

CURRENT AFFAIRS

**Month of
October-2018**



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CURRENT AFFAIRS OCTOBER-2018

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Current Affairs OCTOBER-2018

NITI AAYOG, UN SIGN SUSTAINABLE DEVELOPMENT FRAMEWORK FOR 2018-2022

Why in News: NITI Aayog and United Nations in India signed the Sustainable Development Framework (UNSDF) for 2018-2022 at an event in New Delhi. The agreement is a reflection of the commitment and efforts made by India towards attaining the Sustainable Development Goals.

Important Points:

- The framework was signed by the NITI Aayog CEO Amitabh Kant and United Nations Resident Coordinator in India Yuri Afanasiev at a special signing ceremony presided over by NITI Aayog Vice Chairperson Rajiv Kumar.
- Rajiv Kumar emphasised that the period between 2018 and 2022 will be a crucial phase in India's development story since the year 2022 marks the 75th anniversary of India's Independence.
- Hence, at such a time, partnership instruments such as the UNSDF assume gain even more significance to accelerate the pace towards building a New India by 2022, an India that is free of poverty and equal for all.

About UNSDF:

- The framework outlines the development cooperation strategy between the Union Government and the United Nations country team in India, in support of the achievement of India's key national development priorities and the Sustainable Development Goals (SDGs).
- The framework was created following a highly participative process, in consultation with government entities, civil society representatives, academia and the private sector.

The key focus areas of the framework include poverty and urbanisation, health, water, sanitation, education, nutrition and food security, climate change, clean energy, and disaster resilience, skilling, entrepreneurship, and job creation and gender equality and youth development.

Under the framework, the United Nations will support the Union Government on south-south cooperation, in partnership with the Ministry of External Affairs. The total planned budget outlay for the implementation of the UNSDF 2018-2022 is approximately Rs 11000 crore, of which 47 percent is planned to be mobilised through the course of implementation from multiple sources, including the private sector and the government. Speaking on the occasion, NITI Aayog CEO Amitabh Kant, highlighted the need to promote innovation in meeting India's development challenges and bringing on board the power of social entrepreneurs and the private sector to act on scale.

Other Details:

- The framework is a step in the direction of the overarching principle of the SDGs to leave no one behind.

- The programmatic work outlined in the UNSDF targets the seven low-income states -Bihar, Chhattisgarh, Jharkhand, MP, Odisha, Rajasthan, UP and the North-East region along with the aspirational districts identified earlier this year by the NITI Aayog.
- The work under the framework will mainly focus on improving the lives of the most marginalised, poor, and vulnerable communities and people in the country, especially women and girls.

The framework also includes a set of UN flagship programs that are aligned with major government schemes. The flagship programmes will aim to provide innovative, multi-sectoral solutions to some of the most pressing development challenges faced by India, while also serving as catalysts for an increased investment of development finance.

The programmes range from affordable housing for the poor to increasing access to clean energy in rural off-grid areas, from protecting all children from vaccine-preventable diseases to quality education for all children and skilling for young people, especially young girls and from ending stunting to improving the child sex ratio.

US, CANADA REACH TRILATERAL TRADE

PACT WITH MEXICO TO REPLACE NAFTA

Why in News: The United States and Canada reached an eleventh-hour deal to replace the North American Free Trade Agreement (NAFTA) and maintain a trilateral trade bloc with Mexico. The agreement was announced just before a Sunday midnight deadline imposed by Washington and a rare, late-night emergency Cabinet meeting convened by Canadian Prime Minister Justin Trudeau to discuss the deal.

Important Points:

The "new, modernized trade agreement" will replace the 1994 NAFTA trade bloc and be known as the US-Mexico-Canada agreement (USMCA), according to a joint statement issued by US Trade Representative Robert Lighthizer and Canadian Foreign Affairs Minister Chrystia Freeland.

"USMCA will give our workers, farmers, ranchers and businesses a high-standard trade agreement that will result in freer markets, fairer trade and robust economic growth in our region," the joint statement said. "It will strengthen the middle class, and create good, well-paying jobs and new opportunities for the nearly half billion people who call North America home."

Canada, the US' second largest trade partner, was excluded from a revamped NAFTA deal separately negotiated between Mexico and the US in August after almost a year of negotiations. They had said a bilateral agreement would move forward without Canada, which had entered into tough negotiations with the United States in recent weeks.

The US and Mexico were pushing to get the new deal through their legislatures before Mexican President-elect Andres Manuel Lopez Obrador takes office on December 1. In order to do so, the administration of US President Donald Trump needed to make public the document to allow for a legally mandated 60-day review period.

Among the tough issues that needed to be hashed out between Ottawa and Washington were access to Canada's dairy sector, tariffs and a dispute resolution mechanism that the US wanted to scrap.

Under the terms of the new deal, the trade dispute mechanism Canada had sought to preserve will be maintained. The agreement also exempts tariffs on 2.6 million automobiles. Canada also agreed to open up some of its dairy market to US producers.

Following the announcement, the Canadian dollar rose to its highest value since May against the US dollar.

Trump has wanted a complete overhaul of NAFTA, arguing the quarter-century-old pact has been unfair to the United States. In August last year, he started a review of the trade pact with Mexico and Canada that opened up negotiations.

NAFTA Background:

In 1994, the North American Free Trade Agreement (NAFTA), a state-of-the-art market-opening agreement, came into force. Since then, NAFTA has systematically eliminated most tariff and non-tariff barriers to trade and investment between Canada, the United States, and Mexico. By establishing a strong and reliable framework for investment, NAFTA has also helped create the environment of confidence and stability required for long-term investment.

GOVERNMENT SETS UP COMPETITION LAW REVIEW COMMITTEE

Why in News: Union Finance Ministry has constituted nine-member Competition Law Review Committee to ensure that legislation is in tune with changing business environment. It will be chaired by Corporate Affairs Secretary Injeti Srinivas and includes Insolvency and Bankruptcy Board of India (IBBI) Chairperson M S Sahoo and Competition Commission of India (CCI) Chairperson as members. The committee was constituted in pursuance of Government's objective of ensuring that legislation is in sync with needs of strong economic fundamentals.

What led to the formation of the Competition Law Review Committee?

- The Competition Act was passed in the year 2002 and the Competition Commission of India was set up as a follow up to the Act. The Commission started functioning from 2009 and contributed immensely towards the development of competition and fair play practices in the Indian market.
- The Competition Act lays the ground rules for fair trade practices and prohibits practise of dominance, bid rigging, predatory pricing, and mergers of companies that have adverse effect on competition.
- During the past nine years, the size of the Indian Economy has grown immensely and India is today amongst the top five Economies in the World and is expected to grow further.
- Considering this, the government felt the need of strengthening the Competition Law and recalibrate it to promote best practices which enable citizens to achieve their aspirations and subsequently, the Committee was formed.

MEMBERS OF THE COMPETITION LAW REVIEW COMMITTEE

Designation in the Committee	Name	Profession
Chairperson	Injeti Srinivas	Secretary, Ministry of Corporate Affairs
Member	Sudhir Mittal (Acting Chairperson of CCI)	Chairperson, Competition Commission of India (CCI)
Member	MS Sahoo	Chairperson, Insolvency and Bankruptcy Board of India
Member	Haigreve Khaitan	Partner at Khaitan & Co
Member	Harsha Vardhana Singh	Chairman, IKDHVAJ Advisers LLP
Member	Pallavi Shardul Shroff	Advocate at Shardul Amarchand Mangaldas & Co.
Member	Dr. S Chakravarthy	IAS (Retd.), Visiting Professor at ASCI
Member	Aditya Bhatta-charjea	Professor of Economics, Delhi School of Economics
Member	-	Joint Secretary (Competition), MCA
Secretary		

Terms of References of the Committee:

To review the Competition Act and its rules and regulations to change business environment and bring necessary changes, if required

To look into international best practices in the competition fields, especially anti-trust laws, merger guidelines and handling cross border competition issues

To study other regulatory regimes, institutional mechanisms and government policies which overlap with the Competition Act

- Any other matters related to competition issue and considered necessary by the Committee.

● The Committee will submit its report within three months from the date of its first meeting.

Background:

The Competition Act was passed in 2002 and Competition Commission of India (CCI) was set up in 2009. However, since inception of the commission, the size of the economy has grown immensely making it one of the fifth largest economies in the world. In this context, it was seen necessary to that Competition Law is strengthened and re-calibrated to promote best practices which result in the citizens of this country achieving their aspirations and value for money.

CHINA TESTS THREE HYPERSONIC AIRCRAFT MODELS TOGETHER

Why in News: In a first, China has successfully tested three types of scaled-down hypersonic aircraft models together whose speed will be adjustable for a precision strike towards an unstoppable nuclear-capable weapon.

Important Points:

Tests of the three scaled-down models of the "wide-speed-range vehicles", which can fly at from hypersonic velocity to lower than the speed of sound, were carried out on September 21 at the Jiuquan Satellite Launch Centre in northwest China. In the news footage, three models representing differently shaped designs, code named D18-1S, D18-2S and D18-3S were lifted and then dropped from a balloon.

Another media report said that the speed of the hypersonic aircraft will be adjustable.

This was China's first test of this type of hypersonic aircraft whose speed will be adjustable for a precision strike towards an unstoppable nuclear-capable weapon, the Hong Kong based South China Morning Post reported. Last month, Chinese scientists conducted their first experimental flight of a hypersonic glider named Starry Sky 2 that was launched by rocket and then flew on its own shock wave at Mach 6 (six times the speed of sound, or 7,344km/h).

- Once fully developed, its sheer speed would be capable of penetrating any anti-missile defence system currently available.

- "Their technologies can be inter-complementary. They can be combined together and make a hypersonic missile," Hong Kong-based military commentator Song Zhongping told the Post.
- Researchers measured the respective aerodynamic features of three different design shapes, and recorded their processes of falling, accelerating, breaking the sonic barrier, aerodynamic rebound, parachute opening, landing and retrieving, while collecting data, the CCTV report said.

It was to compare and choose from the three designs, said Song, adding that there will be further wind tunnel tests with larger or real-size models before finalising the aerodynamic configuration of the vehicle.

China, whose defence budget this year amounted to USD 175 billion, is investing heavily in defence research and development to catch-up with the US, Russia and the European Union. China has been testing hypersonic glide vehicles since 2014. The United States and Russia have been carrying out similar experiments.

INTERNATIONAL DAY OF NON-VIOLENCE

Why in News: The International Day of Non-Violence was observed across the world on October 2, 2018, on the occasion of the birth anniversary of Mahatma Gandhi, the leader of Indian independence movement and pioneer of the philosophy and strategy of non-violence.

The day is commemorated every year to disseminate the message of non-violence, including through education and public awareness. The UN resolution, which established the commemoration, reaffirms that the universal relevance of the principle of non-violence and the desire to secure a culture of peace, tolerance, understanding and non-violence.

Introducing the resolution in the General Assembly on behalf of 140 co-sponsors, India's Minister of State for External Affairs, Anand Sharma had said that the wide and diverse sponsorship of the resolution was a reflection of the universal respect for Mahatma Gandhi and of the enduring relevance of his philosophy.

What do we mean by Non violence?

- The principle of non-violence, which is also known as non-violent resistance, rejects the use of physical violence in order to achieve social or political change.
- This form of social struggle has been adopted by mass populations all over the world in campaigns for social justice and social change.
- Professor Gene Sharp, a leading scholar on non-violent resistance, defines non-violent action as a technique by which people who reject passivity and submission and who see struggle as essential, can wage their conflict without violence.
- According to Sharp, non-violent action is not an attempt to avoid or ignore conflict. It is one response to the problem of how to act effectively in politics, especially how to wield powers effectively.
- The power and success of non-violence is determined through the cooperation of the populace.

Background

The principle of non-violence, also known as non-violent resistance, rejects the use of physical violence to achieve social or political change. Many groups throughout the world use this method in social justice campaigns. There are three main categories of non-violence action:

- **Protest and persuasion, including marches and vigils.**
- **Non-cooperation.**
- **Non-violent intervention, such as blockades and occupations.**

The UN recognizes a philosophical connection between the human rights principles in its universal declaration and those that Mahatma Gandhi used. Gandhi was born in India on October 2, 1869. He is remembered today for his contributions towards India's freedom and for sharing with the world a doctrine for dealing with injustice and disharmony. He taught people the philosophy of Ahimsa, which encourages the use of non-violence as a tool for the peaceful resolution of differences. India gained its freedom on August 15, 1947, through Gandhi's efforts. He was assassinated on January 30, 1948.

The UN General Assembly came up with a resolution in 2007 to establish the International Day of Non-Violence. The day aimed to spread the message of non-violence, including through education and public awareness, around the world. The resolution reflected universal respect for Gandhi and his philosophy. October 2, which is Gandhi's birthday, was allocated as the day's date. The first International Day of Non-Violence was on October 2, 2007.

2018 NOBEL PRIZE

Why in News: The 2018 Nobel Prize in Physiology or Medicine was jointly awarded to two immunologists James P. Allison (US) and Tasuku Honjo (Japan) for their discovery of Immune checkpoint therapy i.e. cancer therapy by inhibition of negative immune regulation. It was announced by Nobel Assembly at Sweden's Karolinska Institute.

Important Points:

Both immunologists had figured out entirely new principle for cancer therapy by stimulating the ability of immune system to attack tumour or cancer cells more quickly, unlike traditional forms of cancer treatment that directly target cancer cells.

Their discovery has led to treatments targeting proteins made by some immune system cells that act as brake on body's natural defences killing cancer cells.

This therapy is landmark in fight against cancer and has revolutionised cancer treatment. It also has fundamentally changed way to manage cancer.

The Nobel award for physiology or medicine is given to persons whose discoveries have significantly enhanced understanding of life or practice of medicine.

The winners are chosen by Nobel Assembly at Karolinska Institute. The prestigious award carries prize money of 8 million Swedish kroner (US \$1.1 million).

- Medicine is first of the Nobel Prizes awarded each year. It is one of five Nobel Prizes established by Swedish chemist Alfred Nobel, the inventor of dynamite in 1895 in his will.

- German physiologist Emil von Behring was first recipient of this award in 1901 for his work on serum therapy and development of vaccine against diphtheria.
- Gerty Cori was first woman to receive Nobel Prize in Physiology or Medicine in 1947 for her role in elucidating metabolism of glucose.

About Nobel Prize:

The Nobel Prize is a set of six annual international awards bestowed in several categories by Swedish and Norwegian institutions in recognition of academic, cultural, or scientific advances.

The will of the Swedish scientist Alfred Nobel established the prizes in 1895. The prizes in Chemistry, Literature, Peace, Physics and Physiology or Medicine were first awarded in 1901. In 1968, Sweden's central bank Sveriges Riksbank established the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, which, although not being a Nobel Prize, has become commonly known as the Nobel Prize in Economics. The Nobel Prize is widely regarded as the most prestigious award available in the fields of literature, medicine, physics, chemistry, economics and activism for peace.

SATAT INITIATIVE TO PROMOTE COMPRESSED BIOGAS AS ALTERNATIVE FUEL

Why in News: The Union Petroleum Minister, Dharmendra Pradhan will launch the Sustainable Alternative towards Affordable Transportation (SATAT) initiative in New Delhi on October 1, 2018, on the penultimate day of the ongoing Swachhta Hi Seva campaign. The Minister will launch the initiative with the PSU Oil Marketing Companies, inviting Expression of Interest (EoI) from potential entrepreneurs to set up Compressed Bio-Gas (CBG) production plants and make available the biogas in the market for use in automotive fuels.

Objective

The SATAT initiative is aimed at providing a sustainable alternative towards affordable transportation as a developmental effort that would benefit vehicle-users as well as farmers and entrepreneurs.

Important Points:

- The move is expected to boost the availability of more affordable transport fuels and enable better use of agricultural residue, cattle dung and municipal solid waste.
 - It is expected to pave the way for efficient municipal solid waste management and help in tackling the problem of polluted urban air due to farm stubble-burning and carbon emissions.
- It will boost entrepreneurship, rural economy and employment and provide an additional source of revenue to farmers.
- It will also help achieve the nation's climate change goals and bring down the dependency on natural gas and crude oil imports and act as a buffer against crude oil and gas price fluctuations.
- The Compressed Bio-Gas networks can be integrated with city gas distribution (CGD) networks to boost supplies to domestic and retail users in existing and upcoming markets. Besides retailing from OMC fuel stations, Compressed Bio-Gas can at a later date be injected into CGD pipelines too for efficient distribution and optimised access of a cleaner and more affordable fuel.

How is Compressed Biogas produced?

The Bio-gas is produced naturally through a process of anaerobic decomposition from waste and biomass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste and sewage treatment plant waste. After purification, it is compressed and called CBG, which has pure methane content of over 95 per cent.

The other waste streams including rotten potatoes from cold storages, rotten vegetables, dairy plants, chicken and poultry litter, food waste, horticulture waste, forestry residues and treated organic waste from industrial effluent treatment plants (ETPs) can also be used to generate biogas.

Compressed Biogas plants:

- The plants are proposed to be set up mainly through independent entrepreneurs. The entrepreneurs would be able to separately market the other by-products from these plants, including bio-manure and carbon-dioxide to enhance returns on investment.

- The CBG produced at these plants will be transported through cylinders to the fuel station networks of OMCs for marketing as a green transport fuel alternative.
- It is planned to roll out 5,000 Compressed Bio-Gas plants across India in a phased manner, with 250 plants by the year 2020, 1000 plants by 2022 and 5000 plants by 2025.
- These plants are expected to produce 15 million tonnes of CBG per annum, which is about 40 per cent of current CNG consumption of 44 million tonnes per annum in the country.
- At an investment of approx. Rs 1.7 lakh crore, this initiative is expected to generate direct employment for 75,000 people and produce 50 million tonnes of bio-manure for crops.

Background

- The Compressed Bio-Gas is exactly similar to the commercially available natural gas (CNG) in its composition and energy potential. Hence, it can be used as an alternative, renewable automotive fuel.
- The potential for Compressed Bio-Gas production from various sources in India is estimated at about 62 million tonnes per annum.
- The 1,500-strong CNG stations network in the country currently serve about 32 lakh gas-based vehicles.
- The Working Group on Biofuels, set up under the National Policy on Biofuels 2018, is in the process of finalising a pan-India pricing model for Compressed Bio-Gas.
- The National Policy on Biofuels 2018 emphasises on active promotion of advanced biofuels, including CBG.
- The Union Government had launched the GOBAR-DHAN (Galvanising Organic Bio-Agro Resources) scheme earlier this year to convert cattle dung and solid waste in farms to CBG and compost. The scheme proposes to cover 700 projects across the country in 2018-19.

WORLD HABITAT DAY 2018

Why in News: The World Habitat Day was observed every year on first Monday in October all over the world. This year it was observed on 1 October 2018 with theme 'Municipal Solid Waste Management'. The purpose of day is to reflect on state of cities and towns and basic human right to adequate shelter. It also aims to remind world of its collective responsibility for habitat of future generations.

This year's theme aims to highlight issue of solid waste management as global issue that affects everyone. It seeks to bring change in public attitudes to minimize waste and stop littering, regularization of informal waste pickers, increase recycling and reusing, solid waste planning including adequate landfill sites to improve current state of solid waste management in cities across the world and save money to become 'Waste-Wise Cities'.

Important Points:

The main event was held in Nairobi, Kenya. The main aim behind the observance of this year's World Habitat Day is to address the municipal solid waste management challenge with a slogan 'Waste-Wise Cities'. The theme aims to:

- Raise awareness that Municipal solid waste is a global challenge that needs to be addressed
- Facilitate policy dialogue and form partnerships
- Promote innovative solutions to municipal solid waste management
- Mobilise resources to address the municipal solid waste challenges

The Solid Waste Management has become a global issue in recent years. The amount of waste produced by individuals is growing daily and often costs local authorities a large proportion of their budget.

In 2010, every day 0.8 kilograms of waste was produced by every person in the world. The amount of total waste generated is expected to triple to 5.9 billion tons a year by 2025 due to ineffective waste management strategies.

- Unplanned and poor waste collection and disposal can lead to serious health problems from uncontrolled dump sites.

Background

- The United Nations has designated the first Monday of October of every year as World Habitat Day. The day was established by United Nations General Assembly (UNGA) through Resolution 40/202 in 1985 and was first celebrated in 1986.
- Since then it is observed each year with new theme to promote sustainable development policies that ensure adequate shelter for all. The day intends to remind the world of its power and responsibility to shape the future of all cities and towns.
The United Nations Human Settlements Programme in 1989 launched the 'UN-Habitat Scroll of Honour award'. It is the most prestigious human settlements award in the world.
Every year, World Habitat Day takes on a new theme to promote sustainable development policies that ensure adequate shelter for all.

WHO LAUNCHES FIRST GLOBAL GUIDELINES ON SANITATION AND HEALTH

Why in News: The World Health Organization (WHO) has launched first global guidelines on sanitation and health. These guidelines summarize evidence on effectiveness of range of sanitation interventions. They also articulate role of health sector in maximizing health impact of sanitation interventions.

Important Points:

The new WHO Guidelines on Sanitation and Health summarize the evidence on the effectiveness of a range of sanitation interventions and provide a comprehensive framework for health-protecting sanitation, covering policy and governance measures, implementation of sanitation technologies, systems and behavioural interventions, risk-based management, and monitoring approaches.

Critically, the guidelines articulate the role of the health sector in maximizing the health impact of sanitation interventions.

- The guidelines also identify gaps in the evidence-base to guide future research efforts to improve the effectiveness of sanitation interventions.

Importance of the guidelines:

- Poor sanitation is a major factor in transmission of neglected tropical diseases. Billions of people live without access to even the most basic sanitation services.
- WHO developed the new guidelines on sanitation and health because current sanitation programmes are not achieving anticipated health gains and there is a lack of authoritative health-based guidance on sanitation.
By adopting WHO's new guidelines, countries can significantly reduce the diarrhoeal deaths due to unsafe water, sanitation and hygiene. For every US \$1 invested in sanitation, WHO estimates a nearly six-fold return as measured by lower health costs, increased productivity and fewer premature deaths.

Background:

Worldwide, 2.3 billion people lack basic sanitation (with almost half forced to defecate in the open). They are among the 4.5 billion without access to safely managed sanitation services - in other words a toilet connected to a sewer or pit or septic tank that treats human waste. Without proper access, millions of people the world over are deprived of the dignity, safety and convenience of a decent toilet.

Sanitation is a fundamental foundation of human health and development and underpins the core mission of WHO and ministries of health worldwide. WHO's Sanitation and Health Guidelines are essential to securing health and wellbeing for everyone, everywhere.

About World Health Organization (WHO):

WHO is specialized agency of United Nations that acts as coordinating authority on international public health. It was established on 7 April 1948, it succeeded the Health Organization, which was an agency of the League of Nations. It is a member of UN Development Group (UNDP). It is headquartered at Geneva. WHO flag features the Rod of Asclepius as a symbol for healing.

INTERNATIONAL SOLAR ALLIANCE

Why in News: Prime Minister Narendra Modi inaugurated first Assembly of International Solar Alliance (ISA) in New Delhi. The same event also marked inauguration of second Indian Ocean Rim Association (IORA) Renewable Energy Ministerial Meeting and second Global RE-Invest (Renewable Energy Investors' Meet and Expo). United Nations Secretary General Antonio Guterres was present on the occasion.

About ISA:

- The Paris Declaration establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.
- Objectives: 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.

About IORA:

- The Indian Ocean Rim Association (IORA), formerly known as the Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation (IOR-ARC), is an international organisation consisting of coastal states bordering the Indian Ocean.
- The IORA is a regional forum, tripartite in nature, bringing together representatives of Government, Business and Academia, for promoting co-operation and closer interaction among them.
- The IORA is an association of 21 countries and 7 dialogue partners which have identified 6 areas of cooperation including medicinal plants. The Coordinating Secretariat of IORA is located at Ebene, Mauritius.



RE-Invest:

It is global platform to explore strategies for development and deployment of renewables. The 2nd Global RE-Invest was built upon success of RE-Invest 2015. It provided international forum to established players as well as new segments of investors and entrepreneurs to engage, ideate and innovate. It also showcased India's green energy market and Government's efforts to scale up capacity to meet national energy demand in socially, economically and ecologically sustainable ways. Globally, India stands fifth in renewable power, fourth in wind power and fifth in solar power installed capacity. India is one of world's largest green energy markets with exponential increase in demand and supply.

JUSTICE RANJAN GOGOI TAKES OATH AS 46TH CHIEF JUSTICE OF INDIA

Why in News: Justice Ranjan Gogoi took oath as the 46th Chief Justice of India. He succeeds Justice Dipak Misra who retired on October 1. Justice Gogoi was administered the oath of office by President Ram Nath Kovind at Rastrapati Bhavan.

Prime Minister Narendra Modi, Lok Sabha Speaker Sumitra Mahajan, Home Minister Rajnath Singh, Finance Minister Arun Jaitley, former prime ministers Manmohan Singh and HD Deve Gowda were among the dignitaries who were present at Rashtrapati Bhavan's Darbar Hall for the ceremony.

Leader of the Congress in the Lok Sabha Mallikarjun Kharge and Trinamool Congress leaders Sudip Bandhopadhyay and Derek O'Brien were among the opposition leaders present at the event.

About Justice Ranjan Gogoi:

- Justice Ranjan Gogoi, 63, is the first person from the northeast to become the Chief Justice of India. He will have a tenure of a little over 13 months and would retire on November 17, 2019.

Justice Gogoi is known to be a soft-spoken but tough judge. He was among the four judges who, in January, criticised Chief Justice Misra in a rare press conference and accused him of misusing his role of assigning cases as the Supreme Court's Master of the Roster.

Born on November 18, 1954, Justice Gogoi was enrolled as an advocate in 1978. He practised in the Gauhati High Court on constitutional, taxation and company matters. He was appointed as a Permanent Judge of the Gauhati High Court on February 28, 2001. He was transferred to the Punjab and Haryana High Court on September 9, 2010.

He was appointed as Chief Justice of Punjab and Haryana High Court on February 12, 2011. He was elevated to the Supreme Court on April 23, 2012.

IBSAMAR-VI KICKS OFF AT SOUTH AFRICA

Why in News: The sixth edition of IBSAMAR, a joint Multi-National Maritime Exercise between the Indian, Brazilian and South African Navies, is being held at Simons Town, South Africa.

The last edition of IBSAMAR (IBSAMAR V) was conducted off Goa, from 19 - 26 Feb 16. The aim of the exercise is to undertake collective training for participating navies, building interoperability and mutual understanding as well as sharing of best practices.

Exercise IBSAMAR

It was initiated in 2006. It is considered as most visible manifestation of convergence of democratic values, economic interests and maritime cooperation. The last edition of IBSAMAR V was conducted off Goa, India in February 2016 and all previous exercises were held in South Africa.

