissolved in 1923 as a measure of economy. It was revived in 1935 and has been in existence ever since.

### **The functions of CABE would be:**

- To review the progress of education from time to time.
- To appraise the extent and manner in which the education policy has been implemented by the Central and State Governments, and other concerned agencies, and to give appropriate advice in the matter.
- To advice regarding coordination between the Central and State Governments/UT Administrations, State Governments and non-governmental agencies for educational development in accordance with the education policy.
- To advise, suo motu, or on a reference

made to it by the Central Government or any State Government or a Union Territory Administration or any educational question.

### **Facts for Prelims:**

- The idea that there should be a central Advisory Board of Education was first put forward by the Calcutta University Commission (1917-19).
- Chairman of the board shall be Union Minister of Human Resource Development. Minister of State for Human Resource Development shall be the Vice-Chairman.
- The tenure of office of members of the Board, other than the ex-officio members, shall be three years.

## Defence Acquisition Council (DAC)

**Context:** The Defence Acquisition Council (DAC) has simplified ‘Make II’ procedure, which prescribes guidelines to be followed to develop and manufacture defence equipment through Indian Industry.

### *Changes introduced:*

- Since no government funding is involved in ‘Make II’ project, the DAC felt it necessary to simplify the procedure to make it industry friendly, with minimal government control. The salient aspects of the revised procedure will now allow Ministry of Defence to accept suo-motu proposals from the industry and also allows start-ups to develop equipment for Indian Armed Forces. The minimum qualification criteria to participate in ‘Make II’ projects has also been relaxed by removing conditions related to credit rating and reducing financial net worth criteria.
- As per the earlier ‘Make II’ procedure, only two vendors were shortlisted to develop prototype equipment. Now, all vendors meeting the relaxed eligibility criteria will be allowed to participate in the prototype development process. The vendor will not be required to submit Detailed Project

Report. After accord of approval of the ‘Make II’ project by the council, all clearances will be accorded at Service HQ (SHQ) level.

### *Defence Acquisition Council (DAC)*

- **What is it?** To counter corruption and speed up decision- making in military procurement, the government of India in 2001 decided to set up an integrated DAC. It is headed by the Defence Minister.
- **Objective:** The objective of the DAC is to ensure expeditious procurement of the approved requirements of the Armed Forces, in terms of capabilities sought, and time frame prescribed, by optimally utilizing the allocated budgetary resources.
- **Functions:** The DAC is responsible to give policy guidelines to acquisitions, based on long-term procurement plans. It also clears all acquisitions, which includes both imported and those produced indigenously or under a foreign license.



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## National Pharmaceutical Pricing Authority (NPPA)

**Context:** NPPA has fixed/revised ceiling prices/retail prices of 33 formulations under Drugs (Prices Control) Order, 2013.

### Background:

NPPA fixes ceiling price of essential medicines of Schedule I under the Drugs (Prices Control) Order (DPCO) 2013. In respect of medicines that are not under price control, manufacturers are allowed to increase the maximum retail price by 10% annually. The calculation for essential drugs is based on the simple average of all medicines in a particular therapeutic segment with sales of more than 1%.

### Functions of National Pharmaceutical Pricing Authority:

- To implement and enforce the provisions of the Drugs (Prices Control) Order in accordance with the powers delegated to it.
- To deal with all legal matters arising out of the decisions of the Authority.
- To monitor the availability of drugs, identify shortages, if any, and to take remedial steps.
- To collect/ maintain data on production, exports and imports, market share of individual companies, profitability of companies etc, for bulk drugs and formulations.
- To undertake and/ or sponsor relevant studies in respect of pricing of drugs/ pharmaceuticals.
- To recruit/ appoint the officers and other staff members of the Authority, as per rules and procedures laid down by the Government.
- To render advice to the Central Government on changes/ revisions in the drug policy.
- To render assistance to the Central Government in the parliamentary matters relating to the drug pricing.

### National Pharmaceutical Pricing Authority (NPPA):

- NPPA is an organization of the Government of India which was established, inter alia, to fix/ revise the prices of controlled bulk drugs and formulations and to enforce prices and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995. The organization is also entrusted with the task of recovering amounts overcharged by manufacturers for the controlled drugs from the consumers. It also monitors the prices of decontrolled drugs in order to keep them at reasonable levels.



## Nodal agency to fight malnutrition

**Context:** Aiming to eradicate malnutrition among children, Congress MP Jyotiraditya Scindia has introduced Child Nutrition and Development Nodal Agency Bill, 2017 in the Parliament. The bill proposes setting up a nodal agency for child nutrition and development.

### *Need for a nodal agency:*

Despite thousands of crores of rupees being spent and a number of government schemes working for child development, the status of health and nutrition of children in the country remains abysmal. All nutrition-specific and nutrition-sensitive schemes work in silos. As a result, they are not able to achieve the intended outcome. Therefore, the establishment of a nodal agency that would facilitate coordination of all ministries and departments and execute the schemes in a convergent manner is urgently required.

### *What it does?*

The body would facilitate and supervise multi-sectoral programme in high, medium- and low-burdened districts with malnourished children. It would coordinate and administer policy implementation among various ministries responsible for implementing programmes aimed at eradicating malnutrition. At the end of each financial year, the agency will submit a report of its activities to the Central government.

### *Way ahead:*

The need of the hour is to involve all field functionaries in a productive manner. Consistent monitoring and evaluation of the schemes using technological interventions and real-time data is also important. There is also a need to provide leverage budgets from related departments to develop an integrated plan with cross-sectoral collaboration to achieve nutrition-related targets.

## Maharashtra govt rolls out 1% reservation for orphans

In an unprecedented move, Maharashtra government has announced a 1% reservation in the open category for orphans in the state. Officials say Maharashtra is, perhaps, the first state to bring such a policy.

**Eligibility:** Only children who have no idea who their parents were and what their caste is will be covered under this reservation.

### *Significance of this move:*

The historic decision is aimed at social and economic empowerment of such children. This will help orphans get education and employment, especially in government services. This will also help many children who otherwise find it hard to be assimilated in the mainstream.

## Accessible India Campaign

**Context:** In a path breaking initiative to empower Persons with Disabilities, 100 Accessible websites of various State Governments/UTs under Accessible India Campaign have been launched.

### **What are accessible websites?**

Accessible Websites are those websites into which Persons with Disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web.

### **Background:**

The Department of Empowerment of Persons with Disabilities (Divyangjan) initiated a “Website Accessibility Project” for State Government/Union Territories under Accessible India Campaign through ERNET India, an autonomous scientific society under the Ministry of Electronics & Information Technology (MeitY), to make total 917 websites accessible and providing funds for the same. Now 100 accessible websites are made accessible under the project. The Built Environment Accessibility component of Accessible India Campaign entails following targets:

- Completing accessibility audit of at least 25-50 most important government buildings in 50 cities and making them fully accessible by the end of this year.
- Making 50% of all the government buildings of NCT and all the State capitals fully accessible by December 2018.
- Completing accessibility audit of 50% of government buildings and making them fully accessible in 10 most important cities/towns of States not covered in targets (i) and (ii) by December 2019.

### **About Accessible India Campaign:**

- **What is it?** Accessible India Campaign (AIC) is the nationwide flagship campaign of the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment.
- **Aim:** The aim of the Campaign is to make a barrier free and conducive environment for Divyangjans all over the country. The

campaign has the vision to build an inclusive society in which equal opportunities are provided for the growth and development of Persons with Disabilities (PwDs) so that they can lead productive, safe and dignified lives.

- **Implementation:** For creating universal accessibility for Persons with Disabilities, the campaign has been divided into three verticals: Built Environment; Transport and Information & Communication Technology (ICT) ecosystem.

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## ‘Jiyo Parsi’ scheme

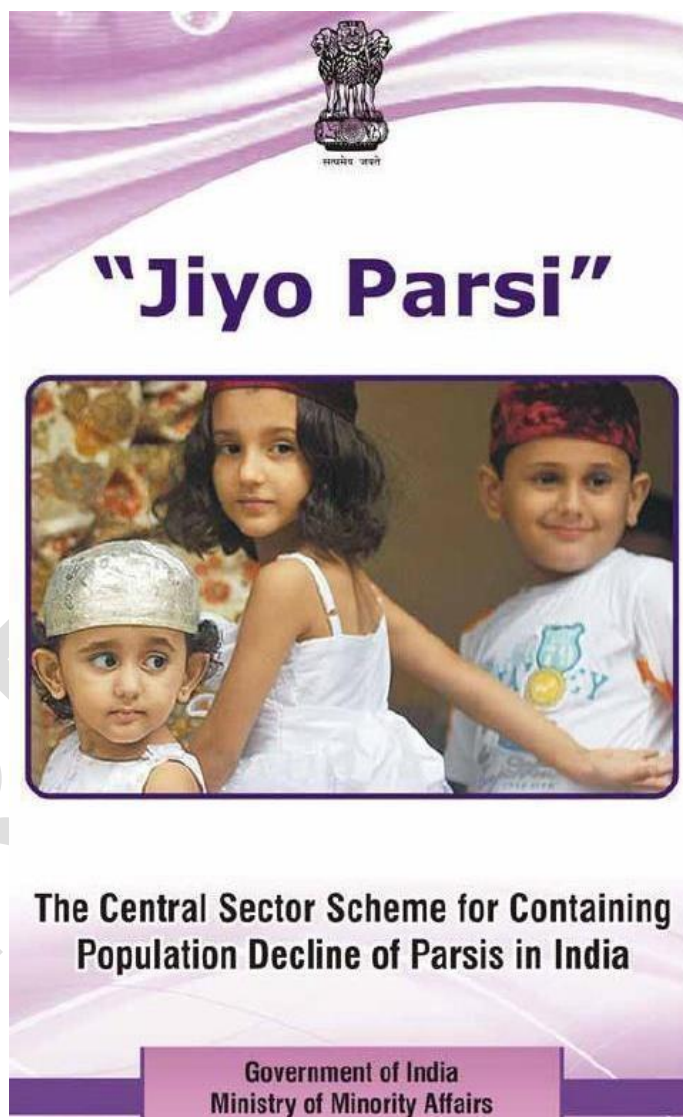
**Context:** Over 130 babies were born since the government launched the ‘Jiyo Parsi’ scheme in 2013 to address the Parsi community’s declining population, says a foundation associated with implementation of the initiative. The Parzor Foundation is implementing the scheme along with the Union minority affairs ministry.

### Background:

The population of Parsis plunged from 1.14 lakh in 1941 to 57,264 in 2011. The sharp decline in the birth rate in the community — located mainly in Maharashtra’s Mumbai and parts of Gujarat – is attributed to socio- psychological reasons. These include Parsis having late or non-marriages, its members marrying with people outside the community and also many couples not willing to have babies.

### About Jiyo Parsi scheme:

- Jiyo Parsi is a Government of India supported scheme to arrest the decline in population of the Parsi Zoroastrian Community in India. The Jiyo Parsi Scheme comprises of three components: Advocacy Component, Health of the Community Component and Medical Component.
- The main objective of the “Jiyo Parsi” scheme is to reverse the declining trend of Parsi population by adopting a scientific protocol and structured interventions, stabilize their population and increase the population of Parsis in India.



## ‘Bharat Ke Veer’

**Context:** The government has launched an official anthem for “Bharat Ke Veer”, an initiative with a corpus fund to help the families of paramilitary troopers killed in the line of duty. The anthem is sung and composed by singer Kailash Kher.

### About Bharat ke Veer:

- **What is it?** It is a web portal and mobile application. The portal is an IT based platform, with an objective to enable willing donors to contribute towards the family of a braveheart who sacrificed his/her life in line of duty. This website is technically supported by National Informatics Centre (NIC) and powered by State Bank of India.
- **What it does?** This domain allows anyone to financially support the bravehearts of his choice or towards the “Bharat Ke Veer” corpus. The amount so donated will be credited to the account of ‘Next of Kin’ of those Central Armed Police Force/Central Para Military Force soldiers. To ensure maximum coverage, a cap of 15 lakh rupees is imposed and the donors would be alerted if the amount exceeds, so that they can choose to divert part of the donation to another braveheart account or to the “Bharat Ke Veer” corpus.
- **Who will manage the fund?** “Bharat Ke Veer” corpus would be managed by a committee made up of eminent persons of repute and senior Government officials, who would decide to disburse the fund equitably to the braveheart’s family on need basis.



## NHFDC

**Context:** A National Conference of the State channelizing Agencies, Public Sector Banks and Regional Rural Banks of National Handicapped Finance and Development Corporation (NHFDC) was recently held.

During the conference, the participating agencies were asked to better coordinate with NHFDC and Channelising agencies for the smooth and better implementation of NHFDC Schemes for the benefit of larger number of Persons with Disabilities (Divyangjan). In the Conference, incentive cheques were also given to the best performing SCAs/PSBs/RRBs of NHFDC.

### About NHFDC:

- The National Handicapped Finance and Development Corporation (NHFDC) has been set up by the **Ministry of Social Justice & Empowerment**, Government of India on 24th January **1997**. The company is registered under Section 25 of the Companies Act, 1956 as a Company **not for profit**. It is **wholly owned by Government of India** and has an authorised share capital of Rs. 400 crores. The company is managed by Board of Directors nominated by Government of India.
- NHFDC functions as an Apex institution for channelizing the funds to persons with disabilities through the State Channelizing Agencies (SCAs) nominated by the State Government.

## Chief Minister-gi Hakshelgi Tengbang (CMHT)

**What is it?** It is Manipur government’s pioneering health assurance scheme for the poor and disabled people.

**Highlights of the scheme:**

- The CMHT will provide cashless treatment to the poor at government hospitals, health centres and other empanelled selected private hospitals.
- The scheme will provide cover up to Rs 2 lakh per eligible family identified from the Socio Economic Caste Census (SECC) in the treatment of seven critical identified critical ailments – cardiovascular diseases, kidney ailments, neurological conditions, liver ailments, cancer, neo-natal diseases and burns per year.
- The beneficiaries may get themselves enrolled for the scheme with the help of ASHA workers at the kiosks opened in nearby PHCs, CHCs and District Hospitals.

The most special aspect of the scheme is its innovative features. Firstly, CMHT will have convergence with Government of India programme like PMÅ’s Jana Aushadhi Programme and Free Diagnostic Programme. Secondly, the scheme will be a truly IT platform driven scheme.

## Affordable Medicines and Reliable Implants for Treatment scheme

**Context:** In a bid to make low-cost medicines more accessible, the health ministry is working to increase the number of AMRIT pharmacy stores by four times by this year end from the existing 111 outlets.

### *About the Affordable Medicines and Reliable Implants for Treatment (AMRIT) scheme:*

The flagship programme of the Union Health ministry – AMRIT (Affordable Medicines and Reliable Implants for Treatment) aims to provide affordable life-saving cancer, cardiac drugs and medical disposables. The AMRIT pharmacies offer an average discount of 63% on medicines.

- The AMRIT programme was launched in November 2015 and is being implemented through mini-ratna PSU HLL Lifecare Ltd (HLL) which has been setting up pharmacies at major hospitals across the country to dispense the medicines.
- The primary goal of AMRIT is to make available and

accessible, at very affordable rates, all drugs, implants, surgical disposables that are not dispensed free of cost by the hospitals.

## Rapid Reporting System for the Scheme for Adolescent Girls

The government has launched the Phase -1 i.e. the beneficiary module of the Rapid Reporting System for the Scheme for Adolescent Girls – a web based on line monitoring for the Scheme for Adolescent Girls.

### **Scheme for Adolescent Girls:**

□ **What is it?** Realizing the multi-dimensional needs of out of school adolescent girls (11-14 years) owing to the onset of second growth spurt during this period and with an aim to motivate these girls to join school system, the government is

implementing the Scheme for Adolescent Girls (SAG) for out of school girls in the age group of 11-14 years.

□ **Aim:** The scheme aims at providing them nutritional support, motivating out of school girls to go back to formal schooling or skill training under non-nutrition component of the scheme. In addition to the nutritional support under the scheme, the girls are equipped with information on health, hygiene and guidance on existing public services.

□ **Implementation:** Presently, MWCD is implementing the Scheme for Adolescent Girls (SAG) in selected 508 districts across the country. The scheme is being implemented using the platform of Integrated child Development Services Scheme. Anganwadi Centres (AWCs) are the focal point for the delivery of the services.

□ **Funding:** Scheme for Adolescent Girls is a centrally sponsored scheme, implemented through Centre and State share in the ratio of 50:50, for nutrition component 60:40 for the rest of the activities for State and UTs with legislation, 90:10 for NE and three Himalayan States and 100% for UTs without legislation.

ensuring faster flow of information, accurate targeting of the beneficiaries and reduction of leakages. This Portal has been developed in collaboration with National Informatics Centre (NIC).

### **About the Rapid reporting system (RRS):**

The RRS will facilitate the monitoring of the scheme and taking corrective measures by

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## Shram Awards

**Context:** The Government has announced the Prime Minister’s Shram Awards for the year 2016 to be awarded to 50 workers employed in the Departmental Undertakings & Public Sector Undertakings of the Central and State Governments and Private Sector Units employing 500 or more workers.

The awards are given in recognition of their distinguished performances, innovative abilities, outstanding contribution in the field of productivity and exhibition of exceptional courage and presence of mind.

**There are four types of awards:**

- Shram Ratna: Rs. Two lakhs and recognition of their contribution to their field (a Sanad).
- Shram Bhushan: RS. 100000 and a Sanad.
- Shram Vir / Shram Veerangana: RS. 60000 and a Sanad.
- Shram Devi / Shram Shree: RS. 40000 and a Sanad.

**About Shram Awards:**

- The **Prime Minister’s** Shram Awards were instituted in **1985** by the Government of India. This national award is conferred on **workers** for outstanding contributions that improve productivity, innovation, and indigenization, resulting in saving foreign exchange. The award is also given for long-term exceptional dedicated work.
- The objective of the Prime Ministers Shram Awards is to recognize the outstanding contributions made by workmen as defined in the **Industrial Dispute Act, 1947** in organizations both in public and private sector and who have distinguished record of performance, devotion to duty of a high order, specific contribution in the field of productivity and proven innovative abilities among others.



## Atal Pension Yojana (APY)

**Context:** The Centre has decided to allow small finance banks and payment banks to offer the Atal Pension Yojana (APY), which is expected to significantly increase the coverage of the scheme. This is also expected to strengthen the existing channels of APY distribution.

### Background:

Participation in APY not only builds a pensioned society but also adds sustainable fee income to banks by way of attractive incentive for mobilising APY. So far, 11 payment banks and 10 small finance banks have received licences from the Reserve Bank of India to start banking operations in India.

### About APY:

#### What is it?

The Atal Pension Yojana became operational from June 1, 2015 and is available to all the citizens of India in the age group of 18-40 years.

#### Features:

- Under the scheme, a subscriber would receive a minimum guaranteed pension of Rs 1,000 to Rs 5,000 per month, depending upon his contribution, from the age of 60 years. The same pension would be paid to the spouse of the subscriber and on the demise of both the subscriber and the spouse, the accumulated pension wealth is returned to the nominee.
- The Central Government would also co-contribute 50% of the total contribution or Rs. 1000 per annum, whichever is lower, to each eligible subscriber account, for a period of 5 years, that is, from 2015-16 to 2019-20, to those who join the NPS before 31st December, 2015 and who are not members of any statutory social security scheme and who are not Income Tax payers.

## Quota For Acid Attack Survivors, People With Disability In Govt. Jobs

The Department of Personnel and Training has written to all central government departments to ensure that 1% of each posts be reserved for people with blindness and low vision; deaf and hard of hearing; locomotor disability including cerebral palsy, leprosy cured, dwarfism, acid attack victims and muscular dystrophy.

### Background:

The move to enhance reservation quota for those with learning disability and acid attack victims comes after passage of the Rights of Persons with Disabilities Act, 2016, and the notification of relevant rules in this regard. As per an earlier order of the DoPT, issued in 2005, 3% of the total posts were to be reserved for people with disabilities. Of these 1% each was for those with blindness or low vision; hearing impairment and locomotor disability or cerebral palsy.

### Grievance redressal:

- Under the new rules, all government organisations have been asked to appoint ‘grievance redressal officers’ to look into complaints. These officers will maintain a register of complaint carrying details such as date of complaint; name of complainant; the name of the establishment or person against whom the complaint has been lodged; the gist of the complaint and the date of disposal by the grievance redressal officer.
- Any person aggrieved with any matter relating to discrimination in employment against any person with disability may file a complaint with the grievance redressal officer of the respective government establishment. Every complaint shall be inquired into within two months of its registration and outcome thereof or action taken thereon shall be communicated to the complainant or person with benchmark disability.

### Reservations:

- In case of direct recruitment, 4% of the total number of vacancies, up from the existing 3%, in groups A, B and C shall be reserved for people with benchmark disabilities. *Benchmark disability means a person with not less than 40% of a specified disability.*
- 1% posts each shall be also reserved for people suffering from autism, intellectual disability, specific learning disability and mental illness. *Intellectual disability is a condition characterised by significant limitations both in intellectual functioning such as reasoning, learning and problem solving, and in adaptive behaviour that covers a range of everyday skills.*

## National Register of Citizens

**Context:** The much-awaited first draft of the National Register of Citizens (NRC) was published with the names of 1.9 crore people out of the 3.29 crore total applicants in Assam recognising them as legal citizens of India. The NRC is being compiled following a Supreme Court directive to identify illegal immigrants in Assam.

### Background:

Assam, which faced influx from Bangladesh since the early 20th century, is the only state having an NRC, first prepared in 1951. The Supreme Court, which is monitoring the entire process, had ordered that the first draft of the NRC be published by December 31 after completing the scrutiny of over two crore claims along with that of around 38 lakh people whose documents were suspect.

### What's the issue?

- The NRC was last updated in Assam way back in 1951. Then, it had recorded 80 lakh citizens in the State. Since then, the process of identification of illegal immigrants in Assam has been debated and become a contentious issue in the State's politics.
- A six-year agitation demanding identification and deportation of illegal immigrants was launched by the All Assam Students' Union (AASU) in 1979. It culminated with the signing of the Assam Accord on August 15, 1985.

### About NRC:

**What is it?** The National Register of Citizens (NRC) contains names of Indian citizens. The NRC was prepared in 1951, after the Census of 1951. It was prepared by recording particulars of all the persons enumerated during that Census.

## OCI and PIO cards

**Context:** The Govt has stopped the scheme of free conversion of PIO cards to OCI. The scheme of converting the Person of Indian Origin (PIO) cards to OCI cards free of cost comes to an end as a decision has been taken not to give any more extension beyond December 31. However, the change of PIO cards to OCI cards would continue on payment of fees.

### Who are NRIs, PIO and OCI?

- Non-Resident Indians (NRI), Person of Indian Origin (PIO) and Overseas Citizen of India (OCI) are the three major categories in which the people from India go and live abroad can be categorised.
- While NRIs is essentially a term used for Indians that live in another country, PIOs and OCIs are people who want to stay connected and involved with India more closely.

### Need for conversion:

- ✓ Simultaneous existence of PIO and OCI cards led to confusion among People of Indian Origin residing abroad. Thus, merging PIO and OCI will lead to simplification of the rules under a single umbrella. It would facilitate visa-free travel to India, rights of residency and participation in business and educational activities in the country. This is aimed at simplifying the visa-free entry for people of Indian origin into India.
- ✓ The merger of the two cards could make PIO cardholders eligible for benefits already enjoyed by OCI cardholders. Merging of the two cards will also facilitate travel of Indians staying abroad and their participation in various activities in India.

### Benefits of a PIO card:

- A PIO card holder doesn't need a visa to visit India. The holder also doesn't require a student or employment visa to acquire employment or academic opportunities in India.
- The holder is also exempted from registering at the foreigner regional

registration office (FRRO) during the duration of stay in India.

- The holder also enjoys parity with NRIs in concern to economic, financial and educational matters. These may include matters related to property transfer or acquisition, holding, disposal, investment, admission of children in educational institutions under general category quota for NRIs.
- Separate immigration counters are provided at all International airports in India for PIO card holders.

### Drawbacks of PIO card:

It does not provide voting rights to the holder. Prior permission is needed to undertake mountaineering expeditions or any such related research work in protected areas.

### The benefits of OCI cards are substantial:

- OCI is essentially a lifetime visa status offered by India to an Indian person who has given up his citizenship. OCI cards give lifetime multiple entry visa to India.
- If one remains an OCI for 5 years, he/she can attain Indian citizenship and then live in India for a period of one year including short breaks.



- Special immigration counters are provided at all international airports in India for OCI

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card holders.

- An OCI cards holder can open special bank accounts in India just like NRIs and make investments. OCI holders can also buy non-farm property and exercise ownership rights.
- An OCI card allows to apply for a driver's license, PAN card or open a bank account in India. They get same economic, financial and educational benefits like NRIs and can also adopt children.

## Restrictions for OCI card holders:

An OCI card holder cannot vote, hold a government job or purchase agricultural or farm land. The person can also not run for public office or travel to restricted areas without permission.



## Pradhan Mantri Swasthya Suraksha Yoajan (PMSSY)

**Context:** The Union Cabinet has approved setting up of an AIIMS in Bilaspur in Himachal Pradesh with an outlay of Rs. 1,350 crore under the Pradhan Mantri Swasthya Suraksha Yojna (PMSSY).

### What you need to know about PMSSY?

The Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) was announced in 2003 with objectives of correcting regional imbalances in the availability of affordable/ reliable tertiary healthcare services and also to augment facilities for quality medical education in the country.

- The scheme has two components: Setting up of new AIIMS and upgradation of government medical colleges.
- Under this scheme, AIIMS have been established in Bhubaneswar, Bhopal, Raipur, Jodhpur, Rishikesh and Patna while work of AIIMS Rae Bareilly is in progress. Also, three AIIMS in Nagpur (Maharashtra), Kalyani (West Bengal) and Mangalagiri in Guntur (Andhra Pradesh) have been sanctioned in 2015 and two AIIMS have been sanctioned at Bathinda and Gorakhpur in 2016.

## BharatNet

**Context:** Government has achieved a significant milestone under the BharatNet by completing Phase-1 of the project by connecting over **one lakh Gram Panchayats (GP)** across the country with high speed optical fibre network as per the declared deadline of 31 Dec 2017. BharatNet network built under Phase 1 envisages delivery of high- speed broadband services in over 2.5 lakh villages benefitting more than 200 million rural Indians.

### *Universal Service Obligation Fund:*

USOF, established in 2002, provides effective subsidies to ensure telegraph services are provided to everyone across India, especially in the rural and remote areas. It is headed by the USOF Administrator who reports to the Secretary, Department of Telecommunications (DoT).

- Funds come from the Universal Service Levy (USL) of 5% charged from all the telecom operators on their Adjusted Gross Revenue (AGR) which are then deposited into the Consolidated Fund of India, and require prior parliamentary approval to be dispatched.
- The USOF works through a bidding process, where funds are given to the enterprise quoting the lowest bid. However, the funds for NOFN were made an exception to this process since BBNL was the sole party involved in the implementation having being specifically created for it.

### *About BharatNet project:*

Bharat Net sought to connect all of India's households, particularly in rural areas, through broadband, forming the backbone of the government's ambitious Digital India programme. It proposes broadband connectivity to households under village panchayats and even to government institutions at district level. The project is being funded through the Universal Service Obligation Fund (USOF).

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## Members of Parliament Local Area Development Scheme

**Context:** The Cabinet Committee on Economic Affairs has given its approval to continuation of Members of Parliament Local Area Development Scheme (MPLADS) till the term of the 14th Finance Commission i.e. 31.03.2020.

### About MPLAD scheme:

- **What is it?** It was launched in December, 1993, to provide a mechanism for the Members of Parliament to recommend works of developmental nature for creation of durable community assets and for provision of basic facilities including community infrastructure, based on locally felt needs.
- **Works under the scheme:** Works, developmental in nature, based on locally felt needs and always available for the use of the public at large, are eligible under the scheme. Preference under the scheme is given to works relating to national priorities, such as provision of drinking water, public health, education, sanitation, roads, etc.
- **Funds:** Funds are released in the form of grants in-aid directly to the district authorities. The funds released under the scheme are non-lapsable. The liability of funds not released in a particular year is carried forward to the subsequent years, subject to eligibility.
- **Execution of works:** The MPs have a recommendatory role under the scheme. They recommend their choice of works to the concerned district authorities who implement these works by following the established procedures of the concerned state government. The district authority is empowered to examine the eligibility of works sanction funds and select the implementing agencies, prioritise works, supervise overall execution, and monitor the scheme at the ground level.
- **Recommendation of works:** The Lok Sabha Members can recommend works in their respective constituencies. The elected

members of the Rajya Sabha can recommend works anywhere in the state from which they are elected. Nominated members of the Lok Sabha and Rajya Sabha may select works for implementation anywhere in the country.

## North Koel Reservoir Project

**Context:** A Memorandum of Understanding has been signed between Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, State of Bihar and State of Jharkhand for completion of balance works of North Koel reservoir project at an estimated cost of Rs. 1622.27 crore.

A supplementary Memorandum of Agreement has also been signed between Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, National Water Development Agency, NABARD with State Governments of Bihar and Jharkhand for funding of the state share under Long Term Irrigation Fund (LTIF) for North Koel reservoir project.

### About the North Koel Reservoir Project:

The project is situated on North Koel river which is a tributary of Sone river finally joining the river Ganga. The North Koel Reservoir is located in the most backward tribal areas in Palamau and Garhwa districts of Jharkhand State.

- The construction was originally started in the year 1972 and continued till 1993 when it was stopped by the Forest Department, Govt. of Bihar. Since then, the work on dam is at a standstill.
- The project aims to provide irrigation to 111,521 hectares of land annually in the most backward and drought prone areas of Palamu & Garhwa districts in Jharkhand and Aurangabad & Gaya districts in Bihar.

### Background:

LTIF was announced in the Union Budget 2016-17 with an initial corpus of Rs 20,000 crore for funding and fast tracking the implementation of incomplete major and medium irrigation projects. LTIF has instituted in NABARD as a part of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY).

### Key facts for Prelims:

- North Koel river rises on Ranchi plateau and flows through Jharkhand. It joins the

Sone a few miles north-west of Haidarnagar.

