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Nongkrem Dance Festival

Recently, Nongkrem dance festival was celebrated at Smit village in Khasi Hills of Meghalaya.

About the Nongkrem Dance Festival

- It is an annual dance festival celebrated for the harvest thanksgiving and for peace and prosperity for all the community people.
- It is one of the most important festival of Khasi tribe Hima Khyrim during which men, women and children dance to the tunes of drums and pipes
- The celebration begins with the sacrifice of a goat. In fact, the the word Nongkrem means "goat killing ceremony".
- A special dance is performed by the men called 'Ka Shad Mastieh' in which they hold sword in their right hand and a whisks in left hand.







My Son Temple Complex

President of India on his recent visit to Vietnam went to the My Son temple complex in Kwangnan province.

About My Son Temple

- It is a cluster of abandoned and partially ruined Hindu temples in Vietnam, constructed between the 4th and the 14th century AD by the Champa kings of Vietnam.
- It has been recognized by UNESCO as a world heritage site.
- Here many temples were built to the Hindu divinities such as Krishna and Vishnu, but most importantly to Shiva. (the most important of which is Bhadreshvara.)
- The temples have a variety architectural designs symbolizing the greatness and purity of Mount Meru, the mythical sacred mountain home of Hindu gods at the center of the universe.
- They are constructed in fired brick with stone pillars and decorated with sandstone bas-reliefs depicting scenes from Hindu mythology
- The Archaeological Survey of India is undertaking the restoration of three temple groups at My Son.

Other conservation efforts by ASI across Asia

- The Angkor Wat in Cambodia:
 - o It is the largest religious structure ever built.
 - It was built to the Hindu god Vishnu by the Khmer King Suryavarman II in the period 1113–50.
- Ananda Temple in Myanmar: It is a Buddhist temple.
- Bamiyan Buddhas in Afghanistan: It was destroyed in 2001 by the Taliban.
- The Ta Prohm Temple in Cambodia
- The Vat Phou Temple in Laos



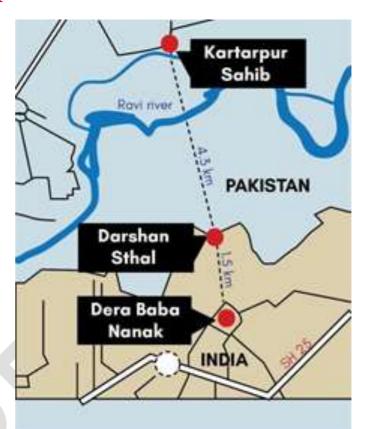


Kartarpur Corridor

Government of India has decided to commemorate 550th Birth Anniversary of Shri Guru Nanak Dev Ji from November, 2018 at national as well as international level by building Kartarpur Corridor.

Kartarpur Corridor

- About the Project: The proposed project will connect the Dera Baba Nanak Sahib Gurdwara in India's state of Punjab to the Gurdwara Darbar Sahib Kartarpur shrine in Narowal district of Pakistan's Puniab province which is reportedly to be completed before the 550th anniversary of Guru Nanak Dev in November 2019. The length of the corridor is about 4 km, 2 km on either side of the international border and runs cross over Ravi River.
- About Gurdwara: It was ordered by Maharaja of Patiala between 1921-1929 and is believed to be place where Nanak ji spent about last 18 years of his life.
- **Protocol on Visits to Religious Shrines:** Pilgrimages between India and Pakistan are governed by the 1974 Protocol on Visits to Religious Shrines, which includes a list of shrines in Pakistan and India open for visitors from the other country, and for which visas are required. The Kartarpur Corridor, which will provide visa-free access from India to the shrine inside Pakistan may need a separate treaty.
- **Importance of Corridor:** Every year Sikh pilgrims from India travel to Pakistan to offer prayers at the Gurudwara. The Kartarpur corridor will provide smooth and easy passage to pilgrims to visit Gurdwara Darbar Sahib throughout the year. It would act as a bridge between the people of the two countries.



About Guru Nanak Dev ji

- He was the founder of Sikhism (the first of the ten Sikh Gurus) and a Bhakti saint.
- He was born in 1469 in Nanakana Sahib, Punjab, Pakistan and died in Kartarpur, Pakistan.
- Guru Nanak and Sikhism were influenced by the nirguni (formless God) tradition of Bhakti movement in medieval India.







Who Are The Sentinelese?

In The News An American national was killed allegedly by the Sentinelese tribe in the Andaman and Nicobar Islands after he illegally entered the protected zone on November 16.

Who are the Sentinelese?

- The Sentinelese are *a negrito tribe* who live on the North Sentinel Island of the Andamans. The inhabitants are connected to the Jarawa on the basis of physical, as well as linguistic similarities. Their numbers believed to be less than 150 and as low as 40.
- Based on carbon dating of kitchen middens by the Anthropological Survey of India, Sentinelese presence was confirmed in the islands to 2,000 years ago. Genome studies indicate that the Andaman tribes could have been on the islands even 30,000 years ago.

How are they protected?

- The Govt. of India issued the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation, 1956 to declare the traditional areas occupied by the tribes as reserves. It prohibited entry of all except those persons authorisation. **Photographing** filming the tribe members is also an offence. The rules were amended later to enhance penalties.
- But restricted area permits were relaxed for some islands recently. In a major step earlier this year, the Indian government excluded this island and 28 others in the Union Territory from the Restricted Area Permit or RAP regime till December 31, 2022. The lifting of RAP means foreigners can go to the island without permission from the government.



Restricted Area Permit (RAP) regime

RAP regime was notified under the Foreigners (Restricted Areas) Order, 1963.

- Under it, foreign nationals are not normally allowed to visit protected or restricted area unless Government is satisfied that there are extraordinary reasons to justify their visit.
- Every foreigner, except citizen of Bhutan, who desires to enter and stay in protected or restricted area, is required to obtain special permit from competent authority having power to issue such permits to foreigner, seeking it.
- Citizens of Afghanistan, China and Pakistan and foreign nationals of Pakistani origin are exception and are not allowed to enter such areas.

Why are they said to be vulnerable?

- It is said they have made little to no advancement in the over 60,000 years and still live very primitive lives, surviving mainly on fish and coconuts.
 - > They are very vulnerable to germs since they have not had contact with the outside world. Even a common flu virus carried by a visitor could wipe out the entire tribe.
 - Since the 1960s, there have been a handful of efforts to reach out to the tribe but all have largely failed. They have repeatedly, aggressively made it clear that they want to be isolated.







Government Of India To Observe The Remembrance Of 100 Years Of The Historical Jallianwalla Bagh Massacre



- Static: Jallianwalla Bagh Massacre timeline and who is responsible for it. The day is remembered as?
- Dynamic and Current: Ministry of Culture and Ministry of Tourism initiatives.

Government of India has decided to mark the remembrance of 100 years of the historical Jallianwalla Bagh Massacre next year. A number of commemorative as well as constructive activities will be taken up during the remembrance period.

Coin and Postage Stamps:

- The commemorative coin and postage stamps will be released on 13th April 2019 (the day the incident took place 100 years ago).
- Ministry of Culture will organize cultural activities like kavi sammelan, plays, exhibition, seminars, etc. across the country.
- A Committee is constituted to ensure timely implementation to Renovate, upgrade and beautify the Jallianwalla Bagh Memorial, and Develop Virtual Reality Theme Based show at the Memorial.

- The **Ministry of Tourism** earmarked an amount of Rs. 8 crore under Swadesh Darshan Scheme for development of Virtual Reality Theme Based show at the Memorial.
- The **Ministry of Culture** will provide additional funds, if needed.

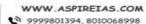
Background:

- It is also known as the **Amritsar** Massacre (dated April 13, 1919) at Jallianwala Bagh, Amritsar, Punjab.
- On 13th April 1919, thousands of people were gathered at Jallianwala Bagh. This day marks the beginning of New Year for the Sikhs, also celebrated as Baisakhi festival all over Punjab.
- Colonel Reginald Dver had announced curfew and a ban on all processions that even prohibited a group of 4 or more people to meet publicly. However, General Dyer sensed the number of people present there and the secret meeting that was about to take place. Thus, he arrived with armed troops and ordered to open fire.
- The troops were ordered to start shooting; this heinous act of violence resulted in extreme mass killing.
- To keep in mind this significance of this place, a trust was founded in 1920 to build a memorial site at Jallianwala Bagh. American architect, Benjamin **Polk**, built the memorial site which was inaugurated by the then President of India, Rajendra Prasad on 13 April 1961.

Development of Virtual Reality Theme Based show:

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Renaming Of Jharsuguda Airport In Odisha

In The News: The Union Cabinet has approved renaming of Jharsuguda Airport in Odisha as "Veer Surendra Sai Airport, Jharsuguda".

Who was Veer Surendra Sai?

Veer Surendra Sai who is well-known freedom fighter and a tribal leader of Odisha.

- Born in 1809 in Khinda in Sambalpur, he was direct descendant of Madhukar Sai and was legally entitled to be crowned as king of Sambalpur after demise of king Maharaja Sai in 1827. But he was not acceptable to British power and ignored his claim for succession.
- He revolted against the British for throne after it allowed widow of Madhukar Sai Rani Mohan Kumari to succeed him and then followed by succession of Narayan Singh, a descendant of royal family but born of low caste as king of Sambalpur.
- The aim of Surendra Sai's revolt was to drive the British out of Sambalpur. His revolution against the British commenced from 1827 when he was only 18 years of age and continued till 1862 when he surrendered and even after that, until he was finally arrested in 1864.







Intensified Mission Indradhanush

Intensified Mission Indradhanush (IMI), is one of 12 best practices from around the world to be featured in a special issue of the British Medical Journal.

Background

- In India, five lakh children die every year due to vaccine-preventable diseases; 95 lakh are at risk because they are unimmunised or partially immunised. But immunization coverage had slowed down and it increased at the rate of 1% per year between 2009 and 2013.
- To accelerate this coverage **Mission Indradhanush** was envisaged and implemented since 2015 to rapidly **increase the full immunization coverage to 90%.**

About Intensified Mission Indradhanush (IMI)

- It has been launched by the Government of India to reach each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.
- The special drive will focus on improving immunization coverage in select districts and cities to ensure full immunization to more than 90% by December 2018.
- It targets to immunize all children against seven vaccine preventable diseases namely Diphtheria, Pertussis, Tetanus, Childhood Tuberculosis, Polio, Hepatitis B and Measles. In addition to this, vaccines for Japanese Encephalitis, Haemophilus influenza type B, inactivated polio vaccine, Rotavirus vaccine and Measles Rubella vaccine are also being provided in selected states.
- It will have inter-ministerial and interdepartmental coordination, action-based review mechanism and intensified monitoring and accountability framework for effective implementation of targeted

- rapid interventions to improve the routine immunization coverage.
- It would be closely monitored at the district, state and central level at regular intervals. Further, it would be reviewed by the Cabinet Secretary at the National level and will continue to be monitored at the highest level under a special initiative 'Proactive Governance and Timely Implementation (PRAGATI)'.
- The first two phases of Mission Indradhanush contributed to an increase in Full Immunization Coverage by 6.7%. This increase, however, would not be sufficient to achieve full Immunization Coverage of more than 90% of new-borns by 2020 as aimed under Mission Indradhanush which would need a supplemental aggressive action plan to cover all left outs and drop outs in select districts and urban cities with low routine immunization coverage in a specific time-frame.

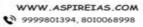
Challenges to immunization

- Limited capacities of staff (vacant positions and lack of training), particularly in poor-performing states and at the field level, and gaps in key areas such as predicting demand, logistics and cold chain management, which result in high wastage rates.
- India lacks a **robust system to track vaccine-preventable diseases**. Vaccination coverage varies considerably from state to state, with the lowest rates in India's large central states.
- Other challenges includes
 - o Lack of adequate health infrastructure and insufficient government investment;
 - o Low demand caused by poor education of the population and presence of **anti-vaccine advocates**.
 - o Parents' lack of awareness of the immunisation benefits, schedules and locations.
 - o Inconvenient timings of vaccination for



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many people (during working hours).

o Poor community participation.

Way forward

- Strengthening of health management information systems, including data recording and registration systems, called Mother and Child Tracking System (MCTS).
- The linking of already available systems with the unique identification like Aadhaar can facilitate tracking of the beneficiaries.
- Furthermore, development of universal health cards and electronic record maintenance for maternal and child health care is highly desirable. This can facilitate care seeking by the migrant population in urban areas and can be used to decide resource allocations.
- Devoting greater financial resources towards immunisation coverage with concerted efforts to improve social mobilisation for immunisation is warranted.
- Strengthening a network of community health workers in urban and peri-urban areas to contribute towards progress in immunisation coverage by reaching out to both slum as well as non-slum populations is of utmost priority.
- Facilitating improvement in knowledge and awareness regarding child immunisation can be intensified with the use of mass media, interpersonal communication, school and youth networks.
- Reaching out to communities and areas with poor immunisation coverage with wellarticulated strategies for community awareness will be key to success.







Unesco Global Education Monitoring Report 2019

UNESCO has released Global Education Monitoring Report 2019 titled Migrations, **Displacement and Education**

which discusses impact of migration on education.

Current scenario

- India is home to some of the world's **largest** internal population movements alongside
- Children of seasonal workers are often denied their right to education. About 80% of temporary migrant children in seven Indian cities lacked access to education near work sites.
- Among youth aged 15 to 19 who have grown up in a rural household with a seasonal migrant, 28% identified as illiterate or had an incomplete primary education.
- In the period between 2001 and 2011, interstate migration rates doubled in India and an estimated 9 million migrated between States annually from 2011 to 2016.

Migration and displacement require education systems to accommodate the needs of those who move and those left behind. Countries need to recognize migrants' and refugees' right to education in law and fulfil this right in practice. They need to tailor education for those cramming into slums, living nomadically or awaiting refugee status. Education systems need to be inclusive and fulfil the commitment to equity. Teachers need to be prepared to deal with diversity and the traumas associated with migration and, especially, displacement.

Government initiatives for welfare of migrant children Conclusion

- The Right to Education Act in 2009 made it mandatory for local authorities to admit migrant children.
- National-level guidelines were issued, allowing for flexible admission of children, providing transport and volunteers to support with mobile education, create seasonal hostels and aiming to improve coordination between sending and receiving districts and states.
- Gujarat introduced seasonal boarding schools to provide migrant children with education and collaborated with nongovernment organizations (NGOs) to begin online tracking of the children on the move.
- Tamil Nadu provides textbooks in other languages to migrant children.
- Odisha assumed responsibility of seasonal

hostels run by NGOs and works with Andhra Pradesh to improve migrant wellbeing.

Challenges

- Most interventions are focused on **keeping** children in home communities instead of actively addressing the challenges faced by those who are already on the move.
- The report sees the growth of slums and informal settlements where schools are often scarce — due to migration as a challenge.
 - "18% of the students displaced by a riverfront project in Ahmedabad dropped out and an additional 11% had lower attendance.
- There is only one urban planner for every **1,00,000 people in India**, while there are 38 for every 1, 00,000 in the United Kingdom.
- The degree and evolution of refugee inclusion in national education vary across displacement contexts, affected geography, history, resources and capacity.





The Global Nutrition Report

Recently **The Global Nutrition Report (GNR) 2018**, released in Bangkok, notes that the global burden of malnutrition "remains unacceptably high and progress unacceptably slow".

Other Important Highlights

Three mains issues that need to be addressed

- **Micronutrient deficiencies** are estimated to impact a significant number of people around the world, but there remains far too little information on micronutrient status and deficiencies.
- Fragility, conflict and violence put a heavy toll on populations' health, livelihoods, food security and nutrition.
- The amount of attention being paid to
 adolescents as a nutritionally vulnerable group with unique nutritional needs in the life cycle is growing, but they are still frequently overlooked.

Seven priority actions for improving adolescent girl nutrition

- Engage and partner with adolescents in the design and implementation of research, policies, programmes, regulations and guidelines.
- Assess how nutrition policies and regulations shape the food environment and influence adolescent nutrition and diet quality.
- Develop and use standardised indicators for assessing adolescent health.
- Ensuring inclusion of adolescents in national surveys, population sampling and routine programme monitored data.
- Conduct quantitative and qualitative research to understand the underlying determinants of malnutrition and the context-specific factors affecting adolescents' food choices, diet and eating practices, physical activity and social and emotional well-being.
- Design implementation research to improve programme delivery, use, cost effectiveness

and scale.

Conduct rigorous evaluations of interventions to assess their impact.

India specific findings

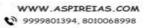
- India is facing a major malnutrition crisis as it is the country with the highest number of 'stunted' children in the world. Out of the total 150.8 million children in the world who are stunted, India is home to 46.6 million, followed by Nigeria (13.9 million) and Pakistan (10.7 million).
- India is also the country with the highest number of children who are 'wasted' (low weight for height, indicating severe weight loss), an even more severe indicator of acute malnutrition.
 - o India has half of the global wasting burden (25.5 million children out of the 50.5 million children who are wasted globally) followed by Nigeria, and Indonesia.
 - India is also among the countries with more than a million children who are overweight.
 - As for the nutrition status of children and adolescents aged between five and 19 years, 58.1 per cent of boys were underweight while 50.1 per cent girls were underweight. This difference between the genders can likely be attributed to **India's adverse sex ratio** in the first place.
 - As for the **rural-urban divide**, 40.7 per cent of children under five years of age were stunted in rural India while 30.6 per cent of children were stunted in urban India, while 21.1 per cent children aged under five were wasted in rural areas and 19.9 per cent were wasted in urban areas.

The Global Nutrition Report

• It came into existence "following the first **Nutrition for Growth Initiative Summit** (**N4G**) in 2013 as a mechanism for tracking the commitments made by 100 stakeholders



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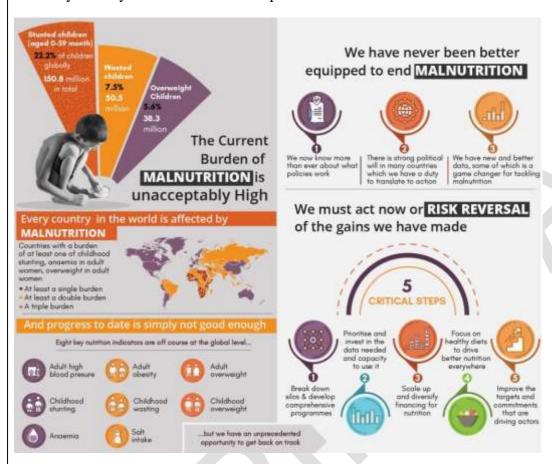






spanning governments, aid donors, civil society, the UN and businesses.

• It acts as a report card on the world's nutrition—globally, regionally, and country by country—and on efforts to improve it.









'Dubai Declaration' Adopted To Measure Progress Of SDGS

At the conclusion of the UN World Data forum, 2018, 'Dubai Declaration' was adopted.

About the Declaration

- It is hard to measure the actual progress of the SDGs due to lack of data for two-thirds of the indicators. Only 0.3% of aid goes to the development of statistical systems.
- Recognizing this, **Dubai Declaration** was adopted which detailed measures to boost funding for data and statistical analysis for monitoring and speeding up progress towards the 2030 SDGs.
- Aimed towards mobilizing domestic and international funds and activating more effective data partnerships, this Declaration supports the implementation of the Cape Town Global Action Plan for Sustainable Development Data.

UN World Data Forum

- It was created after recommendation of a report titled 'A
 World That Counts' by UN Statistical Commission.
- The first United Nations World Data Forum was hosted from 15 to 18 January 2017 in Cape Town, South Africa.
- The second UN World Data Forum was hosted from 22 to 24 October 2018 in Dubai, UAE.
- It is meant for intensifying cooperation between professional groups (IT Experts, Geospatial Information Managers, Data Scientists etc. as well as civil society stakeholders.

In India the review process is led by NITI Aayog, Research and Information system, a think tank attached with Ministry of External Affairs and the Ministry of Statistics and Programme Implementation. They prepare the Voluntary National Review (VRN) Report.

Conclusion

- To fully implement and monitor progress on the SDGs, decision makers need data and statistics that are accurate, timely, sufficiently disaggregated, relevant, accessible and easy to use.
- However, despite the significance there remain several challenges to the process like, the Review mechanism under the 2030 Agenda is voluntary, non-binding and country driven. There is apprehension that if at all countries take up the job, they might inflate their achievements of SDG target to project a positive image or gain in internal politics.
- Despite the improvements in data collection, statistical capacity still needs strengthening and data literacy must be enhanced at all levels of decision-making. This will require coordinated efforts on the part of data producers and users from multiple data systems.
- Dubai Declaration may be seen as yet another stepping stone towards the efforts needed in the direction.

Cape Town Global Action Plan for Sustainable Development Data

- Informally launched at the 1st UN World Data Forum and was adopted by the UN Statistical Commission in March 2017
- Intended to provide a **framework for discussion on,** and planning and implementation of statistical capacity building necessary to achieve the 2030 Agenda.
- Six strategic areas:
 - Coordination and strategic leadership on data for sustainable development;
 - Innovation and modernization of national statistical systems;
 - Strengthening of basic statistical activities and programmes;
 - Data dissemination and use;
 - Multi-stakeholder partnerships;
 - Resource mobilization and coordination.

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Global Wage Report

Recently Global Wage Report for 2018-19 was released by International Labor Organization (ILO).

About Global Wage Report

- Global Wage Report (GWR) is an annual publication of ILO which focuses on different aspects of labour wages and its impact on equitable growth and social justice.
- By providing reliable data, GWR assists member countries in drafting wage policies and assessing the impact of those policies.

Findings of Global Wage Report 2018-19

- Real global wage growth in 2017 (1.8%)
 fell to its lowest growth rate since 2008,
 despite recovery in economic growth and the gradual reduction in unemployment.
- Real wage growth has been especially **low** in developed G20 countries (0.4%). India has the highest average real wage growth (5.5%) in South Asia in 2008-17.
- Wage Inequality: High income countries have lower wage inequality than low and mid income countries. E.g. Sweden has the lowest wage inequality.

• Gender pay gap:

- o Globally, women are paid 20% less than
- o Moreover, gender pay gap is wider at the high end of the pay scale in high-income countries, while in low and middle-income-countries the gender pay gap is higher among lower paid workers.
- Women and Men also differ in terms of Working Time – part time work is more prevalent among women than among men.
- o On average, education and other labour market attributes explain relatively little of the gender pay gap, leaving the only possible explanation as undervaluation of women's work.
- o Motherhood brings about a wage

penalty. Motherhood pay gap (between women who are mothers and women who are not mothers) ranges from 1% in Canada to 30% in Turkey.

Indian scenario

- India and Pakistan had the highest gender pay gap (difference between hourly wages of men and women).
- India has one of the highest Gender Pay Gap of 34%. This pay gap is due
 - o Occupational segregation,
 - o Cultural barriers (including less education opportunities available to women)
 - o Unpaid household work done by women.
- Low levels of wages in India can become an obstacle to sustainable economic growth as consumption demand cannot increase with low wages. The reasons of low wages can be:
 - o The low wage growth in absolute terms despite recovering economic growth is attributed to economic growth being led higher investment spending, rather than by private consumption.
 - o Slow productivity growth due to lack of skills/education.
 - o Intensification of global competition and globalization leading to increased mobility of low skilled labour and the decline in the bargaining power of workers.

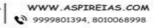
Way Forward

- Gender Pay Gap is more of a social issue, accelerating progress towards eliminating it will require:
 - o **Political commitment and social transformation** leading to shifting social norms and eliminating gender stereotypes.
 - o A well designed minimum wage with broad legal coverage could reduce the gender pay gap at lower wage levels, greater representation of women in



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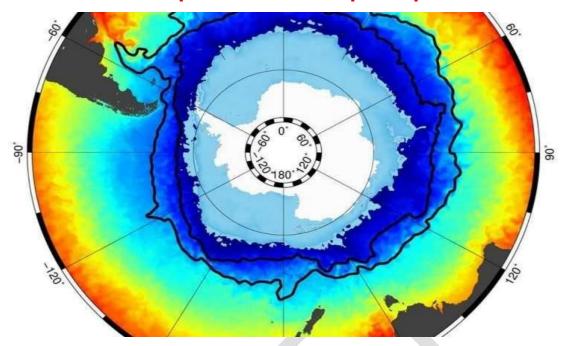
senior and highly paid positions could have a positive effect at the top levels.

- o Reducing occupational segregation of women (such as nurses) is required. E.g. to attract more women into the areas of science, technology, engineering and mathematics (STEM), which offer better paid employment opportunities.
- o **Promoting equitable sharing of family duties** between women and men and
 programmes supporting women's return
 to work after childbirth, as well as
 providing childcare and eldercare
 services will help in reducing
 Motherhood Pay Gap.
- To improve the Wage growth rate:
 - o Although India is among the fastest growing major economy in terms of wage growth, but the average base salary is at much lower levels. India should invest in **social infrastructure** to reap the demographic dividend.
 - o **Formalization of informal economy** in India and other developing countries.
 - o **Better skill development and vocational trainings** to improve wage growth at lower paying jobs and reduce the gap between high and low paying jobs.





How The Antarctic Circumpolar Current Helps Keep Antarctica Frozen?



 Context: The Antarctic Circumpolar Current, or ACC is changing as the world's climate warms. Scientists are studying the current to find out how it might affect the future of Antarctica's ice sheets, and the world's sea levels.

It's significance:

- The Antarctic Circumpolar Current, or ACC, is the strongest ocean current on our planet. It extends from the sea surface to the bottom of the ocean, and encircles Antarctica. It is vital for Earth's health because it keeps Antarctica cool and frozen.
- The ACC carries an estimated 165 million to 182 million cubic metres of water every second (a unit also called a "Sverdrup") from west to east, more than 100 times the flow of all the rivers on Earth. It provides the main connection between the Indian, Pacific and Atlantic Oceans.
- The tightest geographical constriction through which the current flows is Drake Passage, where only 800 km separates South America from

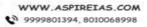
Antarctica. While elsewhere the ACC appears to have a broad domain, it must also navigate steep undersea mountains that constrain its path and steer it north and south across the Southern Ocean.

