



## CURRENT AFFAIRS - PART 1

2018- 2020 (UPTO SEPTEMBER)

## Jai Jawan Jai Kissan Jai Vigyan

- After the Pokharan tests in 1998, Atal Bihari Vajpayee added Jai Vigyan to the slogan to underline the importance of knowledge in India's progress.

## Forensic audit

- A forensic audit is an examination and evaluation of a firm's or individual's financial information for use as evidence in court.
- A forensic audit can be conducted in order to prosecute a party for fraud, embezzlement or other financial claims.

## Flammable ice

- Methane clathrate or Methane hydrate is called as methane ice, fire ice, natural gas hydrate is a solid clathrate compound in which large amount of methane is trapped within a crystal structure of water, forming a solid similar to ice.
- Significant deposits of methane clathrate have been found under sediments on the ocean floors of the earth.
- Methane clathrates are restricted to the shallow lithosphere less than 2000m deep.
- The economic deposits of hydrate are termed Natural Gas Hydrate (NGH)
- The countries set to extract NGH - China Japan

## Super Computer

- A supercomputer is a computer with a high level of computing performance compared to a general purpose computer.
- Performance of a supercomputer is measured in floating-point operations per second instead of million instructions per second
- Supercomputer PARAM 8000 (made by C DAC) was launched on July 01, 1991 was first supercomputer of India
- India is making a powerful Supercomputer with a capacity of 10 peta flops (1 followed by 15 zeroes of floating point operations per second). A clock speed a million times faster than fastest laptop today.
- In India supercomputers are used in Meteorology for Weather Forecasting

## CITES

- Convention on International Trade in Endangered Species of wild Fauna and Flora
- It is an international agreement between governments.
- Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival
- Controls the transfer of wild life products between member countries
- Signed March 3 1973, Effective: 1 July 1975
- Parties 183 Location Washington DC
- From India - Trade in over 1800 species banned  
Rhino horn ` 3 Lakh , Ivory \$ 2100/kg

## Nautical Mile

- A nautical mile is a unit of measurement defined as 1,852 meters
- 1 kilometer = 0.54 nautical mile
- Historically it was defined as one minute of latitude
- Territorial waters as defined by the 1982 United Nations Convention on Law of the Sea, is a belt of coastal waters extending at most 12 nautical miles (22.2km) from base line (Usually the mean low-water mark) of a coastal state.

- List of all those species at risk; includes categories such as 'vulnerable', at risk, endangered, and critically endangered updated every three years
- IUCN- The International Union for Conservation of Nature. Maintains the Red Data Book
- Critically Endangered in India
  - Himalayan Brown/Red Bear
  - Pygmy Hog
  - Namdapha Flying Squirrel
  - Golden Langur
  - Fresh water river dolphin



## Flag meeting

- Flag meeting is the meeting held at the border or line of control by commanders on both sides.
- Basically it is a confidence building exercise aimed at resolving the problem at the local level and ensuring that the tension is brought down.

## Red Corner Alert

- INTERPOL informs its members that an arrest warrant has been issued for an individual by a judicial authority.
- However Interpol can not demand that any member country arrest the subject of a Red Notice.
- A red corner notice is actually ‘a spot out device on the immigration computer’. When a passenger checks in or checks out of India at the international immigration counter, the moment the passengers passport number is fed in ‘a red flag appears’ beside it to alert the immigration officer that this person is wanted by the police of any police station in India.

## Shanghai Cooperation Organization (SCO)

- The SCO is a Eurasian political, economic and security organization.
- Its creation was announced on 15 June 2001 with leaders of China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan
- HQ at Beijing, China. Official Language Russian, Chinese
- India and Pakistan joined SCO as full members at a summit on 9 June 2017 in Astana, Kazakhstan
- Secretary General - Rashid Alimov
- Objective - Social Development, Fight against terrorism, Separatism and extremism, Military cooperation and intelligence sharing

## Marine National Park: Gulf of Kutch

- Situated seawards from the Southern coastline of Gulf of Kutch
- spreads over 458 square km
- Includes a group of 42 islands Poshitra, Pirotan, Karubhar and Narara
- Coral Lichen, sea slug, painted storks, shelled mollusks
- First Marine wild life Sanctuary and first Marine National Park in India

## Difference between World bank and IMF

| Criteria   | IMF                                    | WORLD BANK                                                                                    |
|------------|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Aim        | Maintaining the global monetary system | Finance and advice the developing nations to make them economically developed, lessen poverty |
| Focus      | Economic stability                     | Economic growth                                                                               |
| Operations | Provides assistance                    | Facilitates Lending                                                                           |

## World Heritage Day

- Every year on 18<sup>th</sup> of April we celebrate the “International Day for Monuments and Sites”.
- The Day is celebrated with different types of activities, including visits to monuments and heritage sites.
- The International Day for Monuments and Sites was proposed by the International Council on Monuments and Sites (ICOMOS) in 1982 and approved by General Assembly of UNESCO in 1983.
- The aim is to promote awareness about the diversity of cultural heritage of humanity, their vulnerability and the efforts required for their protection and conservation

## Mother Milk Bank

- Mothers' Milk Bank Mission is to enhance the availability and use of breast milk for all babies in need.
- On 27<sup>th</sup> November 2014, Sion Hospital celebrated the 25<sup>th</sup> anniversary of the First Human Breast Milk Bank in India. Founder was Dr. Armida Fernandez
- Breast milk is better digested and also has number of anti-infective substances that prevent diarrhoea and other infections in premature and sick babies.
- Breast milk is pasteurized and stored in sterilized conditions is safe and healthy for babies
- Milk can be stored for up to 6 months. Breast milk donation is old practice.

