

CURRENT AFFAIRS

16th MARCH TO 31st MARCH 2017

UDAN (UDE DESH KA AAM NAGRIK)

IN NEWS: The Centre announced a list of routes awarded to five airlines which will operate flights under its regional connectivity scheme (RCS), named UDAN (Ude Desh ka Aam Naagrik).

43 new destinations added with the launch of RCS. Low cost airline SpiceJet, Air India subsidiary Alliance Air, along with regional airlines Turbo Megha Airways, Air Deccan and Air Odisha Aviation won the rights to operate flights under the regional connectivity scheme under which half of the seats on the plane will be capped at 2,500 per hour's flight.

Some of the inactive airports that will soon witness regional flights include Shimla, Agra, Bikaner, Gwalior, Kadapa, Rourkela, Jharsuguda, Vidyanagar, Burnpur, Diu, Shillong, Kullu, Mysore, Jagdalpur, Salem, Utkela, and Hosur.

- As per the scheme, the Centre will subsidise the losses incurred by airlines flying out of dormant airports to help airlines charge 2,500 for an hour's flight.
- 80% of the subsidy will be collected by charging a levy of up to 8,500 on each departing flight of domestic airlines and the rest 20% will come from the respective State governments.
- The government will provide subsidy to airlines for first three years of operations when they will have exclusive flying rights on the selected routes.

CAG & GOODS & SERVICE TAX NETWORK

IN NEWS: The Comptroller and Auditor General (CAG) has protested with the finance ministry against the Goods and Services Tax Network (GSTN), a special purpose vehicle majority owned by private companies, refusing to give access to taxpayers data on its network for scrutiny and audit.

ISSUE

The federal auditor has asked the finance ministry to give it access to GSTN's data network after the latter refused to allow the CAG on the ground that it was a non-government company and the auditor could not exercise the same rights as applicable for public enterprises.

The CAG also contended that the government had "strategic control" in GSTN irrespective of the shareholding pattern. The SPV is performing a part of the statutory function pertaining to revenue collection on behalf of the Centre and states and it could not refuse to give access to information to the auditor.

This has to be viewed as GSTN performing a part of the statutory functions pertaining to revenue collection on behalf of the Centre and states.

The auditor has requested the ministry to ensure that it gets access to data maintained on the GSTN portal as well as to its application software, the modalities of which could be worked out later.

GSTN

The GSTN is a private limited company floated to aid the rollout of the new indirect tax regime. The company will provide information technology support to all stakeholders for smooth implementation of the new taxation regime across the country and will be the repository of all information related to taxation and entities registered under GST.

The majority (51%) shareholding in the firm is with private entities including HDFC Bank, ICICI Bank and LIC among others. The central government, jointly with state governments and Union Territories, own 49% in the company.

KANHA TIGER RESERVE'S OFFICAL MASCOT

IN NEWS: Kanha has become the first tiger reserve in India to officially introduce a mascot — 'Bhoorsingh' the Barasingha — to present the hard ground swamp deer as the spirit of the reserve and spread awareness to save it from possible extinction.

- Barasingha, or swamp deer, is the state animal of Madhya Pradesh.
- The Kanha tiger reserve, spread over Mandla and Balaghat districts, is the only place in the world where the species exists.
- It is native to the India & Nepal.
- The barasingha also called swamp deer is a deer species distributed in the Indian subcontinent.
- Populations in northern and central India are fragmented, and two isolated populations occur in southwestern Nepal. It is extinct in Pakistan and in Bangladesh.
- Barasingha is assessed as **Vulnerable** under criterion C1 of IUCN because the estimated total population lies between 3,500 and 5,100 animals (not all of which will be mature individuals) and outside of several key populations, the protection status is not secure. Thus, the species is assumed to still be in decline by at least 10% over 24 years (three generations) mostly due to habitat conversion and degradation

INDIA: NET EXPORTER OF ELECTRICITY

IN NEWS: As per Central Electricity Authority, the Designated Authority of Government of India for Cross Border Trade of Electricity, India has turned around from a net importer of electricity to Net Exporter of electricity for the first time.

During the current year 2016-17 (April to February 2017), India has exported around 5,798 Million Units to Nepal, Bangladesh and Myanmar which is 213 Million units more than the import of around 5,585 Million units from Bhutan.

Export to Nepal and Bangladesh increased 2.5 and 2.8 times respectively in last three years.

BACKGROUND

- The cross border trade of electricity started in mid-Eighties.
- India has been importing power from Bhutan and marginally exporting to Nepal in radial mode at 33 kV and 132 kV from Bihar and Uttar Pradesh.
- On an average Bhutan has been supplying around 5,000- 5500 Million units to India.
- Export of power to Bangladesh from India got further boost with commissioning of 1st cross border Interconnection between Baharampur in India and Bheramara in Bangladesh at 400kV in September 2013.
- It was further augmented by commissioning of 2nd cross border Interconnection between Surjyamaninagar (Tripura) in India and South Comilla in Bangladesh. At present around 600 MW power is being exported to Bangladesh.

FSSAI - CAG

IN NEWS: A comprehensive performance audit of the country's food regulator by CAG.

The audit of the Food Safety and Standards Authority of India (FSSAI) comes against the backdrop of the food regulator's controversial decision to ban manufacturing and sales of Maggie noodles—a popular snack sold by Swiss company Nestle in India.

CAG's audit is looking at issues such as how FSSAI fixes standards, finalizes regulations, approves products, ensures compliance and conducts surveillance.

FASSAI

- FSSAI was set up in August 2011 under the Food Safety and Standard Act, 2006.
- Ministry of Health & Family Welfare, Government of India is the Administrative Ministry for the implementation of FSSAI.
- It has powers to lay down standards for food articles and to regulate their manufacturing, storage, distribution, sale and import.
- FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.
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3D PRINTED ROBOTIC SNAKE

IN NEWS: Scientists have developed a tiny, ingestible 3D printed snake-like robot that can navigate through the small intestines, and could one day be used to visualise the digestive system in real time.

HIGHLIGHTS

- The robot, called SAW (single actuator wave-like robot), moves in a wave-like motion and can travel through the extremely squishy environment of the small intestine.
- The external shape of the robot is a 2D projection of a rotating helix.
- Current colonoscopies can only access large intestines.
- There are pill cameras that can reach the small intestines, but they float passively through the digestive system, meaning they typically take 12 hours to travel its entirety.
- The pill cameras can sometimes get stuck at certain points in the intestines, at which point the battery dies, leaving no data for a doctor to analyze. Passive camera pills also cannot take tissue samples.
- Snakes move in a smooth, undulating wave that could be used to quickly cover large distances.
- The snake-like robot is made from a set of interlocking 3D-printed “plastic” pieces that look a bit like vertebrae.
- In tests, it seems to move incredibly fast and can cross a wide array of terrains, from water to rough, rocky soil.
- The team hopes to create an ingestible robot that could carry a camera through the small intestines, which could ultimately be used for colonoscopies. The simplest version of the robot would hold a camera and could be steered by doctors through the intestines to look at certain spots.

NEW WEATHERING MONITORING SYSTEM

IN NEWS: Navy unveiled an integrated aviation meteorological system which is expected to bring accuracy in weather monitoring mechanism in the Indian Navy.