What is the Antarctic Circumpolar Current?

- Antarctica is a frozen continent surrounded by icy waters. Moving northward, away from Antarctica, the water temperatures rise slowly at first and then rapidly across a sharp gradient. It is the ACC that maintains this boundary.
- The ACC is created by the combined effects of strong westerly winds across the Southern Ocean, and the big change in surface temperatures between the Equator and the poles.
- Ocean density increases as water gets colder and as it gets more salty. The warm, salty surface waters of the subtropics are much lighter than the cold, fresher waters close to Antarctica. The depth of constant density levels slopes up towards Antarctica. The westerly winds make this slope steeper, and the ACC rides eastward along it,

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faster where the slope is steeper, and weaker where it's flatter.

Fronts and bottom water:

- In the ACC there are sharp changes in water density known as fronts. The Subantarctic Front to the north and Polar Front further south are the two main fronts of the ACC (the black lines in the images). Both are known to split into two or three branches in some parts of the Southern Ocean, and merge together in other parts. Scientists can figure out the density and speed of the current by measuring the ocean's height, using altimeters.
- The path of the ACC is a meandering one, because of the steering effect of the sea floor, and also because of instabilities in the current. The ACC also plays a part in the meridional (or global) overturning circulation, which brings deep waters formed in the North Atlantic southward into the Southern Ocean. Once there it becomes known as Circumpolar Deep Water, and is carried around Antarctica by the ACC. It slowly rises toward the surface south of the Polar Front.
- Once it surfaces, some of the water flows northward again and sinks north of the Subarctic Front. The remaining part flows toward Antarctica where it is transformed into the densest water in the ocean, sinking to the sea floor and flowing northward in the abyss as Antarctic Bottom Water. These pathways are the main way that the oceans absorb heat and carbon dioxide and sequester it in the deep ocean.

Changing current:

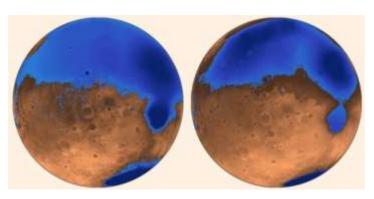
• The ACC is not immune to climate change. The Southern Ocean has warmed and freshened in the upper 2,000 m. Rapid warming and freshening has also been found in the Antarctic Bottom Water, the deepest layer of the ocean.

- Waters south of the Polar Front are becoming fresher due to increased rainfall there, and waters to the north of the Polar Front are becoming saltier due to increased evaporation. These changes are caused by human activity, primarily through adding greenhouse gases to the atmosphere, and depletion of the ozone layer. The ozone hole is now recovering but greenhouse gases continue to rise globally.
 - Winds have strengthened by about 40% over the Southern Ocean over the past 40 years. Surprisingly, this has not translated into an increase in the strength of the ACC. Instead there has been an increase in eddies that move heat towards the pole, particularly in hotspots such as Drake Passage, Kerguelen Plateau, and between Tasmania and New Zealand.
 - Scientists have observed much change already. The question now is how this increased transfer of heat across the ACC will impact the stability of the Antarctic ice sheet, and consequently the rate of global sea-level rise.

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EARTH'S WATER A RESULT OF ASTEROID IMPACTS AND LEFTOVER GAS FROM SUN'S BIRTH



In The News: According to a recent study, Earth's global ocean water may have originated from both asteroidal material and gas left over from the formation of the Sun. The study gives insights about the development of other planets and their potential to support life.

• The study notes that since comets contain a lot of ices, it could have supplied some water. Asteroids, which are not as water-rich yet still plentiful, could be a source as well.

Background:

- The early ocean known as Arabia was formed 4 billion years ago on Mars, while the Deuteronilus ocean was formed 3.6 billion years ago. Both coexisted with the massive volcanic province Tharsis, located on the unseen side of the planet, which may have helped support the existence of liquid water; the water is now gone, perhaps frozen underground and partially lost to space, while the ancient seabed is known as the northern plains.
- The study challenges widely-accepted ideas about hydrogen in Earth's water by suggesting the element partially came from clouds of dust and gas remaining after the Sun's formation, called the solar nebula.

Significance:

- The new finding fits neatly into current theories of how the Sun and the planets formed. It also has implications for habitable planets beyond the solar system.
- Astronomers have discovered more than 3,800 planets orbiting other stars, and many appear to be rocky bodies not greatly different from our own.







SHE-BOX

In The News: The Ministry of Women and Child Development has linked SHe- Box, the online portal to report complaints of Sexual Harassment at Workplace, to all the Central Ministries, Departments and 653 districts across 33 States/Union Territories.

- For prompt disposal of complaints on SHe-Box, each case goes directly to the central/ state authority concerned having jurisdiction to take action in the matter. Cases on She-Box can be monitored by the complainants and Ministry WCD, reducing the time taken in case disposal.
- About SHe-box:
 - What is it? It is an online complaint management system for registering complaints related to sexual harassment at workplace. It was launched by the Ministry of Women and Child Development. complaint management system has been developed to ensure the effective implementation of Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (the SH Act), 2013.
 - How it works? Once a complaint is submitted to the portal, it will be directly sent to the Internal Complaints Committee (ICC) of the concerned Ministry/Department/PSU/Autonomo us Body etc. having jurisdiction to inquire into the complaint. Through this portal, WCD as well as complainant can monitor the progress of inquiry conducted by the ICC.

Significance of the portal:

 This portal is an initiative to provide a platform to women working or visiting any office of Central Government (Central Ministries, Departments, Public Sector Undertakings, Autonomous Bodies and Institutions

- etc.) to file complaints related to sexual harassment at workplace under the SH Act
- Those who had already filed a written complaint with the concerned Internal Complaint Committee (ICC) constituted under the SH Act are also eligible to file their complaint through this portal.









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Yuva Sahakar-Cooperative Enterprise SupportAnd Innovation Scheme

In The News: Union Agriculture Minister launched National Cooperative Development Corporation (NCDC)'s new scheme 'Yuva Sahakar-Cooperative Enterprise Support and Innovation Scheme'.

fisheries, cotton ginning and spinning, sugar and notified services like hospitality, transport, rural housing, hospitals/health core etc.

About Yuva Sahakar

- **Purpose:** To cater to the needs and aspirations of the youth, NCDC has come up with this youth-friendly scheme for attracting them to cooperative business ventures. It would encourage cooperatives to venture into new and innovative areas.
- **CSIF fund:** The scheme will be linked to a 'Cooperative Start-up and Innovation Fund (CSIF)' created by the NCDC with an annual outlay of Rs 100 crore and it has special incentive for cooperatives of North Eastern region, Aspirational Districts and cooperatives with women/SC/ST/PwD members.
- Funding: The funding for the project will be up to 80% of the project cost for the special categories as against 70% for others. The scheme envisages 2% less than the applicable rate of interest on term loan for the project cost up to Rs 3 crore including 2 years moratorium on payment of principal.
- Eligibility: All types of cooperatives in operation for at least one year and having positive net-worth are eligible.

About NCDC

- It is the sole statutory organisation (under Ministry of Agriculture & Farmers Welfare) functioning as an apex financial and developmental institution exclusively devoted to cooperative sector.
- It strengthens and promotes programmes across sectors relating to agriculture and allied fields like dairy, poultry, livestock,

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Internet Shutdowns

- India has topped the world with the highest number of internet shutdowns by government with reportedly 121 in 2018, according to data compiled by Software Freedom Law Centre's 'Internet Shutdown Tracker'.
- Additionally, India's performance has declined in the 'Freedom on The Net 2018' report.

Reasons for Internet Shutdowns in India

- Fake News circulation: It has emerged as a major problem for democratic societies and governments across the world are using internet shutdown as a tool to deal with it. For example: Internet shutdown was recently resorted for preventing child kidnapping rumors in Tamil Nadu.
- For maintaining Internal security: internet shutdowns have also been carried to prevent spread of inflammatory messages, misguiding of youth into terror activities through false propaganda, and have been used maximum times in J&K to maintain peaceful atmosphere.
- Other Issues: Shutdowns have also been utilized for a plethora of other activities such preventing protests against movies, prevent cheating in state recruitment examinations such as in Rajasthan, etc.

Arguments against Internet Shutdown

- Ensuring Freedom of Speech and Expression: The Supreme Court in a 2017 judgement has said that the right to access Internet comes under fundamental right of expression and cannot be curtailed at any cost. Various shutdowns compromise the right to free and fair speech
- Archaic Laws: Section 144 and Section 5(2) contain almost no checks and balances to prevent their abuse by officials. Moreover, they are archaic laws that have been carried down from the British Raj and are clearly not designed to oversee state actions like Internet shutdowns.

- No definite criteria: The criteria for enforcing shutdowns are entirely up to the subjective interpretation of the authority issuing orders as there is **no objective** standard to determine if a given situation qualifies as a public emergency or threatens public safety, etc.
- Non-resolution of the issue: The frequent instances of shutdowns have failed to address the underlying causal issue such as fake news, hate speech, etc. as the vastness of the internet users (over 50 crores in India) makes tracing the origin of fake news almost impossible.
- Increase in Preventive shutdown: In 2017, the number of preventive shutdowns were almost three times the number of reactive shutdowns, indicating that Internet shutdowns are increasingly being resorted to even before law and order breakdowns have actually taken place. Thus, users in affected areas are often unaware and have no time to mitigate the impact of shutdowns.
- Against the spirit of Digital India: It is in contradiction to the Government of India's flagship initiative Digital India.

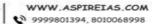
Legislative Backing in India

- Section 144 of the Criminal Procedure Code, 1973: A vast majority of Internet shutdowns recorded in India in the recent years have been ordered under this. It is used to prevent obstruction, annoyance, danger to human life, disturbance of the public tranquility, etc.
- Section 5(2) of the Indian Telegraph Act, 1885
 - It allows authorized officers to prevent the transmission of class of messages during a public emergency or in the interest of public safety.
 - The broad and future-proof definition of the term "Telegraph" brings virtually any communication system – including the Internet – within the Act's purview

The Temporary Suspension of Telecom Services (Public Emergency and Public Safety) Rules, 2017.

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'Beyond Fake News' Project

In The News: UK-based broadcasting channel BBC launched the **Beyond Fake News project** on how and why misinformation is shared in India.

Background

- Fake news can be **propagated through any** media- print, electronic and social.
- There have been instances of mob unrest, death and injury due to fake news as most of the citizens view any news published by mainstream media as true without ascertaining its authenticity.
- It is used to influence public opinions, to gain popularity or to malign the image, character of certain individuals or opponents or to defame them. For example-it has been found that on an average 2% tweets have relevant information on the disaster, the rest of the tweets contains sympathetic and mostly gibberish conversations.
- Self-regulation by mainstream media to contain fake news has largely been ineffective. Any direct effort by the government to control fake news is prone to be seen as an assault on the freedom of media which functions as the fourth pillar of democracy.
- The project 'Beyond Fake News' is a new campaign that is aimed at fighting back against disinformation and fake news with a major focus on global media literacy, including workshops and debates in countries like India.

Right to free speech and fake news

Fake news refers to news, stories, information, data and reports which is or are wholly or partly false. Fake news exploits the freedom allowed to media in a democracy to spread misinformation which in turn affects the right to free speech in the following ways:

• Free publication or broadcast of news in India flows from the fundamental right to

freedom of expression as enshrined under **Article 19** of the Constitution. However, there is **no specific law in India to deal with fake news.**

- Freedom of speech can only be curtailed as per the limited circumstances set out in Article 19(2) of the Constitution of India and falsehood isn't one of those 'reasonable restrictions'.
- In the case of tackling 'fake news', the problem of sharing of mass misinformation must be tackled. But while tackling the problem, the priority of any responsible Government must be to first ensure that freedom of speech is not unduly restrained.

Legal recourses available for people affected by fake news

- Broadcasting Content Complaint Council (BCCC): A complaint relating to objectionable TV content or fake news can be filed to the BCCC if a broadcaster incites communal hatred, encourages violence against women or child abuse, airs contents having gory scenes of violence, promotes superstition or consumption of drugs and other contraband substances.
- Indian Broadcast Foundation (IBF): It look into the complaints against contents aired by 24x7 channels.
- News Broadcasters Association (NBA): It represents the private television news and current affairs broadcasters. It is selfregulatory in nature and probes complaints against news broadcasters in a fair manner.
- Press Council of India: According to the Press Council Act, 1978, it can warn, admonish or censure the newspaper, the news agency, the editor or the journalist found guilty of spreading misinformation.
- IPC Sections 153A and 295: It can be invoked against someone creating or spreading fake news if it can be termed as hate speech.
- **Defamation suit:** It is another legal tool available in the case of fake news. If a

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person finds a fake news defamatory, s/he can file a civil or criminal case for defamation.

- The Information Technology (IT) Act: It imposes an obligation on intermediaries such as search engine giant Google to remove any objectionable content pursuant to takedown notices by law enforcement agencies.
- Contempt of Court laws: False stories about judicial proceedings would be covered by contempt of court laws and false stories about Parliament and other legislative bodies would violate privilege.





Governor's Role In Dissolution Of State Assemblies

In The News: Jammu and Kashmir Governor recently dissolved the State Assembly (which has been in suspended animation) when two political parties separately staked claim to form a government.

More About News

- The reasons for the dissolution were: the "extensive horse trading" and possibility that a government formed by parties with "opposing political ideologies" would not be stable.
- The move is being seen as harmful for democracy as J&K's relationship with the Centre is rooted in constitutional safeguards as well as in the participation of its major electoral politics parties in parliamentary democracy.

Constitutional provisions

- Article 172 says that every Legislative Assembly of every State, unless sooner dissolved, shall continue for five years.
- Article 174 (2) (b) of the Indian Constitution merely states that the Governor may, from time to time, dissolve the Legislative Assembly.
- Article 356 ("President's rule"): In case of failure of constitutional machinery in State the President, on receipt of report from the Governor of the State or otherwise,
 - o may assume to himself the functions of the Government of the State
 - declare that the powers of the Legislature of the State shall be exercisable by or under the authority of **Parliament**
- With Respect to J&K Constitution: The powers under Section 92 (failure of constitutional machinery) and Section 52 (provides for dissolution of assembly) were invoked for this move.

Issues related to Dissolution Powers

Lack of Objective Criteria for untimely **dissolution:** While Article 174 gives powers to the governor to dissolve the assembly, but

- the Constitution is silent on as to when and under what circumstances can the House can be dissolved.
- **Political** reasons being cited for **Dissolution:** Potential political instability in the future being cited as a reason in J&K to prevent emerging alliances is undemocratic in nature.
 - Moreover, describing an alliance as opportunistic is fine as far as it is political opinion but it cannot be the basis for constitutional action.
- Missing Political Neutrality in **Governor's Office:**
 - The post has been reduced to becoming a retirement package for politicians for being politically faithful government of the day. Consequently, the office has been used by various governments at the centre as a political tool to destabilise elected governments.
 - For e.g. Bihar State Assembly was dissolved by the governor in 2005 on apprehensions of "horse trading. Later the Supreme Court called the decision to be illegal and mala fide.

Suggestions

- **Sarkaria Commission**
 - The state assembly should not be dissolved unless the proclamation is approved by the parliament.
 - Sparing use of article 356 of the constitution should be made.
 - All possibilities of formation of an alternative government must be explored before imposing presidential rule in the state.

M M Punchhi Commission

- governor should follow "constitutional conventions" in a case of a hung Assembly.
- It suggested a provision of 'Localized Emergency' by which the centre government can tackle issue town/district level without dissolving

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the state legislative assembly

- Supreme Court Judgements:
 - o Bommai case of 1994:
 - ✓ The court accorded primacy to a floor test as a check of majority.
 - ✓ The court also said that the power under Article 356 is extraordinary and must be used wisely and not for political gain.

o Rameshwar Prasad case (2006)

- ✓ Bihar Governor's recommendation for dissolving the Assembly the previous year was held to be illegal and mala fide
- ✓ A Governor cannot shut out postpoll alliances altogether as one of the ways in which a popular government may be formed.
- ✓ The court had also said unsubstantiated claims of horse-trading or corruption in efforts at government formation cannot be cited as reasons to dissolve the Assembly







None Of The Above (NOTA)

In The News: Maharashtra State Election Commission (MSEC) recently made an order for local body polls that **fresh elections** should be held if NOTA 'emerges winner'.

About NOTA

- It was introduced in India following the 2013 Supreme Court directive. It is an option the voting machine, designed to allow voters to disapprove all the candidates while delivering their vote.
- However, NOTA in India does not provide for a 'right to reject'. The candidate with the maximum votes wins the election irrespective of the number of NOTA votes polled.
- The NOTA votes have not been accounted while calculating votes polled by candidates for making them eligible (1/6th of valid votes) for getting back their security deposits.
- An Association of Democratic Reforms analysis says that since 2013 till March 2018, NOTA has secured a total of 1.33 crores votes from all assemblies and Lok Sabha polls combined.
- Election Commission currently has no plenary power to call a fresh election even if NOTA secures highest votes.
- To give greater sanctity to NOTA and even order a fresh election. Rule 64 of Conduct of Election Rules will have to be amended and can be done by the law ministry. It will not require Parliament sanction.

Significance of re-elections

- Freedom of expression: NOTA emanates from our fundamental right of 'Right to liberty' and 'Freedom of Expression' as it gives a way for the voter to register her consent or discontent for candidates chosen by the political parties.
- Conducive for democracy: Participation of people is one of the crucial pillars of

- democracy thus in exercising the NOTA the voter is participating in the electoral process while not abstaining from voting altogether.
- Betterment of democracy: There is an opaqueness in the selection process of the candidates chosen for representing a political party, with nepotism, favoritism and money power being the driving force. It gives voters an opportunity to express their dissent and may also force parties to field better candidates known for their integrity.

Challenges of conducting fresh election

- **Financial Pressure:** Fresh elections lead to massive expenditures by Government as it has to conduct re- election which put extra pressure on the public exchequer.
- **Disrupting democracy:** It leads to frequent elections which results in disruption of normal public life and impact the functioning of essential services.
- Administrative pressure: Election Commission of India has to take help of a significant number of polling officials as well as armed forces to ensure smooth, peaceful and impartial polls.
- Governance issues: Conducting fresh election impacts development programs and governance due to imposition of Model Code of Conduct by the Election Commission.





Breach Of Privilege

In The News

- Claiming they had misled Parliament on the Rafale fighter jet deal issue, a breach of privilege motion was moved against Prime Minister and Defence Minister.
- A claim of 'breach of privilege' was raised against chairman of the Parliamentary Standing Committee on finance, for "lowering the dignity and ethics of the Finance Committee" by tweeting about the committee's deliberations

Types of Privileges Collective

- Exclude strangers from proceedings. Hold a secret sitting of the legislature
- Freedom of press to publish true reports of Parliamentary proceedings. But, this does not in case of secret sittings
- Only Parliament can make rules to regulate its own proceedings
- There is a bar on court from making inquiry into proceedings of the house (speeches, votes etc.)

Individual

- No arrest during session and 40 days before and 40 days after the session. Protection available only in civil cases and not in criminal cases
- Not liable in court for any speech in parliament
- Exempted from jury service when the house is in session.

Concept of privileges and types of privileges

- The concept of privileges emerged from the British House of Commons when a nascent British Parliament started to protect its sovereignty from excesses of the monarch.
- The Constitution (under Art. 105 for Parliament, its members & committees /Art. 194 for State Legislature, its members & committees) confers certain privileges on legislative institutions and their members to:
 - o Protect freedom of speech and expression in the House and insulates them against litigation over matters that

occur in these houses

- o Protect against any libel through speeches, printing or publishing
- o Ensure their functioning without undue influence, pressure or coercion
- o Ensure sovereignty of Parliament
- Currently, there is no law that codifies all the privileges of the legislators in India. Privileges are based on five sources: i) Constitutional provisions ii) Various laws of parliament (iii) Rules of both the houses iv) Parliamentary conventions v) Judicial interpretations
- Whenever any of these rights and immunities is disregarded, the offence is called a breach of privilege and is punishable under law of Parliament. However, there are no objective guidelines on what constitutes breach of privilege and what punishment it entails.
- Following procedure is followed in privilege cases:
 - o A notice is moved in the form of a motion by any member of either house against those being held guilty of breach of privilege.
 - o The Speaker/Rajya Sabha chairperson is the first level of scrutiny of a privilege motion. They can take a decision themselves or refer it to the privileges committee of parliament. Privilege committee in Parliament as well as in state legislatures decides upon such cases.
 - o An inquiry is conducted by the committee and based on findings a recommendation is made to the legislature.
 - o A debate can be initiated on the report in the House and based on the discussion, the Speaker can order the punishment as defined by the privileges committee.

Challenges with respect to privileges

 Against 'Constitutionalism' or doctrine of limited powers. Absence of codified privileges gives unbridled power to house to



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decide when and how breach of privilege occurs.

- Judicial scrutiny is barred in cases of privileges, which is against the doctrine of judicial review.
- Discredits separation of powers, as speaker acts as complainant, advocate and the judge. Used as a substitute for legal proceedings.
- Penal action in cases of breach of privileges unwarranted, unless there is an attempt to obstruct the functioning of the house or its members.
- Must only be invoked by legislature when there is "real obstruction to its functioning". Breach of privilege invoked for genuine criticism of members of the house or due to political vendetta, reduces accountability of elected representatives. Violation of FR of expression and personal liberty.
- Invoked on grounds of defamation by individual members, while judicial remedy available under defamation and libel law.

Way Forward

- Constituent Assembly envisaged the system of uncodified privileges based on British House of Commons, as only temporary. Indian & British Parliament have different political and legal status (popular sovereignty vs parliamentary sovereignty). Therefore, there is a need for proper codification of privileges. E.g. Australia passed Parliamentary Privileges Act in 1987, clearly defining privileges, the conditions of their breach and consequent penalties.
- The decisions of the speaker may be influenced by his/her political affiliations. Therefore, the **trial must be conducted by a competent, independent and impartial tribunal.**
- Higher judiciary must set limits on punitive powers.
- The 'sovereign people of India' have restricted right to free speech while 'their representatives' have absolute freedom of speech in the houses. Courts must revisit earlier judgments to find right balance

between Fundamental Rights of the citizens and privileges of legislature.







India And European Union

In The News: The European Union has unveiled a 'strategy paper' outlining the broad roadmap for accelerating cooperation with India in a range of key sectors.

What does the strategy paper focus on?

Strategic Partnership

- o It focuses on developing military-torelations under military deploying an EU military advisor in the EU Delegation in New Delhi and viceversa is being considered.
- It will focus on negotiation of a broader contemporary Strategic Partnership Agreement supplanting 1994 EU-India Cooperation Agreement and intensify dialogue on Afghanistan and Central Asia.
- o Also supports strengthening technical cooperation on fighting terrorism, radicalization, countering violent extremism and terrorist financing..

Maritime cooperation-

- Efforts will be made to identify common interests of both at policy operational levels to enhance maritime security.
- It will focus on working with India and other key regional players such as South Africa to help build the capacity of maritime nations in the Indian Ocean and East Africa.

Renewed focus on trade

- India and EU since 2007 are unable to strike a free trade agreement called Bilateral Investment Trade and Agreement (BTIA) due to incoherent interest of both.
- o The European Union (EU) now is looking at reworking the proposed free trade pact with India called the Broad Based BTIA in a post- Brexit scenario.
- Though the strategy paper did not mention BTIA, but it aims to negotiate

a "balanced, ambitious and mutually beneficial" free trade agreement (FTA) with sufficient level of ambition to respond to each side's key interests in trade and investment.

Political Partnership - This includes reinforcing cooperation on foreign policy, promoting effective multilateralism and building on common values and objectives.

Why this immediate thrust?

- After the promising beginnings in 2000s, the EU- India partnership lost its momentum as it largely focused on trade and cultural rather than broad strategic and political issues.
- Europe's main focus earlier was on China as its key partner and market in Asia while India viewed Europe largely as a trade bloc.
- But now the new strategic and power realities have pushed the two towards each other.

o Chinese Challenge

China's increasing presence Eurasia and South Asia is creating security, political economic concerns for Europe and India. Both are driven by the need to diversify its partnerships and balance.

o **BREXIT- a new opportunity**

✓ Both EU and India can seize an opportunity to work without Britain. Brexit is pushing India to look for new 'gateways' to Europe, as its traditional partner leaves the union. A renewed trade and political cooperation are the need of the hour.

o Fall of the conventional Liberal Trade Order-

- ✓ Trade war, crumbling WTO and break down of TPP etc has made EU understand the economic importance of India.
- ✓ Also for India, EU is one of the largest trading partner (13.5% of India's overall trade with the world in 2015-16), well ahead of China

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- (10.8%), USA (9.3%), UAE (7.7%) and Saudi Arabia (4.3%).
- ✓ India is the EU's 9th trading partner in 2016 (2.2% of EU's overall trade with the world), after South Korea (2.5%) and ahead of Canada (1.9%).
- ✓ With the rise of protectionism by USA, both have opportunity to increase the trade.

Conclusion

- The EU sees a larger role of India in the regional (Asian) and global security-economic architecture therefore is working on a new strategy with respect to India.
- Indian multi-alignment approach has made room for reviving India-EU partnership while rebalancing power relations in Eurasia has pushed Europe to carve out its own Asia policy. Hitherto Europe-India partnership was all about trade but now it is finally shifting to a strategic one.







BREXIT

In The News: After months of negotiation, the UK and EU agreed a Brexit deal at Brussels summit paving the way for an orderly withdrawal of UK from EU.