IBSAMAR 2018:

This edition exercise included both harbour and sea phases with various navigation and seamanship evolutions, force protection exercises, surface weapons firing, antipiracy exercise, anti-air and anti-submarine exercise and flying operations were also conducted. Apart from professional activities, sports and social engagements were also conducted.

• For this exercise, Indian Navy was represented by Guided

Missile Destroyer

Kolkata, Guided Missile

Frigate Tarkash, Long

Range Maritime Patrol Aircraft P8I, Seaking and Chetak helicopters as well as MARCOS contingent. South African Navy was represented by SAS

Amatola, SAS Protea and SAS Manthatisi along with elements of its maritime reaction squadron. Brazilian Navy was represented by frigate BNS Barroso, platoon of Special Forces and air asset of AS350 Ecureuil.

IBSA:

It is international tripartite grouping for promoting international cooperation among India, Brazil, South Africa. It aims at galvanizing South-South cooperation and greater understanding between three important continents of developing world form Africa, Asia and South America.

The forum provides three countries with platform to engage in discussions for cooperation in field of agriculture, trade, culture, and defence among others. It also plays important role in foreign policies of India, Brazil and South Africa.

IBSA has become instrumental for promoting ever closer coordination on global issues between three large multicultural and multiracial democracies of Asia, South America and Africa. It has contributed to enhancing trilateral India-Brazil-South Africa cooperation in sectoral areas.

OPERATION SAMUDRA MAITRI

Why in News: India has launched massive humanitarian operation Samudra Maitri to provide assistance to earthquake and tsunami victims in Indonesia. The operation was launched after telephonic conversation between Prime Minister Narendra Modi and Indonesian President Joko Widodo and following Indonesia's acceptance of international aid.

About Operation Samudra Maitri:

- Under this operation, India has dispatched two aircraft C-130J and C-17 and three naval ships carrying relief material and personnel to the country.
- C-130J aircraft had carried medical team along with tents and equipments to set up field hospital.
- C-17 aircraft is carried medicines, generators, tents and water to provide immediate assistance.
- Three Indian Navy ships were deployed INS Tir, INS Sujatha and INS Shardul to carry out humanitarian assistance and disaster relief (HADR).

Background

- A shallow earthquake of magnitude 7.5 (richter scale) had struck in neck of Minahasa Peninsula, Indonesia on 28 September 2018 with its epicentre located in mountainous Donggala Regency, Central Sulawesi.
- The earthquake was located 77 km away from provincial capital Palu. This event was preceded by sequence of foreshocks, largest of which was a magnitude 6.1 tremor and followed by localised tsunami which had struck Palu, sweeping shore-lying houses and buildings on its way.
- The combined effects of earthquake and tsunami had led to deaths of at least 1,424 people and injured further 2,549.
- It was deadliest earthquake to strike Indonesia since 2006 Yogyakarta earthquake, as well as deadliest earthquake worldwide so far in 2018. The earthquake also had caused major soil liquefaction in areas in and around Palu.

INDIA AND KAZAKHSTAN AGREE TO BOOST DEFENCE AND MILITARY-TECHNICAL COOPERATION

Why in News: Raksha Mantri Smt Nirmala Sitharaman was on a three-day visit to Astana, Kazakhstan from October 02, 2018 at the invitation of Minister of Defence of the Republic of Kazakhstan Mr. Nurlan Yermekbayev. During the visit, she met her Kazakh counterpart and Minister of Defence and Aerospace Industry Mr. Beibut Atamkulov.

They discussed a wide range of issues relating to defence and military technical cooperation and took stock of the progress that this bilateral relationship has made since the renewal of the MoU on defence cooperation in January 2017. She inspected a Tri-Services Guard of Honour at the Ministry of Defence and also visited the National Defence University where she was shown the Indian Military Art Room (IMAR), which has been established with Indian assistance.

Important Points:

India and Kazakhstan Defence Cooperation includes military-technical cooperation, military education and training, joint military exercises, bilateral exchange of visits and cadet youth exchange programs.

Over 200 Kazakh Defence Forces Personnel have undergone military training in India till date. Both countries successfully conducted a company level joint military exercise 'KAZIND-2018' in South Kazakhstan, last month.

India and Kazakhstan are bound by historical and cultural ties and this has laid a strong foundation for the multifaceted cooperation. Both countries are Strategic Partners since 2009. Raksha Mantri Smt Nirmala Sitharaman and Minister of Defence Mr. Nurlan Yermekbayev presided over the flag off ceremony of the Kazakhstan contingent that will join the Indian contingent at United Nations International Peacekeeping Force in Lebanon.

India's partnership with Kazakhstan in UN

- Peacekeeping reflects its desire to support Kazakhstan in its contribution to global peace. The contingents of both countries worked together over the past one year to prepare for this joint deployment. The Kazakh contingent will join the Indian Contingent at Lebanon by the end of this month.
- Smt Nirmala Sitharaman also discussed issues relating to defence production with the Minister for Defence and Aerospace Industry. In this connection, the possibilities of joint production and/or co-production were discussed based upon the relative strengths and experience of both sides. She also discussed regional developments with the Kazakhstan Foreign Minister Mr. Kairat Abdrakhmanov.

The Kazakhstan FM appreciated India's position and experience as a major force in UN Peace Keeping and contributor peace building in various parts of the world under the UN mandate.

Raksha Mantri Smt Nirmala Sitharaman invited the Minister of Defence, Mr. Nurlan Yermekbayev and Minister of Defence and Aerospace Industry, Mr Beibut Atamkulov to visit India and to attend Aero India 2019 to be held in Bengaluru in February 2019. The invitations were well received.

About Aero Space:

The five-day event will be held from 20-24 February 2019. It will comprise a major trade exhibition for the aerospace and defence industries, and public air shows. "Besides global leaders and big investors in aerospace industry, the show will also see participation by think-tanks from across the world. It will provide a unique opportunity for exchange of information, ideas and new developments in the aviation industry.

About Kazakhstan:

Kazakhstan has emerged as the second largest economic partner for India. Kazakhstan is natural resources, minerals, oil and gas and chemical products. It is the largest exporter of Uranium to India.

FIRST REGIONAL CONFERENCE ON 'WOMEN IN DETENTION AND ACCESS TO JUSTICE'

Why in News: The Bureau of Police Research and Development (BPR&D), Ministry of Home Affairs is organising the First ever Regional Conference at Shimla on 'Women in Detention and Access to Justice' in collaboration with the Prison Department, Himachal Pradesh.

Important Points:

This conference is organised with a view to provide a platform for the prison personnel of all ranks at the national level to share their candid views on various operational as well as administrative issues not only with their counterparts, but also with other experts of national repute in this field.

The conference also seeks to identify best practices and standards in the working of Correctional Administration to meet new challenges in the present day's context to bring out prison reforms in objective terms.

This event would also promote research and developmental activities on the functioning of the Correctional Administration across the country on the one hand and nudge to develop a scientific approach among the various Correctional Administration in a professional manner.

As of 2015, there are 4,19,623 persons in jail in India, of which, 17,834 (about 4.3%) are women. Of these, 11,916 (66.8%) are undertrial prisoners. There is an increasing trend in the number of women prisoners - from 3.3% of all prisoners in 2000 to 4.3% in 2015.

A majority of female inmates are in the age group of 30-50 years (50.5%), followed by 18-30 years (31.3%). Of the total 1,401 prisons in India, only 18 are exclusive for women, housing 2,985 female prisoners. Thus, a majority of women inmates are housed in women's enclosures of general prisons.

The following themes have been identified for discussions and deliberations:

1. Reproductive Health Rights of Women Prisoners: National and International Legal Norms
2. Health Needs of Women Prisoners
3. Health, Skill, Rehabilitation and Reintegration of Women Inmates and Their Children
4. Prison Reforms, Structural Managerial and Legal Issues with Focus on Women Inmates & Comparison to Global Norms
5. Neuro-Criminology Program for the Offender
6. Transforming Prisons

Need for reforms:

- Women in prisons face greater hardships than their male counterparts due to many factors such as social stigma, financial dependence on their families or husbands etc. These difficulties are further exacerbated when the woman has children.
- Women have to face numerous problems in prisons owing to inadequacy of female staff which often translates to the reality that male staff becomes responsible for female inmates, which is undesirable.
- Women are not provided with meals that are nutritious and according to their bodily requirements.
- Women are at a most disadvantageous position when it comes to their reintegration in society after release. Many are abandoned or harassed post-release, mainly due to the stigma attached with incarceration, which is even more pronounced in cases of women.
- Women also tend to lose ties with their children over the years, due to inadequate child custody procedures. Also, a robust grievance redressal mechanism was required to tackle cases of sexual harassment, violence and abuse against women in jails.

Way ahead:

Reforms are needed for improving the lives of women under incarceration including the elderly and the disabled, addressing a wide range of issues pertaining to pregnancy and childbirth in prison, mental health, legal aid, reintegration in society and their caregiving responsibilities among others. In this regard, changes in the National Model Prison Manual 2016 have also been suggested to bring it in line with international standards and norms.

INTERNATIONAL COURT OF JUSTICE ORDERS U.S. TO LIFT SANCTIONS ON HUMANITARIAN GOODS' IMPORT BY IRAN

Why in News: International Court of Justice has ordered the United States to lift sanctions on Iran that affect imports of humanitarian goods and products and services linked to the safety of civil aviation. The ruling by the International Court of Justice (ICJ) is legally binding.

Important Points:

The U.S. sanctions "have the potential to endanger civil aviation safety" in Iran and sanctions limiting sales of goods required for humanitarian needs such as food, medicines and medical devices "may have a serious detrimental impact on the health and lives of individuals on the territory of Iran."

Treaty of Amity:

Iran alleges that the sanctions breach a 1955 bilateral agreement known as the Treaty of Amity that regulates and promotes economic and consular ties between the two countries.

The treaty was signed when the U.S. and Iran were still allies following the 1953 revolution fomented by Britain and the U.S. that ultimately cemented the rule of Shah Mohammad Reza Pahlavi.

Diplomatic relations were severed following the 1979 Islamic Revolution in Iran and takeover of the U.S. Embassy and the ensuing hostage crisis. However, the treaty remains in force.

About ICJ:

The International Court of Justice (ICJ) is the principal judicial body of the UN. Established in 1946 to replace the Permanent Court of International Justice, the ICJ mainly operates under the statute of its predecessor, which is included in the UN Charter.

It has two primary functions: to settle legal disputes submitted by States in accordance with established international laws, and to act as an advisory board on issues submitted to it by authorized international organizations.

Members of the Court:

The International Court of Justice is composed of 15 judges elected to nine-year terms of office by the United Nations General Assembly and the Security Council. These organs vote simultaneously but separately. In order to be elected, a candidate must receive an absolute majority of the votes in both bodies. In order to ensure a measure of continuity, one third of the Court is elected every three years. Judges are eligible for re-election.

The 15 judges of the Court are distributed as per the regions:

Three from Africa.

Two from Latin America and Caribbean.

Three from Asia.

Five from Western Europe and other states.

Two from Eastern Europe.

Who nominates the candidates?

Every state government, party to the Charter, designates a group who propose candidates for the office of ICJ judges. This group includes four members/jurists of the Permanent Court of Arbitration (machinery which enables arbitral tribunals to be set up as desired and facilitates their work) also picked by the State. Countries not part of the statute follow the same procedure where a group nominates the candidates.

Each group is limited to nominate four candidates, two of whom could be of their nationality. Within a fixed duration set by the Secretary-General, the names of the candidates have to be sent to him/her.

What are the qualifications of ICJ judges?

A judge should have a high moral character.

A judge should fit to the qualifications of appointment of highest judicial officers as prescribed by their respective states or.

A judge should be a juriconsult of recognized competence in international law.

Independence of the Judges:

- Once elected, a Member of the Court is a delegate neither of the government of his own country nor of that of any other State. Unlike most other organs of international organizations, the Court is not composed of representatives of governments.

- Members of the Court are independent judges whose first task, before taking up their duties, is to make a solemn declaration in open court that they will exercise their powers impartially and conscientiously.
- In order to guarantee his or her independence, no Member of the Court can be dismissed unless, in the unanimous opinion of the other Members, he/she no longer fulfils the required conditions. This has in fact never happened.

Background:

Mr. Trump moved to restore tough U.S. sanctions in May after withdrawing from Tehran's nuclear accord with world powers. Iran challenged the sanctions in a case filed in July at the ICJ.

WORLD'S FIRST HYPERLOOP PASSENGER CAPSULE UNVEILED

Why in News: US-based Hyperloop Transportation Technologies (HyperloopTT) unveiled its first full-scale transportation capsule at Puerto de Santa Maria, Spain.

Important Points:

The capsule is 105 feet (32 meters) long and weighs 5 tons. Named as the Quintero One, the product is made almost entirely out of composite material.

It is a transportation system where a pod-like vehicle is propelled through a near-vacuum tube connecting cities at speeds matching that of an aircraft.

The hyperloop concept is a brainchild of Tesla founder Elon Musk. US-based Hyperloop Transport Technology (HTT) claimed it costs \$40 million per kilometre to build a hyperloop system while building a high-speed train line would cost almost twice.

The hyperloop system is being designed to transport passengers and freight.

- The government of Andhra Pradesh has signed a Memorandum of Understanding (MoU) with California-based Hyperloop Transportation Technologies (HTT) to develop India's first Hyperloop route in the state.

The proposed route for the Hyperloop between the city centers of Vijaywada and Amaravati could potentially turn a trip of more than one hour into a 6 minute ride.

- The project will use a Public Private Partnership

(PPP) model with funding primarily from private investors.

How it operates?

In hyperloop transportation, custom-designed capsules or pods are expected to zip smoothly through continuous steel tubes which are held at partial vacuum. The pod which sandwiches the passenger compartment between an air compressor upfront and a battery compartment in the rear is supported by air caster skis at the bottom.

The skis float on a thin layer of air provided under high pressure, eliminating rolling resistance and allowing for movement of the pods at high speeds. These capsules are expected to be driverless with estimated speeds of 1,000 km/h. Linear induction motors that are placed along the tube control the speed of the pod. Electronically-assisted acceleration and braking determines the speed of the capsule.

The Problems Plaguing the Hyperloop:

Constructing a tube hundreds of kilometers long would be an engineering marvel in of itself. However, introducing a tube hundreds of kilometers long that operates at a near perfect vacuum which can support the force of capsule weighing thousands of kilograms as it travels hundreds of kilometers an hour is nothing short of sci-fi fantasy.

Small scale experiments reveal the fundamentals of the idea are sound. Although, in the real world, there are too many factors that cannot be accounted for with a small scale design. In the real world, there are tens of thousands of kilograms of atmospheric pressure which threatens to crush any vacuum chamber.

There is also the problem with thermal expansion which threatens to buckle any large structure without proper thermal expansion capabilities. The Hyperloop would also be stupendously expensive. There are many unavoidable problems facing the Hyperloop that threaten the structural integrity, and every human life on board. The problems can be addressed, but at a great cost.

RBI SHIFTS GEAR FROM NEUTRAL BUT HOLDS RATES

Why in News: Contrary to market expectation, the Monetary Policy Committee of the Reserve Bank of India (RBI) has decided to hold the key policy rate at 6.5% in the fourth bimonthly policy review. However, it changed the stance from neutral to calibrated tightening.

Important Points:

The policy announcement weakened the rupee further and sent the Sensex tumbling 800 points.

Rate hike expectations were running high after the U.S. Fed increased the rate in the last week of September and also because the rupee was under severe stress.

The RBI action seems to indicate that it was more worried about liquidity and hardening of bond yields than inflation as it lowered its forecast.

"The depreciation of the rupee has been in some respects moderate in comparison to several other EME [emerging market economies] peers," said Urjit Patel, Governor, RBI. "By end-September, the rupee has depreciated in nominal effective terms by 5.6% from end-March. In real effective terms, the rupee's depreciation has been 5%," he said, adding that India is not immune to global spillovers from external factors.

The RBI lowered inflation forecast to 3.9-4.5% for the second half of the current financial year from the 4.8% projected earlier and to 4.8% for Q1 of 2019-20 from 5%.

"While the projections of inflation for 2018-19 and Q1:2019-20 have been revised downwards from the August resolution, its trajectory is projected to rise above the August 2018 print," the RBI said.

The rupee breached the 74 a-dollar-mark to touch 74.22 before closing the day at 73.77, down 0.24% from its previous close. Bond prices rallied with the yield on 10-year benchmark bond dropping 13 bps to close at 8.02%.

On changing the stance of the monetary policy to calibrated tightening from neutral, Mr. Patel said this would mean that the rate cut was off the table in this rate cycle but the RBI was not bound to hike rates at every meeting. The RBI had decided to increase interest rates in the last two policy review meetings by 25 bps on each occasion. "It is clear that the RBI will let the market forces prevail and not try to defend any particular level of exchange rate," said Abheek Barua, chief economist, HDFC Bank.

The RBI's decision on focusing on liquidity is expected to have a sobering impact on interest rates, particularly short-term rates. Banks which raised lending rates early this week in expectation of a rate rise, may refrain from further hikes.

"The lingering concerns seem to be around crude oil prices, global interest rates and the ongoing global developments on the trade front. Given the status quo, we expect short-term rates to ease while long-term yields may trade-range bound," said Lakshmi Iyer, CIO (debt) and head of products, Kotak Mahindra AMC.

Repo Rate:

Repo rate, or repurchase rate, is the rate at which RBI lends to banks for short periods. This is done by RBI buying government bonds from banks with an agreement to sell them back at a fixed rate. When RBI increases Repo Rate, the banks can borrow less at a lower cost and thus need to lend at higher rates. This contributes to hike of the interest rates in markets. When RBI increases the repo rate, the move is generally called a tight monetary policy stance.

Monetary Policy Committee:

In India, the monetary policy is responsibility of RBI. RBI regulates the currency and credit system to secure the monetary stability in India. The main objectives of the monetary policy in India are to maintain the price stability, securing the financial stability and to ensure the adequate flow of credit.

Recommendations for MPC:

Strong recommendations to set monetary policy committee in India had come from Urjit Patel panel report. Prior to this, the B N Srikrishna headed financial sector legislative reforms Commission (FSLRC) had also suggested framing a MPC to meet the challenge of the growing complex economy.

Composition of MPC:

Monetary Policy Committee is an executive body of 6 members. Of these, three members are from RBI while three other members are nominated by the Central Government. Each member has one vote. In case of a tie, the RBI governor has casting vote to break the tie. MPC is required to meet for two days before deciding on rates. Further, it is needed to meet at least four times a year and make public its decisions following each meeting.

Mandate of MPC:

The core mandate of MPC is to fix the benchmark policy interest rate {Repo Rate} to contain inflation within the target level. In that context, RBI is mandated to furnish necessary information to the MPC to facilitate its decision. Government also, if wishes to convey its views, can do so in writing to MPC.

INDIA MOVES UP TO 28TH RANK IN GOVT E-PAYMENT ADOPTION

Why in News: India was ranked 28th among 73 countries in 2018 Government e-Payments Adoption Ranking (GEAR). India has jumped by eight positions in this ranking from 36th in 2011 which reinforces country's progress towards digital transformation. Norway has topped 2018 GEAR list scoring 89.7 points in seven categories.

The 2018 GEAR, an Economist Intelligence Unit (EIU) global Index and benchmarking study commissioned by Visa, ranks governments by quantifying their e-payment capabilities based on various indicators.

The ranking is based on seven parameters viz. Government-to-Citizen (G2C), Citizen-to-Government (C2G), Business-to-Government (B2G), Government-to-Business (G2B) transactions, infrastructure, socio-economic and policy environment.

Performance of India across various categories:

- In the latest study, India is ranked 28th among 73 countries. This is up from 36th rank in 2011.
- **B2C category:** India leads the Business to Government category, along with Australia, Singapore and South Korea. The category refers to the ease with which businesses can calculate and make their tax payments, register and renew their registrations online and digitally calculate their pension fund contributions, thereby making those payments on a periodic basis.
- **G2B category:** At the same time, by simplifying refund and loan application processes, wherein businesses can track status digitally, coupled with dedicated digital portals to submit proposals for government procurement services, India leads the Government to Business category as well.
- The **C2G** category evaluates the extent to which citizens can complete various transactions electronically by assessing six indicators, including online one-stop shops, income tax payments, and obtaining an ID card. India ranks third in this category, along with four other countries, while France and the UAE top the list.
- The **G2C** category captures the extent to which various government transfers like tax refunds, pension and welfare benefits and unemployment benefits can be accessed electronically. In India, while everything pertaining to tax filing and pension and welfare benefits has smoothly migrated to digital, the unemployment benefits system continues to be driven by paper processes, as a result of which the country still lags behind, in 25th place.
- The infrastructure and socio-economic categories examine the supportive infrastructure for e-payments and their acceptance in society at large. With respect to infrastructure, while India has witnessed an increase in Internet penetration over recent years, substantial pockets of communities continue to lack reliable access, leaving country ranked 58th.
- In the socio-economic category, India is ranked 60th out of 73 countries, highlighting an urgent need to focus efforts on enhancing educational levels, as well as improving citizens' and businesses' engagement with Internet-enabled services.

The policy category assesses the policy environment and examines how it spurs e-payments adoption. Though India ranks at a low 40th owing to a few inhibiting policy decisions, the government's efforts to strengthen Intellectual Property Rights (IPR) with an objective to foster innovation and protect country's traditional knowledge could motivate innovation and act as a catalyst businesses to grow. Incentives to consumers and merchants to adopt digital payments are also restricted to selected e-payment methods, potentially limiting the effectiveness of these measures.

FUTURE OF WORK IN INDIA REPORT

Why in News: According to recently released World Economic Forum (WEF) "Future of Work in India" report, companies in India experiencing highest growth prefer hiring men. The study shows that technology-led job growth benefits men more than women and has found that one in three companies preferred hiring men, only one in 10 companies wanted to hire more women.

Important Points:

Jobs in India are experiencing highest growth and companies are hiring women at only 26%. Women in India are entering workforce at slower rate than current female workforce participation. India's female workforce participation is mere 27% and stands 23 percentage points lower than global average.

Currently, a third of companies had no female employees, 71% have fewer than 10% female workers, and only 2.4% have half or more females. The retail sector had most companies with no female employees at 45%, followed by transport and logistics at 36%. Companies in both sectors also stated they prefer hiring men most, at 43 and 48% respectively.

There is overall technology-led job growth, but men are disproportionately reaping benefits as compared to women. Only 11 of the surveyed companies were eager to hire more women and 36% of companies reported a preference for men.

- The workforce is trending toward independent, freelance and informal labour that again also give men advantage. 75% of freelancers are men, and men with ten to 20 years experience are paid 30% more than their female counterparts.
 - It was found that participation of women in freelance work declines with more career experience. The freelance work drops from 37% for women with up to five years experience to 10% for women with more than 10 years experience.
- Of the companies surveyed, it was found that 22% were to replace permanent workers with contract workers in the next five years. It was found that less than quarter of companies provide maternity leave for permanent employees and 10% for contract workers.

WEF Future of Work in India report

It was prepared by WEF and Observer Research Foundation (ORF) after surveying 770 companies, from micro-sized firms to those employing more than 25,000 workers, across four industries - textiles, logistics and transportation, banking and financial services and retail to understand how technology impacts workforce. It also took into consideration worldwide concern that technology adoption may displace human workers, leading to jobless growth.

ASIA'S FIRST DOLPHIN RESEARCH

CENTRE TO COME UP IN BIHAR

Why in News: National Dolphin Research Centre (NDRC) will be set up on the banks of the Ganga river in Patna University campus in Patna, capital of Bihar. It will India's and Asia's first Dolphin research centre. The announcement for the centre was made on the occasion of Dolphin day (October 5), observed in Bihar for protection and conservation of Gangetic river dolphin to create awareness to save endangered species. NDRC will play important role in strengthening conservation efforts and research to save endangered mammal whose population is decreasing. Bihar is home to around half of the country's estimated 3,000 dolphin population.



Gangetic river dolphin:

Gangetic river dolphin (scientific name: *Platanista gangetica*) is one of the four freshwater dolphin species in the world. The other three are found in Yangtze river, Indus river in Pakistan and Amazon river. Gangetic river dolphin species are found in India, Bangladesh and Nepal.

Gangetic river dolphin is India's national aquatic animal. It is almost completely blind and finds its way and prey using ultrasonic echoes, with sound being everything for them to navigate, feed, escape danger, find mates, breed, nurse babies and play.

Gangetic Dolphin's presence signals healthy river ecosystem. Dolphins prefer water that is at least 5-8 feet deep and are usually found in turbulent waters where there is enough fish for them to feed on. They prefer deep water with adjoining shallow water and live in zone where there is little or no current that helps them save energy.

Threats: Entanglement in fishing nets, hunting for their oil and meat, poisoning of water supply of river from industrial and agricultural chemicals. They are facing most significant threat from building of dams along the upper course of their habitable rivers. It causing the segregation of populations and has a narrowed gene pool in which dolphins can breed.

Protection Status: Gangetic river dolphins fall under Schedule I of the Indian Wildlife (Protection) Act and have been declared an endangered species by the International Union for Conservation of Nature (IUCN).

- **Conservation Program:** Environment Ministry had launched Ganges River Dolphin Conservation Programme in 1997 to build scientific database of their population status and also study their habitat quality of the dolphins' distribution range.

- **Vikramshila Gangetic Dolphin Sanctuary** located in Bihar's Bhagalpur district of Bihar is India's only dolphin sanctuary is spread over 50 km along the Ganges

National Dolphin Research Centre (NDRC):

1. The much-awaited National Dolphin Research Centre (NDRC), India's and Asia's first is set to be established in Patna.
2. It will play an important role in strengthening conservation efforts and research to save the endangered mammal.
3. University will shift it to Bhagalpur where the number of dolphins is higher.

Threats:

1. The water level has been decreasing and the flow has slowed down. Besides, siltation is increasing in the river. All this is not favorable for dolphins.
2. The Gangetic river dolphin is India's national aquatic animal but frequently falls prey to poachers and is sometimes killed inadvertently after being trapped in plastic fishing nets and hit by mechanized boats.
3. The mammals are being killed at an alarming rate with wildlife officials saying poachers covet them for their flesh, fat and oil.

BILATERAL MARITIME EXERCISE BETWEEN JAPAN AND INDIA (JIMEX 18)

Why in News: The third edition of Japan-India Maritime Exercise (JIMEX), JIMEX 18, began on October 7, 2018 at Visakhapatnam, Andhra Pradesh.

The Japanese Maritime Self Defence Force (JMSDF) Ships under the command of Rear Admiral Tatsuya Fukada, Commander of Escort Flotilla-4 (CCF-4), would be participating in the exercise along with the ships of Eastern Fleet of the Indian Navy from October 7 to 15, 2018.