The Integrated Automatic Aviation Meteorological System (IAAMS) was launched at Rajali Air Station in Tamil Nadu.

The aim of IAAMS is to modernize the meteorological infrastructure of the nine Naval Air Stations (NAS).

- Equipped with the state-of-the-art meteorological sensors, IAAMS undertakes automatic and continuous recording of relevant weather parameters that are vital for accurate weather forecasting.
- It has a special alarm feature that alerts the duty staff during abnormal change of weather parameters that may affect safe flying operations.
- The system can also provide automatic dissemination of routine weather reports as per standards followed by the World Meteorological Organisation to other air stations and Air Traffic Controller towers without human intervention.
- Installation of the system at remaining eight stations is expected to be completed by March 2019.

SC BANS BS III VEHICLES

IN NEWS: The Supreme Court banned the sale of Bharat Stage III vehicles from April 1, rejecting the plea of the automobile makers for more time to dispose of the pre-BS IV vehicles in stock.

All the vehicle-registering authorities under the Motor Vehicles Act are prohibited from registering such vehicles on and from 1st April, 2017 that do not meet BS-IV emission standards, except on proof that such a vehicle has already been sold on or before 31st March, 2017.

BHARAT STAGE EMISSION STANDARDS

- Bharat stage emission standards (BSES) are emission standards instituted by the Government of India to regulate the output of air pollutants from internal combustion engines and Spark-ignition engines equipment, including motor vehicles.
- The standards and the timeline for implementation are set by the Central Pollution Control Board under the Ministry of Environment & Forests and climate change.
- The standards, based on European regulations were first introduced in 2000.
- In 2002, the Indian government accepted the report submitted by the **Mashelkar committee**. The committee proposed a road map for the roll out of Euro based emission norms for India.
- Bharat Stage (BS) III norms have been enforced across the country. In 13 major cities, Bharat Stage IV emission norms have been in place since April 2010 and it's enforced for whole country from April 2017.
- In 2016, the Indian government announced that the country would skip the BS-V norms altogether and adopt BS-VI norms by 2020.
- The harmful emissions that are identified for regulations in different Bharat Stages (BS) are carbon monoxide (CO), unburnt hydrocarbons (HC), Nitrogen Oxides (NOx) and Particulate matter (PM). CO emissions are more prevalent in petrol engines.

BS-IV fuels contain 50 parts per million (ppm) sulphur, while BS-V and BS-VI grade fuel will have 10 ppm sulphur. According to the Centre for Science and Environment, the move to Bharat Stage-VI will bring down Nitrogen Oxide emissions from diesel cars by 68 per cent and 25 per cent from petrol engine cars. Cancer causing particulate matter emissions from diesel engine cars will also come down by a phenomenal 80 per cent.

MONTENAGRO: MEMBER OF NATO

IN NEWS: The US government approved Montenegro as NATO's 29th member.

25 other NATO members have ratified Montenegro's accession, a country of 620,000 people seen as a geostrategic ally. The Netherlands and Spain have yet to do so.

NATO

The North Atlantic Treaty Organization also called the North Atlantic Alliance is an intergovernmental military alliance between several North American and European states based on the North Atlantic Treaty which was signed on 4 April 1949.

NATO's headquarters are located in Haren, Brussels, Belgium, while the headquarters of Allied Command Operations is near Mons.

It consists of 28 independent member countries across North America and Europe.

SURVEILLANCE SHIP INLCU L51

IN NEWS: Indian Navy's latest surveillance ship, INLCU L51 was commissioned.

- It will be part of the fleet deployed to check poaching, illegal fishing, drug trafficking and other unlawful activities in the Indian Ocean region.
- It is the first of the eight ships of the LCU Mk IV Class and has been built by M/s Garden Reach Ship Builders & Engineers Ltd, Kolkata.
- Conceived and designed indigenously.
- With a displacement of 900 tons, the ship is 62.8 metre in length and 11 metre in breadth.
- The armament onboard the ship include 30 mm CRN -91 guns, 12.7 mm Heavy Machine Guns and 7.62 mm Medium Machine Guns.
- In addition, the ship is fitted with state-of-the art Electronic Warfare suite for early detection of adversaries.

MENTAL HEALTHCARE BILL, 2016

IN NEWS: The government passed the Mental Healthcare Bill, 2016.

The bill has defined mental illness as “a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life”.

HIGHLIGHTS

- The bill seeks to decriminalise attempts to suicide to help patients suffering from mental illness to access treatment without fear.

- The bill also empowers patients to give future directions on line of treatment that one would like to avail in case of suffering from any mental ailments.
- The legislative proposal would also safeguard the property rights of the patients.
- The community health care system & community intervention.

INDIA - NEPAL

IN NEWS: India and Nepal agreed to deepen energy ties by renewing, India's fuel sale deal with the Nepal by another five years.

The Indian company will supply about 1.3 million tonnes of fuel every year for the next five years. The renewed deal is for the period April 2017 to March 2022 covering petrol, diesel, kerosene, jet fuel and liquefied petroleum gas (LPG).

India has been supplying fuel to Nepal since 1974 under contracts that were periodically renewed.

India would build the Raxaul-Amlekhganj petroleum product pipeline, for which work is expected to start in 2017-18. Nepal wants that pipeline to be extended closer to Kathmandu.

101 COLD CHAIN PROJECTS

IN NEWS: To reduce wastage of agricultural produce and add value to farmers' harvests ranging from fruits and vegetables to fish, dairy and marine products, the government has approved 101 cold chain projects across the country.

- With a subsidy of Rs838 crore, the cold chain projects will bring in investments of nearly Rs3,100 crore.
- About 2.6 lakh farmers will benefit from these projects which will also provide employment to 60,000 youth.
- The focus of the food processing ministry is to create a national food grid, reduce post-harvest losses and make the agriculture supply chain efficient.
- With 21 projects approved by the ministry, Maharashtra tops the list followed by Uttar Pradesh (14), Gujarat (12) and Andhra Pradesh (8).
- Of the 101 projects, 51 are for fruits and vegetables, while 33 are for dairy and 15 for meat, marine and poultry products.

TU- 142M LONG RANGE PATROL AIRCRAFT

IN NEWS: The Navy would de-induct the Long Range Maritime Patrol aircraft TU 142M, after 29 years of service.

BACKGROUND

- The Long Range Maritime Patrol air craft was inducted in the Navy at Dabolim Goa in 1998 from Russia.
- Later, it shifted base to INS Rajali in 1992 and took part in several naval exercises and operations.
- With its enhanced endurance, speed, long range weapons and sensors, the aircraft transformed the aspects of Maritime Reconnaissance for the Indian Navy.
- The aircraft has also participated in missions off Sri Lanka and taken part in operation ‘Cactus’ in Maldives to provide “airborne surveillance.”
- The P-8I aircraft has proven all its systems and has been fully integrated into the operational grid of the Navy.

36TH INDIAN SCIENTIFIC EXPEDITION TO ANTARTICA

IN NEWS: The National Centre for Antarctic and Ocean Research (NCAOR), Ministry of Earth Sciences, Government of India, organizes the Indian Scientific Mission to Antarctica every year and ISRO has been participating for a long time.