What is Brexit?

Arguments in favor of Brexit

- **Trade benefits-** UK feels that it can secure better trade deals with important countries like US, China, India.
- Arresting reckless spending-Britain can stop sending £350 million (equivalent to half England's school budget), to Brussels every week. This money could be spent on scientific research and new Industries.
- New Immigration laws- Some believe that leaving EU could help Britain reform its immigration policies which currently is expensive and ungovernable hence can offer an open door to EU and non EU immigrants, who could contribute to Britain's economy.
- Reasserting National sovereignty- Those in favor of Brexit argue that leaving EU would allow Britain to recapture its lost position in international bodies hitherto captured by EU.

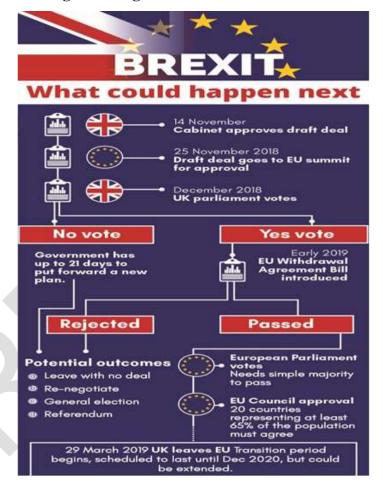
Terms of agreement of the deal

A draft 585-page agreement on Britain's withdrawal from the European Union is a legally-binding text that sets out the terms of the UK's departure. It includes:

- Commitments over citizens' rights after Brexit - people will be able to work and study where they currently live, and to be joined by family members
- A 21-month transition period after the UK's departure, to allow time for trade talks
- The UK would continue to follow all EU rules during this period in order to give governments and businesses more time to prepare for long term changes
- A "fair financial settlement" from the UK also known as the £39bn "divorce bill"
- A "backstop" arrangement to keep the Irish border unmanned if trade talks don't come up

with a way of avoiding that happening.

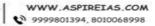
Arguments against Brexit



- Trade Imbalance: Britain avoids exporter tariffs and red-tape, which is important because nearly 45% of its trade goes to EU. Another benefit is that being a member, Britain can obtain better trade terms, because of the EU's size. Brexit would damage Britain's export competitiveness.
- **EU Budget:** The benefits outweigh the costs. According to the Confederation of British Industries UK's annual contribution to the EU is equivalent to £340 for each household but trade, investment, jobs etc leads to £3,000 per year benefit to each household because of EU membership.
- **Immigration:** Leaving EU will not stop immigration to the UK. Migration crisis especially refugee crises is a global issue

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requiring global efforts it's not a country specific problem.

Brexit consequences on EU:

- Trade buoyancy- Disintegration of largest single market and labor market will hugely impact trade patterns and global value chains.
 - o The EU's share in global exports of goods and services at current prices and exchange rate will fall from 33.9% to 30.3 percent. In terms of world GDP, in purchasing power parity, the EU share will decrease from 17.0% to 14.6%, and in current international dollars from 23.8 to 20.0 percent.
- Geopolitical standing -EU will become smaller and weaker both in economic and geopolitical terms. It will become less united and may lead to further exit referendums e.g. GREXIT. Further it may be less vocal and influential in dealing with global issues and loose the bargaining power. Economic crisis may get deep with far reaching effects on EU as a regional organization.
- Globalization- Restricting the free movement of people, goods and services may lead to increased xenophobia and deglobalization.





East Asia Summit

In The News: Recently, India participated in the 13th East Asia Summit, held in Singapore.

About East Asia Summit (EAS)

- It is an annual meeting of regional countries which was started in 2005. It is an ASEANcentred forum which can only be chaired by an ASEAN member.
- The members include 10 Association of South East Asian Nations (ASEAN) nations plus 8 other nations such as Australia, China, India, Japan, New Zealand, South Korea, Russia and the US.
- The EAS membership represents around 54% of the world's population and accounts for 58% of global GDP.
- There are six priority areas of regional cooperation within the framework of the EAS. These are –
 - o Environment and Energy,
 - o Education, Finance,
 - o Global Health Issues and Pandemic Diseases.
 - o Natural Disaster Management,
 - o ASEAN Connectivity.

East Asia Summit acts as a bridge for Indo-Pacific region

- Reaffirms India's diplomatic engagement: East Asia Summit has provided a relatively bigger platform (due to participation of 18 countries) to India for better endorsement of Act East Policy, and historical, cultural and economic linkages with East Asian Communities.
- Balancing the role of China: Majority of EAS participant countries like Singapore, Vietnam and Indonesia are embracing India's role of balancing China on the front of Indian Ocean region and collaboration with other stakeholders' countries on South China Sea.
- Thrust to Regional Comprehensive Economic Partnership: It provides a platform to India for rebalancing the Asia strategy and an acknowledgement of linkage between the Indian and Pacific

Oceans.

Quadrilateral Security Dialogue (QUAD) Summit: It was held in Singapore on the sidelines of 13th EAS in Singapore.

- **About QUAD:** It is an informal mechanism between India, the US, Australia and Japan, and interpreted as a joint effort to counter China's influence in the Indo-Pacific region.
- **Key Takeaway:** It covered a range of security and economic issues under the rubric of supporting a free, open and inclusive rules-based order.

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Asia Pacific Economic Cooperation

In The News: Asia Pacific Economic Cooperation (APEC) at its Summit in Papua New Guinea failed to develop consensus on a communique.

More on news

- This was first such instance in the history of APEC when a consensus could not be achieved on final declaration.
- The unprecedented impasse blamed on tensions between China and the United States presents an opportunity of admitting India as a member — both in recognition of the country's status as a major market and as a means to avoiding a similar impasse in future.

Current relation between India and APEC

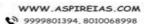
- India was allowed in APEC summit in 2011 as an observer state.
- Although India has been attempting to join APEC since 1993, but still has not got the membership as:
 - India's geographical location isn't conducive for India's membership in APEC as India does not border the Pacific Ocean.
 - o Some APEC members have expressed concerns that India's inclusion could shift the focus of the grouping away from its Pacific Rim.
 - **India's economic policies** are generally considered as protectionist and inward which is considered against liberalized and free market principles of APEC.
 - o India's record in trade negotiations, bilaterally as well as in the World Trade Organization (WTO), has made some APEC economies concerned that including India would slow momentum for achieving the forum's objectives
 - In 1997 a moratorium on membership was put in place for a ten-year period which was extended further till 2010. However currently there is no moratorium on membership.

Why India belongs to APEC?

- **Economic angle:**
 - Size of Economy: India is 6th largest economy of World and 3rd largest economy of Asia. Also as the world's fastest-growing major economy, India represents a significant long-term source of growth for the world **economy**. This mandates an economy based forum such as APEC to take cognizance of India.
 - **Opportunities in India:** India is projected to be the world's third largest economy by 2030 and will need well over \$1 trillion of investment in infrastructure over the next decade. Its burgeoning middle class, estimated to number 450 million in 2030, will offer for **APEC** huge opportunities countries which are experiencing sluggish growth.
 - **Changed Conditions**: At the time of inception of APEC (1989), India had not liberalized and was out of sync of APEC economic principles. However, India starting from 1991 has liberalized and India's trade stands at 40% of GDP **now.** India even has extensive trade relations with all the APEC member economies.
 - **Strengthening Economic Integration:** Emerging trade regimes could create gaps between the standards and policies adopted by their members and those pursued by non-members. By including a key economy such as India, APEC can play a constructive role by helping bridge such gaps.
 - Alternative to China: For APEC members, greater integration with India could offer an alternative source for manufacturing goods. Also India's large labor market (largest in the world by 2030), will help offset the impact of aging populations and shrinking work forces in APEC economies and offers advantages for sourcing services — in











IT, financial services, etc.

Strategic angle:

- o Strategic Balance: Inclusion of India could bring a strategic balance and ease the tension within the grouping. India's record of Non Alignment could bring confidence among the smaller members of APEC amid the impasse between USA and China. Especially, joint efforts of Japan, India and Australia could reduce tension between US and China.
- o Political counter weight to China: As a major power in the Indian Ocean, India could provide a balancing counterweight to China for smaller Asian countries that may be wary of the alternative hard stand provided by the US.
- o New Indo-Pacific policy of USA: USA under Trump regime has changed the view of Asia Pacific to Indo-Pacific. Inclusion of India in APEC is in coherence with the new approach of US in the region.

Benefits to India

- Act East Policy: For further strengthening of economic ties of India East and Southeast Asia through higher trade volumes and greater physical connectivity, APEC membership streamlines the process by standardizing the trade related negotiations.
- Creating Synergy: Through its processes and guidelines, APEC will facilitate India's implementation of the economic reforms, boost competitiveness and the ease of doing
- business. APEC membership would also help India prepare for potential inclusion in emerging trade agreements such as TPP (now CPTPP), if India considers joining these in the future.
- Economic Growth: India's current economic program relies on greater access to foreign markets, investment sources, and value chains to bolster manufacturing and create jobs at home.
- **India-US Relations**: Supporting India's APEC bid would demonstrate an American

commitment to help strategic partner India gain the greater role in institutions of global governance.

Way forward

- Diplomatic investment: To gain support of its candidacy of APEC, India needs to work diplomatically with key members like United States and Japan. Also, India could ask China, Korea, Australia, and Vietnam to provide vocal support and diplomatic resources to India's cause.
- Extensive Study before inclusion: APEC could commission studies assessing the benefits and costs of Indian accession which will help its members to develop consensus on the question of Indian membership.
- Transitional membership: Before providing full membership of APEC a transitional membership could be provided. Transitional memberships could gradually integrate India in ways that satisfy current members and allow India to benefit from APEC's processes and technical support.





US Waiver From Iran Oil Sanctions

In The News: US has agreed to let eight countries including Japan, India and South Korea, **keep buying Iranian oil after it re-imposes sanctions on Iran**, in recognition of their significant efforts to reduce imports from Iran.

Why U.S. is imposing sanctions on Iran?

- The sanctions that are being imposed are the most damaging to the Iranian economy targeting its oil sales, its wider energy industry, shipping, banking, insurance and so on. These are known in the trade as "secondary sanctions", as they are intended to apply pressure on other countries to prevent them trading with Tehran.
- The idea is to dissuade them from purchasing Iranian oil, which brings in a huge proportion of Iran's revenue. In addition, sanctions will be imposed upon hundreds of named entities and individuals.
- Earlier USA has withdrawn from JCPOA (Joint Comprehensive Plan of Action) as the deal did not target Iran's ballistic missile programme, its nuclear activities beyond 2025 and its role in conflicts in Yemen and Syria.
- It was alleged that Iran was placing restrictions on the work of the inspectors of the International Atomic Energy Agency (IAEA). It was reluctant to give IAEA inspectors access to military installations which were part of Iran's 'clandestine nuclear weapons programme'.
- Also many analysts points to Tehran's banking on Paris and Berlin to come up with an alternative arrangement, one that allows Europe and Iran to conduct trade, business and diplomacy, a major cause of concern for US.

Implications on Oil import arrangement

• Oil trade Overall

- o Energy trade anchors the Indo-Iranian relationship, helping to ensure each country gives due consideration to the interests of the other.
- o Iranian exports to India followed these

- trends in oil trade, peaking in 2008 (\$13.8 billion) and 2012 (\$13.3 billion) and dropping to a low in 2015 (\$6.2 billion).
- o In 2017, Iran provided 11.2 percent of India's crude oil imports, the third largest source after Iraq (18.6 percent) and Saudi Arabia (17.5 percent).
- o Again the same fear is looming large whereby India has started reducing oil imports. This again tells impermanence in Oil import arrangement of India-Iran jeopardising the energy security of India in particular and India-Iran relations in general.

• Impact on Iran

o Fossil fuels contributed more than 53 percent of Iran's exports in 2017-18, and accounted for close to 15 percent of its US\$ 440-billion Gross Domestic Product. The U.S. has managed to reduce Iran's oil exports from 2.7 million to 1.6 million barrels a month, according to internal U.S. estimates.

• Bliss for China

- The one country that has decided to take the sanctions as an opportunity is China. It has already shown interest in developing transportation and communication infrastructure in Iran. This October, China was the destination for 44 percent of Iranian crude exports, significantly rise from 26 percent in January-June.
- o This is crucial in Beijing's aim to reshape the global oil market, specifically by greater use of its own currency in oil trade. It fits in conveniently with Iran's proposed approach to circumventing the sanctions conducting trade in currencies other than the US Dollar.

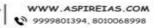
Challenge to autonomous strategic alignment

• Time and again US has been a major



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- roadblock in full nurturing of India-Iran. US sanctions leads to arm twisting of India as over past years India has become entangled with US foreign policy interests.
- This severely puts India in a pickle w.r.t Iran and forcing political downturns (Iran's support for Kashmir). Also, it pushes Iran to Chinese side thus having huge implications for India strategically and economically (Iran's support for a non-Indian all open Chabahar port).

Way Forward

- What India needs to do?
 - o It's high time that India strategically aligns with both countries on an autonomous and need based approach. For this, India has to take bold steps. As a leading power it cannot buckle under pressure of any country.
 - o Short term course can be **developing alternate mode of payment** to Iran and promoting flexibility in investment mode.
 - o Carrying out **high level talks** with US about the security and strategic concerns of India Vis a Vis China.
 - o In the long term, India has to keep aligning with the other members of Iran nuclear deal to carry out peaceful solution to end nuclear terrorism. The Iran nuclear deal is a fair deal and US cannot unilaterally end it.
 - The engagement with Iran has to be fastened and the work on various Indian projects in Iran has to speed up. The engagement with Iran has to be moved to a partnership level e.g. development of Farzad B oil site.
 - o India also needs to develop a **comprehensive energy policy** to arrest its west Asian energy dependence.
 - o As India has learnt the art of **de-hyphenation**, its time it brings a consistent and autonomous Iran policy.

• Collective Effort

o There is a need to collectively resist American efforts to isolate Iran.

- **Collective bargaining** is the key to thwart American unilateralism.
- o America minus implementation of the JCPOA is first step to deal with these sanctions. Also alternate payment arrangement will hugely impact American sanction diplomacy.







INDIA-US TRADE RELATIONS

In The News: Recently U.S. has withdrawn Generalized System of Preferences (GSP) benefits on 94 products for all countries.

What is Generalized System of Preferences?

- It is a non-reciprocal preferential tariff system which provides for exemption from the Most Favored Nation principle of World Trade Organization.
- It involves reduced MFN tariffs or duty free entry of eligible products exported by countries (developed beneficiary countries) to markets of donor countries (developing countries).
- GSP measure was adopted at UNCTAD Conference in 1968 and later enacted by General Agreement on Trade and Tariff (now WTO) in 1971.
- The objective of GSP was to give development support to poor countries by promoting capacity development and trade.
- 11 Developed countries including the US, EU, UK, Japan etc., extend GSPs to imports from developing countries.
- U.S. has a particularly strong GSP regime, under Trade Act, 1974. India has been the largest beneficiary of the GSP. In 2017, India's duty-free export to the US under the GSP was more than \$5.6 billion.
- Now, 50 products (out of a total of 94 products) from India have been removed from GSP particularly impacting handloom and agriculture sectors.

Impact of GSP withdrawal on India

- Impact on Current Account Deficit (CAD) and rupee: GSP withdrawal will cost India \$70 million in raised duties from GSP benefits. It will reduce the trade surplus that India has against trade with US leading to higher CAD which also runs the risk of further weakening rupee.
- Impact on MSME and agriculture: Small and medium size business could be impacted. Especially export of handloom

made home textiles products are expected to be affected.

India -US Trade Relations Some facts:

- U.S. goods and services trade with India totaled an estimated \$126.2 billion in 2017. (exports-\$76.7 billion & imports-\$49.9 billion, Trade deficit-\$27.5 billion)
- US foreign direct investment (FDI) in India was USD \$44.5 billion in 2017.

Major Impediments in trade relations

- **Tariff issues:** US under Trump regime has taken different position as compared to previous stands in trade negotiations. US President called India "the tariff king" and raised issues with India like:
 - Indian motorcycles imported into the US tariff free while US motorcycles imported to India face high tariffs.
 - Intellectual property rights: India has been placed in Priority Watch List of the USTR's Special 301.

Subsidies issues:

- Subsidies given by some US states to local renewable energy producers.
- US is against the Minimum Support Price (MSP) regime of India and accuse India of violating WTO subsidies norms and limitations.
- Visa related tensions: India is the largest beneficiary of H1-B visa scheme of US. But US in recent times has increased visa fees for H1-B applicants and cut their quotas. This has been detrimental for the interest of Indian IT companies. India has raised concerns on this issue.
- India US have been also engaged WTO in dispute resolution: India dragged the US to the WTO dispute settlement mechanism over the imposition of import duties on steel and aluminium. Also, India and US are at loggerheads on subsidies and Domestic Content Requirement (DCR) provisions to renewable energy sector in



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their respective countries.

Way Forward

Unlike US-China there is no trade war between India and US but tension do exist in trade relations.

- India is not in position to engage in titfor-tat approach in raising tariffs like China. India needs cooperation of US in many other sectors like defense, technology transfers, regional security (strategic relationship).
- US has granted some relief to India in recent times. US has granted Strategic Trade Authorization (STA-1) status to India, giving India same access as NATO allies to latest technology. Also India is among the eight countries to get exemption from US in purchasing oil Iran though from even Trump administration has imposed its "toughest ever" sanctions against Iran This is an indication of US seeking deeper strategic ties with India.
- India should stay the course in its current approach to trade negotiations while not reacting to rhetorical moves by US, preventing any escalations and also avoiding the spilling of friction in trade relations to other areas of relations.
- India should continue negotiating for a trade package with the US, and demand a waiver on tariff hikes similar to the ones granted to Argentina, Brazil and South Korea.
- India needs to boost exports and cut nonessential imports in the backdrop of its current account deficit (CAD) touching 2.4%.







INDIA-AUSTRALIA RELATIONS

In The News: Australia Prime Minister has implementation of "An India announced Economic Strategy to 2035", a vision document that will shape India- Australia bilateral ties.

What is the vision and Why?

- A three-pillar strategy- The focus of this report is on building a sustainable long-term India economic strategy. The report identifies 10 sectors and 10 states in an evolving Indian market where Australia has competitive advantages, and where it should focus its efforts. These are divided into a flagship sector (education), three lead sectors (agribusiness, resources, tourism) and six promising sectors (energy, health, financial services, infrastructure, sport, science and innovation).
 - First Pillar Economic Ties- India is already in the first tier of Australia's diplomatic relations. It has been a high foreign policy priority for at least two decades. But the economic relationship is stuck in the second tier. This vision thus focuses on upgrading ties into full blown economic partnership.
 - Building on India's Economic Rise- Over the past decade and a half, India's economic growth, its appetite for resources, energy demand, skill development, technical knowhow and investments have made it an important trade partner and export destination for Australia.
 - Therefore, this strategic vision aims at capturing this rise of India economy. India's growing economic weight makes it an unavoidable economic partner, despite challenges in navigating its market. Australian exports to India are expected to grow from 14.9 billion dollars in 2017 to around 45 billion dollars in the next 20 year, and Australian investment to India rise from 10.3 billion dollars to over the

- 100-billion mark, reflecting transformational expansion of the relationship. This investment will be spread over various sectors like resources, education, infrastructure etc.
- ✓ The core of the trade ties are energy resources and now Australia is moving forward in providing assured Uranium supply under Civil Cooperation Nuclear agreement which is important for India's energy security and economic growth.
- Pillar-Geostrategic o **Second Engagement**
 - ✓ Indo-Pacific A global Strategic **region-** Recently there is a shift to Indo pacific which is becoming a centre of economic and strategic gravity. With a high volume of seaborne trade passing through the Strait of Malacca, the Straits of Singapore and the Gulf of Hormuz, the region has become a theatre of competing claims and power plays. India and Australia enjoy strategic position in Indo-pacific and therefore are natural allies in the region.
 - ✓ **Preserving the status quo-** Both Australia and India support a rules based international order which currently is under increasing threat. Its defenders are shrinking and its challengers growing.
 - ✓ **Chinese revisionism-** China is continuously revising its power in the Blatant disregard region. international law, construction of artificial islands, an active defence strategy weaponising capital and trade, and adoption of a military posture that seeks to keep other powers out from parts of the western Pacific is disturbing the balance of power in the. It provides India and Australia an opportunity to be net security providers thereby ensuring







rebalancing.

✓ Ambiguous American leadership— Though during the Indo-Pacific Business Forum US laid out a partnership based economic engagement in Indo pacific to reassure friends but still the countries have reservations about its America first policy.

Third pillar-Rethinking Culturethrust on soft power diplomacy

• In the last decade a large scale has been witnessed in the Indian Diaspora in Australia which now constitute 700,000 strong and the fastest growing large Diaspora in Australia. This Diaspora can play a big role to enhance the partnership by creating personal links, in business, arts, education, politics and civil society.

Concerns

- Dichotomous Australian Foreign **Policy-** Historically, a key problem with Australia's bilateral relationships has been the Australia's misalignment of economic political-security and interests. While Australia is reliant on the US for its defence and security through the Australia-New Zealand-US treaty, its economy depends on China, which accounts for a huge in bilateral share trade and investment.
- Challenges of Indian Economy-India is too complicated for its growth story to be linear. Canberra has skepticism about India's economic progress which constrained by the political compromises demanded by a diverse democratic federation, held back by thinly institutions. resourced burdened interfering by a bureaucracy, dented by corruption and shaped by a political tradition

- which puts much greater faith in government intervention than the efficiency of markets.
- Trade implications for India- India and Australia are "too far apart" to conclude the bilateral Comprehensive Economic Cooperation Agreement (CECA) in the near term.
- **Perception of Indo pacific-** There is no coherent Indo pacific strategy as countries do not have one definitive vision for the region. It is largely seen as global construct to arrest China's rise.

Way forward

- India-Australia needs to formulate a comprehensive shared Indo pacific vision which ensures inclusivity, transparency, openness and a rule based order.
- India has to **remove various governance bottlenecks** and ensure speedy engagement. CECA need to be concluded immediately in order to realize the untapped trade potential.
- Both sides should share the **benefits of increased cooperation** equally.

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Double Jeopardy

In The News

- The Supreme Court of India has ruled that *the* bar of double jeopardy does not arise if an accused was discharged of a criminal offence, even before the commencement of trial, on the basis of an invalid sanction for prosecution. Background:
- The judgment is based on an appeal filed by the State of Mizoram against an order passed by the Gauhati High Court in August 2015.
 - The corruption case was filed by the Aizawl police in February 2009 for misappropriation of public money. During inquiry, it was detected that the respondent acquired valuable assets disproportionate to known sources of income.
 - The first invalid sanction for prosecution was issued by the Commissioner-Secretary, Department of Personnel Administrative Reforms (DP & AR) directly without Governor's approval.
 - Following the discharge of the accused by the special court, the Governor accorded a fresh sanction in December 2013. However, the high Court upheld a Special Court decision to decline to entertain a second chargesheet filed in a corruption case against the accused on the ground of double jeopardy.

What has the Court ruled?

- Article 20 (2) of the Constitution mandates that a person cannot be prosecuted or punished twice for the same offence.
- The court held that if an accused has not been tried at all and convicted or acquitted, the principles of double jeopardy cannot be invoked at all. If an earlier order of sanction was found to be invalid, there is no bar for the competent authority to issue a proper order of sanction for prosecution.

The courts are not to quash or stay the proceedings under any Act merely on the ground of an error, omission or irregularity in the sanction granted by the authority unless it is satisfied that such error, omission or irregularity has resulted in failure of justice, the SC observed.

About Article 20- Protection in respect of conviction for offences:

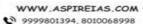
- 1. No person shall be convicted of any offence except for violation of the law in force at the time of the commission of the act charged as an offence, nor be subjected to a penalty greater than that which might have been inflicted under the law in force at the time of the commission of the offence.
- No person shall be prosecuted and punished for the same offence more than once.
- No person accused of any offence shall be compelled to be a witness against himself.

Doctrine of Double Jeopardy:

- Article 20(2) says that no person shall be prosecuted and punished for the same offence more than once. This is called Doctrine of Double Jeopardy. The objective of this article is to avoid harassment, which must be caused for successive criminal proceedings, where the person committed only one crime.
- There are two aspects of Doctrine of Jeopardy viz. autrefois convict and autrefois acquit. Autrefois convict means that the person has been previously convicted in respect of the same offence. The autrefois acquit means that the person has been acquitted on a same charge on which he is being prosecuted.
- Please note that Constitution bars double punishment for the same offence. The conviction for such offence does not bar for subsequent trial and conviction for another offence and it does not matter the some



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ingredients of these two offences are common.

Self Incrimination Law:

- Article 20(3) of the constitution says that no person accused of any offence shall be compelled to be a witness against himself.
- This is based upon a legal maxim which means that No man is bound to accuse himself.
- The accused is presumed to be innocent till his guilt is proved. It is the duty of the prosecution to establish his guilt.

Key facts:

- Article 20 has taken care to safeguard the rights of persons accused of crimes.
- Persons here means the citizens, non-citizens as well as corporations.
- This article cannot be suspended even during an emergency in operation under article 359.
- Article 20 also constitutes the limitation on the legislative powers of the Union and State legislatures.

Ex-Post facto Law Article 20 (1):

It says that no person shall be convicted of any offence except for violation of a law in force at the time of the commission of the Act charged as an offence, nor be subjected to a penalty greater than that which might have been inflicted under the law in force at the time of the commission of the offence. This is called Ex-Post facto Law. It means that legislature can not make a law which provides for punishment of acts which were committed prior to the date when it came into force. This means that a new law can not punish an old act.