## Voter-verified paper audit trail (VVPAT)

- VVPAT is a method of providing feedback to voters using a ballot less voting system.
- VVPAT is intended as an independent verification system for voting machines designed to allow voters to verify that their vote was cast correctly.
- This is to detect possible election fraud or malfunction and to provide a means to audit the stored electronic results.
- It contains name of the candidate (for whom vote has been casted) and symbol of the party.
- The paper record is printed behind glass so that the voter may not take it or alter it.



## NOTA

- None Of The Above
- NOTA choice is provided as option to the voters of India in most election
- Through the usage of NOTA, a citizen can choose not to vote for any candidates who are contesting the election
- NOTA has been given a symbol
- NOTA is considered as maturing of India's democracy
- At present NOTA votes even if more they are not considered in counting of votes for candidates winning the election on getting the highest votes

## Enemy Property Bill

- Successors of those who migrated to Pakistan and China during partition will have no claim over the properties left behind in India.
- The Enemy Property Bill was passed in 1968, the amendment was passed in 2016
- The Enemy property refers to any property belonging to, held or managed on behalf of an enemy, an enemy subject or an enemy firm.
- The law of inheritance will not apply
- The government has brought the amendment in the wake of a claim laid by the heirs of Raja Mohammad Amir Mohammad Khan, known as Raja Sahib of Mahmudabad, on his properties spread across UP and Uttarakhand. The matter is before the Supreme Court

## National Pledge

- National Pledge is an oath of allegiance to Republic of India
- The pledge was composed by Pydimarri Venkata Subba Rao in 1962 in Telugu language
- *The Pledge*  
India is my country.  
All Indians are my brothers and sisters.  
I love my country, and I am proud of its rich and varied heritage.  
I shall always strive to be worthy of it.  
I shall give my parents, teachers and all elders, respect and treat everyone with courtesy.  
To my country and my people, I pledge my devotion.  
In there well being and prosperity alone lies my happiness
- It is recited immediately after the National Anthem

## Indradhanush

- Mission Indradhanush was launched to speed up the process of immunization.
- It aims to immunize all children against seven vaccine preventable diseases namely diphtheria, whooping cough, tetanus, polio, tuberculosis, measles, and hepatitis B by 2020.

## Char-Dham Highway Project

- PM laid the foundation stone for Char Dham Highway Project. It will involve construction of over 900 km of roads. It is an ambitious project connecting Badrinath, Kedarnath, Gangotri and Yamunotri.
- States involved- Uttarakhand
- Total cost- Rs. 12000Cr.
- Will generate employment and boost economy of the state.

## Human Development Index

- The Human Development Index (HDI) is a measure of economic development.
- It provides an index of economic development based on three variables
  - Life expectancy at birth
  - Educational attainment (Which includes the adult literacy rate and the ratio of children and young people who attend primary, secondary and tertiary school)
  - PPP adjusted GDP per capita.
- The performance of a country for each variable is given a value between 0 and 1 and then the scores are put together to produce one index value.

## HDI

- Countries are placed in one of four groups:

| Group                       | HDI           |
|-----------------------------|---------------|
| Very high human development | 0.9 and over  |
| High human development      | 0.8-0.899     |
| Medium human development    | 0.5-0.799     |
| Low human development       | Less than 0.5 |

- Norway:0.955, Australia:0.938, Switzerland:0.939, USA:0.937
- India: 2015, Rank 131 among 188 countries (0.624)
- Sri Lanka and Maldives are ahead of India

## Payment Bank

- Minimum capital requirement 100 Cr.
- Can accept restricted deposits upto 1 lakh only. Cannot issue loans and credit cards
- Current accounts and saving accounts can be opened
- Can issue ATM cards, Debit cards, net banking and mobile banking
- Committee on Comprehensive Financial Services for Small Businesses and Low Income Households headed by Nachiket Mor recommended the Payment Bank
- Objective is to widen the spread of payment and financial services to small businesses, low-income households, migrant labour workforce in secured technology-driven environment.



## Ujjwala Yojana

- The Pradhan Mantri Ujjwala Yojana is a welfare program of the government of India, launched by Indian Prime Minister Narendra Modi in 2016.
- The stated objective of the programme is providing 50,000,000 LPG connections to women from families below the poverty line.