Important Points:

- The Indian ships participating would be under the command of Rear Admiral Dinesh K Tripathi, Flag Officer Commanding of the Eastern Fleet.
- The Japanese fleet includes JMSDF Ships Kaga, an Izumo Class Helicopter Destroyer; and Inazuma, a Guided Missile Destroyer.



- The Indian Navy will be represented by three indigenously designed and built warships and a Fleet Tanker. The ships participating are multipurpose stealth frigate INS Satpura; Anti-Submarine Warfare Corvette, Missile Corvette INS Kadmatt; and the Fleet Tanker INS Shakti. In addition, one submarine, P8I Long Range Maritime Patrol Aircraft and a number of integral helicopters would also be participating in the exercise.

The second edition of JIMEX was conducted in December 2013 off Chennai.

The conduct of JIMEX-18 after five long years is indicative of resurgence of the Indo-Japanese defence relations and the continued efforts of both Governments to work closely to enhance safety and security in keeping with 'rule based order'.

Also, the Japanese Maritime Self Defence Force is a regular participant in the Malabar series of exercises between Indian and US Navies. In addition, the ships of the two navies have been working in close coordination in Anti-Piracy Operations in the Gulf of Aden (GoA) for the past few years.

JMSDF Ships also participated in the recently concluded MALABAR 18 off Guam (along with Indian and US Navy units) in the Pacific Ocean in Jun; and in biennial multilateral exercise RIMPAC-18 off Hawaii, USA.

About JIMEX-18:

JIMEX-18 is aimed to enhance interoperability, improve understanding and imbibe the best practices of each other.

- JIMEX 18 will comprise a Harbour Phase and a Sea Phase of four days each.

- The Harbour Phase of the exercise will include professional and social interactions between ship's crews, sports fixtures and operational planning for the Sea Phase.
- The Sea Phase would include Anti-Submarine Warfare Exercises, VBSS (Visit, Board, Search and Seizure) Drills, Gun Firings, Cross Deck Helo Operations and coordinated operations in Anti-Submarine/ Anti-Air threat scenarios.

INDIA, RUSSIA SIGN \$5.43 BILLION S-400 MISSILE DEAL

Why in News: India and Russia have concluded the contract for five S-400 'Triumf' missile systems, one of the biggest defence deals in recent times.

However, the U.S. has warned the deal would invoke sanctions under the Countering America's Adversaries Through Sanctions Act (CAATSA) law.

What is CAATSA?

CAATSA is a US federal law that imposed sanctions on Iran, North Korea and Russia. It includes sanctions against countries that engage in significant transactions with Russia's defence and intelligence sectors.

However, any imposition of sanctions on India, which is now a major defence partner, could be disastrous for the bilateral relationship.

What is S-400?

With an ability to locate targets within the range of 600 km, the S-400 brings almost all the Pakistani airbases within India's range.

With a capacity to engage with targets within the range of 400 km, the missile system can simultaneously engage 72 targets and its radars can track 160 targets at a given point in time.

One of the major advantages of the S-400 Triumf is its easy deployability. The system boasts of being deployable within five minutes. India is reportedly planning to create five regiments of the Russian missile defence system.

- While India's adversary on the northern frontiers-China, has already bought the system, some of the other countries to go ahead with the purchases are Turkey, Saudi Arabia along with Morocco and Qatar.

- On the diplomatic level, the purchase would send a strong message to Moscow that India remains its all-weather friend, no matter what the international pressures. This is more significant in light of a growing closeness between Islamabad and Moscow and an alienation of Moscow by the international community in light of the US sanctions.

- It is an air defence missile system that can take down enemies' aircraft in the sky from the surface itself.

The S-400 is an upgraded version of the S-300 systems.

The missile system, manufactured by Almaz-Antey, has been in service in Russia since 2007.

Why does India want S-400

In the words of Air Force Chief BS Dhanoa, S-400 would be like a "booster shot" in the Indian Air Force's (IAF) arm.

India needs to be well-equipped against neighboring threats. Pakistan has over 20 fighter squadrons, with upgraded F-16s, and inducting J-17 from China in large numbers. China has 1,700 fighters, including 800 4-Gen fighters.

Whereas, a shortfall of over fighter squadrons has severely affected IAF's efforts to pose a challenge to the enemies.

No country is facing the kind of grave threat that India is confronted with. Intentions of our adversaries can change overnight. We need to match force level of our adversaries," IAF Chief Dhanoa said at a press conference this week.

ICMR RECOMMENDS VACCINE FOR LIONS

Why in News: Gujarat Forest Department has started vaccination of lions in Gir sanctuary to protect them from a deadly canine distemper virus (CDV) and protozoa infections. The virus is blamed for the death of as many as 23 lions in Gujarat's Gir sanctuary in less than month. The segregated lions are being vaccinated under intensive veterinary care and as per standard protocol and with consultations of national & International lion experts.

Asiatic lions

Asiatic lions are cousins of the African lion. They are believed to have split away 100,000 years ago. They are slightly smaller and have distinctive fold of skin along their bellies. Gir sanctuary is the only wild population of Asiatic lions in the world. According to the last census conducted in 2015, the number of lions in Gir sanctuary stood at 523. It is listed in Schedule I of Wildlife (Protection) Act 1972, has been categories as Endangered on IUCN Red List and is listed Appendix I of CITES.

Canine distemper virus (CDV)

- CDV is highly contagious disease that attacks gastrointestinal, respiratory, central nervous systems, immune system and other vital organs in animals. In most of the cases, the infection is fatal. It is mainly found in wild dogs, jackals and wolves. The disease can be contracted by lions if they eat any animal infected by it. CDV is considered dangerous virus and is blamed for wiping out 30% population of African lions in East African forests.

Important Points:

- The Indian Council for Medical Research (ICMR) has confirmed that the Canine Distemper Virus (CDV) was responsible for lion deaths in the Gir forest of Gujarat and recommended that the remaining lions be vaccinated to prevent further outbreaks. This goes against recommendations by wildlife biologists that wild animals shouldn't be vaccinated.
- The scientists of ICMR-NIV (ICMR-National Institute of Virology) have recommended the existing CDV vaccine which should work as a protective intervention for Gir lions.
- Though 21 lions reportedly died between September and October, the Pune-based ICMR-NIV found CDV responsible for the death of 5 Asiatic lions in Gir. The genetic sequence of the virus was compared to available CDV sequences and it was found to be related to the East African strains.
- The prevalence of this virus and its diversity in wildlife of India has not been studied. Only a few reports are available regarding the detection of CDV in captive wild carnivores which included tigers and red pandas.

- A report in 2016 from Etawah, Uttar Pradesh about CDV infection was confirmed by the Indian Veterinary Research Institute. There dogs were considered to be the primary source of infection and virus transmission, the ICMR added.
- Considering the threat posed by CDV, ICMR has requested the Government of India to take immediate steps to save the Gir lions, which are heading towards extinction.

As a precautionary measure, 300 shots of CDV vaccine have been imported from the U.S.. ICMR has also recommended that the animals should be placed in 2-3 different sanctuaries.

Background:

CDV causes a highly contagious and life-threatening disease in dogs. It also affects different wild carnivores viz., wolves, foxes, raccoons, red pandas, ferrets, hyenas, tigers, and lions.

The prevalence of this virus and its diversity in wildlife of India has not been studied.

Only a few reports are available regarding the detection of CDV in captive wild carnivores which included tigers and red pandas.

CDV had wiped out 30% of the total population of lions in Serengeti forest areas in East Africa.

Considering the threat posed by CDV, ICMR has requested the Government of India to take immediate steps to save the Gir lions, which are heading towards extinction.

HARYANA TO RAISE NSG- TRAINED ANTI-TERROR KAVACH

Why in News: The Haryana Government has decided to set up an Anti-Terrorist Force (ATF) that would comprise specially trained personnel to be recruited from the State police, announced Chief Minister Manohar Lal Khatar.

The Chief Minister was interacting with media persons on the occasion of the release of 'Vikas Geet' CD composed by Information, Public Relations and Languages Department.

Important Points:

- After rigorous training of around 14 weeks by the National Security Guard (NSG) located at Manesar in Gurugram around 150 Haryana police personnel will be inducted into this special force. A batch of 50-50 physically fit personnel of the state police will be inducted in the ATF and member of the force could be transferred to Haryana police.

We have decided to set up an anti-terrorist force. This force will be named 'Kavach'. Select Haryana police recruits will be trained by the National Security Guard (NSG). I have already spoken to the NSG in this regard.

ATF will be headed by an officer of Additional Director General of Police (ADGP) or Inspector General (IG) rank and the headquarter of the special force will be at Gurugram as the NSG campus is already present in the district.

A senior official from the State Government said members of this team are experts in building interventions, counter ambush and VVIP security.

The force personnel will tab on the eye on religious places and at the high-security zones in the State and suspicious activities of the terror groups.

When asked on the need for such a force, Khattar said the ATF will deal with "security challenges in general which we face in the present day. It will also help the state police force to deal with terrorist ideology.

Clarifying that the decision to form this force had nothing to do with any specific threat being faced by the state, the CM said, "Prevention is better than cure."

The finer modalities for setting up the ATF are being worked out.

ARUNACHAL GOVT LAUNCHES 2 AGRI PROGRAMMES

Why in News: Arunachal Pradesh Agriculture Minister Dr. Mohesh Chai launched Chief Minister's Sashakt Kisan Yojana (CMSKY) and the Chief Minister's Krishi Samuh Yojana (CMKSY) schemes. The schemes are to support the farmers to increase production and their income.

Finance Minister Chowna Mein in his 2018-19 budget speech had announced a number of initiatives to transform farm economy in the state.

Important Points:

- The two new initiatives launched today is aimed at fulfilling the vision of the Prime Minister Narendra Modi to double farmer's income by 2022.

- Under these initiatives, all allied departments would be involved under District Agricultural Development Society which is responsible for planning and implementation of farmers oriented development schemes he said.

The minister said the state government is coming out with more policies for the enhancement of farmer's income.

The government plans to link farmers with markets, and develop scientific and integrated ways of farming, he said.

Arunachal Pradesh produces around 4500 mt of fish per year, whereas the requirement is about 15000 mt. So, the state has a ready market for fishes.

Chai also launched the web portal of the department.

The CMSKY would subsume three programmes - the CM's Employment Generation Scheme, the CM's Agri-Mechanization Programme and the CM's Flagship Programme on Tea and Rubber, Agriculture Secretary Mimun Tayeng said.

The CMKSY aims at empowering farmers through cooperative approach, by providing them timely support and marketing intervention for better price realization and income, the secretary explained.

The schemes are to fulfil the vision of the Prime Minister Narendra Modi to double farmer's income by 2022.

The CMSKY would subsume three programmes:

The CM's Employment Generation Scheme

- The CM's Agri-Mechanization Programme
- The CM's Flagship Programme on Tea and Rubber

Also, the State is planning to introduce more policies for the enhancement of the farmer's income.

INDIA AND TAJIKISTAN ANNOUNCE NINE AGREEMENTS

Why in News: The President of India, Shri Ram Nath Kovind, delivered a lecture on the theme of 'Countering Radicalisation: Challenges in Modern Societies'. Addressing the gathering, the President said that he had chosen to speak on the subject for two reasons. First, Tajikistan has done commendable work to tackle this global menace, and the world must recognise its efforts and success. Second, the battle against terrorism, extremism and radicalism must be fought, primarily, in the minds of people - between those who believe in peace and humanity and those who feed on death and destruction. It is a battle of opposing ideas. Talking to the youth as well as to our scholars and pathfinders therefore becomes essential.

Important Points:

- The President said that terrorism does not believe in borders. India, like Tajikistan, is taking on terrorism and extremism. We too face the problem of radicalisation but our inclusive society, where socio-economic partnerships and participatory politics provide everybody with an inherent sense of belonging, has been our most effective bulwark. Plural and democratic India is a land of equal opportunity and equal respect for all. And a growing economy lifts one and lifts all.
- The President commenced his engagements with a visit to the Palace of Nation in Dushanbe. He was received by his Tajik counterpart, President Emamoli Rahmon, and accorded a ceremonial welcome. He also paid his respects at the Ismail Somani Memorial.
- During the discussions the President thanked President Rahmon for the warm reception. He said India is proud of its Strategic Partnership and age-old friendship with Tajikistan. He appreciated the lead Tajikistan has taken in fighting terrorism and said that we need to strengthen our cooperation in combating terrorism, including cross-border terrorism.
- Subsequently, the two Presidents led delegation-level talks. Speaking on the occasion, President Kovind stressed the importance of defence and connectivity projects to advance Indo-Tajik relations for the benefit of the people of both countries.
- The two Presidents also discussed the common challenge of terrorism, particularly in the context of Afghanistan. India announced a grant of US\$ 20 million for developmental assistance projects identified by Tajikistan.

India and Tajikistan announced nine agreements.

These are:

1. An agreement on cooperation in the field of disaster management
2. An agreement between the Indian Council of Agricultural Research and the Tajik Academy of Agriculture Sciences
3. An agreement on peaceful use of space technology for developmental purposes
4. An agreement between the Ministry of Youth Affairs and Sports, Government of India, and the Committee of Youth, Sports and Tourism, Government of Tajikistan
5. An agreement between the Centre Council for Research in Unani Medicine, Ministry of AYUSH, Government of India, and the Tajik State Medical University Abualibh Sino
6. A programme of cooperation between the Ministry of External Affairs, Government of India, and the Ministry of Foreign Affairs, Government of Tajikistan, for the period 2018-21
7. An agreement between the India's Ministry of New and Renewable Energy and Ministry of Energy and Water Resources of Tajikistan for cooperation in renewable energy
8. A cultural exchange programme between the Ministries of Culture of India and Tajikistan for the period 2019-23
9. An agreement for academic and research exchanges between the Vivekananda International Foundation, India, and the Centre for Strategic Researches, Tajikistan

MORE THAN 70 PER CENT OF FATAL ROAD ACCIDENT VICTIMS IN 18-45 YEARS AGE GROUP: REPORT

Why in News: More than 70 per cent of fatal road crashes in 2017 involved adults in the 18-45 years age group, according to a report. As many as 1.47 lakh people died on Indian roads in 4.64 lakh accidents reported during 2017, the report by the Ministry of Road Transport and Highways.

Important Points:

Fatal road accident victims largely constitute young people in the productive age groups. Young adults in the age group of 18 - 45 years accounted for 72.1 per cent of victims during 2017.

People in working age group of 18- 60 years accounted for a share of 87.2 per cent in the total road accident fatalities.

In terms of accidents on road categories, the National Highways accounted for 30.4 per cent of total road accidents and 36 per cent of deaths in 2017.

Accidents on State Highways and other roads constitute 25 per cent and 44.6 per cent respectively. In case of fatality, State Highways and other roads have accounted for 26.9 per cent and 37.1 per cent, respectively.

The State of Tamil Nadu has recorded highest number of road accidents in 2017, but the number of persons killed in road accident has been the highest in Uttar Pradesh.

Major States that achieved significant reduction in road accidents and fatalities in 2017 were Tamil Nadu, Maharashtra, Gujarat and West Bengal.

Uttar Pradesh and Bihar were the worst performers recording large increase in the number of road accidents and fatalities in 2017 as compared to 2016.

The report said that for the second consecutive year, the number of road accidents declined in 2017 over the previous year.

Similarly, the number of persons injured has been on the decline since 2015. In percentage terms, the number of accidents in 2017 has been lower by 3.3 per cent and injuries by 4.8 per cent over that of the previous year, 2016.

- Significantly, the number of persons killed in road accidents during 2017 has been less than that of 2016 by 1.9 per cent.
- There has also been a decline in the number of fatal accidents, i.e., accident involving at least one death.
- A total of 1.34 lakh fatal accidents were reported in 2017, which is 0.9 per cent lower than the 2016 figure of 1.36 lakh.
- Road accident severity measured by the number of persons killed per 100 accidents, however, saw a marginal increase of 0.4 percentage points in 2017 over the previous year.

Among vehicle categories involved in road accidents, two-wheelers accounted for the highest share (33.9) per cent in total accidents and fatalities (29.8 per cent) in 2017.

Light vehicles comprising cars, jeeps and taxis as a category comes a distant second with a share of 24.5 per cent in total accidents and 21.1 per cent in total fatalities.

In terms of road-user categories, the share of two-wheeler riders in total fatality has been highest (33 per cent) in 2017, the statement said adding, pedestrian road-users comprise 13.8 per cent of persons killed in road accidents during 2017.

COCA-COLA AND NESTLE AMONG WORST PLASTIC POLLUTERS BASED ON GLOBAL CLEAN-UPS

Why in News: Coca-Cola, PepsiCo, and Nestlé were the most frequent companies identified in 239 cleanups and brand audits spanning 42 countries and six continents. Over 187,000 pieces of plastic trash were audited, identifying thousands of brands whose packaging relies on the single-use plastics that pollute our oceans and waterways globally.

Important Points:

- Coca-Cola was the top polluter in the global audit, with Coke-branded plastic pollution found in 40 of the 42 participating countries. This brand audit effort is the most comprehensive snapshot of the worst plastic polluting companies around the world.

- This ranking of multinational companies included only brands that were found in at least ten of the 42 participating countries. Overall, polystyrene, which is not recyclable in most locations, was the most common type of plastic found, followed closely by PET, a material used in bottles, containers, and other packaging.
- In North and South America, Coca-Cola, PepsiCo, and Nestlé brands were the top polluters identified, accounting for 64 and 70 percent of all the branded plastic pollution.
- In Latin America, brand audits put responsibility on the companies that produce useless plastics and the governments that allow corporations to place the burden, from extraction to disposal, in mostly vulnerable and poor communities.
- In Europe, Coca-Cola, PepsiCo, and Nestlé brands were again the top identified polluters, accounting for 45 percent of the plastic pollution found in the audits there. In Australia, 7-Eleven, Coca-Cola, and McDonald's brands were the top polluters identified, accounting for 82 percent of the plastic pollution found. And finally, in Africa, ASAS Group, Coca-Cola, and Procter & Gamble brands were the top brands collected, accounting for 74 percent of the plastic pollution there.
- After sifting through nearly 1,200,000 pieces of plastic collected from shores around the world, their packaging was the most frequent identified by volunteers who conducted clean-up operations from the UK to Vietnam.
- In Europe, these three companies made up nearly half of this "brand audit" of plastic, according the Break Free From Plastic, a global movement consisting of nearly 1,300 groups from across the world including Greenpeace, whose member organisations carried out the work.

As 69 MEPs on the European environment committee prepare to vote on new rules to cut back on single-use plastics, a 250,000-strong petition was delivered to the European Parliament calling for producers to pay for their pollution.

Their case was bolstered by the audit, which aimed to give some sense of the plastic footprints left by these companies.

The company was aiming to help collect and recycle a bottle or can for every one we sell, and aim for 50 per cent recycled content, by 2030.

A Nestle spokesperson said: "Our vision is that none of our product packaging, including plastics, should end up in landfill or as litter, including in seas, oceans and waterways. In order to achieve this, we have set ourselves the ambition of ensuring 100 per cent of our packaging is reusable or recyclable by 2025."

PepsiCo said they had also committed to achieving "100 per cent recyclable, compostable or biodegradable packaging by 2025". Everything you've been told about plastic is wrong

The brand audit is a way to name some of the worst polluters and demand they stop producing plastic.

	Top polluters	Percentage of plastic pollution
Europe	Coca-Cola, PepsiCo, and Nestle	45
N. America	Coca-Cola, PepsiCo, and Nestle brands	64
S. America	Coca-Cola, PepsiCo, and Nestlé brands	70
Asia	Coca-Cola, Perfetti van Melle, and Mondelez International	30
Australia	7-Eleven, Coca-Cola, and McDonald	82
Africa	ASAS Group, Coca-Cola, and Procter & Gamble	74

What is Break Free from Plastic Movement?

- The 'Break Free From Plastic Movement' is a global movement that envisions a future free from plastic pollution.
- The movement was launched in September 2016 with nearly 1300 international organisations joining the movement to demand massive reductions in single-use plastics and to push for lasting solutions to the plastic pollution crisis. These organisations share the common values of environmental protection and social justice.

About Greenpeace India

Greenpeace India is the subsidiary of the global environmental group Greenpeace, a non-profit NGO.

Greenpeace has its presence across the world including in Europe, America, Asia and Pacific.

Its operations in India run mainly in four broad campaigns viz. stop climate change, preserving the oceans, sustainable agriculture and preventing another nuclear catastrophe.

GOVERNMENT SETS UP KEY PANEL UNDER NSA TO ASSIST NATIONAL SECURITY COUNCIL

Why in News: Union Government has reconstituted Security Policy Group (SPG) under chairmanship of National Security Advisor to assist National Security Council (NSC) in strategising on matters dealing with external, internal and economic security of the country.

Security Policy Group (SPG)

SPG will be principal mechanism for inter-ministerial coordination and integration of relevant inputs in the formulation of national security policies. It will undertake among other tasks including long-term strategic review of country's security affairs.

Composition of SPG

It will be 16-member body chaired by National Security Advisor (NSA) Ajit Doval. Its members will include NITI Aayog Vice Chairman, Cabinet Secretary, Chiefs of the three defence services, RBI governor, foreign secretary, home secretary, finance secretary and defence secretary.

- It will also include secretary of Department of Defence Production and Supplies, scientific adviser to Defence Minister and secretary (R), Cabinet Secretariat; Secretary, Department of Revenue; secretary, Department of Atomic Energy; Director, Intelligence Bureau and secretary, Secretary, Department of Space; National Security Council Secretariat.
- The reconstitution of SPG puts NSA at top of national security strategy set-up. It also comes close on heels of decision to set up Defence Planning Committee (DPC), a new strategic think-tank under chairmanship of NSA to formulate national military and security strategy and oversee defence acquisitions from abroad. This makes NSA is all-time powerful now and concentrates too much centralised power in one command centre.

SPG Meetings

NSA will convene meetings of SPG and cabinet secretary will coordinate implementation of its decisions by Union Ministries and Departments and state governments. SPG can invite representatives of other ministries and departments to its meetings as and when necessary.

Background

SPG mechanism was first notified in April 1999 during regime of Prime Minister Atal Bihari Vajpayee and later was functioning in previous UPA government too. It was recommended by committee which was set up to look into lapses during Kargil. Earlier, it was then chaired by Cabinet Secretary, the most senior bureaucrat in the government.

About Ajit Doval:

Ajit Kumar Doval, IPS (Retd), PM, PPM, KC (born 20 January 1945) is a former Indian intelligence and law enforcement officer, who, since 30 May 2014, is the 5th and current National Security Advisor to the Prime Minister of India. He had previously served as the Director of the Intelligence Bureau in 2004-05, after spending a decade as the head of its operations wing.

Awards and recognitions:

- Doval was the youngest police officer ever to get the Police Medal for meritorious service. He got it after six years in the police (the norm is at least 17 years' service).
- He was later awarded the President's Police Medal.
- In 1988, Doval was awarded one of the highest gallantry awards, the Kirti Chakra, becoming the first police officer to receive a medal previously given only as a military honour.

ISRO AND ROSCOSMOS HAVE SIGNED AN MOU TO WORK TOGETHER FOR GAGANYAAN

Why in News: Indian Space Research Organisation (ISRO) and Russia's federal space agency Roscosmos State Corporation for Space Activities (ROSCOSMOS) have agreed to work together for first manned space mission Gaganyaan. In this regard, both space agencies have signed MoU at end of delegation level talks between Prime Minister Narendra Modi and Russian President Vladimir Putin in New Delhi.

Important Points:

As per the MoU, ROSCOSMOS has offered ride to Indian astronaut short visit to International Space Station (ISS) on board Soyuz spacecraft for short training mission in 2022.

ISS is habitable artificial satellite in low Earth orbit. Russia had first made the offer to train an Indian astronaut for the mission when External Affairs minister Sushma Swaraj had visited Russia in September 2018.

Historically, India-Russia space cooperation was very strong, with Soviet Union being one of the three partners who helped India get off the ground with its space programme.

- This has continued for several decades included for sending an Indian cosmonaut in a Soviet Soyuz mission in 1982.
- Former Indian Air Force (IAF) pilot Rakesh Sharma was first Indian to travel to space. He was part of Soviet Union's Soyuz T-11 expedition, launched on April 2, 1984 of Interkosmos programme.
- A manned space mission is very different from all other missions that ISRO has so far completed. In terms of complexity and ambition, even the missions to the Moon (Chandrayaan) and Mars (Mangalyaan) are nowhere in comparison. For a manned mission, the key distinguishing capabilities that ISRO has had to develop include the ability to bring the spacecraft back to Earth after flight, and to build a spacecraft in which astronauts can live in Earth-like conditions in space. If India does launch the Gaganyaan mission, it will be the fourth nation to do so after the United States, Russia and China.

Recent technological advancements:

In what appears to be a preparation for the Gaganyaan mission, ISRO recently conducted its first 'pad abort' test that was successful.

The 'pad abort' test or Crew Escape System is an emergency escape measure that helps pull the crew away from the launch vehicle when a mission has to be aborted. The test was conducted at the Satish Dhawan Space Centre, Sriharikota.

The Pad Abort Test demonstrated the safe recovery of the crew module in case of any exigency at the launch pad.

Gaganyaan Mission

It is India's first manned space mission. Under it, India is planning to send three humans (Gaganyatris) into space i.e. in low earth orbit (LEO) by 2022 i.e. by 75th Independence Day for period of five to seven days. The mission was announced by Prime Minister Narendra Modi during his 72nd Independence Day speech.

- Under this mission, crew of three astronauts will conduct experiments on microgravity in space. The crew will be selected jointly by Indian Air Force (IAF) and ISRO after which they will undergo training for two-three years. This mission will make India fourth nation in the world after USA, Russia and China to launch human spaceflight mission.
- Objectives of Gaganyaan Mission: Enhance of science and technology levels in the country, serve as national project involving several institutes, academia and industry, improve of industrial growth, inspire youth, develop technology for social benefits and improve international collaboration.

WORLD'S FIRST BIOELECTRIC MEDICINE

Why in News: It has been claimed by Northwestern University of America and the Washington University School of Medicine that they have developed the world's first bioelectric medicine. Scientists say that this drug can be implanted in the body. It is a biodegradable wireless device that helps in regeneration of nerves and the treatment of damaged nerves. It is believed that this discovery can prove to be very useful in future treatment of nerve cells.

The device has not been tested in humans, but its successful testing on animals (rats) offer promise as future therapeutic option for nerve injury patients.

Important Points:

Bioelectronics medicine is a type of wireless device, it can be controlled by a transmitter outside the body.

It is believed that after implanting it can work in the body for the next two weeks.

After this period the drug is automatically absorbed in the body.

Its size is as small as a small coin and thickness is the society of paper.

Scientists have said that it was used on rats after which positive results were found.