The 36th Indian scientific expedition, four teams from ISRO (one from Space Applications Centre (SAC) Ahmedabad with two members, one from National Remote Sensing Centre (NRSC) Hyderabad with four researchers, one from Indian Institute of Remote Sensing (IIRS) Dehradun with one scientist and one from Space Physics Laboratory(SPL) VSSC Thiruvananthapuram with three members) participated.

HIGHLIGHTS

- Climate change is the thrust area of the 36th Indian Scientific Expedition to Antarctica (36-ISEA).
- The main objective of this expedition is to install stakes on ice for Differential Global Positioning System (DGPS) measurements around Bharati and Maitri to validate glacier surface velocity derived from satellite data to estimate thickness of snow over land and sea ice using Ground Penetrating Radars (GPR's) and also to verify conditions of snow over sea and land ice.
- SAC also participated in the research activities in the area of Cryosphere under its Earth Observation Program.
- Cryospheric studies on the earth surface include the inventory, dynamics, changes, and interaction with hydrosphere, atmosphere etc., of snow, ice cover on land, sea ice and permafrost.
- SAC also monitored sea ice status near Bharati and Maitri coasts of Antarctica using real time satellite data from newly launched SCATSAT-1 and other satellites, for accurate navigation of expedition ship.
- **Measurements of Atmospheric Black Carbon (BC), GHGs and solar radiation fluxes at Antarctica on a long-term basis:** The objectives of the project are to generate base line concentrations of atmospheric

constituents such as CO₂, CH₄, H₂O, which are being measured by ultra portable Greenhouse Gas Analyser/Licor CO₂ analyser.

- BC measurement for long-range transport from populated mid and low latitude regions and its presence over pristine Antarctic environments is being measured using Aethalimeter-AE31.
- Microtops sun photometer is used to measure Columnar Aerosol Optical depth (AOD), Water vapour and Ozone.
- The rate of atmospheric precipitation over Antarctica may have important role to global sea level variation via impact on the surface snow and ice accumulation.
- In the area of **Polar Ionosphere**, studies are conducted to understand the impact of solar wind at the high and low latitude regions.

DRDO – INDIAN NAVY

The Naval Systems handed over to the Indian Navy are **USHUS-II Submarine Sonar**, Directing Gear for **Hull Mounted Sonar Array**, and RLG based **Inertial Navigation System for Ship Applications (INS-SA)**.

DRDO is playing an important role in self-reliance of Defence Forces and the export potential of the Organisation is finding a place in the global Defence market.

Sonars are the eyes and ears of a submarine under water.

- DRDO has developed the State-of-the-Art submarine sonar suite, **USHUS-II**, a highly evolved compendium of multiple sensors.
- The constituent sonars in the suite include passive sonar, active sonar, intercept sonar, obstacle avoidance sonar and underwater telephony.
- Gear is an electro-mechanical system that supports the transducer array of **hull-mounted ship sonar systems** and rotates it at a controlled speed for in-situ acoustic calibration at Harbour and Sea.

The **Inertial Navigation System**, based on indigenous Ring Laser Gyroscopes, provides vital information on the ship's position coordinates and heading for steering it to its destination accurately. It features high speed processor, multi-constellation Sat Nav receiver, ship specific interfaces and innovative algorithms.

With the emergence of **Gallium Nitride** as a state-of-the-art material for MMIC applications, DRDO has established this futuristic technology, which will substantially help in the development of next generation radars, seekers and communication systems, for application in Light Combat Aircraft.

INDIA – WORLD BANK

IN NEWS: India Signed Financing Agreement with World Bank for US \$ 100 Million for Uttarakhand Health Systems Development Project.

HIGHLIGHTS

- The **objective** of the project is to improve access to quality health services, particularly in the hilly districts of the State, and to expand health financial risk protection for residents of the State.
- The project will benefit the residents of hilly districts in particular. The project has two main components, Innovations of engaging the private sector and Stewardship and system improvement.
- Out of the total project size of USD 125 million, USD 25 million will be the counterpart contribution of the State Government.
- The planned design of the Project consists of multiple self-contained clusters of clinical services managed by operators on a PPP basis.

WORLD'S LARGEST ARTIFICIAL SUN: SYNLIGHT

The huge structure could help shed light on new ways of making green fuels, among other technologies.

- The sun is made up of a honeycomb of 149 spotlights, which together make the structure known as "Synlight".
- Individually, they are the kinds of xenon short-arc lamps used for cinema projectors, instead put to work simulating sunlight.
- If it points all of those lights at one single, small spot, it can create about 10,000 times the amount of solar radiation that would normally fall there.
- Creating such furnace-like conditions - with temperatures of up to 3,000 degrees Celsius - is key to testing novel ways of making hydrogen.
- Many consider hydrogen to be the fuel of the future because it produces no carbon emissions when burned, meaning it does not add to global warming.
- Hydrogen is the most common element in the universe, but free, uncombined hydrogen gas is relatively rare on earth.
- One way to manufacture hydrogen is to split water into its two components - the other being oxygen - using electricity in a process called electrolysis.

Researchers hope to bypass the electricity stage by tapping into the enormous amount of energy that reaches Earth in the form of light from the sun.

BARAK MISSILE SYSTEM

IN NEWS: The Indian Navy has successfully conducted the maiden trial firing of newly installed surface-to-air Barak missile system.

- The trial was conducted from its aircraft carrier INS Vikramaditya in the Arabian Sea.
- During the firing, the missile was fired against a live low flying high-speed target.
- Over three years after joining the Navy, the country's sole aircraft carrier INS Vikramaditya carried out the maiden test of the newly installed Barak short range surface-to-air missile.

BARAK MISSILE

- Barak 8 also known as LR-SAM or as MR-SAM is an Indian-Israeli surface-to-air missile (SAM), designed to defend against any type of airborne threat including aircraft, helicopters, anti-ship missiles, and UAVs as well as cruise missiles and combat jets out to a maximum range of 70 km.
- Both maritime and land-based versions of the system exist.
- The radar system provides 360 degree coverage and the missiles can take down an incoming missile as close as 500 meters away from the ship.

ENVIRONMENT MISNISTRY TO CHAIR ANIMAL WELFARE BOARD

IN NEWS: The Animal Welfare Board of India (AWBI), a statutory advisory body under the Union Ministry of Environment, Forests and Climate Change (MoEF), will now be permanently chaired by a senior MoEF official.

In its 55-year history the organisation has always been chaired by somebody outside government, such as veterinarians, animal welfare activists or retired judges.

Differences between the AWBI and the MoEF, especially on the conduct of the jallikattu, which brought Chennai to a standstill earlier this year, was a key reason for the Centre to exert primacy in the management of the organisation, two people familiar with the AWBI's workings.

ANIMAL WELFARE BOARD OF INDIA

- The Animal Welfare Board of India is a statutory advisory body on Animal Welfare Laws and promotes animal welfare in the country.
- Established in 1962 under Section 4 of the Prevention of Cruelty to Animals Act, 1960.
- The Animal Welfare Board of India was started under the stewardship of Late Smt. Rukmini Devi Arundale, well known humanitarian.
- The Board consists of 28 Members. The term of office of Members is for a period of 3 years.

RASHTRIYA VAYOSHRI YOJANA

IN NEWS: “Rashtriya Vayoshri Yojana”, a ‘Scheme for providing Physical Aids and Assisted-living Devices for Senior citizens belonging to BPL category’ launched in District Nellore, Andhra Pradesh.