## GDP Sector Wise Contribution

- India accounts for 7.68 percent of total global agricultural output. GDP of Industry sector is \$496 billion and world rank is 12. In service sector, India's world rank is 11 and GDP is \$1186 billion.
- Contribution of Agriculture sector in Indian economy is much higher than world's average (6.1%).
- Agriculture 17.9%
- Industry 24.2% (World Average (30.5%))
- Services 57.9% (World Average (63.5%))

## VX Nerve agent

- VX is very strong poison. It is terminal toxic nerve agent It is tasteless and odorless
- A fraction of a drop of VX absorbed through the skin can fatally disrupt the nervous system leading to death. Causes Convulsions, respiratory failure and loss of consciousness
- It is used as a nerve agent in chemical warfare
- Just 10 milligrams through skin contact is sufficient to kill a person within a minute
- North Korean leader Kim Jong-un alleged to got killed his brother Kim Jong-nam
- Formula  $C_{11}H_{26}NO_2PS$  Created by Ranjit Ghosh and JF Newman in UK. Later UK Army sold it to US.

## Scoville scale

- The Scoville scale is a measurement of the pungency (spicy heat) of chilli peppers as reported in Scoville heat units (SHU) a function of capsaicin concentration.
- The scale is named after its creator, American pharmacist Wilbur Scoville.

## Geographical indication

- A geographical indication (GI) is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- There is a link between the product and its original place of production. GI Tag is given. GI Tag is a public Property.
- WIPO (World Intellectual Property Organization) 191 members
- Ex. Darjeeling Tea, Mysore Silk, Kolhapuri Chappals, Agra Petha, Banglar Rasogolla, Kanchipuram Sari, Tirupati Ladoo
- The Geographical Indications of Goods (Registration and Protection Act), 1999.

## Swine flu

- Caused by virus
- Swine influenza A(H1N1 and H3N2)
- Respiratory disease
- Infects pigs
- Transmitted to human beings
- The April 2009 swine flu outbreak was due to infection with the H1N1 virus and was first observed in Mexico.
- Incubation 1-4 days
- It is contagious

## Swine flu

- Disease lasts 3-7 days
- Vaccination is the best way to prevent or reduce chances
- Why H1N1- It is mainly found infecting people and exhibits two main surface antigens, H1 (hemagglutinin type1) and N1 (Neuraminidase type 1)
- The eight RNA strands from novel H1N1 flu have one strand derived from human flu strains, two from avian (bird) strains and five from swine strains.

## Purchasing Power Parity

- The quantity of goods that two currencies can purchase in their respective countries varies drastically.
- The purchasing power of two currencies differs.
- PPP is a type of exchange rate which equalizes the purchasing power of different currencies in their countries for a given basket of goods.
- PPP is often used to compare the standards of living between countries.



## Velocity of Money

- Velocity of money is a term used to denote the number of times a unit of money in an economy changes hands during a certain period of time, say one year.
- We calculate the velocity by dividing the value of the Gross Domestic Product by the value of money supply.

## Common wealth Games 2018

- 19 sports
- More than 4,400 sports person participated
- For India: Flag bearer P V Sandhu; Closing Mary Kom
- India participators 216 in 15 sports
- India won 26 Gold, 20 Silver and 20 Bronze Total 66
- 26 Gold: 7 Shooting, 5 Wrestling, 5 Weightlifting, 3 Boxing, 2 Badminton 1 Athletics

## Commonwealth Games 2018

- 71 countries participated in Commonwealth games 2018
- Although Commonwealth has membership of 53 countries only
- Number of Dependent Territories participated under their own flags.
- A Dependent Territory is a territory that is not fully independent or sovereign.
- UK participated one team each of its constituent nations England, Scotland, Northern Ireland, and Wales.
- Motto of the Games: *Share the Dream*

## Coins

- Coins can be issued up to the denomination of Rs. 1000 as per the Coinage Act 1906.

## National Highways

- National Highways Act 1956
- The National Highway network is owned by Ministry of Road Transport and Highways.
- National Highways are constructed and managed by National Highway Authority of India.
- All Highways from the North to South numbered even number
- All Highways East to West numbered odd number
- Three digit numbered highways are secondary routes or branches of a main highway.

## National Highways

- NH 44 (Old 7) is the longest Highway of India. It stretches from Srinagar to Kanyakumari.
- NH 47A is the smallest Highway. It connects Kundannoor and Willingdon Island in Kochi and covers a distance of 8 km
- National Highways are highways controlled by Central Government. They connects State Capitals, industrial hubs, major Ports etc.
- State Highways are controlled by State Governments connecting State Capital to District Headquarters and major cities of the state

## Pro-tem Speaker

- Pro-tem Speaker is the temporary speaker who presides over the first meeting after the election.
- A Pro-tem speaker is chosen with the agreement of the members of the Lok Sabha and Legislative assembly.
- Generally the senior most member is chosen to function as Pro-tem Speaker
- President of India on the recommendation of Minister of Parliamentary Affairs appoints Pro-tem Speaker.
- Kamal Nath was sworn in as pro-tem Speaker of 16<sup>th</sup> Lok Sabha

## 'NEAM' Coated Urea

- With 46% N content, Urea is the most Popular Nitrogenous fertilizer. When Urea is applied to soil it is broken down into Ammonia and Nitrate in the presence of water.
- This process is called nitrification. This process make nitrogen available to plants. But if the process of nitrification is too rapid nitrogen will escape to atmosphere.
- And there is a concentration of nitrates in the soil. Excess nitrates reaches underground water. Excess nitrate in groundwater when used causes diseases such as blue baby syndrome.
- Coating urea with Neem inhibits the fast nitrification.
- GOI has made it mandatory to produce at least 75% of domestic urea as Neem coated urea only.