- The North Koel, along with its tributaries, meanders through the northern part of Betla National Park.
- The principal tributaries are the Auranga and the Amanat.



## Monuments Bill

**Context:** Some historians and archaeologists have expressed concern over amendments proposed to the Ancient Monuments and Archaeological Sites and Remains Act (1958). The Lok Sabha passed the amendments to the Act on January 3. But the Bill is yet to be cleared by the Rajya Sabha.

### *What are the concerns?*

The Act, which originally instituted conservation measures and banned construction activities near protected monuments, is now sought to be amended so that public works could be allowed within the 100 m prohibited zone.

### *The Ancient Monuments and Archaeological Sites and Remains (Amendment) Bill, 2017:*

- Construction in ‘prohibited areas’: The Act defines a ‘prohibited area’ as an area of 100 meters around a protected monument or area. The central government can extend the prohibited area beyond 100 meters. The Act does not permit construction in such prohibited areas, except under certain conditions. The Act also prohibits construction in ‘prohibited areas’ even if it is for public purposes. The Bill amends this provision to permit construction of public works in ‘prohibited areas’ for public purposes.
- Definition of ‘public works’: The Bill introduces a definition for ‘public works’, which includes the construction of any infrastructure that is financed and carried out by the central government for public purposes. This infrastructure must be necessary for public safety and security and must be based on a specific instance of danger to public safety. Also, there should be no reasonable alternative to carrying out construction in the prohibited area.
- Procedure for seeking permission for public works: As per the Bill, the relevant central government department, that seeks to carry out construction for public purposes in a prohibited area, should make an application

to the competent authority. If there is any question related to whether a construction project qualifies as ‘public works’, it will be referred to the National Monuments Authority. This Authority, will make its recommendations, with written reasons, to the central government. The decision of the central government will be final.

Impact assessment of proposed public works: The Bill empowers the National Monuments Authority to consider an impact assessment of the proposed public works in a prohibited area, including its (i) archaeological impact; (ii) visual impact; and (iii) heritage impact. The Authority will make a recommendation, for construction of public works to the central government, only if it is satisfied that there is no reasonable possibility of moving the construction outside the prohibited area.



## Swine flu

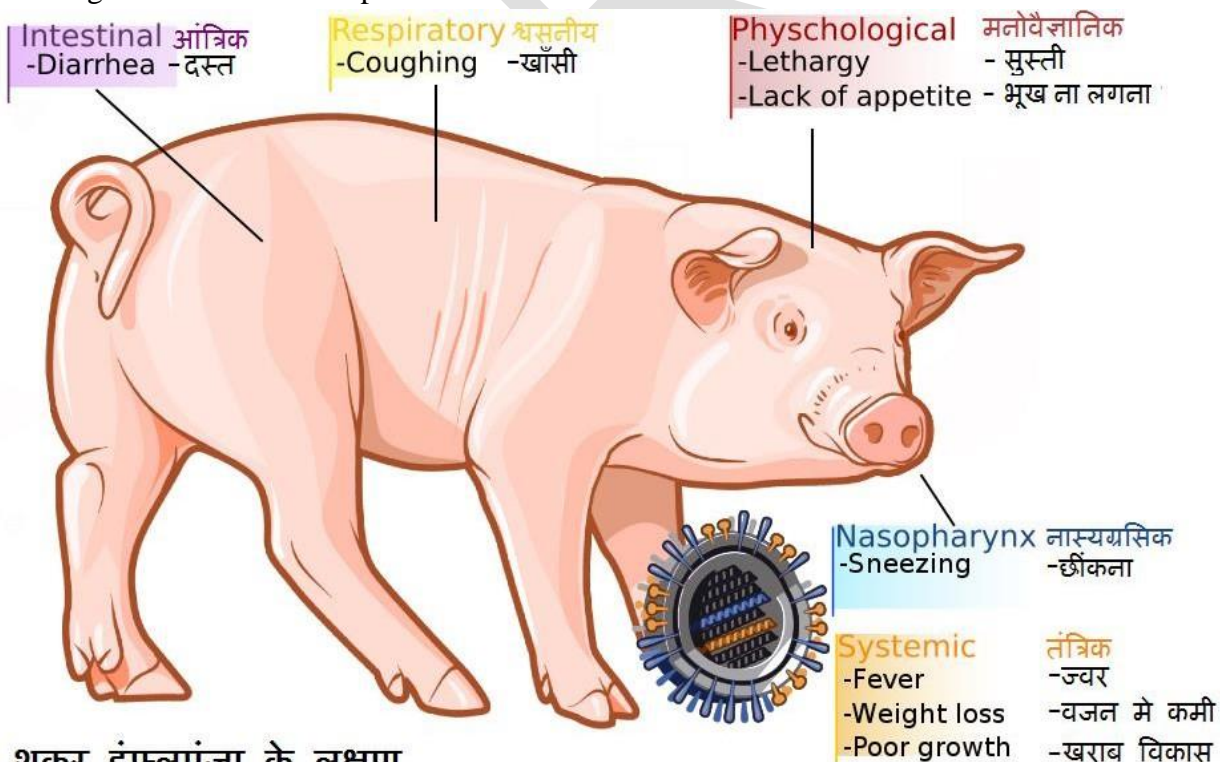
The Rajasthan government has sounded an alert in the State after more than 400 people were diagnosed positive for the swine flu virus. Nearly 11,721 people were tested for swine flu between January 1, 2017 to December 19, 2017, of which 3,214 were confirmed positive.

### Swine Flu:

• **What is it?** Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza viruses that causes regular outbreaks in pigs. H1N1 is a flu virus. When it was first detected in 2009, it was called “swine flu” because the virus was similar to those found in pigs.

- **Spread:** Swine flu is contagious, and it spreads in the same way as the seasonal flu. When people who have it cough or sneeze, they spray tiny drops of the virus into the air. If a person comes in contact with these drops or touch a surface that an infected person has recently touched, the person can catch H1N1 swine flu.
- Pregnant women who contract the H1N1 infection are at a greater risk of developing complications because of hormonal changes, physical changes and changes to their immune system to accommodate the growing foetus.

- **Transmission from Pigs to Humans:** The H1N1 virus is currently a seasonal flu virus found in humans. Although it also circulates in pigs, one cannot get it by eating properly handled and cooked pork or pork products.
- **Pandemic:** In 2009, H1N1 was spreading fast around the world, so the World Health Organization called it a pandemic.



शूकर इन्फ्लुएंजा के लक्षण

Symptoms of Swine influenzas

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## Typbar TCV

**What is it?** It is a Typhoid conjugate vaccine developed by Bharat Biotech Ltd (BBL).

**Why in news?** The World Health Organisation (WHO) has pre-qualified its typhoid conjugate vaccine. The new vaccine was found to have given a longer immunity from typhoid than older vaccines and it required fewer doses for childhood immunisation.

**What does this mean?** The pre-qualification by WHO allows for the sale of the vaccines to UN agencies such as UNICEF and GAVI.

### About Typhoid:

Typhoid fever is caused by food and water contaminated by Salmonella Typhi (S. Typhi) bacteria. The symptoms of the disease include fever, headache, nausea, loss of appetite, constipation and sometimes diarrhoea. According to the World Health Organisation, typhoid affects about 21 million people per year and kills around 222,000.

### About the vaccine:

Typbar TCV is reportedly the world's first typhoid vaccine clinically proven for use on recipients who can be as young as six months. A single dose offers 87% protective efficacy against typhoid.

### Facts for Prelims:

**What is GAVI?** Created in 2000, Gavi is an international organisation – a global Vaccine Alliance, bringing together public and private sectors with the shared goal of creating equal access to new and underused vaccines for children living in the world's poorest countries. Gavi brings together developing country and donor governments, the World Health Organization, UNICEF, the World Bank, the vaccine industry in both industrialised and developing countries, research and technical agencies, civil society, the Bill & Melinda Gates Foundation and other private philanthropists.

## Global Entrepreneurship Summit 2017 (GES-2017)

**Context:** The Union Cabinet has given its ex-post facto approval for the Memorandum of Understanding (MoU) signed between India and the USA for co-hosting the Global Entrepreneurship Summit (GES) 2017 in India. The MoU delineated the responsibilities, areas of co-operation including logistics and venue related requirements between the parties for smooth conduct of the Summit.

### About GES 2017:

- **What is it?** The summit organised annually since 2010, is the preeminent annual entrepreneurship gathering that convenes over one thousand emerging entrepreneurs, investors, and supporters from around the world. GES 2017 marks the first GES held in South Asia.
- **Key facts:** The 8th edition of the Global Entrepreneurship summit (GES) was recently held in Hyderabad. It was hosted by NITI Aayog in partnership with US government. The summit was attended by 1,500 entrepreneurs from 170 countries.
- **GES 2017 Theme:** “Women First, Prosperity for All”.
- **Outcomes of the summit:** The Summit provided opportunities for meeting with global industry leaders, networking of international entrepreneurs, innovators, investors. The summit also provided forum for pitching competition, strategic workshops and sector-programmes to help in creating new collaborations amongst entrepreneurs and Investors. The Summit provided for significantly increased economic opportunities for young entrepreneurs, especially, women entrepreneurs and start-ups.

## H5 Avian Influenza

**Context:** An outbreak of H5 Avian Influenza has been reported from Dasarahalli village from Bengaluru Urban District in Karnataka. On the directions of the Centre, the Karnataka Government has notified the outbreak and initiated the control and containment operations. A central team of Department of Animal Husbandry, Dairying & Fisheries comprising of two experts has been deputed to Bengaluru for overseeing the operation and to assist the State Government.

### *Avian influenza or Bird flu:*

- Avian influenza, commonly called bird flu, is an infectious viral disease of birds with a tendency of causing large-scale outbreaks of serious disease. Although most influenza viruses do not infect humans, A (H5N1) and A (H7N9) have caused serious infections in people.
- **Symptoms:** Fever, cough, sore throat, muscle, body aches, nausea can lead to severe breathing problems, pneumonia, and acute respiratory distress syndrome.
- **Treatment:** Human infections with bird flu viruses usually can be treated with the same prescription drugs that are used to treat human seasonal flu viruses.
- **Risk factors involved:** According to WHO, a few A (H5N1) human cases have been linked to consumption of dishes made of raw, contaminated poultry blood. However, slaughter, handling carcasses of the infected poultry, and preparing poultry for daily consumption in households are likely to be risk factors.



## Kerala's fight against AMR

### Context:

With antimicrobial resistance (AMR) emerging as a major concern in the health as well as allied sectors such as veterinary, dairy, fisheries and poultry, Kerala is all set to launch its strategic action plan for tackling AMR. The draft AMR action plan of the State is in the process of being finalised and implemented.

### Need for an action plan:

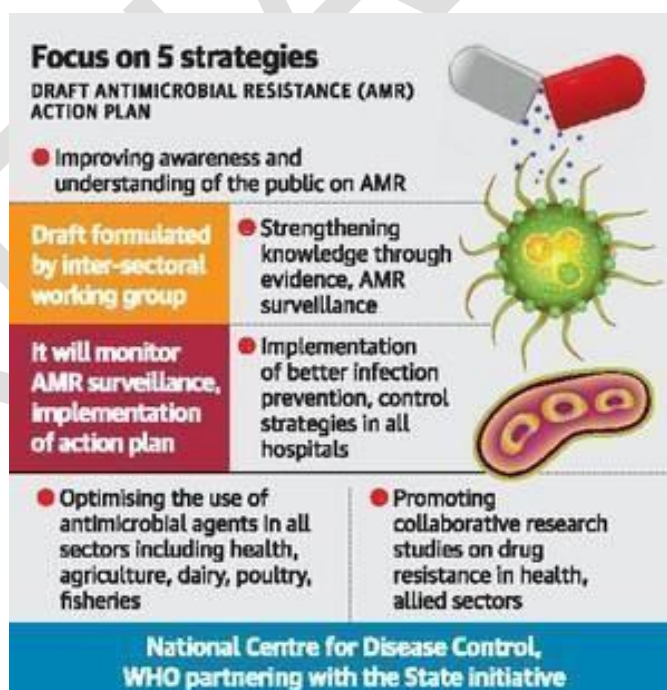
The AMR surveillance data, from seven tertiary care centres in the state, have reported that resistance to Colistin, the last-mile antibiotic available to treat pan-drug resistant *Klebsiella pneumoniae* strains, is a reality in most government medical college hospitals in the State. Besides, AMR surveillance in the State is currently restricted to the sample studies done in tertiary care hospitals but this hardly reflects the situation in the community.

### The draft focuses on 5 strategies:

- Improving awareness and understanding of the public on AMR.
- Strengthening knowledge through evidence, AMR surveillance.
- Implementation of better infection prevention, control strategies.
- Optimising use of antimicrobial agents in all sectors including health, agriculture, dairy, poultry and fisheries.
- Promoting collaborative research studies on drug resistance in health, allied sectors.

### What is AMR?

An antibiotic is a drug used to treat bacterial infections in both humans and animals. However, bacteria can change and find ways to survive the effects of an antibiotic. This has resulted in antibiotics losing their effectiveness. The more we use antibiotics and the way that we use them can increase the chance that bacteria will become resistant to them. This is known as antimicrobial resistance (AMR).



### What are the dangers of AMR?

AMR causes a reduction in the effectiveness of medicines, making infections and diseases difficult or impossible to treat. AMR is associated with increased mortality, prolonged illnesses in people and animals, production losses in agriculture, livestock and aquaculture. This threatens global health, livelihoods and food security. AMR also increases the cost of treatments and care.



## Integrated Disease Surveillance Programme (IDSP)

**Context:** Recent data put out by the Union Health Ministry's Integrated Disease Surveillance Programme (IDSP) has indicated that food poisoning is one of the commonest outbreaks reported in 2017. This is apart from acute diarrhoeal disease (ADD).

The IDSP has interpreted that the incidence of ADD and food poisoning is high in places where food is cooked in bulk, such as canteens, hostels and wedding venues.

### Background:

Food poisoning, also called food-borne illness, is caused by eating contaminated food. Infectious organisms including bacteria, viruses and parasites or their toxins are the most common causes.

### About IDSP:

- What is it? The Integrated Disease Surveillance Program (IDSP) is a disease surveillance scheme under the Ministry of Health and Family Affairs in India, assisted by the World Bank.
- Aim: The scheme aims to strengthen disease surveillance for infectious diseases to detect and respond to outbreaks quickly. The Project was undertaken to meet the World Health Organization Guidelines for South East Asian countries on disease surveillance to track the outbreak of diseases and its potential trans boundary threats.
- Surveillance units: The scheme seeks to set up a Central Disease Surveillance Unit and a State Surveillance Unit in each State where data is collected and analyzed.
- Significance: A large amount of data on disease reports are collected in order to be able to identify the outbreak of a disease, identify its causes and take corresponding preventive and responsive measures. An early warning system has been put into place in order to take timely preventive steps.

Need: The International Health Regulations of

2005 lay down comprehensive guidelines on the role of an International Health Regulation (IHR) contact point in surveillance of disease outbreaks in the country. This information is to be shared during unexpected or unusual public health events. The IHR that came into force in 2007, places an obligation upon member states to report certain outbreak reports in order to track global disease trends through health surveillance.

## Supreme Court sets aside order cancelling larger tobacco health warnings

The Supreme Court has put on hold Karnataka High Court's order that quashed central government rules mandating larger health warnings on tobacco packages, in a setback for the country's \$11 billion tobacco industry. The court foregrounded the health of citizens over the concerns of the tobacco industry.

- The court's decision comes as a relief for health advocates and central health ministry who say bigger health warnings deter tobacco consumption. More than 900,000 people die each year in India due to tobacco-related illnesses, the government estimates.

### **Background:**

The Central government had, in 2014, amended the Cigarette and other Tobacco Products (Packaging and Labelling) Rules prescribing that 85% space on both sides of the tobacco packaging would be covered with the statutory warnings telling consumers that cigarette smoking and tobacco chewing were harmful to health. The Cigarette and other Tobacco Products (Packaging and Labelling) Amendments Rules, 2014 were framed under the Cigarette and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003.

### ***The Karnataka High court had cited the following reasons for striking down the rules:***

- The Ministry of Health and Family Welfare unilaterally framed the Rules without concurrence of the other departments concerned, and this was a violation of the Article 77 (Conduct of Business of Government of India) and the Transaction of Business (ToB) rules framed under it as the subject of tobacco control and legislation was not attached to one department or Ministry.
- Also, the rules were notified even before the Parliamentary Committee on subordinate legislations was examining them. Ministry of Commerce had also opposed 85% area for pictorial warning on the

ground that it would not result in any benefit and wanted to restrict the pictorial warnings to 40% or 50%. And the Labour Ministry too had opposed pictorial warning for the reason that it would harm the beedi industry, on which several poor families are depending upon for their livelihood.

- The rules are also contrary to Article 19(1)(g) [right to practise any profession, or to carry on any occupation, trade or business] as they are “unreasonable” restrictions imposed “without application of mind or any basis.”

## Kala Azar

**Context:** India has missed the 2017 deadline that Finance Minister Arun Jaitley had announced for elimination of Kala Azar (black fever) in his Budget speech last year. In fact, endemic blocks have increased from 61 to 68 in 17 districts of Bihar and Jharkhand.

### Background:

**Kala-azar is endemic to the Indian subcontinent** in 119 districts in four countries (Bangladesh, Bhutan, India and Nepal). This disease is the second-largest parasitic killer in the world. Elimination is defined as reducing the annual incidence of Kala Azar (KA) to less than 1 case per 10,000 people at the sub-district level.

### Kala-azar:

- **What is it?** Visceral leishmaniasis (VL), also known as kala-azar, black fever, and Dumdum fever, is the most severe form of leishmaniasis and, without proper diagnosis and treatment, is associated with high fatality.
- **Spread:** Caused by protozoan parasites of the *Leishmania* genus. migrates to the internal organs such as the liver, spleen (hence “visceral”), and bone marrow
- **Signs and symptoms** include fever, weight loss, fatigue, anemia, and substantial swelling of the liver and spleen.

## Tourette Syndrome

**Context:** For patients with Tourette syndrome, deep brain stimulation (DBS) is associated with symptomatic improvement, according to a study. The procedure, called deep brain stimulation (DBS), improved tic severity by nearly half in 171 patients with uncontrolled Tourette symptoms at 31 hospitals in 10 countries.

With DBS, brain surgeons run thin electric leads to specific regions of the basal ganglia, a cluster of nerves in the brain related to motor control and behaviour. Doctors then apply electricity to the brain circuits they've most closely linked to Tourette, to try to control the patient's tics. However, the procedure still needs more work. More than a third of patients experienced adverse events, most often slurred speech or a pins-and-needles sensation.

- **Symptoms:** Tourette's syndrome causes sudden repetitive movements called the tics. These can be so mild as to go unnoticed and can be severe enough to seek medical assistance as well. These tics can be of two types, motor tics and vocal tics. Motor tics concentrate on the sudden, involuntary muscle movement in the body. These include: Head jerking, Rapid blinking, Mouth, or face twitching, Shrugging and Arms jerking. Vocal tics concentrate on the involuntary vocal sounds made by an individual. For example: Throat clearing, Coughing, Repeating what someone else says, Swearing, Shouting and Sniffing.

### What is Tourette syndrome?

- Tourette's syndrome is a neuropsychiatric disorder that causes people to make sudden repetitive movements or sounds which aren't controlled (known as tics). For example, an individual with Tourette's syndrome may blink rapidly, clear their throat, shrug, turn heads and make controllable hand movements or blurt out words they don't intend to. Though these tics can be suppressed, it is often physically exhausting to do so. One, in hundred children suffers from Tourette's, which is the same as the number of children with autism.
- **Causes:** Though the exact cause of the Tourette's syndrome is unknown, it is believed to be caused both by genetic and environmental factors. Studies suggest that it is inherited most of the time, though the mode of inheritance and the carrier gene is not yet identified. This syndrome has been linked to a dysfunction in an area in the brain, which could be basal ganglia, thalamus and frontal cortex, which controls the body movements. A disruption in the working of neurotransmitters is also believed to cause tics.



## Global Talent Competitiveness Index

**Context:** The fifth edition of the Global Talent Competitiveness Index has been released by INSEAD in partnership with The Adecco Group and Tata communications.

**Background:**

Launched for the first time in 2013, the Global Talent Competitiveness Index (GTCI) is an annual benchmarking report that measures the ability of countries to compete for talent. The index that measures how countries grow, attract and retain talent. With this fifth edition, GTCI addresses the theme of Diversity for Competitiveness.



## The Global Talent Competitiveness Index

*Growing talent for today and tomorrow*

**Highlights:**

- India has moved up to the 81st position, but remains a laggard among the BRICS nations. India was at the 92nd position last year and at the 89th place in 2016.
- Among the five BRICS countries China is at 43rd, Russia 53rd, South Africa 63rd and Brazil 73rd.
- Switzerland has topped the list. It is followed by Singapore and the US. European countries dominate the top ranks, with 15 out of the top 25 places.

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## Seasonal affective disorder (SAD)

**Context:** According to a recent study, in India, more than 10 million people suffer from a self-diagnosable ailment called Seasonal affective disorder (SAD). Its milder version usually resolves itself within months.

Sometimes, it is mistaken to be a “lighter” version of depression, which is untrue. It is a different version of the same illness and people with SAD are just as ill as people with major depression, according to psychiatrists.

- **Symptoms:** Symptoms include fatigue, depression, a feeling of hopelessness and social withdrawal.
- **Vulnerable group:** Women are overwhelmingly more susceptible to SAD than men. Statistics released by the Indian Medical Association (IMA) show that SAD occurs four times more often in women than in men. The age of onset is estimated to be between 18 and 30 years but can affect anyone irrespective of age. SAD generally starts in late fall and early winter and goes away during spring and summer. Depressive episodes linked to summer can occur, but are much rarer than winter episodes.
- **Prevention:** A few ways in which people can prevent winter depression include ensuring a healthy and balanced diet. Staying well hydrated is key during the winter months since it gives you more energy, mental clarity and an enhanced digestive function. Getting enough sunlight and engaging in regular outdoor physical exercise are also important.
- **Treatment:** Treatment for SAD involves enough light exposure, artificial light exposure, sun therapy and drugs, if needed. Artificial light exposure is effective but may take four to six weeks to see a response, although some patients improve within days. Therapy is continued until sufficient and daily natural sunlight exposure is available.

### What is Seasonal affective disorder (SAD)?

- SAD occurs in climates where there is less sunlight at certain times of the year.

## Pulse polio programme

**Context:** Concerned over any entry of polio virus from other countries, the government has launched Pulse Polio programme for 2018.

In order to mitigate the risk of poliovirus importation, the immunity against polio infection is maintained through National and Sub- National Polio rounds along with sustained high quality polio surveillance. For additional protection, the government has also introduced the injectable Inactivated Polio Vaccine (IPV) into its routine immunization program.

### Background:

In India the last polio case was recorded on 13 January 2011. India maintains a sensitive surveillance system for polio. All cases of paralysis with sudden onset in children up to 15 years (which is called Acute Flaccid Paralysis or AFP) are picked up by the polio surveillance network. Each of these cases is followed up and their stool samples tested for poliovirus in World Health Organization (WHO) accredited laboratories. In addition, sewage samples are collected from over 30 sites spread across the country for poliovirus detection at regular intervals.

### About IPV:

- IPV is produced from wild-type poliovirus strains of each serotype that have been inactivated (killed) with formalin. As an injectable vaccine, it can be administered alone or in combination with other vaccines. IPV is an evidence-based intervention that not only ensures continued protection of children against all types of polio viruses, but also helps save vaccine — a move bound to positively impact global vaccine supply in the coming years. IPV provides serum immunity to all three types of poliovirus, resulting in protection against paralytic poliomyelitis.
- India became the first country globally to introduce fractional doses of IPV in childhood immunisation programme in eight

states and Union territories in early 2016.

## Global Initiative on Academic Network (GIAN) Program

**Context:** The First Global Initiative on Academic Network GIAN course on Sustainable Urban planning using remote sensing and Geographic Information System, GIS has been launched at Indian Institute of Technology Kanpur's outreach center in NOIDA.

**Key facts:**

- This course is being conducted under the Global Initiative on Academic Network (GIAN) Program of the Ministry of Human Resource Development and actively supported by NITI Aayog and Ministry of Housing and Urban Affairs.

- This course aims to give participants state-of-the-art remote sensing and GIS skills which will allow them to rise to the challenge of managing the rapidly changing urban environment of Indian cities.

- Focus will be on issues such as water resource management, water pollution and strategic emplacements for water treatment facilities.

**Significance of the course:**

This course is expected to contribute significantly to build trained manpower for the Smart Cities Mission launched by the Government on 25th June 2015 with an objective to promote sustainable and inclusive cities that provide core

infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions.

**GIAN is envisaged to achieve the following objectives:**

- To increase the footfalls of reputed international faculty in the Indian academic institutes.
- Provide opportunity to our faculty to learn and share knowledge and teaching skills in cutting edge areas.
- To provide opportunity to our students to seek knowledge and experience from reputed International faculty.

- To create avenue for possible collaborative research with the international faculty
- To increase participation and presence of international students in the academic Institutes.
- Opportunity for the students of different Institutes/Universities to interact and learn subjects in niche areas through collaborative learning process.
- Provide opportunity for the technical persons from Indian Industry to improve understandings and update their knowledge in relevant areas.
- Motivate the best international experts in the world to work on problems related to India.
- Develop high quality course material in niche areas, both through video and print that can be used by a larger body of students and teachers.
- To document and develop new pedagogic methods in emerging topics of national and international interest.

**About Global Initiative of Academic Networks (GIAN):**

Global Initiative of Academic Networks (GIAN) in Higher Education was launched in 2015. GIAN aims at tapping the talent pool of scientists and entrepreneurs to engage with the institutes of higher education in India to augment the country's existing academic resources, accelerate the pace of quality reforms, and further strengthen India's scientific and technological capabilities.

## Anganwadi Services Training Programme

**Context:** The government has launched the Management Information System (MIS) portal for Anganwadi Services Training Programme.

- The Ministry of Women and Child Development in collaboration with National Informatics Centre (NIC), has developed a Management Information System (MIS) portal for submitting applications/estimates by NGOs for carrying out Anganwadi Services (ICDS) Training through AWTCs/MLTCs.
- The first phase of the portal will enable NGOs to submit proposal to the respective States/UTs. They, in turn, process the proposals and recommend requirement of funds for running the Programme in the States/UTs.

### **Anganwadi Services Training Programme:**

- The Anganwadi Services Training Programme under the Umbrella Integrated Child Development Services (ICDS) Scheme is a Centrally Sponsored Scheme and the overall administration, management and monitoring of the implementation of the Scheme are being done by the respective State Government/UT Administration.
- The training provided to the Anganwadi Workers (AWWs)/Anganwadi Helpers (AWHs) and the Supervisors at the Anganwadi Workers Training Centres (AWTCs)/Middle Level Training Centres (MLTCs) is a part of the Anganwadi Services. AWTCs/MLTCs are run either by the respective State Governments/Union Territory Administrations or by NGOs under the supervision of respective State Governments/UT Administrations.
- The Government of India releases funds to the State Governments/UT Administrations for implementation of the Scheme.

## ‘Maitreyi Yatra’

**Context:** The closing ceremony of Maitreyi Yatra was recently held.

### *About Maitreyi Yatra:*

- **What is it?** The Maitreyi Yatra is an exchange programme for school children as part of a Memorandum of Understanding (MoU) between the J&K government and the Ministry of Human Resource Development.
- **Objective:** The objective of this programme is to integrate the youth of Jammu and Kashmir to the rest of the country and to promote brotherhood and harmony. It provides a good opportunity for the youth of J&K to be acquainted with culture, language and development story of different parts of the country.
- **Organizers:** The Student Exchange Programme is organized by Ministry of Human Resource development.



## Tamil Nadu Rural Transformation Project

**Context:** India and the World Bank have signed a \$100 million loan agreement to support Tamil Nadu Rural Transformation Project. This is expected to promote rural enterprises, facilitate their access to finance, and create employment opportunities for youth, particularly women, in selected blocks of Tamil Nadu across 26 districts, directly benefitting over 400,000 people.

### About Tamil Nadu Rural Transformation Project:

- The Tamil Nadu Rural Transformation Project will create an enabling environment for producer organisations and enterprises to promote businesses across select value chains. The project will enable producer organizations and enterprises in Tamil Nadu build businesses that will help them access finance, markets and networks and generate employment.
- It will also specifically support eligible households from socially and culturally disadvantaged groups harness their existing assets, skills, and resources; break their entry barriers to value-added economic activities; enhance their ability to access finance, markets, technology, and related support services; help them graduate to value-added economic activities with higher returns such as garment manufacturing and food processing units, eco-tourism ventures, and businesses around creative industries.

## “Res extra commercium”

**Context:** To curb the \$11 billion tobacco industry’s legal right to trade, the government, for the first time, has asked the top court to classify tobacco as “res extra commercium”, which is a Latin phrase for “outside commerce”. The move is part of the government’s effort to tame the tobacco companies looking to challenge tough regulations pertaining to the industry.

### **What’s the issue?**

□ India’s tobacco labelling rules, which mandate 85% of a cigarette pack’s surface be covered in health warnings, have been a sticking point between the government and the tobacco industry since they were enforced in 2016. But a court in southern Karnataka state last month quashed those labelling rules after the tobacco industry successfully argued the measure was “unreasonable” and violated its right to trade.

- Therefore, seeking to apply this doctrine to tobacco, the government argued it should have the power “to regulate business and to mitigate evils” to safeguard public health.

### **Concerns associated:**

The doctrine would open the door to an outright ban on tobacco sales if a state so wished. It gives the state autonomy to completely ban trade in tobacco. It also gives governments the constitutional cover that will protect future litigation. The industry will lose significant ground as your protection of right to trade is gone.

### **Background:**

This is not the first time the doctrine has been cited; in the 1970s, the top court’s application of the doctrine led to two states completely banning alcohol, apart from allowing courts to take a stricter stance on regulating liquor.

### **Efforts by government to curb the use of tobacco:**

The government, over the years, initiated several reforms in the recent years to curb the use of tobacco that kills almost nine lakh people in India each year. Increased taxes, campaigns, advertisements are some of the measures taken by the government to curb the use of tobacco.