This is a Central Sector Scheme, fully funded by the Central Government. The expenditure for implementation of the scheme will be met from the "Senior Citizens' Welfare Fund".

The Physical Aids and Assisted-living Devices for Senior citizens will be distributed in Camp mode and the Scheme will be implemented through the sole implementing agency, ‘Artificial Limbs Manufacturing Corporation (ALIMCO)’, (a PSU under M/o SJ&E), which will undertake one year free maintenance of the aids & assisted living devices.

- The devices will help the Senior Citizens to overcome their age related physical impairment.
- Beneficiaries in each district will be identified by the State Governments/UT Administrations through a Committee chaired by the Deputy Commissioner/District Collector.
- As far as possible, 30% of the beneficiaries in each district shall be women.
- The State Government/UT Administration/District Level Committee can also utilize the data of BPL beneficiaries receiving Old Age Pension under the NSAP or any other Scheme of the State/UT for identification of senior citizens belonging to BPL category.
- As per the Census figures of 2011, the population of senior citizens in India is 10.38 crore.
- More than 70% of the population of senior citizens live in rural areas of the country.
- A sizeable percentage (5.2%) of the senior citizens suffers from some sort of disabilities related to old age.
- Projections indicate that the number of elderly population will increase to around 173 million by 2026.

ABEL PRIZE

Abel Prize 2017: **Yves Meyer** wins 'maths Nobel' for work on wavelets.

The Abel Prize is a Norwegian prize awarded annually by the Government of Norway to one or more outstanding mathematicians.

It is named after Norwegian mathematician Niels Henrik Abel and modelled after the Nobel Prizes.

WORLD TB DAY 2017: “UNITE TO END TB”

IN NEWS: World TB Day is observed every year on March 24 to create awareness and support world-wide efforts to eliminate tuberculosis (TB).

This annual event commemorates the date in 1882 when Dr. Robert Koch announced his discovery of Mycobacterium tuberculosis, the bacillus that causes TB.

SOLAR POWER SKIN FOR PROSTHETIC LIMBS

IN NEWS: While prosthetics are usually fully powered using batteries, a new prototype from University of Glasgow researchers opens up the possibility for solar-powered skin, which would include better sense capabilities than current technology.

HIGHLIGHTS

- The technology involves installing a thin layer of pure carbon around a prosthetic arm, hand or leg.
- This allows light to pass through it and be easily used as solar energy. The sun can provide up to 15 times more energy than is usually needed to power a prosthetic limb.
- This renewable energy can be used to power sensors that increase sense and feeling in a limb, so much so that the prosthetic can feel pressure, temperature and texture like natural skin.
- The technology could also increase the functionality of robots, allowing them to have a better understanding of what they touch.

GLOBAL ENERGY ARCHITECTURE PERFORMANCE INDEX

IN NEWS: The top 20 performers in the fifth annual Global Energy Architecture Performance Index Report 2017 have achieved twice the average increase in their score compared to that of all other countries.

It is a **World Economic Forum's** initiative of the Global Energy Architecture Performance Index (EAPI).

Its objective to examine the progress of the global energy transition towards more sustainable, competitive, secure and affordable energy systems matches very well with the objectives of the Energy Union strategy.

The report developed in collaboration with Accenture Strategy and launched at the European Commission, ranks 127 countries based on their ability to provide energy across three dimensions of the “energy triangle”.

- Overall, some of the largest consumers of energy such as China (95th), India (87th), Japan (45th), the Russian Federation (48th) and the United States (52nd) have either slipped in the rankings or experienced only marginal gains.
- Switzerland (1st) and Norway (2nd) taking the top spots. Colombia (8th), Uruguay (10th) and Costa Rica (14th) are the highest-ranked Latin American nations, while New Zealand places 9th.
- France (5th), the United Kingdom (15th) and Germany (19th) have effectively managed complex energy sectors alongside large economies.

The World Economic Forum is an international institution committed to improving the state of the world through public-private cooperation in the spirit of global citizenship. It engages with business, political, academic and other leaders of society to shape global, regional and industry agendas.

Incorporated as a not-for-profit foundation in 1971 and headquartered in Geneva, Switzerland, the Forum is independent, impartial and not tied to any interests. It cooperates closely with all leading international organizations.

EMPLOYEE'S COMPENSATION BILL, 2016

IN NEWS: The Employee's Compensation (Amendment) Bill, 2016 was introduced in Lok Sabha on August 5, 2016 by the **Minister for Labour and Employment**. The bill was passed by the Lok Sabha last August but it was brought before the Lower House as Rajya Sabha had passed it last month with two minor amendments.

HIGHLIGHTS

- The Bill amends the Employee's Compensation Act, 1923.
- The Act provides payment of compensation to employees and their dependants in the case of injury by industrial accidents, including occupational diseases.
- The Bill introduces a provision which requires an employer to inform the employee of his right to compensation under the Act. Such information must be given in writing (in English, Hindi or the relevant official language) at the time of employing him.
- The Bill penalises an employer if he fails to inform his employee of his right to compensation. Such penalty may be between fifty thousand to one lakh rupees.
- The Act provides that any dispute related to an employee's compensation will be heard by a Commissioner (with powers of a civil court). Appeals from the Commissioner's order, related to a substantial question of law, will lie before the High Court.
- Act stipulates that appeals can be made against orders related to compensation, distribution of compensation, award of penalty or interest, etc. only if the amount in dispute is at least three hundred rupees.
- The Bill raises this amount to ten thousand rupees. It permits the central government to further raise this amount.
- Employees suffering injury in industrial accident will now get compensation of up to Rs1 lakh..

GOVERNMENT MERGED 8 TRIBUNALS

The Lok Sabha approved the merger of eight tribunals with other tribunals. These amendments were introduced as part of the Finance Bill, 2017.

The bill empowers the Central government to lay down the rules for appointment of tribunal members across a cross section of tribunal.

Some of the prominent tribunals include **the Income tax Appellate Tribunal (ITAT), Central Excise and Service Tax Tribunal (CESTAT), Securities Appellate Tribunal (SAT), National Company Law Appellate Tribunal (NCLAT), and Authorities for Advance Rulings (AAR).**

- In addition, the Centre has also obtained the authority to determine the qualifications, term of office, salaries and allowances, resignation, removal and other terms of service of such quasi-judicial officials.
- The new rules will not apply to those currently serving on these tribunals. The term of office of tribunal members will be five years with eligibility for reappointment.
- Age limits have been increased, for instance, chairpersons of tribunals will now retire at age 70.

IMPACT

Allowing the executive to determine appointment, reappointment and removal of members could affect the independent functioning of Tribunal. There would be conflict of interest if the government were to be a litigant before a tribunal, as well as determine appointment of its members.

WORLD METEOROLOGICAL DAY

IN NEWS: The United Nations' (UN) World Meteorological Day is annually held on or around March 23.

Clouds play a pivotal role in weather forecasts and warnings. They help to drive the water cycle and the entire climate system.

The theme: “**Understanding Clouds**”, together with the launch of the new edition of the International Cloud Atlas (the first update in 30 years).