## 'NEAM' Coated Urea

- Urea is used to produce some type of plastics, glues, animal feed and pesticides
- Urea is also used to produce milk

## Space Debris

- Space debris is a natural or manmade waste that is found in space
- It is the combination of fragments of asteroids, rocket explosions etc.
- These fragments are difficult to track.
- As per estimation more than 170 million debris are smaller than 1 cm, about 6,70,000 debris are of size 1-10 cm. and 29,000 larger debris of more than 10 cm.
- Space debris can damage the space craft
- Debris are travelling at a very high speed up to 28000 km/h

## 'SCUTOID' Shape

- Scientist have discovered new shape called scutoid
- It was discovered while studying nature's way of molding tissue to form the skin, cavity linings and building blocks of organs. (Epithelial Cells)
- The shape has five sides on one end and six on the other and a triangular surface on one of its longer edges
- It is like twisted prism
- The shape helps in curvature of tissues, make them more energetically efficient
- It will help in tissue engineering specially development of artificial organs



SCUOTOID Shape

## Growth of Banking Sector

- According to Global Findex Database Report released by World Bank 11% of the world's unbanked adults are in India
- India has 19 crore adults without a bank account
- India's Jan Dhan Yojana Scheme brought an additional 310 million Indian into the formal banking system by March 2018

## Matritva Vandana Yojana

- It is a maternity benefit scheme.
- Old scheme Indra Gandhi Matritva Yojana launched in 2010
- The scheme is a cash transfer scheme for pregnant and lactating women of 19 years of age or above for first two live-births
- The scheme has been brought under Food Security Act 2013
- Aadhar linked
- Direct benefit transfer of Rs.6000 in beneficiary's bank/post office account in three instalments
  - early stage of pregnancy registration
  - After 6 months of pregnancy
  - First cycle of Immunization

## Matritva Vandana Yojana

- India accounts for 17% of all maternal deaths in the world
- It is 167 per 1 Lakh live births
- Primary causes of high maternal and infant mortality are poor nutrition and inadequate medical care during pregnancy and childbirth
- The scheme is centrally sponsored
  - Sharing ratio of expenditure 60:40 with states
  - Sharing ratio with North-Eastern States & three Himalayan states 90:10
  - 100% central assistance to Union Territories without Legislature

## National Water Awards

- Instituted by Union Ministry for Water Resources
- Objective: to encourage all stake holders to manage their water resources efficiently and create water consciousness in the country
- Innovating practices of ground water augmentation by rain water harvesting
- Efficient use of water: recycling
- Best State, Best District, Best Village Panchayat, Best Municipal Corporation, Best Research, Best educative and mass awareness campaign etc.



## Water as a Resource

- Earth is 70% water
- Only 2.5% is fresh water
- Only 1% is available for use
- Uses: drinking, irrigation, sanitation, industrial use.
- A small family with four persons consumes around 960 litres of water everyday
- It is estimated 3 billion people will face shortage of fresh water by 2025
- Every 15 seconds a small child is dying of water born disease

## Launch of PSLV C43

- HySIS satellite lifted off at 9.57 Hrs on November 29, 2018 from the First Launch Pad of Satish Dhawan Space Centre, Sriharikota
- HySIS = Hyper spectral Imaging Satellite
- Objective: to study the Earth's surface in visible, near infrared and shortwave infrared regions of the electromagnetic spectrum

QUESTION: what is PSLV

## Types of Satellites

- Rohini was the first satellite by ISRO by SLV-3
- ISRO made two more launch vehicles  
Polar Satellite Launch Vehicle (PSLV)  
Geosynchronous Satellite Launch Vehicle (GSLV)  
PSLV is launching Satellite to Polar Orbits  
GSLV is launching Satellite into Geostationary Orbits
- Polar Orbit: A polar orbit is one in which a satellite passes above or nearly above both poles of planet (i.e. Earth, Moon or Sun) on each revolution. A satellite in a polar orbit will pass over the equator at a different longitude on each of its orbits.
- Polar satellites are used for earth mapping, weather satellite.

## GSLV

- A geostationary orbit is a circular geosynchronous orbit 35,786 km above Earth's equator and following the direction of Earth's rotation.
- Communications satellites and weather satellites are often placed in geostationary orbits.
- An object in such an orbit appears motionless at a fixed position in the sky.
- The satellite makes one rotation in 23 hours 56 minutes and 4 seconds.