### **Way ahead:**

If this Roman law doctrine is applied, it would have severe implications on the tobacco industry; not only would the industry’s legal rights to trade will suffer, but it will also give authorities more freedom to impose restrictions.

### **What is “res extra commercium”?**

*Res extra commercium* means things beyond commerce, i.e., which cannot be brought or sold, such as public roads, rivers, titles of owners etc. it is a doctrine originating in roman law. In some contexts, it can refer to areas beyond national borders, such as space and the seabed.

## e-Samvad

**Context:** e- Samvad portal has been launched by the Ministry of Women & Child Development.

**About e- Samvad:**

**What is it?** It is an online platform for NGOs and Civil Societies to interact with the Ministry of Women & Child Development.

**Details:** Through e-Samvad portal, NGOs and civil society can provide their feedback, suggestions, put up grievances, share best practices etc. Senior Officers within MWCD will be able to view the inputs/suggestions received for their concerned subject areas and appropriately respond to NGOs. This will help in formulation of effective policies and measures for welfare of women and children.

## Govt notifies electoral bonds to replace cash donations to political parties

In an attempt to ensure more transparent financing of political parties participating in elections, the government has announced the introduction of new electoral bonds that donors can buy from the State Bank of India (SBI). The political parties who get these bonds can in turn encash them only through a designated bank account. The bonds will be available at specified SBI branches for 10 days each in the months of January, April, July and October.

### About Electoral bonds:

- **What are electoral bonds?** Electoral bonds will allow donors to pay political parties using banks as an intermediary. Although called a bond, the banking instrument resembling promissory notes will not carry any interest. The electoral bond, which will be a bearer instrument, will not carry the name of the payee and can be bought for any value, in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh or Rs 1 crore.
- **Eligibility:** electoral bonds, can be given to a registered political party which has secured at least 1 per cent vote in the last Lok Sabha or state assembly elections. That party will have to give one bank account to the Election Commission and it will have to be encashed within 15 days.
- **Need:** The electoral bonds are aimed at rooting out the current system of largely anonymous cash donations made to political parties which lead to the generation of black money in the economy.

## e-Sansad and e-Vidhan

**Context:** Government has rolled out e-Sansad and e-Vidhan in Parliament and State Legislatures to digitize and make their functioning paperless.

### About e-Sansad and e-Vidhan:

- **What are they?** e-Sansad and e-Vidhan are mission mode projects of Government of India under Digital India, to make the functioning of Parliament and State Legislatures paperless. MoPA is the Nodal Ministry for implementation of both the projects.
- **Details:** These projects would make the functioning of Parliament and State Legislatures participative, responsive, transparent, productive and more accountable to the public and make the entire Legislative process more efficient. Further, this environment friendly initiative is in line with the ‘Go Green’ initiative of the Government.



## SFOORTI Application

**What is it?** To help plan the traffic flows and optimize freight operations, Ministry of Railways have launched Smart Freight Operation Optimisation & Real Time Information (SFOORTI) App for Freight Managers which provides features for monitoring and managing freight business using Geographic Information System (GIS) Views and Dashboard.

**Salient features of SFOORTI Application are as below:**

- With this application, movement of freight trains on Geographic Information System (GIS) view can be tracked.

- Both passenger and freight trains can be tracked over Zones/Divisions/ Sections in single GIS View.
- Freight business can be monitored.
- Comparative Analysis of Zonal/Divisional Traffic.
- Analysis of new traffic captured and traffic lost.
- This app provides a Bird's eye view of all Freight Assets in a single window.
- Provides end to end Rake movement on Geospatial view
- Expected Traffic at Interchange points to evaluate daily performance can be viewed.
  - Performance of each zone and divisions with respect to loading and utilization of freight assets can be viewed.
  - Sectional performance monitoring for sections, divisions and zones shall help in traffic routing.
  - Freight terminal and sidings can be better monitored to ensure better turnaround of rakes.

Freight traffic is vital for economic and industrial progress of the country.

### Importance of Freight traffic:

Freight traffic is the major source of revenue for Indian Railways. Only one-third of the 13000 trains running daily on IR are freight trains, but it accounts 65% of total revenue of IR. Railway

## India, Pakistan exchange list of nuclear installations

**Context:** India and Pakistan recently exchanged, through diplomatic channels simultaneously at New Delhi and Islamabad, the list of nuclear installations and facilities under a three-

decade old bilateral pact.

This is the twenty seventh consecutive exchange of such a list between the two countries, the first one having taken place on January 1, 1992.

### Background:

The exchange is done each year on January 1, under the Agreement on the Prohibition of Attack against Nuclear Installations and Facilities, also referred to as the Non-Nuclear Aggression Agreement.

### Significance of the agreement:

- The need for the agreement had been felt against the backdrop of Israel's 1981 bombing of Iraq's Osirak reactor near Baghdad. The strike, carried out by Israeli fighter jets over hostile airspace, had set Iraq's nuclear weapons programme significantly.

The agreement had also come at a time of deep anxiety for Pakistan. Islamabad had been rattled by the memory of the 1972 defeat which dismembered the country, and military developments in India, such as Operation Brasstacks in 1987, which was a wargame exercise to prepare for deep strike offensive capabilities. Pakistan had at the time responded by putting at its nuclear installations and assets on 'high alert'.

### About the Agreement on the Prohibition of Attack against Nuclear Installations:

The agreement, which was signed on December 31, 1988, and entered into force on January 27, 1991, provides that the two countries inform each other of nuclear installations and facilities to be covered under the pact on the first of January of every calendar year.

## China develops underwater surveillance networks in Indian Ocean, South China Sea

China has developed a new underwater surveillance network to help its submarines get a stronger lock on targets while protecting the nation's interests along the maritime Silk Road, which includes the Indian Ocean. The project is part of an unprecedented military expansion fuelled by Beijing's desire to challenge the United States in the world's oceans.

### *About the Underwater surveillance network:*

- What is it? It is an underwater surveillance system that is based on a network of platforms — buoys, surface vessels, satellites and underwater gliders — that gather data from the South China Sea, and the Western Pacific and Indian Oceans.
- How it works? The system works by gathering information about the underwater environment, particularly water temperature and salinity, which the navy can then use to more accurately track target vessels as well as improve navigation and positioning.

## National Knowledge Network (NKN)

**Context:** India has kicked off the process of appointing a telecom company that will connect and extend its state-of-the-art National Knowledge Network (NKN) to research and education networks in six South Asian Association of Regional Cooperation member states — Afghanistan, Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka. Pakistan is the only SAARC nation that has been left out of this initiative.

### Background:

India has for long suspended official talks with Pakistan due to continuing terrorist attacks launched by groups from across the border and chill in the relations is now evident in sphere of research cooperation too.

### International connectivity:

- India has now decided to extend the NKN to the global research and education networks in SAARC nations.
- NKN will be connected from Afghanistan to Delhi or Mumbai, from Bangladesh to Kolkata or Delhi, from Bhutan to Kolkata or Delhi, from Nepal to Kolkata or Delhi, from Maldives to Chennai or Mumbai and from Sri Lanka to Chennai or Mumbai. A state-of-the-art management centre and Network Operations

Centre will also be set up to run the NKN network. The connection from Afghanistan, Maldives and Sri Lanka to India would be through a submarine cable for international connectivity.

- India's National Knowledge Network and Sri Lanka's LEARN which connect to educational institutions between the two countries have now been linked with

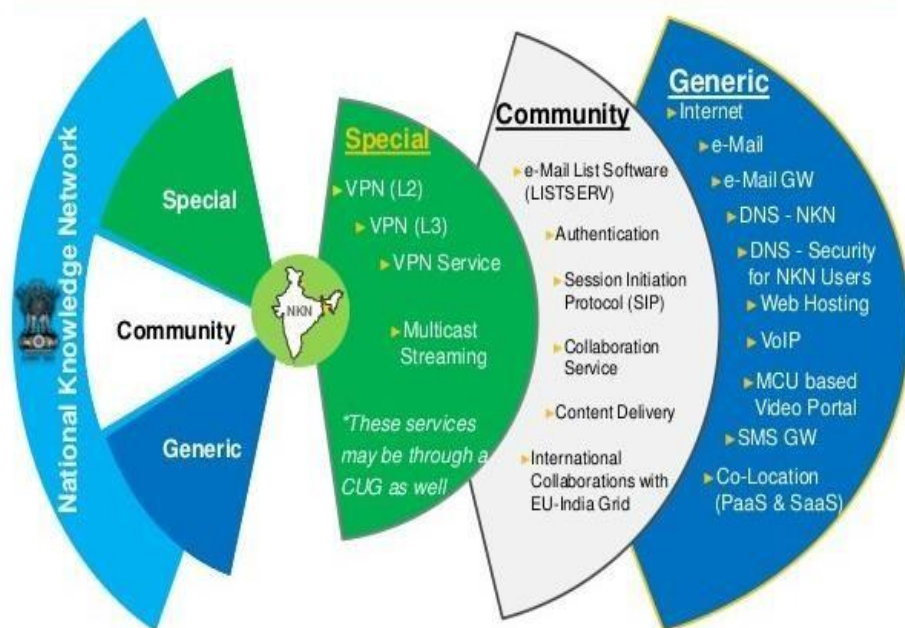
each other through high capacity internet. This dedicated high speed internet connectivity will boost the collaboration among the academic institutions of India and Sri Lanka.

### National Knowledge Network:

- **What is it?** NKN is a multi-gigabit pan-India network which facilitates the development of India's communications infrastructure, stimulates research and creates next generation applications and services.
- **Aim:** With its multi-gigabit capability, NKN aims to connect all universities, research institutions, libraries, laboratories, healthcare and agricultural institutions across the country to address such paradigm shift.

- **What it does?** It enables collaboration among researchers from different educational networks such as TEIN4, GARUDA, CERN and Internet2. It also enables sharing of scientific databases and remote access to advanced research facilities. The leading mission oriented agencies in the fields of nuclear, space and defence research are also part of NKN.

### National Knowledge Network Key Services



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## Nepal ends India’s monopoly on internet access with new Chinese link

By opening a new optical fibre link across the Himalayan mountains to China, Nepal has ended India’s monopoly on internet access. The Chinese optical fibre link enters Nepal at Rasuwa, 175 km north of the capital Kathmandu.

### *Significance of this move:*

Till recently, landlocked Nepal was totally dependent on India for access to the worldwide web through connections at Biratnagar, Bhairahawa and Birgunj, for which it pays a substantial sum as fees and royalties. Besides state-run Indian firms, Nepal has been acquiring bandwidth from private players such as Tata and Airtel and BSNL. The opening of new line shows China’s growing engagement in a region seen as India’s backyard.

### *Background:*

- The internet was first introduced to Nepal in 1993 by a venture between the Royal Nepal Academy of Science and Technology (RONAST) and a private firm, the Mercantile Office Systems. The Indian Institute of Technology in Mumbai had a UNDP-funded internet connection and RONAST set up a system whereby it could connect to Mumbai to transfer email messages. The first optical fibre link to India was built four years later.
- Data use in Nepal has been increasing constantly with more people using social media platforms such as Facebook and Twitter and communication platforms such as Viber, Messenger, WhatsApp and WeChat, especially to communicate with family members abroad.



## BBIN Motor Vehicles Agreement

**Context:** Bangladesh, India and Nepal have agreed on the text of the operating procedures for passenger vehicle movement in the sub- region under the Bangladesh-Bhutan-India- Nepal (BBIN) Motor Vehicles Agreement (MVA) signed in June 2015, and will soon complete the internal approval processes for signing of the passenger protocol. The participating countries have also agreed to conduct more trial runs for cargo vehicles under the agreement.

### Background:

Bangladesh, Bhutan, India and Nepal (BBIN) had signed a framework MVA in June 2015 to enable movement of passenger and cargo vehicles across borders among the four countries. Bhutan has not yet ratified the pact for its entry to come into force. However, Bhutan has given its consent for the BBIN MVA to enter into force amongst the other 3 countries i.e. Bangladesh, India and Nepal, who have already ratified it.

- **Benefits:** It would permit unhindered movement of passenger and cargo vehicles among the four countries. Cargo vehicles do not have to be changed at the border, a practice that has prevailed until now. The BBIN agreement will promote safe, economical efficient and environmentally sound road transport in the sub-region and will further help each country in creating an institutional mechanism for regional

integration.

- **Assistance from ADB:** The Asian Development Bank (ADB) has been providing technical, advisory, and financial support to the BBIN MVA initiative as part of its assistance to the South Asia Subregional Economic Cooperation (SASEC) program, a projects-based economic cooperation initiative that brings together the BBIN countries, Maldives, Sri Lanka and more recently, Myanmar. ADB is the secretariat of SASEC.

### About BBIN MVA:

- **What is it?** The landmark MVA was signed by Transport Ministers of the BBIN countries in Thimphu, Bhutan on 15 June 2015. As per the agreement, member countries would allow vehicles registered in the other countries to enter their territory under certain terms and conditions. Customs and tariffs will be decided by the respective countries and these would be finalised at bilateral and trilateral forums.
- **Objective:** The main objective of the agreement is to provide seamless people-to-people contact and enhance economic interaction by facilitating cross border movement of people and goods.



## VINBAX

**What is it?** It is a military exercise between India and Vietnam. VINBAX-2018 was Table Top Exercise to carry out training for Peace Keeping Operations under United Nations (UN) mandate. It is the first military exercise between the two countries. The exercise is being held in Jabalpur in Madhya Pradesh.

### **Background:**

Defence ties between India and Vietnam have been on an upswing with the primary focus being cooperation in the maritime domain. India and Vietnam had signed a protocol on defence cooperation in 1994. The partnership was thereafter elevated to strategic level in 2007 and a pact on boosting bilateral defence cooperation was signed in 2009. The strategic partnership was elevated to a comprehensive strategic partnership in September 2016.

## CPEC

**Context:** China has offered to open talks with India to resolve differences on the China-Pakistan Economic Corridor (CPEC), opening the door for removing a major irritant in New Delhi-Beijing ties.

### About CPEC:

- CPEC is clutch of projects valued at \$51 billion project which aims at rapidly expanding and upgrading Pakistan's infrastructure and strengthening the economic ties between the People's Republic of China (China) and Pakistan. It includes building roads, laying railway lines and pipelines to carry oil and gas.
- CPEC eventually aims at linking the city of Gwadar in South Western Pakistan to China's North Western region Xinjiang through a vast network of highways and railways.

### Why is India worried?

India has objected to CPEC which passes through Pakistan occupied Kashmir (PoK), as violation of its sovereignty.

### Is the initiative a threat or an opportunity for India?

The answer undoubtedly ticks both boxes. Chinese political expansion and economic ambitions are two sides of the same coin. To be firm while responding to one facet, while making use of the opportunities that become available from the other, will largely depend on the institutional agency and strategic imagination India is able to bring to the table.

### Way ahead:

India and China have made significant progress in their relationship but differences like the \$50 billion CPEC project and the trade imbalance need to be discussed. Any differences arising between the two countries can be resolved with sincerity and mutual respect.

## Thar Link Express

**Context:** Thar Link Express, the solitary rail link between India and Pakistan has received an extension for three more years from Islamabad.

### *About the Thar Link Express:*

The Thar Link Express connects Khokhrapar in Pakistan and Munabao in Rajasthan. The agreement to run the Thar Link Express was signed in 2006 and is one of the cheapest means of transport between the two rival countries. The rail link facilitates people-to-people contacts which Pakistan believes are essential for improving relations between both the countries.

## Vajra Prahar'

**what is it?** ‘Vajra Prahar’ is a Indo-US Special Forces joint training exercise conducted alternately in India and the US.

March 2017. This edition’s Indian Army team is from the Pune-headquartered Southern Command.

**Why in news?** The upcoming edition of the joint military exercise ‘Vajra Prahar’ will be held at Joint Base Lewis-McChord (JBLM) in Seattle. The exercise will mainly focus on special operations in urban areas.

**Aim and objectives of the exercise:** The aim of the exercise is to promote military relations between the two countries by enhancing interoperability and mutual exchange of tactics between Special Forces. The objectives of the joint training is to share the best

practices between the two armies and to develop joint strategies by sharing expertise of conducting operations in a counter-insurgency and counter-terrorism environment, while capitalising on the rich repository of experiences of each other armies.

**Key facts:** Though the exercise began in 2010, there was a gap of three years between 2012 and 2015. The last edition was held in Jodhpur in

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## Raisina Dialogue 2018

**Context:** The 2018 edition of Raisina Dialogue is being held in New Delhi. **Theme:** ‘Managing Disruptive Transitions: Ideas, Institutions & Idioms’. **About the Raisina Dialogue:**

- This is an annual **geo-political event**, organised by the Ministry of External Affairs and Observer Research Foundation (ORF). It is designed to explore prospects and opportunities for Asian integration as well as Asia’s integration with the larger world. It is predicated on India’s vital role in the Indian Ocean Region and how India along with its partners can build a stable regional and world order.
- **Participants:** The conference is a multistakeholder, cross-sectoral meeting involving policy and decision-makers, including but not limited to Foreign, Defence and Finance Ministers of different countries, high-level government officials and policy practitioners, leading personalities from business and industry, and members of the strategic community, media and academia.
- **Significance of the event:** The Raisina Dialogue was born two years ago, in 2016, in the belief that the Asian century that the world was talking about was not about any exclusive geographical region. It was rather about the engagement of global actors with Asia and of Asia with the world. So this dialogue took birth as a platform, where the old and the new could work together, to discover their connections, their inter-dependence. It has today become a crucible for conversations and ideas that while located in India can be owned by the world.



## 10th Global Forum for Food & Agriculture

The 10th Global Forum for Food and Agriculture (GFFA) on the subject “Shaping the Future of Livestock – sustainably, responsibly, efficiently” is being held in Berlin.

### *Significance of the forum:*

During the GFFA there will be a Cooperation Market where associations, companies, universities and the BMEL will showcase their activities in the agri-food sector. This – along with the Business Lounge – provides all the GFFA participants with an opportunity to withdraw from the bustle and conduct bilateral talks in a more relaxed atmosphere.

### *Facts for Prelims:*

- The conference is being held in Berlin.
- This is 10<sup>th</sup> such conference.
- It is held during International Green Week (IGW).
- Theme of this year’s event is “Shaping the future of livestock –

sustainably, responsibly, efficiently”.

### *What is GFFA?*

The Global Forum for Food and Agriculture (GFFA) is an international conference that focuses on central questions concerning the future of the global agri-food industry. It gives representatives from the worlds of politics, business, science and civil society an opportunity to share ideas and enhance understanding on a selected topic of current agricultural policy.

## Budapest Convention on cyber security

**Context:** Making a strong pitch to sign the Budapest Convention on cyber crime, the Ministry of Home Affairs recently flagged the need for international cooperation to check cyber crime, radicalisation and boost data security.

### Background:

India was reconsidering its position on becoming a member of the Budapest Convention because of the surge in cyber crime, especially after a push for digital India. The move, however, is being opposed by the Intelligence Bureau (IB) on the grounds that sharing data with foreign law enforcement agencies

infringes on national sovereignty and may jeopardise the rights of individuals.

- It was drawn up by the Council of Europe in Strasbourg, France, with the active participation of the Council of Europe's observer states Canada, Japan, South Africa and the United States. The Convention has 56 members, including the US and the UK.
- The Budapest Convention provides for the criminalisation of conduct, ranging from illegal access, data and systems interference to computer-related fraud and child

pornography, procedural law tools to make investigation of cybercrime and securing of e-evidence in relation to any crime more effective, and international police and judicial cooperation on cybercrime and e-evidence.

### What is Budapest convention?

- The Convention on Cybercrime, also known as the Budapest Convention on Cybercrime or the Budapest Convention, is the first international treaty seeking to address Internet and computer crime by harmonizing national laws, improving investigative techniques, and increasing cooperation among nations.

### About the scope of Budapest Convention

#### Criminalising conduct

- Illegal access
- Illegal interception
- Data interference
- System interference
- Misuse of devices
- Fraud and forgery
- Child pornography
- IPR-offences

#### Procedural tools

- Expedited preservation
- Search and seizure
- Interception of computer data

#### International cooperation

- Extradition
- MLA
- Spontaneous information
- Expedited preservation
- MLA for accessing computer data
- MLA for interception
- 24/7 points of contact

Harmonisation

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## International Solar Alliance

**Context:** In one of its first outreach programmes post-ratification, the

International Solar Alliance (ISA) is hosting an event ‘International Solar Alliance Forum’ at the Future World Energy Summit (WFES) 2018.

among its member countries. The ISA’s major objectives include global deployment of over 1,000GW of solar generation capacity and mobilisation of investment of over US\$ 1000 billion into solar energy by 2030.

- As an action-oriented organisation, the ISA brings together countries with rich solar potential to aggregate global demand, thereby reducing prices through bulk purchase, facilitating the deployment of existing solar technologies at scale, and promoting collaborative solar R&D and capacity building.
- When the ISA Framework Agreement entered into force on December 6th, 2017, ISA formally became a de-jure treaty based International Intergovernmental Organization, headquartered at Gurugram, India. As of now the ISA Framework Agreement has been signed by 48 countries, with 19 of them also depositing the instruments of ratification with the Ministry of External Affairs, Government of India.

**PLACE IN THE SUN** International Solar Alliance takes shape

<p><b>WHAT IS ISA?</b> 120-nations bloc between Tropics of Cancer &amp; Capricorn Most countries in Africa or South America</p>	<p><b>HEADQUARTERS</b> 200-acre NISE campus in Gurgaon</p>	<p><b>WHAT ISA WILL DO</b></p> <ul style="list-style-type: none"> <li>• Promote solar technologies</li> <li>• Ensure solar light for households by 2022</li> <li>• Mechanisms to reduce cost of capital</li> <li>• e-portal to share experiences &amp; practices</li> </ul>
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### About ISA:

The Paris Declaration establishes ISA as an alliance dedicated to the promotion of solar energy

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## Regional Comprehensive Economic Partnership (RCEP)

**Context:** Mounting pressure on New Delhi to give an early consent to the Regional Comprehensive Economic Partnership — a mega regional trade pact being negotiated by sixteen nations — the 10-member ASEAN expressed hope that India would not let the bloc down in its efforts to conclude the agreement this year.

- India has, however, refused to take responsibility for the long-winding negotiations and has stressed that it is important to address the sensitivities and aspirations of all participants.

### Conflicting issues:

- India is not comfortable with the ambitious dismantling of import tariffs being pushed for by the ASEAN, especially as it would also mean allowing duty-free access to Chinese goods. The Indian industry does not want the country to commit to high levels of liberalisation as it fears that it could get out-priced in the domestic market.
- India has also stressed on the need for other

RCEP members to deliver in

the area of services to arrive at an agreement. So far proposals in the area of services, including on work-visas for movement of professionals, have been disappointing with no member ready to make meaningful contributions.

### What you need to know about RCEP?

- RCEP is proposed between the ten member states of the Association of Southeast Asian Nations (ASEAN) (Brunei, Burma (Myanmar), Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand, Vietnam) and the six states with which ASEAN has existing FTAs (Australia, China, India, Japan, South Korea and New Zealand).

RCEP negotiations were formally launched in November 2012 at the ASEAN Summit in **Cambodia**. RCEP aims to boost goods trade by eliminating most tariff and non-tariff barriers — a move that is expected to provide the region's consumers greater choice of quality products at affordable rates. It also seeks to liberalise investment norms and do away with services trade restrictions.

### Regional Comprehensive Economic Partnership (RCEP) participants





## Delhi Declaration

**Context:** Delhi declaration was adopted at the recently concluded ASEAN-India Commemorative Summit. ASEAN-India Commemorative Summit was held to celebrate the 25th anniversary of the establishment of sectoral dialogue between two sides.

Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

- The motto of ASEAN is “**One Vision, One Identity, One Community**”.

### Highlights of the Delhi declaration:

- The Declaration supports a common approach to counter terrorism and sought a “comprehensive approach to combat terrorism through close cooperation by disrupting and countering terrorists, terrorist groups and networks, including by countering cross border movement of terrorists and foreign terrorist fighters and misuse of Internet including social media by terror entities.”
- The declaration urges countries to strengthen cooperation and collaboration in combating other transnational crimes, including people smuggling, trafficking in persons, illicit drug trafficking, cybercrime, and piracy and armed robbery against ships.
- The Delhi Declaration also reaffirmed “the importance of maintaining and promoting peace, stability, maritime safety and security, freedom of navigation and overflight in the region, and other lawful uses of the seas and unimpeded lawful maritime commerce and to promote peaceful resolutions of disputes, in accordance with UNCLO”.

### Background:

- The Association of Southeast Asian Nations, or ASEAN, was established on 8 August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration (Bangkok Declaration) by the Founding Fathers of ASEAN, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. At present there are 10 members namely, Brunei Darussalam, Cambodia,



## AAI, Lao PDR sign civil aviation cooperation agreement

Celebrating 25 years of the India-ASEAN relationship, the Airports Authority of India (AAI) has signed a historic agreement with Lao Air Traffic Management, Department of Civil Aviation, Lao PDR, for providing SkyRev360, a comprehensive e-data gathering, invoicing and collection system.

### About SkyRev360:

- **What is it?** SkyRev360 is a fully automated and comprehensive data gathering, invoicing and collection service which eliminates inaccuracies, errors and delays for better revenue management. SkyRev360 has been developed in collaboration with the International Air Transport Association (IATA) under the Government of India's Make in India initiative.
- **What it does?** SkyRev360 automates data processing, helping ANSPs overcome strenuous manual processes which are prone to mistakes. A collaboration between two experts of the aviation industry: IATA and the Airports Authority of India (AAI). The solution gathers 100% of your flight data and produces comprehensive billing data. Therefore, with SkyRev360, ANSPs' financial operations become both more accurate and efficient in one stroke.

efficiencies and automation to ANSPs and airlines by settling through IATA Settlement Systems.

- **Airline queries:** The IATA team handles all queries and disputes related to billing and collection from your air operators.
- **Dashboard and reports:** Incident reports, airspace usage, traffic volumes, economic values and more are always at your fingertips.

### Features:

- **Data gathering and processing module:** SkyRev360 can ensure the essential data for your invoices is always the latest and most complete.
- **Invoicing module:** The system maintains all account attributes and allows for an extensive view of associated data, including aircraft specifications, flight movements, billing ledger records, etc.
- **Collection:** All collections are managed with the IATA Enhancement & Financing Services (E&F) process, which offers

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## H-1B visa

**Context:** The US government is considering a proposal that could potentially lead to large-scale deportation of foreigners on H-1B visas for high-speciality workers waiting for their Green Card — mostly Indians — and drastically alter the way high-tech companies operate in the United States.

### Background:

The United States grants 85,000 non-immigrant H-1B visa every year —

65,000 to foreigners hired abroad and 20,000 to foreigners enrolled in

advanced degree courses in US schools and colleges. An estimated 70% of these visas go to Indians — hired mostly by American companies such as Facebook, Microsoft and Google and some by American arms of Indian tech giants Infosys, Wipro and TCS.

### What's the proposal?

The proposal intends to end the provision of granting extensions to H-1B visa holders whose applications for permanent residency (Green Card) had been accepted. The administration also plans to redefine high-speciality professionals for the purpose of H-1B visas.

### How will this impact Indians working abroad?

- An estimated 500,000 to 750,000 Indian H-1B visa holders could be sent home if the administration decides to go ahead with the proposal which is aligned with President Donald Trump's "Buy American, Hire American" vision to boost manufacturing and protect local jobs for Americans.
- The US companies, which are large employers of foreign workers but escape the scrutiny facing Indian firms, will be hit the hardest as they are more likely to apply for Green Cards for their H-1B workers than their Indian counterparts, who tend to rotate their workers home at the end of the stipulated period.

- The H-1B visa is a non-immigrant visa that allows US companies to employ foreign workers in speciality occupations that require theoretical or technical expertise. The technology companies depend on it to hire tens of thousands of employees each year.
- An H-1B visa is granted for three years, with the provision of three more with one extension after which visa holders return to their countries. If approved for Green Card, they wait in the US using extensions.

### Criticisms:

The aim of the H1B visa programme was to supplement the US workforce with high-skilled workers to do jobs that Americans are not skilled to do, not to replace the US workers. But over time, there have been many grumblings that many companies use the H1B visa to replace American workers with foreign ones, as the latter can be hired at lower salaries without compromising on the skill sets. In some cases, American employees have alleged that they were made to train H1B holders to do their own jobs, and then fired.

### What is H-1B Visa?

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## US puts Pakistan on Special Watch List

The US has placed Pakistan on a ‘Special Watch List’ for “severe violations” of religious freedom, making it the only country to be put under the newly-formed list.

### *What is Special Watch List?*

The Special Watch List is for countries that engage in or tolerate severe violations of religious freedom but may not rise to the level of the ‘Countries of Particular Concern’ (CPC). The Special Watch List designation is being seen as a step below designating it as Country of Particular Concern, which would have automatically kicked in economic and political sanctions.

### *Background:*

Special watch list is a new category created by the Frank R Wolf International Religious Freedom Act of 2016. The 2016 Frank R Wolf International Religious Freedom Act amended the IRF Act to require the President to designate a ‘Special Watch List’ of countries deemed not to meet all of the CPC criteria but who engaged in or tolerated severe violations of religious freedom. IRF stands for International Religious Freedom.

### *Why was Pakistan placed in this list?*

As per the US, Pakistan was placed in this list because the country continues to harass its religious minorities, has state-sanctioned discrimination against groups such as the Ahmadis, and tolerates extra-judicial violence in the guise of opposing blasphemy.

## “Countries of Particular Concern” (CPC)

The US State Department has unveiled its list of countries designated as the worst offenders against religious liberty. These countries are labeled as “Countries of Particular Concern” (CPC).

**The list includes** Burma, China, Eritrea, Iran, North Korea, Sudan, Saudi Arabia, Tajikistan, Turkmenistan, and Uzbekistan.

### About CPC:

**What is it?** A country is labeled as a CPC after it engages in “systemic, ongoing, [and] egregious” violations of religious liberty. This declaration is in accordance with the International Religious Freedom Act of 1998.