HIGHLIGHTS

- The new WMO Atlas is a bunch of hundreds of images of clouds, including a few newly classified cloud types.
- It also features other meteorological phenomena such as rainbows, halos, snow devils and hailstones.
- For the first time ever, the Atlas has been produced in a digital format and is accessible via both computers and mobile devices.
- The **International Cloud Atlas** is the single authoritative and most comprehensive reference for identifying clouds.

- It is an essential training tool for professionals in the meteorological community and those working in aviation and shipping.
- The International Cloud Atlas has its roots in the late 19th century. It was revised on several occasions in the 20th century, most recently in 1987, as a hard copy book, before the advent of the Internet.

NEW OBC COMMISSION

IN NEWS: The government has approved a proposal to provide constitutional backing to the **National Commission for Socially and Educationally Backward Classes (NSEBC)**.

It will replace the existing National Commission for Backward Classes (NCBC), created in response to a Supreme Court ruling in 1992; it examines and recommends requests for inclusion and exclusion in the list of Other Backward Classes or OBCs.

- National Commission for Socially and Educationally Backward Classes created as a constitutional body by making an amendment to the Constitution, mainly by insertion of Article 338B.
- A constitutional amendment requires two-thirds approval of both houses of Parliament and subsequent ratification by 50% of the state assemblies.
- Like the NCBC, the new body too will comprise of a chairperson, a vice-chairperson and three other members.

FUND OF FUND FOR START- UPS (FFS)

IN NEWS: The Union Cabinet had approved the proposal to establish a Fund of Funds for Start-ups (FFS) with a total corpus of Rs.10000 crore, with contribution spread over the 14th & 15th Finance Commission cycles based on progress of implementation and availability of funds.

- Alternate Investment Funds (AIFs) supported by FFS shall invest at least twice the amount of contribution received from FFS in Start-ups.
- Operating expenses for carrying out due diligence, legal and technical appraisal, convening meeting of Venture Capital Investment Committee, etc. would be met out of the FFS to the extent of 0.50% of the commitments made to AIFs and outstanding.
- It was decided that the FFS shall contribute to the corpus of Alternative Investment Funds (AIFs) for investing in equity and equity linked instruments of various start-ups at early stage, seed stage and growth stages.
- The FFS is being managed and operated by Small Industries Development Bank of India (SIDBI).
- FFS contributes to SEBI registered Alternative Investment Funds (AIFs) that may go up to a maximum of 35% of the corpus of the AIF concerned.

AMENDMENT TO NABARD ACT, 1981

The Amendments include provisions that enable Central Government to increase the authorized capital of NABARD from Rs. 5,000 crore to Rs. 30,000 crore and to increase it beyond Rs. 30,000 crore in consultation with RBI, as deemed necessary from time to time.

- Transfer of 0.4 per cent equity of RBI in NABARD amounting to Rs. 20 crores to the Government of India.
- The proposed amendments in NABARD Act, include, certain other amendments including changes in long title and certain Sections to bring Medium Enterprises and Handlooms in NABARD's mandate.
- The proposed increase in the authorized capital would enable NABARD to provide Long Term Irrigation Fund.
- It will enable NABARD to augment its business and enhance its activities which would facilitate promotion of integrated rural development and securing prosperity of rural areas including generation of more employment.
- The transfer of entire shareholding in NABARD held by RBI to the Central Government will remove the conflict in RBI's role as banking regulator and shareholder in NABARD.

RIGHT OF CHILDREN TO FREE AND COMPULSORY EDUCATION ACT, 2009

IN NEWS: The Union Cabinet has approved the amendment to Right of Children to Free and Compulsory Education (RTE) Act, 2009.

This will ensure that all teachers, in position as on 31st March, 2015, acquire the minimum qualifications prescribed by the academic authority to extend the period for such training for four years up to 31st March, 2019.

This will enable the in-service untrained elementary teachers to complete their training and ensure that all teachers at the elementary level in the country have a certain minimum standard of qualifications.

This would also ensure that all Teachers would attain minimum qualifications as considered necessary to maintain the standard of teaching quality.

BACKGROUND

- The Right of Children to Free and Compulsory Education (RTE) Act, 2009, is effective from 1st April, 2010.
- It envisages free and compulsory elementary education to every child in the age group of 6-14 years.
- The Proviso to Section 23(2) of the Act specifies that all teachers at elementary level who, at the commencement of this Act, did not possess the minimum qualifications as laid down under the RTE Act, need to acquire these within a period of five years i.e., 31st March, 2015.

- However, several State governments have reported that out of a total number of 66.41 lakh teachers at the elementary level, 11.00 lakh are still untrained (of this, 5.12 lakh are in Government and Aided Schools and 5.98 lakh are in private schools).

N.E. ROAD NETWORK CONNECTIVITY PROJECT

IN NEWS: The Cabinet Committee on Economic Affairs has given its approval for development of 403 kms of National Highways in Meghalaya and Mizoram. Out of 403 km, approximately 52 kms will be in Meghalaya and 351 km in Mizoram.

- The projects will be taken up for implementation during the financial year 2017-18.
- The projects will encourage sub-regional socio-economic development by improvement of infrastructure in Meghalaya and Mizoram. It will also enhance the connectivity with inter-state roads and International Borders.
- The work for development to two lane standards are under scheme "North East Road Network Connectivity Project Phase I" with loan assistance of Japan International Cooperation Agency (JICA).

HIV & AIDS (PREVENTION AND CONTROL) BILL, 2014

IN NEWS: The HIV and AIDS (Prevention and Control) Bill, 2014 criminalizes discrimination against HIV-positive people and those living with them was passed in the Rajya Sabha.

- The bill includes denial, termination, discontinuation or unfair treatment with regard to employment, educational institutions, healthcare services, sale or renting out of property, contesting for public or private office, and provision of insurance.
- Apart from addressing HIV-related discrimination, the bill seeks to strengthen the existing programme by bringing in legal accountability and establishing formal mechanisms for probing complaints and redressing grievances.
- The bill also intends to enhance access to healthcare services by ensuring informed consent and confidentiality for HIV-related testing, treatment and clinical research.
- The bill also takes guardianship of minors into consideration. A person between the age of 12 and 18 years, who has achieved sufficient maturity in understanding and managing the affairs of his HIV or AIDS-affected family, will be deemed competent to act as a guardian of another sibling below 18 years of age. This is especially applicable in matters pertaining to admission to educational establishments, operating bank accounts, managing property, and providing care and treatment, among others.
- The legislation stipulates that "no person shall be compelled to disclose his HIV status except with his informed consent, and if required, by a court order".

- It also mandates organisations that maintain records on HIV-positive individuals to adopt data-protection measures to safeguard their rights.
- Once the legislation comes into effect, every HIV-infected or affected person below the age of 18 will have the right to live in a shared household, and enjoy household facilities.

India has the third-largest HIV-affected population in the world, accounting for an estimated 21 lakh people. Even though the number has decreased over the last decade, the bill is expected to provide essential support to the National AIDS Control Programme in arresting new infections, which will help the government achieve its target of “ending the epidemic by 2030”.

HYPERSONIC WIND TUNNEL: ISRO

IN NEWS: The Indian Space Research Organisation (ISRO) has commissioned world’s third largest hypersonic wind tunnel at the Vikram Sarabhai Space Centre (VSSC) in Thiruvananthapuram.