After the experiment, found that bioelectronic device in rats gives electrical implants to the damaged part of the nerves regularly after the surgical repair procedure.

- In this, the nerve cells in the legs of those rats were again increased and later their muscle strength and control also increased.

Advantages of Bioelectronic medicine:

- This biomedical technology provides therapy and treatment over clinically relevant period of time and directly at site where it is needed, thereby reducing side effects or risks associated with conventional, permanent implants. Moreover, these engineered systems provide active, therapeutic function in programmable, dosed format and then naturally disappear into body, without trace.

With this device, it has been shown that electrical stimulation given on scheduled basis during surgery can further enhance nerve recovery. No adverse biological effects from device and its reabsorption were found.

Researchers envision that such transient engineered technologies one day can complement or replace pharmaceutical treatments for a variety of medical conditions in humans.

MOBILE HEALTH APP LAUNCHED BY THE INDIAN AIR FORCE

Why in News: On the occasion of 86th anniversary, the Indian Air Force (IAF) has launched an innovative mobile health App named 'MedWatch' in keeping with the Prime Minister's vision of 'Digital India, Ayushman Bharat and Mission Indradhanush'. Mobile health app to provide health information to users, including first-aid and other health and nutritional topics. It is first of its kind mobile health app built by any of the three armed forces.

Important Points:

The app is conceived by the doctors of IAF and developed in house by Directorate of Information Technology (DIT) with ZERO financial outlay.

'MedWatch' will provide correct, Scientific and authentic health information to air warriors and all citizens of India.

It comprises of host of features like information on basic First Aid, Health topics and Nutritional Facts; reminders for timely Medical Review, Vaccination and utility tools like Health Record Card, BMI calculator, helpline numbers and web links.

Importance:

- 'MedWatch' is the first such health app to be built by any of the three armed forces. It is an initiative of the Indian Air Force.
- Before its launch, it was displayed and showcased to the Prime Minister of India, Narendra Modi.

Air Force Day:

- The Air Force Day is celebrated every year on October 8 to pay rich tribute to the untiring efforts and supreme sacrifice made by veterans, who laid a strong foundation for the service.
- It was celebrated for the first time on October 8, 1932. The day was observed to increase the awareness about the importance of Indian Air Force in any organisation of the national security.
- The Indian Air Force has been involved in various operations and wars including World War II, Indo-Pakistani War of 1947, Sino-India War, Indo-Pakistani War of 1965, Operation Cactus, Operation Vijay, Kargil War, Congo Crisis, Operation Poomalai and Operation Pawan.

11 OCTOBER: INTERNATIONAL DAY OF THE GIRL CHILD

Why in News: The International Day of the Girl Child is observed every year across world on October 11 to recognize girls' rights and unique challenges faced by girls around the world. Observance of the day seeks to increase awareness of gender inequality faced by girls worldwide based upon their gender and supports more opportunity for girls. This year it was seventh edition of this day after it was observed for first time in 2012. It seeks to bring together partners and stakeholders to advocate for, and draw attention and investments to most pressing needs and opportunities for girls to attain skills for employability.

Theme

- The 2018 theme of the International day is 'With Her: A Skilled GirlForce'.
- Under the theme, the International Day will mark the beginning of a year-long effort to bring together partners and stakeholders to advocate for and draw attention and investments to the most pressing needs and opportunities for girls to attain skills for employability.

Important Points:

- In the next decade, around 600 million adolescent girls are estimated to enter a world of work transformed by innovation and automation.
- Among them, more than 90% of those living in developing countries will work in the informal sector, where low or no pay, abuse and exploitation are common. They will be faced with multiple barriers including systematic discrimination, biases and lack of training.

According to UN Secretary-General Antonio Guterres, the negative gender stereotypes related to girls' education in science, technology, engineering and mathematics begin as early as primary school and have a devastating effect of making them doubt their own potential.

Though the number of girls attending school is the highest ever, many still not get the necessary skills for lifelong success.

The biggest challenges faced by girls include obtaining quality secondary and higher education, avoiding child marriage, receiving information and services related to puberty and reproductive health, and protecting themselves against unwanted pregnancy, sexually transmitted disease and gender-based violence.

Hence, the girls need to be equipped with transferable and lifelong skills such as critical thinking, creativity and digital awareness.

Background:

The United Nations General Assembly adopted a resolution on December 19, 2011 to declare October 11 as the International Day of the Girl Child, to recognise girls' rights and the unique challenges girls face around the world.

The day was established with the aim of ensuring that adolescent girls have the right to a safe, educated, and healthy life, not only during their critical formative years but also as they mature into women.

- Over the last 15 years, however, the global community has made significant progress in improving the lives of girls during early childhood.

- The United Nations recently launched Youth2030 to help empower young people. It is a strategy that aims to work with the youth especially young girls and understand their needs and help put their ideas into action.
- In India, Women and Child Development Minister Maneka Gandhi said that in the four years since its inception, Beti Bachao Beti Padhao has progressed tremendously by bringing about a change in people's mindset. The Minister reaffirmed the government's commitment to providing every girl child with an environment that will enable the girl child to reach her full potential.

INDIA'S FIRST NATIONAL ENVIRONMENT SURVEY

Why in News: India's first ever National Environment Survey (NES) will be kicked off in January, 2019 to map environment data of 55 districts across 24 states and 3 Union Territories. The NES will rank all districts on their environmental performance and document their best green practices based on various environmental parameters. The earliest first set of complete green data from this survey will be available in 2020.

National Environment Survey (NES):

1. The Environmental Information System (ENVIS) will conduct the survey through its hubs and resource partners across the country.
2. The NES will rank all the districts on their environmental performance and document their best green practices.
3. The earliest the first set of complete green data from the survey will be available is 2020, providing an important tool in the hands of policy-makers for decision making at all levels - district, state and national.
4. The survey will be done through a grid-based approach, using grids measuring 9x9 km.
5. It will collect comprehensive data on various environmental parameters such as air, water, soil quality; emission inventory; solid, hazardous and e-waste; forest & wildlife; flora & fauna; wetlands, lakes, rivers and other water bodies.
6. It will also assess carbon sequestration potential of all the districts across the country.

Utility of the Survey

1. At present, the country has secondary data on most of these parameters.
2. The NES for the first time will provide primary data on all the green heads in the same way that the National Sample Survey (NSS) periodically collects various socio-economic data.
3. The first set of complete green data from the survey will be available in 2020 providing an important tool in the hands of policy-makers for decision making at all levels - district, state and national.

Other details

1. The first set of data will be compiled in one year because it needs to cover seasonal cycles in terms of air pollution and flora & fauna.
2. Presently the survey is planned for 55 districts across the country.
3. All 716 districts in the country are expected to be surveyed in a period of three to four years.

Importance:

The green data from this survey will provide important tool in hands of policy-makers for decision making at all levels - district, state and national. The survey will fully map and create emission inventory, provide valuation of ecosystem services and collate research in the field of environment. Initially the survey will be focusing on 55 districts and later will be scaled up to all districts in the country. The skilled manpower required for the survey will be provided from persons skilled and trained under MoEFCC's Green Skill Development Programme.

CYCLONIC STORM 'TITLI'

Why in News: Cyclone Luban used a brief stopover mid-ocean to ramp up in strength to become a severe cyclone in the West-Central Arabian Sea while the Bay of Bengal produced its own cyclone, named 'Titli', in its West-Central basin.

How are cyclones named?

In September 2004, an international panel on tropical cyclones decided that countries from the region would each put in names, which would be assigned to storms in the Bay of Bengal and Arabian Sea.

- Eight countries - India, Pakistan, Bangladesh, Maldives, Myanmar, Oman, Sri Lanka and Thailand - participated and came up with a list of 64 names.
- In the event of a storm, the Regional Specialized Meteorological Centre, New Delhi, selects a name from the list.

Why it is necessary to name cyclones?

- The late origin of this naming system - unlike storms in the Atlantic, which have been getting named since 1953 - was ostensibly to protect sensitivities in the ethnically diverse region.
- The purpose of the move was also to make it easier for "people easily to understand and remember the tropical cyclone/hurricane in a region, thus to facilitate disaster risk awareness, preparedness, management and reduction.

Guidelines for naming cyclones:

- Citizens can submit names to the Director General of Meteorology, IMD, for consideration, but the weather agency has strict rules for the selection process.
- A name, for instance, 'should be short and readily understood when broadcast'.
- The names must also be neutral, 'not culturally sensitive and not convey some unintended and potentially inflammatory meaning'.
- Furthermore, on the account of the 'death and destruction' a storm in the Indian Ocean causes, their names are retired after use, unlike those in the Atlantic and Eastern Pacific lists, which are reused every few years.

Cyclone categories:

- Category 1: Wind and gales of 90-125 kph, negligible house damage, some damage to trees and crops.
- Category 2: Destructive winds of 125-164 kph. Minor house damage, significant damage to trees, crops and caravans, risk of power failure.
- Category 3: Very destructive winds of 165-224 kph. Some roof and structural damage, some caravans destroyed, power failure likely.

- Category 4: Very destructive winds of 225-279 kph. Significant roofing loss and structural damage, caravans destroyed, blown away, widespread power failures.
- Category 5: Very destructive winds gusts of more than 280 kph. Extremely dangerous with widespread destruction.

Names reused every six years:

Atlantic and Pacific storm names are reused every six years, but are retired "if a storm is so deadly or costly that the future use of the name would be insensitive or confusing," according to forecasters at the US National Hurricane Center in Miami.

Cyclone season:

The country's cyclone season runs from April to December, with severe storms often causing dozens of deaths, evacuations of tens of thousands of people from low-lying villages and wide damage to crops and property.

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.

SECTION 151A OF THE REPRESENTATION OF THE PEOPLE ACT 1951 MANDATES ECI

Why in News: Amidst murmurs in political circles that the Lok Sabha bypolls in Karnataka to three seats was "unnecessary", the Election Commission has cited Section 151 A of the Representation of People Act, which mandated it.

Section 151A of the Representation of the People Act, 1951:

- Section 151A of the Representation of the People Act, 1951 mandates the Election Commission to fill the casual vacancies in the Houses of Parliament and State Legislatures through bye elections within six months from the date of occurrence of the vacancy, provided that the remainder of the term of a member in relation to a vacancy is one year or more.
- 151A, Time limit for filling vacancies referred to in sections 147, 149, 150 and 151.-Notwithstanding anything contained in section 147, section 149, section 150 and section 151, a bye-election for filling any vacancy referred to in any of the said sections shall be held within a period of six months from the date of the occurrence of the vacancy:

What is Section 151A of RPA all about?

It mandates the Election Commission to fill the casual vacancies in the Houses of Parliament and State Legislatures through bye elections within six months from the date of occurrence of the vacancy, provided that the remainder of the term of a member in relation to a vacancy is one year or more.

How EC defends its move?

Byelections are required to be held under Section 151A of RP Act within six months from the date of occurrence of the vacancy. Vacancies in Karnataka occurred more than a year before the expiry of the term of the house. In case of vacancies in Andhra Pradesh, there is no need to hold byelections as the remaining term of Lok Sabha is less than one year.

Background:

Experts have written to the President questioning the rationale behind holding byelections close to general elections. President Ram Nath Kovind has been requested to withdraw notification of the byelection. They have questioned EC's move as the announcement of byelections to parliamentary constituencies were only in Karnataka while there are vacant constituencies in Andhra Pradesh too.

GLOBAL HUNGER INDEX 2018

Why in News: At least one in five Indian children under the age of five are wasted, which means they have extremely low weight for their height, reflecting acute under-nutrition, according to the Global Hunger Index 2018. The only country with a higher prevalence of child wasting is the war-torn nation of South Sudan.

Important Points:

- Overall, India has been ranked at 103 out of 119 countries in the Index, with hunger levels in the country categorised as "serious". India's ranking has dropped three places from last year, although the Index says its results are not accurately comparable from year to year and instead provides a few reference years for comparable data. The 2018 scores reflect data from 2013-2017.

Four main indicators are used to calculate hunger levels in the report, which is a peer-reviewed publication released annually by Welthungerhilfe and Concern Worldwide. (The International Food Policy Research Institute was also involved with the publication until this year.)

The first indicator is undernourishment, which is the share of the population which is undernourished and reflects insufficient caloric intake.

The next three indicators use data for children under five: child wasting (low weight for height), reflecting acute under-nutrition; child stunting (low height for age), reflecting chronic under-nutrition; and child mortality.

India has shown improvement in three of the indicators over the comparable reference years. The percentage of undernourished people in the population has dropped from 18.2% in 2000 to 14.8% in 2018.

The child mortality rate has halved from 9.2% to 4.3%, while child stunting has dropped from 54.2% to 38.4% over the same period.

However, the prevalence of child wasting has actually worsened in comparison to previous reference years. It stood at 17.1% in 2000, and increased to 20% in 2005. In 2018, it stands at 21%. South Sudan's child wasting prevalence is at 28%.

Child wasting is high across South Asia, constituting a "critical public health emergency", according to UN organisations. The report notes that wasting rates are highest for infants aged 0 to 5 months, suggesting that attention to birth outcomes and breastfeeding is important.

- Also, child wasting in the region is associated with a low maternal body mass index, suggesting the need for a focus on the nutritional status of the mother during pregnancy.
- The report notes that in South Asia, "maternal BMI and access to improved water and sanitation are more closely associated with rates of child wasting than household wealth, suggesting that a reduction in poverty alone may not be sufficient to correct the problem...Factors that could reduce child stunting in South Asia include increased consumption of non-staple foods, access to sanitation, women's education, access to safe water, gender equality, and national food availability."
- Globally, the level of hunger still falls into the "serious" category, despite improvement over the last two decades. The Index projects that at the current rate of progress, 50 countries will fail to reach the "low" hunger category by 2030. This puts the UN's Sustainable Development Goal 2, which aims to end hunger by 2030, in jeopardy, says the report.

Global Hunger Index and how it is calculated?

- The Global Hunger Index (GHI) is a tool designed to comprehensively measure and track hunger at global, regional, and national levels.
 - GHI scores are calculated each year to assess progress and setbacks in combating hunger.
 - GHI scores are calculated using a three-step process.
1. Firstly, values are determined for each country in four indicators- Undernourishment, Child Wasting, Child Stunting and Child Mortality.
 2. Secondly, each of the four component indicators is given a standardised score on a 100-point scale based on the highest observed level for the indicator.
 3. Thirdly, standardised scores are aggregated to calculate the GHI score for each country, with each of the three dimensions (inadequate food supply; child mortality; and child undernutrition).

INTERNATIONAL DAY FOR DISASTER REDUCTION : 13 OCTOBER

Why in News: The International Day for Disaster Reduction was observed across the world on October 13, 2018 to promote a global culture of risk-awareness and disaster reduction.

The day celebrated how people and communities around the world are reducing their exposure to disasters and raising awareness about the risks associated with them.

The theme of the 2018 International Day for Disaster Reduction was 'Reducing Disaster Economic Losses'. The 2018 theme continues as part of the "Sendai Seven" campaign, centred on the seven targets of the Sendai Framework. This year focuses on Target C of the Sendai Framework, which is, 'reducing disaster economic losses in relation to global GDP by 2030'.

Important Points:

The campaign is an opportunity for all, including governments, local governments, international organisations, the private sector and the UN family to promote best practices at the international, regional and national level across all sectors, in order to reduce disaster risk and disaster losses.

In 2016, the United Nations International Strategy for Disaster Reduction (UNISDR) launched the Sendai Seven campaign, which was centred on the seven targets of the Sendai Framework.

The Sendai Framework for Disaster Risk Reduction 2015-2030 is the first major agreement of the post-2015 development agenda, with seven targets and four priorities for action.

The campaign seeks to create a wave of awareness about actions taken to reduce mortality around the world.

In 1989, the UN General Assembly through a resolution had designated the second Wednesday of October as International Day for Natural Disaster Reduction.

Later on December 21, 2009, the Assembly adopted a new resolution on in which it designated 13 October as the date to commemorate the Day and it also changed the day's name to International Day for Disaster Reduction.

- The main objective of the observance is to raise awareness of how people are taking action to reduce their risk to disasters.

Seven targets of Sendai Framework

- 1) Substantially reduce global disaster mortality by 2030
- 2) Substantially reduce the number of affected people globally by 2030
- 3) Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030
- 4) Substantially reduce disaster damage to critical infrastructure and disruption of basic services by 2030
- 5) Substantially increase the number of countries with disaster risk reduction strategies by 2020
- 6) Substantially enhance international cooperation to developing countries by 2030
- 7) Substantially increase the availability of and access to multi-hazard early warning systems by 2030

INDIA-AZERBAIJAN SIGNS PROTOCOL

Why in News: India and Azerbaijan has signed protocol on trade and economic, science and technology cooperation. It was signed at 5th meeting of

India-Azerbaijan Inter-Governmental Commission on Trade and Economic, Science and Technology Cooperation (IA-IGC) held on 11-12 October, 2018 in New Delhi.

The meeting was co-chaired by Union Minister of Commerce & Industry and Civil Aviation Suresh Prabhu and Azerbaijan's Minister of Ecology and Natural Resources Mukhtar Babayev.

Important Points:

Both countries exchanged views on current economic situation and reviewed current status of bilateral trade, investment and their cooperation in fields of trade, economy, science and technology. They also emphasised to further strengthen and expand their cooperation in trade and investment, energy and hydro-carbons, transportation, SMEs, agriculture, food safety and environmental protection, tourism, culture, health and pharmaceuticals, space technology, education and scientific research, chemicals and petrochemicals and mining.

- Both sides also felt that bilateral trade was far below potential and there is need to step up cooperation to enlarge trade basket and increase bilateral trade and investment.
- Currently trade turnover between India and Azerbaijan in January-August 2018 was US \$657.9 million. Both sides also agreed to take measures to enhance trade relations and expand business relations between the two countries. They also decided to send trade delegations to raise awareness regarding economic developments and reforms in two countries and have regular exchange of information about trade exhibitions, fairs, conferences and other business events. They also agreed to convene next meeting of IA-IGC in Baku, capital of Azerbaijan.

MALAYSIA GOVERNMENT DECIDES TO END THE DEATH PENALTY

Why in News: The Malaysian government has decided to end the death penalty. Malaysia's Communication and Multi Media Minister Gobind Singh Dev said that considering the strong opposition to this punishment, the government has decided to end it.

After the death penalty is over, Malaysia will get the moral right to fight for the lives of the Malaysians facing the death penalty in other countries.

Important Points:

The death penalty in Malaysia is exclusively carried out by hanging and has been legacy of British colonial rule. More than 1200 people are on death row in Malaysia.

In fact, in many other countries of the world, in Malaysia, a large section of human rights groups and the general public had been demanding to end the death penalty for a long time. In this matter, the Malaysian Cabinet had recently held a meeting, after which the government agreed to abolish the death penalty.

- Since this decision of the government, the human rights groups and the general public also welcomed the decision and thanked the government.

- In a statement, Lawyer for Liberty Rights Group N Surendran said in a statement that the death sentence is barbarous and is unimaginably brutal.

Death penalty in Malaysia:

Death penalty is mandatory in Malaysia for murder, kidnapping and other crimes including firearms. Malaysia is executed by hanging in death. It was believed to be the legacy of the British colonial period. This rule of death sentence is also being run here since the British era.

Death penalty in other countries:

India, the United States, Japan, China and Arab countries are among the select 52 countries of the world, which have not yet ended the death penalty provision. While 140 out of 192 countries recognized by the United Nations have removed the provision of death penalty here. The European Union has made a mandatory condition for the death penalty for its membership.

Death penalties in various countries

- Firing, Hanging, Stoning: Afghanistan, Sudan
- Firing, Hanging: Bangladesh, Cameroon, Syria, Uganda, Kuwait, Iran, Egypt
- Hanging only: India, Malaysia, Barbados, Botswana, Tanzania, Zambia, Zimbabwe, South Korea
- Firing: Yemen, Togo, Turkmenistan, Thailand, Bahrain, Chile, Indonesia, Ghana, Armenia
- Injection and Firing: China
- Injection: Philippines
- Electrocution, gas, hanging, firing: America

Background:

At present, the sentence of death penalty has been abolished in 103 countries, while penalty of capital punishment is still in 56 countries. There are still provisions for capital punishment in countries like China, India, America, Indonesia, Pakistan, Bangladesh, Japan and Sri Lanka. United Nations General Assembly passed the resolution in 62nd session in 2007 to impose universal restrictions on the death penalty.

Capital Punishment in India:

- India does not have a mandatory death penalty. Though murder is punishable by death under Article 302 of the Penal Code, in Mithu v. State of Punjab, the Supreme Court of India had ruled that the mandatory death penalty is unconstitutional.

- In Bachan Singh vs. State of Punjab, the Supreme Court had held that the death penalty was constitutional only when applied as an exceptional penalty in 'the rarest of the rare' cases.
- The crimes punishable by death in India include murder, terrorism-related offenses, rape, kidnapping, drug trafficking, treason and military offences.

INDIA ELECTED TO UN HUMAN RIGHTS COUNCIL WITH HIGHEST VOTES

Why in News: India was elected to United Nations' Human Rights Council', the main body of UN charged with promoting and monitoring human rights for period of three years beginning January 1, 2019. In this secret ballot election held in 193-member UN General Assembly (UNGA) India secured 188 votes in Asia-Pacific category, the highest number of votes among all candidates. Total 18 new members in the five regional categories were elected by absolute majority (i.e. minimum of 97 votes are required to get elected through secret ballot). From Asia-Pacific region category, Fiji with 187 and Bangladesh 178 votes were also elected along with India. This was fifth time India has been elected to UNHRC, previously was elected 2006-2009, 2011-2014 and 2014-2017.

Following the election, India's Permanent Representative to the UN Ambassador Syed Akbaruddin said that India's win with the highest number of votes reflects the country's standing in the international community.

Important Points:

The 193-member UN General Assembly held elections for new members to the UN Human Rights Council.

The countries needed a minimum of 97 votes to get elected to the Council.

18 new members were elected to UNHRC by absolute majority through a secret ballot.

- India got the highest number of votes among all 18 countries in the five regional categories.

- In the Asia Pacific category, India got 188 votes followed by Fiji with 187 and Bangladesh 178 votes.
- The new members will serve a term of three years beginning January 1, 2019.

Background

- India had been looking to win the seat at the UNHRC in the Asia Pacific category.

India had previously been elected to the Geneva-based Human Rights Council for the 2011-2014 and 2014-2017. Its last term had ended on December 31, 2017 and in accordance with the rules, it was not eligible for immediate re-election since it had already served two consecutive terms.

Along with India, Bahrain, Bangladesh, Fiji and Philippines had also staked a claim in the same regional group.

So in total, there were five nations vying for five seats in the Asia Pacific category. India's election to the Council was hence, all but certain.

United Nations Human Rights Council (UNHRC):

UNHRC is an inter-governmental body within United Nations system. It is responsible for strengthening promotion and protection of human rights around globe and for addressing situations of human rights violations and make recommendations on them. It was created by UNGA on 15 March 2006 by adopting resolution 60/251 to promote human rights globally. It had replaced former UN Commission on Human Rights. It is headquartered in Geneva, Switzerland.

Members: UNHRC is made up of 47 UN member states which are elected by UN General Assembly (UNGA) with specific number of seats allocated for each five region of the globe viz. African States (13 seats), Asia-Pacific States (13 seats), Eastern European States (6 seats), Latin American and Caribbean States (8 seats) and Western European and other States (7 seats). Members serve for three-year terms and can serve only two terms in a row.

Functions: Members of the council work to engage countries on improving human rights. They make decisions ranging from exposing violations to recommending that UN Security Council make referral to International Criminal Court (ICC). UNHRC does not have authority to take action but can exert significant pressure on violating country. It can also set up special rapporteurs with mandate to investigate and report human-rights violations and abuses.

- Note: United States under President Donald Trump Administration had withdrawn from UNHRC earlier this year after it questioned legitimacy of the council because of presence of several dictatorial regimes violating human rights on it.

On the basis of equitable geographical distribution, the council seats are allocated to the five regional groups as follows:

1. African States: 13 seats
2. Asia-Pacific States: 13 seats
3. Eastern European States: 6 seats
4. Latin American and Caribbean States: 8 seats
5. Western European and other States: 7 seats

All five of the General Assembly's regional groups had submitted competition-free slates, meaning that all candidates, regardless of their rights records, were virtually assured seats on the council.

Former President of Chile Michelle Bachelet assumed the role of UN High Commissioner for Human Rights in September this year, succeeding Jordanian diplomat Zeid Ra'ad al-Husseini, who had in June this year released a first-ever report on Kashmir that was rejected by India.

UNIFORM 'SMART' DLS, RCS ACROSS

INDIA FROM JULY NEXT YEAR

Why in News: The Indian government is planning to roll out uniform driving licences across the country, starting from July next year. The new rule will see Driving Licences (DLs) and Registration Cards (RCs) with a similar look, design and colour across all states and union territories. Both the DL and RC will also come with the same security features as well.

Important Points:

Driving licences across India will soon have similar look, colour and design, irrespective of the state of issuance.

The Times of India reported that the new 'smart' DLs and RCs embedded with microchips will have QR codes.

- These cards will be enabled with the near field communication (NFC) feature which would be readable by hand-held devices.

- Besides the details of holders, which the traffic enforcers would be able to quickly access, the driving licence will also mention the driver's pledge of organ donation.
- The DL will also mention if the driver is driving specially designed vehicle meant for the physically challenged.
- The RC will have emission details of the vehicle to help officials carry out the pollution under control (PUC) test.
- The Union Road Transport Ministry has already started the process of switching to the new system.
- Those who have old driving licence will be issued the new 'smart' ones when they go to get it renewed. Similarly, old RCs will be replaced with the new ones when the vehicles are re-registered.
- Enforcement personnel - RTO officials and traffic cops - will have multiple options to get access to all details of a driver.
- They can manually key in the DL or RC numbers in their hand-held device or inserting the smart card in the device or read the QR code to get access to the details.
- "It will directly give access to the URL having details of the particular vehicle or driver including past records as stored in the central database of Vahan (for vehicles) and Sarthi (drivers)," a transport ministry official said.

IND-INDO CORPAT: 2018

Why in News: Indian Naval Ship Kulish, a Kora class missile corvette, commanded by Commander Deepak Bali and an Indian Dornier (naval maritime time patrol aircraft) from Andaman and Nicobar command entered Belawan harbour, Indonesia for the opening ceremony of the 32nd edition of India - Indonesia coordinated patrol (IND-INDO CORPAT), to be held from 11 - 27 Oct 2018. The delegation is led by Commodore Ashutosh Ridhorkar, Naval Component Commander, Andaman and Nicobar Command.

IND-INDO CORPAT 2018:

- The patrolling will be conducted in three phases, followed by closing ceremony at Port Blair, Andaman and Nicobar Island.