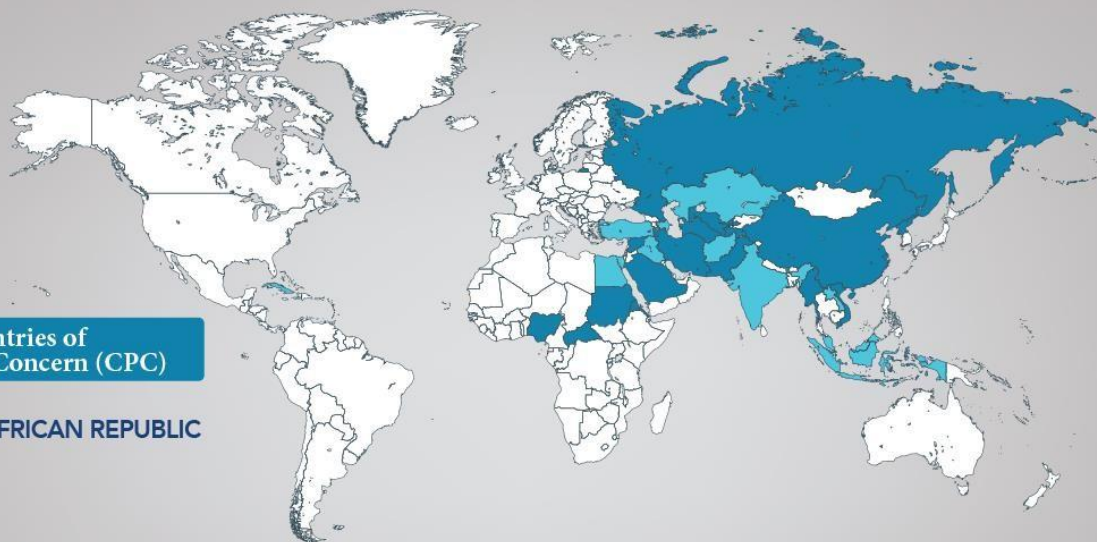
**Implications:** The governments that have been designated as CPCs are subject to ‘Presidential Actions’, such as sanctions, which may include

economic or political measures directed against a government to encourage it to improve the state of religious freedom in its country.

**Significance of this move:** The designation of these countries is a key step in ensuring continued U.S. engagement in support of international religious freedom. Also, these designations are aimed at improving the respect for religious freedom in these countries.



## U.S. Commission on International Religious Freedom



### Tier 1 Countries of Particular Concern (CPC)

BURMA  
CENTRAL AFRICAN REPUBLIC  
CHINA  
ERITREA  
IRAN  
NIGERIA  
NORTH KOREA  
PAKISTAN  
RUSSIA  
SAUDI ARABIA  
SUDAN  
SYRIA  
TAJIKISTAN  
TURKMENISTAN  
UZBEKISTAN  
VIETNAM

### Tier 2 Countries

AFGHANISTAN  
AZERBAIJAN  
BAHRAIN  
CUBA  
EGYPT  
INDIA  
INDONESIA  
IRAQ  
KAZAKHSTAN  
LAOS  
MALAYSIA  
TURKEY

### Entities of Particular Concern (EPC)

ISLAMIC STATE OF IRAQ AND SYRIA (ISIS)  
(IRAQ AND SYRIA)  
THE TALIBAN (AFGHANISTAN)  
AL-SHABAAB (SOMALIA)

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## ASEAN India Pravasi Bharatiya

**Context:** The annual ASEAN India Pravasi Bharatiya Divas is being celebrated at Singapore.

The conference, which will be attended by top leaders and businessmen from Singapore and India, will discuss the contribution of the Indian diaspora community in Southeast Asia.

**Aim of the event:** To highlight the

“ancient human, maritime, cultural, commercial and religious links between India and Southeast Asia” and to promote greater economic, cultural and diplomatic cooperation between the two regions.

**Theme:** “Ancient Route, New Journey: Diaspora in the Dynamic ASEAN-India Partnership.”

**Significance of the event:**

The event coincides with the 25th anniversary of India-ASEAN dialogue partnership, which will be marked by a summit on Jan. 25 in New Delhi. ASEAN leaders have been invited by India to be chief guests at the Republic Day parade in New Delhi on Jan. 26.

**About Pravasi Bharatiya Divas:**

- Pravasi Bharatiya Divas (PBD) is celebrated every year on January 9 to mark the contribution of overseas Indian community in the development of India. January 9 was chosen as the day to celebrate this occasion since it was on this day in 1915 that Mahatma Gandhi, the greatest Pravasi, returned to India from South Africa, led India's freedom struggle and changed the lives of Indians forever.

These conventions provide a platform to the overseas Indian community to engage with the government and Indian communities in India for mutually beneficial activities. These conventions are also very useful in networking among the overseas Indian community residing in various parts of the world and enable them to share their experiences in various fields.



## India rejects US solar claim at WTO, explores new defence

India has hit back at Washington's latest legal assault on its solar power policies at the World Trade Organization, rejecting a US legal claim and exploring possible new protection of India's own solar industry.

### *What's the issue?*

Last month, the United States had triggered a new round of litigation at the WTO, arguing that India had failed to abide by a ruling that it had illegally discriminated against foreign suppliers of solar cells and modules. However, India said it had changed its rules to conform with the ruling and that a US claim for punitive trade sanctions was groundless.

### *Background:*

- It may noted here that, in 2014, the US dragged India to WTO on the country's solar mission. The US alleged that India's programme appears to discriminate against the US solar

equipment by requiring solar energy producers to use locally manufactured cells and by offering subsidies to those developers who use domestic equipment. It also alleged that forced localisation requirements restricted US exports to Indian markets.

- India had lost this case as the WTO ruled that India's domestic content requirements under its solar power programme were inconsistent with the international norms.

### *National Solar Mission:*

National Solar Mission, launched in 2010, aims to establish India as a global leader in solar energy by creating the policy conditions for its diffusion across the country as quickly as possible. The Mission has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022 and aims at reducing the cost of solar power generation in the country.

## Inclusive Development Index

**Context:** Inclusive Development Index has been released by the **World Economic Forum**. This Inclusive Development Index has been developed as a new metric of national economic performance as an alternative to GDP. The index takes into account the living standards, environmental sustainability and protection of future generations from further indebtedness.

### Background:

The 2018 index, which measures progress of 103 economies on three individual pillars — growth and development; inclusion; and inter-generational equity — has been divided into two parts. The first part covers 29

advanced economies and the second 74 emerging economies. The index has also classified the countries into five sub-categories in terms of the five-year trend of their overall Inclusive Development Growth score — receding, slowly receding, stable, slowly advancing and advancing.

### Performance of countries:

- India is placed at the 62nd place among emerging economies much below China's 26th position and Pakistan's 47th. India was ranked 60th among 79 developing economies last year, as against China's 15th and Pakistan's 52nd position.
- Despite its low overall score, India is among the ten emerging economies with 'advancing' trend. Only two advanced economies have shown 'advancing' trend. Of the three pillars that make up the index, India ranks 72nd for inclusion, 66th for growth and development and 44th for inter-generational equity.
- Performance is mixed among BRICS economies, with the Russian Federation ranking 19th, followed by China (26), Brazil (37), India (62) and South Africa (69). The neighbouring countries ranked above India include Sri Lanka (40), Bangladesh (34) and Nepal (22).

- Norway remains the world's most inclusive advanced economy. Among advanced economies, Norway is followed by Ireland, Luxembourg, Switzerland and Denmark in the top five.
- Lithuania again tops the list of emerging economies. It is followed by Hungary, Azerbaijan, Latvia and Poland.

### Concerns:

- The study found that decades of prioritising economic growth over social equity has led to historically high levels of wealth and income inequality and caused governments to miss out on a virtuous circle in which growth is strengthened by being shared more widely and generated without unduly straining the environment or burdening future generations.
- Excessive reliance by economists and policy-makers on Gross Domestic Product as the primary metric of national economic performance is part of the problem. The GDP measures current production of goods and services rather than the extent to which it contributes to broad socio-economic progress as manifested in median household income, employment opportunity, economic security and quality of life.

### Way ahead:

The report has cautioned political and business leaders against expecting higher growth to be a panacea for the social frustrations, including those of younger generations who have shaken the politics of many countries in recent years. It has also urged the leaders to urgently move to a new model of inclusive growth and development, saying reliance on GDP as a measure of economic achievement is fuelling short-termism and inequality.

## China releases Arctic Policy

China has released its Arctic Policy. The document draws a picture of how China views the economic possibilities the region offers. With this, China has vowed to actively participate in Arctic affairs as a “near-Arctic State” and a major stakeholder in the Arctic.

*As per the policy, specifically, China will mainly focus its attention on four aspects:*

- First, China will participate in the development of Arctic shipping routes which are composed of the Northeast

Passage, Northwest Passage, and the Central Passage. Noting that “the Arctic shipping routes are likely to become important transport routes for international trade” as a result of global warming, China plans to build a “Polar Silk Road” by developing the Arctic shipping routes. To that end, China will encourage its enterprises to participate in the infrastructure construction for these routes and conduct commercial trial voyages.

- Second, China aims to participate “in the exploration for and exploitation of oil, gas, mineral and other non-living resources” in the Arctic. However, the white paper also places a particular emphasis on nontraditional energy sources.
- Third, China will start to utilize fisheries and other living resources and participate in conservation, since “the Arctic has the potential to become a new fishing ground in the future.” In recent years, Chinese fishermen have been sailing farther and farther abroad in search of fertile fishing grounds; including, unfortunately, illegal fishing.
- Fourth, China will develop Arctic tourism, which the paper described as “an emerging industry.” China will support and encourage “its enterprises to cooperate with Arctic States in developing tourism in the region” and conduct “training for and regulates Chinese tourism agencies and

professionals involved in Arctic tourism.”

### Concerns:

Although Beijing maintained that China’s Arctic policy is based on the principle of “respect, cooperation, win-win results and sustainability,” some analysts have raised concerns over China’s increasing prominence in the region.

### Background:

China is an important stakeholder in Arctic affairs. Geographically, China is a ‘Near-Arctic State’, one of the continental States that are closest to the Arctic Circle. The natural conditions of the Arctic and their changes have a direct impact on China’s climate system and ecological environment, and, in turn, on its economic interests in agriculture, forestry, fishery, marine industry and other sectors.

### Facts for Prelims:

The land territories in the Arctic cover an area of about 8 million square kilometres, whose sovereignty belongs to Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the US. The Arctic Ocean has an area of over 12 million square kilometres, in which coastal and other countries share maritime rights and interests according to international law.

## Official languages of the UN

**Context:** India is pushing forward its proposal to include Hindi as one of the official languages of the United Nations. The ministry of external affairs [MEA] is currently reviewing a draft advocacy paper to present the Indian case with regard to introducing Hindi in the UN.

### *Procedure for language to be recognised as an official one of UN:*

The procedure for getting any language recognized as one of the Official Languages of the UN involves obtaining approval of the General Assembly. Such a proposal has to be approved by more than half of the members of the General Assembly where every member-State has a vote. In addition, recognizing any language as the official language of the UN entails a substantial increase in the expenditure of the UN necessitating an enhanced contribution by every member country, which is why most of the members remain reluctant to support such a proposal.

### *Need for recognition:*

According to the estimates around 340 million to 500 million speak, and as many as 800 million people understand Hindi language. Outside India there are countries like Nepal South Africa, Mauritius, the United Kingdom, the United States, Yemen, and Uganda where a significant number people speak Hindi. Also, the government believes that at a time when Indian economy is shining and the country is emerging as next global power it is the best time for the country to promote its national language and get it recognised as an official language of United Nations.

### *Official languages of the UN:*

There are six official languages of the UN. These are Arabic, Chinese, English, French, Russian and Spanish. These languages are used at meetings of various UN organs, particularly the General Assembly, the Economic and Social Council, and the Security Council.

- Each representative of a country may speak in any one of these six languages, or may

speak in any language and provide interpretation into one of the six official languages. The UN provides simultaneous interpretation from the official language into the other five official languages, via the United Nations Interpretation Service.

- The six official languages are also used for the dissemination of

official documents. Until a document is available in all six official languages, it is not published. Generally, the texts in each of the six languages are equally authoritative.

- The six official languages spoken at the UN are the first or second language of 2.8 billion people on the planet, less than half of the world population. The six languages are official languages in more than half the nations in the world.

### **Multilingualism and the UN:**

Multilingualism enables communication between the UN's linguistically and culturally diverse Member States within the meeting rooms and halls of the UN. By promoting tolerance, multilingualism also ensures increased participation of all Member States in the Organization's work, as well as greater effectiveness, better outcomes and more involvement.

### **What's India doing in this regard?**

India has already started diplomatic efforts to promote Hindi at international level and to gain the support of other countries. The MEA has set up the World Hindi Secretariat in Mauritius along with the ministry of external affairs has prepared Hindi-Chinese, Hindi-Arabic, Hindi-French, and Hindi-Spanish dictionaries to promote Hindi. A consolidated Hindi-based dictionary of UN languages is also under compilation.



## World Energy and Environment Conference

**Context:** The World Energy and Environment Council is organising the 5<sup>th</sup> Series World Energy and Environment Conference and Exhibition 2018 at Bahrain. The Conference raises and sets the bar higher for global debate, dialogue, engagement and cooperation.

**Theme:** “Shifting to Clean, Renewable Energy in Time of Transition”.

### ABOUT WEEC:

- WEEC is a world platform that address serious issues about environment and the challenges to turn to clean, renewable energy. The focus is into the development of energy policy, sustainable strategies, sustainable resource developments and sustainable economic development.
- WEEC aim for commitment from governments, its leaders, for lawmakers to do intelligent thinking, get brilliant ideas in directing laws and regulations. With the private sectors cooperation and participation, creating a roadmap toward sustainability for the benefit of all.



## UN Environment Management Group

**Context:** The Secretariat of the UN Environment Management Group (EMG) is planning to hold a new series of ‘Nexus Dialogues,’ create two new Issue Management Groups and launch a campaign for waste management in the UN, among its activities in 2018.

- Upcoming dialogues will address sustainable consumption and production (SCP), biodiversity, and UN system support for SDG implementation at the national level. The dialogues seek to contribute to a common understanding of the integrated SDGs and targets on selected “nexus” themes.
- The EMG also will launch a waste management campaign dubbed ‘Say yes to less,’ to raise awareness of waste reduction and management among UN staff.

### **About the UN Environment Management Group (EMG):**

The EMG is a UN system-wide coordination body on environment and human settlements. It was established in 2001 pursuant to a UN General Assembly resolution, supporting a proposal of the UN Secretary-General.

- Its members include the secretariats of the multilateral environmental agreements (MEAs) and other specialized agencies, programmes and organs of the UN. Representatives of intergovernmental bodies, civil society and international non-governmental organizations can be invited to contribute.

The group is chaired by the Executive Director of the UN Environment Programme and supported by a secretariat provided by UNEP, located in Geneva, Switzerland. The EMG works through technical meetings, Issue Management Groups and task forces.

## Australia Group

**Context:** India was recently admitted as the 43rd member of the Australia Group, an informal bloc of countries that keeps a tight control over exports of substances used in the making of chemical weapons.

### Significance of this development:

- With its admission into the Australia Group, India is now part of three of the four key export control groups in the world. This includes the Missile Technology Control Regime—an informal and voluntary partnership among 35 countries that

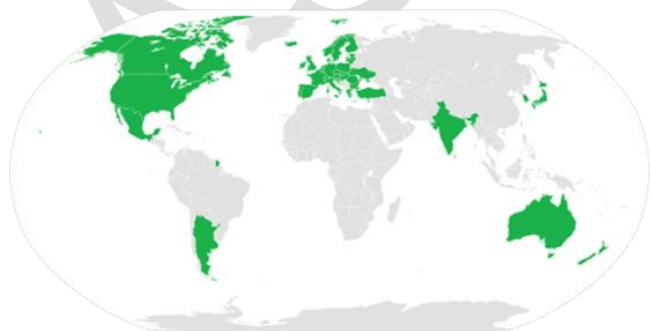
regulates trade in sensitive equipment and technologies to ensure there is no proliferation of missile and unmanned aerial vehicle technology capable of carrying payloads above 500kg for more than 300km. Last month, India joined the Wassenaar Arrangement, which is also an informal grouping of 42 countries, exercising control over the export of dual-use goods and technologies.

- The only export control group that India is not a part of is the elite Nuclear Suppliers Group (NSG), which controls the export of

sensitive nuclear technologies and equipment, with the aim of preventing nuclear weapons' proliferation.

### The Australia Group:

The Australia Group works to counter the spread of materials, equipment and technologies that could contribute to the development or acquisition of chemical and biological weapons (CBW) by states or terrorist groups. It was established in 1985.



## India is world's 3rd largest steel producer

As per the latest data released by World Steel Association, India is the world's third-largest steel producer.

### Key facts:

- India remained the world's third-largest steel producer for the third year in a row in 2017. India had grabbed the third slot in steel production in 2015 from the US after long been holding the fourth slot.
- In 2017, China and Japan have occupied top two positions respectively.

the world at large.

- Provide on a timely basis world-class economic data and analysis on the global steel industry and its value chain, as well as assessments on life cycle aspects of steel.
- Increase awareness, understanding and support for the steel industry amongst all external stakeholders and key target audiences worldwide.
- Promote market competition that is free of government interventions preventing fair trade.

### About the World Steel Association:

- What is it?** Worldsteel is a **non-profit** organisation with headquarters in **Brussels**, Belgium. A second office in Beijing, China, opened in April 2006.

- Background:** The World Steel Association (worldsteel) was founded as the International Iron and Steel Institute on 10 July 1967. It changed its name to the World Steel Association on 6 October 2008.
- Representation:** Worldsteel represents over 160 steel producers (including 9 of the world's 10 largest steel companies), national and regional steel industry associations, and steel research institutes. Worldsteel members represent around 85% of world steel production.

### Goals of Worldsteel:

- To act as the focal point for the steel industry providing global leadership on all major strategic issues impacting the industry, particularly focusing on economic, environmental and social sustainability.
- Deliver benchmarking analysis and drive global improvement initiatives in the areas of environmental protection, technology, safety and people development.
- Promote global market development opportunities for steel and promote steel to

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## Difficult Dialogues forum

**Context:** The third edition in the series of Difficult Dialogues Summit will be held in Goa in the month of February. This year, the forum will be held in partnership with UCL (University College London), Goa University (GU) and the ICG.

Difficult Dialogues 2018 will focus on how Indian gender constructs affect fundamental aspects of daily lives and citizenship.

### **About Difficult Dialogues:**

Difficult dialogues is an independent, non-partisan forum for conversations around critical issues concerning our lives in South Asia. To be held as an annual festival of topical ideas and motions, it is premised on the conviction that knowledge sharing is the cornerstone of progressive change in this fastest growing, volatile region of the world.

# GS - III

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## NABARD Bill

The National Bank for Agriculture and Rural Development (Amendment) Bill, 2017, was recently passed by voice vote in the Rajya Sabha. The bill was passed by the Lok Sabha in August, 2017.

### Highlights of the Bill:

- The Bill seeks to amend the National Bank for Agriculture and Rural Development Act, 1981.
- Increase in capital of NABARD: Under the 1981 Act, NABARD may have a capital of Rs 100 crore. This capital can be further increased to Rs 5,000 crore by the central government in consultation with the Reserve Bank of India (RBI). The Bill allows the central government to increase this capital to Rs 30,000 crore. The capital may be increased to more than Rs 30,000 crore by the central government in consultation with the RBI, if necessary.
- Transfer of the RBI's share to the central government: Under the 1981 Act, the central government and the RBI together must hold at least 51% of the share capital of NABARD. The Bill provides that the central government alone must hold at least 51% of the share capital of NABARD. The Bill transfers the share capital held by the RBI and valued at Rs 20 crore to the central government. The central government will give an equal amount to the RBI.
- Micro, small and medium enterprises (MSME): The Bill replaces the terms 'small-scale industry' and 'industry in the tiny and decentralised sector' with the terms 'micro enterprise', 'small enterprise' and 'medium enterprise' as defined in the MSME Development Act, 2006. Under the 1981 Act, NABARD was responsible for providing credit and other facilities to industries having an investment of upto Rs 20 lakh in machinery and plant. The Bill extends this to apply to enterprises with

investment upto Rs 10 crore in the manufacturing sector and Rs five crore in the services sector.

- Under the 1981 Act, experts from small-scale industries are included in the Board of Directors and the Advisory Council of NABARD. Further, banks providing loans to small-scale, tiny and decentralised sector industries are eligible to receive financial assistance from NABARD. The Bill extends these provisions to the micro, small, and medium enterprises.
- Consistency with the Companies Act, 2013: The Bill substitutes references to provisions of the Companies Act, 1956 under the NABARD Act, 1981, with references to the Companies Act, 2013. These include provisions that deal with: (i) definition of a government company, and (ii) qualifications of auditors.

### NABARD:

- It is an apex development and specialized bank established on 12 July 1982 by an act by the parliament of India. Its main focus is to uplift rural India by increasing the credit flow for elevation of agriculture & rural non farm sector.
- It was established based on the recommendations of the Committee set up by the Reserve Bank of India (RBI) under the chairmanship of Shri B. Shivaraman. It replaced the Agricultural Credit Department (ACD) and Rural Planning and Credit Cell (RPCC) of Reserve Bank of India, and Agricultural Refinance and Development Corporation (ARDC).
- It has been accredited with “matters concerning policy, planning and operations in the field of credit for agriculture and other economic activities in rural areas in India”.

## Financial Sector Assessment Program

**Context:** The two main Reports of the 2017 India Financial Sector Assessment Programme (FSAP) – the Financial System Stability Assessment (FSSA) and Financial Sector Assessment (FSA), were recently released by the International Monetary Fund (IMF) and the World Bank. Last FSAP for India was conducted in 2011-12.

The Report providing ‘Detailed Assessment of Observance—Basel Core Principles for Effective Banking Supervision’ has been released by the IMF and the World Bank and the Report providing ‘Detailed Assessment of Observance of Clearing Corporation of India Limited (CCIL) Central Counter Party (CCP) and Trade Repository (TR)’, was released by the World Bank.

### Highlights of the report:

□ The FSAP report acknowledges many efforts by Indian authorities like tackling Non-Performing Assets (NPAs), recent recapitalization measures for banks and introduction of special resolution regime, formalization of National Pension System (NPS) and making the pension sector regulator statutory, passing of Insolvency and Bankruptcy Code and setting up of Insolvency and Bankruptcy Board of India (IBBI), to name a few.

□ It appreciates initiatives such as ‘no frills’ account (under Jan Dhan Yojana), promoting digitization, introduction of unique biometric identification number (AADHAR), currency exchange initiative etc. It also recognizes the improved inter-agency co-operation since the establishment of Financial Stability and Development Council (FSDC), supported by its Sub-Committee and four technical groups and progress in setting up of Financial Data Management Centre (FDMC).

**The FSAP follows a three-pronged approach when looking at the country’s financial sector:**

- The soundness of a financial system versus its vulnerabilities and risks that increase the likelihood or potential severity of financial sector crises.
- A country’s developmental needs in terms of infrastructure, institutions and markets.
- A country’s compliance with the observance of selected financial sector standards and codes.

### Financial Sector Assessment Program (FSAP):

- The Financial Sector Assessment Program (FSAP), established in 1999, is a comprehensive and in-depth assessment of a country’s financial sector. It is a joint program of the International Monetary Fund and the World Bank.
- FSAPs analyze the resilience of the financial sector, the quality of the regulatory and supervisory framework, and the capacity to manage and resolve financial crises. Based on its findings, FSAPs produce recommendations of a micro- and macro-prudential nature, tailored to country-specific circumstances.

## Prompt Corrective Action (PCA)

**Context:** The Finance Ministry is planning to initiate a performance review of heads of public sector banks that are under the RBI's Prompt Corrective Action (PCA) as part of the reform process.

### Background:

So far, the Reserve Bank has put 12 public sector banks under watch in view of poor performance on parameters such as high levels of non-performing assets (NPAs), low capital level and low return on assets. These parameters indicate the financial health of banks and a need to initiate remedial measures to put them on the right course.

### What is PCA?

PCA norms allow the regulator to place certain restrictions such as halting branch expansion and stopping dividend payment. It can even cap a bank's lending limit to one entity or sector. Other corrective action that can be imposed on banks include special audit, restructuring operations and activation of recovery plan. Banks' promoters can be asked to bring in new management, too. The RBI can also supersede the bank's board, under PCA.

### When is PCA invoked?

The PCA is invoked when certain risk thresholds are breached. There are three risk thresholds which are based on certain levels of asset quality, profitability, capital and the like. The third such threshold, which is maximum tolerance limit, sets net NPA at over 12% and negative return on assets for four consecutive years.

### What are the types of sanctions?

There are two type of restrictions, mandatory and discretionary. Restrictions on dividend, branch expansion, directors compensation, are mandatory while discretionary restrictions could include curbs on lending and deposit. In the cases of two banks where PCA was invoked after the revised guidelines were issued — IDBI Bank and UCO

Bank — only mandatory restrictions were imposed. Both the banks breached risk threshold 2.

### What will a bank do if PCA is triggered?

Banks are not allowed to re new or access costly deposits or take steps to increase their fee-based income. Banks will also have to launch a special drive to reduce the stock of NPAs and contain generation of fresh NPAs. They will also not be allowed to enter into new lines of business. RBI will also impose restrictions on the bank on borrowings from interbank market.



## FDI policy further liberalized in key sectors

**Context:** The Union Cabinet has given its approval to a number of amendments in the FDI Policy. These are intended to liberalise and simplify the FDI policy so as to provide ease of doing business in the country. In turn, it will lead to larger FDI inflows contributing to growth of investment, income and employment.

### Changes include:

- 100% FDI under automatic route for Single Brand Retail Trading.
- 100% FDI under automatic route in Construction Development.
- Foreign airlines allowed to invest up to 49% under approval route in Air India.
- FIIs/FPIs allowed to invest in Power Exchanges through primary market.
- Definition of ‘medical devices’ amended in the FDI Policy.

### **Background:**

Foreign Direct Investment (FDI) is a major driver

of economic growth and a source of non-debt finance for the economic development of the country. Government has put in place an investor friendly policy on FDI, under which FDI up to 100%, is permitted on the automatic route in most sectors/ activities. In the recent past, the Government has brought FDI policy reforms in a number of sectors viz. Defence, Construction Development, Insurance, Pension, Other Financial Services, Asset reconstruction Companies, Broadcasting, Civil Aviation, Pharmaceuticals, Trading etc. Measures undertaken by the Government have resulted in increased FDI inflows in to the country.

Cabinet Decision  
January 10, 2018

### FDI Policy Further Liberalized in Key Sectors 2/2



- Cabinet approves a number of amendments in the FDI Policy. These are intended to liberalize and simplify the FDI policy so as to improve ease of doing business in the country. This will lead to larger FDI inflows, contributing to growth of investment, income and employment.

#### Key Decisions

- Issue of equity shares against non-cash considerations like pre-incorporation expenses, import of machinery etc. shall be permitted under automatic route in case of sectors under automatic route
- For investments in automatic route sectors, requiring approval only on the matter of investment being from country of concern, FDI applications would be processed by Department of Industrial Policy & Promotion for Government approval. Cases under the government approval route, also requiring security clearance with respect to countries of concern, will continue to be processed by concerned Administrative Department/Ministry

Government has put in place an investor friendly policy on FDI. Measures undertaken by the Government have resulted in increased FDI inflows into the country, including the all-time high inflow of US \$60.08 billion in 2016-17. The amendments are being introduced, given the country's potential to attract far more foreign investment.

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## Global Manufacturing Index (WEF)

The World Economic Forum (WEF) has released its Global Manufacturing Index. This is WEF's first 'Readiness for the future of production report'. The report has been developed in collaboration with A T Kearney and calls for new and innovative approaches to public-private collaboration are needed to accelerate transformation.

***The report has categorised 100 countries in four major groups for its ranking:***

- Leading (strong current base, high level of readiness for future).
- High Potential (limited current base, high potential for future).
- Legacy (strong current base, at risk for future).
- Nascent (limited current base, low level of readiness for future).

***Performance of various countries:***

- Japan has topped the list. Japan is followed by South Korea, Germany, Switzerland, China, Czech Republic, the US, Sweden, Austria and Ireland in the top 10.
- Among BRICS nations, Russia is ranked 35th, Brazil 41st and South Africa at 45th place.
- China figures among the WEF's "leading countries". "Legacy" group includes Hungary, Mexico, Philippines, Russia, Thailand and Turkey, among others, and Brazil as well as South Africa are among the "nascent" ones.

***Performance of India:***

- India is at the 30th position, five places below China, but higher than the other BRICS members Brazil, Russia and South Africa. India has been placed in the "Legacy" group.
- In terms of scale of production, India has

been ranked 9th, while for complexity it is at 48th place. For market size, India is ranked 3rd, while areas where the country is ranked poorly (90th or even lower) include female participation in labour force, trade tariffs, regulatory efficiency and sustainable resources.

- Overall, India is ranked better than its neighbours Sri Lanka (66th), Pakistan (74th) and Bangladesh (80th). Other countries ranked below India include Turkey, Canada, Indonesia, New Zealand, Australia, Hong Kong, Mauritius and the UAE.
- India's manufacturing sector has grown by over 7% per annum on average in the past three decades and accounts for 16-20% of India's GDP. Home to the second-largest population in the world and one of the fastest growing economies, the demand for Indian manufactured products is rising.

***Way ahead for India:***

India has room for improvement across the drivers of production, except for demand environment where it ranks in the top 5. Human capital and sustainable resources are the two key challenges for India and the country needs to continue to raise the capabilities of its relatively young and fast-growing labour force. This entails upgrading education curricula, revamping vocational training programmes and improving digital skills. India should also continue to diversify its energy sources and reduce emissions as its manufacturing sector continues to expand.



## Centre to declare 2018 as ‘national year of millets’

Nutrient-rich millets have got a boost with the Union government deciding to declare 2018 as the ‘national year of millets’. This decision has been taken following a request by Karnataka, which is the country’s leader in the millet sector.

### *Significance of this move:*

Dedicating a year for millets will not only increase awareness about its health benefits, but also result in higher demand for these drought-resistant varieties, resulting in remunerative prices for poor and marginal farmers.