National Body Set Up To Study Monogenic Diabetes

In The News:

A National Monogenic Diabetes Study Group has been formed to identify cases of monogenic diabetes across the country. Supported by the Indian Council of Medical Research (ICMR), the Madras Diabetes Research Foundation (MDRF) and Dr. Mohan's Diabetes Specialities Centre (DMDSC) will be the national coordinating centre for the study group.

What is Monogenic Diabetes?

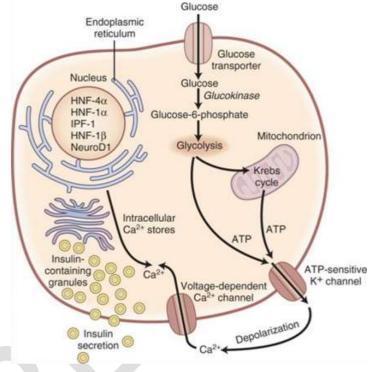
Monogenic diabetes is a group of disorders where mutation of a single gene causes diabetes; the three commonest forms being - Maturity Onset Diabetes of the Young (MODY), Neonatal Diabetes Mellitus (NDM) and Congenital Hypoglycaemia.

Factors of Monogenic diabetes:

- Monogenic diabetes is usually passed on in an autosomal dominant gene, (a sex independent gene that's inherited from one of the parents). This means only one copy of the mutation is needed to develop diabetes.
- There is usually a strong family history of diabetes and in multiple generations, (although it's possible for someone to have a spontaneous mutation). Diagnosis, therefore, involves genetic testing for these diabetescausing gene mutations that disrupt insulin production.
- Monogenic diabetes patients are also usually antibody negative, (though there are cases where low levels of antibodies have been detected). Once treatment for the diabetes begins, the antibodies usually resolve.

In addition to blood sugar issues, some of the forms of Monogenic diabetes involve metabolic issues such as:

- Growth problems.
- Impaired glycogen storage in the liver.
- Impaired fatty acid metabolism.
- Exocrine pancreatic insufficiency









Deal Inked For Biofuel Research

In The News: The Department of BiotechnoloDBT) has signed a three-year, ₹11 crore deal with The Energy and Research Institute to set up a centre to produce "advanced biofuels and bio-commodities."

Key facts:

- This is the fifth such dedicated centre bioenergyresearch by development set ир the **Department**. The others are located at the Indian Agricultural Research Institute, New Delhi; the Indian Institute of Technology-Guwahati; Transtech Green Power Limited, Jaipur; and the Oil and Natural Gas Energy Centre in the National Capital Region.
- The bio-centre would be focussed on not only developing technology but also commercialising it.
- Other than fuel, by-products envisaged at the TERI- DBT Centre include food, feed, nutrition supplements, bioplastics and novelty speciality chemicals.

Significance of Biofuels:

- Globally, biofuels have caught the attention in last decade and it is imperative to keep up with the pace of developments in the field of biofuels.
- Biofuels in India are of strategic importance as it augers well with the ongoing initiatives of the Government such as Make in India, Swachh Bharat Abhiyan, Skill Development and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation.

Classification of Biofuels:

• *1st generation biofuels* are also called conventional biofuels. They are made from

- things like sugar, starch, or vegetable oil. Note that these are all food products. Any biofuel made from a feedstock that can also be consumed as a human food is considered a first generation biofuel.
- 2nd generation biofuels are produced from sustainable feedstock. The sustainability of a feedstock is defined by its availability, its impact on greenhouse gas emissions, its impact on land use, and by its potential to threaten the food supply. No second generation biofuel is also a food crop, though certain food products can become second generation fuels when they are no longer useful for consumption. Second generation biofuels are often called "advanced biofuels."
- *3rd generation biofuels* are biofuel derived from algae. These biofuels are given their own separate class because of their unique production mechanism and their potential to mitigate most of the drawbacks of 1st and 2nd generation biofuels.

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Location Tracking Devices, Emergency Buttons Mandatory For New Public Service Vehicles

In The News: The Union Ministry of Road Transport and Highways has notified that all new public service vehicles, except auto rickshaws and e-Rickshaws, registered on and after January 1, 2019 will have to be mandatorily equipped with Vehicle Location Tracking (VLT) and Emergency Buttons.

> In case of older public service vehicles, registered up to December 31, 2018, the respective State Governments will notify the date by which these vehicles have to install Vehicle Location Tracking Device and Panic Buttons.

Operational procedure for implementation of VLT cum Emergency buttons:

- The States are required to ensure execution of this order and check fitment and functional status of the VLT device in the public service vehicles at the time of checking of the vehicles for fitness certification.
- Command and Control Centres will be State or by the manufacturers or any other agency authorised by the State Government.
- These centres will provide interface such as state emergency response centre, the transport department or Regional Transport Offices and its designated agencies.
- These centres will also provide feed to the 'VAHAN' data base or the relevant data base of the State with regard to the over speeding device 'healthstatus'.
- The details of each VLT device will be uploaded on the VAHAN database by the VLT device manufacturer using its secured authenticated access.

Roles of various stakeholders involved:

The VLT device manufacturers or their authorised dealers will install the VLT devices in public service vehicles and register the devices along with details of vehicle on the corresponding

- backend systems in real-time.
- The public service vehicle owners have to ensure that the VLT devices installed in their vehicles are in working condition and regularly send required data to the corresponding backend system.
- VLT device manufacturers will get their devices tested for conformity of production every year after the first certification from the testing agencies referred to in Rule126 of the Central Motor Vehicles Rules, 1989.
- The testing agencies will upload the details of the VLT devices certified by them on the VAHAN database.
- The State or Union Territories will publish Internet Protocol address (IP address) and Short Message Service Gateway (SMS gateway) details of their respective emergency response system where VLT devices will send the emergency alerts on press of emergency button.

About VAHAN:

- VAHAN is a highly flexible comprehensive system that takes care of all the activities of Vehicle Registration, leaving the Transport Department to deal with more important business issues.
- The software enables the processes at RTO/DTO/MLO/SDM involving vehicle registration, fitness, taxes, permits and enforcement to get computerised.

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Companies Amendment (Ordinance), 2018

• In The News: The President has given his assent to the *Companies Amendment (Ordinance)*, 2018. The Ordinance is promulgated to review offences under the Companies Act, 2013.

Key Amendments:

- Shifting of the jurisdiction of 16 types of corporate offences from the special courts to in-house adjudication, which is expected to reduce the case load of Special Courts by over 60%, thereby enabling them to concentrate on serious corporate offences.
- The penalty has been reduced to half for small companies and one person companies of that applicable to normal companies.
- Instituting a transparent and technology driven in-house adjudication mechanism on an online platform and publication of the orders on the website.
- Strengthening in-house adjudication mechanism by necessitating a concomitant order for making good the default at the time of levying penalty, to achieve the ultimate aim of achieving better compliance.
- Declogging the NCLT by enlarging the pecuniary jurisdiction of Regional Director, vesting in the Central Government the power to approve the alteration in the financial year of a company and vesting the Central Government the power to approve cases of conversion of public companies into private companies.



Regional Connectivity Scheme (RCS)

In The News: Opening the third round of the Regional connectivity scheme (RCS), the Ministry of Civil Aviation has invited proposals for air routes that include tourist destinations. The deadline for submitting applications is November 20.

Under this scheme, the government has allowed seaplanes commercial passenger flights. Included among the 10 destinations that the government proposes to through seaplanes are the recently unveiled Statue of Unity at Sardar Sarovar Dam, Sabarmati Riverfront in Ahmedabad. Tehri Dam in Uttarakhand and Nagarjuna Sagar in Telangana.

About UDAN (Ude Desh ka Aam Nagrik) scheme:

- UDAN (Ude Desh Ka Aam Nagrik) is the Government's initiative to make air travel to India's tier II and tier III cities affordable to the aam aadmi. The idea is to put smaller cities and remote regions on the aviation map, by getting domestic airlines to ply more regional routes.
 - Under the scheme, the Government offers incentives to airlines to flag off new flights to neglected smaller cities and towns by providing Viability Gap Funding to make these operations profitable.
 - Airlines are required to bid for exclusive rights to fly on the regional routes opened up under the scheme. They must sell a specific number of seats on each flight at a fixed fare of ₹2,500 for one hour of flying. In the case of helicopter operations, allowed for the first time now, fares are capped

at ₹2,500 for a 30-minute flight.

Objectives of the scheme:

- The primary objective of RCS is to facilitate / stimulate regional air connectivity by making it cheap and affordable.
- Promoting affordability of regional air connectivity is envisioned under RCS by supporting airline operators through: Concessions and Financial (viability gap funding or VGF) support.

Significance:

• The scheme gives India's aviation sector a boost by giving a chance to small and first-time operators to be a part of the rapid growth in passenger traffic.







Strategic Petroleum Reserves (SPR)

In The News: The Union Cabinet has approved the filling of Padur Strategic Petroleum Reserves (SPR) in Karnataka by overseas National Oil Companies (NOCs).

Key facts:

• The filling of the SPR will be under PPP model and is being undertaken to reduce budgetary support of Union Government. The SPR facility at Padur is underground rock cavern with total capacity of 2.5 million metric tonnes (MMT) having four compartments of 0.625 MMT each.

Background:

- India has built 5.33 million tons of underground reserves in three locations, including Padur, under an earlier phase that can meet 9.5 days of the country's oil needs.
- The government purchased crude to fill the caverns in Visakhapatnam in Andhra Pradesh and half of another facility in Mangalore in Karnataka, while leasing out the other half to Abu Dhabi National Oil Co.

About SPR programme:

- To ensure energy security, the Government of India had decided to set up 5 million metric tons (MMT) of strategic crude oil storages at three locations namely, Visakhapatnam, Mangalore and Padur (near Udupi).
- These strategic storages would be in addition to the existing storages of crude oil and petroleum products with the oil companies and would serve as a cushion during any external supply disruptions.
 - In the 2017-18 budget, it was announced that two more such caverns will be set up Chandikhole in Jajpur district of Odisha and Bikaner in Rajasthan

- as part of the second phase.
- The construction of the Strategic Crude Oil Storage facilities is being managed by Indian Strategic Petroleum Reserves Limited (ISPRL), Special Purpose a Vehicle, which is a wholly owned subsidiary of Oil Industry Development Board (OIDB) under the Ministry of Petroleum & Natural Gas.

Need for strategic oil reserves:

- In 1990, as the Gulf war engulfed West Asia, India was in the throes of a major energy crisis. By all accounts India's oil reserves at the time were adequate for only three days. While India managed to avert the crisis then, the threat of energy disruption continues to present a real danger even today.
 - o It is unlikely that India's energy needs will dramatically move away from fossil fuels in the near future. Over 80% of these fuels come from imports, a majority of which is sourced from West Asia. This is a major strategic risk and poses a massive financial drain for an embattled economy and its growing current account deficit.
 - O To address energy insecurity, the Atal Bihari Vajpayee government mooted the concept of strategic petroleum reserves in 1998. Today, with India consuming upwards of four million barrels of crude every day (January 2015 figures), the case for creating such reserves grows stronger.







Government Approves Mechanism For Sale Of Enemy Shares

In The News: The Union Cabinet has approved a mechanism for sale of enemy shares which at the current price is estimated at around Rs 3,000 crore. Sale proceeds are to be deposited as disinvestment proceeds in the government account maintained by the Ministry of Finance. The Department of Investment and Public Asset Management has been authorised to sell the shares.

• A total number of 6,50,75,877 shares in 996 companies of 20,323 shareholders are under the custody of Custodian of Enemy Property of India (CEPI).

Significance:

 The decision will lead to monetisation of movable enemy property lying dormant for decades and the proceeds will be used for development and social welfare programmes.

Background:

- Total shares, known as "enemy shares numbering 6,50,75,877 worth Rs 3,000 crore, are lying unutilised because enemy property act includes movable and immovable property.
- Of these 996 companies, 588 are functional/ active companies, 139 of these are listed with remaining being unlisted.

What are enemy properties?

- When wars broke out between India and China in 1962, and India and Pakistan in 1965 and 1971, the central government took over properties of citizens of China and Pakistan in India under the Defence of India Acts. These Acts defined an 'enemy' as a country that committed an act of aggression against India, and its citizens.
- The properties of enemies in India were classified as enemy property. The properties included land, buildings, shares held in companies, gold and jewellery of the citizens of enemy

countries. The responsibility of the administration of enemy properties was handed over to the Custodian of Enemy Property, an office under the central government.

Enemy properties Act:

- After the Indo-Pakistan War of 1965, the Enemy Property Act was enacted in 1968, which regulates such properties and lists the custodian's powers.
- The government amended the Act in the wake of a claim laid by the heirs of Raja Mohammad Amir Mohammad Khan, known as Raja of Mahmudabad, on his properties spread across Uttar Pradesh and Uttarakhand.
- The government has vested these properties in the Custodian of Enemy Property for India, an office instituted under the Central government.

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INSPIRE 2018

In The News: The second edition of International Symposium to Promote Innovation & Research in Energy Efficiency (INSPIRE) is being held in New Delhi. The symposium will focus on enhancing grid management, e-Mobility, financial instruments and technologies for energy efficiency in India.

About INSPIRE 2018:

- INSPIRE 2018 has been organised in collaboration with the Bureau of Energy Efficiency (BEE), The Energy & Resources Institute (TERI), Asian Development Bank (ADB), the United **Nations** Environment Program (UNEP), and the Administrative Staff College of India (ASCI).
- The event is bringing together policyinfluencers, innovators, makers, thought leaders, researchers, leading energy-efficient companies, government agencies, business leaders and other stakeholders to deliberate on key energy policies, market transformation strategies, sustainable business models that will help leverage the full potential of energy efficiency and bring its multiple co-benefits to the fore.

About Energy Efficiency Revolving Fund (EERF):

- Alongside, to support investments in new, innovative and scalable business models, EESL and Asian Development Bank (ADB) have signed an agreement for a Global Environment Facility (GEF) grant of USD 13 million to establish Efficiency an Energy Revolving Fund (EERF).
- EERF aims to expand and sustain investments in the energy efficiency market in India. build market

diversification, and scale up existing technologies.

About EESL:

- Energy Efficiency Services Limited (EESL), under the administration of Ministry of Power, Government of India, is working towards mainstreaming energy efficiency and is implementing the world's largest energy efficiency portfolio in the country.
 - > Driven by the mission of Enabling More – more transparency, more transformation, and more innovation, EESL aims to create market access for efficient and future-ready transformative solutions that create a win-win situation for every stakeholder. By 2020. EESL seeks to be a US\$ 1.5 billion 10,000 (INR company.
 - EESL has pioneered innovative approaches business successfully roll-out large-scale programs that allow for incentive alignment across the value chain and rapidly drive transformative impact. EESL aims to leverage this implementation experience and explore new overseas market opportunities for diversification of its portfolio. As on date, EESL has begun its operations in UK, South Asia and South-East Asia.

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Witness Protection Scheme

- In The News: The Supreme Court of India has directed all the states to implement the draft witness protection scheme framed by the Centre in consultation with the National Legal Services Authority (NALSA). Background:
- In April this year, the Centre had informed the top court that it had framed a draft witness protection scheme and it was circulated among the states and Union Territories administration for comments. The court had asked the Centre to finalise the scheme after getting response from the states and Union Territories.
- In November last year, the court had asked the Centre as to why a draft scheme cannot be formulated for witness protection in the country when specific provisions in this regard were already there in the National Investigation Agency (NIA) Act.
- Objectives of the Witness Protection Scheme-2018:
- To enable a witness to give testimony in a judicial setting or to cooperate with law enforcement and investigations without fear of intimidation or reprisal.
- To ensure that the investigation, prosecution and trial of criminal offences is not prejudiced because witnesses are intimidated or frightened to give evidence without protection from violent or other criminal recrimination.
- To promote law enforcement by facilitating the protection of persons who are involved directly or indirectly in providing assistance to criminal law enforcement agencies and the overall administration of Justice.
- To give witnesses the confidence to come forward to assist law enforcement and Judicial Authorities with full assurance of safety.
- To identify a series of measures that may be adopted to safeguard witnesses and their family members from intimidation and threats against their lives, reputation and property.
- Need for the scheme:
- Victims and witnesses of serious crimes are

- particularly at risk when the perpetrator is powerful, influential, or rich and the victims or witnesses belong to a socially or economically marginalised community. Girls and women who report sexual violence are often even more vulnerable and face extreme pressure or direct threats from the accused.
- Also, witnesses *need to have the confidence* to come forward to assist law enforcement and prosecutorial authorities. They need to be assured that they will receive support and protection from intimidation and the harm that criminal groups may seek to inflict upon them in attempts to discourage or punish them from co-operating. Hence, legislative measures to emphasise prohibition against tampering of witnesses have become the imminent and inevitable need of the day.







Sub-Categorization Of Other Backward Classes

In The News: Cabinet approves extension of the term of the Commission to examine the issue of Sub-categorization of Other Backward Classes in the Central List till 31st May 2019.

Terms of references of the Commission are as follows:

- To examine the extent of inequitable distribution of benefits of reservation among the castes/ communities included in the broad category of OBCs, with reference to the OBCs included in the Central list.
- To work out the mechanism, criteria, norms and parameters, in a scientific approach, for sub-categorization within such OBCs.
- To take up the exercise of identifying the respective castes/communities/ sub-castes/ synonyms in the Central List of OBCs and classifying them into their respective subcategories.

Is sub-categorisation permissible under the law?

• The Supreme Court in its order in *Indra Sawhney and others vs. Union of India* observed that there is no Constitutional or legal bar to a State categorizing backward classes as backward or more backward and had further observed that if a State chooses to do it (subcategorization), it is not impermissible in law.

How are OBC reservations offered at present?

- At present, there is a single Central OBC list, with entries from each State. People belonging to all of these castes can seek reservation from within the single 27% OBC reservation pie for Central government jobs and Central educational institutions.
- Nine States, however, have already subcategorised OBCs.
- These are Andhra Pradesh, Telangana, Puducherry, Karnataka, Haryana, Jharkhand, West Bengal, Bihar, Maharashtra and Tamil Nadu.
- OBC reservation became a reality after the implementation of the Mandal Commission report, which categorised many castes as

constituting backward classes and deserving of quotas. New castes have been added to the list over the years.

Need for subcategorization:

- Sub categorization of the OBCs will ensure that the more backward among the OBC communities can also access the benefits of reservation for educational institutions and government jobs.
- At present, many feel that the more advanced OBC castes corner the lion's share of the benefits and have become influential. Not only will such a move offer more opportunities to the most backward castes among the OBCs but also give the government and the ruling party an opportunity to carve out a new political constituency.

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Allied And Healthcare Professions Bill, 2018

In The News: The Union Cabinet has approved the Allied and Healthcare Professions Bill, 2018 for regulation and standardisation of education bv allied and services and healthcare professionals.

Highlights of the Bill:

- It provides for the *Establishment of a Central* corresponding State Allied Healthcare Councils; 15 major professional categories including 53 professions in Allied and Healthcare streams.
- The Bill provides for Structure, Constitution, Composition and Functions of the Central Council and State Councils, g. Framing policies and standards, Regulation professional conduct. Creation and maintenance of live Registers, provisions for common entry and exit examinations, etc.
- The Central Council will comprise 47 members, of which 14 members shall be exofficio representing diverse and related roles and functions and remaining 33 shall be nonex-officio members who mainly represent the 15professional categories.
- The State Councils are also envisioned to mirror the Central Council, comprising 7 exofficio and 21 non- ex officio members and Chairperson to be elected from amongst the non-ex officio members.
- Professional Advisory Bodies under Central and State Councils will examine issues independently and provide recommendations relating to specific recognised categories.
- The Bill will also have an overriding effect on any other existing law for any of the covered professions.
- The State Council will undertake recognition of allied and healthcare institutions.
- Offences and Penalties clause have been included in the Bill to check malpractices.
- The Bill also empowers the Central and State Governments to make rules.
- Central Govt. also has the power to issue directions to the Council, to make regulations and to add or amend the schedule.

Major Impact, including employment generation potential:

- Bring all existing allied and healthcare professionals on board during the first few of years from the date of establishment of the Council.
- Opportunity to create qualified, highly skilled and competent jobs in healthcare by enabling professionalism of the allied and healthcare workforce.
- High quality, multi-disciplinary care in line with the vision of Ayushman Bharat, moving away from a 'doctor led' model to a 'care accessible and team based' model.
- Opportunity to cater to the global demand (shortage) of healthcare workforce which is projected to be about 15 million by the year 2030, asper the WHO Global Workforce, 2030 report.

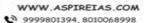
Number of beneficiaries:

- It is estimated that the Allied and Healthcare Professions Bill, 2018 will directly benefit around 8-9 Lakh existing Allied Healthcare related professionals in the country and several other graduating professionals joining workforce annually and contributing to the health system.
- However, since this Bill is directed to strengthen the healthcare delivery system at large, it may be said that the entire population of the country and the health sector as a whole will be benefited by this Bill.

Need for this legislation:

- Allied and Healthcare Professionals (A&HPs) constitute an important element of the health human resource network, and the skilled and efficient Allied and Healthcare Professionals (A&HPs) can reduce the cost of care and dramatically improve the accessibility to quality driven healthcare services.
- Though such professionals have existed in the Indian healthcare system for many decades, a considerable gap in the allied and healthcare









space is because of a lack of a comprehensive regulatory framework and absence of standards for education and training of A&HPs.

• The Bill thus seeks to establish a robust regulatory framework which will play the role of a standard- setter and regulator for Allied and Healthcare professions.







'Heli-Clinics' For Remote Areas

In The News:

• Union Minister has mooted "Heli-Clinics"/Helicopter Clinics for remote areas, which could help to provide specialized medical care to people living in inaccessible hilly terrains of the States like Jammu & Kashmir and Northeast.

Central Government's Previous Measures:

- In the last four years, which include opening of **Dialysis Centres** in every district hospital, setting up of Wellness Centres and, launch of "Ayushman Bharat".
- There is need to incentivize medical practitioners to go to remote rural areas and to provide adequately satisfactory facilities for government doctors to be able to serve in the rural areas.

What is Ayushman Bharat?

- Avushman Bharat is National Health Protection Scheme, which will cover over 10 crore poor and families vulnerable (50) crore beneficiaries) providing coverage upto 5 lakh rupees per family per year for secondary and tertiary care hospitalization.
- Ayushman Bharat National Health **Protection Mission** will subsume the on-going centrally sponsored schemes - Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).

Salient Features:

- Benefits of the scheme are portable across the country and a beneficiary covered under the scheme will be allowed to take **cashless benefits** from any public/private empaneled hospitals across the country.
- Ayushman Bharat will be

- entitlement based scheme with entitlement decided on the basis of deprivation criteria in the SECC database.
- One of the core principles of Ayushman Bharat is to co-operative federalism and flexibility to states.
- For giving policy directions and fostering coordination between Centre and States, it is proposed to set up **Avushman Bharat National Health** Protection Mission Council (AB-NHPMC) at apex level Chaired by Union Health and Family Welfare Minister.
- States would need to have State Health Agency (SHA) to implement the scheme.
- In partnership with NITI Aayog, a modular, scalable robust. interoperable IT platform will be made operational which will entail a paperless, cashless transaction.





City Gas Distribution (CGD) Projects

In The News:

- The Prime Minister would lay the Foundation Stones of City Gas **Distribution (CGD) Projects** in 65 Geographical Areas (GAs) in 129 districts under the 9th CGD Bidding Round recently awarded by PNGRB (Petroleum Natural and Regulatory Board).
- This might herald the availability of convenient, environment-friendly and cheaper natural gas for nearly half of the country's population spread across 26 States and Union Territories.

CGD Network:

- Govt of India puts thrust to promote the usage of environment friendly clean fuel i.e. natural gas as a fuel/feedstock to move towards a gas based economy.
- Development of CGD networks focuses to increase the availability of cleaner cooking fuel (i.e. PNG) and transportation fuel (i.e. CNG) to the citizens.
- The expansion of CGD network will benefit the industrial and commercial units by ensuring the uninterrupted supply of natural gas.

At Present:

- Till September 2018, 96 cities/districts were covered for development of CGD networks.
- About 46.5 lakh households and 32 lakh CNG vehicles are availing the benefit of clean fuel through existing CGD networks.
- As per commitment made by various entities in this bidding round, around 2 crore PNG (Domestic) connections and 4600 CNG stations are expected to be installed in next 8 years across the country (This expanded the coverage of CGDs to about 50% of the population over 35% of India's area).

PNGRB Additionally, has also initiated the process of 10th CGD bidding round for additional 50 new GAs covering 124 districts in 14 States to increase the coverage to nearly 53% of the country's area covering 70% of the population.

Why Natural Gas:

- Natural Gas is a superior fuel, environment friendly, safe and cheaper when compared to coal and other liquid fuels.
- Natural Gas is supplied through pipelines just like water from the tap. Hence, its saves space by not using cylinders.
- Natural Gas (as CNG) is cheaper by 60% as compared with petrol and 45% w.r.t. Diesel.
- Natural Gas (as PNG) is cheaper by 40% as compared with market price LPG.
- An auto-rickshaw owner can save Rs. 7000-8000 on his monthly fuel bill by conversion from petrol to CNG.
- Share of Natural Gas in India's energy basked is 6.2% as against 23.4% globally. The Gujarat state itself has 25%.
- If Gujarat can achieve share of gas consumption more than global average, rest of India can also.

Background:

- India has made a commitment in COP21 Paris Convention in December 2015 that by 2030; it would reduce carbon emission by 33% of 2005 levels.
- Natural gas, as domestic kitchen fuel, as fuel for transport sector and fuel for industries and commercial units, will play an imperative role in reducing carbon emission.





Leadership For Academicians Program (Leap)

In The News : The government has launched Leadership for Academicians Programme (LEAP) for higher education faculty.