HIGHLIGHTS

- A wind tunnel is used to study the effects of air flowing past a solid object—space vehicles.
- ISRO commissioned two facilities—a one-metre Hypersonic Wind Tunnel and a one-metre Shock Tunnel.
- These facilities are the third largest in terms of size and simulation capability in the world.
- These facilities named after former ISRO chairman Satish Dhawan have been indigenously designed, developed and made in India with the support of Indian Industries.
- Commissioning of such facilities would provide adequate data for design and development of current and future Space transportation systems in the country.
- Aerospace vehicles fly at high speed, often greater than the speed of sound. Their re-entry through the atmosphere is at high Mach numbers, the modelling of which is intricate.
- Hypersonic Wind Tunnel and Shock Tunnel facilities are used to simulate the aero-thermal environment where characterisation of vehicles is carried out.
- Facilities existing in the country are smaller in size and have limited simulation capabilities.
- One metre hypersonic wind tunnel can simulate flow speeds of Mach 6 to 12.
- One metre shock tunnel simulates flight speed of 4.5 kilometres per second.

WORLD WATER DAY 2017

IN NEWS: World Water Day, on 22 March every year, is about taking action to tackle the water crisis.

Today, there are over 663 million people living without a safe water supply, spending countless hours queuing or trekking to distant sources, and coping with the health impacts of using contaminated water.

This year's theme:” **Why waste water**” in support of SDG 6.3 on improving water quality and reducing, treating and reusing wastewater.

Globally, the vast majority of all the wastewater from our homes, cities, industry and agriculture flows back to nature without being treated or reused – polluting drinking and bathing and irrigation and losing valuable nutrients and other recoverable materials.

Reducing and safely treating and reusing wastewater, for example in agriculture and aquaculture, protects worker, farmers and consumers promotes food security, health and wellbeing.

NUCLEAR RESEARCH PROJECT

IN NEWS: The southern bench of the National Green Tribunal has suspended the environmental clearance of the India-based Neutrino Observatory project for research on high energy and nuclear physics, being set up in Tamil Nadu.

The project that was proposed to be set up in Theni in Tamil Nadu was put on hold by the NGT when it was told that the Madhikettan Shola National Park in Idukki district of Kerala was just about 4.9 km from the proposed project site.

The INO Project is a multi-institutional effort aimed at building a world-class underground laboratory with a rock cover of approximately 1200 metre for non-accelerator based high energy and nuclear physics research in India.

- A neutrino is a fermion (an elementary particle with half-integer spin) that interacts only via the weak subatomic force and gravity.
- The mass of the neutrino is much smaller than that of the other known elementary particles.
- The neutrino is so named because it is electrically neutral and because its rest mass is so small that it was originally thought to be zero.
- The weak force has a very short range, gravity is extremely weak on the subatomic scale, and neutrinos, as leptons, do not participate in the strong interaction. Thus, neutrinos typically pass through normal matter unimpeded and undetected.

GRAPES-3

IN NEWS: The GRAPES-3 experiment located at Ooty in India started as a collaboration of the Tata Institute of Fundamental Research, Mumbai, India and the Osaka City University, Osaka, Japan. At present many institutions from India and Japan are in collaboration.

HIGHLIGHTS

GRAPES-3 (Gamma Ray Astronomy PeV EnergieS phase-3) is designed to study cosmic rays with an array of air shower detectors and a large area muon detector.

It aims to probe acceleration of cosmic rays in the following four astrophysical settings. These include acceleration of particles to,

- (i) ~100 MeV in atmospheric electric fields through muons,
 - (ii) ~10 GeV in Solar system through muons,
 - (iii) ~1 PeV in our galaxy through nuclear composition of cosmic rays,
 - (iv) ~100 EeV in nearby universe through measurement of diffuse γ -ray flux.
- The observations began with 217 plastic scintillators and a 560 m² area muon detector in 2000. The scintillators detect charged particles contained in extensive air showers produced by interaction of high energy cosmic rays in the atmosphere.

OBJECTIVES

- The origin, acceleration and propagation of $>10^{14}$ eV cosmic rays in the galaxy and beyond.
- Existence of “Knee” in the energy spectrum of cosmic rays.
- Production and/or acceleration of highest energy (~ 10^{20} eV) cosmic rays in the universe.
- Astronomy of multi-TeV γ -rays from neutron stars and other compact object.
- Sun the closest astrophysical object, accelerator of energetic particles and its effects on the Earth.

IDEA – VODAFNE MERGER

IN NEWS: The boards of Idea Cellular Ltd and Vodafone India Ltd have approved their merger, excluding the latter’s 42% stake in Indus Towers Ltd, heralding the creation of India’s largest telecom company in a \$23 billion deal.

HIGHLIGHTS

- The merger will create the world’s second largest and India’s largest telco, overtaking Bharti Airtel Ltd.
- It will have almost 400 million customers with 35% customer and 41% revenue market share.
- It will have revenue of Rs81,600 crore and an operating profit of Rs24,400 crore. Together, Idea Cellular and Vodafone India have debt of Rs1.08 trillion.
- The merger is expected to be completed in 2018.

WORLD HAPPINESS REPORT

IN NEWS: India ranked at 122 out of 155 countries in the World Happiness Report 2017, four notches below its previous rank of 118. The report was released at the United Nations.

HIGHLIGHTS

- India was behind the majority of South Asian Association for Regional Cooperation (SAARC) nations.
- Among the eight SAARC nations, Pakistan was at 80th position, Nepal stood at 99, Bhutan at 97, Bangladesh at 110 while Sri Lanka was at 120. Maldives did not figure in the World Happiness Report.
- Norway, Denmark, Iceland, Switzerland and Finland round out the top 5.

The rankings are based on gross domestic product per person, healthy life expectancy with four factors from global surveys. In those surveys, people give scores from 1 to 10 on how much social support they feel they have if something goes wrong, their freedom to make their own life choices, their sense of how corrupt their society is and how generous they are.

GANGA & YAMUNA: LIVING ENTITY

IN NEWS: The Uttarakhand high court declared the Ganga and Yamuna living entities, bestowing on them same legal rights as a person, a move that could help in efforts to clean the pollution-choked rivers.

- The order also ends the five-day reign of **New Zealand's Whanganui River** as the only one in the world to be granted living entity status.
- The court's order will allow complaints to be filed in the name of the two rivers.
- It also gives the Centre eight weeks to set up boards for cleaning and maintaining the rivers.
- It means now Ganga and Yamuna rivers will be treated like a natural person but only through a designated person.
- The world's third largest river, the Ganga is among the dirtiest in the world, with toxic industrial waste and untreated sewage reducing it to a dirty trickle at several places.

GST BILLS

The Union Cabinet has approved the following four GST related bills:

- The Central Goods and Services Tax Bill 2017 (The CGST Bill).
- The Integrated Goods and Services Tax Bill 2017 (The IGST Bill).
- The Union Territory Goods and Services Tax Bill 2017 (The UTGST Bill).
- The Goods and Services Tax (Compensation to the States) Bill 2017 (The Compensation Bill).