### *What are Millets?*

Millet is a common term to categorize small-seeded grasses that are often termed nutri-cereals or dryland-cereals, and includes sorghum, pearl millet, ragi, small millet, foxtail millet, proso millet, barnyard millet, kodo millet and other millets.

### *Benefits of Millets:*

- An important staple cereal crop for millions of small holder dryland farmers across sub-saharan Africa and Asia, millets offer nutrition, resilience, income and livelihood for farmers even in difficult times. They have multiple untapped uses such as food, feed, fodder, biofuels and brewing. Therefore, millets are Smart Food as they are Good for You, Good for the Farmer and Good for the Planet.
- Nutritionally superior to wheat & rice owing to their higher levels of protein with more balanced amino acid profile, crude fiber & minerals such as Iron, Zinc, and Phosphorous, millets can provide nutritional security and act as a shield against nutritional deficiency, especially among children and women.
- The anaemia (iron deficiency), B-complex vitamin deficiency, pellagra (niacin deficiency) can be effectively tackled with intake of less expensive but nutritionally rich food grains like millets.

- Millets can also help tackle health challenges such as obesity, diabetes and lifestyle problems as they are gluten free, have a low glycemic index and are high in dietary fibre and antioxidants.
- Adapted to low or no purchased inputs and to harsh environment of the semi-arid tropics, they are the backbone for dry land agriculture.

Photo-insensitive & resilient to climate change, millets are hardy, resilient crops that have a low carbon and water footprint, can withstand high temperatures and grow on poor soils with little or no external inputs. In times of climate change they are often the last crop standing and, thus, are a good risk management strategy for resource- poor marginal farmers.

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## Zero Budget Natural Farming project

Himachal Pradesh has launched Zero Budget Natural Farming project to promote organic farming.

### *What is Zero Budget Natural Farming?*

Zero Budget Natural Farming, as the name implies, is a method of farming where the cost of growing and harvesting plants is zero. This means that farmers need not purchase fertilizers and pesticides in order to ensure the healthy growth of crops. It is, basically, a natural farming technique that uses biological pesticides instead of chemical-based fertilizers. Farmers use earthworms, cow dung, urine, plants, human excreta and such biological fertilizers for crop protection. It reduces farmers' investment. It also protects the soil from degradation.

### *Background:*

Both traditional farming, using chemical fertilisers and pesticides, and organic farming are becoming unviable for farmers. The organic farming was costlier than the traditional farming as the farm inputs were expensive.

## PMKSY

**Context:** The Union Water Resources Ministry has released central assistance of Rs 246.9 crore for nine prioritised projects under the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for Accelerated Irrigation Benefits Programme (AIBP) works.

### About PMKSY:

PMKSY has been conceived amalgamating ongoing schemes viz. Accelerated Irrigation Benefit

Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC).

- The scheme will be implemented by Ministries of Agriculture, Water Resources and Rural Development.
- The major objective of PMKSY is to achieve convergence of investments in irrigation at the field level, expand cultivable area under assured irrigation, improve on-farm water use efficiency to reduce wastage of water and enhance the adoption of precision-irrigation and other water saving technologies (More crop per drop).

### Accelerated Irrigation Benefits Programme:

The Accelerated Irrigation Benefit Programme (AIBP) was launched during **1996- 1997** to give loan assistance to the States to help them complete some of the incomplete major/medium irrigation projects which were at an advanced stage of completion and to create additional irrigation potential in the country. Grant component has been introduced in the programme from April 2004 like other Central Sector Schemes.

## Zojila Pass tunnel

**Context:** The Union Cabinet has approved the construction of Asia’s longest bi-directional Zojila Pass tunnel at an estimated cost of Rs 6,089 crore.

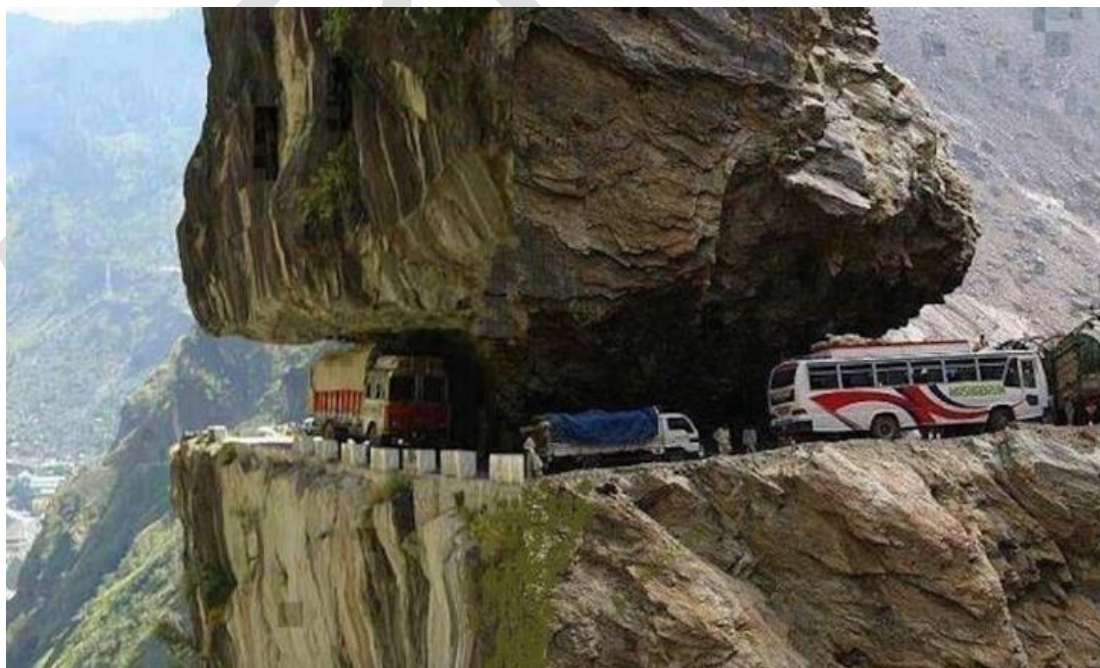
An MoU has been signed between National Highways and Infrastructure Development Corporation (NHIDCL) under the Ministry of Road Transport & Highways, and M/S IL&FS Transportation Networks Ltd for construction of the Zojila Tunnel in Jammu & Kashmir.

### About the Zojila pass tunnel:

- **What is it?** It is a 14.2-km long tunnel project in Jammu and Kashmir to provide all-weather connectivity between Srinagar, Kargil and Leh, which remains cut-off from the rest of India during winters due to heavy snowfall. “Zojila tunnel will be the longest bi-directional tunnel in Asia.
- **Implementation:** The project will be implemented by the ministry of road transport and highways (MoRT&H) through the National Highways and Infrastructure Development Corporation Limited (NHIDCL).
- **Benefits of the tunnel:** The project would

enhance the safety of travellers crossing Zojila Pass and reduce the travel time from 3.5 hours to 15 minutes. This pass is most strategic for the entire Kargil sector which has seen intrusion and war in the past. It will further increase the employment potential for the local labourers for the project activities.

- **Facts for Prelims:** Zojila pass is situated at an altitude of 11,578 feet on Srinagar-Kargil-Leh National Highway which remains closed during winters (December to April) due to heavy snowfall and avalanches cutting off Leh-Ladakh region from Kashmir.



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## National Waterway-1

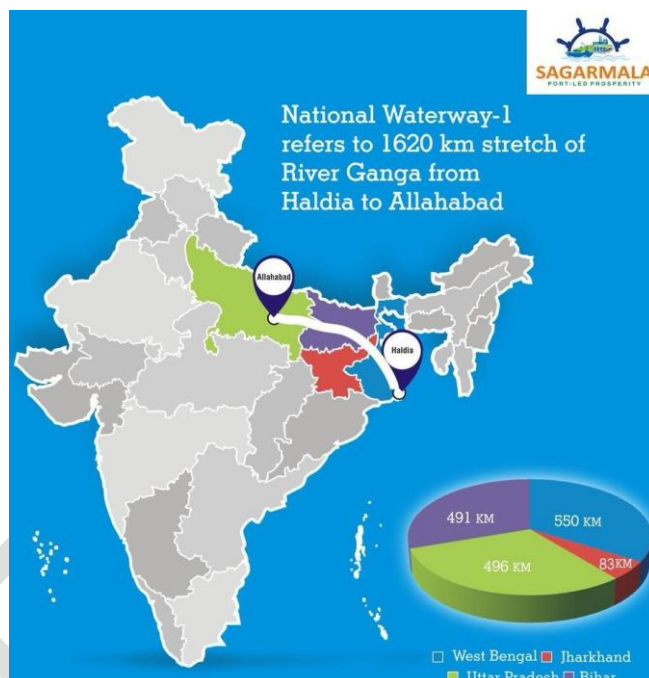
### Context:

The Cabinet Committee on Economic Affairs has given its approval for implementation of the Jal Marg Vikas Project (JMVP) for capacity augmentation of navigation on National Waterway-1 (NW-1) at a cost of Rs 5369.18 crore with the technical assistance and investment support of the World Bank. The Project is expected to be completed by March, 2023.

### About Jal Marg Vikas Project:

#### What is it?

The Jal Marg Vikas Project seeks to facilitate plying of vessels with capacity of 1,500-2,000 tonnes in the Haldia- Varanasi stretch of the River Ganga. The major works being taken up under JMVP are development of fairway, Multi- Modal Terminals, strengthening of river navigation system, conservancy works, modern River Information System (RIS), Digital Global Positioning System (DGPS), night navigation facilities, modern methods of channel marking etc.



**NW 1:** Ganga-Bhagirathi-Hooghly river system from **Allahabad** to **Haldia** was declared as National Waterway No.1.

**States covered under NW-1:** States: Uttar Pradesh, Bihar, Jharkhand, West Bengal.

### Benefits of this project:

Alternative mode of transport that will be environment friendly and cost effective. The project will contribute in bringing down the logistics cost in the country. Mammoth Infrastructure development like multi-modal and inter-modal terminals, Roll on – Roll off (Ro-Ro) facilities, ferry services, navigation aids. Socio-economic impetus; huge employment generation.



## Logistics Ease Across Different States (LEADS) Index

**Context:** The Logistics Ease Across Different States (LEADS) index, a perception-based index of mobility of goods and efficiency of logistics chain, has been released.

### **Performance of states:**

While Gujarat topped the first-of-its-kind index, Punjab and Andhra Pradesh took the second and third positions, respectively.

### **Challenges:**

The study found that supply chain efficiencies and economies of scale are yet to be unlocked, mostly due to suboptimal investment in building scale in infrastructure, automation, human capital and technology. It also highlighted problems such as inadequate terminal capacity, poor last-mile terminal connectivity and issues in regulatory services provided by government agencies, among others. It also underlined issues specific to certain states.

### **Push by the government:**

In a major push to developing an integrated logistics framework in the country, including industrial parks, cold chains and warehousing facilities, the government in November granted infrastructure status to the logistics sector, enabling the industry to access cheaper finances. The government also created the position of a special secretary in the commerce ministry to exclusively handle logistics.

### **What needs to be done?**

The report has identified focus areas where action can help improve. Regulation through cumbersome rules, rigid slabs for rail cargo, poor customs facilities and frequent stoppages have been flagged as challenges. Similarly, it has suggested that digitisation and last mile connectivity, specially road links to ports and airports, or inadequate capacity at ports in addition to lack of grievance mechanism, need to be addressed.

### **LEADS Index:**

- **What is it?** The **Logistics Ease Across Different States (LEADS) index** is a composite indicator to assess international trade logistics across states and Union territories. It is based on a stakeholders' survey conducted by Deloitte for the ministry of commerce and industry. LEADS is loosely based on the World Bank's biannual **Logistics Performance Index (LPI)**, on which India was ranked 35 among 160 countries in 2016, up from 54 in 2014.
- **Parameters:** LEADS is based on eight parameters such as infrastructure, services, timeliness, track and trace, competitiveness of pricing, safety of cargo, operating environment and regulatory process.

## MoU with Transport for London

**Context:** The Ministry of Road Transport and Highways has signed an MoU with Transport for London. The MoU is aimed at using the expertise of TFL to revamp the public transport architecture in the country.

a result of creation of a successful public transport system in London, the city has not seen any increase in number of their private cars.

### Significance of the MoU:

- The proposed MoU will help to revamp the public transport and augment passenger capacity by way of creating a sustainable public transport system. It will help in adopting best practices for policy reforms in the transport sector. It will also enable improved customer services, harness from scientific data analysis and implement effective IT systems in the transport sector.
- The MoU can see an increase the use of electric vehicles in public transport and promote digital transaction for ticketing. It can also help in improving major procurement strategies including PPP models for operations, infrastructure maintenance strategies, infrastructure design and delivery, besides promoting behavioral change towards promotion of public transport.

### The success story of TFL:

TFL is the agency that manages the transport system for Greater London, and has demonstrated its capability by creating a strong and dependable public transport system in the city.

- TFL has created a unique system of operating buses in PPP model with over 17 operators under a single brand. A salient feature has been their double decker buses which provide for high capacity with low road space requirement. They have also been operating large number of electric and hybrid buses.
- The common mobility card is another successful product launched by TFL which has made travel easy for the commuters and accounting easier for the operators. As

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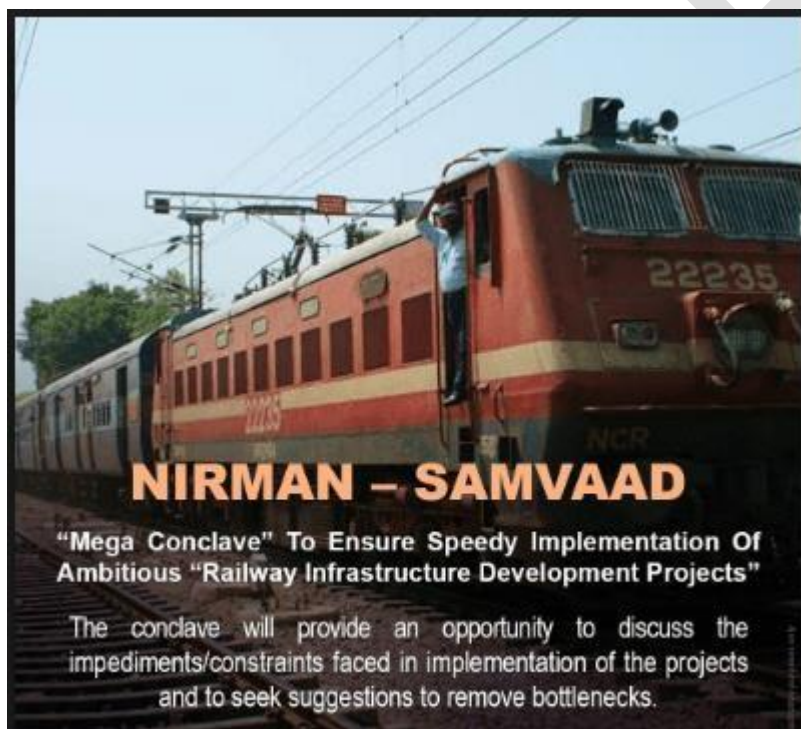
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## ‘Nirman Samvaad’

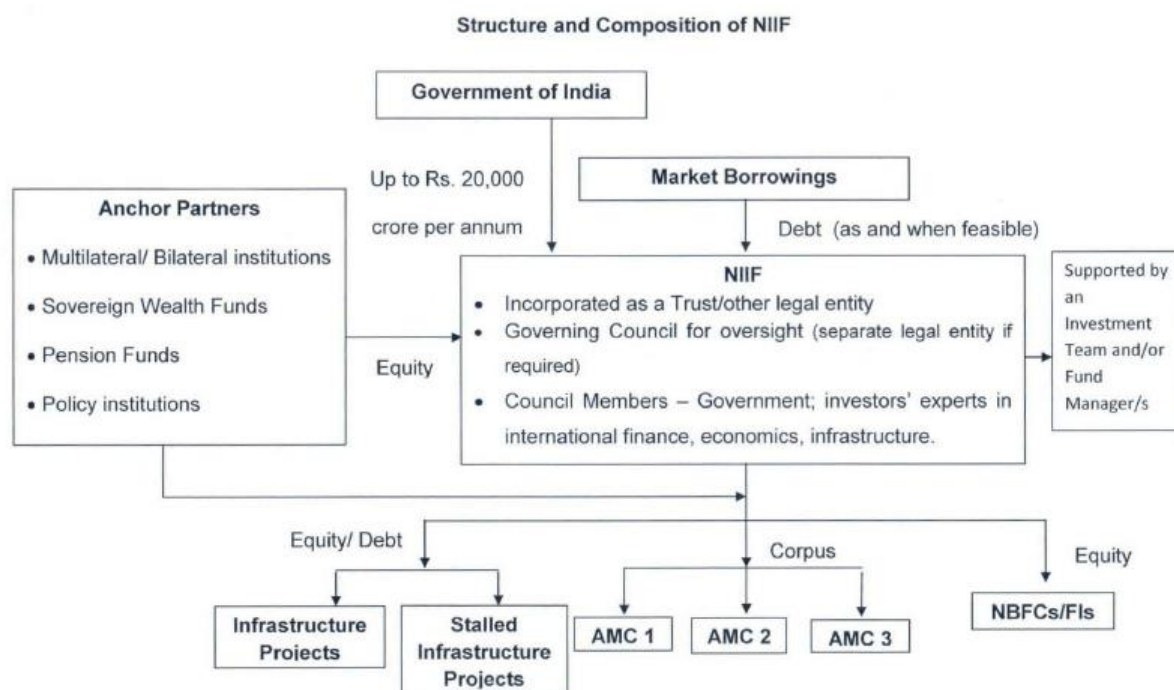
**What is it?** It is A one-day Mega Conclave, a first ever interaction between the Ministry of Railways and the Construction Industry. The conclave was held recently in New Delhi.

### Key facts:

- It was a major event aimed at taking measures to ensure expeditious implementation of ambitious Railway Infrastructure Development Plans. It aims to streamline procedures and remove bottlenecks to ensure the fast track implementation of projects on the railways.
- This Conclave was organized by Rail Vikas Nigam Ltd. (RVNL), a dedicated arm of Ministry of Railways for fast track implementation of railway projects.



## National Investment and Infrastructure Fund (NIIF)



sectors in India.

**Context:** The National Investment and Infrastructure Fund (NIIF), India's first sovereign wealth fund, and Dubai-based ports operator DP World Pvt. Ltd, have announced the creation of an investment platform to invest up to \$3 billion in ports, terminals, transportation and logistics businesses in India. This is the first investment platform from NIIF and will see investment up to \$3 billion of equity to acquire assets and develop projects in these sectors.

The platform will also look at opportunities beyond sea ports such as river ports and transportation, freight corridors, port-led special economic zones, inland container terminals and logistics infrastructure, including cold storage.

### About NIIF:

NIIF was set up in 2015 as an investment vehicle for funding commercially viable greenfield, brownfield and stalled projects in the infrastructure sector. NIIF will invest in areas such as energy, transportation, housing, water, waste management and other infrastructure-related

- The corpus of the fund is proposed to be around Rs40,000 crore, with the government investing 49% and the rest to be raised from third-party investors such as sovereign wealth funds, insurance and pension funds, endowments etc.
- NIIF's strategy includes anchoring equity, quasi-equity and debt funds in partnership with investors targeting investments across the relevant sectors in India.



## UDAN-2

The Civil aviation ministry has awarded 325 routes in the second round of UDAN bidding. In the second round, RCS routes have also been given to helicopter operators.

### *Why is it important?*

Air connectivity has a multiplier effect on tourism, investments, economic growth, job creation. Getting the nooks and corners of India linked up, directly or indirectly, through the fastest mode of transportation can open up the country like never before. Cheap fares on regional routes can mean a horde of first-time fliers taking to the skies, making accessible to them new economic opportunities and quick connections in times of emergencies. India is already among the fastest growing aviation markets in the world. But infrastructure constraints at airports in big cities could slow down this growth. UDAN, if successful, can provide a fillip to India's aviation story. It could boost passenger numbers and provide feeder traffic to networks in big centres.

Sources: pib.

### *What is Udan?*

- UDAN ('Ude Desh ka Aam Naagrik') is a first-of- its-kind scheme globally to stimulate regional connectivity through a market-based mechanism. The scheme aims to connect the country's under-served and unserved airports.
- The objective of the Scheme is to make flying affordable for the masses, to promote tourism, increase employment and promote balanced regional growth. It also intends to put life into un-served and under-served airports.
- It offers viability gap funding to operators to fly smaller aircraft to such airports with a commitment to price tickets for at least half of the seats at ₹2,500 for an hour-long flight.

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## Solar capacity reaches 20 GW on Govt. push

**Context:** India has achieved 20 GW (giga watt) cumulative solar capacity, achieving the milestone four years ahead of the target for 2022 originally set in the National Solar Mission. The utility-scale cumulative installations now stand at approximately 18.4 GW, with rooftop solar accounting for another 1.6 GW.

### Key facts:

- For the first time, solar was the top source of new power capacity additions in India during calendar year 2017. Solar installations reached 9.6 GW and accounted for 45% of total capacity additions.
- The top state for solar installations was Telangana, followed by Karnataka, Andhra Pradesh, and Rajasthan.

### Challenges ahead:

- The country has reached the milestone at a time when protectionist measures threaten to slow down activity in the industry. The pace of overall solar installations is expected to be less impressive in 2018 as several protectionist government policies appear poised to increase costs and uncertainty.
- Also, experts say Centre's revised solar installation target of 100 GW by 2022 has recently been clashing with Make in India Initiative to promote domestic manufacturing. The recently announced 70% preliminary safeguard duty recommendation,

the ongoing anti-dumping case, and a 7.85% port duty on imported modules are together creating an atmosphere of regulatory uncertainty that is taking a toll on the industry and slowing down installation activity.

### Way ahead:

The 20 GW of solar installations is a laudable achievement for India. However, it took eight long

years to reach 20 GWs and hopefully the pace will pick up soon.

### National Solar Mission:

- National Solar Mission, launched in 2010, aims to establish India as a global leader in solar energy by creating the policy conditions for its diffusion across the country as quickly as possible. The mission is one of the several initiatives that are part of the National Action Plan on Climate Change. Initial target was to achieve 20GW by 2022 which was later increased to 100 GW in the 2015 Union budget of India.
- The objective of the National Solar Mission is to establish India as a global leader in solar energy, by creating the policy conditions for its diffusion across the country as quickly as possible.

## Bio-toilet project

**Context:** The Comptroller and Auditor General’s (CAG) report on bio-toilets has found 1,99,689 defects in 25,000 toilets installed in Railways. Also, according to the data released by national auditor to Parliament, the Indian Railways needs to buy 3,350 truckloads of cow dung at Rs 42 crore in 2018 to “recharge”— add bacteria to activate degradation

—leaky, malfunctioning ‘bio-toilets’ that it has fitted on 44.8% of trains and hopes to expand to all trains by 2018.

### What are Bio- toilets?

- The bio-toilets are fitted underneath the lavatories and the human excreta discharged into them; these toilets incorporate microbes with an anaerobic digestion process to digest human waste. A colony of anaerobic bacteria acts upon the collected waste and converts the waste into water and biogases (mainly methane and carbon dioxide). While the gases escape into the atmosphere, the wastewater is discharged after disinfection onto the track, thus putting an end to the crisis of railway tracks strewn with excreta.
- Each bio-toilet requires 60 litres — or three large bucketfuls — of **inoculum**, a mix of cow dung and water. This inoculum begins the process of breaking down 3,980 tons of human excreta. Anaerobic bacteria are abundantly available in cow dung.

## India unveils Pratyush, its fastest Supercomputer yet

India has unveiled Pratyush, an array of computers that can deliver a peak power of **6.8 petaflops**. One petaflop is a million billion floating point operations per second and is a reflection of the computing capacity of a system. The machines will be installed at two government institutes: 4.0 petaflops HPC facility at IITM, Pune; and 2.8 petaflops facility at the National Centre for Medium Range Weather Forecast.

### *Facts for Prelims:*

- With this, India will now occupy the fourth position, next only to United Kingdom, Japan and USA in terms of dedicated capacity for HPC resources for weather and climate proposes. The UK leads with a capacity of 20.4 Petaflop, followed by Japan with 20 Petaflop and USA with 10.7 Petaflop.
- It will also move an Indian supercomputer from the 300s to the 30s in the Top500 list, a respected international tracker of the world's fastest supercomputers.
- India had till now occupied the eighth position with a capacity of 1 Petaflop. With the new system, it has now jumped over Korea (4.8 Petaflop), France (4.4 Petaflop) and China (2.6 Petaflop).

### *Applications of Pratyush:*

The Pratyush HPC will improve weather forecasts and extended range forecasts. It will also predict cyclones and tsunami accurately, with more lead time. It will also help those dependent on agriculture, hydrology and power sectors.

## India test-fires nuclear-capable ICBM Agni-V

Agni-5, India's nuclear capable missile, was recently successfully test fired.

### Key facts:

- Agni- 5 is the intercontinental surface-to-surface nuclear capable ballistic missile. It is the latest in India's “Agni” family of medium to intercontinental range missiles.
- Agni-5 has a range of over 5,000 km and can carry about a 1,000-kg warhead. It can target almost all of Asia including Pakistan and China and Europe.
- The 17-metre long Agni-5 Missile weighs about 50 tonnes and is a very agile and modern weapon system.
- The surface-to-surface missile is a fire-and-forget system that cannot be easily detected as it follows a ballistic trajectory. India describes the Agni – 5 missile system as a ‘weapon of peace’.

India has already joined an elite club of nations that possess the ICBM launch capability when the maiden test- firing of Agni-V was successfully conducted in April, 2012. Only the five permanent members of the United Nations Security Council – China, France, Russia, the United States and Britain, along with Israel, have so far possessed such long-range missiles.

## New programmes of DST and SERB for young scientists and researchers

The government has announced four schemes to promote young scientists and researchers in the country. The schemes primarily aim at early recognition and reward to young talent in the field of science. They focus on youth to empower, recognize and motivate them.

*The schemes announced are as follows:*

### 1. Teacher Associateship for Research Excellence (TARE) Scheme:

The scheme aims to tap the latent potential of faculty working in state universities, colleges and private academic institutions who are well trained but have difficulty in pursuing their research due to varied reasons including lack of facilities, funding and guidance. This scheme facilitates mobility of such faculty members to carry out research in well-established public funded institution such as IITs, IISc, IISERS and other National Institutions (NITs, CSIR, ICAR, ICMR labs, etc) and Central Universities located preferably nearer to the institution where the faculty member is working. Up to 500 TAs will be supported under this scheme.

### 2. Overseas Visiting Doctoral Fellowship:

This has been instituted for enhancing the international mobility of Indian research students which has the potential to create a talented pool of globally trained manpower. The scheme provides an opportunity for research students to gain exposure and access to top class research facilities in academia and labs across the world. This scheme offers opportunities for up to 100 PhD students admitted in the Indian institutions for gaining exposure and training in overseas universities / institutions of repute and areas of importance to country for period up to 12 months during their doctoral research. The selected fellows will be paid a monthly fellowship amount equivalent to US \$ 2000, one-time Contingency / Preparatory allowances of Rs. 60,000/- to cover visa fee, airport transfer charges, medical insurance etc.

### 3. Distinguished Investigator Award (DIA):

This has been initiated to recognize and reward Principal Investigators (PIs) of SERB/DST projects who have performed remarkably well. The scheme aims not only to reward the best PIs of completed projects but also to motivate the ongoing PIs to perform exceedingly well. This positive reinforcement strategy would effectively improve the productivity of the research undertaken and the overall efficiency of the research ecosystem. DIA is a one-time career award devised to specifically cater to the younger scientists who have not received any other prestigious awards or fellowships. The award carries a fellowship of Rs. 15,000/- p.m. and an optional research grant for three years, based on peer review of the project proposal submitted.

### 4. AWSAR (Augmenting Writing Skills for Articulating Research):

This has been initiated to encourage, empower and endow popular science writing through newspapers, magazines, blogs, social media, etc. by young PhD Scholars and Post-Doctoral Fellows during the course of their higher studies and research pursuits. As over 20,000 youth are awarded PhD in S&T every year in India, the scheme aims to tap this tremendous potential to popularize & communicate science and also to inculcate scientific temperament in the masses.



## Scorpene-class submarine Karanj

**Context:** The third Scorpene-class submarine – INS Karanj has been launched.

### About Karanj:

- Karanj is the third of the six Scorpene-class submarines being built by Mazagon Dock Shipbuilders Limited (MDL) under the Project 75 programme of Indian navy. It is designed to operate in all theatres, including the tropics. It is provided with all means and communications to ensure interoperability with other components of a naval task.
- It has superior stealth features such as advanced acoustic silencing techniques, low radiated noise levels and hydrodynamically optimized shape. These stealth features give it an invulnerability, unmatched by most submarine.

### Background:

- The Scorpene submarines are a primary modernization requirement of the Indian Navy, which is currently faced with an ageing submarine fleet. MDL has the contract for the construction and transfer of technology for six Scorpene submarines. The submarines are being built in collaboration with French shipbuilding major Naval Group (formerly DCNS).

The first one, INS Kalvari, a diesel-electric attack submarine was commissioned by Prime Minister Narendra Modi on December 14 last year. The second one, INS Khandari, was launched on January 12 this year is currently undergoing sea trials.

## Parker solar probe

**Context:** NASA’s Parker Solar Probe is scheduled for launch in 2018 to explore the Sun’s outer atmosphere.

**About the Parker solar probe:**

- **What is it?** NASA’s historic Parker Solar Probe mission will revolutionize our understanding of the sun, where changing conditions can propagate out into the solar system, affecting Earth and other worlds. Parker Solar Probe will travel through the sun’s atmosphere, closer to the surface than any spacecraft before it, facing brutal heat and radiation conditions — and ultimately providing humanity with the closest-ever observations of a star.
- **Journey:** In order to unlock the mysteries of the sun’s atmosphere, Parker Solar Probe will use Venus’ gravity during seven flybys over nearly seven years to gradually bring its orbit closer to the sun. The spacecraft will fly through the sun’s atmosphere as close as 3.9 million miles to our star’s surface, well within the orbit of Mercury and more than seven times closer than any spacecraft has come before.
- **Goals:** The primary science goals for the mission are to trace how energy and heat move through the solar corona and to explore what accelerates the solar wind as well as solar energetic particles.