## India's Heaviest Satellite Launched

- The country's heaviest satellite Gsat 11 weighing 5,854 kg was launched from the European spaceport in French Guiana at 2.07 am on Wednesday 4 December 2018.
- Arianespace's Ariane 5 rocket successfully lifted off with communication satellite Gsat-11.
- 29 minutes after the lift off, Gsat11 separated from the rocket and was placed in the geo-transfer orbit.
- Gsat-11 is a high-throughput satellite that carries 40 transponders in the Ku-band and Ka-band frequencies and is capable of 'providing high bandwidth connectivity' with 14 gigabit per second (GBPS) data transfer speed.

## Gsat-11

- The satellite's designed life time is more than 15 years.  
Gsat 11 provides high data rate connectivity for users over India using spot beams  
It provides broadband connectivity to Gram Panchayats under BharatNet Project, as part of Digital India Programme
- Gsat-11 also supports high data applications for enterprise network and consumer broadband applications

## Gsat-11

- Gsat-11 is the third in a series of four high throughput satellites (Gsat-19, Gsat-29 Gsat-11 and Gsat-20)
- These satellites will provide the country broadband connectivity of over 100 giga bits per second (GBPS) and will link rural areas and bridge the digital divide under the Digital India programme.
- While Gsat 19 was launched in June last
- A spot beam is a satellite signal that is specially concentrated in power so that it covers only a limited geographical area on earth. The narrower the beam more is the power.

## India doing well to achieve Paris Agreement Targets

- Paris Agreement: limit the rise in global temperatures to 1.5 degree C above pre-industrial levels
- India's NDC (Nationally Determined Contribution) is closest to 1.5 limit as compared to G20 nations
- How it has happened:
  - Green policies
  - National Electricity Plan
  - Target increase in forest cover from 24% to 33%
  - India has lowest emissions per capita from transportation in G20
  - Increase in Solar Power



## Private Equity

- Private Equity investments in the last five years growing as the returns have gone up from 8% to 22%
- PE investments have gone up in consumer goods, financial services, health care, IT, BPO, & telecom
- Private Equity are funds by Limited partnerships and wealthy individuals. They are not publicly traded.
- It is used in debt financing to purchase companies restructure them and sell them at a higher value
- Corporate Tax is less for Debt investment

## Qatar to pull out of OPEC

- OPEC is the Organization of Petroleum Exporting Countries
- Members 15 Nations formed in 1960
- Qatar, Saudi Arabia, Iran, Indonesia, Venezuela, Iraq, Libya, Nigeria, Algeria, UAE, Kuwait, Ecuador, Angola, Gabon
- The group decides about output of oil production to control the price level
- Qatar is not agreeing to cut down the production
- Qatar produces only 6Lakh barrel/day 2% of total production
- Qatar is the world's largest exporter of liquified natural gas and wants to increase it from 77 million tons of gas per year to 110 million tons.

## Sentinelese

- The Sentinelese are indigenous people who inhabit North Sentinel Island in the Bay of Bengal in India
- They are considered one of the world's last uncontacted peoples.
- They belong to the broader class of Andamanese people
- They are hostile to outsiders and have killed people who approached or landed on the island.
- North Sentinel Island is declared as tribal reserve and prohibited travel within 4.8 km of the island. Even photography is strictly prohibited.
- Other reclusive tribes of Andaman and Nicobar Islands are Great Andamanese, the Onge, the Shompen and Jarawa

## Mary Kom

- Mary Kom 35 years old has become the most successful woman boxer in history
- She fights in 48kg category
- She has won 6 world titles
- She defeated Ukraine's Hanna Okhota 22 with a 5-0 verdict in her favour.
- The event light flyweight 10<sup>th</sup> AIBA Women's World Boxing Championship
- Her first gold was in 2002
- She is mother of three, from Manipur and now Rajya Sabha MP also

## Kartarpur Corridor

- Gurudwara Darbar Sahib in Kartarpur is in Pakistan located on the banks of the Ravi.
- It is the Guru Nanak's final resting place
- Guru Nanak's 550<sup>th</sup> birth anniversary is in 2019
- Both Pakistan and India will construct Road on their side connecting to Gurudwara called as Corridor
- The corridor on Indian side will begin from Dera Baba Nanak in Gurdaspur to the International border with Pakistan.
- Pakistan portion of road will be 2.5 km India side 1.5 km (upto Gurudwara it will be 4.3 km)
- Present route is via Lahore covering 125 km long journey

## ‘OPERATION KABADDI’

- Operation Kabaddi was the largest planned operation by the Indian Army to tackle and finish cross-LOC infiltration by capturing at least 25 selected Pakistani posts along the Line of Control in September 2001.
- However, the planned operation was not carried out.

## Alliance to End Plastic Waste

- The Alliance to End Plastic Waste (AEPW) is designed as a non-profit organization. It comprises of 30 companies. It includes companies from across North and South America, Europe, Asia, Southeast Asia, Africa as well as Middle East in the alliance.
- They have pledged over 1 Billion \$ to eliminate plastic waste across the world.
- Plastic waste management is a complex and serious global challenge.
- The issue of plastic waste is seen and generating concern and becoming a serious threat to existence of human on land.
- The issue must be addressed.