About the Leadership for Academicians Programme (LEAP):

- Programme (LEAP) is a three weeks Flagship leadership development training programme (2 weeks domestic and one week foreign training) for second level academic functionaries in public funded higher education institutions.
- *The main objective* is to prepare second tier academic heads who are potentially likely to assume leadership roles in the future.
- The programme would provide senior faculty, with high academic credentials, the required leadership and managerial skills including skills of problem-solving, handling stress, team building work, conflict management, developing communication understanding and coping with the challenges complexity and of governance in HEIs, financial general administration.
- The implementation of LEAP Programme will be through 15 NIRF top ranked Indian Institutions namely. The foreign Universities identified for the training are also within the top 100 in the world global rankings.





Annual Refresher Programme In Teaching (Arpit)

In The News: The Centre has launched Annual Refresher Programme in Teaching (ARPIT) for higher education faculty.

About Annual Refresher Programme in Teaching (ARPIT):

- Annual Refresher Programme in Teaching (ARPIT) is a major and unique initiative of online professional development of 15 lakh higher education faculty using the MOOCs platform SWAYAM.
 - o For implementing ARPIT, 75 discipline-specific institutions have been identified and notified as National Resource Centres (NRCs) in the first phase, which are tasked to prepare online training material with focus on latest developments in the discipline, new & emerging trends, pedagogical improvements and methodologies for transacting revised curriculum.
 - ARPIT will be an ongoing exercise so that every year NRCs will continuously develop new refresher module in earmarked discipline each year. The training materials will be uploaded and made available through SWAYAM. NRC will publish the list of the faculty who have been certified. The NRCs will revolutionize professional development of faculty by catering to massive numbers by leveraging **ICT** and online technology platform of SWAYAM.
 - o NRCs are located in a mixed range of institutions such as, Central Universities, IISc, IUCAA, IITs, IISERs, NITs, State Universities under the Ministry's Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching

(PMMMNMTT); UGC's Human Resource Development Centres (HRDCs), National Institutes for Technical Teachers Training (NITTTRs), IIITs and IGNOU.







'Institution's Innovation Council (IIC)' Program

In The News : The government has launched the 'Institution's Innovation Council (IIC) program under Innovation cell of MHRD.

About 'Institution's Innovation Council (IIC) program:

- The purpose of formation of network of Institution's Innovation Councils (IICs) is to encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years.
- program The aims to institutionalize innovation scientific and develop temperament in the country.
- More than 1000 Higher Education Institutions (HEIs) have already formed IICs in their campuses and enrolled for the IIC network managed by MHRD's Innovation cell to promote innovation through multitudinous modes leading to an innovation promotion ecosystem in their campuses.

Way ahead:

The educational advancement in higher be achieved education can only encouraging best practices in innovation and advance research and Innovation Cell has undertaken many initiatives in this direction such as implementing programs like Atal Ranking of Institutions on Innovation Achievement (ARIIA), Smart India Hackathon (SIH)- 2019, etc.

Innovation cell:

Ministry of Human Resource Development has established an "Innovation Cell" at AICTE, to systematically foster the culture of Innovation in all Higher Education Institutions (HEIs) across the country.

Aim of Institution's Innovation Councils (IICs):

To encourage, inspire and nurture young students by exposing them to new ideas and processes resulting in innovative activities in their formative years.

Major Focus of IIC -

- To create a vibrant local innovation ecosystem.
- Start-up supporting Mechanism in HEIs.
- Prepare institute for Atal Ranking of Institutions on Innovation Achievements Framework.
- Establish Function Ecosystem for Scouting Ideas and Pre-incubation of Ideas.
- Develop better Cognitive Ability for Technology Students.

Why HEIs should join IICs Network?

- No major capital investment required for establishing IIC as it will make use of existing local ecosystem.
- Students/Faculty associated with IIC will get exclusive opportunity to participate in various Innovation related initiatives and competitions organized by MHRD.
- Win exciting Prizes/Certificates every month.
- Meet/Interact with renowned Business Leaders and top-notch academicians.
- Opportunity to nurture and prototype new
- Mentoring by Industry Professionals.
- Experimentation with new/latest technologies.
- Visit new places and learn a new culture.

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Himalayan State Regional Council

In The News: NITI Aayog has constituted the 'Himalayan State Regional Council' to ensure sustainable development of the Indian Himalayan region.

entrepreneurship with focus on identified priority sectors, among other action points.

About the Council:

- Composition: The Himalayan State Regional Council will be chaired by the Dr VK Saraswat, Member, NITI Aayog and will consist of the Chief Secretaries of the Himalayan States as well as the Secretaries of key Central Ministries, senior officers of NITI Aayog as well as special invitees.
- *Objective:* The Council has been constituted to review and implement identified action points based on the Reports of five Working Groups, which were established along thematic areas to prepare a roadmap for action.
- Functions: The Himalayan States Regional Council will be the nodal agency for the Sustainable development in the Himalayan Region which consists of the twelve States Jammu &Kashmir, namely Uttarakhand, Himachal Pradesh, Arunachal Pradesh. Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura, two districts of Assam namely Dima Hasao KarbiAnglong and Darjeeling Kalimpong in West Bengal.
- The terms of reference of the Council states that it shall monitor the implementation of action points for Central Ministries, Institutions and 12 Himalayan State Governments in Indian Himalayan Region which include river basin development and regional cooperation, spring mapping and revival across Himalayas in phased manner for water security; develop, implement and monitor tourism sector standards as well as bring policy coherence, strengthen skill &

Background:

- Recognizing the uniqueness of the Himalayas and the challenges for sustainable development, Five Working Groups were constituted by NITI Aayog on June 2, 2017. The five thematic reports were released by the NITI Aayog in August, 2018 and framed the action points for the Terms of Reference of the Council constituted.
- These Working Groups were tasked with preparing a roadmap for action across five thematic areas namely:
 - 1. Inventory and Revival of Springs in Himalayas for Water Security
 - 2. Sustainable Tourism in Indian Himalayan Region.
 - 3. Shifting Cultivation: Towards Transformation Approach.
 - 4. Strengthening Skill & Entrepreneurship (E&S) Landscape in Himalayas.
 - 5. Data/Information for Informed Decision Making.

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UNESCO'S LIST OF INTANGIBLE CULTURAL

In The News: UNESCO, the United Nations Educational, Scientific and Cultural Organization, has added reggae to its list of cultural institutions worthy of protection and preservation. Background:

> Each year, UNESCO adds to its Representative List of the Intangible Cultural Heritage of Humanity, and submitted Jamaica reggae consideration earlier this year. The genre now joins a list of over 300 cultural traditions, including numerous musical ones such as Dominican merengue, Slovakian bagpipe music and Vietnamese xoan singing.

About Reggae:

It is Jamaican music originating from marginalized groups, mainly in Western Kingston. It was started out as voice of marginalized. But now it is played and embraced by wide crosssection of society, including various genders, ethnic and religious groups.

About UNESCO's List of Intangible Cultural Heritage:

- This coveted list is made up of those intangible heritage elements that help demonstrate diversity of cultural heritage and raise awareness about its importance.
- The list was established in 2008 when Convention for Safeguarding of the Intangible Cultural Heritage came into effect.
- It has two parts viz. Representative List of Intangible Cultural Heritage of Humanity and List of Intangible Cultural Heritage in Need of urgent safeguarding.

From India the Intangible Cultural Heritages added into this list include:

- Tradition of Vedic chanting
- traditional Ramlila. the

- performance of the Ramayana
- Kutiyattam, Sanskrit theatre
- o Ramman, religious festival and ritual theatre of the Garhwal Himalayas.
- o Mudiyettu, ritual theatre and dance drama of Kerala
- Kalbelia folk songs and dances of Rajasthan
- Chhau dance
- Buddhist chanting of Ladakh: recitation of sacred Buddhist texts in the trans-Himalayan Ladakh region, Jammu and Kashmir.
- Sankirtana. ritual singing, drumming and dancing of Manipur
- Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru. Punjab
- Yoga
- Nawrouz
- Kumbh Mela







World Customs Organisation (WCO)

In The News: A regional meeting of World Customs Organisation (WCO) was held recently in Jaipur, Rajasthan.

Outcomes of the meeting:

- The meeting deliberated upon various issues including the steps required for the capacity building and reforms in customs.
- It also discussed and deliberated upon amended Kyoto protocol, digital customs, e-commerce among other issues.
- Summary of various efforts made by National Trade Facilitation Committee (NTFC) for trade facilitation was also tabled in the meeting.

World Customs Organisation (WCO):

- What is it? WCO is independent intergovernmental body whose mission is to enhance effectiveness and efficiency of Customs administrations. It was established in 1952 as Customs Co-operation Council (CCC). It is the only international organization with competence in Customs matters and is considered as voice of international Customs community.
- *It is headquartered* in Brussels, Belgium.
- *Composition:* It represents 182 Customs administrations across the globe that collectively process approximately 98% of world trade.
- Functions: It plays leading role in discussion, development, promotion implementation and of modern customs systems and procedures. It offers range of Conventions and other international instruments, as well as technical assistance and training services to its members. It also actively supports its members in their endeavours to modernize and build capacity within their national Customs

- administrations.
- *Objectives:* It aims to enhance efficiency and effectiveness of member customs administrations and assist them to contribute successfully to national development goals, particularly revenue collection, national security, trade facilitation, community protection, and collection of trade statistics.







Indian Ocean Naval Symposium (IONS)

In The News: The 10th anniversary celebrations of the Indian Ocean Naval Symposium (IONS) is being held in Kochi.

 The commemorative Special Cover of IONS 10th Anniversary celebrations depicts a map of the Indian Ocean and littoral countries of the IOR, signifying the geopolitical importance of the region.

About IONS:

- IONS, the 21st century's first significant international maritime security initiative launched in February 2008, provides a forum for discussion of regional maritime issues and promotes friendly relationships among member nations. It presently has 24 members and eight observer navies.
- It is a voluntary initiative that seeks to increase maritime co-operation among navies of the littoral states of the Indian Ocean Region by providing an open and inclusive forum for discussion of regionally relevant maritime issues and, in the process, endeavors to generate a flow of information between naval professionals that would lead to common understanding and possibly agreements on the way ahead.
- Under the charter of business adopted in 2014, the grouping has working groups on Humanitarian Assistance and Disaster Relief (HADR), Information Security and Interoperability (IS&I) and anti-piracy now renamed as maritime security.





International Telecommunications Union (ITU)

In The News: India has been elected as a Member of the International Telecommunications Union (ITU) Council for another 4-year term (2019-2022). The elections to the Council were held during the ongoing ITU Plenipotentiary Conference 2018 at Dubai, UAE.

> By securing 165 votes, India ranked third among the 13 countries elected to the Council from the Asia- Australasia region, and eighth among the 48 countries elected to the Council The ITU has globally. 193memberstates who elect representatives to the Council.

About International Telecommunication Union (ITU):

- The International Telecommunication Union (ITU) is an agency of the *United Nations (UN)* whose purpose is telecommunication coordinate operations and services throughout the world.
- Originally founded in 1865, as the International Telegraph Union, the ITU is the oldest existing international organization.
- ITU headquarters are in Geneva, Switzerland.

The ITU consists of three sectors:

- 1. Radiocommunication (ITU-R)ensures optimal, fair and rational use of the radio frequency (RF) spectrum.
- 2. Telecommunication Standardization (ITU-T)formulates recommendations for standardizing telecommunication operations worldwide.
- 3. Telecommunication **Development** (ITU-D) — assists countries in developing and maintaining internal communication operations.

ITU, including all UN member states except the Republic of Palau, plus the Vatican City.

Membership of ITU is open to only UN members, which may join the Union as Member States, as well as to private organizations like carriers, equipment manufacturers. funding bodies. development research and organizations and international and telecommunication regional organizations, which may join ITU as non-voting Sector Members.

Functions:

- The ITU sets and publishes regulations and standards relevant to electronic communication and broadcasting technologies of all kinds including radio, television, satellite, telephone and the Internet.
- The organization conducts working parties, study groups and meetings to address current and future issues and to resolve disputes. The ITU organizes and holds an exhibition and forum known as the Global TELECOM every four years.
- Another important aspect of the ITU's mandate is helping emerging countries establish and develop telecommunication systems of their

Although the recommendations of the ITU are non-binding, most countries adhere to them in the interest of maintaining an effective international electronic communication environment.

Membership:

There are 193 Member States of the







UN Habitat

In The News : The National Mission for Clean Ganga partnered with UN Habitat recently organized a policy dialogue-

'Urban Cafe: River for Habitat' in New Delhi on the occasion of World Cities Day 2018.

> Experts in the sector got together to discuss the deep association that rivers have with various aspects of human civilization – our cities, our economy and various facets of our daily lives, the challenges to maintaining healthy river ecosystems and ways to deal with the same.

About UN Habitat:

The United Nations Human Settlements Programme (UN–Habitat) is the United Nations agency for human settlements and sustainable urban development.

It was established in 1978 as an outcome of the First UN Conference on Human Settlements and Sustainable Urban Development (Habitat I) held in Vancouver, Canada in 1976.

- It is mandated by the United Nations General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. It is a member of the United Nations Development Group.
- The mandate of UN-Habitat derives from the Habitat Agenda, adopted by the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey, in 1996. The twin goals of the Habitat Agenda are adequate shelter for all and the development of sustainable human settlements in an urbanizing world.
- As an inter-governmental policy making and decision making body, the Governing Council of UN-Habitat seeks to promote integral and

- comprehensive approach to human settlements, assist the countries and regions in addressing human settlement problems and strengthen cooperation among all countries on human settlement issue.
- UN-Habitat reports to the United Nations General Assembly. World Cities Day 2018:
- World Cities Day is celebrated every year on October 31st.
- **Theme:** "Building sustainable and resilient cities".
- Significance: The Day is expected to greatly promote the international community's interest in global urbanization, push forward cooperation among countries meeting opportunities and addressing challenges of urbanization, and contributing to sustainable urban development around the world.





E-Registration Must For Jobs In 18 Countries

- In The News: Ministry of External Affairs is planning to bring in a rule according to which Passport holders with "non- Emigration Check Required (non-ECR)" status will have to get themselves registered with the Ministry of External Affairs before taking up jobs abroad.
- The non-ECR category of passengers include Indians paying income tax and those with educational qualification above matriculation.
- As of now only ECR category passport holders were required to get emigration clearance from the office of the Protector of Emigrants to seek employment abroad.

Key facts:

- The rule, which takes effect on January 1, is aimed at the welfare of Indians going abroad. It applies to jobs in 18 countries, including the six Gulf Cooperation Council nations, which have the largest number of expats.
- The objective of the directive is to protect workers with higher educational qualification from not getting into blue collar jobs. Previously only ECR stamped passport holders had to go through the mandatory emigrate registration since 2015.
- All those seeking employment will have to register online via the website www.emigrate.gov.in. Those failing to register at least 24 hours prior to actual departure will be off-loaded at the airports.

Indians working abroad- relevant stats:

• Statistics available with the Ministry of External Affairs showed that UAE is one of the five top destination countries for Indians taking up employment. Nearly 1.5 lakh Indians had taken up employment in that country last year.

- This was followed by Saudi Arabia (78,611); Kuwait (56,380); Oman (43,332) and Qatar (24,759).
- The job roles were that of mason (52,833); labour (49,490); carpenter (41,588); helper (23,6700; and electrician (17,703). Incidentally Uttar Pradesh has emerged as the top laboursending State with 88,450 Indian emigrants registering with the emigrate system. This was followed by Bihar (69,426); Tamil Nadu (38,341); West Bengal (36,599) and Rajasthan (32,184).
- The other countries where registration is required are Afghanistan, Indonesia, Iraq, Jordan, Lebanon, Libya, Malaysia, Sudan, South Sudan, Syria, Thailand and Yemen.

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India Votes Against Unga Draft Resolution On Use Of Death Penalty

In The News: India has voted against a *United Nations General Assembly draft resolution on the use of death penalty*, saying it goes against the statutory law of the country where an execution is carried out in the "rarest of rare" cases.

UN Against Death Penalty:

- The draft resolution, taken up in the Third Committee (Social, Humanitarian, Cultural) of the General Assembly was approved with a recorded vote of 123 in favour, 36 against and 30 abstentions.
- The draft aimed to ensure that it is not applied on the basis of discriminatory laws or as a result of discriminatory or arbitrary application of the law.
- The resolution sought to promote a moratorium on executions with the aim of abolishing death penalty.
- India was among the countries that voted against the resolution, which would have the Assembly call on all States to respect international standards on the rights of those facing death penalty.

India's views:

- India has voted against the resolution as a whole, as it goes against statutory law in India. The death penalty is exercised in 'rarest of rare' cases, where the crime committed is so heinous that it shocks the conscience of the society.
- Indian law provides for all requisite procedural safeguards, including the right to a fair trial by an independent Court, presumption of innocence, the minimum guarantees for defence, and the right to review by a higher court.







India's Nuclear Triad Is Complete

In The News: India has declared that its nuclear triad, stated in its nuclear doctrine, is operational indigenous ballistic missile nuclear submarine INS Arihant recently achieved a milestone by conducting its first deterrence patrol.

> The submarine recently returned from its first deterrence patrol, completing the establishment of the country's survivable nuclear triad. INS Arihant is now capable of prowling the deep seas carrying ballistic missiles equipped with nuclear warheads.

Significance:

- This places India in the league of the few countries that can design, construct and operate ship submersible ballistic nuclear (SSBN).
- Given India's stated position of 'No-First-Use' (NFU) in launching nuclear weapons, the ship submersible ballistic nuclear (SSBN) is the most dependable platform for a second-strike. Because they are powered by nuclear reactors, these submarines can stay underwater indefinitely without the adversary detecting it. The other two platforms land-based and air-launched are far easier to detect.

About INS Arihant:

Arihant was commissioned into service in August 2016. It has a displacement of 6000 tonnes and is powered by an 83 MW pressurised light-water reactor with enriched uranium.

India's NFU:

In 1998, India conducted nuclear tests under Pokhran-II and in 2003, it declared its nuclear doctrine based on credible minimum deterrence and a NFU policy while reserving the right of massive retaliation if struck with nuclear weapons first.

What is no first use nuclear doctrine?

- No first use (NFU) refers to a pledge or a policy by a nuclear power not to use nuclear weapons as a means of warfare unless first attacked by an adversary using nuclear weapons. Earlier, the concept had also been applied to chemical and biological warfare.
 - India first adopted a "No first use" policy after its second nuclear tests, Pokhran-II, in 1998. In 1999, August the Indian government released a draft of the doctrine which asserts that nuclear weapons are solely for deterrence and that India will pursue a policy of "retaliation only".
 - The document also maintains that India "will not be the first to initiate a nuclear first strike, but respond with punitive retaliation should deterrence fail" and that decisions to authorise the use of nuclear weapons would be made by the Prime Minister or his 'designated successor(s)'.

Why India should retain this policy?

- Adopting a no-first use policy enables New Delhi to keep the nuclear threshold high, especially as Pakistan tries to lower the threshold by developing tactical nuclear weapons, the Hatf-9 with 60km
 - It must also be noted that New Delhi is not bordered by just one nuclear weapon state. China adopts a no-first use policy and, in spite of calls for Beijing to revise its no-first use doctrine, it is unlikely to do so. Hence, if New Delhi gave up its no-first use doctrine, it could give Beijing a chance to adopt a first strike policy and shift blame on India.
 - In fact, India's adoption of a first strike policy would be an easy excuse





for Beijing to give up its no-first use doctrine against the United States and Russia as well.

- Moreover, India has always promoted herself as a responsible nuclear weapon state. Hence, a first strike policy would severely damage India's reputation as a responsible nuclear weapon state. This means that while India would not be resilient to any nuclear attack by its adversaries, at the same time, it will not act as a villain who tries to bully its adversaries by threatening to strike first.
- Also, it is India's no first use doctrine that has enabled both Pakistan and India to keep their nuclear arsenal in a de-mated posture rather than a ready deterrent posture. This means nuclear warheads are not mated with the delivery systems. This reduces the chances of nuclear terrorism in Pakistan and also reduces the likelihood of an accidental launch of a nuclear weapon. A first strike policy by India may not have allowed Pakistan to keep their nuclear arsenal in a de-mated posture.
- o There is also the issue of ballistic missile defense being developed by India which is highly destabilizing in nature and hence, New Delhi would continue to resort to using its no-first use doctrine in order to prevent instability in the South Asian region. A first-strike policy, coupled with a ballistic missile defense system, could provoke Pakistan to launch a nuclear pre-emptive strike against India.
- New Delhi has also made it evident that nuclear weapons are indeed the weapons of last resort. Abandoning this doctrine would make it evident that India considers the option of using nuclear weapons in the initial phases of the conflict. In fact, India's

nuclear strategy is dependent on punitive retaliation. This strategy itself acts as deterrence against Pakistan.







World's First Sovereign Blue Bond By Seychelles

In The News : The Republic of Seychelles has launched the world's first Sovereign Blue Bond, a financial instrument designed to support sustainable marine and fisheries projects. With this, Seychelles became the first nation to pioneer such a novel financing instrument.

> The bond raised USD 15 million from international investors. The demonstrates the potential for countries to harness capital markets for financing the sustainable use of marine resources.

Key features and uses of the Blue Bond:

- The Blue Bond is a part of an initiative that combines public and private investment to mobilise resources for empowering local communities and businesses. It will greatly assist Seychelles in achieving a transition to sustainable fisheries and safeguarding oceans.
- The Seychelles blue bond is partially guaranteed by a USD 5 million guarantee from the World Bank (IBRD) and is further supported by a USD 5 million concessional loan from the Global Environment Facility (GEF) which will partially cover interest payments for the bond.
- Proceeds from the bond will be utilised for the expansion of marine protected areas, improved governance of priority fisheries and the development of the Sevchelles' blue economy.
- Proceeds from the bond will also contribute to the World Bank's South West Indian Ocean **Fisheries** Governance and Shared Growth Program, which supports countries in the region to sustainably manage their fisheries and increase economic benefits from their fisheries sectors.
- Grants will be provided through the Blue Grants Fund and will be managed by the Seychelles'

Conservation and Climate Adaptation Trust (SeyCCAT).

> Loans will be provided through the Blue Investment Fund and will be managed by the Development Bank of Seychelles (DBS).

Facts for Prelims:

The Seychelles is an archipelagic nation consisting of 115 granite and coral islands in the Indian Ocean, off East Africa.

- As one of the world's biodiversity hotspots, Seychelles is balancing the need to develop economically and protect its natural resources.
- After tourism, the fisheries sector is the most important industry in the country, contributing significantly to annual GDP and employing 17 percent of the population. Fish products make up around 95% of the total value of domestic exports.





President Of India Addresses National Assembly Of Vietnam

In The News:

The President of India held bilateral meetings with the President of Vietnam as well as led delegation- level talks.

The two countries signed and exchanged four agreements:

- An agreement between the Ministry of Information and Communication of Vietnam and the Ministry Communications of India.
- An agreement of cooperation between the Department of Foreign Affairs of Provinces, Ministry of Foreign Affairs, Vietnam, and the Indian Business Chamber in Vietnam.
- An academic agreement between the Ho Chi Minh National Academy of Politics, Hanoi, and the Jawaharlal Nehru University, New Delhi.
- agreement between Confederation of Indian Industry and the Vietnam Chamber of Commerce and Industry.
- 1. Vietnam and India share a vision for the Indo-Pacific Region, where the South China Sea is a critical component.
- 2. Further, India has consistently supported ASEAN's unity and centrality and ASEAN-led mechanisms for regional security and economic architecture - to promote peace and prosperity in the Indo-Pacific Region.

Indian investors are keen to strengthen their presence in Vietnam:

- India seeks Vietnam's support in facilitating Indian investments in like renewable sectors energy, infrastructure, agriculture, textiles, pharmaceuticals, and oil and gas.
- India also looks forward to cooperation with Vietnam in improving agricultural productivity.

- India wants to enhance bilateral cooperation in the maritime domain instance, through our Bilateral Maritime Security Dialogue to be hosted by Vietnam in early 2019.
- Maritime security, piracy, and drug trafficking using the oceans are issues of common concern.

Dialogue for Maritime Security:

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Protocol Amending India-China DTAA

- The Government of Republic of India and the Government of the People's Republic of China have amended the Double Taxation Avoidance Agreement (DTAA) by signing a Protocol.
- of income from shipping, air transport, inheritance, etc.
- India has DTAAs with more than eighty countries.

Purpose of the amendment of DTAA:

- For the avoidance of double taxation.
- For the prevention of fiscal evasion with respect to taxes on income.

Additional changes by signing the Protocol:

- It updates the existing provisions for exchange of information to the latest international standards.
- It incorporates changes required to implement treaty related minimum standards under the Action reports of Base Erosion & Profit Shifting (BEPS) Project, where India participated on an equal footing.

Legal Provision:

• Under Section 90 of the Income-tax Act, 1961, India can enter into an agreement with a foreign country or specified territory for the avoidance of double taxation of income, for the exchange of information for the prevention of evasion.

Double Taxation Avoidance Agreement (DTAA):

- It is referred as Tax Treaty, a bilateral economic agreement between two nations that aims to avoid or eliminate double taxation of the same income in two countries.
- A DTAA applies in cases where a taxpayer resides in one country and earns income in another.
- DTAAs can either be comprehensive to cover all sources of income or be limited to certain areas such as taxing





UN Migration Pact

In The News: The Australian Government has announced that it would not sign the UN Global Compact for Migration saying that the agreement would undermine its existing immigration policies. Australia argues that the Compact is inconsistent with its well- established policies and not in Australia's interest.

Australia's arguments:

Australia believes that its immigration policy already promotes safe, orderly and regular migration. Hence, adopting the pact would risk encouraging illegal entry to Australia and reverse the hard-won successes in combating the peoplesmuggling trade.