**Why do we study the sun and the solar wind?**

- The sun is the only star we can study up close. By studying this star we live with, we learn more about stars throughout the universe.
- The sun is a source of light and heat for life on Earth. The more we know about it, the more we can understand how life on Earth developed.

- The sun also affects Earth in less familiar ways. It is the source of the solar wind; a flow of ionized gases from the sun that streams past Earth at speeds of more than 500 km per second (a million miles per hour).
- Disturbances in the solar wind shake Earth’s magnetic field and pump energy into the radiation belts, part of a set of changes in near-Earth space known as space weather.
- Space weather can change the orbits of satellites, shorten their lifetimes, or interfere with onboard electronics. The more we learn about what causes space weather – and how to predict it – the more we can protect the satellites we depend on.

The solar wind also fills up much of the solar system, dominating the space environment far past Earth. As we send spacecraft and astronauts further and further from home, we must understand this space environment just as early seafarers needed to understand the ocean.

## World's first ‘speed breeding’ technique to boost production of wheat

**Context:** Australian scientists have developed the world's first ‘speed breeding’ technique that can boost the production of the crop by up to three times.

**DS Faraday:** The scientists have used the technique to develop the new ‘DS Faraday’ wheat variety due for release to industry this year. DS Faraday is a high protein, milling wheat with tolerance to pre-harvest sprouting.

**Significance of the technique:** By using speed breeding techniques in specially modified glasshouses scientists could grow six generations of wheat, chickpea and barley plants, and four generations of canola plants in a single year – as opposed to two or three generations in a regular glasshouse, or a single generation in the field. The quality and yield of the plants grown under controlled climate and extended daylight conditions was as good, or sometimes better than those grown in regular glasshouses.

### About the speed breeding technique:

- **How it works?** This technique uses fully controlled growth environments and can also be scaled up to work in a standard glass house. It uses LED lights optimised to aid photosynthesis in intensive regimes of up to 22 hours per day.
- **Why LED?** LED lights significantly reduce the cost compared to sodium vapour lamps which have long been in widespread use but are ineffective because they generate much heat and emit poor quality light.
- **Significance:** The speed breeding technique has largely been used for research purposes but is now being adopted by industry. There has been a lot of interest globally in this technique due to the fact that the world has to produce 60-80% more food by 2050 to feed its nine billion people. The new technology could also have some great applications in future vertical farming systems, and some horticultural crops.

## Astronauts Identify Unknown Microbes In Space For First Time

Astronauts aboard the International Space Station (ISS) have for the first time identified microbes in space without having to samples back to Earth for tests.

### *Significance of this discovery:*

The ability to identify microbes in space could aid in the ability to diagnose and treat astronaut ailments in real time, as well as assisting in the identification of DNA- based life on other planets.

It could also benefit other experiments aboard the orbiting laboratory. Identifying microbes involves isolating the DNA of samples, and then amplifying – or making many copies – of that DNA that can then be sequenced, or identified.

### *About the International space station (ISS):*

- **What is it?** The International Space Station (ISS) is a space station, or a habitable artificial satellite, in low Earth orbit. The ISS is now the largest artificial body in orbit. The ISS consists of pressurised modules, external trusses, solar arrays and other components. ISS components have been launched by Russian Proton and Soyuz rockets as well as American Space Shuttles.
- **What is it for?** The ISS serves as a microgravity and space environment research laboratory in which crew members conduct experiments in biology, human biology, physics, astronomy, meteorology and other fields. The station is suited for the testing of spacecraft systems and equipment required for missions to the Moon and Mars.
- **Orbit:** The ISS maintains an orbit with an altitude of between 330 and 435 km by means of reboost manoeuvres using the engines of the Zvezda module or visiting spacecraft. It completes 15.54 orbits per day.
- **Joint project:** The ISS programme is a joint project among five participating space agencies: NASA, Roscosmos, JAXA, ESA, and CSA. The ownership and use of the space

station is established by intergovernmental treaties and agreements. The station is divided into two sections, the Russian Orbital Segment (ROS) and the United States Orbital Segment (USOS), which is shared by many nations.

ISS is the ninth space station to be inhabited by crews, following the Soviet and later Russian Salyut, Almaz, and Mir stations as well as Skylab from the US.

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## China to be world's first country to launch a lunar probe on far side of moon

China announced its plans to launch a lunar probe in 2018 to achieve the world's first soft landing on the far side of the moon to showcase its ambitious space programme. The mission is called Chang'e 4 project.

### About the mission:

- Chang'e 4 is the fourth mission in the country's lunar mission series which is being named after the Chinese moon goddess.
- A Long March 4C rocket will start its course to 60,000 kilometers behind the moon carrying a 425-kilogram relay satellite. This relay satellite will act as an initial communication link between earth and the lunar far side. Once China's space agency succeeds in establishing the link, China will trigger the second part of the mission i.e. sending a lander and rover to the unexplored region of the moon.

### Significance of the mission:

According to experts, landing on the far side of the moon is undoubtedly one of the most challenging missions ever launched by any of the world's superpowers. The far side of the moon known as 'South Pole-Aitken Basin' still remains a mystery among space scientists and by sending a probe there, China will outdo the historical achievements of the US and USSR.

### Difficulties:

Communication difficulties will be the main problem faced by the Chinese team as they try to land on the other side of the moon. China is expected to consider using options like radio telescopes developed by Heino Falcke of Radboud University to communicate in the absence of a transmitting medium.

### History of China's lunar exploration programmes:

China began their lunar exploration program in 2007 by launching a simple lunar orbiter named

'Chang'e 1'. The second mission in the program named 'Chang'e 2' was launched in 2010, and it was later followed by the third mission 'Chang'e 3'. 'Chang'e 3' made headlines all around the world as it marked the first soft moon landing since 1976.



## NASA launches 2 missions to explore nearest space

U.S. space agency National Aeronautics and Space Administration (NASA) is all set to launch two missions to explore a little-understood area 60 miles (96 KM) above Earth's surface. The missions are named GOLD and ICON.

The **Global-scale Observations of the Limb and Disk (GOLD)** mission will be launched aboard a commercial communications satellite in January 2018, and the designed spacecraft **Ionospheric Connection Explorer (ICON)** will be launched later this year.

### About the missions:

- **What are they?** GOLD and ICON will team up to explore the ionosphere, a boundary area between Earth and the space where particles have been cooked into a sea of electrically-charged electrons and ions by the Sun's radiation. These layers of near-Earth space are increasingly becoming a part of human domain as it is home to radio signals used to guide airplanes, ships and Global Positioning System satellites.
- **Goals:** Among others, the missions' goals is to measure how upper atmosphere changes in response to hurricanes and geomagnetic storms. GOLD will also explore how the

upper atmosphere reacts to geomagnetic storms, which are temporary disturbances of Earth's magnetic field set off by solar activity. The agency is hoping to find evidences for a theoretical model about El Nino's repercussions on the ionosphere.

- **Orbits:** The two missions are complementary. ICON in low-Earth orbit, at 350 miles (560 km) above Earth, flies through and just above the ionosphere, like a close-up camera. GOLD runs in geostationary orbit over the Western Hemisphere, 22,000 miles (about 35,398 km) above the planet's surface. It will build up a full-disk view of the ionosphere and the upper atmosphere beneath it every half hour.



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## Ethereum

**Context:** Ethereum has hit \$1,000 for the first time, while investors eye at alternative currencies such as ripple, ethereum and litecoin besides bitcoin. Earlier Ethereum was the second-most valued currency after bitcoin, but now ripple has outpaced it lately. The market capitalization of ripple is \$121 billion while ethereum’s market cap is little less than \$100 billion on Saturday. Bitcoin, the big daddy of cryptocurrency, still rules the world of digital currencies with a whopping market cap of \$280 billion.

### What is Ethereum?

It, like most cryptocurrencies, shares the same basic traits as bitcoin. It has underlying blockchain technology with a tethered token, which in this case is known as “Ether.” Ether is the token investors are purchasing.

### How is it different from other cryptocurrencies?

Unlike most blockchains, Ethereum’s has an added component that’s particularly attractive to enterprise clients: smart contracts. These protocols help to verify, facilitate, or enforce the negotiation of a contract in an efficient and secure manner.

### About Blockchain technology:

- Blockchain is the digital and decentralized ledger that records transactions without the need for a financial intermediary, which in most cases is a bank.
- The advantages of blockchain technology are aplenty. First, is the potential for smaller transaction fees as a result of having no third-party involved. Secondly, the decentralization of blockchain ensures that there’s no central hub cybercriminals could attack.

## What happens to the human body in space?

**Context:** Space is a dangerous and unforgiving place, and spending time away from gravity takes its toll on the human body, as many astronauts have found out after returning to Earth.

Recently, Japanese astronaut Norishige Kanai announced that he had stretched a staggering 9cm (3.5in) in just three weeks onboard the International Space Station (ISS). However, he later admitted he had miscalculated the figure and it was actually just 2cm (0.9in), but significant height changes are actually normal for astronauts spending time in space.

### Why do they stretch?

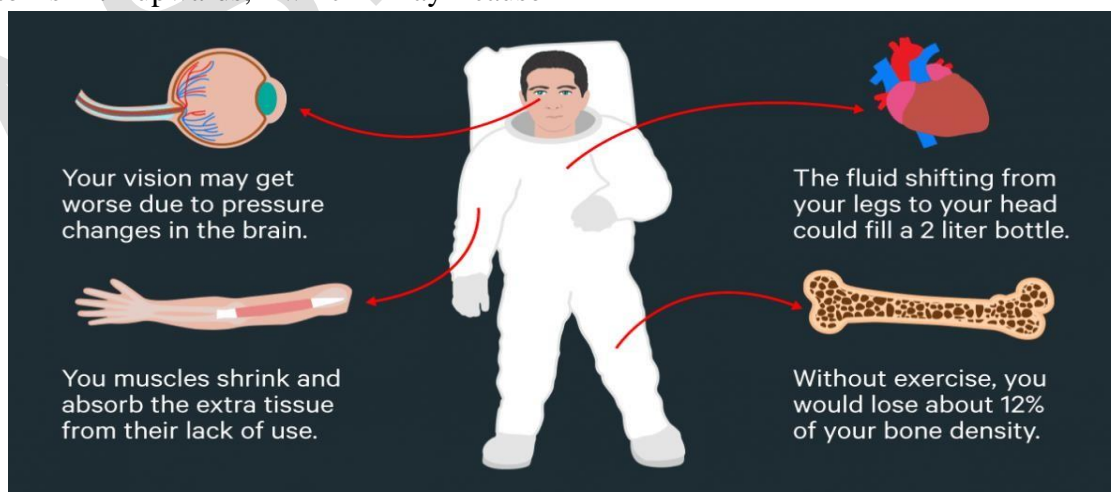
The effect happens as the astronauts' spines stretch out, because of the reduced gravity on board the floating lab. Because the vertebrae aren't being pushed together as much as they are on Earth, they are able to float apart and lead to the strange stretching phenomenon. They shrink back down to their usual size once back on Earth and affected by its gravity.

### Health issues for astronauts to overcome:

- The rapid change of gravity in space can cause a loss of bone density of up to 1% a month. This could lead to osteoporosis-related fractures and long-term health problems.
- Lack of gravity can also cause body fluids to shift upwards, which may cause

swelling, high-blood pressure and vision and organ problems. Nutrition and exercise become very important, and special measures like medications and body cuffs aim to reduce the risk of long-term medical problems associated with muscle and bone wastage.

- Living in isolation and confinement can cause behavioural and psychological issues. Without a natural body clock, depression and sleep disorders can develop. The space station uses LED technology to imitate light on Earth to improve body rhythms.
- A closed environment also means microbes in the body can transfer more easily. The environment can weaken the immune system, so urine, saliva and blood samples are carefully monitored to make sure dormant viruses have not been reactivated.
- Radiation exposure is far higher in space than it is on Earth. Without the shielding of Earth, you could be more at risk of cancer and damage to the nervous system. Space radiation can also cause sickness and fatigue. The ISS sits just within the protective field on Earth to reduce risks, but missions further afield will need to overcome this.



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## ISRO Launches Its 100th Satellite

Space agency ISRO has successfully sent up a rocket carrying India's 100th satellite along with 30 others, four months after failed launch. The Polar Satellite Launch Vehicle or PSLV lifted off from Sriharikota in Andhra Pradesh.

### *Facts for Prelims:*

- The PSLV-C40 placed 31 satellites, originating from seven countries. This is the 42nd flight of the PSLV. The 30 other satellites onboard include two other satellites from India and 28 satellites from six countries — Canada, Finland, France, Korea, the United Kingdom and the United States.
- The Cartosat-2 satellite, the third in the series, was

deployed to relay high resolution scene specific spot imageries. The images will be useful for cartographic applications, urban and rural applications, coastal land use and regulation, road network monitoring, water distribution, creation of land use maps and change detection to bring out geographical Land Information Systems and Geographical Information System applications.

- The mission is a unique one, since the satellites were launched in two orbits. Thirty of the satellites were launched in an orbit 550 km about, and one 359-km above the Earth. This was done through what scientists call the “multiple burn technology” under which the rocket's engine is switched off and then switched on to control its height.

This is ISRO's first launch in 2018 and it is also the first after the unsuccessful mission of IRNSS-1H in August last year.



## BeiDou

**Context:** China has sent twin satellites into space on a single carrier rocket, as part of efforts to enable its BeiDou system to provide navigation and positioning services to countries along the Belt and Road by the end of 2018.

This is the first launch of the BeiDou satellites in 2018. The twin satellites are coded the 26th and 27th satellites in the BeiDou Navigation Satellite System (BDS).

### **Background:**

The BeiDou Navigation Satellite System is a Chinese satellite navigation system. BeiDou has been described as a potential navigation satellite system to overtake GPS in global usage, and is expected to be more accurate than the GPS once it is fully completed. The current third generation of BeiDou claims to reach millimeter-level accuracy (with post-processing), which is ten times more accurate than the finest level of GPS.

### **Facts for Prelims: List of Global Navigation Satellite Systems:**

- GPS of the United States of America.
- GLONASS or Global Navigation Sputnik System of Russia.
- Galileo of the European Union.
- IRNSS or NAVIC of India.
- Quasi-Zenith Satellite System (QZSS) of Japan.



## SPARCS

**Context:** Scientists are planning to launch a small telescope into the Earth’s orbit that will monitor the flares and sunspots of small stars to assess how habitable the environment is for planets orbiting them. The spacecraft is known as the Star-Planet Activity Research CubeSat, or SPARCS.

Since M dwarfs are so plentiful, astronomers estimate that our galaxy alone contains roughly 40 billion rocky planets in habitable zones around their stars. This means that most of the habitable-zone planets in our galaxy orbit M dwarfs.

### About SPARCS:

SPARCS is a new NASA-funded space telescope and will be launched in 2021. The mission, including spacecraft design, integration and resulting science, is led by Arizona State University’s School of Earth and Space Exploration (SESE).

- The stars that SPARCS will focus on are small, dim, and cool by comparison to the Sun. Having less than half the

Sun’s size and temperature, they shine with barely one per cent its brightness.

- The heart of the SPARCS spacecraft will be a telescope with a diameter of nine centimetres plus a camera with two ultraviolet-sensitive detectors to be developed by NASA’s Jet Propulsion Laboratory.
- Both the telescope and camera will be optimised for observations using ultraviolet light, which strongly affects the planet’s atmosphere and its potential to harbour life on the surface.

### Background:

- Astronomers have discovered that essentially every M dwarf star has at least one planet orbiting it, and about one system in four has a rocky planet located in the star’s habitable zone. This is the potentially life-friendly region where temperatures are neither too hot nor too cold for life as we know it, and liquid water could exist on the planet’s surface.

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## James Webb Space Telescope

**Context:** NASA’s James Webb Space Telescope the world’s premier infrared space observatory of the next decade — has successfully completed critical testing in a massive thermal vacuum chamber, enabling it to function properly in the extremely cold and airless environment in space in 2019.

### *James webb space telescope:*

- The James Webb Space Telescope (JWST) is the largest space telescope ever built. It is an international collaboration between of about 17 countries including NASA, European Space Agency (ESA) and the Canadian Space Agency (CSA). When it is launched in 2019, it will be

the world’s biggest and most powerful telescope.

- When it is launched into space it will be able to peer back in time 3.5 billion years, teaching us more than ever before about the start of the universe. The telescope will be used to look back to the first galaxies born in the early universe more than 13.5 billion years ago, and observe the sources of stars, exoplanets, and even the moons and planets of our solar system.

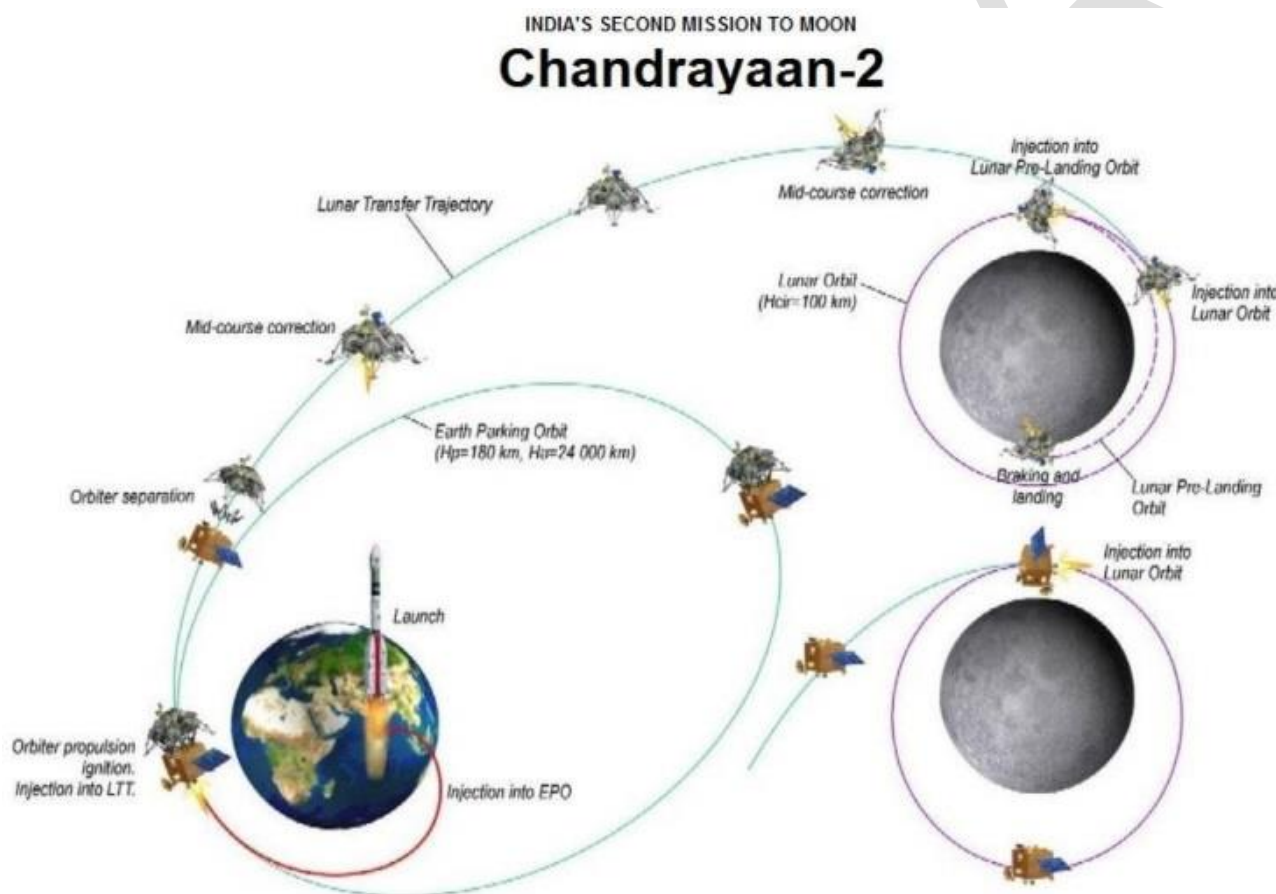
## Chandrayaan-2

**Context:** To prepare for landing on the moon, the Indian Space Research Organisation is planning to conduct landing simulation tests for Chandrayaan-2 spacecraft at Mahendragiri in coming weeks.

### About Chandrayaan-2:

Chandrayaan-2 includes soft-landing on Moon and moving a rover on its surface. It is an advanced version of the previous Chandrayaan-1 mission. It consists of an orbiter, lander and rover configuration.

into the earth parking orbit (EPO) of 170 X 18,500 km by GSLV- Mk II.



- The Orbiter spacecraft when launched from Sriharikota will travel to the Moon and release the Lander, which will in turn deploy a tiny Rover to roam the lunar surface — all three sending data and pictures to Earth.

It is planned to be launched as a composite stack

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## Station Explorer for X-ray Timing and Navigation Technology

**Context:** NASA has invented a new type of autonomous space navigation that could see human-made spacecraft heading into the far reaches of the Solar System, and even farther – by using pulsars as guide stars. It’s called Station Explorer for X-ray Timing and Navigation Technology, or SEXTANT (named after an 18th century nautical navigation instrument).

**About Station Explorer for X-ray Timing and Navigation Technology:**

- **What is it?** SEXTANT works like a GPS receiver getting signals from at least three GPS satellites, all of which are equipped with atomic clocks. The receiver measures the time delay from each satellite and converts this into spatial coordinates.
- **How it works?** The technology uses X-ray technology to see millisecond pulsars, using them much like a GPS uses satellites. The electromagnetic radiation beaming from pulsars is most visible in the X-ray spectrum, which is why NASA’s engineers chose to employ X-ray detection in SEXTANT. To do so, they used a washing machine-sized observatory attached to the International Space Station. Called Neutron-star Interior Composition Explorer, or NICER, it contains 52 X-ray telescopes and silicon-drift detectors for studying neutron stars, including pulsars.
- **Applications:** SEXTANT could be used to calculate the location of planetary satellites far from the range of Earth’s

GPS satellites, and assist on human spaceflight missions, such as the space agency’s planned Mars mission.

**What are pulsars?**

Pulsars are highly magnetised, rapidly rotating neutron stars – the result of a massive star’s core collapsing and subsequently exploding. As they spin, they emit electromagnetic radiation. If an

observer is in the right position, they can appear as sweeping beams, like a cosmic lighthouse. They’re also extraordinarily regular – in the case of some millisecond pulsars, which can spin hundreds of times a second, their regularity can rival that of atomic clocks.

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## ‘IPrism’

**What is it?** It is one of its kind Intellectual Property (IP) Competition for college and university students. The Cell for IPR Promotion and Management (CIPAM), Department of Industrial Policy and Promotion (DIPP), in collaboration with ASSOCHAM and ERICSSON India, has launched this competition.

### **About the competition:**

The competition aims to foster a culture of innovation and creativity in the younger generation. It will provide young creators a unique opportunity to see their creations recognized on a national platform. This competition invites students to submit films on piracy & counterfeiting under two categories of 30 and 60 seconds. Another category in the competition is for a mobile gaming app on IP.

### **Background:**

Counterfeiting and Piracy cause significant loss to the industry and pose serious safety threats to the consumers. Generating awareness can help in tackling such crimes since limited knowledge about their adverse social and economic impact leads to circulation and consumption of pirated content and fake goods.

### **About CIPAM:**

Cell for IPR Promotion and Management (CIPAM) has been created as a professional body under the aegis of DIPP to take forward the implementation of the National IPR Policy that was approved by the Government in May 2016, with the slogan – “Creative India; Innovative India”. CIPAM is working towards creating public awareness about IPRs in the country, promoting the filing of IPRs through facilitation, providing inventors with a platform to commercialize their IP assets and coordinating the implementation of the National IPR Policy in collaboration with Government Ministries/Departments and other stakeholders.



## Maharashtra unveils Public cloud policy

Maharashtra has unveiled a public cloud policy, virtually mandating its departments to shift their data storage onto the cloud, which intends to make them available for free to the general public.

consumer.

### *About the policy:*

The policy, a first by any State, will create a \$2 billion opportunity for the industry. Under the framework, the government will make it mandatory for the data to be stored within the country.

- The objective is to use public cloud in cases wherever the Right to Information Act is applicable, and then go in for enhanced security features for private and sensitive data, which will also be stored on the cloud.
- A four-member committee under the secretary of the information technology department has been formed by the CM to oversee the implementation of the policy.
- Once the policy is implemented and the data stored on the cloud, the access to the public cloud services will either be free or on a pay-per-usage model.
- The State policy is compliant with the Union government's National Data Sharing and Accessibility Policy, 2012, which mandates facilitation of access to government-owned shareable data in human readable and machine readable forms.

### *Significance of this move:*

The government produces 1.25 lakh documents every day. Most of them are being stored at 75 centralised data centres, resulting in a high maintenance cost. With the public cloud, investment on these centres is not required. The idea is to reduce expenditure on IT resources. This will also accelerate e-governance, and open an area for private sector investments, taking new technologies to all the departments as the government is the biggest data creator and

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## iCreate

**Context:** Prime Minister Modi and his Israeli counterpart Benjamin Netanyahu recently dedicated to the nation the iCreate facility located on the outskirts of Ahmedabad.

### About iCreate:

- iCreate is an independent centre created with the objective of facilitating entrepreneurship through a blend of creativity, innovation, engineering, product design and leveraging emerging technologies to deal with major issues such as food security, water, connectivity, cybersecurity, IT and electronics, energy, bio-medical equipment and devices etc.
- **Aim:** iCreate aims to develop an ecosystem in India to generate quality entrepreneurs.

## 2002 AJ129

**What is it?** It is an asteroid larger than the tallest building on Earth, Burj Khalifa. As per reports, the asteroid will pass Earth on February 4, missing our planet by 2.6 million miles. It has been classified as a “near-Earth object” and “potentially hazardous” by US space agency NASA.

### What are asteroids?

Asteroids are celestial objects that are smaller than planets, which are irregularly shaped and lack fixed orbits. In our solar system, most asteroids originate from the asteroid belt, a zone between Mars and Jupiter, where these objects are scattered about.



## Kilopower

**Context:** NASA has announced new tests are underway for the Kilopower project, a program designed to create small nuclear power sources to fuel further space exploration. A prototype, which was created by NASA and the Department of Energy, has completed non- nuclear tests and is now running with a real reactor core at a facility in Nevada.

and life-support systems, enable astronauts to mine resources, recharge rovers and run processing equipment to transform resources such as ice on the planet into oxygen, water and fuel. It could also potentially augment electrically powered spacecraft propulsion systems on missions to the outer planets.

**Context:** NASA has announced new tests are underway for the Kilopower project, a program designed to create small nuclear power sources to fuel further space exploration. A prototype, which was created by NASA and the Department of Energy, has completed non- nuclear tests and is now running with a real reactor core at a facility in Nevada.

### About Kilopower:

- **What is it?** The Kilopower project is a near-term technology

effort to develop preliminary concepts and technologies that could be used for an affordable fission nuclear power system to enable long-duration stays on planetary surfaces.

- **Goal:** The principal goal of the project is to sufficiently develop and test nuclear power system technologies by 2018 so fission power can be a viable option for NASA decision makers to consider when making their informed selection of exploration surface systems.
- **Significance:** Kilopower tackles a few different problems in spacecraft design: existing nuclear power systems rely on a fuel we've essentially run out of, solar power becomes increasingly feeble the further from the sun the spacecraft goes, and more complicated space activities—like those involving humans—would require significantly stronger power supplies than current projects.

**Benefits:** The technology could power habitats

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## IndAS

based on the new accounting standards.

**Context:** Banks and non-banking financial companies are due to switch to Indian Accounting Standards (IndAS) from 1 April 2018. However, the government and the Reserve Bank of India (RBI) may postpone the implementation of new accounting standards for banks because of the legislative changes and additional capital requirements the process would entail.

### Background:

Banks and non-banking financial companies currently follow Indian generally accepted accounting principles (GAAP) standards. Other corporate entities started complying with IndAS with effect from 1 April 2016.

### What is it?

Ind AS or Indian Accounting Standards govern the accounting and recording of financial transactions as well as the presentation of statements such as profit and loss account and balance sheet of a company. For long, there has been a heated debate about Indian companies moving to the globally accepted International Financial Reporting Standards (IFRS) for their accounts. But firms have resisted this shift, stating that this will lead too many changes in the capture and reporting of their numbers. Ind AS has been evolved as a compromise formula that tries to harmonise Indian accounting rules with the IFRS.

### Facts for Prelims:

- The implementation of IndAS for public sector banks requires an amendment to the Banking Regulation Act. The schedule in BR Act relating to financial statement disclosures needs to be changed to the IndAS format.
- Section 29 of the BR Act deals with the accounts and balance sheets of public sector banks. Private sector banks are covered by the Companies Act, which is

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## Parker Solar Probe

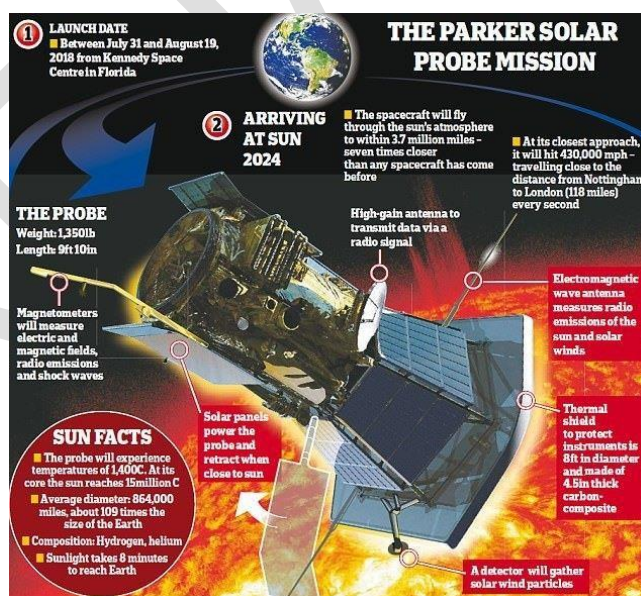
**Context:** NASA has begun testing its new probe- Parker solar probe- that will ‘touch the sun’, when it launches into space this summer.