## Alliance to End Plastic Waste

- The aim of the alliance is to develop solutions to mitigate plastic pollution and promote a circular economy by utilizing used plastics.
- This new alliance is the most comprehensive effort to date to end plastic waste in the environment.



## Global Economy

- Global Economy Watch report has been released by London based multinational professional services network- Price waterhouse Coopers (PwC).
- PwC's Global Economy Watch is a publication that looks at the trends and issues affecting the global economy. It gives the projections for the world's leading economies.
- According to report, India is likely to surpass the United Kingdom in 2019 economy rankings.
- And, India's climb up the ranking is likely to be permanent and stable.

## Last Four Years Hottest on Record

- The last four years were the hottest since global temperature records began. The U.N. confirmed this and observed “clear sign of continuing long-term climate change. The U.N.’s World Metrological Organisation said in November that 2018 was set to be the fourth warmest year in recorded history, stressing the urgent need for action to rein in runaway planetary warming.
- The average global surface temperature in 2018 was 1°C above pre-industrial baseline levels.
- 2016 remains the hottest year on record. In 2006 strong El Nino was responsible for abnormal rise in temperature.

## Last Four Years Hottest on Records

- The WMO also said that the 20 warmest years in history all occurred within the last 22 years.
- Secretary-General of WMO- Petteri Taalas.
- The WMO said heightened temperatures also contributed to a number of extreme weather events such as hurricanes, droughts and flash flooding.  
In 2019, Australia is experiencing its warmest January on record.
- WMO warned that intense heatwaves are becoming more frequent as a result of climate change.

## Polar Vortex

- A phenomenon called the polar vortex has hit central and eastern parts of the United States. It has brought with it snow, brutally cold temperatures and potentially life-threatening wind chill.  
In Chicago the temperature dropped to  $-46^{\circ}\text{C}$ .
- Schools and businesses have closed and flights have been cancelled.
- Polar Vortex is an upper level jet stream that circulates around the North and South poles keeping the coldest air there. When the jet streams weaken, it disrupts weather patterns bumping warmer air into Alaska and pushing cold winds down into the U.S. Midwest and East Coast

## The Dravidian Language Family

- THE DRAVIDIAN LANGUAGE FAMILY  
The Dravidian language family's four largest languages-  
Kannada, Malayalam, Tamil and Telugu.
- Tamil is oldest.
- The Dravidian language family consisting of 80 varieties spoken by nearly 220 million people across southern and central India and surrounding countries, originated about 4,500 years ago.

## Ring of Fire

- The Ring of Fire is a Pacific region home to over 450 volcanoes, including three of the world's most active volcanoes- Mount St. Helens in the USA, Mount Fuji in Japan and Mount Pinatubo in the Philippines. It is also called the circum-Pacific belt.
- The Ring of Fire is the result from subduction of oceanic tectonic plates beneath lighter continental plates. The area where these tectonic plates meet is called a subduction zone.

## Ring of Fire

- The world's deepest earthquakes happen in subduction zone areas as tectonic plates scrape against each other- and the Ring of Fire has the world's biggest concentration of subduction zones.
- Indonesia is located along the Ring of Fire region. Indonesia has been hit hard due to its position on a large grid of tectonic plates.

## Katowise Package

- The Katowise package includes guidelines that will operationalize the transparency framework.
- It sets out how countries will provide information about their Nationally Determined Contributions (NDC) that describe their domestic climate actions.
- This information includes mitigation and adaptation measures as well as details of financial support for climate action in developing countries.
- The Katowise package also includes guidelines that relate to process for establishing new targets on finance from 2025 onwards to follow on from the current target of mobilizing \$100 billion per year from 2020 to support developing countries.
- It also includes how to conduct the Global Stocktake (GST) of the effectiveness of climate action in 2023 and how to assess progress on the development and transfer of technology.

It is Outcome of COP 24 in Poland.



## Eco Niwas Samhita

- Ministry of Power has launched ECO Niwas Samhita 2018.
- It is an Energy Conservation Building Code for Residential Buildings (ECBC-R).
- The code was launched on National Energy Conservation Day 2018. Aim of ECO Niwas Samhita 2018 is to benefit the occupants and the environment by promoting energy efficiency in design and construction of homes, apartments and townships.

## The Pradhan Mantri Kissan Samman Nidhi

- Under the Scheme Rs.6000 per year would be provided to farmers holding cultivable land of up to 2 hectares.
- It is estimated it will help 12 crore small and marginal farmers.
- The scheme is being implemented with effect from December 1, 2018.

## Fertilizer Subsidy

- The Rs 71,309-crore **subsidy** budget allocated for 2020-21 was about Rs 8,689 crore (around 11 per cent) lower than the allocation for 2019-20 at Rs 79,998 crore.
- Urea is the top **fertiliser** sold in India, and almost 75 per cent of its cost of sales comes from **subsidies** from the government.
- After the pan India roll out of DBT scheme, 100% **subsidy** on various **fertilizer** grades of P&K are released to the **fertilizer** companies on the basis of actual sales made by the retailers to the beneficiaries.