Background:

Australia's harsh immigration policy detains asylum-seekers who try to reach the country by boat on remote Pacific islands. While the policy has led to a decline in people-smuggling, hundreds of people are now being held in Papua New Guinea and Nauru.

About Global Compact on Migration:

- United Nations for first time has finalized Global Compact for Safe, Orderly and Regular Migration to better manage international migration, address its challenges, strengthen migrant rights and contribute to sustainable development.
- The agreement will be formally adopted by world leaders in Morocco in December 2018. Key facts:
- The compact is the first intergovernmental agreement to cover wide-ranging dimensions international migration in holistic and comprehensive manner, agreed upon by all the UN member states minus the United States.
- It sets out 23 objectives to deal issues ranging from factors that compel

people to move, legal channels for migration, combating trafficking and smuggling, harnessing the economic benefits of migration and return of the migrants.

• It is not legally binding.

Need for a global compact:

- Over 250 million migrants worldwide account for 3% of the world's entire population, but contribute 10% of the global gross domestic production (GDP).
- Migrants remittance is huge contributor to their home countries' development.

Way ahead:

The Global Compact for Migration offers the international (GCM) community the opportunity to improve workplace productivity and deliver decent work outcomes for migrant and national workers, as well as to shift current misperceptions of migration, by readjusting migration policies to effectively include all labour market aspects.

Facts for Prelims:

The GCM is meant to be consistent with target 10.7 of the 2030 Agenda for Sustainable Development – in which Member States committed to cooperate internationally to facilitate orderly, safe and responsible migration.







First India-Nepal Passenger Train On Broad Gauge To Make First Run In December

In The News: The first passenger train to run on broad gauge between India and Nepal will run from December this year.

Key facts:

- The train will run from Jayanagar in Bihar to Kurtha in Dhanusa district in Janakpur Zone of south-eastern Nepal, which is a 34 km stretch.
- No visa will be required for Indian and Nepalese nationals crossing the border through this stretch.

Significance:

 After Beijing decided to extend its railway network up to Kathmandu, New Delhi proposed the construction of new railway links during Prime Minister K P Sharma Oli's recent visit to India. The move is being seen as part of efforts to counter China's plans to forge rail links with Nepal.







International Tourism Mart

What is it? The Ministry of Tourism, Government of India, in association with the Department of Tourism, Government of Tripura and the North the 7th Eastern States is organizing "International Tourism Mart" in Agartala, Tripura.

Key facts:

- This is the 7th edition of the International Tourism Mart, annual event organised in the North Eastern region with the objective of highlighting the tourism potential of the region in the domestic and international markets.
 - o It brings together the tourism business fraternity and entrepreneurs from the eight North Eastern States..
 - The event has been planned and scheduled to facilitate interaction between buyers, sellers, media, Government agencies and other stakeholders.
 - The International Tourism Marts are organised in the North Eastern States on rotation basis. The earlier editions of this mart have been held in Guwahati, Tawang, Shillong, Gangtok and Imphal.

Background:

- The North East Region of India comprising the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim, is endowed with diverse tourist attractions and products.
- The varied topography of the region, its flora and fauna, the ethnic communities with their rich heritage of ancient traditions and lifestyles, its festivals, arts and crafts, make it a holiday destination waiting to be explored.

- The ITM will see wide participation of buyers International and media delegates from countries around the world and from different regions of the
- They will be engaging in business-tobusiness meetings with sellers from the North Eastern Region.
- This will enable the tourism product suppliers from the region to reach out to international and domestic buyers, with the objective of promoting tourism to the region.

Need and significance of the event:







Global It Challenge For Youth With Disabilities 2018

In The News: The Global IT Challenge for Youth with Disabilities, 2018, being organised by the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice **Empowerment** in association Rehabilitation International Korea and their associated partner LG Electronics, is being held in New Delhi.

About the Global ICT Challenge for Youth with Disabilities:

- The Global ICT Challenge for Youth with Disabilities is a capacity building project that helps youth with disabilities to overcome their limitations and challenge themselves for a better future by providing them with access to ICT and related experiences, improving their ability to information leverage and participation while setting ICT agendas for participant countries related to disabilities and boosting international cooperation and exchange.
 - > The objective of the event is to leverage IT skills among youth with disabilities and also to spread awareness about the application of Information and Computer Technology (ICT) in enhancing the quality of life of persons with disabilities especially in Asia-Pacific region.
 - Participants: This year around 100 youth with disabilities (visual disability, hearing disability, locomotor disability intellectual disability/developmental disorder) from 18 countries are participating in the event.
 - The competition is focused on strategies for strengthening IT skills of youth with disabilities as a critical requirement for enhancing their access to information and

communication services on an equal basis with others. It is being held with a total of four events including e-Tool Challenge to evaluate the skills of using the MS Office programme and e-Life Map Challenge to evaluate the online information search ability specific situations.

Significance of ICT:

- Today, plethora we have applications and softwares across the world that can be used for improving the life skills of persons with disabilities to enable them to lead the dignified life such ICT tools can work as communication bridge for the persons with disabilities.
- The use of ICT can reduce digital divide and expand social integration of with disabilities communities and counties by creating accessible global information network.

Way ahead:

India has always been in the forefront of software development in the world. However, there is a need to create deeper and wider awareness about the application of ICT at the grass root level for empowering the person with disabilities.







Partial Credit Enhancement (PCE)

In The News : The Reserve Bank of India (RBI) has allowed banks to provide partial credit enhancement (PCE) to bonds issued by systemically important non-deposit taking nonbanking financial companies (NBFCs) registered with the RBI and housing finance companies (HFCs) registered with the National Housing

What is credit enhancement?

- Credit enhancement means improving the credit rating of a corporate bond. For example, if a bond is rated BBB, credit enhancement, which is basically an assurance of repayment by another entity, can improve the rating to AA. This is done to provide an additional source of assurance or guarantee to service the bond.
- RBI has now allowed banks to provide credit enhancement up to 20% of the total bond issue. This means banks (one or many together) can assure repayment of dues related to a bond issue up to 20% of the value. Other than banks, organisations such as India Infrastructure Finance Co. Ltd also provide this facility.

Significance:

- The move is aimed at enhancing the credit rating of the bonds and enabling these NBFCs to access funds from the bond market on better terms.
- PCE is expected to help NBFCs and HFCs raise money from insurance and provident or pension funds who invest only in highly-rated instruments.

Key facts:

- The tenure of these bonds shall not be less than three years and proceeds from them shall only be utilized to refinance existing debt.
- Banks shall introduce appropriate mechanisms to monitor and ensure that the end-use condition is met.

- The central bank has restricted the exposure of a bank through PCEs to bonds issued by each such NBFC or HFC to 1% of capital funds of the bank within the current single and group borrower exposure limits.
- Banks are allowed to provide PCE as non-funded subordinated facility in the form of a contingent line of credit to be used in case of shortfall in cash flows for servicing the bonds and thereby improve the credit rating of the bond issue.

Background:

- The incentive comes at a time when NBFCs and HFCs have requested the government and regulators to ensure that confidence returns to the market.
- They have sought relaxations of the National Housing Bank's credit rating norms related to refinance, lowering of the criterion on years of existence to one year, providing for 10% of the loan loss by the government and capital infusion in banks.

BENEFITS FOR THE ISSUER:

- Typically, bonds issued by subsidiaries or special purpose vehicles (SPVs) of infrastructure companies enhancement. Since the projects take a long time to become operational and generate money, along with the risk of implementation, often their formal credit rating is not very high. Through the credit enhancement facility, the existing rating can be improved at an early stage, which enables the issuer to raise funds at a relatively lower yield. Higher the credit rating, lower is the cost of raising funds.
- Since these bonds are long-term in nature, they appeal to institutional investors like pension funds and insurers. However, these investors,





especially pension funds, invest mostly in investment grade securities which are at least AA-rated. Credit enhancement makes the bonds more attractive by improving the rating enough so that institutional investors become interested in adding these to their portfolios.

BENEFIT FOR THE INVESTOR:

- For the investor, the facility provides a sort of insurance in case of hard times.
 Basically, the credit enhancement gets used only when there is a shortfall in either paying interest or repaying principal.
- Hence, investors are more secure about repayment even if there is uncertainty regarding cash flows for some time.

BENEFITS FOR THE BOND MARKET:

- The bond market will benefit as more issues get placed, which will help in developing the secondary market. This is useful in giving investors an early exit route, and in adding stability to secondary market transactions in longterm corporate bonds.
- At present, however, there is not much trading happening in long-term corporate bonds from infrastructure companies in the secondary market.











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Integrated Health Information Platform (IHIP)

What is IHIP?

- It is real time, village wise, case based electronic health information system with GIS tagging which will help in prompt prevention and control of epidemic prone diseases.
- It will provide near-real-time data to policy makers for detecting outbreaks, reducing the morbidity and mortality and lessening disease burden in the populations and better health systems.
- The objective behind setting up IHIP was to enable creation of interoperable Electronic Health Records (EHRs) which can be made available and accessible throughout the country.
- Information from other branches like tuberculosis control programme, maternal and child health programme and non-communicable disease programme also will be included in this platform.

Benefits from IHIP

- Reducing Medical Errors It provides a vehicle for improving quality and safety of patient care by reducing medication and medical errors.
- Patient Involvement- It stimulates consumer education and patients' involvement in their own health care.
- Increases efficiency by eliminating unnecessary paperwork and provides caregivers with clinical decision support tools for more effective care and treatment
- Improves public health reporting and monitoring by creating a potential loop for feedback between health- related research and actual practice. Further, it provides a basic level of interoperability among electronic health records (EHRs) maintained by individual physicians and organizations.
- **Technology in Healthcare** It facilitates efficient deployment of emerging technology and health care services and provides the backbone of technical

infrastructure for leverage by national and State level initiatives

Integrated Disease Surveillance Programme (IDSP)

- IDSP is a disease surveillance scheme under National Health Mission, under the Ministry of Health and Family Welfare in India, assisted by the World Bank.
- The scheme seeks to set up a Central Disease Surveillance Unit and a State Surveillance Unit in each State where data is collected and analyzed.
- The IDSP portal is a one stop portal which has facilities for data entry, view reports, outbreak reporting, data analysis, training modules and resources related to disease surveillance.

Way forward

- While digitization of health records is a
 welcome step, there is a need to enhance
 research facilities to deal with new and
 emerging viral threats like Zika Virus,
 Nipah Virus etc.
- Further, utilizing such technical advancements would entail a need for well trained and committed workforce who would regularly monitor the cases.

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The 26th General Conference on Weights & Measures (CGPM) in a historic decision unanimously redefined World's standard definition of **kilogram**, **Ampere**, **Kelvin**, **and Mole**.

Impact of Change

- It will result in **uniform and worldwide accessible SI system** for high- technology
 manufacturing, basic science, etc. For
 example earlier the scientific definition of
 the "second" had helped ease
 communication across the world via
 technologies like GPS and the Internet.
- The units shall be **stable in the long term**, internally self-consistent and practically realisable being based on the present theoretical description of nature at the highest level.
- It will **not be bound by the limitations of objects in our measurement** of the world,
 but have universality accessible units that
 can pave the way to even greater accuracy
 and accelerate scientific advancement.
- It will **not change measurements in our day to day life** like in kitchen, trade & transport etc. Thus for most people, everyday life will carry on as normal despite the redefinitions.

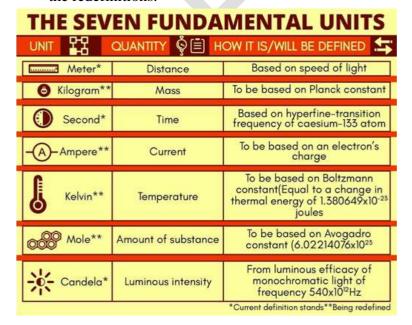
General Conference on Weights and Measures (CGPM)

- CGPM is the highest international body of the world for accurate and precise measurements.
- India became a signatory in 1957.
- The CGPM meets usually once every four years
- The International Bureau of Weights and Measures (BIPM), the main executive body of CGPM has the responsibility of defining the International System of Units (SI).

International System of Units (SI Units)

• The SI system was adopted in 1960.

There are seven fundamental units. Every other unit of measurement can be derived from one or more of these seven units: the unit for speed, for instance, factors in the units for distance and time.







Human Microbiome

In The News: Indian Human Microbiome Initiative, led by The National Centre for Microbial Resource (NCMR) - National Centre for Cell Science (NCCS) has been put up for approval.

What is Microbiome?

- The collective genome of all microorganisms contained within the human body, residing inside tissues & bio-fluids is called Human Microbiome. It includes bacteria, archaea, fungi, protists and viruses.
- Most of them have either commensal (coexist without harming humans) mutualistic (each benefit from the other).
- Different parts of human body including the skin, mammary glands, placenta, uterus, ovarian follicles, lungs, saliva, oral mucosa, conjunctiva, biliary and gastrointestinal tracts, are occupied by characterstic microbial populations.
- The composition of microbiome is shaped by factors such as genetics, dietary habits, age, geographic location and ethnicity. Human microbiome makes up around 2% of the body mass of the adult.

Importance of the Human Microbiome

- Microbial communities play a key role in many aspects of host physiology:
 - o Metabolism of otherwise complex indigestible carbohydrates and fats
 - o Production of essential vitamins
 - o Maintaining immune systems
 - o Acting as a first line of defense against pathogens
 - Influence the susceptibility to certain infectious diseases, as well as contribute to disorders such as obesity and diabetes
 - o Determines how one responds to a particular drug treatment
- The diversity of microbes that make up human microbiome could lead to novel therapies e.g. an infection caused by a 'bad' bacterial species can be treated by

promoting the growth of 'good' bacteria.

About Human Microbiome Project (HMP)

- Human Microbiome Project is a research initiative of US's National Institute of **Health** with the mission to generate the resources and expertise needed characterize the human microbiome and analyze its role in health and disease.
- Launched in 2007, it is focused on identifying and characterizing human microbial fauna and elucidating their roles in health and diseases.
- Some methodologies used in HMP are:
 - **Metagenomics** as a culture-independent method of broad microbial community characterization
 - Whole Genome Sequencing (WGS) to provide a "deep" genetic perspective on aspects of a given microbial community, *i.e.* individual bacterial species

Metagenomics

- It is a sequence-based approach that allows the genetic material from the complete collection of microbes to be analyzed in their natural environment without needing to cultivate the microorganisms.
- Currently, only a small percentage of the bacteria that comprise the human microbiome have been identified and studied. Majority (>95%) of them are **difficult to isolate and** culture, because the required growth conditions cannot be reproduced in the laboratory.
- However, recent technological advances in DNA sequencing and the development of **meta-genomics** have now made it feasible to analyze the entire human microbiome.

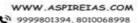
Human Microbiome Research in India

- India doesn't have a dedicated national human microbiome project. But, the proposed Indian Human Microbiome Initiative holds a lot of potential.
- The project will include collection of saliva,



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stool and skin swabs of 20,000 Indians across various ethnic groups from different geographical regions. India provides for a wide range of research with more than 4,500 ethnic groups and presence of two global biodiversity hotspots (Himalayan range and Western Ghats).

Scientists have found that Indian population, particularly tribals, have distinct gut microbiota than individuals from other parts of the world. Such tribal populations largely unaffected by "modern" diet and have lower prevalence of lifestyle diseases and their study would shed some light on mutualism between gut microbiota and the host.



Earth Biogenome Project

In The News: International biologists have launched an ambitious Earth BioGenome **Project** at an estimated cost of \$4.7bn.

About Earth BioGenome Project

- It aims to sequence, catalog characterize the genomes of all of Earth's eukaryotic biodiversity over a period of ten vears.
- It involves projects by various countries:
 - o **US-led project** to sequence the genetic code of tens of thousands of vertebrates
 - o Chinese project to sequence 10,000 plant genomes
 - The Global Ant Genomes Alliance. which aims to sequence around 200 ant genomes.
- UK participants, led by the Wellcome Sanger Institute, will also sequence the genetic codes of all 66,000 species inhabiting Britain in a national effort called the Darwin Tree of Life.
- Currently, fewer than 3,500, or about 0.2 per cent of all known eukaryotic species on Earth have had their genome **sequenced**.
- Physical samples would be stored frozen in liquid nitrogen in four or more facilities located in different parts of the world, and repositories of digitised information would be created.
- The completed project will generate at least 1 exabyte (that is, 1 billion gigabytes) of data, which is to be shared online for free.
- The initiative would produce a database of biological information that provides a platform for scientific research and supports environmental and conservation initiatives.
- The participating institutions would raise their own funding as far as possible. However, the project has the backing of the World Economic Forum
- The potential benefits of EGP are compared to those from Human Genome Project, which has transformed research into human health and disease.

Significance of Project

- Saving **Biodiversity:** Given Change and related worries such as loss of forest cover, about 50% of current biodiversity could be lost by the end of the 21st century in what is being referred to as the Sixth Great Extinction. This Project will help record the genomes of organisms at risk.
- Discovery of Unknown Species: It is believed that there are somewhere between 2 million and 3 million eukaryotic species on the planet. Only about half have been identified so far.
- New Resources: It should also lead to the discovery of new drugs, new biofuels, and agricultural technologies, boost with obvious commercial benefits.
- **Generate Revenues:** It could help to boost scientific capacity and generate revenues for poor countries with rich biodiversity.
- **Better Understanding:** It will revolutionize the understanding of biology and evolution and thus create new approaches for the conservation of rare and endangered species.

Challenges in Project

- **High Quality data:** The most difficult part in EBP will be to acquire and process highquality samples from species that are hard to reach.
- Lack of Technologies: New technologies such as specimen-collecting drones may need to be developed.
- **IPR issue:** There are complicated protocols involved in transferring physical samples and genetic data across borders, and there are bound to be disputes about the sharing of the benefits obtained.
- **Legal Frameworks:** While the Nagoya Protocols of 2014 provide a framework for transfers. the United Convention on Biological Diversity will have to work out new protocols and, ideally, create a new, transparent and equitable legal framework.





10 Years of 26/11 Mumbai Attack

In The News: Recently, India commemorated 10 years of Mumbai attacks.

Failures that led to the attack & subsequent consequences

One of the deadliest terror attacks to be staged on Indian soil, it exposed several lacunae in Indian security infrastructure, making it a 'watershed' moment in India's internal security paradigm:

- The perpetrators came by the sea-route and used a combination of tools (gun-fire, bombs and grenades) to unleash terror. It India's maritime exposed vulnerabilities, including absence of deep sea surveillance and malfunctioning coastal policing.
- Highly sophisticated state of the art communications were used including **Voice-Over-Internet-Protocol** (VoIP), which Indian intelligence agencies were unable to intercept.
- There was a complete **failure of intelligence** coordination. The tip-offs related to the visits of American-born Pakistani terrorist David Richard Headley to India by CIA were not adequately heeded to.
- The response to the attack was also slow, despite fishermen reporting activities of armed strangers. Well- trained and better equipped terrorists took local police by Trained NSG & surprise. marine commandos took long to arrive, as there was no NSG hub near Mumbai.
- In absence of defined crisis reportage protocols, live coverage by media channels and on social media helped terrorist handlers to communicate about presence of foreign national in the hotel as well as the impending security operations.
- The attack of 26/11 was a case of 'war by other means', where one state's resources (Pakistan), were employed and authorities (Inter-Services Intelligence Directorate, Pakistani armed forces etc) were directly

involved to carry out terror attacks in a major Indian city. India's lack of resolve to follow through & respond in an appropriate, adequate and timely manner against grave provocations (such as crossborder terror) failed to act as a strategic deterrent.

Improvements in security mechanism since

- **Coastal Security Preparedness:**
 - **3-layered protection** of Indian coastal areas has been strengthened responsibilities have been delineated.
 - **Indian Navy:** Beyond 200 Nautical Miles (NM)
 - **Indian Coast Guard:** 12 to 200
 - **Marine Police:** Up to 12NM from shore
 - Coastal Surveillance Network. comprising of static sensors along coasts, automatic identification systems (AIS), long range tracking, day-night cameras and communication devices has been put in place. Vessel Traffic Management System (VTMS) radars are installed on all major & minor ports to facilitate surveillance.
 - Commissioning Information of Management & Analysis Centre in Gurugram for easy collection and dissemination of shipping data for increased awareness.
 - Activities in maritime zones are now more regulated: (i) Multi-purpose ID issued to all fishermen, sea- ferrying services and coastal villages (ii) Uniform licensing of fishing boats (iii) GPS and transponders for tracking.
 - Central Industrial Security Force (CISF) now guards ports. Moreover, Sagar Prahari Bal was constituted as a special force from navy for protection of naval bases.





Operation Sagar Kavach was put in operation post 26/11 to improve coordination between security agencies including Indian Navy, Coast Guard and the local police.

Intelligence Overhaul:

- **National Intelligence** Grid (NATGRID) was constituted to link all governmental databases into create single source of comprehensive intelligence to be accessible to all agencies. It would allow agencies to scan & assess voluminous amount of collected information strategically and identify valuable intelligence leads.
- Multi Agency Centres (MACs) under Intelligence Bureau were strengthened to act as intelligence "fusion- centres" and provide real time 24X7 actionable intelligence.
- Indian Navy constituted Joint Operations Centre to keep vigil over India's extended coastline.
- **Investigation Reforms:**
- **National Investigation Agency** was setup in 2008 as a specialized statutory agency to deal with terrorist offences, without requiring specific consent of the states to take up the cases. Special NIA courts were setup for fast-tracking cases related to terrorism.
- amended Unlawful **Activities** The Prevention Act (UAPA) has given new powers to the security agencies, including the ability to hold terror suspects for 6 months without charges.
- **Response preparedness:**
- The deployment of the National Security (NSG) has also decentralized with 4 new operational **hubs** for the NSG to ensure rapid response to terror attacks.
- Elite commando force called 'Force One' was instituted by Maharashtra government with specialized training in line with the National Security Guards (NSG), as per the recommendations of Ram Pradhan Committee.

Challenges remaining

- Functional Challenges: According to CAG audit reports, **under-utilization** of acquired equipment, delays in creation of shorebased infrastructure, human resources shortages, unspent funds and red-tapism continue to plague the state of coastal policing along India's shoreline.
- Absence of an over-arching counter terror organisation: The government intention to create a National Counter-**Terrorism Centre (NCTC),** as an umbrella organization with control over agencies like National Investigation Agency (NIA), National Technical Research Organisation (NTRO), Joint Intelligence Committee (JIC), National Crime Records Bureau (NCRB) and National Security Guard (NSG), failed due to political opposition on grounds that it violates federal principle (law & order being state subjects)
- **Absence of Apex Maritime Authority:** The National Committee for Strengthening Maritime and Coastal Security (NCSMCS) is at best an ad-hoc arrangement, lacking a statutory backing. The Coastal Security Bill to form a National Maritime Authority (NMA) is mired in red tape since 2013. Marine Police Stations, under governments, are still not fully integrated in the coastal security chain.
- Non-functional Integrated Intelligence **Network: NATGRID** is not in a functional **stage**, though some of its functionalities are being replicated by the Crime and Criminal Tracking Networks & System (CCTNS), meant to seamlessly link India's 15,000-plus stations to allow for better information sharing (according to NCRB 14,749/15,655 police stations connected)
- Financial Constraints: CCTNS received no financial allocation for two consecutive budgets for 2014-15 and hampering the progress of the project. While CCTNS was designed to be used in conjunction with the e-prisons system, the integration has not been successful.

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- Lack of coordination between centre & states: National Investigation Agency (NIA) has also faced backlash from the states, which resist giving up their jurisdiction over policing
- Challenges in traditional policing: The Mumbai attacks of 2008 and Pathankot airbase attack of 2016 indicate that the traditional style of policing is inadequate to deal with modern asymmetric threats from terrorism (lone wolf or remote controlled attacks) /cyber crimes. India's low police-to-population ratio of about 180/100,000 is much lower than United **Nations** (UN) recommendations peacetime policing (~250/100000). The police force being over-worked has huge bearing on their professional responsibilities, including counterterrorism duties.
- Politicization of Terrorism: Partisan politics has led to religious polarization, which has made it difficult for the country to nurture a strong and coherent response to terrorism.
- Way forward
 - To deal with such internal-security threats, the **first responders**, **i.e.** the police, need to have modern equipment and training. Basic training in the police forces must be improved. There is a need to post experienced and competent faculty members in these academies, as well as improve their infrastructure (library, classrooms, fields etc.)
 - **Refresher courses** must be introduced and implemented at all ranks, particularly constabulary, whose immediate response is consequential while dealing with terror attacks. Currently, <7% of police force has received in-service training in last 5 years (BPRD 2017)
 - Dealing with phenomena such as terrorism, insurgency, organized and cyber crime needs **coordinated responses**. Therefore, requisite institutional structure (e.g. NCTC) must be created.
 - There is an acute shortage of cyber

- **specialists** in state police and central paramilitary forces. Retaining domain expertise is not given priority while making appointments. This must be addressed.
- The government must consider setting up a separate Ministry of Internal Security (MoIS).

The attacks of 26/11 not only provoked large-scale public outrage but also pushed the government to finally begin to address the deep-seated, systemic shortcomings in the country's security apparatus. Post 26/11, it was accepted that the ability of terror groups to hit India in the hinterland will depend largely on whether Pakistan perceives us as a hard or soft state. There is a growing realization in Pakistan that public pressure in India will force any government to respond with force against a terror strike, irrespective of the consequences, as evident from surgical strikes after Uri attacks in 2017.





Submarine Completes Nuclear Triad

In The News: The indigenous INS Arihant, nuclear-powered India's first submarine successfully completed its first deterrence patrol, meaning that the submarine is fully ready for its role as a strategic deterrent.

Significance of this event

With the completion of the patrol, India have finally achieved the longstanding ambition to have a nuclear triad, giving the country multiple options if it comes to a nuclear confrontation.