### About the Parker Solar Probe:

- ‘Parker Solar Probe will travel through the sun’s atmosphere, closer to the surface than any spacecraft before it, facing brutal heat and radiation conditions and ultimately providing humanity with the closest-ever observations of a star.’
- **Aims of the mission:** It will study the outer atmosphere of the sun, known as the corona. To measure the corona, the probe will reach an orbit within four million miles (6.5 million km) of the sun. The Parker Solar Probe (PSP) is also aimed at collecting vital information about the life of stars and their weather events. This will help scientists improve how we predict dangerous solar flares, which can disrupt satellites and power supplies here on Earth.
- **Benefits of the mission:** The mission can help scientists to better understand solar flares – brief eruptions of intense high-energy radiation from the sun’s surface that can knock out communications on Earth. According to NASA, observations from this new vantage point will also help to uncover the physics of how stars work, and could improve our ability to predict space weather. These events have impacts on Earth as well as the satellites and astronauts in space.

### How solar flares impact earth?

- Solar flares can damage satellites and have an enormous financial cost. The charged particles can also threaten airlines by disturbing the Earth’s magnetic field. Very large flares can even create currents within electricity grids and knock out energy supplies.
- Geomagnetic storms are more disruptive now than in the past because of our greater dependence on technical systems that can be affected by electric currents.



### Why study the corona?

The corona is the sun’s outer atmosphere. It is unstable and produces solar wind and flares. Millions of tons of highly magnetised material can erupt from the sun at speeds of several million miles an hour. Therefore, we need to get closer to it in order to understand how it works.



## Global-Scale Observations of the Limb and Disk (GOLD)

**Context:** NASA’s Global-Scale Observations of the Limb and Disk (GOLD) instrument was recently launched atop an Ariane 5 rocket.

**About Global-Scale Observations of the Limb and Disk (GOLD):**

- **What is it?** GOLD is essentially an imaging spectrograph. Spectrographs are scientific instruments that have been designed to break light down into its constituent wavelengths and to measure their intensity. By examining the data from such an instrument, scientists can determine a wide variety of characteristics, including a target’s composition and temperature. GOLD will be tasked with collecting far ultraviolet light data on Earth’s atmosphere.
- **Mission:** To shed light on how the uppermost layers of Earth’s atmosphere can be affected by powerful space and Earth-based weather events.
- **Focus:** GOLD will focus its attention on a relatively poorly-understood region of the upper atmosphere, where the charged particles of the ionosphere mingle with the diffuse neutral gasses that make up the thermosphere.

thermosphere will occur, and this can be a serious problem for satellite communications. Disturbances in the ionosphere can interfere with, or even block signals being sent between Earth-based systems and orbital probes, potentially affecting cell-phone communications, and other vital services such as GPS, which is needed to safely navigate airplanes and ships.

**Background:**

- Earth’s atmosphere is a complex, multi-layered protective shell that envelopes our planet, and safeguards its inhabitants from dangerous space weather emanating largely from our Sun. This tenuous region of the atmosphere has been known to undergo swift and significant changes in less than an hour. These fluctuations can be driven by the constant interactions between the ionosphere and thermosphere, in conjunction with weather emanating from both Earth and space.
- The complexity of these interactions makes it very difficult to predict when an atmospheric change in the ionosphere and

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## Scientists clone monkeys

**Context:** Shanghai scientists have created two genetically identical long-tailed macaques. The monkeys are named Hua Hua and Zhong Zhong, a version of the Chinese adjective Zhonghua which means the “Chinese nation” or “people.” This could be an important tool in medical research for understanding disease in a species genetically more comparable to humans.

This is for the first time that scientists have created cloned primates using the same complicated cloning technique that made Dolly the sheep in 1996. The technique is called somatic cell transfer, or SCNT.

### *Overall, are these the first primates to be cloned?*

Overall, these two are not the first primates to be cloned. Scientists in 1999 created Tetra, a rhesus monkey, but used what researchers consider a simpler cloning method that produces a more limited number of off spring. In Tetra’s case, scientists split the embryos, much like what happens naturally when identical twins develop.

### *About somatic cell transfer, or SCNT:*

Under this technique, scientists reconstruct an unfertilized egg. The researchers remove the egg’s nucleus — the part of the cell that contains most of its genetic information— and replace it with the nucleus from another cell. It’s then stimulated to develop into an embryo, which is transplanted into a surrogate mother. That same cell cluster can make more genetically matched animals.

### *New ethical questions:*

The birth of these clones also brings up ethical issues. Humans are in the primate family. With this birth, these scientists have broken a barrier and that means the technique could, in theory, be applied to humans.

## RemoveDebris

**Context:** RemoveDebris, a mission that will test different methods to clean up space junk is getting ready for launch.

### *About RemoveDebris mission:*

- RemoveDEBRIS is aimed at performing key Active Debris Removal (ADR) technology demonstrations (e.g capture, deorbiting) representative of an operational scenario during a low-cost mission using novel key technologies for ADR. The project is co-ordinated by the Surrey Space Centre at the University of Surrey, UK, and involves the collaboration of a number of mission partners.
- The mission will comprise of a main satellite platform that once in orbit will deploy two CubeSats as artificial debris targets to demonstrate some of the technologies (net capture, harpoon capture, vision-based navigation, dragsail de-orbitation).

### *Background:*

- Scientists have warned that the growing problem of space debris is putting spacecraft and astronauts at risk. It is estimated that there are about half a million pieces of man-made rubbish orbiting the Earth, ranging from huge defunct satellites, to spent rocket boosters and nuts and bolts. Any collisions can cause a great deal of damage, and generate even more pieces of debris.

International space guidelines suggest that satellites should de-orbit themselves after 25 years – but it is difficult to ensure everyone plays by the rules.

## NASA Fund Researches the Potential of Blockchain Technology in Space

NASA recently awarded a grant of \$330,000 USD to the University of Akron to research the potential of blockchain technology to improve space communications. NASA wants ways to reduce the time it takes for their exploration vehicles to receive signals and react to potential threats in space. Also, a decentralized blockchain would ensure there is no degradation or loss of the critical data collected by vehicles in space.

### Background:

A major hurdle of space exploration today is the distance between the machines in space and their Earth-based controllers. The distance creates a time lag between machine and operator. Semi-autonomous machines eliminate some of the barriers created by this time lag, by allowing the machines to make some decisions for themselves.

### What is Blockchain?

Blockchain is the digital and decentralized ledger that records transactions without the need for a financial intermediary, which in most cases is a bank. A blockchain is an anonymous online ledger that uses data structure to simplify the way we transact. Blockchain allows users to manipulate the ledger in a secure way without the help of a third party.

### How it works?

Blockchain enables two entities that do not know each other to agree that something is true without the need of a third party. As opposed to writing entries into a single sheet of paper, a blockchain is a distributed database that takes a number of inputs and places them into a block. Each block is then ‘chained’ to the next block using a cryptographic signature. This allows blockchains to be used as a ledger which is accessible by anyone with permission to do so. If everyone in the process is pre-selected, the ledger is termed ‘permissioned’. If the process is open to the whole world, the ledger is called unpermissioned.

### Benefits of blockchain technology:

A blockchain is anonymous, protecting the identities of the users. This makes blockchain a more secure way to carry out transactions. The algorithm used in blockchain reduces the dependence on people to verify the transactions.

## Imager for Magnetopause-to-Aurora Global Exploration (IMAGE) science satellite

**Context:** A long lost NASA satellite has been found alive. NASA has confirmed it stumbled across radio transmissions from **Imager for Magnetopause-to-Aurora Global Exploration (IMAGE)** science satellite, which lost contact with mission control over 12 years ago.

### **Background:**

On March 25, 2000, NASA launched the IMAGE satellite atop a Delta II

rocket. The unmanned orbiter kept an eye on the Earth's magnetosphere and how it reacts to the solar winds. Then on December 18, 2005, radio contact was lost for unknown reason. After weeks of attempts by NASA to regain contact, the probe was written off for good.

**IMAGE used neutral atom, ultraviolet, and radio imaging techniques to:**

- Identify the dominant mechanisms for injecting plasma into the magnetosphere on substorm and magnetic storm time scales.
- Determine the directly driven response of the magnetosphere to solar wind changes.
- Discover how and where magnetospheric plasmas are energized, transported, and subsequently lost during substorms and magnetic storms.

**About Imager for Magnetopause-to-Aurora Global Exploration (IMAGE) mission:**

IMAGE was the first satellite mission dedicated to imaging the Earth's magnetosphere, the region of space controlled by the Earth's magnetic field and containing extremely tenuous plasmas of both solar and terrestrial origin. Invisible to standard astronomical observing techniques, these populations of ions and electrons have traditionally been studied by means of localized measurements with charged particle detectors,

magnetometers, and electric field instruments. Instead of such in situ measurements, IMAGE employed a variety of imaging techniques to “see the invisible” and to produce the first comprehensive global images of the plasma populations in the inner magnetosphere. With these images, space scientists were able to observe, in a way never before possible, the large-scale dynamics of the magnetosphere and the interactions among its constituent plasma populations.



## 60th anniversary of first US satellite into space

**Context:** United States is celebrating the 60th anniversary of the launch of the first spacecraft sent into space.

### Explorer 1:

- Explorer 1, a two-metre long satellite carrying a scientific instrument, was launched from Cape Canaveral in Florida on 31 January 1958. Explorer 1 was around two metres in length. Within that the science instrument took up about 95cm.
- The main instruments were a cosmic-ray detection

package; internal, external and nose-cone temperature sensors; a micrometeorite impact microphone; a ring of micrometeorite erosion gauges; and two transmitters. There were two antennas in the body of the satellite and its four flexible whips that formed a turnstile antenna. Electrical power was provided by batteries that made up 40% of the total weight.

- Explorer 1 and missions that came after it were responsible for the first space-based discovery – radiation belts around the Earth called the Van Allen Belts.

### Facts for Prelims:

Overall, Explorer 1 was not the first object launched into space, as almost a year earlier the USSR successfully put a small metal satellite, Sputnik 1, into orbit. A month later, they also successfully launched a second, Sputnik 2.

## India commissions high performance computer system Mihir

India recently commissioned its High Performance Computer (HPC) system – named ‘Mihir’ (meaning Sun) – at the National Centre for Medium Range Weather Forecasting at Noida, Uttar Pradesh.

*The new HPC facility is expected to improve the following services:*

- Weather forecasts at block level over India which can predict extreme weather events.
- High resolution seasonal/extended range forecasts of active/break spells of Monsoon.
- Very high resolution coupled models for prediction of cyclones with more accuracy and lead time.
- Ocean state forecasts including marine water quality forecasts at very high resolution.
- Tsunami forecasts with greater lead time.
- Air quality forecasts for various cities.
- Climate projections at very high resolution.

### *About Mihir:*

The new system will be India’s largest HPC facility in terms of peak capacity and performance and will propel India’s ranking from the 368th position to the 30th in the list of top 500 HPC facilities in the world. The country will now also be ranked 4th – after Japan, UK and USA – for dedicated HPC resources for weather/climate community.

## Retrotransposons

**What are they?** They are the recently identified special genes which could help Symbiodinium adapt more rapidly to heat stress.

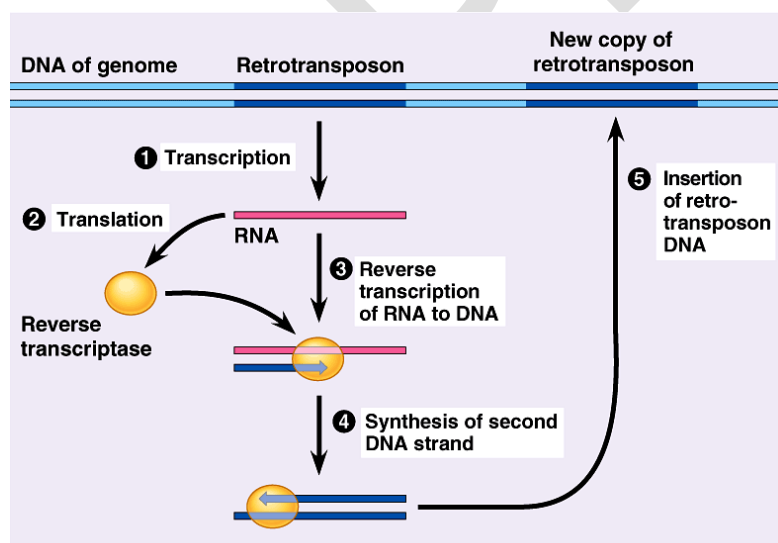
### About Symbiodinium:

- **What is it?** Symbiodinium is a unicellular algae that provides its coral host with photosynthetic products in return for nutrients and shelter.

**Coral bleach:** High sea temperatures can cause the breakdown of the symbiotic relationship between the algae and corals and lead to the widespread expulsion of Symbiodinium from host tissues, an event known as coral bleaching. If bleached corals do not recover, they starve to death, leaving only their white, calcium-carbonate exoskeleton.

### What is Coral Bleaching?

Bleaching occurs when abnormal environmental conditions, such as warmer sea temperatures, cause corals to expel tiny photosynthetic algae, draining them of their colour. Corals can recover if the water temperature drops and the algae are able to recolonise them.



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## Latte levy

**Context:** Britain is considering implementing a “latte tax” to curb the consumption of disposable coffee cups. The fee would amount to 50 cents on top of every coffee sold, and it’s intended to encourage people to use reusable coffee cups.

### *Need for levy on this:*

In the UK, 500 takeaway coffee cups are thrown away every minute. Most takeaway cups aren’t recyclable; they’re laminated with plastic or polyethylene that is difficult to strip away and most recycling facilities aren’t equipped to recycle them.

## Mankidia denied habitat in Simlipal

### Context:

- Mankidia, one of the 13 Particularly Vulnerable Tribal Groups (PVTG) in Odisha, have been denied habitat rights inside the Similipal Tiger Reserve (STR) under the historic Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, as the State Forest Department has objected on grounds that tribals could be attacked by wild animals, especially tigers.
- **Definition of Habitat:** “‘Habitat’ as defined under Section 2(h) of the

FRA (Forest Rights Act) includes the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling Scheduled Tribes.

### Facts for Prelims:

- **About Mankidia tribe:** Mankidia is a marginalised group that critically depends on making rope with siali fibre

that’s richly available in Similipal.

- **About ‘Particularly Vulnerable Tribal Groups (PVTGs)’:** PVTGs are more vulnerable among the tribal groups. In 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT), in the country

(2011 census). Among the 75 listed PVTG’s the highest number are found in Odisha (13), followed by Andhra Pradesh (12).

- **About Simlipal national park:** It is located in Mayurbhanj district in Odisha. It is part

of the Similipal-Kuldiha- Hadgarh Elephant Reserve popularly known as Mayurbhanj Elephant Reserve, which includes three protected areas — Similipal Tiger Reserve, Hadgarh Wildlife Sanctuary and Kuldiha Wildlife Sanctuary. Similipal National Park derives its name from the abundance of semul (red silk cotton trees) that bloom here.



## Territorial Army battalion of ex-Army men to clean Ganga

AS PART of its mission to clean the Ganga by 2020, the Central government has sanctioned the raising of a Territorial Army (TA) battalion comprising ex-servicemen of the Army. The battalion will be raised in Allahabad, Uttar Pradesh as a Composite Ecological Task Force (CETF) battalion of TA for National Mission for Clean Ganga (NMCG).

### About the territorial army battalion:

- Composition: The CETF TA battalion, to be commanded by a Colonel-rank officer, will have eight officers, 20 JCOs and around 500 other ranks on its roll. For the task, it will only enroll ex-servicemen, who will be embodied under TA rules.
- Functions: The battalion will be responsible for monitoring ecological and environmental projects related to the river, and also raise public awareness through campaigns.
- Funding: The government has allocated Rs 167 crore for the battalion under NMCG, the nodal agency for cleaning the Ganga. The battalion will work on a book debit system with funding provided from the budget of the Ministry of Water Resources, River Development and Ganga Rejuvenation.

### About the territorial army:

India's first Governor General Shri C Rajagopalachari formally inaugurated the Indian Territorial Army on October 9 in 1949. It is an organization where volunteers apply for a short period of training every year, so as to be ready to tackle any emergent situation or to serve for the defence of India.

- The Territorial Army, also known as the 'Terriers', is considered the second line of national defence after the regular Army. The Territorial Army is part of a Regular Army and its present role is to relieve the Regular Army from static duties and assist

civil administration in dealing with natural calamities and maintenance of essential services in situations where life of the communities is affected or the security of the country is threatened and to provide units for Regulars Army as and when required.

Territorial Army comes under the Defence Ministry. Nine Ecological Task Force (ETF) battalions of TA have been raised to execute specific environment-related projects.

## Microbeads ban takes effect

**Context:** A UK-wide ban on the manufacture of products containing microbeads has come into force on 9 January. Manufacturers can no longer add tiny pieces of plastic to wash-off cosmetic and personal care products (such as exfoliating scrubs, shower gels and toothpaste).

**Exemption:** However, this isn't a complete ban – ‘leave-on’ products (such as sunscreen and makeup) will still be allowed to contain microbeads following the cosmetic industry's resistance.

### Why are microbeads bad for the environment?

Evidence has shown that microbeads can find their way from your bathroom to the sea. Trillions of tiny pieces of plastic are accumulating in the world's oceans, lakes and estuaries, harming marine life and entering the food chain.

### Where else are they banned?

The United States passed the Microbead-Free Waters Act of 2015, which required companies to stop using microbeads in beauty and health

products by July 2017, and Canada's ban on manufacturing the pellets took effect at the beginning of this year. New Zealand's ban on microbeads is to take effect in June. Several countries in the European Union have campaigned for a similar ban.

### What are microbeads?

In a nutshell, microbeads are tiny pieces of plastic found in many beauty products, such as exfoliating scrubs, toothpastes and more.



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## Chiru goat

**Context:** India’s environment ministry has ruled out the possibility of conservation breeding of the Chiru goat, a ‘near threatened’ species whose underfur is used for making the famous Shahtoosh shawls.

### *What’s the concern?*

Chiru goat, which is also known as the Tibetan antelope, has long been hunted for its underfur (Shahtoosh), which is renowned for its quality and has traditionally been transported to Srinagar, where it is woven into an extremely fine fabric used to make shawls.

### *Background:*

Last year, the parliamentary standing committee on science & technology, environment & forests had recommended to the ministry of environment, forest and climate change (MoEFCC) to conserve and breed the Chiru goat, which can then be given to the shawl makers. The panel said this would provide a sustainable livelihood opportunity to the people of Jammu and Kashmir.

### *Why the government is not in favour of conservation breeding of Chiru goat?*

- In 2017, the Chiru goat species was assessed as ‘near threatened’ by the International Union for Conservation of Nature (IUCN) because their current population can only be maintained with continued high levels of protection in its natural range and strict controls on trade of the shawls made from its underfur. The government believes that any relaxation in the protection regime of the animal would lead to a rapid population decline due to commercial poaching.
- Also, Chiru inhabits the high-altitude Tibetan plateau and requires large a expanse of land for its movement and ranging patterns to fulfil its feeding and breeding requirements. Rearing the goat in captivity is extremely difficult. Besides, any attempt to do conservation breeding of Chiru at very high altitude regions of Ladakh (more than

3,800m) may neither be economical nor feasible as humans cannot be posted there continuously for more than 2-3 months.

### *Facts for Prelims:*

- Chiru, or Tibetan antelope, is assessed as ‘Near Threatened’ by the International Union for Conservation of Nature 2017.
- The Tibetan antelope is the sole species in the genus *Pantholops*.
- Endemic to the Tibetan Plateau, the Tibetan antelope inhabits open alpine and cold steppe environments between 3,250 and 5,500 m (10,660 and 18,040 ft) elevation.

## Sikkim allows people to forge fraternal ties with trees

**Context:** Under Sikkim Forest Tree (Amity & Reverence) Rules 2017, the Government of Sikkim has come up with a unique way of preserving trees by encouraging people to forge a relationship of brotherhood or sisterhood with trees through a practice locally known as Mith/Mit or Mitini. With this, Sikkim is keen to not just preserve its forest cover but also forge amity between people and trees.

State government has also started an initiative of identifying heritage trees where 21 trees of 25-ft. girth and above and 32 trees of 20-25 ft. girth have been demarcated as heritage trees.

### **Highlights of Sikkim Forest Tree (Amity & Reverence) Rules 2017:**

- Under the rules, State government shall allow any person to associate with trees standing on his or her private land or on any public land by entering into a Mith/Mit or Mitini relationship.
- A person can also adopt a tree “as if it was his or her own child in which case the tree shall be called an adopted tree.” Another way to forge a relationship with a tree is by “preserving a tree in remembrance of a departed relative in which case the tree shall be called a smriti tree.”

In case an individual wants to forge a relationship with a tree which does not stand on his or her land but another's, the person concerned shall execute an agreement with the owner and compensate him or her in terms of the market value of the timber or the wood contained in the tree. If the person desires to enter into a relationship with a tree located on public land then permission from the said department or agency needs to be taken.

- The Rules also prohibit felling or damage to any tree registered as Mith/Mit or Mitini, adopted or smriti and points out that any such violation shall be treated as a forest offence.

### **Background:**

As per the Forest Survey of India, 2015 the forest cover of Sikkim is 47.80 % of the State's total geographical area. Over the past few years the

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## The 25 Year Environment Plan

**Context:** UK has launched its long-awaited 25 Year Environment Plan. The Plan sets out comprehensive and long-term approach to protecting and enhancing the environment in England for the next generation. The Plan is far-reaching, touching on topics ranging from plastics recycling, biodiversity and habitats to climate change and air pollution.

### Highlights of the plan:

- **Independent green watchdog:** The plan promises a consultation on a new independent body to hold government to account post-Brexit, alongside a new set of green principles to underpin policy-making. A new set of metrics will also help assess progress against the 25 Year goals.
- **Green business council:** A new council is to be established to advise government on setting the right conditions to stimulate environmental entrepreneurship and innovation. The group would also promote the business case for companies to address and report on natural capital risks and green opportunities in their supply chains.
- **2019 Year of Green Action:** The government has promised to launch a year-long youth-focused promotional campaign to engage people with environmental issues. Using #iwill hashtag the campaign will aim to increase action and engagement on the environment among 10 to 20 year olds. Meanwhile, a range of events and activities will be staged to coincide with the 70th anniversary of National Parks and centenary of the Forestry Commission.
- **‘Natural Environment for Health and Wellbeing’ programme:** A cross-government alliance will establish a three-year programme promoting natural environment as a path for improving health and wellbeing.
- **Green infrastructure standards:** Natural England will lead on new cross-government project to review and update existing standards for green infrastructure by summer 2019, with government supporting local councils to assess developments against these new standards.
- **Tree planting:** The government reiterates goals to plant one million trees in England’s towns and cities by 2022, and endorses proposals for a new Northern Forest. It will also appoint a national Tree Champion and design a new woodland creation grant scheme. A Tree health Resilience Plan is also scheduled for 2018.
- **Plastic waste targets and taxes:** The government said it aims to eliminate all “avoidable” waste by 2050, and all “avoidable plastic waste” by the end of 2042. A call for evidence on using the tax system to eradicate single-use plastics is also on its way this year, while government says it will “explore whether we can ban other problematic materials where suitable alternatives exist”.
- **Water refill points:** To cut plastic bottle waste, the government wants to help retailers and transport hubs to offer up free water refill points in every major city and town in England, while the water industry will be encouraged to create nationwide network of refill points.
- **International Natural Capital Conference:** The UK plans to host major event to “discuss new ways of incorporating natural capital approaches to long-term policy making”.
- **Global deforestation initiative:** A cross-government global resource initiative is to be set up this year that will work with businesses, NGOs, producer countries, and intermediary countries to identify supply chain actions to boost the sustainability of products and reduce deforestation.



## Microwaves could be as bad for the environment as cars, finds new research

**Context:** Researchers at the University of Manchester have carried out the first ever comprehensive study of the environmental impacts of microwaves, considering their whole life cycle, from ‘cradle to grave’.

### The study found:

- Microwaves emit 7.7 million tonnes of carbon dioxide equivalent per year in the EU. This is equivalent to the annual emissions of 6.8 million cars.
- Microwaves across the EU consume an estimated 9.4 terawatts per hour (TWh) of electricity every year. This is equivalent to the annual electricity generated by three large gas power plants.
- Efforts to reduce consumption should focus on improving consumer awareness and behaviour to use appliances more efficiently.

### Background:

The study used life cycle assessment (LCA) to estimate the impacts of microwaves, taking into account their manufacture, use and end-of-life waste management. Altogether, the research team investigated 12 different environmental factors, including climate change, depletion of natural resources and ecological toxicity. Microwaves account for the largest percentage of sales of all type of ovens in the European Union (EU), with numbers set to reach nearly 135 million by 2020.

### How microwaves affect the environment?

- The research shows that the main environmental ‘hotspots’ are materials used to manufacture the microwaves, the manufacturing process and end-of-life waste management. For example, the manufacturing process alone contributes more than 20% to depletion of natural resources and to climate change.
- However, it is electricity consumption by microwaves that has the biggest impact on

the environment, taking into account its whole life cycle, from production of fuels to generation of electricity. In total, microwaves across the EU consume an estimated 9.4 terawatts per hour (TWh) of electricity every year. The study found that, on average, an individual microwave uses 573 kilowatt hour (kWh) of electricity over its lifetime of eight years. That is equivalent to the electricity consumed by a 7 watt LED light bulb, left on continuously for almost nine years. This is despite the fact that microwaves spend more than 90% of their lifetime being idle, in the stand-by mode.

- Waste is another major problem. Due to their relative low cost and ease of manufacture, consumers are throwing more electrical and electronic (EE) equipment away than ever before, including microwaves. ‘Consumers now tend to buy new appliances before the existing ones reach the end of their useful life as electronic goods have become fashionable and ‘status’ items. Another major contributing factor to the waste is a reduced lifespan of microwaves.

### Way ahead:

- Given that microwaves account for the largest percentage of sales of all type of ovens in the EU, it is increasingly important to start addressing their impact on resource use and end-of-life waste. Therefore, efforts to reduce consumption should focus on improving consumer awareness and behaviour to use appliances more efficiently.

Also, existing regulation will not be sufficient to reduce the environmental impacts of microwaves. It is necessary to develop specific regulations for these devices targeting their design. This will help to reduce the amount of resources used to make microwaves and waste generated at the end of

## Automated moorings

**What is it?** It is the new ocean data acquisition system which will do away with the present practice of collecting water samples from sea and studying their pollution levels thereafter.

**Why in news?** The government has said that the system will become functional by April this year and the cost of the project is estimated to be at Rs. 100 crore.

**Background:**

There are reports that the water is becoming anoxic and it could change the marine system. Anoxic waters are areas of sea water that are depleted of dissolved oxygen.

**About automated moorings:**

- What is it? It is an automated ocean pollution observation system which will help keep a tab on ocean pollution levels apart from offering insights on how the marine system is changing.
- Benefits: The system will do away with the present practice of collecting water samples from sea and studying their pollution levels thereafter. It will also provide data that will help scientists to understand how the marine system is changing.

## Campaign to save Reef from starfish

- In a push to preserve the World Heritage-listed ecosystem, a multimillion-dollar campaign has been launched by Australia to stop the predatory crown-of-thorns starfish devouring the Great Barrier Reef.
- Money will be spent as incentives for farmers to prevent agricultural pollutants from running into the reef. Funds will also go towards increasing the number of patrol vessels and divers targeting the starfish.

### Background:

The coral-eating starfish are naturally occurring but have proliferated due to pollution and agricultural run-off at the struggling reef. Their impact has been profound — a major study of the 2,300-km long reef's health in 2012 showed coral cover has halved over the past 27 years, with 42% of the damage attributed to the pest. The reef is also reeling from significant coral bleaching due to warming sea temperatures linked to climate change.

### About the Great barrier reef:

- The Great Barrier Reef is the world's largest coral reef system composed of over 2,900 individual reefs and 900 islands stretching for over 2,300 kilometres over an area of approximately 344,400 square kilometres. The reef is located in the Coral Sea, off the coast of Queensland, Australia.
- The Great Barrier Reef can be seen from outer space and is the world's biggest single structure made by living organisms. This reef structure is composed of and built by billions of tiny organisms, known as coral polyps. It was selected as a World Heritage Site in 1981.

## ‘Himalayan Research Fellowships scheme’

**Context:** The union environment ministry has decided to start a ‘Himalayan Research Fellowships scheme’. This is among the series of programmes that MoEFCC is running for conservation and protection of Himalayas.

### *About the Himalayan Research Fellowship Scheme:*

- **Aim:** The scheme aims scheme’ to create a young pool of trained environmental managers, ecologists and socio- economists. This pool will help generate information on physical, biological, managerial and human aspects of Himalayan environment and development.
- **Implementation:** The fellowship scheme will be executed through various universities and Institutions working in the Indian Himalayan Region (IHR) and preference will be given to the Institutions from north-eastern states.
- **Funding:** The financial support will be provided under the National Mission on Himalayan Studies (NMHS) and the fellowships will be awarded for a maximum period of three years and last date for submitting fellowship proposals is 12 February.
- **Focus areas:** The research may be undertaken in any of the identified broad thematic areas (BTAs) of the NMHS. Some of the broad thematic areas that are being focused on for research under the NMHS are water resource management including rejuvenation of springs and catchments, hydropower development, assessment and prediction of water-induced hazards, livelihood options including ecotourism opportunities, biodiversity management including recovery of threatened species and skill development.

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## Environmental Performance Index (WEF)

**Context:** The 2018 Environmental Performance Index (EPI) — the green rankings was recently released on the sidelines of the World Economic Forum meet in Davos. The biennial index is prepared by Yale and Columbia Universities along with the World Economic Forum (WEF).

The 10th EPI report ranks 180 countries on 24 performance indicators across 10 categories covering environmental health and ecosystem vitality.

### Performance of countries:

- India is among the bottom five countries on the Index, plummeting 36 points from 141 in 2016. Overall, India (at

177) and Bangladesh (179) come in near the bottom of the rankings, with Burundi, Democratic Republic of the Congo and Nepal rounding out the bottom five.