## Water Conservation Fee

- The Central Ground Water Authority of Union Ministry of Water Resources, River Development and Ganga Rejuvenation on December 12, 2018 notified revised guidelines for ground water extraction. The revised guidelines , which will be effective from June 1, 2019, aim to ensure a more robust groundwater regulatory mechanism in the country.

The guidelines were revised in the wake of the directions issued by the National Green Tribunal to address various shortcomings in the existing guidelines of ground water extraction.

## Future Earth Program

- Future Earth is a 10-year international research program which aims to build knowledge about the environmental and human aspects of Global change, and to find solutions for sustainable development. It aims to increase the impact of scientific research on sustainable development.

Future Earth is an interdisciplinary research program bringing together natural and social sciences as well as the humanities, engineering and law, and focused on designing and producing research together with stake holders from outside the scientific community.

## Photo DNA Technology

- This technology has been developed by Microsoft and improved by Hany Farid of Dartmouth College. The technology will aid in finding and removing known images of child exploitation. The technology computes hash values of images, video and audio files to identify similar images.

Photo DNA is primarily used in the prevention of child pornography, and works by computing a unique hash that represents the image. This hash is computed such that it is resistant to alterations in the image, including resizing and minor colour alterations. It works by converting the image to black and white, resizing it, breaking it into a grid, and looking at intensity gradients or edges.

## Procedure for Dissolving Assembly

- The Governor of the State is the Political Head. He has to ensure smooth functioning of government.
- If the constitutional machinery breaks down in a state or the government loses majority support in the Assembly, the government resigns. The Governor may ask the resigning chief minister to carry on the responsibility till alternative arrangements are made. The caretaker government looks after day to day functioning and doesn't take major policy decisions till a responsible government is in place.

## Procedure for Dissolving Assembly

- Sometimes the Centre invokes President Rule by dismissing the State Government under Article 356 of the Constitution. At that time the financial Bills of the state is passed by the Parliament.
- If Governor is dissolving the Assembly due to no party or group is having the majority and will not able to form a suitable and long lasting government. In this case Governor will send the report to President about the condition of State Government and assembly will be dissolved. Then there will be Governor's rule in the State.



## RBI-Contingency Fund

- In 1998, RBI adopted RBI's internal group Chairman V Subrahmanayam's recommendation to achieve contingency reserve at 12% of total assets by 2005.

However, barring four years when reserves stood at over 11% mark, for 16 years it was below 10%. Now it stands at 7.05%

- Contingency fund is kept to cover unexpected or unforeseen events like depreciation in the value of securities or exchange rate risks.
- The contingency reserve's overall 12 % target is inclusive of one % of Asset Development Reserve (ADR.)
- For three years 2013-15 under former governor Raghuram Rajan, contingency reserves remained stagnant, as RBI transferred 100% profits (excluding expenditure) to government.

## Liquidity Coverage Ratio

- It's a ratio which tells one's ability to pay off its debt as and when they become due.
- The **liquidity coverage ratio** is the requirement whereby banks must hold an amount of high-quality liquid assets that's enough to fund cash outflows for 30 days. **Liquidity ratios** are similar to the LCR in that they measure a company's ability to meet its short-term financial obligations.
- Is a tool that assesses a financial institutions strength in terms of its high liquid assets in hand such as cash & Govt securities to meet any short term liquidity issues.

## ONGC Gas Production

- ONGC domestic output of natural gas production 70 million standard cubic m/day
- The gas is found in shallow sea off AP /Gujarat/ Mumbai West blocks.
- India imports 80% of its needs

## Sub-Prime Lending

- In finance subprime lending means making loans to people who may have difficulty maintaining the repayment schedule.
- These loans are characterized by higher interest rates, poor quality collateral and less favorable terms in order to compensate for higher credit risk.
- Many subprime loans were packaged into mortgage-backed securities and ultimately defaulted, contributing to the financial crises of 2007-2008.

## Importance of Banking Sector in India

- In India only 3% of savings goes into the stock market. India's economy is bank-driven and not a market driven economy.
- All listed companies put together contribute only 5% of India's GDP.
- Entire corporate sector, listed and unlisted put together constitute 15% of India's GDP.
- MSME sector contributes 50% of India's GDP and 90% of Employment 70% of India's export.

## Indian National Centre for Ocean Information Services

- INCOIS is an autonomous organization of the GOI, under the Ministry Of Earth Sciences, located in Hyderabad.
- It is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focused research.
- They identify the Potential Fishing Zone
- They make use of parameters such as sea surface temperature and chlorophyll content provided by satellites.
- They can also provide information on Tsunami (Tsunami Early Warning System).