HIGHLIGHTS

- The **CGST Bill** makes provisions for levy and collection of tax on intra-state supply of goods or services for both by the Central Government. On the other hand, IGST Bill makes provisions for levy and collection of tax on inter-state supply of goods or services or both by the Central Government.
- The **UTGST Bill** makes provisions for levy on collection of tax on intra-UT supply of goods and services in the Union Territories without legislature.
- Union Territory GST is akin to **States Goods and Services Tax (SGST)** which shall be levied and collected by the States/Union Territories on intra-state supply of goods or services or both.
- The **Compensation Bill** provides for compensation to the states for loss of revenue arising on account of implementation of the goods and services tax for a period of five years as per section 18 of the Constitution (One Hundred and First Amendment) Act, 2016.

NEW SUB ATOMIC PARTICLES DISCOVERED

IN NEWS: The Large Hadron Collider (LHC), the latest addition to CERN's accelerator complex, is the most powerful particle accelerator ever built.

HIGHLIGHTS

- It features a 27-kilometre (16-mile) ring made of superconducting magnets and accelerating structures built to boost the energy of particles in the chamber.
- In the accelerator, two high-energy particle beams are forced to collide from opposite directions at speeds close to the speed of light.
- The energy densities that are created when these collisions occur cause ordinary matter to melt into its constituent parts - quarks and gluons.
- The LHC team is responsible for the discovery of the Higgs boson, potentially disproving the existence of the paranormal, and discovering a host of new particles.
- Each of the five particles were found to be excited states of Omega-c-zero, a particle with three quarks.

NEW WI-FI SYSTEM

IN NEWS: Scientists has developed a new wireless Internet based on infrared rays that is reportedly 100 times faster than existing Wi-Fi networks.

HIGHLIGHTS

- The wireless network developed by researchers in The Netherlands not only has a huge capacity than 40 Gigabits per second (Gbit/s) but does away with the need to share Wi-Fi as every device gets its own ray of light.
- The wireless data comes from a few central 'light antennas', which can be mounted on the ceiling, that are able to precisely direct the rays of light supplied by an optical fibre.
- The antennas contain a pair of gratings that radiate light rays of different wavelengths at different angles ('passive diffraction gratings').
- The network tracks the precise location of every wireless device using its radio signal transmitted in the return direction.
- Different devices are assigned different wavelengths by the same light antenna and so do not have to share capacity.

The system has so far used the light rays only to download; uploads are still done using radio signals since in most applications much less capacity is needed for uploading.

INDIA'S LONGEST ROAD TUNNEL

India's longest surface tunnel in Jammu and Kashmir's (Cheneni- Nashiri)Udhampur district is complete.

- The 9-km-long tunnel passes through the Himalayas on Jammu- Srinagar National Highway.
- The twin-tube tunnel, at an elevation of 1,200 meters.
- India's Longest Road Tunnel Completes Trial Run Passing across a highly seismic zone.
- It will be the first in India to be equipped with world class "integrated tunnel control system" through which ventilation, fire control, signals, communication and electrical systems will be automatically actuated.
- The tunnel is an important step to make it an all-weather road, better connectivity with the rest of the country will also help to boost the trade and commerce in the valley.

INDEGENOUSLY BUILT "MEDHA"

IN NEWS: Made-in-India train, Medha, is on tracks of the Western Railway.

- Medha has been manufactured by the Integral Coach Factory (ICF) in Chennai.
- The train can run at a speed of 110 kmph, whereas local trains don't run above 90 or 100 kmph.

DEV RAJ SIKKA PASSED AWAY

IN NEWS: Dev Raj Sikka, former director of the Indian Institute of Tropical Meteorology, Pune, who first proposed a link between the El Nino phenomenon and the Indian monsoon.

- Dr. Sikka began his career at the India Meteorological Department, was also credited with being among the pioneers of developing weather models and computer-modelling techniques to forecast the monsoon.
- He was Chairman of the Monsoon Mission of the Ministry of Earth Sciences, a programme to improve monsoon-related forecasts.
- He is well known as MONSOON MAN of India and father of Indian meteorology.

The El Nino Southern Oscillation phenomenon, a see-sawing of temperatures in the equatorial Pacific, is now among the most significant factors that meteorologists scan to forecast the performance of the Indian monsoon.

Six out of 10 El Nino-years have been associated with below-normal rainfall over India.

NATIONAL HYDROLOGY PROJECT

IN NEWS: The World Bank has approved a \$175 million loan for the National Hydrology Project to improve India's ability to forecast floods and reduce vulnerability to recurring floods and droughts.

- The loan from the International Bank for Reconstruction and Development (IBRD) has a six-year grace period in which no interest payments will be due. The loan will mature in 23 years.
- In the context of climate change, advanced flood management and enhanced river basin planning are essential for building livelihoods and sustaining economic growth.
- This National Hydrology Project will aim to cover the entire country, including the states along the Ganga and Brahmaputra-Barak basins.
- National Flood Forecasting Systems with an advance warning system and reservoir operation systems as well as water resources accounting in river basins will be included under the project.

The National Hydrology Project is expected to take forward the success of the Hydrology Project-I and Hydrology Project-II, under which real-time flood forecast systems in two large river systems (Krishna and Satluj-Beas) were developed to give reservoir managers an accurate picture of the water situation in their region.

INDIA - RUSSIA

IN NEWS: India and Russia signed two long-term support agreements for the Sukhoi Su-30MKI combat aircraft fleet, which is the mainstay of the Indian Air Force (IAF).

- Pacts were also signed for maintenance and life-cycle support for other Russian-origin platforms, such as Mi-17 helicopters, MiG-29K aircraft, INS Vikramaditya and T-90 tanks.
- The agreements were signed by Hindustan Aeronautics Ltd (HAL) with United Aircraft Corporation and United Engine Corporation.
- The Su-30MKI was designed and developed by Russia's Irkut Corporation, specifically for India.

LABOUR CODE

IN NEWS: The government has proposed a labour code which will provide social security cover to the entire workforce in the country, including self-employed and agricultural workers.

- A 'draft code on Social Security and Welfare' proposed by the Labour Ministry.
- Factories employing even a single worker will have to contribute towards social security benefits, as per the proposal.
- Every working person in the country will be covered under the social security code whether she/he belongs to the organised sector or the unorganised sector.

- A National Social Security Council has been proposed to streamline and make policy on social security schemes related to all the Ministries. Other members would include: Finance Minister, Labour Minister, Health and Family Welfare Minister along with employer and employees' representatives.
- The council will co-ordinate between central and State governments, monitor the implementation of social security schemes, regulate funds collected under various social security schemes.
- The proposed code seeks to cover “any factory, any mine, any plantation, any shop, charitable organisations” and all establishments or households employing casual, part-time, fixed-term, informal, apprentice, domestic and home-based workers.
- All such establishments or factories will be liable to pay compensation if they fail to contribute towards the social security schemes of the workers.
- Social security benefits unclaimed for five years after becoming due to the worker will be confiscated by the government.

BACKGROUND

The total contribution to be made by employers towards Employees' Provident Fund and Employees' State Insurance Scheme is proposed to be capped at 30% of the workers' income. At present, employers contribute 31.5% of the workers' income towards these schemes. According to the proposed code, self-employed workers will contribute 20% of their monthly income towards provident fund, pension and other related schemes. Self-employed workers will also include “a person who takes land on share cropping or any other form of rent, and tills the same using his own or family members' labour.”

All the entities whether factories or households will have to register their workers through an Aadhaar-based registration system, according to another proposal, and self-employer workers will be required to register themselves.