Indian Naval Ship (INS) Kulish, a Kora class missile corvette and Dornier naval maritime time patrol aircraft from Andaman and Nicobar command are participating.

This deployment is expected to contribute towards Indian Navy's effort to forge strong bonds of friendship across seas and consolidate inter-operability.

It also seeks to emphasize India's peaceful presence and solidarity with friendly countries towards ensuring good order in maritime domain, consolidate interoperability and strengthen existing bonds of friendship between the two countries.

Background:

Under the strategic partnership between India and Indonesia, navies of both countries have been carrying out coordinated patrolling twice year since 2002 near International Maritime Boundary Line in an effort to keep Indian Ocean region (IOR) safe and secure for commercial shipping and international trade.

The coordinated patrol reflects shared concerns between two countries for peaceful Indian Ocean for benefit of international community. It also enhances mutual understanding and inter-operability between the two navies. Moreover, as part of Central Government's vision of SAGAR (Security and Growth for All in the Region) and 'Act East policy' Indian Navy has increasingly deployed to address maritime concerns of the IOR and also been involved in assisting countries in IOR with EEZ Surveillance, Search and Rescue, other capacity - building and capability-enhancement activities.

TN GOVT. NOTIFIES COMPENSATION FOR SEXUAL ABUSE VICTIMS

Why in News: The state govt. of Tamil Nadu has notified the Victim Compensation Scheme 2018 for women victims / survivors of sexual assault / other crimes. This scheme will follow the lines of Supreme Court (SC) judgment delivered last month. A bench led by Justice Madan B. Lokur had approved this suggestion for compensation while hearing the Nipun Saxena Vs Union of India case and had given directions that the guidelines to be made operational.

TN Victim Compensation scheme 2018 would cover offences registered under Sections 326A (acid attack), 354A to 354D (sexual harassment), 376A to 376E (sexual intercourse with wife during separation and allied offences), 304B (dowry death) and 498A (cruelty to wife) of the Indian Penal Code.

The TNSLSA / DLSA can start preliminary verification of facts to grant of interim compensation amount to the victims and their dependents.

Tamil Nadu Victim Compensation Scheme 2018:

As per the notified Victim Compensation Scheme, the following amount would be given to the victims:-

Each rape survivor will get a minimum compensation amount equals to Rs. 4 lakh. In case the rape victim women has lost her life, maximum compensation amount to the dependent of rape victim could be Rs. 7 lakh.

Each survivor of gang rape would receive compensation amount of Rs. 5 lakh. The maximum compensation amount that could be granted in case of loss of life as well as gang rape could be Rs. 10 lakh.

Important Points:

TN Victim Compensation scheme will provide funds for the purpose of compensation to women victims and their dependents who have suffered loss or injury as result of offence committed and who requires rehabilitation. To decide the amount of compensation to women survivor or dependents, Section 357-B of CrPC would be taken into account. Any survivors and their dependents can apply for compensation before the Tamil Nadu Legal Services Authority (TNSLSA) or the respective District Legal Services Authority (DLSA) along with the police FIR.

- To determine the compensation, various issues like gravity of offence, severity of mental / physical harm or injury suffered, expenditure incurred for medical treatment, loss of educational and employment opportunity as a result of offence would be taken into account.
- Various other issues such as consideration of whether the abuse was a single isolated incident or took place over a period of time and women became pregnant will be taken into account. In case of a minor victim, 80% of the compensation amount would be deposited directly into a fixed deposit account and shall be drawn only on attainment of majority age of majority of the survivor.

EMERGENCY PLAN INITIATED TO COMBAT AIR POLLUTION IN DELHI

Why in News: An emergency plan to combat air pollution came into force which will include measures like mechanised sweeping of roads and deployment of traffic police to ensure smooth passage of traffic at vulnerable areas in Delhi-NCR region.

Use of gensets have been banned under the Graded Response Action Plan but will not be banned in NCR because of power supply situation in the area, said Anumita Roy Chowdhury, a member of the Supreme Court-mandated Environment Pollution (Prevention and Control) Authority. The plan has been implemented to combat air pollution that has begun to show a trend towards very poor category.

Important Points:

Under the emergency plan, stringent actions are implemented based on the air quality of the city. Currently, the air quality lies in the poor category due to which measures like mechanised sweeping of roads, ban on garbage burning, pollution control measures at brick kilns and deployment of police to ensure smooth passage of traffic at vulnerable areas are in force in the Delhi NCR region.

- If the air quality deteriorates further to very poor category then in addition measures like enhancing parking fees 3-4 times and increasing frequency of metro and buses would be implemented, an official with the Central Pollution Control Board said.
- If the air quality falls in the severe category, additional measures would be implemented like increasing frequency of sprinkling of water on roads and identifying road stretches with high dust generation. If the air quality falls to severe plus emergency category, then measures like stopping entry of trucks into Delhi (except essential commodities), stopping construction activities and appointment of a task force to take decision on any additional steps, including shutting of schools, are implemented.
- In addition to GRAP, the CPCB has also deployed 41 teams across the Delhi NCR to monitor proper implementation of norms enforced to prevent pollution at the source.
- Meanwhile, satellite images from the NASA showed rampant stubble burning activity in Punjab and Haryana.
- The NASA, on its official website, stated that burning of crop residue in Punjab and Haryana has increased significantly over the past 10 days in and near Amritsar, Ambala, Karnal, Sirsa and Hisar.
- Burning of paddy straw every year during October and November and wheat straw during April in Punjab and Haryana are the major contributors of air pollution in Delhi-NCR, as the smoke travels towards the national capital.

About Graded Action Plan:

Meanwhile, an emergency plan has been brought into effect in Delhi-NCR. The plan -- officially called the Graded Response Action Plan (GRAP) -- is overseen by the Environment Pollution (Prevention and Control) Authority, a body that was set up by the Supreme Court for the specific purpose of combating pollution in Delhi-NCR.

GRAP specifies what mandatory actions must be taken depending on the air quality in Delhi-NCR at any given time. Since Delhi's current air quality has been classified as poor, the following measures are now in effect:

- Generation sets have been banned (not in the NCR due to the power situation there)
- Mechanised sweeping of roads will be carried out at regular intervals
- Garbage burning has been banned
- Pollution control measures have kicked in at brick kilns
- Extra traffic police officers have been deployed to ensure smooth movement of traffic

DRAFT NATIONAL POLICY ON

ELECTRONICS 2018 RELEASED

Why in News: Union Ministry of Electronics and Information Technology (MeitY) has issued draft 'National Policy on Electronics 2018' (NPE 2018) for Electronics System Design and Manufacturing (ESDM) Sector of India. It sets ambitious target of creating \$400 billion electronics manufacturing industry by 2025, with mobile phone devices segment accounting for three-fourths of production.

Important Points:

Draft NPE aims to promote domestic manufacturing in entire value-chain of ESDM sector for spur economic development in the country. It also aims to double the target of mobile phone production from 500 million units in 2019 to 1 billion by 2025 to meet objective.

It replaces existing incentive schemes like Modified Special Incentive Package Scheme (M-SIPS), with schemes that are easier to implement such as interest subsidy and credit default guarantee etc. It also takes into consideration interest subsidy and credit default guarantee in order to encourage new units and in expansion of existing units in electronics manufacturing sector.

- The set target of \$400 billion turnover under it, includes targeted production of 1 billion mobile handsets by 2025, valued at \$190 billion (approximately Rs. 13 lakh crore) and also 600 million mobile handsets valued at \$110 billion (approximately Rs. 7 lakh crore) for export.
- It also proposes to push development of core competencies in all sub-sectors of electronics including electronic components and semiconductors, automotive electronics, defence electronics, industrial electronics, strategic electronics etc. It also proposes to set up 20 greenfield and three brownfield electronic manufacturing cluster projects have been sanctioned with project outlay of Rs 3,898 crore, including Rs 1,577 crore from Central Government. It proposes suitable direct tax benefits, including inter-alia investment-linked deduction under Income Tax (IT) Act for electronics manufacturing sector, for setting up of new manufacturing unit or expansion of an existing unit.
The proposal includes increasing tax benefits on expenditure incurred on R&D, enhancing rate of duty drawback for electronics sector, reimbursement of state levies and other levies for which input tax credit is not available, allowing duty free import of second-hand capital goods for electronics hardware manufacturing etc. It also proposes cess on select electronic goods resources to promote certain critical sub-sectors of electronic manufacturing such as semiconductor wafer fabrication and display fabrication units.

First National Policy on Electronics:

The first National Policy on Electronics (NPE) was rolled out in 2012.

The NPE 2012 provided the road map for the development of Electronics System Design and Manufacturing (ESDM) sector in the country.

Implementation of the Schemes/ Programmes under the aegis of NPE 2012 successfully consolidated the foundation for a competitive Indian ESDM value chain.

- The Government now seeks to build on that foundation to propel the growth of ESDM industry in the country.

DRDO PAYS TRIBUTE TO DR APJ ABDUL KALAM ON HIS BIRTH ANNIVERSARY

Why in News: Defence Research & Development Organisation (DRDO) celebrated the 87th Birth Anniversary of Bharat Ratna Dr A P J Abdul Kalam, the former President of India and DRDO chief at a function in DRDO Bhawan. Raksha Mantri Smt Nirmala Sitharaman graced the occasion as the Chief Guest which also had the presence of Raksha Rajya Mantri, Dr Subhash Ramrao Bhamre, and Prof K Vijay Raghavan Principal Scientific Advisor (PSA) to the Government of India, along with other dignitaries.

Speaking on the occasion Smt. Sitharaman shared her experience of meeting with Dr Kalam. She said, he was not only a good scientist but also an excellent administrator who could spot and nurture talent among his team members. That among others made this 'missile man' a great team leader.

Important Points:

Addressing the gathering, Raksha Rajya Mantri said, Dr Kalam believed in a strong nation - one that is scientifically superior and always used to inspire people for putting their total commitment towards the mission in hand. This can be gauged in his words, "If you want to shine like sun, first burn like sun."

Raksha Mantri Smt Sitharaman also launched a DRDO website dedicated to the theme 'The Kalam Vision - Dare to Dream' for engaging young minds in emerging technologies namely Artificial intelligence, Cyber security, Robotics, Autonomous Systems, etc. The website will facilitate open competition for students and Startups. It is available at the address: <https://drdo.gov.in/drdo/kalam/kalam.html>.

Hindi version of the book "Incredible Kalam" was released by RRM Dr Bhamre in today's function so that message of Dr Kalam can reach to the masses of the country. The book is the compilation of personal experiences of some distinguished scientists about their association with Kalam.

The function was attended by Students of three Delhi based schools. These schools have set up Atal Tinkering Lab in their schools under Atal innovation mission of Government of India. Students and researchers from Indian Institute of Technology (IIT) Delhi also attended the function.

- The aim of inviting young minds was to motivate them with diverse and great qualities of Dr A P J Abdul Kalam, who had special affinity for students and youth of the country. Young scientists from DRDO laboratories delivered presentations at the function regarding the innovative projects they have undertaken.
- The students were taken to visit the Kalam Gallery at DRDO Bhawan to get a glimpse of defence systems and technologies displayed. Students took keen interest in the life and work of Dr Kalam depicted in the gallery.

About DRDO:

- The Defence Research and Development Organisation (DRDO) is an agency of the Republic of India, charged with the military's research and development, headquartered in New Delhi, India. It was formed in 1958 by the merger of the Technical Development Establishment and the Directorate of Technical Development and Production with the Defence Science Organisation. It is under the administrative control of the Ministry of Defence, Government of India.
- With a network of 52 laboratories, which are engaged in developing defence technologies covering various fields, like aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems, DRDO is India's largest and most diverse research organisation. The organisation includes around 5,000 scientists belonging to the Defence Research & Development Service (DRDS) and about 25,000 other scientific, technical and supporting personnel.

ALLAHABAD TO BE RENAMED AS PRAYAGRAJ

Why in News: Allahabad was officially renamed as 'Prayagraj'. The Cabinet of Uttar Pradesh Chief Minister Yogi Adityanath cleared a proposal to rename the historic city. "Allahabad will be called Prayagraj" state minister Siddharth Nath Singh said in Lucknow after the Cabinet meeting.

Allahabad in Uttar Pradesh is not only the leading educational centre in the state but also the seat of High Court and hosts the Uttar Pradesh Public Service Commission. The Sangam place also holds religious importance for many. The association of Kumbh Mela with Allahabad dates way back.

Here is the timeline of Allahabad's renaming:

Before 1575, it was known as Prayag

Some medieval texts including Akbar's court historian Abul Fazl called it Piyag

In 1575, the city was named Illahabas meaning 'abode of God' by the then Mughal Emperor Akbar when he visited the place

Later in the time, it came to be known as Allahabad.

Background:

In August 2018, Yogi Adityanath led UP government approached the centre to rename airports of Bareilly, Kanpur and Agra, the account of which is as follows:

1. The state government sent the proposal to rename the Bareilly airport as 'Nath Nagri' which is believed to be the ancient name of the city. Nath Nagri relates to Hindu God Lord Shiva and the city hosts as many as seven temples dedicated to the deity.
2. According to the proposal, Kanpur city was earlier known as Kanha Pur. Although it didn't propose to rename the city, it did ask to rename the city's Chakeri airport after freedom fighter Ganesh Shankar Vidyarthi.
3. UP government also wants to rename the Agra airport after the RSS thinker Pt Deendayal Upadhyaya.

"We have reached out to the centre to get the airports renamed. A meeting with the Union ministry of civil aviation is expected soon," said Uttar Pradesh civil aviation minister; PTI reported.
4. In 2017, The Hindu Yuva Vahini, a right-wing outfit floated by CM Adityanath demanded that Azamgarh in eastern Uttar Pradesh should be renamed as Aryamgarh. The city's name dates back to 1665 when Azam Khan founded it from the ruins of Ailwal and Phulwaria. Azam Khan was the son of Vikramjit, whose ancestors were Gautam Rajputs of Mehnagar.

17 OCTOBER : INTERNATIONAL DAY FOR THE ERADICATION OF POVERTY

Why in News: The International Day for the Eradication of Poverty was observed across the world on October 17, 2018. This year's theme of the day is 'coming together with those furthest behind to build an inclusive world of universal respect for human rights and dignity.'

Important Points:

The year 2018 marks the 25th anniversary of the declaration of the day by the UN General Assembly, in its resolution dated December 22, 1992.

The year also marks the 30th anniversary of the Call to Action by Father Joseph Wresinski, which inspired the observance of October 17 as the World Day for Overcoming Extreme Poverty and the recognition by the United Nations of the day as the International Day for the Eradication of Poverty.

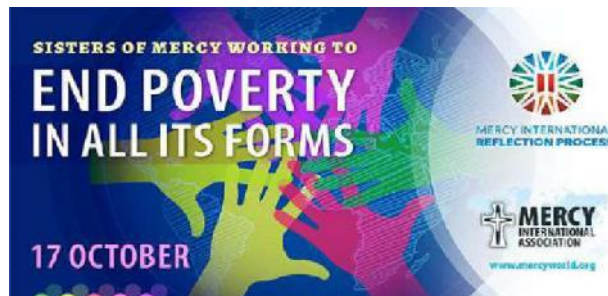
The year also marks the 70th anniversary of the proclamation of the Universal Declaration of Human Rights. There is a fundamental connection between extreme poverty and human rights and the people living in poverty are disproportionately affected by many human rights violations.

The International Day for the Eradication of Poverty aims to ensure that the active participation of people living in extreme poverty and those furthest behind is a driving force in all efforts made to overcome poverty, including in the design and implementation of programmes and policies which affect them.

The day highlights that only by creating and nurturing a genuine partnership with people living with poverty will it be possible to build an inclusive world where all people can enjoy their full human rights and lead lives with dignity.

The commemoration of October 17 each year demonstrates how the society can achieve greater social inclusion by enabling people from all walks of life to come together to respect the human rights and dignity of people living in poverty.

It underscores the importance of reaching out to people living in poverty and building an alliance around their priorities with citizens from all backgrounds to end extreme poverty.



- The government policies alone cannot create the social inclusion that is fundamental to reaching those left furthest behind and overcoming poverty in all its dimensions.

The commemoration also recognises the important mutual roles and relationships that people have with each other based on common and equal dignity.

About Human Rights and Extreme Poverty:

Joseph Wresinski was one of the first persons to highlight the direct link between human rights and extreme poverty.

In February 1987, he appealed to the Human Rights Commission to examine the question of extreme poverty and human rights.

He observed that wherever men and women are condemned to live in extreme poverty, human rights are violated. He said that to come together to ensure that these rights be respected is our solemn duty.

Background:

The International Day for the Eradication of Poverty was established by the UN General Assembly on October 17, 1987. On that day, over a hundred thousand people gathered at the Trocadéro in Paris, where the Universal Declaration of Human Rights was signed in 1948, to honour the victims of extreme poverty, violence and hunger. They proclaimed that poverty is a violation of human rights and affirmed the need to come together to ensure that these rights are respected. Since then, people of all backgrounds, beliefs and social origins have gathered every year on October 17 to renew their commitment and show their solidarity with the poor. The day presents an opportunity to acknowledge the effort and struggle of people living in poverty, a chance for them to make their concerns heard and a moment to recognise that poor people are the first ones to fight against poverty. The commemoration also reflects the willingness of people living in poverty to use their expertise to contribute to the eradication of poverty.

YOUTH ROAD SAFETY LEARNERS

LICENCE PROGRAMME

Why in News: Union Ministry of Road Transport & Highways has launched Youth Road Safety Learners Licence programme in New Delhi. It is Public-private partnership (PPP) initiative in collaboration with Diageo India and Institute of Road Traffic Education (IRTE).

Important Points:

- The programme is a part of the Union Government's efforts to emphasise on the importance of road safety, as recent times have seen an alarming rise in road fatalities especially among the youth.
- The programme will help the government achieve its target of reducing road accidents by 50 percent by 2020.
- Some of the major factors resulting in high road accidents include rash driving, drunken driving and the lack of adequate safety measures like not wearing helmets.
- The youth road safety learners licence programme is an immersive and interactive module led by senior faculty members of IRTE covering varied aspects of responsible driving including defensive driving, ill effects of driving under the influence of alcohol, speeding and wearing of helmets spread over two days.
- It will help improve road safety awareness amongst the young adults by inculcating behavioural change and creating awareness about responsible driving habits.
- This programme adopts the means of creating awareness amongst youth so that they become defensive road users.
- In the first year, the programme will cover 20 universities with a total of 400 programmes across the country. India's Institute of Road Traffic Education (IRTE) has been successfully running its 'Road to Safety' initiative to provide capacity building training to traffic police officials and educate commercial drivers such as truckers and bus drivers and university students on the dangers of drunken driving.
- The programme has trained over 4624 traffic officials in road safety capacity-building, 6,000 commercial vehicle drivers and over 5,000 university students in more than 64 cities of 17 states.

Background

- India accounts for 12.5 per cent (over 1.45 lakh fatalities a year) of global road accidents, with one road accident occurring every four minutes.
- Alarming, 72 per cent victims involved in such road mishaps are between the age groups of 15-44 years with speeding, reckless and drunk driving being the top reason accounting for 1.5 per cent of road traffic accidents and 4.6 per cent of fatalities.

L&T RANKS 22 IN FORBES BEST GLOBAL EMPLOYER LIST

Why in News: Engineering and construction major Larsen & Toubro, which is majority owned by its employees, is the only domestic firm to be featured among the top 25 companies in the Forbes' global 2000 best employers list that is led by Google parent Alphabet.

Important Points:

While L&T is ranked 22, there are only four domestic firms in the top 100 list which include Mahindra & Mahindra at 55, Grasim Industries at 59 and HDFC at 91, and only 24 domestic companies in the overall list, as per the US magazine.

While for the second year in a row Alphabet tops the list, at the second slot is Microsoft and American companies account for six of the top 10 spots.

There are only 24 domestic companies in the list which include the state-run GIC Re ranked 106, tobacco major ITC at 108, state-run alloy major SAIL at 139, Sun Pharma at 172, Asian Paints at 179, and HDFC Bank at 183.

At 201 is Adani Ports & Special Economic Zone, JSW Steel is placed at 207, at 253 is Kotak Mahindra Bank, Hero Motocorp is ranked 295, Tech Mahindra comes at 351, ICICI Bank at 359, Wipro at 362, Hindalco at 378, State Bank of India is ranked 381, Bajaj Auto at 417, Tata Motors scores 437, Power Finance Corporation is at 479, Axis Bank at 481 and the state-run Indian Overseas Bank is ranked at 489, according to the list.

- Over 430,000 recommendations have been analysed to create the world's best employers list, according to Forbes. The ranking is based on the feedback on the likelihood of an employee recommending his/her employer to a friend or family member.
- This list is based on Forbes' 2018 global 2000 rankings, which includes publicly traded companies from 60 countries that together accounted for USD 39.1 trillion in sales, USD 3.2 trillion in profit, USD 189 trillion in assets and USD 56.8 trillion in market value, the magazine said.
 Besides Alphabet and Microsoft, the top 10 include Apple at the third slot, Walt Disney Company (No 4), Amazon (No 5) and Celgene Corporation (No 9).
 American companies dominate the list in general. Of the top 500 employers, 185 are in the list, while 80 are in the list from China and Hong Kong.
 This year, German companies are the second most represented on the top 10. Auto company Daimler ranks seventh, and BMW scores the tenth spot.

IRCTC LAUNCHES AI CHATBOT "ASK DISHA" TO ANSWER USER QUERIES

Why in News: Indian Railway Catering and Tourism Corporation (IRCTC) has launched Artificial Intelligence (AI) powered chatbot- Ask Disha ((Digital Interaction to Seek Help Anytime) to help its users answer various queries. The chatbot is special computer programme designed to simulate conversation with users, especially over the internet. It has gone live on IRCTC's next-gen e ticketing website and soon will be integrated on the IRCTC Rail Connect Android app.

Important Points:

- The first-of-its-kind initiative by IRCTC is aimed at facilitating accessibility by answering users' queries pertaining to various services offered to railway passengers.
 The chatbot is voice enabled and will support several regional languages in the near future. It will offer greatly improved and intuitive customer support by answering customer queries pertaining to all aspects of the services that IRCTC provides.
- Users can also ask questions to AI chatbot by visiting IRCTC website. As soon as the users start typing their queries, AI chatbot automatically starts showing some options based on typed phrases.

- Users can then either pick one of queries from displayed options or type in complete question if their query is not being displayed on the screen.
- The essential features of AskDisha include ability to quickly answer to customer queries, ability to provide round-the-clock customer support, ability to multitask, zero waiting time for query to get answered and overall ability to provide customer with stress-free experience and overall customer satisfaction.

The 'Ask Disha' chat bot has been jointly developed by IRCTC and CoRover Private Limited, a Bangalore-based startup. According to IRCTC, some of the salient features of 'Ask Disha' include 24*7 customer query support, quick response time to queries and multi-tasking.

The new next-generation IRCTC e-ticketing website gets an average 4 million users per day. IRCTC hopes that with the new 'Ask Disha' chat bot, the website and app users will be able to use its services more seamlessly.

INDIA RANKED 58TH MOST COMPETITIVE ECONOMY IN WORLD ECONOMIC FORUM'S INDEX

Why in News: The World Economic Forum released the Global Competitiveness Report 2018. According to the report, India has jumped five spots to become the 58th most competitive economy on the Global Competitiveness Index 2018 (GCI 4.0). India witnessed the largest gain among the G20 nations. The report publishes the Global Competitiveness Index, ranking 140 countries on the basis of 98 indicators organised into 12 pillars.

These 12 pillars are Institutions; Infrastructure; ICT adoption; Macroeconomic stability; Health; Skills; Product market; Labour market; Financial system; Market size; Business dynamism; and Innovation capability.

The United States ranked number one again with a score of 85.6. India ranked highest among South Asian countries with a score of 62.0. Sri Lanka was ranked 86, Bangladesh 103, Pakistan 107 and Nepal 109. As for the BRICS nations, China topped the list at 28th position with a score of 72.6 followed by Russian Federation, India, South Africa and Brazil respectively.

THE TOP 5 COUNTRIES ON THE INDEX ARE:

1. US,
2. Singapore,
3. Germany,
4. Switzerland, and
5. Japan.

Important Points:

- Among the BRICS economies, China topped the list at 28th place with a score of 72.6, ahead of the Russian Federation (65.6, 43rd), India (62.0, 58th), South Africa (60.8, 67th), and Brazil (59.5, 72nd).
- The report states that the global economy is projected to grow nearly 4 percent in 2018 and 2019.
- On the list of 140 economies, the United States topped the list with a score of 85.6, followed by Singapore and Germany at the second and the third positions respectively.
- Other countries in the top 10 include Switzerland (4th), Japan (5th), Netherlands (6th), Hong Kong (7th), United Kingdom (8th), Sweden (9th) and Denmark (10th).
- In Europe, Sweden is ranked the highest among the Nordic economies at 9th position, while France (17th) is among the top 20. Countries such as Germany and Switzerland set the global standards for innovation.
- Chile (33rd) leads the Latin America and the Caribbean region by a wide margin, ahead of Mexico (46th) and Uruguay (53rd). Insecurity and weak institutions are two of the biggest challenges for most countries in the region.
- Competitiveness performance in the Middle East and North Africa remains diverse, with Israel (20th) and the United Arab Emirates (27th), leading the way in their respective regions.
- 17 of the 34 sub-Saharan African economies are among the bottom 20. Mauritius (49th) leads the region, ahead of South Africa and nearly 91 places ahead of Chad (140th). India remained the "South Asia's main driving force" with 58th rank.
- Among the BRICS economies, China topped the list at 28th place with a score of 72.6, followed by Russia, India, South Africa and Brazil respectively.
- The World Economic Forum (WEF) on October 16, 2018 released the Global Competitiveness Report 2018.

India's rank on the Global Competitiveness Index 4.0:

- India was ranked as the 58th most competitive economy with a score of 62.0 on the Global Competitiveness Index 2018. India jumped five spots from 2017, the largest gain among G20 economies.

As per the report, India leads the region in all other areas of competitiveness except for health, education and skills. As per the report, India's greatest competitive advantages include its market size and innovation.

India ranked highest among South Asian countries. Sri Lanka was ranked 86th, Bangladesh 103rd, Pakistan 107th and Nepal 109th.

Global Competitiveness Index 4.0:

The 2018 edition of the Global Competitiveness Report introduced the new Global Competitiveness Index 4.0 (GCI 4.0). The new index sheds light on an emerging set of drivers of productivity and long-term growth in the era of the Fourth Industrial Revolution.

The GCI 4.0 provides novel insights on four factors that will grow in significance as the Fourth Industrial Revolution gathers pace. These four factors are human capital, innovation, resilience and agility.