## Thalassemia

- Thalassemia are inherited blood disorders characterized by abnormal hemoglobin production.
- There are two main types:
  - Alpha Thalassemia
  - Beta Thalassemia
- It is due to missing genes. There are four genes of alpha globin and two genes for beta globin.
- Diagnosis may occur before birth through parental testing.  
Treatment: Blood transfusion

## Bogibeel Project

- Bogibeel bridge is a combined road cum rail bridge over the Brahmaputra river in Assam.
- The bridge has a double rail line on the lower deck and a 2 lane road on the upper deck. The bridge is between Dhemaji and Dibrugarh district. The construction started in 2002.
- Bogibeel river bridge is the longest rail-cum-road bridge in India. It is 4.94 km over the Brahmaputra river. The bridge site is in earthquake prone area. |
- It is the first bridge to have fully welded steel-concrete support beams that can withstand earthquakes of magnitudes up to 7 on the Richter scale. It's life is 120 years.



## Bogibeel Bridge

- It is the 5<sup>th</sup> longest bridge in India after  
Bhupen Hazarika Setu  
Dibang River Bridge  
Mahatma Gandhi Setu
- Bandra -Worli Sea link
- The bridge is located just over 20km away from the Assam-Arunachal Pradesh border and acts as an alternative to the Kolia Bhomora Setu, Tejpur in providing connectivity to nearby five million people residing in Upper Assam and Arunachal Pradesh.

## Hima Das

- Hima Das nicknamed the “Dhing Express”, is an Indian sprint runner from the State of Assam.
- She holds the current Indian national record in 400 meters with a timing of 50.79s that she clocked at 2018 Asian Games in Jakarta, Indonesia.  
Gold Medal: Athletics at the 2018 Asian Games- Women's 4x400 meters relay.

## Sanctuary Vs. National Park

- There are three major differences between the National Parks and Wild Life Sanctuaries. Livestock grazing is not allowed in a National Park, but it can be allowed in a regulated manner in a Sanctuary. A Sanctuary can be upgraded to a National Park but a National Park cannot be down graded as a Sanctuary. No human activity is allowed inside National Parks
- In biosphere reserve limited economic activity like sand mining and stone mining is permitted.
- Wild life sanctuaries of India are classified as IUCN Category IV protected areas.
- Between 1936 and 2016, 543 wild life sanctuaries were established in the country.
- Area of Sanctuaries: In 2017 about 1.2 Lakh km
- National parks in India: 104 in 2018 covering an area of 40,501 Square Km that is 1.23% of total area of India.

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## National Park

### Largest Sanctuaries in the World:

- Natural Park of the Coral Sea : Largest Marine Park of the World spread over 5lakh square miles. It is in east of Australia
- Second largest is Kavango-Zambezi Trans frontier Conservation Area- It is located on convergence of the borders of Angola, Botswana, Namibia, Zambia and Zimbabwe. Area 2 lakh square miles
- Third largest is Northeast Greenland National Park: Extending across nearly half of all of Greenland, Northeast Greenland National Park. Established in 1974. Area 3.75 lakh square miles

## Pava Kathakakali

- Pavakathakali (glove puppet kathakali) was probably born in 18<sup>th</sup> century.
- Pavakathkali performers from the Andipandaram community belong to a small number of families from Paruthippully village in the Palghat region. Their ancestors appear to have emigrated from Andhra Pradesh during 14<sup>th</sup> century to establish themselves in Kerala.
- Pavajathakali puppets measure between 40 and 60 centimeters in height. The finely sculpted head and arms attached by thick cotton knots on a small bag. The puppets are very colorful, adorned with fine, small metallic golden ornaments, cowrie shells, coral, gemstones, peacock feathers, etc.
- The Puppeteer places his hand in the bag and manipulates the puppet's arms with the thumb and middle finger and moves the head with the index.
- The puppet's gestures require great dexterity.
- In 2010, K V Ramakrishnan and K C Ramakrishnan, performers of Pavakathakali received the national Sangeet Natak Akademi Award for their contribution to Indian puppetry.

## The Shrinking Standard

- In regression analysis a fitted relationship appears to perform less well on a new data set than on the data set used for fitting.
- In particular the value of the coefficient of determination shrinks.
- There are shrinkage estimators that incorporates the effects of shrinkage. This means that a raw estimate is improved by combining it with other information.
- Machine learning is the scientific study of algorithms and statistical models that computer systems use to effectively perform a scientific task without using explicit instructions, relying on patterns and inference instead. This is subset of artificial intelligence.

## Manika Batra

- Manika Batra is an Indian table tennis player. She is the top-ranked female table tennis player in India.
- In 2011, she won the silver medal in the under 21 category of the Chile Open. She won three gold medals at the 2016 South Asian Games.
- Batra led the Indian women's team a gold medal win in the final against four-times gold medalists and defending champions Singapore at the 2018 Commonwealth Games in Gold Coast, Australia.
- Manika Batra became 1<sup>st</sup> Indian Woman to bag a commonwealth table tennis individual gold medal in CWG 2018. She defeated Yu Mengyu of Singapore.
- On December 12, 2018 she became the only Indian to receive "The Breakthrough Star Award" by ITTF.



- Thank You