ICAR - ICRISAT

IN NEWS: In a bid to benefit small farmers in India and globally, Indian Council of Agricultural Research (ICAR) and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) would work together on crop improvement and agronomy programmes for grain legumes and dryland cereals.

ICAR and ICRISAT, recently signed an agreement in New Delhi, in which climate smart crops, smart food and digitalisation of breeding database were identified as some of the core areas of research.

Areas of focus over the next three years include - integrating systems modelling tools for upscaling climate resilient agriculture, developing genetic and genomic resources of finger millet and enhancing genetic gains for priority traits.

The pact will facilitate research on pigeonpea and chickpea for insect resistance.

ICRISAT

- The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is an international organisation which conducts agricultural research for rural development.
- Headquartered in Patancheru (Hyderabad, Telangana, India) with several regional centers (Bamako (Mali), Nairobi (Kenya)) and research stations (Niamey (Niger), Kano (Nigeria), Lilongwe (Malawi), Addis Ababa (Ethiopia), Bulawayo (Zimbabwe)).
- It was founded in 1972 by a consortium of organisations convened by the Ford and the Rockefeller foundations. Its charter was signed by the FAO and the UNDP.

Since its inception, host country India has granted a special status to ICRISAT as a UN Organization operating in the Indian territory making it eligible for special immunities and tax privileges.

INDIA - BRAZIL

IN NEWS: India and Brazil signed a social security agreement.

Detached workers of the two countries are exempted from making social security contributions in either countries so long as they were making such contributions in their respective countries.

- **Detached workers** are sent by their employers to work in the office of their company or an affiliate located in a different country.
- The text establishes the rights and obligations of the nationals of both the countries and provides for equal treatment of the nationals of both countries and unrestricted payment of pensions even in the case of residence in the other contracting state (benefits export principle).
- The requirements to be entitled to a pension can be met by aggregating the periods of insurance completed in India and Brazil, whereby each country pays only the pension for the insurance periods covered by its laws.

END TB BY 2030: WHO

IN NEWS: Health ministers from countries in WHO South-East Asia Region, which bear half the global TB burden and WHO signed a 'Call for Action' for ending TB, pledging to scale-up efforts and implement adequately funded, innovative, multi-sectoral and comprehensive measures to achieve the global target to end the disease by 2030.

- India among other countries in the South East Asian Region, which bear half of the global tuberculosis burden signed a 'call for action' and pledged to scale up measures to end the disease by 2030.
- India reports 2.8 million new TB cases annually and nearly half a million deaths due to the disease.

- In 2015, TB caused nearly 8,00,000 deaths in the region, while an estimated 4.74 million new cases were reported.
- Six of the region's countries Bangladesh, DPR Korea, India, Indonesia, Myanmar and Thailand are among the 30 high TB burden nations globally.
- The global targets seek to reduce TB mortality by 90 per cent and incidence by 80 per cent by 2030. The initiative also stresses on increasing government and partner budgetary allocations to enable national TB plans to be fully funded.

India represents the single highest number of TB cases in the world and has approached the "challenge" to end the disease in "all seriousness". And has accelerated action to meet the 'End TB target by 2025'.

WHO's South-East Asia Region comprises Bangladesh, Bhutan, Democratic People's Republic of Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand and Timor-Leste.

NATIONAL HEALTH POLICY 2017

Life Expectancy and healthy life

- Increase Life Expectancy at birth from 67.5 to 70 by 2025.
- Establish regular tracking of Disability Adjusted Life Years (DALY) Index as a measure of burden of disease and its trends by major categories by 2022.
- Reduction of TFR to 2.1 at national and sub-national level by 2025.

Mortality

- Reduce Under Five Mortality to 23 by 2025 and MMR from current levels to 100 by 2020.
- Reduce infant mortality rate to 28 by 2019.
- Reduce neo-natal mortality to 16 and still birth rate to "single digit" by 2025.

Reduction of disease

- Achieve global target of 2020 which is also termed as target of 90:90:90, for HIV/AIDS i. e., -90% of all people living with HIV know their HIV status, - 90% of all people diagnosed with HIV infection receive sustained antiretroviral therapy and 90% of all people receiving antiretroviral therapy will have viral suppression.
- Achieve and maintain elimination status of Leprosy by 2018, Kala-Azar by 2017 and Lymphatic Filariasis in endemic pockets by 2017.
- To achieve and maintain a cure rate of >85% in new sputum positive patients for TB and reduce incidence of new cases, to reach elimination status by 2025.

Coverage of Health Services

- Increase utilization of public health facilities by 50% from current levels by 2025.
- Antenatal care coverage to be sustained above 90% and skilled attendance at birth above 90% by 2025.
- More than 90% of the newborn are fully immunized by one year of age by 2025.
- Reduction of 40% in prevalence of stunting of under-five children by 2025.
- Access to safe water and sanitation to all by 2020 (Swachh Bharat Mission).

TRADE INFRASTRUCTURE FOR EXPORT SCHEME (TIES)

IN NEWS: Commerce and Industry Ministry launched the Trade Infrastructure for Export Scheme (TIES).

The objective of the proposed scheme is to enhance export competitiveness by bridging gaps in export infrastructure, creating focused export infrastructure, first mile and last mile connectivity for export-oriented projects and addressing quality and certification measures.

- Scheme is focussed on addressing the needs of the exporters.
- There will be an Empowered Committee to periodically review the progress of the approved projects in the Scheme and will take necessary steps to ensure achievement of the objectives of the Scheme.
- The scheme would provide assistance for setting up and up-gradation of infrastructure projects with export linkages like the Border Haats, Land customs stations, quality testing and certification labs, cold chains, trade promotion centres, dry ports, export warehousing and packaging, SEZs and ports/airports cargo terminuses.
- The Central and State Agencies, including Export Promotion Councils, Commodities Boards, SEZ Authorities and Apex Trade Bodies recognised under the EXIM policy of Government of India; are eligible for financial support under this scheme.
- The Central Government funding will be in the form of grant-in-aid, normally not more than the equity being put in by the implementing agency or 50% of the total equity in the project. (In case of projects located in North Eastern States and Himalayan States including J&K, this grant can be upto 80% of the total equity).
- The grant in aid shall, normally, be subject to a ceiling of Rs 20 Cr for each infrastructure project.

COAL BED METHANE GAS MARKETING & PRICING

IN NEWS: The Cabinet Committee on Economic Affairs approved for marketing and pricing freedom to the Coal Bed Methane (CBM) Contractors to sell the CBM at Arm's Length Price in the domestic market.

While discovering the market price for Arms Length Sales, the Contractor has to ensure a fully transparent and competitive process for sale of CBM with the objective that the best possible price is realized for the gas without any restrictive commercial practices.

The policy is expected to incentivize the CBM operation in the country to boost gas production and will generate economic activities which in turn will be beneficial for creating more employment opportunities in CBM operations and related activities.

COAL BED METHANE

Coalbed methane (CBM or coal-bed methane), coalbed gas, coal seam gas, or coal-mine methane (CMM) is a form of natural gas extracted from coal beds.

In recent decades it has become an important source of energy in United States, Canada, Australia, and other countries.

The term refers to methane adsorbed into the solid matrix of the coal. It is called 'sweet gas' because of its lack of hydrogen sulfide.