Nuclear Triad

- A nuclear triad refers to the three components of atomic weapons delivery: strategic bombers, intercontinental ballistic missiles (ICBMs) and submarine launched ballistic missiles (SLBMs).
- Of the three elements of the triad, the **SLBMs** are considered the **important** because the nuclear-powered ballistic missile submarine is the hardest to detect, track and destroy.
- A nuclear triad gives a country the ability to launch nukes from land, air and sea. This is important, because if a country initiates a nuclear attack, it cannot destroy all three components of the triad at once, and thus, the component which is intact can launch a retaliatory strike.
- Uniqueness of each leg of Triad: According to Undersea Warfare, the Official Magazine of the US submarine force, each leg of the triad contributes unique attributes that enhance deterrence and reduce risk.
 - o ICBMs provide a prompt response, the potential to launch under attack, and a hardened, geographicallytarget base.
 - Strategic **bombers** provide flexibility in force posturing, signalling intentions, route planning, and recallability.
 - Missile submarines provide survivable, assured response and the mobility to

adapt missile over- flight to targets.

Why India needs a Nuclear Triad?

- India's 'No first use' nuclear policy (NFU) talks of minimum credible **deterrence**. Minimum credible deterrence capability would, however, require India to possess the critical capabilities to ensure the survivability of its nuclear weapons even after a first strike against it. NFU, therefore, casts a responsibility on the nation to achieve a second strike capability. A second strike capability can only be imparted by a Triad.
- India has two nuclear-armed countries (China and Pakistan) on both its eastern and western fronts which makes it particularly imperative for the country to possess adequate deterrence.
- The absence of INS Arihant came to attention during the Doka La standoff with China, when Beijing had flexed muscle in the Indian Ocean. The Indian Ocean Region, crucial for India's strategic interests, has in general been witnessing an increasing presence of Chinese ships and submarines.
- Chinese String of Pearls and Maritime **Silk Road** are attempting to create a Chinese monopoly in the Indian Ocean Region while encircling India from Myanmar to West Asia and Eastern Africa.
- Pakistan last year tested its submarinelaunched Babur missile, and in the process completed its nuclear triad, since it already possesses land-based ballistic missiles as well as tactical nuclear bombs that it can drop from its fighter aircraft.
- India now joins the elite squad of **countries** like Russia, China, France, the US and the UK that possess nuclear- powered submarines. It is the first SSBN (Ship Submersible Ballistic Nuclear) to have been built by a country other than one of the five permanent members of the United Nations Security Council.

What Next?







- More requirement of SSBN: According to the US Navy Institute, a continuous patrol requires a minimum of four SSBNs. This assumes one submarine is on patrol for, say, two to three months; another is in port on standby; while the third and fourth may be undergoing repairs or refits. In this context India needs to speed up its Advanced Technology Vessel (ATV) project to ensure timely delivery of SSBNs.
- Complementary fleet to SSBN: India will require a complementary fleet of ship submersible nuclear (SSN) submarines these are fast, hunter killer subs that will be required to detect and track Chinese and Pakistani undersea activity and warships. The Indian Navy plans to acquire as many as six SSNs, and discussions are on with shipbuilders from France and the US for participating in the project.
- Nuclear Submarine Base: The Indian Navy has commenced Project Varsha the construction of a massive nuclear submarine base south of Visakhapatnam. The base will house India's SSBN fleet. The first phase of the project will be completed by 2022. Its timely completion is crucial for India's Oceanic leg of Nuclear Triad.
- Enhance the range of Missiles: The Arihant is equipped to carry twelve K-15 ballistic nuclear missiles with an abysmally short range of 750 km. This means before launching its missiles, the sub will have to venture close to enemy waters, endangering its own security. A 3,500 km range missile named the K-4 is currently in development. Apart from this, DRDO is also developing 5,000-km range K-5 and 6,000-km range K-6 which would add more teeth to the arsenal.



Advanced Motor Fuels Technology Collaboration Programme(AMF-TCP)

In The News: Recently, Cabinet was apprised that India is joining Advanced
 Motor Fuels Technology Collaboration
 Programme as a member.

About AMF TCP

- It is one of the **International Energy Agency's** (IEA) transportation related Technology Collaboration Programme.
- Its vision is to establish a **sustainable transportation system** that uses advanced, alternative, and renewable fuels, has reduced emissions and meets needs for personal and goods mobility on a local and global scale.
- It will help Ministry of Petroleum & Natural Gas to get sound scientific information and technology assessments to make informed decision making about using advanced fuels.
- Under this, the R&D work is carried out within individual projects called "Annex" which enable members to cooperate in groups that share common interests.
- Other member countries of AMF TCP are USA, China, Japan, Canada, Chile, Israel, Thailand, Republic of Korea etc.

About IEA

- It is an autonomous body within the Organization for Economic Co-operation and Development (OECD) framework established in the wake of 1973 oil crisis.
- It works to ensure reliable, affordable & clean energy for its member countries and beyond.
- Its four main areas of focus are energy security, economic development, environmental awareness, and engagement worldwide.
- An IEA Member country must be a member country of the OECD, but not all OECD members are members of the IEA.
- Apart from 30 members, it has 8 association members including India.

• Requirement for membership:

- o Crude oil reserves equivalent to 90 days of the previous year's net imports.
- o A demand restraint program to reduce national oil consumption by up to 10%.
- o A national plan for Coordinated Emergency Response Measures.
- Ensure all oil companies under its jurisdiction report information upon request.
- Capability of contributing its share of an IEA collective action.

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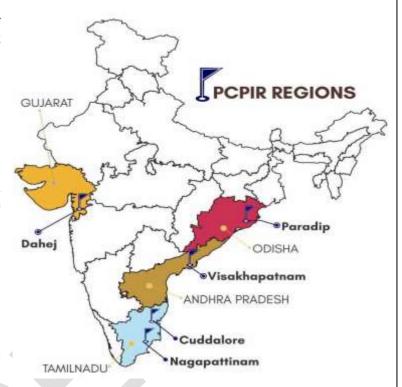


Petroleum, Chemicals And Petrochemical Investment Region

In The News: Recently Minister of State for & **Fertilizers** informed Chemicals Petroleum, Chemicals and Petrochemical Investment Regions (PCPIRs) in India has registered good progress in attracting Investments for Industrial Development and generating employment

About PCPIRs

- PCPIR is based on cluster-based development model for setting manufacturing facilities for both domestic consumption and exports in Petroleum, Chemicals and Petrochemicals.
- The cluster is combination of production units, logistics handling, environmental protection mechanism and social infrastructure.
- It includes Special Economic Zones. Free Trade Zones Warehousing Zones etc.
- Connectivity to the region is provided by state and central governments through Rail, Road, Ports, Airports and Telecom. state government will also be responsible for providing facilities of water, road connectivity (state roads), Waste Treatments linkages etc
- PCPIRs will ensure developing economy of scale in petrochemical sector due to the use of common infrastructure, support services and R&D facilities.
- Chemical and Petrochemical industries generate concerns over environmental degradation. However, PCPIRs follow a robust Environmental Impact Assessment (EIA) mechanism.









City Gas Distribution Projects

In The News: The Prime Minister laid the foundation stone to mark the commencement of work for 9th round of City Gas Distribution (CGD) spanning 129 districts.

More on news

- This has expanded the potential coverage of CGDs to about 50% of country's population spreading over 35% of India's area.
- In addition, PNGRB has also initiated the process of 10th CGD bidding round for additional 50 new GAs covering 124 districts in 14 States to increase the potential coverage to about 53% of the country's area covering 70% of country's population.

National Gas Grid

- At present, about 16000 Km long gas pipeline network is under operation and it has formed a partial gas grid by interconnecting western, northern and southeastern gas markets in the country.
- To have a gas-based economy and enhance the share of gas in the energy basket to 15% from currently 6.5%, the Government has envisaged developing additional 15,000 km of gas pipeline network.
- To provide the clean energy in the Eastern part of the country, the Government is running Pradhan Mantri Urja Ganga Project. These gas pipeline will pass through 50 districts in the State of Uttar Pradesh, Bihar, Jharkhand, Odisha & West Bengal.
- A pipeline of about 750 Km long from Barauni (Bihar) to Guwahati (Assam) will be the gateway to connect Northeastern States with existing gas grid. A Mini Gas Grid in North East covering 1,500 km and connecting capitals, is also being developed by a Joint Venture (JV) of 5 companies. This will also facilitate the completion and creation of a National Gas Grid.

City Gas Distribution (CGD) Network: It is the interconnected network of pipelines to make supply of natural gas to domestic, industrial or commercial premises and CNG stations situated in a specified Geographical Area (GA). CGD networks are being developed based on the availability of trunk gas pipeline connectivity or gas sources and techno-commercial feasibility in a GA.

Progress made so far: As per Ministry of Petroleum and Natural Gas (MoPNG) Annual Report, 2017-18

- 31 CGD companies are developing CGD networks in 81 GAs in 21 States/Union Territories.
- The CGD networks have also connected about 32,500 Industrial & Commercial Units to supply environment friendly fuel i.e. natural gas for energy purpose.
- 1282 CNG stations have been established to cater the CNG demand of transport sector in the country.

September 2018, 96 cities/Districts in Till different parts of the country were covered for development of CGD networks. About 46.5 lakh households and 32 lakh CNG vehicles are availing the benefit of clean fuel through existing CGD networks.

The Petroleum and Natural Gas Regulatory Board (PNGRB) was constituted under The Petroleum and Natural Gas Regulatory Board Act, 2006 with a mandate-

- To protect the interests of consumers and entities engaged in specified activities relating to petroleum, petroleum products and natural gas and to promote competitive markets and for matters connected therewith or incidental thereto.
- To regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas so as and to ensure





uninterrupted and adequate supply of petroleum, petroleum products and natural gas in all parts of the country.

Aims and objectives of National Gas Grid

- To remove regional imbalance within the country with regard to access of natural gas and provide clean and green fuel throughout the country.
- To connect gas sources to major demand centres and ensure availability of gas to consumers in various sectors.
- Development of City Gas Distribution Networks in various cities for supply of CNG and PNG.



First Multi-Modal Terminal On Inland Waterways

In The News: India's first multi-modal terminal on inland waterways was inaugurated on by Prime Minister in Varanasi.

PepsiCo India became the first company to use the country's inland waterways for container movement by transporting products from its plant in Kolkata to Varanasi in the IWAI vessel. MV RABINDRANATH TAGORE.

Detail

- This is the first of the multi-modal terminals constructed on the National Waterway-1 as part of the World Bankaided Jal Marg Vikas project of the Inland Waterways Authority of India.
- The project of multi-modal terminal and proposed Freight Village at Varanasi are generate **500** expected to direct employment and more than 2000 indirect employment opportunities.

Multimodal transport is carried out using different modes of transport such as roadways, railway, waterway, and airway.

Key benefits of multimodal transport are:

- Minimizes time loss at trans-shipment **points:** Multimodal transport operator maintains its communication links and coordinates that interchange onward carriage smoothly at transhipment points.
- Provides faster transit of goods: The markets are psychically reduced by faster transit of goods; the distance between origin or source materials and customers is getting insignificant.
- Reduces the burden of documentation and formalities: The burden of issuing multiple documentation and formalities connected with each segment of the transport chain is reduced to a minimum.
- **Saves cost:** The savings in money from costs resulting from these advantages are

usually reflected in the through freight rates charged by the Multimodal transport operator (MTO) and also in cargo insurance cost.

- **Establishes only one agency to deal with:** The consignor/ consignee needs to deal with only the Multimodal transport operator in all matters relating to goods, or delay in delivery of goods at destination.
- Reduces cost of exports: The inherent advantages will help to reduce the cost of exports and improve their competitive position with pricing in the international market segment.
- Less Congestion: It helps to avoid overburdening of any particular mode of transport and thus saves space and cost associated with congestion. Moreover, this would save fuel and lessen the pollution.

India has witnessed growth in Multimodal transport in the recent times and the sector is still evolving.

- The advent of containerization along with initiatives from the Government such as passing Multimodal Transport Act, 1993 to the recent implementation of Goods and Services Tax have helped the country to progress towards an integrated transport system.
- Government is planning a Policy on Multi modal transportation.
- Economic Survey 2017-18 estimates that Indian Logistics sector which is worth around USD 160 billion is likely to touch USD 215 billion in the next two years with the implementation of GST. In order to realize this potential, the country will need to make effective use of its strengths in IT and look out for collaborations with experts in this field.

What primarily constitute inland waterways in India? Rivers, lakes, canals, backwaters and reservoirs primarily constitute the source for inland waterways in India.



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Potential of inland water transport (IWT) in the country: As per National Transport Policy Committee (NTPC) Report of 1980, the approximate length of navigable waterways in the country was 14,500 km.

- The National Waterways Act, 2016 declares a total of 111 National Waterways with a total navigable length of over 20200 kms. Out of this, 17,980 km of the river and 2,256 km of canals can be used by mechanized crafts.
- The **estimated cargo movement** on these waterways by the year 2022 is estimated to be **159 million tonnes** according to the report on Integrated National Waterways Transportation Grid submitted by RITES in 2014.

Challenges in developing National Waterways

- Very low level of investment: Lack of convergence between IWT and other modes of transport and more emphasis on development of rail and road networks resulted in low level of expenditure on IWT.
 - o Between 1986 and 2010 (25 years) investment in IWT development was just Rs. 1117 crore, i.e., US\$ 200 million. Compared to this, the Bharatmala Pariyojana- an umbrella programme for the highway development has a budget of over 5 lakh crore. Similarly the Railways used to have their own separate Budget till last year.
- High cost of development of Ancillary facilities: Multi-modal and inter- modal terminals are part of the fairway development of an inland waterway. Development of modern day multimodal terminals, jetties, ferry points and river information systems is highly capital intensive.
- Perception of IWT investment as highrisk investment: This was a disincentive for the banks to advance loans to private players. It discouraged private participation also even through PPP mode.
- Technical Challenges: such as

Development and maintenance of Fairway width of 2.5 m to 3.0 m depth, irregular siltation, Speed Control regulations to avert bank erosion and safety of other users, Safety against cross ferries, Connectivity to Terminal Locations, Clearance at Cross Structures/bridges, Identification of navigational channel in a wide river, Discharge control by regulations, and Difficulty in land acquisition for development of terminals.

Benefits of inland waterways

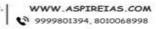
- Capital Savings: The capacity augmentation of navigation on NW-1 through the Jal Marg Vikas Project estimated to entail a capital expenditure of Rs. 2.53 crore per km only. Compared to this road and rail each cost over 5 crore per km.
- Savings in transportation costs: IWT would have positive impact on the overall logistics cost.
 - o 1 Horse Power energy moves 150 kg on road, 500 kg on rail and 4000 kg on water.
 - o 1 litre of fuel moves 24 ton-km on road, 85 ton-km on rail & 105 ton-km on Inland Waterways.
 - o As per RITES Report of 2014 on "Integrated National Waterways Transportation Grid (INWTG)" the cost comparison between Inland Water Transport (IWT) mode and other mode of surface transport like rail and road is as below:

Mode	Freight (Rs/TKm)	Taxes	Total Rs / TKm
Railways	1.36	3.71%	1.41
Highways	2.50	3.09%	2.58
IWT	1.06	Nil	1.06

- Environment friendly: Use of modern inland water vessels, with natural gas (LNG/CNG) as fuel will reduce emission of SOx, NOx (70%), particulate matter (95%) and CO2 (25%). Hence will have negligible impact on ambient air quality. Other factors include
 - o It's a **non-water consumptive** transportation project with minimal

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resource depletion.

- Least fuel consumption per ton-km, burden on road and rail transportation will come down resulting in less fuel consumption and consequent environmental pollution
- Negligible land requirement: Due to requirement minimum of acquisition (except in few places where terminals are likely to be constructed), there will be insignificant impact on ecology & biodiversity, agricultural activities as well as on the livelihood of the people.
- o Safe mode for hazardous and overdimensional cargo
- o LNG/CNG engines have lower noise level than diesel engines, hence less impact on ambient noise level.
- o **Improved** river flow due to improvement / augmentation of navigation facilities will in turn benefit aquatic flora and fauna.

Supplementary mode:

- **Increase in economic opportunities** in the form of employment and business opportunities (both in relation to cargo movement and peripheral petty business activities).
- Access to local communities in the form of a mode of transport to conduct activities on both sides of the river.
- Better water flow through maintenance of minimum water levels will provide for better fish production and catch, which in turn will directly enable enhanced income for the fishing communities along the river stretch.
- Improved access to trading centres and ancillary infrastructure (cargo handling, etc.) along the rivers and navigation will benefit local, regional and international business.

Initiatives to Develop Inland Waterways

A total of 111 waterways have been declared as National Waterways under the National Waterways Act, 2016.

- The 'Jal Marg Vikas Project' on National Waterways-I (NW-I) in river Ganga, a large integrated IWT project, has been launched between Varanasi and Haldia covering a distance of 1380 kms at an estimated cost of `5369 crore.
- On NW-2 (River Brahmaputra), Ro-Ro services have commenced between Dhubri and Hatsingimari in July 2017 on an Inland Waterways Authority of India (IWAI) vessel.
- Based on techno economic studies, eight new NWs have been taken up for development in 2017-18. These include, NW-16 (Barak river); three in Goa viz. NW 27 - Cumberjua, NW 68 - Mandovi, NW 111 – Zuari; NW- 86 (River Rupnarayan); NW 97 (Sunderbans); NW-9 (Alappuzha-Kottayam- Athirampuzha Canal) and NW-37 (River Gandak).
- In order to reduce the logistics cost of cargo and facilitate passenger movement between North East and mainland, MOUs have been signed with Bangladesh.
- Construction of Slipway at Pandu in Assam is on, with December, 2018 as the target date of completion. This will be the **first dry** dock repair facility in the NE Region.
- On NW-4, Phase-I development of the stretch between Muktyala to Vijayawada (82 kms) has commenced. This will provide an efficient logistics solution to boost the economic growth of the region and facilitate the development of Amravati, the new capital city of Andhra Pradesh as substantial construction material is expected to be transported on this stretch of NW-4.
- To provide institutional funding, Government has proposed to allocate 2.5 per cent of the proceeds of Central Road Fund for development and maintenance of National Waterways. In 2017- 18, IWAI raised Rs. 660 crore from the market by issuing 'GOI fully serviced Bonds' to meet capital expenditure on development of National Waterways.
- To promote ship building industry under "Make in India" initiative, Government provides financial assistance of





up to 20 percent for ships build in the country.

- IWAI is planning to start the transportation of fertilizers from IFFCO Paradip to various destinations on NW1 by integrating coastal movement with IWT.
- Integrated National Transportation Waterway Grid Study: It was undertaken by IWAI through RITES with an aim to link first 6 National Waterways to National/ State Highways, Railways (wherever feasible) and Sea Ports (wherever feasible).





SEZ Policy Report

In The News

The **Baba Kalyani committee** constituted by the Ministry of Commerce & Industry to study the existing **SEZ policy**

of India submitted its report to the government.

Performance of SEZ

- As on 31st March, 2018, there were a total of **223 Operational SEZs** against 355 notified SEZs in the country.
- **Total Investment** in SEZs (as on 31st March, 2018) amounted 4.75 lakh crore and it has generated close to **20 lakh jobs**.
- Exports from SEZs amounted nearly 5.81 lakh crore in 2017-18, which is higher from 5.23 lakh crore in 2016-17 and 4.67 lakh crore in 2015-16.

Major Challenges and Solutions

- Unutilised land (more than 25,000 hectares) in SEZs which is due to lack of flexibility to utilise land in SEZs for different sectors. The solution to this challenge is "Optimal utilisation of vacant land in SEZ by allowing flexibility of land use and removing sector- specific constraints."
- Existence of multiple models of economic zones such as SEZ, coastal economic zone, Delhi-Mumbai Industrial Corridor, National Investment and Manufacturing Zone, food park and textile park.
 - o Solution: The group of secretaries of various central government's departments have recommended "rationalisation" of these models. Moreover, the Department of Industrial Policy and Promotion (DIPP) and the Niti Aayog is going to "develop and master plan for industrial clusters" in order to deal with this challenge.
- Under-utilisation of existing capacity. Currently, SEZ units are not allowed to do "job work" for domestic tariff area (DTA) units. Any area that lies outside of SEZ or any other custom bonded zone in India is

- known as the DTA. Goods and services going into the SEZ from DTA is treated as exports and goods coming from the SEZ into DTA is treated as imports. **It is recommended that** "optimal utilisation of existing capacity in SEZ units" should be done by "allowing job work for DTA".
- Domestic sales of SEZs face a disadvantage as "they have to pay full customs duty", as compared to the lower rates with the Association of Southeast Asian Nations (ASEAN) countries due to free-trade agreement (FTA). It is suggested that the "best FTA rates" should be allowed for domestic sales, too.
- Imposition of Minimum Alternate Tax (MAT) on SEZs from April 1, 2012, as well as imposition of income tax on new SEZs and new units from April 1, 2017 and April 1, 2020, respectively. The experts advocated restoration of income tax benefit as well as MAT exemption.
 - o Also, there is a need to align changed taxation regime under GST to the SEZ Rules.
- Another challenge has been the "requirement of payment in foreign exchange for services provided by SEZ units to DTA area". To deal with this problem, it has been suggested an amendment in the definition of "services" in the SEZ Act, 2005.
- Lack of support from the state government when it comes to developing effective single-window system for clearances.
- Other issues: There are other demands of the business and industrial community. These include- grant infrastructure status to buildings of SEZs and industrial parks, permit external commercial borrowing (ECB) for entire SEZ infrastructure, allow a refinancing option through ECB; relax the "risk weightage norms" for the real estate sector
 - o Moreover, simplification of the process





of granting environment clearance by the Union environment ministry and repeal of certain sections of the Urban Land Ceiling Act, 2007 is demanded.

- The Commerce ministry has been consistently lobbying with the finance ministry to exempt units in the SEZs from the minimum alternate tax, or MAT, imposed on them in 2011.
- Some of the incentives offered under the SEZ policy have been challenged at the WTO by the US and may need to be replaced by other sops.

Special Economic Zone (SEZ) is a specifically delineated duty-free enclave and deemed to be foreign territory for the purposes of trade operations and duties and tariffs.

India's SEZ Policy was implemented from 1 April, 2000. Subsequently

the Special Economic Zones Act, 2005 supported by SEZ Rules 2006.

The main objectives of the SEZ Act are:

- Generation of additional economic activity
- Promotion of exports of goods and services
- Promotion of investment from domestic and foreign sources
- Creation of employment opportunities
- Development of infrastructure facilities

The SEZ Rules provide for:

- Simplified procedures for development, operation, and maintenance of the Special Economic Zones and for setting up units and conducting business in SEZs;
- Single window clearance for setting up of an SEZ or a unit within it;
- Single Window clearance on matters relating to Central as well as State Governments;
- Simplified compliance procedures documentation with an emphasis on self certification.

Approval mechanism and Administrative set up of SEZs: The developer submits the proposal for establishment of SEZ to the concerned State **Government.** The State Government has to forward the proposal with its recommendation within 45 days from the date of receipt of such proposal to the Board of Approval. The **applicant** also has the option to submit the proposal directly to the Board of Approval.

- The Board of Approval chaired by the Secretary, Department of Commerce has been constituted by the Central Government in exercise of the powers conferred under the SEZ Act.
- All the decisions are taken in the Board of Approval by consensus.

Recommendations of the Committee

Reincarnation of SEZs as employment and Economic Enclaves (3Es): The main focus of the recommendations of the SEZ committee is on migration from export focus to economic and employment growth focus. For this to be achieved, incentives for the manufacturing SEZs have to be based on specific parameters including demand, investment, employment and technology, value addition and inclusivity.

Other supports for SEZ(3Es)

- Flexibility to enable 3E units to seamlessly support business outside the zone.
- Supply of power directly to units from independent power producer (IPPs) at competitive rates to ensure uninterrupted power supply.
- Fast tracking various approvals through online application process
- Integrating MSMEs with the 3Es and giving additional incentives to zones focusing on priority industries
- o Infrastructure status to 3E projects to make cheaper finance available to them
- SEZs: **Connectivity** to remote Development of last mile and first mile connectivity infrastructure by government should be provided for land parcels which far from highways and agglomerations.
- Replicate Success of ITeS: The success seen by services sector like IT and ITES has to be promoted in other services sector like





health care, financial services, legal, repair and design services.

- Tax benefits: For services SEZs, tax benefits must be retained including extension of sunset clause, lowering taxes (such as a MAT of 9 per cent and exemption from DDT) for identified strategic services and allowing supplies to domestic market in Indian currency to bring parity between goods and services.
- Ease of doing business: The committee has advocated simpler entry and exit processes using time-bound online approval and dispute resolution through robust arbitration and commercial courts.
- In line with WTO norms and the GST, the Committee recommended to prepare a sunrise list for "focused diversification" such as engineering and design, biotech and healthcare services.
- Align the policy framework to avoid competition among similar schemes of industrial parks, export oriented units, SEZ, national investment and manufacturing zones and sectoral parks and provide ease of doing business to developers and tenants.







12-Point Action Plan For MSMES

In The News

The Government of India launched a support and outreach initiative for greater synergy to the Micro, Small and Medium Enterprises (MSME) sector.

Detail

- MSME Outreach Programme will run for 100 days covering 100 Districts throughout the country.
- Various Central Ministers are likely to visit these districts in order to apprise the entrepreneurs about various facilities being extended to MSME Sector by the Government and financial institutions and to come forward and make best use of these facilities including access to credit and market, etc.