INDIA'S FIRST RAILWAY STATION INSIDE TUNNEL

Why in News: For the first time in India, a railway station will be built inside a tunnel at a height of 3,000 metres, on the strategic Bilaspur-Manali-Leh line close to the Sino-India border. While many metro stations in Delhi and other cities are inside tunnels, once completed, the Keylong station in Himachal Pradesh will be the first on the railway network to be inside a tunnel.

Important Points:

- Indian Railways is moving fast to connect Ladakh with New Delhi through rail lines by expediting work on the strategically significant Bilaspur-Manali-Leh broad-gauge rail line.
- The location survey of the first phase is complete. The final location survey is expected to be completed in 30 months after which a detailed project report will be finalised.

- Railways has proposed it to be declared a national project. It is the most difficult project undertaken by the railways till date given the terrain over which the tracks have to be laid. Railways has suggested that construction on a 51 kilometre stretch between Upshi in Himachal Pradesh and Phe in Leh should begin immediately.

- The Bilaspur-Manali-Leh railway line is estimated to cost Rs 83,360 crore. It is a 465-km railway line. It would be the highest railway tracks in the world when complete. At its highest point, the tracks would be at 5,360 metres above sea level. It is comparable only to the Qinghai-Tibet Railway Line in China, which is at a height of around 2,000 metres above sea level.

There would be 30 stations on the new line taking Railways closer to India-China border in Ladakh. The important locations to be connected en route between Bilaspur and Leh are Sundernagar, Mandi, Manali, Keylong, Koksar, Darcha, Upshi and Karu in the states of Himachal Pradesh and Jammu and Kashmir.

This line is expected to help the armed forces, boost tourism and give a major push to development in Ladakh region. If the Railways' proposal of it declaring a national project is accepted by the government, the Centre would be providing most of the funds making the job easier.

Of total 465 km length, 52 per cent would go through tunnels, the longest of which would be 27 km long. Total length of the tunnels would be 244 km. According to the first phase of the survey, the railway line will have 74 tunnels, 124 major bridges and 396 minor bridges.

The railway line connecting Bilaspur with Leh would emerge from Bhanu Palli railway station on the Anandpur Sahib route. It is a rugged terrain in an area that is prone to landslides. Oxygen level reduces at this altitude and temperature drops to sub-zero levels.

According to Chief Administrative Officer (Construction) of Northern Railway Alok Kumar, the Bilaspur-Manali-Leh rail line project is more difficult than the one undertaken by the department in Jammu and Kashmir previously.

The final location survey is being undertaken at a cost of Rs 457.72 crore, he said. It would be completed in three phases - digital evaluation of elevation model, selection of path for better alignment and geographical survey for bridges and tunnels.

- When complete, trains on Bilaspur-Manali-Leh line would run at a speed of 75 kmph. It will reduce the distance between Delhi to Leh from the present 40 hours to 20 hours.
- The 51-km stretch between Upshi and Leh has a gentle gradient compared to the rest of the project. It is likely to take two years for completion with an estimated cost of Rs 5,000 crore.

ICFRE SIGNS TWO MOUS TO SPREAD AWARENESS ON FORESTS AND ENVIRONMENT

Why in News: Context: The Indian Council of Forestry Research and Education (ICFRE) has signed two Memorandums of Understanding (MoUs) with Navodaya Vidyalaya Samiti (NVS) and Kendriya Vidyalaya Sangathan (KVS).

Important Points:

The agreements were signed to launch 'Prakriti' programme, which aims to promote awareness about forests and environment and stimulate interest among the students of NVS and KVS in maintaining a balanced environment and for acquiring skills that reflect care and protection towards forests, environment and society.

The main objective behind the agreements is to provide a platform for the school children to learn practical skills towards sustainable use of the resources.

The two agreements have been signed for a period of 10 years. They aim to make the Indian youth more sensitive towards national and global issues of environment and thus, help them become responsible citizens.

The agreements also aim to mobilise a cadre of youth for raising a peoples' movement, which is committed to the conservation of forest and environment.

- The collaboration will enable transfer of knowledge to students and teachers of NVS and KVS on environment, forest, environmental services and contemporary areas of forestry research through lectures and interactive sessions by ICFRE scientists.

Prakriti programme:

The main objective of Prakriti programme is to provide platform for school children to learn practical skills towards sustainable use of resources. It also aims to promote awareness about forests and environment and stimulate interest among students of KVS and NVS in maintaining balanced environment. It also seeks to provide students with skills that reflect care and protection towards forests, environment and society.

About ICFRE:

- The Indian Council of Forestry Research and Education (ICFRE) is an autonomous council under the Union Environment Ministry.
- The council mainly guides, promotes and coordinates forestry research, extension and education at the national level through its nine institutes and five centres located across the country.
- Presently, the council's activities are focussed on contemporary issues of national and international importance particularly in the areas of climate change, forest productivity, biodiversity conservation and skill development.

Navodaya Vidyalaya Samiti (NVS):

- The Navodaya Vidyalaya Samiti is an autonomous organisation established under the Department of School Education and Literacy in the Ministry of Human Resource Development.
- The organisation was established to provide modern quality education to talented children, predominantly from rural areas, without regard to their family's socio-economic condition.
- Currently, there are 660 functional residential schools under the Samiti.

Kendriya Vidyalaya Sangathan (KVS):

- The Kendriya Vidyalaya Sangathan was established in 1963 to provide uninterrupted education to the children of the transferable central government employees.
- The KVS established Kendriya Vidyalayas all over the country to impart quality education, promotion of national integration, adventure activities and physical education.
- The Sangathan has one of the world's largest chains of schools. It runs around 1,183 schools in India and three abroad.

US SAYS IT COULD REMOVE INDIA FROM CURRENCY MONITORING LIST

Why in News: The US could remove India from its currency monitoring list of major trading partners, the Treasury Department has said, citing certain developments and steps being taken by New Delhi which address some of its major concerns. India for the first time was placed by the US in its currency monitoring list of countries with potentially questionable foreign exchange policies in April along with five other countries - China, Germany, Japan, South Korea and Switzerland.

Important Points:

India's circumstances have shifted markedly, as the central bank's net sales of foreign exchange over the first six months of 2018 led net purchases over the four quarters through June 2018 to fall to \$4 billion, or 0.2% of GDP.

This represented a notable change from 2017, when purchases over the first three quarters of the year pushed net purchases of foreign exchange above 2% of GDP. Recent sales came amid a turnaround in foreign portfolio inflows, as foreign investors pulled portfolio capital out of India (and many other emerging markets) over the first half of the year.

The rupee depreciated by around 7% against the dollar and by more than 4% on a real effective basis in the first half of 2018. India has a significant bilateral goods trade surplus with the US, totalling \$23 billion over the four quarters through June 2018, but India's current account is in deficit at 1.9% of GDP.

On what basis is a country named a 'currency manipulator'?

The three pre-conditions for being named currency manipulator are:

1. a trade surplus of over \$20 billion with the US,
2. a current account deficit surplus of 3% of the GDP, and
3. persistent foreign exchange purchases of 2% plus of the GDP over 12 months.

ASIA-EUROPE MEETING (ASEM)

Why in News: The 12th Asia-Europe Meeting (ASEM)

Summit was held in Brussels, Belgium. The theme of summit was 'Global Partners for Global Challenges'. It was chaired by European Council President Donald Tusk.

The summit was attended by heads of state of 51 European and Asian countries, representatives of European Union and Secretary General of Association of Southeast Asian Nations (ASEAN). India was represented by Vice President M. Venkaiah Naidu. This edition of summit has prioritised issues related to trade and investment, connectivity, sustainable development, climate change, terrorism, migration, maritime security and cyberspace.

Asia-Europe Meeting Summit (ASEM)

ASEM is informal political dialogue and cooperation forum that brings 53 entities - including 51 countries (including India) from Asia and Europe and two regional bodies European Union (EU) and ASEAN. It represents around 62.3% of the world's population, 57.2% of the global GDP and almost 60% of the world's trade.

ASEM was officially established in March 1996 at the first summit in Bangkok, Thailand. The dialogue addresses political, economic and cultural issues between the two regions. It also seeks to strengthen relationship between the two regions in a spirit of mutual respect and equal partnership. Three main pillars ASEM process are Political & Security, Economic & Financial and Social, Cultural & Educational.

75TH ANNIVERSARY OF AZAD HIND GOVERNMENT

Why in News: Seventy years after Subhash Chandra Bose assumed the leadership of the 'Azad Hind Government', PM Narendra Modi will hoist the national flag and unveil a plaque to celebrate the 75th anniversary of the erstwhile government on October 21 at the Red Fort.

About Azad Hind Government:

Netaji Subhash Chandra Bose had announced the establishment of the provisional government of Azad Hind in occupied Singapore in 1943.

Known as Arzi Hukumat-e-Azad Hind, it was supported by the Axis powers of Imperial Japan, Nazi Germany, the Italian Social Republic, and their allies.

The revered freedom fighter had launched a struggle to free India from British rule under the banner of the provisional government-in exile during the latter part of the Second World War.

Objectives:

Bose was convinced that armed struggle was the only way to achieve independence for India. He had been a leader of the radical wing of the Indian National Congress in the late 1920s and 1930s, rising to become Congress president in 1938 and 1939 but was ousted following differences with Mahatma Gandhi and the Congress leadership.

Under his provisional government, the Indians living abroad had been united. The Indian National Army drew ex- prisoners and thousands of civilian volunteers from the Indian expatriate population in Malaya (present-day Malaysia) and Burma (now Myanmar).

The formation:

- On October 21, 1943, in his address announcing the setting up of the provisional government, he said India's Army of Liberation was drawn up in military formation on the battlefield of Singapore which was once the bulwark of the British Empire.

- Under the provisional government, Bose was the head of the state, the prime minister and the minister for war and foreign affairs. Captain Lakshmi headed the women's organisation while S A Ayer headed the publicity and propaganda wing.
- Revolutionary leader Rash Behari Bose was designated as the supreme advisor. The provisional government was also formed in the Japanese-occupied Andaman and Nicobar Islands. The islands were reoccupied by the British in 1945.
- Bose's death was seen as the end to the Azad Hind movement. The Second World War, also ended in 1945 with the defeat of the Axis powers.

Netaji Subhash Chandra Bose:

- He was great Indian freedom fighter born on 23 January 1897 in Cuttack, British India (now in Odisha). Initially, he had joined Congress and was the president of the Congress during 1938-39. Later, due to differences in Congress, he resigned from Congress and established Forward Bloc. He tried to liberate the country through the Azad Hind Fauj.
- Azad Hind Fauj was founded in Singapore on October 21, 1943. It was established by exiled Indians. The role of Ras Bihari Bose was very important in its establishment. It was founded by ideas of Netaji Subhash Chandra Bose. It was armed force, whose purpose was to free India from British control. Subhash Chandra Bose was supreme commander of this army.

SINGAPORE HOSTS 12TH ASEAN DEFENCE MINISTERS MEETING AND 5TH ADMM-PLUS

Why in News: The 12th ASEAN Defence Ministers Meeting (ADMM) and 5th ADMM-Plus were held recently Singapore.

The conferences were attended by defence ministers from India, Australia, China, Japan, New Zealand, South Korea, Russia and US. This was second time Singapore has chaired ADMM since its establishment in 2006 and first time to chair ADMM-Plus since its establishment in 2010.

ADMM-Plus:

- ADMM-Plus is platform for ASEAN and its eight dialogue partners to strengthen security and defence co-operation for peace, stability, and development in the region. Its objective is to promote mutual trust and confidence between defence establishments through greater dialogue and transparency.

The inaugural ADMM-Plus was convened in Hanoi, Vietnam in 2010. The defence ministers then had agreed on five areas of practical cooperation, including maritime security, counter-terrorism, peacekeeping operations and humanitarian assistance.

Background:

ADMM and ADMM-Plus serves as key Ministerial-level platforms in regional security architecture for promoting strategic dialogue and practical cooperation between ASEAN and its partners.

About ASEAN:

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

The motto of ASEAN is "One Vision, One Identity, One Community".

INDIA'S FIRST BITCOIN ATM KIOSK SET UP IN BENGALURU

Why in News: AMIDST uncertainty over the validity of cryptocurrencies and the Central government directions preventing banks from trading the same, Unocoin Technologies Private Ltd has set up India's first ATM kiosk to trade in cryptocurrencies in Bengaluru.

- The first-of-its-kind automated teller machine will have both a trading and exchange platform, and will allow verified customers to use the device. It is expected to become operational soon.
- This kiosk is accessible to registered customers of Unocoin. The customers will be able to buy or sell up to 10 Bitcoins - one of the high value cryptocurrencies per day. However, all the transactions will have to be conducted in Indian rupees which will then be changed into the currency of choice of the consumer.

The kiosk will allow customers to trade in Bitcoin and Ethereum, while providing an exchange platform for 24 other cryptocurrencies in circulation.

Customers risking the use of Bitcoins will have to register by using their mobile number and entering a password. A verification process is initiated during which details such as PAN number, phone number, address, bank details, and others have to be furnished. It uses an elaborate procedure for both deposits and withdrawals, with the withdrawals requiring a prior request and 12-digit OTP.

Fiat and Non-fiat currency:

A fiat currency is any currency that has no intrinsic physical value, but whose value is established by government decree. For example, most national currencies around the world, including the Rupee and the Dollar, are fiat currencies as their values are dictated by the government.

Non-fiat currencies such as the Gold Standard have more or less been effectively phased out, as they require adequate physical stockpiles to maintain their value.

However, the new breed of digital cryptocurrencies such as Bitcoin blurs the boundaries between fiat and non-fiat - they don't have any physical value as such, but are also not government-controlled. This has created uncertainties about their role in the modern financial system.

What is bitcoin?

Bitcoin is one of many cryptocurrencies that have gained popularity across the world.

- A cryptocurrency is a basically a digital asset that has been created to function as a medium of exchange, like cash.

- It uses cryptography to ensure the security of transactions - authentication and prevention of duplicate transactions - and to control the creation of new units of currency.
- This is different from cash in that cryptocurrencies have no physical form. These blur the boundaries between fiat and non-fiat currencies. They are simply numbers on a screen and there is no central bank that issues new currency. However, bitcoin has emerged as the popular face of cryptocurrencies.

CSIR DEVELOPS AFFORDABLE WATER DISINFECTION SYSTEM "ONEERTM"

Why in News: Council of Scientific and Industrial Research, Indian Institute of Toxicology Research (CSIR-IITR), Lucknow has developed an innovative technology for "Drinking Water Disinfection System" with Trade name "OneerTM" which was transferred to M/s Bluebird Water Purifiers, New Delhi in the presence of Union Minister of Science & Technology and Vice-President, CSIR, Dr. Harsh Vardhan. It is useful for continuous treatment of water and eliminates all disease causing pathogens such as virus, bacteria, fungi, protozoa and cyst to provide safe drinking water to domestic and communities settings as per National and International standards prescribed for potable water (BIS, WHO etc.).

Important Points:

The Council of Scientific and Industrial Research - Indian Institute of Toxicology Research (CSIR-IITR) of Lucknow developed an innovative technology for "Drinking Water Disinfection System" with Trade name "OneerTM" which was transferred to Bluebird Water Purifiers.

OneerTM is useful for continuous treatment of water and eliminates all disease causing pathogens such as virus, bacteria, fungi, protozoa and cyst to provide safe drinking water as per National and International standards prescribed for potable water.

Infection through drinking water results in an increase in morbidity and mortality particularly amongst children and Oneer developed by CSIR-IITR will provide access to safe and clean drinking water at a cost of just 2 paise per litre.

- It is of 450 LPH capacity which can be scaled up to 5000 to 1 lakh litre per day and is also maintenance and membrane free.
- The technology will be helpful especially for rural people since it can be solar powered and this development is in line with the 'Make in India' initiative.

Industrial Toxicology Research Centre (ITRC):

- Industrial Toxicology Research Centre (ITRC) is now named as Indian Institute of Toxicology Research (IITR), Lucknow, India. The institute is engaged in the field of Toxicology having its main campus in Lucknow city and the other Gheru campus, is located near village 'Gheru' at Lucknow-Kanpur highway.
- It is one of the constituent laboratory of CSIR India, which was established in 1965 with the motto of "Safety to Environment & Health and Service to Industry". The founder Director (1965-78) of the institute was Prof. Sibte Hasan Zaidi who died on 5 April 2008 at New York. He was the recipient of Padmashri and prestigious Sir Shanti Swarup Bhatnagar award for scientific excellence. IITR conducts Dr. S.H. Zaidi Oration in his honour every year during its foundation day celebrations on 4 November.

CHINESE COMPANY SUCCESSFULLY TESTS THE WORLD'S LARGEST 'TRANSPORT DRONE'

Why in News: China's first home-grown amphibious aircraft AG600 (code-named Kunlong) successfully carried out its first take-off and landing on water. It is claimed to be as the world's largest amphibious aircraft. In this maiden flight, the seaplane took off from Zhanghe Reservoir in Jingmen, Hubei's province and stayed airborne for about 15 minutes

About AG600 amphibious aircraft:

- China has successfully tested the world's largest unmanned transport drone which can carry a payload of 1.5 tonnes.
- A large commercial drone Feihong-98 (FH-98) developed and modified by the China Academy of Aerospace Electronics Technology made a successful test flight at Baotou test site in North China's Inner Mongolia autonomous region.



Feihong-98 (FH-98) is now the world's largest unmanned transport aircraft, with a maximum payload of up to 1.5 tonnes.

It was adapted from the prototype of the Shifei Y5B, a China-developed transport plane. As China's first fully domestically-built transport aircraft, the Shifei Y5B has a history of over 60 years since its first flight in 1957 and has been widely used.

According to Liu Meixuan, president of the China Academy of Aerospace Electronics Technology, the FH-98 features simple take-off and landing, simple operation, advanced technology, at an affordable cost.

The FH-98 has a maximum takeoff weight of 5.25 tonnes, a maximum capacity of 1.5 tonnes and 15 cubic metres, a flight height of 4,500 metres, a cruising speed of 180 kilometers per hour, and a maximum range of 1,200 kms.

China has been making advances in the development of Unmanned Aerial Vehicles. China will sell 48 of its Wing Loong II high-end reconnaissance and multi-role Chinese drones to its all-weather ally Pakistan.

AG600 can land and take off from water. It has wingspan of 38.8 metres. It is powered by four turboprop engines. It has been designed and built by China's state-owned manufacturer Aviation Industry Corp of China. It is capable of carrying 50 people and can stay airborne for 12 hours.

Background:

AG600 is third member of China's large aircraft family following large freighter Y-20 and large passenger aircraft C919. It has been developed and built by state-owned aircraft giant Aviation Industry Corporation of China. It had made its maiden flight at the coastal city at Zhuhai in December 2017.

US TO PULL OUT OF INTERMEDIATE-RANGE NUCLEAR FORCES TREATY WITH RUSSIA

Why in News: US President Donald Trump confirmed that the United States will pull out of the three-decade-old Intermediate-Range Nuclear Forces (INF) treaty, which it had signed with Russia during the Cold War.

Explaining the decision, Trump alleged that Russia has "violated" the agreement. He said that they have been violating it for many years. He said that the US would not let Russia violate a nuclear agreement and go out and develop the weapons while the US is not allowed to. "We'll have to develop those weapons," he added.

Intermediate-Range Nuclear Forces (INF) treaty:

It was crucial Cold War-era treaty banning development, testing and possession of short and medium range ground-launched nuclear missiles with range of 500-5,000 km. The treaty was signed in December 1987 between then US President Ronald Reagan and his USSR counterpart Mikhail Gorbachev.

The treaty banned all nuclear and conventional missiles, as well as their launchers, with ranges of 500-1,000 km or (short-range) and 1,000-5,000 km (intermediate-range). This treaty was central to ending arms race between two superpowers during cold war and protected America's NATO allies in Europe from Soviet missile attacks. It was designed to provide measure of some strategic stability on continent of Europe.

Importance of the treaty:

The treaty offered a blanket of protection to the United States' European allies and marked a watershed agreement between two nations at the centre of the arms race during the Cold War.

It was designed to provide a measure of some strategic stability on the continent of Europe.

Reasons of US withdrawal:

US President Trump has alleged that Russia has violated treaty and has been violating it for many years. This violation comes after Russia's alleged development and deployment of Novator 9M729 missile (also known as SSC-8), that could strike Europe at short notice.

- Accusations of Russia violating this treaty pre-dates Trump presidency and go back to 2008 during President Obama administration. Under former President Barack Obama raised issue of Russia testing ground-launched cruise missile with Russian President Vladimir Putin in 2014. But Russia had denied allegations and raised counter-allegations of the US installing missile defence systems in Europe. While two countries failed to find resolution using dispute resolution mechanism in treaty, US continued to remain party to treaty under pressure from its European allies.

What led US to withdraw from the agreement?

The Trump Administration has repeatedly alleged that Russia has violated the treaty. The US insists the Russians have, in breach of the deal, developed a new medium-range missile called the 'Novator 9M729' - known to NATO as the SSC-8. The missile would enable Russia to launch a nuclear strike at NATO countries at very short notice.

In 2014, President Barack Obama had accused Russia of breaching the INF after it allegedly tested a ground-launched cruise missile. He, however, reportedly chose not to withdraw from the treaty under pressure from the European leaders, who said such a move could restart an arms race.

Recently, NATO officially confirmed Russia's activity constituted a likely violation. NATO Secretary General Jens Stoltenberg said earlier this month that the military alliance remained concerned about Russia's lack of respect for its international commitments, including the Intermediate-Range Nuclear Forces Treaty.

Stoltenberg stated that after years of denials, Russia recently acknowledged the existence of its new missile system '9M729'. However, Russia did not provide any credible answers on its new missile.

Russia's failure to adhere to the agreement was also addressed in the most recent Nuclear Posture Review published by the Defense Department in February, which said Russia "continues to violate a series of arms control treaties and commitments."

Other Factors :

- The INF treaty was a bilateral treaty between the US and the USSR. Hence, other nations such as China were free to develop and deploy intermediate-range nuclear missiles without restraint.
- This led many in the Trump administration to feel that the INF treaty placed them at a growing disadvantage in their developing strategic rivalry with China.

Russia's reaction:

- According to reports, a Russian foreign ministry source has said that the US's move is motivated by a 'dream of a unipolar world' where it is the only global superpower.
- Russian President Vladimir Putin plans to discuss the decision with US national security adviser John Bolton when he visits Russia this week.

Impact:

The withdrawal of the United States from the treaty could provoke an arms race across Europe, similar to the one that was occurring when the agreement was initially signed in the 1980s.

HARIT DIWALI, SWASTH DIWALI CAMPAIGN

Why in News: Union Ministry of Environment, Forests and Climate Change (MoEFCC) has launched Harit Diwali-Swasth Diwali campaign. MOEFCC has merged this year's campaign with "Green Good Deed" movement that has been initiated as social mobilization for conservation and protection of environment.

Aim: To reduce adverse environmental conditions especially pollution in the country after post Diwali celebrations due to excessive bursting of crackers which contributes significantly to air and noise pollution.

Important Points:

- In 2017, a large number of school children especially from eco-clubs participated and took a pledge to minimise bursting of crackers and discourage others including their neighbours and friends from bursting of crackers.

During the intensive campaign, the children were advised to celebrate Diwali in an environment-friendly manner by gifting plant sapling to their relatives and friends along with sweets and undertake cleaning of houses, neighbourhoods, schools, collect old books and unused notebooks gift to needy children, donate old warm clothing, blankets to night-shelters and other homeless people.

The children were also encouraged to light up their houses and their schools with candles and diyas.

The campaign was extremely successful and the air quality had not deteriorated post-Diwali in 2017 unlike what was experienced in 2016.

This year the campaign has been extended Pan-India. The Harit Diwali-Swasth Diwali campaign is now merged with 'Green Good Deed' movement that has been initiated for the conservation and protection of the environment.

The Ministry is encouraging all schools and colleges to be part of this campaign.

Background:

Air pollution is a serious health issue in the country especially in the northern parts during winter seasons.

It is attributed to dust, burning of crops in certain states, burning of garbage construction and prevailing climatic conditions.

The pollution has serious impacts on the health of children, aged people and people suffering from respiratory ailments.

- The festival of Diwali, which is celebrated by most people through the practice of bursting crackers, falls during the same period.

- The crackers not only contain combustible chemicals that include potassium chlorate powdered aluminum, magnesium, salts of barium, copper, sodium, lithium, strontium but also emit smoke on combustion of these chemicals along with the sound.
- As a result, there has been a significant impact on the environment and health of the people and animal and birds.
- The airborne pollution has also been rising above safe limits during winter in many cities. The pollution levels in Delhi in 2016, especially post Diwali, reached such levels that the government had to declare an emergency situation, which had socio-economic consequences like closing down of schools, construction sites and power stations.

EARTH'S INNER CORE IS SOLID, SOFTER THAN THOUGHT: STUDY

Why in News: The inner core of the Earth is solid, and softer than previously thought, according to a study which could improve our understanding of how the planet was formed.

Researchers at The Australian National University (ANU) came up with a way to detect shear waves, or "J waves" in the inner core - a type of wave which can only travel through solid objects.

Facts about the inner core of the Earth:

Radius: 1,220 kilometres (760 miles) i.e. 70 per cent of the Moon's radius.

Composed of: Nickel-iron alloy.

Temperature: 5,700 K (5,430 °C) or 9806 °F, which is almost the temperature of Sun.

The inner core is made up of two layers outer and inner.

Outer core is 1,355 miles (2,180 km) thick.

Important Points:

- There is no estimated radius of the inner core; however, it plays a distinct role in making Earth's magnetic field.
- The inner core is measured by shear waves, a seismology term, which so tiny and feeble that it can't be observed directly.

- In fact, detecting them has been considered the 'Holy Grail' of global seismology since scientists first predicted the inner core was solid in the 1930s and 40s.

- When charged particles from the solar wind collide with air molecules above Earth's magnetic poles, it causes the air molecules to glow, causing the auroras - the northern and southern lights.

- Researchers came up with a way to detect shear waves, or "J waves" in the inner core - a type of wave which can only travel through solid objects.

According to the research published by the university, the wavefield method looks at the similarities between the signals at two receivers after a major earthquake, rather than the direct wave arrivals. The study shows these results can then be used to demonstrate the existence of J waves and infer the shear wave speed in the inner core.

It has been found that the inner core shares some similar elastic properties with gold and platinum.

The understanding of the Earth's inner core has direct consequences for the generation and maintenance of the geomagnetic field, and without that geomagnetic field there would be no life on the Earth's surface.

INDIA, MYANMAR SIGN MOU TOWARDS SITTWE PORT OPERATIONALISATION

Why in News: India and Myanmar signed an important MoU for the appointment of a private Port Operator for the Operation and Maintenance of Sittwe Port, Paletwa Inland Water Terminal and associated facilities included in the Kaladan Multi Model Transit Transport Project in implementation of India's Act East Policy.