- India's overall low ranking—177 among 180 countries—was linked to poor performance in the environment health policy and deaths due to air pollution categories.
- Switzerland leads the world in sustainability, followed by France, Denmark, Malta and Sweden.

### Concerns:

- The report found that, globally, air quality is the leading environmental threat to public health. In 2016, the Institute for Health Metrics and Evaluation estimated that diseases related to airborne pollutants contributed to two-thirds of all life-years lost to environmentally related deaths and disabilities. Pollution is particularly severe in places such as India and China, where greater levels of economic development contribute to higher pollution levels.
- Further, as countries develop, increased population growth in large cities, as well as increased industrial production and

automotive transportation, continue to expose people to high levels of air pollution.

### India's scenario:

India's low scores are influenced by poor performance in the environmental health policy objective. Deaths attributed to PM2.5 have risen over the past decade and are estimated at 1,640,113, annually (Institute for Health Metrics and Evaluation, 2017). Despite government action, pollution from solid fuels, coal and crop residue burning, and emissions from motor vehicles continue to severely degrade the air quality.

### Way ahead:

As the world community pursues new sustainable development goals, policymakers need to know who is leading and who is lagging on energy and environmental challenges. The 2018 EPI confirms that success with regard to sustainable development requires both economic progress that generates the resources to invest in environmental infrastructure and careful management of industrialization and urbanisation that can lead to pollution that threatens both public health and ecosystems.



## Indian Railways conceives to deploy “Drone” cameras

**Context:** Indian Railways has decided to deploy “Drone” cameras (UAV/NETRA) for various railway activities especially project monitoring and maintenance of tracks and other railway infrastructure. In this regard, directions have been given to Zonal Railways to procure such cameras. This is in-line with Railways’ desire to use technology to enhance safety and efficiency in train operations.

### Benefits:

- Drone” cameras will help in monitoring activities of relief and rescue operation, project monitoring, progress of important works, conditions of track and inspection related activities.
- It shall also be used to assess preparedness of Non-Interlocking (NI) works, crowd management during fairs and melas, to identify scrap and also for aerial survey of station yards.
- Drones are also going to be instrumental in providing real time inputs related to safety and maintenance of tracks and other railway infrastructure.

### Background:

Safety has been one of the biggest concerns in the Indian Railways system. While the number of accidents have gone down over the last few years, the number still remains over 100 accidents a year. Railway accidents happen due to several reasons. An incorrect signal, a mistake or an act of negligence by one of its staff directly associated with the running of trains, deficiency in tracks, a rash act by one of the millions of road users, an irresponsible act by a passenger who carries inflammable goods. Added to these are the acts of sabotage.

### Suggestions by the World Bank:

The world bank has prepared a report titled ‘Strengthening Safety on Indian Railways’. Suggestions include:

- As a measure to avert accidents, the trains are to be equipped with ‘ditch lights’ and painted bright yellow that will enable more visibility even during twilight hours.
- The rail employees should be garbed in “high-visibility” clothes that can be worn round the year. A special heed is to be taken to ensure they wear it on duty at all times. The footwear and helmets are to be chosen by the employees that stay well within the allowance’s range and serve the purpose.
- Every train must be equipped with fire extinguishers and the staff must be well guided on various fire prevention measures.
- The level crossings and paths are to be painted with a crosshatched pattern that can alert and highlight the dangers for people to be in the area.
- The current investigators who have been employed to investigate root-cause of accidents are to be trained for better analysis.
- The authorities have been suggested to review timetables such that a maintenance block of four hours is provided weekly on all main lines as well as review safety performance in terminal operations with the intent of recognising prevailing risks.
- An independent rail safety regulator is to be created by the railways to strengthen the powers of commissioner of railway safety and form a safety management system under the Chairman, Railway Board.
- To address derailments, fires, or any other possible mishap, an emergency response plan is to be constituted.

### Facts for Prelims:

Under this initiative, West Central Railways with headquarter at Jabalpur (M.P) has become the first

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Zonal Railway to procure “Drone” cameras in Indian Railways.

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## National Disaster Response Force (NDRF)

**Context:** The National Disaster Response Force (NDRF) celebrated its 13th Raising Day on January 19<sup>th</sup>, 2018.

An MoU was also signed in between NDRF and NSDC. Besides, a co- operation with Facebook took place during the programme. The highlights of the cooprtaiion with facebook includes targeted geographical messaging, disaster information volunteers and community capacity building.

### Background:

Two national calamities in quick succession in the form of Orissa Super Cyclone (1999) and Gujarat Earthquake (2001) brought about the realization of the need of having a specialist response mechanism at National Level to effectively respond to disasters. This realization led to the enactment of the DM Act on 26 Dec 2005.

### ROLE AND MANDATE OF NDRF:

- Specialized response during disasters.
- Proactive deployment during impending

disaster situations.

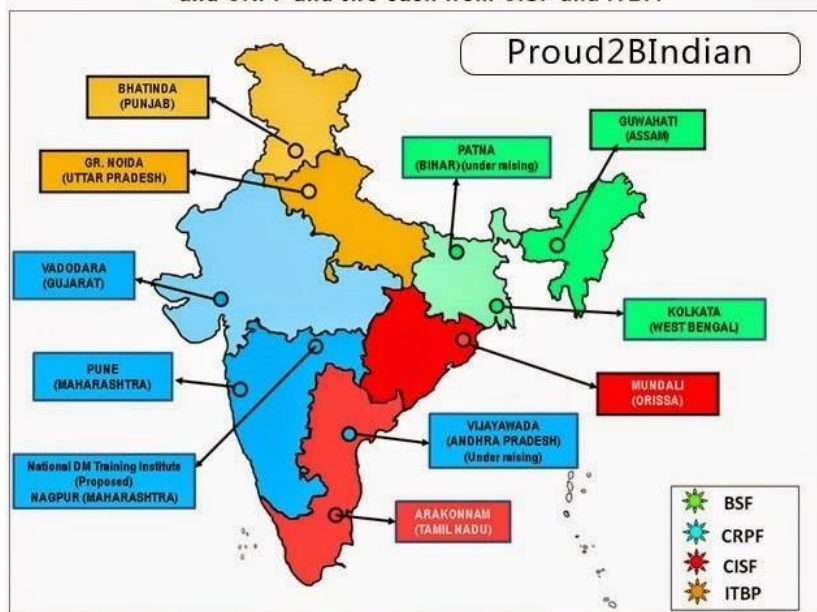
- Acquire and continually upgrade its own training and skills.
- Liaison, Reconnaissance, Rehearsals and Mock Drills.
- Impart basic and operational level training to State Response Forces (Police, Civil Defence and Home Guards).
- Community Capacity Building Programme.
- Organize Public Awareness Campaigns.

### About NDRF:

The Disaster Management Act has made the statutory provisions for constitution of National Disaster Response Force (NDRF) for the purpose of specialized response to natural and man-made disasters.

## National Disaster Response Force

NDRF consist of ten battalions, three each from the BSF and CRPF and two each from CISF and ITBP.



Map showing NDRF Bns locations and their respective area of responsibility

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## International Dam Safety Conference

**Context:** India will be hosting the International Dam Safety Conference – 2018 at Thiruvananthapuram. Central Water Commission is organizing the event in association with Kerala Water Resources Department (KWRD), Kerala State Electricity Board, National Institute of Technology Calicut and College of Engineering, Trivandrum. Dam safety conferences are organized as an annual event under the Dam Safety Rehabilitation and Improvement Project (DRIP) project.

- The project originally envisaged the rehabilitation and improvement of about 223 dams within four states namely, Kerala, Madhya Pradesh, Odisha, and Tamil Nadu and later Karnataka, Uttarakhand (UNVNL) and Jharkhand (DVC) joined DRIP and total number of dams covered under DRIP increased to 250.
- The project will also promote new technologies and improve Institutional capacities for dam safety evaluation and implementation at the Central and State levels and in some identified premier academic and research institutes of the country.
- The Central Dam Safety Organisation of Central Water Commission, assisted by a Consulting firm, is coordinating and supervising the Project implementation.

The project development objectives of DRIP are:  
(i) to improve the safety and performance of selected existing dams and associated appurtenances in a sustainable manner, and (ii) to strengthen the dam safety institutional setup in participating states as well as at central level.

### **DHARMA:**

A software programme – **Dam Health and Rehabilitation Monitoring Application**

**(DHARMA)**- will also be launched during the conference. DHARMA is a web tool to digitize all dam related data effectively. It will help to document authentic asset and health information pertaining to the large dams in the country, enabling appropriate actions to ensure need based rehabilitation. It is a new stride in asset management aspect by India.

### **About DRIP:**

The **Ministry of Water Resources (MoWR)**, Government of India, with assistance from the **World Bank**, is implementing the **DAM REHABILITATION AND IMPROVEMENT PROJECT (DRIP)**, which would be a six-year project.

## Nagaland declared as ‘disturbed area’ for 6 more months

**Context:** The entire Nagaland has been declared as “disturbed area” for six more months, till June-end, under the controversial AFSPA. The decision to continue the declaration of Nagaland as “disturbed area” has been taken as killings, loot and extortion have been going in various parts of the state which necessitated the action for the convenience of the security forces operating there.

### Background:

The AFSPA has been in force in Nagaland for several decades. It has not been withdrawn even after a framework agreement was signed in August 2015 between the Naga insurgent group NSCN-IM and the government. The framework agreement came after over 80 rounds of negotiations spanning 18 years with the first breakthrough in 1997 when the ceasefire agreement was sealed after decades of insurgency in Nagaland.

### What is AFSPA?

AFSPA, enacted in 1958, gives powers to the army and state and central police forces to shoot to kill, search houses and destroy any property that is “likely” to be used by insurgents in areas declared as “disturbed” by the home ministry.

- The Act provides army personnel with safeguards against malicious, vindictive and frivolous prosecution. Security forces can “arrest without warrant” a person, who has committed or even “about to commit a cognizable offence” even on “reasonable suspicion”.

### What are ‘disturbed’ areas?

- The state or central government considers those areas as ‘disturbed’ “by reason of differences or disputes between members of different religious, racial, language or regional groups or castes or communities.

### How is a region declared ‘disturbed’?

Section (3) of the Afspa empowers the governor

of the state or Union territory to issue an official notification in The Gazette of India, following which the Centre has the authority to send in armed forces for civilian aid. Once declared ‘disturbed’, the region has to maintain status quo for a minimum of three months, according to The Disturbed Areas (Special Courts) Act, 1976.”

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## Indo-Myanmar agreement on land border crossing

**Context:** The Union Cabinet has approved an agreement between India and Myanmar on land border crossing which the government said would enhance economic interaction between people of the two countries.

### *Significance of the agreement:*

- The agreement will also facilitate movement of people on the basis of valid passports and visas which will enhance economic and social interaction between the two countries.
- It is expected to provide connectivity and enhance interaction of the people from north-eastern states of India with those of Myanmar.
- The agreement will also safeguard the traditional rights of the largely tribal communities residing along the border which are accustomed to free movement across the land border.

### *Background:*

India shares a 1643-km long border with Myanmar in Arunachal Pradesh, Nagaland, Manipur and Mizoram. Despite threats, the India–Myanmar border has the Free Movement Regime (FMR), which allows the tribes living along the border to travel 16 km across the boundary without visa restrictions. There are over 250 villages with over 300,000 people living within 10 km of the border who frequently cross the border through 150 small and large, formal and informal, border crossings.

## Villagers along India-Myanmar international border to get passes

India and Myanmar are all set to streamline free movement of people within 16 km along their borders. The Centre has asked the four states that share unfenced border with Myanmar to distribute “border pass” to all the residents living within 16 km from the boundary line. It has also asked the governments of Arunachal Pradesh, Nagaland, Manipur and Mizoram to enrol the border residents under Aadhaar on war footing.

### About the border pass:

The border pass will be given only to the domiciles. All

residents going across the border for agriculture, work or to meet relatives should carry the pass at all times. There will be no restrictions on their movement.

### Background:

Both the countries had been intending to put a system in place after India raised the issue of movement of extremists and smugglers freely across the border. On January 3, the Union Cabinet had approved the agreement between India and Myanmar on land border crossing which the

government said would enhance economic interaction between the people of the two countries.

### Facts for Prelims:

India and Myanmar share an unfenced border of 1,643 km, touching Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km) and Mizoram (510 km).



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## Cryptocurrencies are a Ponzi scheme, warns FinMin

The spurt in the prices of Bitcoin and other cryptocurrencies seems to have rung an alarm bell, with the Finance Ministry expressing concern and likening them to Ponzi schemes.

The ministry has cautioned against investing in them. Noting the “phenomenal increase” in the price of virtual currencies (VCs), including Bitcoin, in India and globally, it said, “VCs don’t have any intrinsic value and are not backed by any kind of assets. The price of bitcoin and other VCs is entirely a matter of speculation resulting in spurt and volatility in their prices.”

### Concerns:

Virtual currency (VC) transactions are encrypted and are likely being used for terror-funding, smuggling, drug trafficking and money laundering. Besides, VCs are not reliable as they are stored in digital/electronic format, making them vulnerable to hacking and malware attack.

### Background:

- The government of India is yet to introduce regulations covering the digital currency market, but it already created an interdisciplinary committee to research and to develop a regulatory framework for the sector. The committee’s members included the country’s central bank, the Reserve Bank of India (RBI).
- Meanwhile, the Indian Supreme Court has issued an appeal to the government in November to start the drafting of a regulatory framework to ‘control the flow of Bitcoin’ in the country.
- Despite its latest warning, the finance ministry has not implemented a total ban on virtual currency trading and has not announced any measures that will curb the adoption and trading of digital currencies in India.

### What are Ponzi Schemes?

- A Ponzi can be any scheme in which the

returns to promised to older investors are paid from the money collected from new investors, and not actual profits from the investments. Ponzi schemes were named after Charles Ponzi, a clerk in Boston who, almost a century ago, duped thousands of investors into speculating on phenomenal returns from the humble postage stamp.

- Those running a Ponzi scheme reel in their first set of investors by introducing them to a great opportunity. They may even pay up the fanciful returns out of their personal funds. But once investors begin to bite, they build a house of cards, using money from the stream of new entrants, to pay the older patrons.
- Even if profits are made from the investments, more often than not, the scheme operators siphon it off to private accounts. As long as new investors are willing to sign up, the Ponzi scheme works. But when the flow of fresh money dwindles, the house of cards collapses.



## UIDAI introduces 2-tier security to shield Aadhaar data

In the wake of reports of an alleged breach of the Aadhaar database published in a newspaper last week, the Unique Identification Authority of India (UIDAI) has rolled out a new two-tier security process that will come into effect from June 1.

### *About the new security process:*

- The UIDAI has introduced the concept of a virtual

ID which an Aadhaar holder can use in lieu of his/her Aadhaar number at the time of authentication, besides sharing of ‘limited KYC’ with certain agencies.

system. For this, a 72 character alphanumeric ‘UID Token’ will be generated for “system use”. UID token allows an agency to ensure uniqueness of its beneficiaries, customers etc. without having to store Aadhaar number in their databases.

- **What is VID?** A Virtual ID (VID) will be a temporary 16-digit random number mapped with the Aadhaar number. There can only be one active and valid VID for an Aadhaar number at any given time and it will not be possible to derive the Aadhaar number from VID. The VID authentication will be similar to using Aadhaar numbers. However, since a VID is temporary, agencies will not be able to use it for de-duplication. Only the Aadhaar holder will be able to generate a VID and no other entity, including authentication user agencies (AUAs), can do it on their behalf.
- **Limited KYC:** To address the issue of storage of Aadhaar number within various databases, the UIDAI has brought in the concept of limited KYC. It has categorised its AUAs into Global AUAs and Local AUAs wherein the latter will get access to only need based or limited KYC details. AUAs, which by law are required to use Aadhaar number in their KYCs, will be categorised as Global AUAs and have access to Full e-KYC and the ability to store Aadhaar numbers within their system.
- **UID Token:** Once storage of Aadhaar number is restricted and since VID is temporary, agencies need a mechanism to uniquely identify their customers within their

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## Cyber Crime Coordination Centre

**Context:** The government has set a deadline of February this year to operationalise the Indian Cyber Crime Coordination Centre. The Home Minister had announced the setting up of I4C in 2016 to deal with all types of cyber crime at the national level.

### *Need for surveillance:*

Asia is the region most targeted by cyber-attackers, resulting in significant economic losses. As the region continues to play a key role in the global economic market, these cyber threats are expected to increase. Over 460 million people in India currently use the internet, leaving them vulnerable to online criminals – both individuals and organised syndicates.

### *Way ahead:*

The government has decided to hire IT experts from premier public and private institutes, including IITs, to help fight new age crimes like online fraud, hacking, identity theft, dark net, trafficking, child pornography, online radicalisation and cyber-terrorism and prepare a roadmap for Indian Cyber Crime Coordination Centre.

### *About the Indian Cyber Crime Coordination Centre:*

The Indian Cyber Crime Coordination Centre will be set up under the newly created Cyber and Information Security (CIS) division of the MHA. CIS will have four wings, namely security clearance, cybercrime prevention, cyber security and information security. The I4C will assist in centralising cyber security investigations, prioritise the development of response tools and bring together private companies to contain the menace.



## Crime and Criminal Tracking Network System (CCTNS)

**Context:** Coimbatore police, as part of the Crime and Criminal Tracking Network System (CCTNS), have launched the facility to serve summons to witnesses through Short Messaging Service (SMS) on mobile phones.

### Background:

Tamil Nadu state police have successfully implemented the CCTNS mission mode project under National e-Governance programme in all the 1,913 FIR registering units of the Tamil Nadu police.

What it does?

- The Project will interconnect about 15000 Police Stations and additional 5000 offices of supervisory police officers across the country and digitize data related to FIR registration, investigation and charge sheets in all Police Stations.
- It will not only automate Police functions at Police station and higher levels but will also create facilities and mechanism to provide public services like registration of online complaints, ascertaining the status of case registered at the police station, verification of persons etc.
- In 2015, an additional objective of establishing a basic platform for an Inter-operable Criminal Justice System (ICJS) was added to the Project.

Benefits:

- ☐ The Full implementation of the Project with all the new components would lead to a Central citizen portal having linkages with State level citizen portals that will provide a number of citizen friendly services like Police Verification for various purposes including passport verification, reporting a crime including cyber-crime and online tracking of the case progress etc.
- ☐ The project will enable National level crime analytics to be published at increased

frequency, which will help the policy makers as well as lawmakers in taking appropriate and timely action, it will also enable Pan-India criminal/accused name search in the regional language for improved inter-state tracking of criminal movement. This would lead to development of a national database of crimes and criminals.

### What is CCTNS project?

Crime and Criminal Tracking Network and Systems (CCTNS) is a project initiated in June 2009 which aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing at the Police Station level. This will be done through adoption of principles of e-Governance, and creation of a nationwide networked infrastructure for evolution of IT- enabled state-of-the-art tracking system around “investigation of crime and detection of criminals”. CCTNS is a Mission Mode Project (MMP) under the National e-Governance Plan of Govt. of India.

## Cyber Surakshit Bharat

Recognizing the need to strengthen the cybersecurity ecosystem in India, the Ministry of Electronics and Information Technology (MeitY) has announced the Cyber Surakshit Bharat initiative in association with National e-Governance Division (NeGD) and industry partners.

### About the Cyber Surakshit Bharat:

- **What is it?** Conceptualized with the mission to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments, Cyber Surakshit Bharat will be operated on the three principles of Awareness, Education and Enablement. The primary objective is to keep our data safe and protected.
- **What it does?** It will include an awareness program on the importance of cybersecurity; a series of workshops on best practices and enablement of the officials with cybersecurity health tool kits to manage and mitigate cyber threats.

**Significance:** Cyber Surakshit Bharat is the first public-private partnership of its kind and will leverage the expertise of the IT industry in cybersecurity.

## Global Centre for Cybersecurity

**Context:** In a bid to safeguard the world from hackers and growing data breaches — especially from nation-states —

under the auspices of the **World Economic Forum**.

the World Economic Forum (WEF) has announced a new Global Centre for Cybersecurity.

- The aim of the centre is to establish the first global platform for governments, businesses, experts and law enforcement agencies to collaborate on cybersecurity challenges.
- The centre will draw on the Forum’s government and industry support to work towards a more secure cyberspace through its established multistakeholder approach.

**The centre will focus on the following aims:**

- Consolidating existing cybersecurity initiatives of the World Economic Forum.
- Establishing an independent library of cyber best practices.
- Helping partners to enhance knowledge on cybersecurity.
- Working towards an appropriate and agile regulatory framework on cybersecurity.
- Serving as a laboratory and early-warning think tank for future cybersecurity scenarios.

**Way ahead:**

As a truly borderless problem, cyber-attacks are surpassing the capacities and institutions that are currently dealing with this threat in an isolated manner. Only through collaboration, information exchange and common standards can the global community successfully counter organized digital crime.

**About the Global Centre for Cybersecurity:**

The Global Centre for Cybersecurity will help build a safe and secure global cyberspace. The centre will be based in **Geneva**, Switzerland, and will function as an **autonomous organization**

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## Cybercrime coordination centre

**Context:** The Centre has proposed to set up Indian Cyber Crime Coordination Centre (I4C) in Delhi. It has asked States to establish a similar mechanism in every district. It has also released ₹83 crore for setting up of a cyber forensic training laboratory-cum-training centre for police officials in each State. The funds were given under the Cyber Crime Prevention against Women and Children Scheme.

### About the Indian Cyber Crime Coordination Centre (I4C):

- It is an apex coordination centre to deal with cyber crimes such as financial frauds, circulation of communal and pornographic contents. The Centre will be set up under the newly created Cyber and Information Security (CIS) division of the MHA.
- **What it does?** The I4C will assist in centralising cyber security investigations, prioritise the development of response tools and bring together private companies to contain the menace. It would coordinate with state governments and union territories, and closely monitor the cyber space and social media with due emphasis on vernacular content. The centre would also block those websites which flout India's laws and circulate child porn, and communally and racially sensitive content.

### Background:

Cyber crime cases pose technical, legal and administrative challenges in investigation which require strengthening of the institutional mechanism. Phishing, scanning or probing, website intrusions and defacements, virus or malicious code and denial of service attacks are some types of cyber crimes. National Crime Record Bureau (NCRB) states that 5,693, 9,622 and 11,592 cyber crime cases were registered during 2013, 2014 and 2015, respectively, showing a rise

of 69% during 2013 to 2014 and 20% increase during 2014 to 2015.

### Need for coordination:

The cyber crime cases are of varied types. These range from defacement of government websites, online financial frauds, online stalking and harassment, and data thefts. Each requires specialised investigative skill sets and forensic tools. Therefore, coordination among security agencies is the need of the hour.

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## New night frog species

- Scientists have discovered a new frog species from **Kozhikode's Malabar Wildlife Sanctuary**. The frog species, named Mewa Singh's Night frog, belongs to a genus endemic to the Western Ghats. The frog has been named after wildlife scientist Mewa Singh, in honour of his contributions to behavioural ecology and primate studies.
- **About the frog:** It belongs to genus *Nyctibatrachus* (commonly known as night frogs) endemic only to Western Ghats mountain range. The frog's genetically closest relatives are the Athirappilly night frog (found south of the Palakkad Gap in Thrissur and Idukki) and the Kempholey night frog (found in the northern Western Ghats of Kerala and Karnataka).

**Significance of this discovery:** Frogs in the genus *Nyctibatrachus*, commonly known as night frogs, are found only in the Western Ghats mountain range. The addition of the Mewa Singh's night frog to this group brings the total number of night frogs to 36.

## Two new Ginger species found in the northeast

- Scientists have discovered two new species of Ginger in easternmost districts, Ukhrul in Manipur and Tuensang in Nagaland, both bordering Myanmar.
- **About the new species:** *Hedychium chingmeianum*, the species discovered in Tuensang district, is an epiphytic plant and grows on tall trees, while *Caulokaempferia dinabandhuensis* was found growing in rock crevices, boulders and humus rich soil in the Shirui Hills, where the highest peak stands at an elevation of 2,938 metres. Both the plants are from the family of *Zingiberaceae*, to which the commonly found Ginger (*Zingiber officinale*) belongs.

## India's second-largest rooftop solar plant

- **What?** State-run gas transmission utility GAIL India (GAIL) has commissioned the country's second-biggest rooftop solar power plant.
- **Where?** The solar plant has been commissioned in Uttar Pradesh.

**Where's the largest power plant?** Tata Power Solar has commissioned India's largest solar rooftop project with 12 MW capacity in Amritsar.

## In A First, Saudi Arabia, UAE Introduce VAT

- **What?** Saudi Arabia and the United Arab Emirates have introduced value-added tax, a first for the Gulf which has long prided itself on its tax-free, cradle-to-grave welfare system.

**Details:** It is a five per cent tax on most goods and services to boost revenue. The VAT will be applied on food, clothes, electronics and gasoline, phone, water and electricity bills, as well as hotel reservations.

## China starts collecting environment tax

- China has started collecting an environment tax to better protect the environment and cut pollutant discharge, as the country's Environmental Protection Tax Law took effect on Jan. 1, 2018. This is China's first tax clearly designed for environmental protection, which will help establish a “green” financial and taxation system and promote pollution control and treatment of pollutants.

Under the Environmental Protection Tax Law, which targets enterprises and public institutions that discharge listed pollutants directly into the environment, companies will pay taxes for producing noise, air and water pollutants as well as solid waste. Individuals do not need to pay the tax as it is applicable only to enterprises, public institutions and other business operators.

## GI recognition: Famed Nilambur teak

- Kerala's Nilambur teak *aka* **Malabar teak** has found its place in the Geographical Indications (GI) Registry. GI tag denotes quality and origin of the products and helps keep unscrupulous commercial operators at bay.

**Nilambur teak:** The **golden brown teak** is known for its log dimensions, desired wood figure and wide reputation in the world of trade. Its durability is attributed to the synergistic effect of total extensive components and the resistance to fungal decay to naphthoquinone and derivatives it contains. The hydrophobicity, anti-oxidant properties and oily nature are due to a caoutchouc compound.

## Species we lost in 2017 and the ones that managed to hold on

According to the updated IUCN (International Union for Conservation of Nature) red list, here are the species that were marked as “EXTINCT”:

- **Christmas Island Pipistrelle** : This small bat found exclusively on Christmas Island, Australia was listed as critically endangered last year. Predation, loss of habitat, and diseases were pointed out as causes for its extinction.
- **Christmas Island Whiptail-skink** : Another species endemic to Christmas Island, this lizard went extinct this year. Non-native predators and insecticide poisoning drove it over the edge.
- **Christmas Island chained gekko** : The species is listed as extinct in the wild, which means it is now found only in a captive breeding programme.
- **Gunthers Dwarf Burrowing skink** : Though no record of the skink has been made for more than 125 years, this native of South Africa was officially confirmed to be extinct only this year.

Species placed under the “critically endangered” category:

- **Western Ringtail Possum**: The number for this species has declined by almost 80 per cent in the past 10 years.

Australia’s increasingly dry and hot climate has led to its dramatic decline.

- **Yellow-breasted Bunting**: Loss of roosting site and use of pesticides are major causes of their decline.
- **Plains Wanderer** : Exposure to pesticides, habitat loss, predation by foxes have all affected the survival of this small quail-like bird

**Green Poison Frog, Perret’s Toad, and Rose’s Mountain Toad** are also listed as critically endangered.

## India's second FTII to be set up in Arunachal

Arunachal Pradesh would get its first Film and Television Institute, being set up by the Union Government as part of tapping the potential of the Northeastern region. This would be the second such one in the country.

The first Film and Television Institute of India (FTII) was set up in Pune, an autonomous institute operating under the Information and Broadcasting Ministry.

## Zuma Mission

**What is it?** It is the US government's secret satellite mission. SpaceX has successfully launched the secretive Zuma mission from Cape Canaveral.

## Ancient Rock Art in India Is Oldest Depiction of Supernova

- Scientists in India have discovered rock art that appears to depict a supernova and the surrounding stars, buried inside the wall of an ancient dwelling place. Thought to date from 3,600 BC, the carving would be the oldest-known depiction of such a cosmic event.

**Where was it found?** The carving was found in the Burzahama region in Kashmir, India.



## Matunga Railway Station

**Why in news?** Matunga Railway Station in Mumbai Division of Central Railway has entered Limca Book of Records 2018 for posting all women staff on the station. Matunga Railway Station has become the first station in India which has all women staff managing the operations of the stations. Ladies staff across all departments viz. operating, commercial, RPF, etc. are posted at Matunga Railway Station to make it first of its kind station on Railways.

## International Dharma-Dhamma Conference

- **Context:** 4th International Dharma-Dhamma Conference on “State and Social Order in Dharma-Dhamma Traditions” was recently inaugurated at Rajgir in Nalanda district. The event is being organised as part of the commemorative events to celebrate the Silver Jubilee year of ASEAN-India Dialogue Partnership.
- **Organizers:** Nalanda University, in collaboration with the Centre for Study of Religion and Society, India Foundation, Ministry of External Affairs and the Vietnam Buddhist University, is organising the conference.

**Significance of the conference:** The central theme of the conference is the ideal state and just social order based on dharmic principles. Through this conference it is aimed to facilitate crosspollination of ideas and foster harmony at the global level. In the present era of globalization it is all the more needed to integrate the world through the common bond of Dharma-Dhamma which provides strong thread of interconnectedness. Thus, the conference seeks to explore the shared values of the dharmic traditions, which may provide the guiding light to the troubled world today.

## Goa bird festival

- **Context:** The second edition of the Goa Bird Festival is being held from January 12 to 14 at Cotigao Wildlife Sanctuary, Canacona. The festival will host some of the country's top naturalists, photographers and artists as resource persons. The State Forest department is organising the event with the support of Goa Tourism, the Goa Bird Conservation Network (GBCN) and Birderpics.com.

**Facts:** Cotigao Wildlife Sanctuary was established in 1968 as the second largest National Park in Goa.

## ‘Charlie-435’

**What is it?** It is the state-of-the-art patrol vessel of the Indian Coast Guard which was commissioned at Karaikal in the Union Territory of Puducherry recently. The patrol vessel is equipped with modern navigation and communication systems.