Where is Sittwe located?

Sittwe is the capital of Rakhine State (which has been in the news for the plight of Rohingya Muslims) in south-western Myanmar. It is located at the mouth of the Kaladan river, which flows into Mizoram in north-eastern India.

TEA BOARD PLANS APP TO HELP GROWERS

Why in News: Tea Board of India is planning to launch an app aimed at guiding small growers, whose share in total tea production is increasing. The proposed name of the app is Chai Sahay (tea help).

Important Points:

- India has for years sought transit access through Bangladesh to ship goods to the landlocked north-eastern States.
- At present, the only route to this region from the rest of India is a rather circuitous one through a narrow strip of Indian territory nicknamed the Chicken's Neck in West Bengal, sandwiched between Bhutan and Bangladesh.
- The new route through Sittwe would significantly lower the cost and distance of movement from Kolkata to Mizoram and beyond.
- Following this MoU the process of identifying bidders to maintain these facilities will be initiated by floating an RFP.
- Subsequent to the commencement of operations at this port, it would offer new infrastructure for trade including between India and Myanmar, thereby contributing to job creation and development in the whole region, particularly in the Rakhine and Chin States of Myanmar.

About Kaladan Project:

- The Kaladan project connects Sittwe Port in Myanmar to the India-Myanmar border.
- The project was jointly initiated by India and Myanmar to create a multi-modal platform for cargo shipments from the eastern ports to Myanmar and to the North-eastern parts of the country through Myanmar.
- It is expected to open up sea routes and promote economic development in the North-eastern states, and also add value to the economic, commercial and strategic ties between India and Myanmar.
- This project will reduce distance from Kolkata to Sittwe by approximately 1328 km and will reduce the need to transport good through the narrow Siliguri corridor, also known as Chicken's Neck.

Important Points:

The existing database of the STGs would be incorporated in the app, which would also give information on their registration process. There would be advisories on application of farm inputs and pesticide use. Small growers can also post queries for advice on pest control.

The mobile platform would have user-interface facilities with the targeted user groups (the small tea grower) and the various officials. It would also have information on the various activities of the board officials.

About Tea Board of India:

The Tea Board is set up under the Tea Act 1953. It has succeeded the Central Tea Board and the Indian Tea Licencing Committee which functioned respectively under the Central Tea Board Act, 1949 and the Indian Tea Control Act, 1938 which were repealed.

The Tea Board is functioning as a statutory body of the Central Government under the Ministry of Commerce.

The Board is constituted of 31 members (including Chairman) drawn from Members of Parliament, tea producers, tea traders, tea brokers, consumers, and representatives of Governments from the principal tea producing states, and trade unions. The Board is reconstituted every three years.

The Tea Board India is responsible for the assignment of certification numbers to exports of certain tea merchants. This certification is intended to ensure the teas' origin, which in turn would reduce the amount of fraudulent labelling on rare teas.

- The Tea Board India's tasks include endorsement of the diverse production and productivity of tea, financial support of research organisations and the monitoring of advances in tea packaging as it relates to health beneficial aspects.

- It coordinates research institutes, the tea trade and government bodies, ensuring the technical support of the tea trade in the global industry.
- IBBI notifies the Insolvency and Bankruptcy Board of India (Mechanism for Issuing Regulations) Regulations, 2018
- The Insolvency and Bankruptcy Code, 2016 (Code) is a modern economic legislation. Section 240 of the Code empowers the Insolvency and Bankruptcy Board of India (IBBI) to make regulations subject to the conditions that the regulations: (a) carry out the provisions of the Code, (b) are consistent with the Code and the rules made thereunder; (c) are made by a notification published in the official gazette; and

(d) are laid, as soon as possible, before each House of Parliament for 30 days.

Given the importance of subordinate legislations for the various processes under the Code, it is essential that the IBBI has a structured, robust mechanism, which includes effective engagement with the stakeholders, for making regulations. Section 196

(1) (s) of the Code requires the IBBI to specify mechanisms for issuing regulations, including the conduct of public consultation processes, before notification of regulations. In sync with this philosophy and the statutory requirement, the IBBI notified the Insolvency and Bankruptcy Board of India (Mechanism for Issuing Regulations) Regulations, 2018 (Issuing Regulations) to govern the process of making regulations and consulting the public .

The Issuing Regulations provide that for the purpose of making or amending any regulations, the IBBI shall upload the following, with the approval of the Governing Board, on its website seeking comments from the public-

- draft of proposed regulations;
- the specific provision of the Code under which the Board proposes regulations;
- a statement of the problem that the proposed regulation seeks to address;
- an economic analysis of the proposed regulations;
- a statement carrying norms advocated by international standard setting agencies and the international best practices, if any, relevant to the proposed regulation;
- the manner of implementation of the proposed regulations; and
- the manner, process and timelines for receiving comments from the public.

The IBBI shall allow at least twenty-one days for public to submit their comments. It shall consider the public comments received and upload the same on its website along with a general statement of its response on the comments, not later than the date of notification of regulations. If the Governing Board decides to approve regulations in a form substantially different from the proposed regulations, it shall repeat the process under the Issuing Regulations. The regulations shall be notified promptly after it is approved by the Governing Board and the date of their enforcement shall ordinarily be after thirty days from the date of notification unless a different date is specified therein.

However, where the IBBI is of the opinion that certain regulations are required to be made or existing regulations are required to be amended urgently, it may make regulations or amend the existing regulations, as the case may be, with the approval of the Governing Board, without following the above process of consultation.

CITIZENSHIP (AMENDMENT) BILL, 2016

Why in News: In recent weeks, Assam has seen many protests over the proposed Citizenship (Amendment) Bill, 2016. Earlier this month, when the Joint Parliamentary Committee on the Bill visited Assam and Meghalaya to hear from the locals, it did so amid protest voices which said the move would make Assam a "dumping ground for Hindu Bangladeshis".

What is the Citizenship Amendment Bill 2016?

The Citizenship Amendment Bill was proposed in Lok Sabha on July 19, amending the Citizenship Act of 1955.

If this Bill is passed in Parliament, illegal migrants from certain minority communities coming from Afghanistan, Bangladesh, and Pakistan will then be eligible for Indian citizenship.

In short, illegal migrants belonging to the Hindu, Sikh, Buddhist, Jain, Parsi or Christian religious communities from Afghanistan, Bangladesh or Pakistan would not be imprisoned or deported.

- Moreover, these citizens gain permanent citizenship after six years of residency in India instead of 11 years - as mentioned in the Citizenship Act (1955).
- The registration of Overseas Citizen of India (OCI) cardholders may get cancelled if they violate any law.

What is the Citizenship Act 1995?

Under Article 9 of the Indian Constitution, a person who voluntarily acquires citizenship of any other country is no longer an Indian citizen.

Citizenship by descent: Persons born outside India on or after January 26, 1950, but before December 10, 1992, are citizens of India by descent if their father was a citizen of India at the time of their birth.

- From December 3, 2004, onwards, persons born outside of India shall not be considered citizens of India unless their birth is registered at an Indian consulate within one year of the date of birth.
- In Section 8 of the Citizenship Act 1955, if an adult makes a declaration of renunciation of Indian citizenship, he loses Indian citizenship.

Who is an illegal immigrant?

According to the Citizenship Act (1955), an illegal immigrant is defined as a person who enters India without a valid passport or stays in the country after the expiry of the visa permit. Also, the immigrant who uses false documents for the immigration process.

What are the guidelines to become an Indian citizenship?

Citizenship is granted to an individual by the government of the country when he/she complies with the legal formalities, so it's like a judicial concept.

In India, the Citizenship Act, 1995 prescribes five ways of acquiring citizenship:

1. Birth.
2. Descent.
3. Registration.
4. Naturalization.
5. Incorporation of the territory.

Assam NRC:

The National Register of Citizens (NRC) is a list that contains names of Indian citizens of Assam. It was last prepared after Census in 1951. Assam, which had faced an influx of people from Bangladesh since the early 20th century, is the only state having an NRC.

- The Assam government on July 30, 2018 released the second and final draft of the state's National Register of Citizens (NRC). The draft includes the names of Indian citizens who have been residing in Assam before March 25, 1971.

- As per the Draft, the total number of persons included in the list is 2,89,83,677 leaving a total of 40,70,707 as ineligible for inclusion. Out of 40,70,707 names, 37,59,630 names have been rejected and 2,48,077 names are kept on hold.

'MAIN NAHIN HUM' PORTAL

Why in News: Prime Minister Narendra Modi launched the 'Main Nahin Hum' portal and app and interacted with IT professionals at the town hall in Delhi. The portal, which works on the theme "Self4Society", will enable IT professionals and organisations to bring together their efforts towards social causes and service to society on one platform.

Important Points:

Addressing the gathering of IT professionals, he lauded the youth for making use of technology in a wonderful manner. "India's youngsters are leveraging the power of technology wonderfully. They are using technology not only for themselves but also for the welfare of others.

Adding further, he said, "Every effort, however big or small, must be valued. Governments may have schemes and budgets but the success of any initiative lies in public involvement."

The PM also said, "More people are paying taxes because they have faith that their money is being used properly and for the welfare of people."

He also touched upon the Swachh Bharat Mission and said, "The symbol of the Swachh Bharat Mission is the specs of Bapu, the inspiration is Bapu and we are fulfilling Bapu's vision."

The 'Main Nahin Hum' portal is expected to help catalyse greater collaboration towards the service of the weaker sections of society, especially by leveraging the benefits of technology. It is also expected to generate wider participation of interested people who are motivated to work for the benefit of society.

INDIA SIGNS \$777 MILLION DEAL FOR ISRAELI MISSILE DEFENCE SYSTEMS

Why in News: State-owned Israel Aerospace Industries (IAI) has won an additional \$777 million contract to supply LRSAM air and missile defence systems to seven ships in the Indian navy. The contract is with the Bharat Electronics Ltd (BEL), which is the main contractor in the project, IAI said.

Important Points:

The LRSAM, part of the Barak 8 family, is an air and missile defence system used by Israel's navy as well as India's navy, air and land forces.

With this deal, sales of the Barak 8 over the past few years total over \$6 billion, IAI said.

IAI's partnership with India dates many years back and has culminated in joint system development and production.

India is a major market for IAI and we plan to reinforce our positioning in India, also in view of increasing competition.

Israel's and India's leaders have pledged to deepen ties and the countries have been increasing cooperation in fields like agriculture and advanced technologies.

Israel is also emerging as one of India's biggest suppliers of weapons, alongside the United States and long-term partner Russia.

Last year, IAI struck a deal worth almost \$2 billion to supply India's army and navy with missile defence systems.

This was followed by a \$630 million contract with BEL to supply Barak 8 surface-to-air missile systems for four ships in the Indian navy.

The Barak 8 was developed by IAI in collaboration with Israel's Defence Ministry, India's Defence Research and Development Organisation, the navies of both countries, Israel's Rafael and local industries in India and Israel.

About Defence Research and Development Organisation:

The Defence Research and Development Organisation (DRDO) is an agency of the Republic of India, charged with the military's research and development, headquartered in New Delhi, India. It was formed in 1958 by the merger of the Technical Development Establishment and the Directorate of Technical Development and Production with the Defence Science Organisation. It is under the administrative control of the Ministry of Defence, Government of India. With a network of 52 laboratories, which are engaged in developing defence technologies covering various fields, like aeronautics, armaments, electronics, land combat engineering, life sciences, materials, missiles, and naval systems, DRDO is India's largest and most diverse research organisation.

About Israel Aerospace Industries (IAI):

Israel Aerospace Industries or IAI is Israel's prime aerospace and aviation manufacturer, producing aerial and astronautic systems for both military and civilian usage. It has 16,000 employees as of 2013. IAI is wholly owned by the government of Israel. IAI designs and builds civil aircraft, drones, fighter, aircraft, missile, avionics, and space-based systems

INDIA, IRAN, AFGHANISTAN DISCUSS CHABAHAR PORT

Why in News: The first trilateral meeting between India, Afghanistan and Iran of Coordination Council of Chabahar Agreement was held in Tehran, capital city of Iran. India, Iran and Afghanistan in May 2016, had signed agreement which entailed establishment of transit and transport corridor among three countries using Chabahar Port as one of regional hubs.

Important Points:

Detailed discussions were held between three sides on full operationalisation of trilateral Agreement for international transit and transport through Chabahar port.

- They shared view that full operationalisation of Chabahar port will promote connectivity and economic development of Afghanistan and region. They also reviewed its implementation.

INTERNATIONAL CONFERENCE ON STATUS AND PROTECTION OF CORAL REEFS (STAPCOR - 2018)

- They also decided to constitute follow-up committee that will hold its first meeting within two months in Chabahar port.
- This committee will discuss and aim to finalise protocol to harmonise transit, roads, customs and consular matters for making the route attractive and decrease logistic costs.
- It was also decided to hold next meeting of the coordination council in India in the first half of 2019.

Comment

The meeting assumes significance as strategically-located Chabahar port on energy-rich Iran's southern coast was coming under ambit of US sanctions on Iran. The sanctions were announced after US under President Donald Trump administration withdrew from 2015 Iran nuclear deal that lifted most of embargoes on Iran imposed for its suspected nuclear weapons programme. India is committed to Chabbar project despite threat of US sanctions on nations doing business with Iran including buying oil or investing in the country. It also has conveyed to US importance of Chabahar project, saying it can be major link for trade with war-ravaged Afghanistan.

Chabbar project

Chabahar is strategically located in Sistan-Balochistan province on energy-rich Iran's southern coast in Gulf of Oman. It is less than 100 nautical miles from Chinese built port of Gwadar in Pakistan. India in 2003 had first proposed developing Chabahar port. The port is seen as golden gateway for India to access landlocked markets of Afghanistan and Central Asian markets bypassing Pakistan. India and Iran had signed lease agreement for operation of Shahid Beheshti port or phase 1 of Chabahar in February 2018. Under the terms of this agreement, India Ports Global Ltd (IPGL), an Indian company was to take over interim operations of port Chabahar and operate terminal for 18 months.

Why in News: : The International Conference on Status and Protection of Coral Reefs (STAPCOR - 2018) is being held at Bangaram coral Island of Territory of Lakshadweep.

Theme: "Reef for Life"

Organizers: It was jointly organized by Department of Environment and Forest, Union Territory of Lakshadweep Administration with the technical support of Zoological Survey of India (ZSI) and in association with Ministry of Environment, Forest and Climate Change (MoEFCC), International Union for Conservation of Nature (IUCN), Environmental Information System (ENVIS) in consonance with declaration of year 2018 as 3rd decadal International year of Reefs.

What is STAPCOR?

The effect of climate change and global warming along with El-Nino on the corals has lead to heavy bleaching internationally during the year 1998. This led to the foundation of STAPCOR with a decision to have a international conference in every 10 years to review the status and progress of coral reefs all over the world.

The goals of the 3rd IYOR - 2018 are to:

- Strengthen awareness about ecological, economic, social and cultural value of coral reefs and associated ecosystems.
- Improve understanding of the critical threats to reefs and generate both practical and innovative solutions to reduce these threats.
- Generate urgent action to develop and implement effective management strategies for conservation and sustainable use of these ecosystems.

Background:

The first IYOR was designated in 1997 in response to the increasing threats on coral reefs and associated ecosystems. The hope was to increase awareness of the value of and threats to coral reefs, and to promote conservation, research and management efforts on a global scale.

What are Corals?

Corals are invertebrates belonging to a large group of colourful and fascinating animals called Cnidarians. Other animals in this group include jellyfish and sea anemones. Each individual coral animal is called a polyp, and most live in groups of hundreds to thousands of genetically identical polyps that form a 'colony'. The colony is created by a process called budding, where the original polyp literally grows copies of itself.

Hard and Soft Corals:

Corals are generally classified as either "hard" or "soft". There are around 800 known species of hard coral, also known as 'reef building' or scleractinian corals. Soft corals, or octocorals, which include sea fans, sea feathers and sea whips, don't have the rock-like calcareous skeleton, instead they grow wood-like cores for support and fleshy rinds for protection. Soft corals also live in colonies, that often resemble brightly coloured plants or trees, and are easy to tell apart from hard corals as their polyps have tentacles that occur in multiples of 8, and have a distinctive feathery appearance. Soft corals are found in oceans from the equator to the north and south poles, generally in caves or on ledges. Here, they hang down in order to capture food floating by in the currents.

What are coral reefs?

Coral reefs have evolved on earth over the past 200 to 300 million years, and have developed a unique and highly evolved form of symbiosis. Coral polyps have developed this relationship with tiny single-celled algae known as zooxanthellae. Inside the tissues of each coral polyp live these zooxanthellae, sharing space and nutrients.

This symbiosis between plant and animal also contributes to the brilliant colors of coral that can be seen while diving on a reef. It is the importance of light that drives corals to compete for space on the sea floor, and so constantly pushes the limits of their physiological tolerances in a competitive environment among so many different species. However, it also makes corals highly susceptible to environmental stress.

INVEST INDIA

Why in News: Invest India, the country's investment promotion body, has won United Nations (UN) Award for excellence in promoting investments in sustainable development.

Invest India received this award for excellence in servicing and supporting major global wind turbines company in establishment of blade manufacturing plant in India while committing to train local staff and produce 1 gigawatt (GW) of renewable energy. Implementation of this project is expected to reduce India's wind energy cost significantly.

What is Invest India?

Invest India is the National Investment Promotion and Facilitation Agency of India and acts as the first point of reference for investors in India.

Invest India is set up as a non profit venture under the Department of Industrial Policy and Promotion, Ministry of Commerce and Industries, Government of India.

A joint venture: Operationalized in early 2010, Invest India is set up as a joint venture company between the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce & Industry (35% equity), Federation of Indian Chambers of Commerce and Industry (FICCI) (51% equity), and State Governments of India (0.5% each).

Functions: The core mandate of Invest India is investment promotion and facilitation. It provides sector-specific and state-specific information to a foreign investor, assists in expediting regulatory approvals, and offers hand-holding services. Its mandate also includes assisting Indian investors to make informed choices about investment opportunities overseas.

Why Invest in India?

India to remain one of the fastest growing economies in the world- International Monetary Fund.

- FDI inflows increased by 37% since the launch of Make in India initiative.
- Leading investors ranked India as the most attractive market.

- Largest youth population in the world.
- Huge domestic market.
- Rising economic influence- IOR and INSTC.
- India registered a record improvement on EoDB ranking from 142 to 100 between 2014-2017.

UN Investment Promotion Award:

The awards are given annually by United Nations Conference on Trade and Development (UNCTAD) since 2002 as part of its investment promotion and facilitation programme.

- It honours investment promotion agencies (IPAs) and their governments for their achievements.
- It also seeks to showcase best practices in attracting investment into Sustainable Development Goals (SDGs)-related projects that can inspire investment promotion practitioners in developing and developed countries.

SCHEME FOR PROMOTION OF ACADEMIC AND RESEARCH COLLABORATION (SPARC)

Why in News: The Minister of Human Resource Development, Shri Prakash Javadekar launched the web portal of the Scheme "Scheme for Promotion of Academic and Research Collaboration (SPARC)" in New Delhi. Speaking on the occasion, the Minister said that SPARC scheme aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian Institutions and the best institutions in the world. He informed that under this Scheme, 600 joint research proposals will be awarded for 2 years to facilitate strong research collaboration between Indian research groups with the best in class faculty and renowned research groups in the leading universities of the world, in areas that are at the cutting edge of science or with direct social relevance to the mankind, specifically India.

The minister further informed that the Government in August 2018 had sanctioned the scheme "Scheme for Promotion of Academic and Research Collaboration (SPARC)" at a total cost of Rs.418 Cr for implementation up to 31.3.2020 and Indian Institute of Technology Kharagpur is the National Coordinating Institute to implement the SPARC programme. Details may be viewed at www.sparc.iitkgp.ac.in.

Salient Features of SPARC are :

This scheme will improve research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between Indian Institutions [overall top-100 or category-wise top-100 in NIRF (including such Private Institutions which are recognized under 12(B) of UGC Act)] and the best institutions in the world (top-500 overall and top-200 subject-wise institutions listed in QS World University Ranking) from 28 selected nations [Australia, Austria, Belgium, Brazil, Canada, China, Denmark, Finland, France, Germany, Hong Kong, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Russia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, United Kingdom(UK), United States of America(USA)] to jointly solve problems of national and international relevance. As per the criteria mentioned above, 254 top Indian Institutes and 478 top ranked global Institutes have been already identified.

- a. A set of 5 Thrust Areas (Fundamental Research, Emergent Areas of Impact, Convergence, Action-Oriented Research and Innovation-Driven) and sub-theme areas in each thrust area has been identified for collaboration under SPARC based on emergent relevance and importance for the nation.
- b. Each Thrust Area will have a Section Chair. The role of Section Chair of each Thrust Area is to review shortlist and recommend the potential joint-proposals submitted under SPARC scheme.
- c. A set of Nodal Institutions (NI), from India, for each participating foreign country has been identified. The role of a NI is to help, handhold and coordinate with willing Participating Indian (PI) Institutions to forge alliance with the Institutions of concerned participating foreign country, for academic and research collaboration. 25 such reputed Institutions have been notified as Nodal Institutions.
- d. SPARC proposes to enable productive academic cooperation by supporting the following critical components that can catalyze impact making research:
 - i) Visits and long-term stay of top international faculty/researchers in Indian institutions to pursue teaching and research ,
 - ii) Visits by Indian students for training and experimentation in premier laboratories worldwide ,

- iii) Joint development of niche courses, world-class books and monographs, translatable patents, demonstrable technologies or action oriented research outcomes and products ,
- iv) Publication , Dissemination and Visibility through a high profile annual international conference in India .

Importance of the Scheme:

This Scheme is expected to have a major impact in providing the best international expertise to address major national problems, expose Indian academicians to the best collaborators abroad, enable international faculty to stay in India for a longer duration, provide Indian students an opportunity to work in the world class laboratories, to develop strong bilateral relationships in research, and improve the international ranking of Indian Institutes.

INDIA AND BANGLADESH SIGN AGREEMENTS FOR ENHANCING INLAND AND COASTAL WATERWAYS CONNECTIVITY

Context: India and Bangladesh have signed several milestone agreements for enhancing inland and coastal waterways connectivity between the two countries for trade and cruise movements. These agreements will facilitate easier movement of goods and passengers between the two countries, giving an impetus to trade and tourism.

Important Points:

- The two countries have signed an agreement to use Chattogram and Mongla Ports in Bangladesh for movement of goods to and from India. A Standard Operating Procedure (SOP) has also been signed for movement of passenger and cruise services.
- An addendum to 'Protocol on Inland Water Transit and Trade' (PIWTT) between India and Bangladesh has been signed for inclusion of Dhubri in India and Pangaon in Bangladesh as new Ports of Call.
- The two sides have also agreed to consider inclusion of Rupnarayan river (National Waterway-86) from Geonkhali to Kolaghat in the protocol route and to declare Kolaghat in West Bengal as new Port of Call.
- Both sides agreed to declare Badarpur on river Barak (NW 16) as an Extended Port of Call of Karimganj in Assam and Ghorasal of Ashuganj in Bangladesh on a reciprocal basis.

- Both sides have also agreed for development of Jogighopa as a hub/trans-shipment terminal for movement of cargo to Assam, Arunachal Pradesh, Nagaland and Bhutan and notifying Munsiganj River terminal by Bangladesh Customs for routing third party Exim cargo through Kolkata Port.

Benefits and significance:

- It was also agreed that a Joint Technical Committee will explore the technical feasibility of operationalisation of Dhulian-Rajshahi protocol route upto Aricha and the reconstruction and opening up of Jangipur navigational lock on river Bhagirathi subject to the provisions of the Treaty between India and Bangladesh on Sharing of Ganga Waters at Farakka in 1996.

This move has the potential to reduce the distance to Assam by more than 450 kms on the protocol routes.

A Joint Monitoring Committee has also been constituted for overall monitoring of the dredging works of Ashuganj-Zakiganj and Sirajganj-Daikhowa stretches of Indo-Bangladesh Protocol Route in Bangladesh that will be engaged with 80 percent financial contribution from India and rest by Bangladesh.

Other developments:

- To bring about significant reduction in logistics cost and faster delivery of Bangladesh export cargo, India proposed permitting 'Third country' EXIM Trade under Coastal Shipping Agreement and PIWTT by allowing transshipment through ports on the East Coast of India. Bangladesh agreed to hold stakeholder consultations and revert on the matter.
- Both sides have also agreed for development of Jogighopa as a hub or terminal for movement of cargo to Assam, Arunachal Pradesh, Nagaland and Bhutan and notifying Munsiganj River terminal by Bangladesh Customs for routing third party Exim cargo through Kolkata Port.
- Both the sides discussed to make Nakugaon Land Port in Bangladesh and Dalu ICP (India) operational and to connect Gelephu (Bhutan) as tripartite cross-border route.

- Inclusion of Dhamra Port, V.O. Chidambaranar Port (formerly Tuticorin Port) and Kamarajar Port under Coastal Shipping Agreement was also deliberated upon.
- North-Eastern States of India to use Chattogram sea port and Mongla river ports in Bangladesh. This will restore pre-partition logistics arrangements, when the North-East was served by the then East Bengal ports.
- The deal will particularly help Tripura, which is nearly 2000 km away from Kolkata but a few hundred km from the Chattogram port.
- A cruise service will be launched between Kolkata and Dhaka from March 2019. The cruise operator, Exotic Heritage Group, has already booked the service for five years. Exotic heritage group already runs cruises on River Ganga.
- Setting up of a multi-modal transshipment hub at Jogighopa in Assam for movement of cargo to Assam, Arunachal Pradesh, Nagaland and Bhutan. Goods from Bhutan and the North-East can take the river route to Bangladesh and vice-versa through Jogighopa.

AIM, SHOOT FOR A CITIZEN-SCIENCE REPOSITORY OF INDIAN MAMMALS

Why in News: Scientists and researchers from the National Centre for Biological Sciences (NCBS) in Bangalore have come up with a new citizen-science repository on Indian mammals, called Mammals of India (MaOI). MaOI is a part of the Biodiversity Atlas (India project).

Important Points:

- The initiative aims to develop individual species pages for all Indian mammals with information on identification, variation, distribution, breeding and non-breeding ecology and species conservation.
- Now one can contribute to the cause of science by sharing the picture of the animal on a specific website, providing the location of spotting. This will make more information available about lesser known mammals of the country.

Background:

As per current estimates, 426 species of mammals are found in India; of them 47 species are endemic to the Indian subcontinent. Along with well known species, the mammals of 100 species of rats and 126 species of bats and 24 species of whales of dolphins.

Importance of MaOI:

These photographic records will help researchers in having distribution map of mammals in the country. The photographs will not only help gather information on the distribution of the various species but also interactions between different species of mammals, like predation and mutualism.

INDIA'S FIRST ENGINE-LESS 'TRAIN 18'

Why in News: India's first 'Made in India' engineless train 'Train 18' is set to hit the tracks for trials. The train will be unveiled on October 29 for three to four days trial outside the Coach Factory's premises. After successful trials, the train will be handed over to Research Design and Standards Organisation (RDSO) for further trials.

The Train 18 will be tested at a speed of 180 km per hour. It will feature a stainless steel body, with full scape windows and driver's cabin at both ends of the train.

Important Points:

Train 18 doesn't require an engine to run as it will be self-propelled on electric traction like the metro trains. It will replace existing intercity express trains including Shatabdis. The most prominent feature is that all coaches are inter-connected by fully sealed gangways to enable passenger movement from one coach to another.

- The swanky 16-coach prototype without a locomotive (engine) will cut travel time by 15 per cent compared to the Shatabdi.
- Developed by the city-based Integral Coach Factory in 18 months, the full AC train is designed in such a way that passengers can have a look at the driver's cabin.
- The estimated cost of each Train 18 vehicle is Rs 100 crore. Indian Railways' Integrated Coach Factory General Manager Sudhanshu Mani said that subsequent production would bring down the cost compared to its current prototype.

The self-propelled train, fitted with CCTV cameras, will have two executive compartments in the middle with 52 seats each, whereas trailer coaches will have 78 seats each.

The train has a potential to travel up to the speed at 160 kmph as against 130 kmph of Shatabdi.

Train 18 has diffused lighting, automatic doors, and footsteps beside GPS-based Passenger Information System.

It will have onboard WiFi and infotainment.

The train will be equipped with modular toilets with a bio-vacuum system and there will be accessible toilets for persons with disability.

The executive class will have rotating seats which can be aligned in the direction of travel.

The train will have modular luggage rack with a glass bottom.

The footstep in a coach's doorway slides outward when the train stops at a station enabling passengers to alight safely with comfort in view of the variation in height between a train's floor and the platform.

'NORTH EAST' FESTIVAL

Why in News: The sixth edition of North East festival is being organized till October 28, 2018 in New Delhi and the 15th edition of Indian International Centre festival is to be held from 27-31 October 2018.

Important Points:

- Cultural performances involving Bagrumba dance, Hozagir dance of Tripura, Bihu dance of Assam, Garo Wangla dance and Manipuri martial arts performances called Thang Ta.

- Fashion shows with traditional patterns and textiles.
- Presentation of organic food and vegetables grown in the region
- 150 craft stalls displaying exotic handloom and handicrafts products of north east region.
- Agriculture, horticulture and food processing stalls.
- There will be special performances by Nise Meruno, classical pianist and vocalist.

The festival is a part of Destination North East Series being organised by North Eastern Council, Ministry of Development of North Eastern Region (DoNER).

The festival is organised by Indian International Centre as 15th anniversary of its annual festivals. The theme for this year is "Experiencing the North East".

To showcase the richness of cultural heritage of North East there will be focus on presenting dance, music, theatre, exhibitions, and special cuisines to the visitors.

There will be an exhibition specially focused on Bamboo products.

A literary event called "These hills we come from' Voices from North East

Will took place focusing on literature of the region.

There will be a showcase of Films of the region also there in the festival.

Thang Ta and sarit-sarak: These two are the martial art forms from the Indian state of Manipur. In Manipuri language thang means sword and ta means spear. Thang Ta is name for the ancient martial practice known as Huyen Lallong . The unarmed aspect of Thang Ta is named as sarit sarak.

About North Eastern Council (NEC):

NEC is the nodal agency for economic and social development of North Eastern Region (NER) which consists of eight states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. It was constituted in 1971 under North Eastern Council (NEC) Act, 1971 (Thus NEC is statutory body). In June 2018, the chairmanship of NEC was transferred by Union Cabinet to Home Minister from Minister of Development of NER.

- NEC servers as an apex level body for securing balanced and coordinated development and facilitating coordination with NER states. It has been mandated to function as regional planning body for NER. It gives priority to schemes and projects while formulating regional plan for this area benefiting two or more states.

Background:

Destination North East event is one of the steps taken by Ministry of Development of North Eastern Region to bring North East closer and help assimilate the diverse cultural heritage of India while encouraging investment in priority sectors like Tourism, Handloom, Handicrafts, Food Processing etc. Other steps taken by Ministry of DoNER towards assimilation of North Eastern Region, are funding Business Summits, Seminars, Buyers & Sellers meets to attract investors in North Eastern Region and supporting participation of weavers/artisans of NER in Craft Bazaars and exhibitions all over India to promote their Handloom and Handicrafts and give them exposure to the National Market.

KRISHI KUMBH INTERNATIONAL CONFERENCE 2018

Why in News: The government of Uttar Pradesh in association with the Government of India is organizing a mega Agriculture Expo called "Krishi Kumbh-2018".

Important Points:

- Krishi Kumbh-2018 would comprise of the National level exhibition, technical sessions around the theme of doubling farmers income, Business Meet, and host of other engaging activities.
- The primary objective of Krishi Kumbh 2018 is to provide a common platform to farmers, farmers group, technical experts and entrepreneurs for seamless exchange of knowledge regarding agriculture production food processing and marketing, agriculture mechanization, agro-food processing, high value crops, input and technology management in agriculture etc.

Importance:

- As Uttar Pradesh is the state with the largest number of farm holdings and largest numbers of farmers, this event offers a great opportunity for showcasing their work to the stakeholders in this field.

- The event is planned to project the state's agriculture potential on one hand and provide a platform for interaction among stakeholders on the other hand.
- Participation of over one lakh farmers is expected in this mega event besides several ministers, senior Government officials and other Policy makers, international organizations, heads of banks and development institutions and captains of industries working in this vast area.

INDIA TO HOST GLOBAL CONFERENCE ON MATERNAL AND INFANT HEALTH

Why in News: India will host a meeting of UNICEF's motherhood, neonatal and child health stakeholders in December 2018. This will involve participants from about 100 countries.

The Ministry of Health and Family Welfare will host the program in partnership with Partnership for Maternal, Newborn and Child Health (PMNCH) in December 2018.

Objective: The stage of maternity, neonatal and child health stakeholders will emphasize on the importance of women-centric responsiveness, innovative programs and creative projects to highlight the side of women, children and adolescents and the real surroundings.

Important Points:

Main speakers of the program: UNICEF said that Prime Minister Narendra Modi, President of Chile's former President Michelle Bachelett and PMNCH will be key speakers of the program.

According to UNICEF, India has made significant progress in improving maternal health and child mortality indicators.

- **Second time held:** This is the second time since 2010 when UNICEF's program will be held in India. India has made significant progress in improving maternal health and child mortality indicators.

About UNICEF:

- The initial objective of establishing United Nations Children's Fund (UNICEF) was to provide food and health services to the children of the destroyed nations in World War II. It was founded by the United Nations General Assembly on 11 December 1946. In 1953, UNICEF became a permanent member of the United Nations. It has its headquarters in New York. UNICEF was awarded the Nobel Prize for Peace in 1965 for his better work. In 1989, the organization was awarded the Indira Gandhi Peace Prize. It has offices in more than 120 cities and employs more than 190 employees.

UNICEF's supply division office is in Copenhagen, Denmark. At present, UNICEF is mainly focusing on five priorities. Child Development, fundamental education, protection against child violence, exploitation, against child labor, HIV AIDS and children, children's rights, work for legal struggle.

AIR POLLUTION KILLS 600,000 CHILDREN EACH YEAR: WORLD HEALTH ORGANIZATION

Why in News: A recent report by the World Health Organisation (WHO) reveals that breathing in toxic air kills about 600,000 children every year under the age of 15 years. The report found that in 2016 alone, about 600,000 children died due to lower respiratory infections caused by air pollution.

Important Points:

- Data shows that everyday about 93 per cent children under the age of 15, 1.8 billion youngsters, and 630 million children under the age of five breathe dangerously polluted air which is a full of pollutants.
- Polluted air is ruining the respiratory system of millions of children. The WHO reports found that nine out of 10 people are breathing polluted air which is causing pre-mature deaths each year.
- This toxic air is the most dangerous for children -- in every 10 deaths, one is below the age of five.
- The WHO study examined that the health hazard level takes a toll on children's health both due to outdoor and indoor air pollution.

- The polluted air includes toxins like sulphate and black carbon. These toxins can go deep into your lungs and/or cardiovascular system and may cause asthma. These are the most dangerous for health.

Air pollution diseases that can impact children:

- Breathing toxic air can impact a child's development and cognitive abilities. This can also lead to causing asthma and childhood cancer.

Also children exposed to dangerously polluted air are at a greater risk for chronic diseases like cardiovascular disease in the coming years of their life.

Air pollution is affecting the brains and bodies of the children in many more ways.

Poorer countries are at more risk

The report says that children in poorer countries are at more risk -- 98 per cent of all children under five are at risk in areas of low and medium income, while 52 per cent of all children under five at risk in high-income countries.

These countries are exposed to PM 2.5 levels above WHO air quality guidelines.

WHO said that both the household air pollution caused by cooking and outside pollution are top reasons causing acute lower respiratory infections in the children of low income countries.

Why is air pollution more dangerous for children?

- It is found that breathing polluted air affects children more than grownups because children breathe more rapidly and end up absorbing more pollutants at a time when their brain and bodies are still developing. Also they are more active on the ground, where pollutants reach peak concentration.
- The household pollution produced by the use of cooking oil, heating and lighting are severely injurious for newborn children.

2017 UNICEF report on how air pollution damages children's brains:

- According to the report, particulate matter can cause neuro-inflammation by damaging the blood-brain barrier -- a thin, delicate membrane that protects the brain from toxic substances.
- Ultrafine pollution particles (particulate matter that is equal or less than 2.5 microns in diameter like, PM 0.1) pose an especially high risk because they can more easily enter the blood stream and travel through the body to the brain.
- Specific air pollution particles, such as magnetite, are so small that they can enter the body through the olfactory nerve and the gut.
- Magnetite is very common in urban outdoor air pollution, and a recent study found that it was considerably more present in brains of people living in areas where urban air pollution is high.
- Several studies also show that polycyclic aromatic hydrocarbons (PAHs), a specific class of pollutants formed from fossil fuel combustion and commonly found in areas of high automobile traffic, contribute to a loss of or damage to white matter in the brain.
- White matter contains nerve fibers that are critical in helping neurons communicate across different parts of the brain.

CELL-SIZED ROBOTS CAN BE USED TO DETECT DISEASES

Why in News: MIT scientists have developed a method to mass produce robots no bigger than a cell that could be used to monitor conditions inside an oil or gas pipeline, or to search out disease while floating through the bloodstream.

The key to making such tiny devices, which the team calls "syncells" (short for synthetic cells), in large quantities lies in controlling the natural fracturing process of atomically-thin, brittle materials.

Important Points:

- The process, called "autoperforation," directs the fracture lines so that they produce miniscule pockets of a predictable size and shape.

- Embedded inside these pockets are electronic circuits and materials that can collect, record, and output data, according to the study published in the journal Nature Materials.
- The system, developed by researchers at the Massachusetts Institute of Technology in the US, uses a two-dimensional form of carbon called graphene, which forms the outer structure of the tiny syncells.

Ranging in size from that of a human red blood cell, about 10 micrometers across, up to about 10 times that size, these tiny objects "start to look and behave like a living biological cell," said Michael Strano, a professor at MIT.

In fact, under a microscope, you could probably convince most people that it is a cell. One layer of the material is laid down on a surface, then tiny dots of a polymer material, containing the electronics for the devices, are deposited by a sophisticated laboratory version of an inkjet printer. Then, a second layer of graphene is laid on top.

Controlled fracturing:

People think of graphene, an ultrathin but extremely strong material, as being 'floppy,' but it is actually brittle.

However, rather than considering that brittleness a problem, the team figured out that it could be used to their advantage.

The system controls the fracturing process so that rather than generating random shards of material, like the remains of a broken window, it produces pieces of uniform shape and size.

There are a wide range of potential new applications for such cell-sized robotic devices.

As a demonstration, the team "wrote" the letters M, I, and T into a memory array within a syncell, which stores the information as varying levels of electrical conductivity.

- This information can then be "read" using an electrical probe, showing that the material can function as a form of electronic memory into which data can be written, read, and erased at will.

- It can also retain the data without the need for power, allowing information to be collected at a later time.
- The researchers have demonstrated that the particles are stable over a period of months even when floating around in water, which is a harsh solvent for electronics.

INDIA, JAPAN SIGN SIX PACTS, AGREE TO HOLD '2+2' DIALOGUE AT MINISTERIAL LEVEL

Why in News: India and Japan signed six agreements, including on a high-speed rail project and naval cooperation, and agreed to hold '2+2' dialogue at the ministerial level after Prime Minister Narendra Modi and his Japanese counterpart Shinzo Abe held talks in Tokyo. The two leaders also discussed a range of bilateral, regional and global issues, including the situation in the Indo-Pacific region where China has begun to assert itself.

Important Points:

"We have agreed for a 2+2 dialogue between our Foreign Ministers and Defence Ministers. The aim of this is to further work towards world peace and stability," Modi said in a joint address to the media following the 13th annual bilateral summit, signalling a strengthening of ties between the two Asian powers.

Till now, the 2+2 dialogue between India and Japan was held at the vice-ministerial level. On September 6, Foreign Minister Sushma Swaraj and Defence Minister Nirmala Sitharaman held the first edition of the '2+2' dialogue with their US counterparts Michael Pompeo and James Mattis in New Delhi.

The two nations also signed a \$75 billion currency swap agreement, which the Finance Ministry said was aimed at improving confidence in the foreign exchange and capital markets. It said the value of the deal was 50 per cent higher than the last currency swap between the two countries, signed in 2014.

PM Modi said Japan investors have announced they would invest \$2.5 billion in India. "We both agree that from digital partnership to cyberspace, health, defence, ocean to space, in every field we will strengthen our partnership. I have been told that today Japan investors have announced that they will invest 2.5 billion US dollars in India," he said at the joint briefing.

- "We both agree that from digital partnership to cyberspace, health, defence, ocean to space, in every field we will strengthen our partnership," PM Modi said after the talks,
- The two leaders reviewed the progress made on the Mumbai-Ahmedabad bullet project and signed an agreement on the implementing arrangement for deeper cooperation between the Indian Navy and the Japan Maritime Self-Defense Force (JMSDF). Besides, India and Japan also decided to cooperate for the first time in Yoga and Ayurveda to provide holistic healthcare in both countries.

PM Modi interacts with Indian diaspora:

Modi was given a guard of honour upon his arrival for the annual summit talks at the Kantei, the Prime Minister's Official Residence. Earlier in the day, the PM held a series of meetings with top Japanese leaders and addressed the Indian community.

Hailing India's "tremendous progress" in the digital infrastructure, Modi said 1 GB data was cheaper than the smallest bottle of cold drink in the country. "Today India is making tremendous progress in the field of digital infrastructure. Broadband connectivity is reaching villages, over 100 crore mobile phones are active in India. 1 GB is cheaper than a small bottle of cold drink," Modi said.

STATUE OF UNITY

Why in News: Prime Minister Narendra Modi, dedicated to the nation a 182-metre statue of Sardar Vallabhbhai Patel, believed to be the tallest in the world and said it will be a reminder about the courage of a man who thwarted efforts to disintegrate India. Statue of Unity has been inaugurated in Surat. The Statue of Unity is built in dedication to Iron Man Sardar Vallabhai Patel, who served as the first home minister of independent India. October 31, 2018 marks the 143rd birth anniversary of Sardar Patel. In his speech, Modi stressed that the statue would generate immense employment opportunities for the local tribals living near the dam in Narmada district. Gujarat's governor OP Kohli, chief minister Vijay Rupani and BJP chief Amit Shah were also present at the unveiling of the Statue of Unity.

Important Points:

- At 182 metre, the statue is 23 metre taller than China's Spring Temple Buddha statue and almost double the height of the Statue of Liberty (93 metre tall) in US.
- Located on the Sadhu Bet island, near Rajpipla on the Narmada river, the Statue of Unity is located between the Satpura and the Vindhya mountain ranges.
- The Sardar Vallabhbhai Patel Rashtriya Ekta Trust (SVPRET), a special purpose vehicle set up by Modi in 2011, arranged some 129 tonnes of iron implements from nearly 100 million farmers in 169,000 villages across all states to construct the base of the statue in the 'Loha' campaign.
- The Statue of Unity was brought to fruition by Padma Bhushan-winning sculptor Ram V Sutar and intricate bronze cladding work was done by a Chinese foundry, the Jiangxi Toqine Company (JTQ).

About Sardar Vallabhai Patel:

Sardar Patel is credited with uniting all 562 princely states in pre-independent India to build the Republic of India - hence the name of the statue. The date for the inauguration of the statue (October 31, 2018) also marks the 143rd birth anniversary of Sardar Patel.

Role in the Indian National Movement:

In 1917, Sardar Vallabhbhai was elected as the Secretary of the Gujarat Sabha, the Gujarat wing of the Indian National Congress. In 1918, he led a massive "No Tax Campaign" that urged the farmers not to pay taxes after the British insisted on tax after the floods in Kaira. The peaceful movement forced the British authorities to return the land taken away from the farmers. His effort to bring together the farmers of his area brought him the title of 'Sardar'.

He actively supported the non-cooperation Movement launched by Gandhi. Patel toured the nation with him, recruited 300,000 members and helped collect over Rs. 1.5 million.

In 1928, the farmers of Bardoli again faced a problem of "tax-hike". After prolonged summons, when the farmers refused to pay the extra tax, the government seized their lands in retaliation. The agitation took on for more than six months. After several rounds of negotiations by Patel, the lands were returned to farmers after a deal was struck between the government and farmers' representatives.

In 1930, Sardar Vallabhbhai Patel was among the leaders imprisoned for participating in the famous Salt Satyagraha movement initiated by Mahatma Gandhi.

Sardar Patel was freed in 1931, following an agreement signed between Mahatma Gandhi and Lord Irwin, the then Viceroy of India. The treaty was popularly known as the Gandhi-Irwin Pact. The same year, Patel was elected as the President of Indian National Congress in its Karachi session where the party deliberated its future path.

What is unique about the statue?

Apart from being the world's tallest statue, it also holds the distinction of being among the fastest to be completed -just 34 months unlike China's Spring Temple Buddha which took 11 years. The work began on December 19, 2015.

Where is the statue built?

The imposing monument is twice the height of the Statue of Liberty in the US and is built on an islet, Sadhu Bet, around 3.5 km downstream from the Sardar Sarovar Dam in Gujarat's Narmada district.

The best way to reach Sadhu Bet island is to take a boat ride.

- Built at a cost of Rs. 2,989 crore, the statue depicts Sardar Vallabhbhai Patel, India's first home minister, wearing a traditional dhoti and shawl, towering over the Narmada River.

Who designed the Statue of Unity?

- One of the greatest living Indian sculptors, Shri Ram Vanji Sutar created over 50 sculptures. His works include restoring sculptures found in Ellora & Ajanta, Chambal monument at the Gandhi Sagar Dam, busts of Bapu and Gurudev Tagore and 'Statue of Unity.' Congratulations to him!
- Padma Bhushan awardee, Ram Vanji Sutar, a 93-year-old acclaimed sculptor who graduated from the prestigious J.J School of Art in Bombay designed the statue. He has sculpted masterpieces including that of Mother Chambal at Gandhi Sagar Dam in Madhya Pradesh, equestrian statue of Maharaja Ranjit Singh in Amritsar, and numerous statues of Mahatma Gandhi.

Who built the statue?

It took about 250 engineers and 3,400 labourers to construct the Statue of Unity.

It has been built by Larsen and Toubro and the state-run Sardar Sarovar Narmada Nigam Ltd. It took about 250 engineers and 3,400 labourers to construct the statue.

Malaysia-based Eversendai, which constructed Dubai's famous Burj Al Arab and Burj Khalifa buildings, was handed the contract for the steel framework.

Construction materials used to build the statue

It has been built using over 70,000 tonnes of cement, 18,500 tonnes of reinforcement steel, 6,000 tonnes of structural steel and 1,700 metric tonnes of bronze, which was used for the outer cladding of the structure.

The Sardar Vallabhbhai Patel Rashtriya Ekta Trust (SVPRET), set up by Modi in 2011 arranged some 129 tonnes of iron implements from nearly 100 million farmers in 169,000 villages across all states to construct the base of the statue.

How was the design finalised?

The statue is conceived as a naturalistic depiction of Sardar Patel in a walking pose.

- To get it right, designers sifted through 2,000 photographs of Sardar Patel before picking the one that they would model it on and then converted the two-dimensional photograph into a three-dimensional model.

What will be its cost of operation and maintenance?

Rs 657 crore over 15 years, Rs 43.8 crore annually or Rs 12 lakh per day.

Costing of tickets

- The statue will be open for the public visit from November 3. People will have to book tickets online to visit the statue - at www.soutickets.in. Entry ticket for adults is priced at Rs 120 while for children (between three to 15 years), it is Rs 60. The ticket includes entry to the 'Valley of Flower', memorial, museum and an audio-visual gallery, SOU site and the Sardar Sarovar Dam. For observation deck view, the ticket is priced at Rs 350. Tickets to avail the bus services cost Rs 30 for adults and Re 1 for children. If you have booked an entry ticket or observation deck ticket, then the bus ticket need not be booked separately.

Timings to visit the statue

The Statue of Unity can be visited from 9 am to 6 pm on all days.

CHINA TO BUILD FIRST PERMANENT AIRPORT AT SOUTH POLE

Why in News: China will build the country's first permanent airport in the South Pole which will provide logistical support to scientists and enhance airspace management in the resource-rich Antarctic. The 35th China's Antarctic expedition will leave and the major task is to build the airport, which is expected to be located along the ice sheet, 28 kms from the China-built Zhongshan station in Antarctic, the state-run Science and Technology Daily reported.

Important Points:

- Chinese scientists built a 4-kilometer-long, 50-meter-wide runway for fixed-wing aircraft in 2009 during the 25th expedition in the Antarctic.

- China is joining the US, Russia, Britain, Australia and New Zealand among others in having airfields in the Antarctic, which is rich in natural resources such as silver, gold, platinum and coal.
- In 2010, an airport called Feiying was constructed on the ice sheet, according to the earlier official Chinese media reports.
- The establishment of the airport will also help China gain management authority of airspace over the South Pole, state-run Global Times quoted the Science and Technology Daily as reporting.
- South Pole is the southernmost point on the surface of the Earth and lies on the opposite side of the Earth from the North Pole.
- Chinese analysts say the permanent airport will provide logistical support to scientists and enhance airspace management in the Antarctic.
- "The new airport allows medium and large transport aircraft, like Boeing planes, to take off and land in the South Pole, shortening transport time as well as enhancing efficiency," Zhang Xia, director of the Polar Strategy Centre at the Polar Research Institute of China, told the Global Times.
- He noted that the airport will complete China's aviation security system in the Antarctic, including the communications and meteorological support systems.
- The new airport will provide logistical support to Chinese scientists' research there. Specifically, the airport will decrease the exposure time of researchers in the polar environment, as well as medical aid time, he said.
- "Around 99.5 per cent of the polar land is covered with accumulations of thick snow leading to a lack of hardness to build an airport," Zhang said, adding that the flat area in the Antarctic is not enough either, and some original districts have already been occupied by other countries.
- As global warming melts sea ice across the far north, the region is becoming a development hot spot, with major powers like Russia and China seeking control of resources and transport routes, a recent report carried by Japanese publication Nikkei Asia Review said.
- The maximum ice coverage hit the lowest level on record in 2017. By as early as 2030, the Arctic Ocean could be largely free of ice in the summer, it said.

- The US Geological Survey reported that the Arctic Circle may hold about 30 per cent of the world's undiscovered gas.

INDIA'S LARGEST DRY DOCK AT COCHIN SHIPYARD

Why in News: The foundation for the country's largest dry dock at Cochin Shipyard was laid by Union Minister Nitin Gadkari and Kerala Chief Minister Pinarayi Vijayan. The dry dock, being constructed at a cost of Rs 1,799 crore, would give an impetus to "Make in India" initiative under Sagarmala and raise India's share in global shipbuilding market to two per cent from 0.66 at .

Important Points:

The commercial ship building industry in India is worth Rs. 3,200 Crore and focuses primarily on small-medium sized offshore vessels and cargo/bulk carriers.

At present, Cochin Shipyard has two dry docks, one predominantly used for ship building of size 255m x 43 x 9m and capacity 1,10,000 DWT and the other one for ship repair of size 270 x 45 x 12m and capacity 1,25,000 DWT.

It will be 310 m long, 75m wide, with a depth of 13 m and draught of 9.5m.

The dock will be designed to handle both ship building and repairs, and bear a load up to 600 T/m.

It will be equipped with international safety standards.

The dock will also have a water treatment plant and Green Belt Development. Equipped with this Dry Dock, Cochin Shipyard will be able to build specialized and technologically advanced large vessels like LNG Carriers, drill ships, jack up rigs, large dredgers, aircraft carriers for Indian Navy and high end research vessels.

- It will also help make Cochin a one stop maritime hub for all repair needs in South East Asia.
- The project is expected to be completed by May 2021 and generate employment opportunities for about 2000 people.
- Two 500 capacity passenger vessels built by CSL for Andaman and Nicobar Islands administration will also be launched on the occasion. These vessels will help enhance intra island connectivity.

Shri Gadkari will also lay the foundation stone for three National Highways projects in Kerala, costing Rs 1557 Crore at an event in Eranholi in Thalassery in Kannur district.

These would include the construction of the 18.6 km, 4 lane Thalassery - Mahe bypass (NH-66) at a cost of Rs 1181 Crore ; construction of 0.78 km, 4-lane Railway Over Bridge near Neeleshwaram town (NH-

66) at a cost of Rs 82 Crore and widening of 46.72 km from Nattukal to ThanavuJn (NH-66) to two lane with paved shoulder at a cost of Rs 294 Crore .

About Dry Dock:

- Dry docking is a term used for repairs or when a ship is taken to the service yard. During dry docking, the whole ship is brought to a dry land so that the submerged portions of the hull can be cleaned or inspected. Locking devices clearances are also examined. All overboard and sea suction valves are overhauled. Tail shaft bearing wear down is checked. Tail shaft is removed and inspected. Anchor chain is examined, cleaned and re-marked.

The dock will also have a water treatment plant and Green Belt Development. Equipped with this Dry Dock, Cochin Shipyard will be able to build specialised and technologically advanced large vessels like LNG Carriers, drill ships, jack up rigs, large dredgers, aircraft carriers for Indian Navy and high end research vessels. It will also help make Cochin a one stop maritime hub for all repair needs in South East Asia.



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