Key challenges being faced by MSMEs

A non-level playing field for MSME Sector, facing the odds has pushed them towards the edge. Their threshold tolerance level to alterations of markets and vagaries of banking system is so small that any adverse environment can have serious consequences leading to sickness or even closure. The list of the problems that are faced by existing/new companies in SME sector are as under:

- Limited capital: Absence of adequate and timely banking finance, as per Economic Survey 2017-18, the MSME received only 17.4 per cent of the total credit outstanding as of November 2017.
- Lack of technology: Non-availability of suitable technology, creating public perception of products with low quality standards.
- Low production: due to reasons such as Ineffective marketing strategy, constraints on modernisation & expansions etc.
- Lack of skilled labour: Non-availability of skilled labour at affordable cost

Access to Credit

- o 59 minute loan portal to enable easy access to credit for MSMEs: Loans upto Rs. 1 crore can be granted inprinciple approval through this portal, in just 59 minutes. A link to this portal will be made available through the GST
- o Interest Subvention: A 2 percent interest subvention will be provided for all GST registered MSMEs, on fresh or incremental loans. For exporters who receive loans in the pre-shipment and post-shipment period, there will be an increase in interest rebate from 3 percent to 5 percent.
- Cash flow certainty: All companies with a turnover more than Rs. 500 crore, must now compulsorily be brought on the Trade Receivables e-Discounting System (TReDS). Joining this portal will enable entrepreneurs to access credit from banks, based on their upcoming receivables. This will resolve their problems of cash cycle.

Access to Markets

- o **Mandatory** public procurement: Public sector companies have been mandated to compulsorily procure 25 percent, instead of 20 percent of their total purchases, from MSMEs.
- o Women entrepreneurs: Out of the 25 percent procurement mandated from MSMEs, 3 percent now be reserved for women entrepreneurs.
- o **GeM Portal**: All public undertakings of the Union Government must now compulsorily be a part of GeM. They should also get all their vendors registered on GeM.

Technology Upgradation

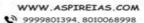
Technology Centres: Tool rooms across the country are a vital part of product design. Considering this, 20

12-Point Action Plan for MSMEs



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hubs will be formed across the country, and 100 spokes in the form of tool rooms will be established.

• Ease of Doing Business

- Support to pharma companies: Clusters will be formed of pharma MSMEs and 70 percent cost of establishing these clusters will be borne by the Union Government.
 - o **One annual return:** The return under 8 labour laws & 10 Union regulations now to be filed only once a year.
 - o **No more inspector raj:** Now the establishments to be visited by an Inspector will be decided through

a computerised

random allotment and inspectors must upload reports on portal within 48 hours.

- o **Relaxation** in environmental clearances: As part of establishing a unit, an entrepreneur needs two clearances namely, environmental clearance and consent to establish. Under air pollution and water pollution laws, now both these have been merged as a single consent. Moreover, the return will be accepted through certification.
- o Ordinance and companies Act: An Ordinance has been brought, under which, for minor violations under the Companies Act, the entrepreneur will no longer have to approach the Courts, but can correct them through simple procedures.

Apart from the above 12-Point Action Plan, the Prime Minister also stressed on the need of **social security for the MSME sector employees.** He said that a mission will be launched to ensure that they have Jan Dhan Accounts, provident fund and insurance.

Significance of the Action Plan

 MSMEs were hit hard by the twin shocks of demonetisation and the implementation of the Goods and Services Tax over the last couple of years. done by non-banking

- financial companies to the MSME sector, this scheme would act as a tool to improve credit flow and the pace of job creation in the economy.
- The scheme aims to ensure a **coordination of all the ministries** as it inculcate various dimensions ranging from finance, technology and skilling and women entrepreneurs to environmental, legal and social aspects. This will ensure holistic development of MSME sector.
- Given the **leading stature of India in the pharma sector**, the scheme would further boost the quality and quantity upgradation in drugs with reduced dependence on imports for APIs (Active Pharma Ingredients).
- Most importantly, these schemes would act as a bridge to bring large portion of unorganised MSMEs under the formal and organised banner through GST/TReDS and simplified procedures and institutional lending.
- Further, in the aftermath of the IL&FS crisis, which has affected the amount of lending

Other Government schemes to help MSMEs:

The primary responsibility of promotion and development of MSMEs is of the State Governments. However, the Government of India, supplements efforts of the State Governments through various initiatives.

Credit and Financial Assistances to MSMEs

- Prime Minister's Employment Generation Programme (PMEGP) is aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector by helping traditional artisans and unemployed youth.
- Credit Guarantee Scheme for Micro and Small Enterprises covers collateral free credit facility (term loan and/or working capital) extended by eligible lending institutions including Non-Banking Financial Company (NBFC) to new and existing micro and small enterprises up to 2





crore per borrowing unit.

- Credit Linked Capital Subsidy Scheme (CLCSS) aims at facilitating technology upgradation of the MSME sector.
- The Government has also initiated the Pradhan Mantri Mudra Yoiana for development and refinancing activities relating to micro industrial units.

Skill Development and Training

A Scheme for Promotion of Innovation, Rural Industry & Entrepreneurship (ASPIRE) to create a framework for startup promotion through Network Technology Centres and Incubation and commercialisation of Business Programme.

Infrastructure

- Scheme of Fund for Regeneration of Traditional Industries (SFURTI)
- Scheme for Micro & Small Enterprises Cluster Development Programme (MSE-CDP)

Marketing Assistance

- Scheme for providing financial assistance to Khadi institutions under MPDA (Market **Promotion Development Assistance).**
- MSME Delayed Payment Portal MSME Samadhaan
- Public Procurement Portal for MSEs -Sambandh Technology **MSME Upgradation and Competiveness**
- Financial Support to MSMEs in ZED Defect (Zero and Zero Effect) certification to encourage MSMEs to upgrade their quality standards in products and processes with adoption of Zero Defect production processes and without impacting the environment, etc.

Other services

National Scheduled Caste and Scheduled Tribe Hub to provide professional support to SC/ST entrepreneurs.







Revival Of Stressed Thermal Power Plants

In The News

An empowered committee headed by cabinet secretary has suggested strong policy measures to revive stressed thermal power plants.

Historical Background

- Following the Electricity Act which came into force in 2003 there were various developments that encouraged investment in the power sector, out pf which 45.48% was installed in private sector. This aggressive capacity addition has led to a widening gap in the overall demand and supply situation.
- However, an upsurge in demand has been observed, which is growing at more than 6 per cent per year. This is further expected to rise because of various government interventions like Saubhagya, Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Power for All, etc.
- Coal is the single largest source of energy for electricity production since 2, 21,803 MW is installed in thermal (including Coal + Lignite). There are various reasons that have been responsible for stress in some coal-based power plants to serve their debt.

Reasons for stress in Power Sector

The Committee identified following reasons for stress in the power sector-

- Issues related to coal supply- After the cancellation of 204 coal mines by the Supreme Court in 2014, many of the power projects became stranded without arrangements of adequate fuel supply. In addition, many projects were setup without firm coal linkages from Coal India Limited (CIL) leading to high cost of generation.
- Slow growth in power demand- Lower than anticipated growth in power demand coupled with a scenario of surplus supply has resulted in under-utilization of thermal power capacity. In addition to this low offtake/ difficulty in selling costlier power are

- also causing stress in thermal power projects.
- **Delayed payments by DISCOM's-** Delay in realization of receivables from DISCOMs impairs the ability of project developers to service debt in a timely manner and leads to exhaustion of working capital. In some cases, the DISCOM's have pressed for renegotiating terms of Power Purchase Agreement (PPA). This, coupled with nonpayment of penalties / Late Payment Surcharges (LPS) is causing financial stress for such projects.
- **Inability of the promoter to infuse equity** and service debt- Many projects got delayed due to financial reasons and slow implementation by developers leading to project cost overruns.
- Other Issues include delay in disbursement / non-agreement amongst FIs, Delays in approval of working capital by lenders, Regulatory and contractual disputes, etc.

Recommendations of the Committee

- Recommendations for Coal Allocation/Supply
 - Coal linkage for short term PPA: Linkage coal may be allowed to be used against short term PPAs and power be sold through Discovery of Efficient Energy Price (DEEP) portal following a transparent bidding process.
 - **Termination of PPAs**: A generator should be able to terminate PPA in case of default in payment from the DISCOM with the facility to use linkage coal for short term PPAs for a period of maximum of 2 years or until they and buyer of another power long/medium term PPA, whichever is earlier.
 - o Procurement by nodal agency: A nodal agency may be designated which may invite bids for procurement of bulk power for medium term for 3 to 5 years in appropriate tranches, against pre-





declared linkage by Coal India Limited (CIL).

- o PSU as an aggregator of power:
 National Thermal Power Corporation
 (NTPC) can act as an aggregator of
 power, i.e., procure power through
 transparent competitive bidding process
 from such stressed power plants and
 offer that power to the DISCOMs
 against PPAs of NTPC till such time as
 NTPC's own concerned plants/units are
 commissioned.
- o **E-auction of coal**: Ministry of Coal may earmark for power, at least 60 per cent of the e-auction coal, and this should be in addition to the regular coal requirement of the power sector.
- o Linkages to be provided at notified prices without bidding: The generator should be required to bid only once, for the procurement of PPA and linkage should be granted at notified price without any further bidding, to the extent of incremental coal production.
- Recommendations to facilitate sale of power of the stressed power plants- Old and high heat rate plants not complying with new environment norms may be considered for retirement in a phased and timebound manner at the same time avoiding any demand/supply mismatch.
- Recommendations on Regulatory & DISCOM payment issues-
 - Late Payment Surcharge be mandatorily paid in the event of delay in payment by the DISCOM.
 - o PFIs providing the Bill Discounting facility may also be covered by TPA i.e. in case of default by the DISCOM, the RBI may recover the dues from the account of States and make payment to the PFIs.
- Other recommendations: PPAs, Fuel Supply Agreement and Long Term Open Access for transmission of power, EC/FC clearances, and all other approvals including water, be kept alive and not cancelled by the respective agencies even if the project is referred to NCLT or is acquired by any other

entity.







Guidelines For Operations Greens

In The News

Ministry of Food Processing Industries (MoFPI) has approved the operationalisation strategy for **Operation Greens (Central Sector Scheme)**.

Detail

- Operation Greens was announced in the Budget speech of 2018-19 with an outlay of Rs 500 crores to stabilize the supply of Tomato, Onion and Potato (TOP) crops and to ensure availability of TOP crops throughout the country round the year without price volatility.
- The Centre has identified 17 top producing clusters across 8 states (Maharashtra, Bihar, Gujarat, Andhra Pradesh, Uttar Pradesh, Karnataka, Odisha and Wes Bengal) for the first phases of this initiative.
- The government also intends to utilize the 28 centres of excellence **under Indo-Israel Cooperation** for the demonstration of new technologies in production and the supply of quality planting material and capacity building to farmers under the scheme.
- Government has laid down special strategy and grants-in-aid under the scheme to ensure enhanced production of TOP crops and to augment value chain.

Strategy for Operation Greens

- Short term Price Stabilisation Measures:
 National Agricultural Cooperative
 Marketing Federation of India Ltd
 (NAFED) will be the Nodal Agency to
 implement price stabilisation measures.
 MoFPI will provide 50% of the subsidy on
 the following two components:
 - o Transportation of Tomato Onion Potato(TOP) Crops from production to storage;
 - o Hiring of appropriate storage facilities for TOP Crops;
- Long Term Integrated value chain development projects such as Capacity Building of FPOs & their consortium, Quality production, Post-harvest processing

facilities, Agri-Logistics, Marketing / Consumption Points, and Creation and Management of e-platform for demand and supply management of TOP Crops.

Grants-in-Aid

- The pattern of assistance will comprise of grants-in-aid at the rate of 50% of the eligible project cost in all areas, subject to maximum Rs. 50 crores per project (For FPOs the grant-in-aid will be at rate of 70%).
- Eligible Organisation would include State Agriculture and other Marketing Federations, Farmer Producer Organizations (FPO), cooperatives, companies, Self-help groups, food processors, logistic operators, service providers, supply chain operators, retail and wholesale chains and central and state governments and their entities/ organizations which will be eligible to participate in the programme and to avail financial assistance.

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Ending Apmc Monopoly

In The News

Maharashtra became 2nd state after Bihar to end the monopoly of Agricultural Produce Market Committee (APMC) and allow trade in farm commodities including livestock outside the wholesale markets (mandis).

Why do APMCs need reform?

- Market Segmentation: The monopoly of APMCs in agriculture market reduces buyer competition in comparison to integrated markets, as it limits the geographical range of the mandis, number of buyers and sector specialization of buyers. Thus, it limits the income accrued to the
- High Spatial Price Dispersion: In India, the ratio of the highest price of a commodity to its lowest price - a measure of price dispersion (Economic Survey 2015-16) - is almost thrice that observed in the US. This indicates that markets are not well integrated and logistics cost is high
- **Cartelization**: Cartelization by traders prevents price discovery mechanisms from functioning in mandis.
- Degree **Intermediation:** High of According to Ashok Dalwai Committee, farmers' share in consumer prices range 15% to 40% (Ashok Dalwai from Committee). Missing credit markets (farmers borrow from intermediaries. conditional to sale of harvest), lack of storage, high transportation & processing costs add to the retail-farmgate wedge. This prevents farmers from realizing higher prices and consumers from buying food at lower prices, lowering overall welfare
- High License fees + APMC Cess and Taxes: High commission levied on both farmers and buyers create artificial inflation. Final price to consumer high but benefit does not reach the farmer.
- Wastage (poor storage and transportation): APMCs do no value addition in terms of storage and transport

facilities leading to high wastage. Tax money is not utilized properly in creating infrastructure (electronic weighing machines, drying yards, grading & assaying facilities, cold storage etc.) in the mandis

Changes Proposed

- The amendment of the Maharashtra Agricultural Produce Marketing (Development and Regulation) Act, 1963 has deregulated the sale of agri-produce. Thus, first point of sale needn't be an APMC-regulated mandi
- No cess or market fee can be charged on **the trades outside** the purview of the mandi
- done away with also requirement of separate licenses to trade in different mandis, creating single market in the entire state. This would enable farmers and traders to buy and sell at any mandi without the requirement of the mandatory license.

Way Forward

Creating Market Infrastructure:

- Physical integration: Railroad expansion changed the landscape of agricultural markets in US
- Digital integration: e-NAM (National Agricultural Market). Instead of treating state as single market area, the entire country must be treated as unified market
- the target market: Like Changing Maharashtra & Bihar, other states must also modify laws that constrain farmers to sell in local mandis only, especially perishables. Some complementary measures such as provision of land & financial incentives for private sector-promoted market vards is needed. Farmers can also realize maximum profits by selling the produce directly to food processing units (less rotting & regular supply)
- Transport and storage infrastructure for **perishables:** Currently, only 7000-8000 refrigerated trucks are plying in India,

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mostly transporting pharmaceuticals & dairy products. Transport of perishable commodities in Reefer trucks & freight subsidy would help in better supply and availability of the produce. At present, India's cold storage capacity is nearly 3.5 cr tonnes, short by 30-40 lakh tonnes, and it needs to be increased

- Establishing Markets of National Importance (MNI): At present, Asia's largest agricultural market at Azadpur, Delhi is the only Market of National Importance (MNI) in the country. More such markets need to be established to boost inter-state trade
- Setting up Farmer Producer Organizations and Cooperatives: It would provide better avenues at collective bargaining to small & marginal farmers. It could also act as a direct marketing channel to supply produce from 'surplus' regions to high demand states
- Restructure Essential Commodities Act:
 To incentivize corporate companies to invest in trading of agricultural commodities. The exemptions from stockholding limits must be given to exporters, food processors, multiple outlet retailers, large departmental retailers etc.
- Alternative marketing options: such as contract farming, direct marketing through FPOs/cooperatives etc, commodity trading through National Commodity and Derivatives Exchange, e-RaKAM (digital spot trading market), NSEL (where warehouse receipts of commodities are traded) etc.
- Nation-wide Price Dissemination Mechanism: Forward Market Commission (FMC) has set up e-portal AGMARKNET that displays real time wholesale price of agricultural commodities on e-portal connected with APMC markets, Kisan mandis, Kisan Vikas Kendras (KVKs), State Agricultural Boards etc.





Greater Flamingoes

In The News

Greater Flamingoes have been spotted on the Coast of Hope Island, a part of the Coringa Wildlife Sanctuary, after a gap of 25 years.

About Coringa Wildlife Sanctuary (CWLS):

- It is situated in Andhra Pradesh near confluence of Godavari and Bay of Bengal and houses the second largest mangroves forest in India.
- The Hope Island, Kakinada Port and CWLS come within Coastal Circuit theme of Swadesh Darshan Scheme of Ministry of Tourism.
- Historically, Coringa has been a major port city which was used for the export of manpower during the time of British to Malaysia. The successors of those migrants are called Korangis there.

About Greater Flamingoes

- These come under 'Least Concern' category of IUCN Red List.
- They prefer shallow brackish lakes & use mudflats & saltpans for nesting.
- They are the indicators of healthy coastal environment.
- They are filter feeders (take prey and water together and then filter out water) and get their characteristic pink colour from their diet of brine shrimps and algae available in the coastal wetlands.







Pollinators

In The News

According to a recent studies, high levels of pollution is having negative effects on plants and insects, resulting into **decline of pollinator species**.

Importance of pollinators and pollination

- Regulating ecosystem service in nature: Globally, nearly 90 per cent of wild flowering plant species depend, at least in part, on the transfer of pollen by animals.
- **Food Security**: Pollinator-dependent crops contribute to 35 per cent of global crop production volume.
- **Health:** Pollinator-dependent food products are important contributors to healthy human diets and nutrition.
- Cultural Importance: Pollinators serve as important spiritual symbols in many cultures. Sacred passages about bees in all the worlds' major religions highlight their significance to human societies over millennia.
- Economic Importance: According to Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), pollinator contributed \$0.831-1.5 billion annually for just six vegetable crops in India.

Sources of Threats to Pollinators

- **Environment pollution**: Pollutants in the air, water and land affect the physiology and behavior of the insects.
- Anthropogenic factor like disturbance, degradation, fragmentation, shrinkage, and the loss of habitat
- Impact of introduced species: Alien invasive plants may impact negatively on insect biodiversity by changing habitat quality, outcompeting native host plants, and interrupting vital ecological interactions.
- Increase in mono-cropping: The transformation of agriculture from traditional mixed crop farming to high value

- cash crop farming has led to an increase in monocrop agriculture, resulting in reducing the food sources for natural insect pollinators.
- **Forest fires:** It destroy the habitat, food sources and pollinators nesting in the area.
- **Honey hunting**: An increase and ruthless hunting of the nests of wild honeybees is contributing to the decline in the population of indigenous honeybees.
- **Pesticides:** Use of pesticides, including insecticides and herbicides, is detrimental to a healthy community of pollinators.

Way Froward

- Enabling policies and strategies: Develop and implement coherent and comprehensive policies that enable and foster activities to safeguard and promote wild and managed pollinators, to be integrated into the broader policy agendas for sustainable development
- Protect and promote indigenous and traditional knowledge, innovations and practices related to pollinators and pollination and support participatory approaches to the identification of diagnostic characteristics for new species and monitoring.
- Control the trade and movement of managed pollinators: Monitor the movement and trade of managed pollinator species, sub-species and breeds among countries and within countries to Prevent and minimize the risk of introducing invasive alien species.
- connectivity, Promote conservation, management and restoration of pollinator **habitats** by preserving pollinators and habitats distributed in natural areas, including forests. grasslands and agricultural lands, urban areas and natural corridors, to enhance the availability of floral resources and nesting sites over time and space.
- Promote sustainable beekeeping and bee health: By promoting better availability and

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husbandry of floral resources, therefore improving pollinator nutrition and immunity to pests and diseases.

- Practicing Sustainable Agriculture Practices: Exposure of pollinators to pesticides can be decreased by promoting Integrated Pest Management supported by educating farmers, organic farming and policies to reduce its overall use.
 - o **Ecological Intensification**: Managing nature's ecological functions to improve agricultural production and livelihoods while minimizing environmental damage.
 - o Strengthening Existing Diversified Farming Systems: to foster pollinators and pollination through practices validated by science or indigenous and local knowledge (e.g., crop rotation
 - o **Investing in ecological infrastructure by protecting**, restoring and connecting
 patches of natural and semi- natural
 habitats throughout productive
 agricultural landscapes.





Inclusive Wealth Report

In The News

The inclusive wealth of **one-third of the countries in the world has declined**, but their **gross domestic product (GDP) has increased**, finds the Inclusive Wealth Report 2018 presented by the UN Environment.

Highlights of the Report

- About the Index: The Inclusive Wealth Report is a biennial report that seeks to evaluate and report on a country's wealth and wellbeing through the Inclusive Wealth index (IWI). IWI is intended as a replacement to Gross Domestic Product (GDP) and the Human Development Index (HDI) which assesses a nation's ability to look after its wealth in a way that is sustainable and safeguards its future generations.
- Methodology: It does this through tracking the progress of 140 countries that make up the lion's share of the global economy and population. The changes in the inclusive wealth of 140 countries are calculated by annual average growth rates over the past 25 years, and 1990 is set as a base year.
- Inclusive Wealth and SDG: The report demonstrates that assessing and valuing natural capital and the change in per capita inclusive/comprehensive wealth over time has the potential to keep track of progress on most Sustainable Development Goals (SDGs). It considers the relationship between inclusive wealth and the SDGs, arguing that governments need to have a way to check whether or not the economic measures they take to meet the SDGs jeopardize the sustainability of the Goals.
- Global Structure of Capital: As of 2014 has composed of **produced capital** (21%), **human capital** (59% of which 26% education induced human capital and 33% is health induced human capital), and **natural capital** (20%).
- **Growth rate:** The global level growth of each of the three capitals over the study

period indicate that produced capital was growing at an average rate of 3.8% per year and health and education induced human capital was growing at 2.1%. Contrary, natural capital was decreasing at a rate of 0.7% per annum.







Measuring Natural Capital

In The News

Envistats India 2018 report by the Ministry of Statistics and Programme Implementation (MOSPI), it had revealed that India's economic growth took a toll on its natural assets like forests, food and clean air.

Detail

- The average growth rate of gross state domestic product (GSDP) during 2005- 15 for almost all the states was around 7-8 per cent but 11 states registered a decline in their natural capital.
- This model of economic growth may not let country sustain the rate development for long. Monitoring the natural capital is important and should be one of the determiners for sustainable development.
- According to MOSPI, the assessment of natural assets is a reminder of how important is sustainable use of natural resources and is likely to propel India on the path of compilation of ecosystem accounts.
- The natural capital accounting (NCA) method has been used in this report, to account for income and costs associated with natural resource used, based on a framework approved by the United Nations called the **System** 2012 **Environmental Economic Accounts** (SEEA).

Why does natural capital matter for economic growth?

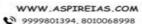
- GDP only looks at one part of economic performance output but tells us nothing about income in the long term, thus is an incomplete assessment of country's economic wellbeing. For example, when a country exploits its minerals, it is actually using up its finite mineral wealth.
- A full picture of a country's wealth obtained through a methodology called 'wealth accounting' (including natural capital accounting) includes all assets that

- contribute to our economic wellbeing, from buildings and factory machines, infrastructure, human and social capital, and natural capital.
- Natural capital is **especially important to** many developing countries because it makes up a large share of their total wealth some 36 percent and the livelihoods of many subsistence communities depend directly on healthy ecosystems.
- Currently **GDP ignores natural capital**. In forestry, for example, timber resources are counted, but forest carbon sequestration is not. Other services, like water regulation that benefits crop irrigation, are hidden and the value is (wrongly) attributed to agriculture in a country's GDP.
- Several countries are compiling natural capital accounts (NCA) to make economic decision making on natural resources an informed process. They want to use NCA as the basis for compiling indicators to monitor progress of sustainability policies.
- India is participating in the **Natural Capital** Accounting and Valuation of Ecosystem Services project.

How are natural capital accounts used?

- **Support inclusive development and better economic management:** For example, land and water accounts can help countries interested in hydropower to assess the value of competing land uses and find the optimal solution.
- For **Economic Growth:** Ecosystem accounts help biodiversity-rich can countries manage the tradeoffs between agriculture, subsistence ecotourism, livelihoods, and ecosystem services like flood protection. In this way, ecosystem accounting is a tool for maximizing economic growth while identifying who benefits and who bears the cost of ecosystem governments changes. helping gauge whether their growth is inclusive.









strategic partner countries.

Natural Capital

- It includes those elements of the nature that provide valuable goods and services to humans, such as the stock of forests, food, clean air, water, land, minerals, etc.
- It incorporates a broad perspective on the set of services provided by ecosystems assets.
- It is essential for economic growth, employment, and, ultimately, prosperity.

Natural Capital Accounting, or environmentaleconomic accounting

- It is a tool that can help to gain an understanding of the interaction between the economy and the environment.
- It can be used to measure the state of ecosystems, flows of ecosystem services as well as changes in stocks and flows of natural resources in relation to economic changes.

System of Environmental-Economic Accounting (SEEA)

- It is a **statistical system** that brings together economic and environmental information into a common framework to measure the condition of the environment, the contribution of the environment to the economy and the impact of the economy on the environment.
- It organizes and presents statistics on the environment and its relationship with the economy. Natural Capital Accounting and Valuation of Ecosystem Services
- The United Nations Statistics Division, UNEP, the Secretariat of the Convention on Biological Diversity, and the European Union have launched this project.
- The project is funded by the European Union, aims to assist the five participating partner countries, namely Brazil, China, India, Mexico and South Africa, to advance the knowledge agenda on environmental and ecosystem accounting.
- The project review policy demands, data availability and measurement practices in order to advance and mainstream natural capital accounting and initiate pilot ecosystem accounts in each of the five





Water Use In India's Power Generation

In The News: IRENA has come up with a study, titled 'Water Use in India's Power Generation: Impact of Renewables and Improved Cooling Technologies to 2030'.

Summary of the Study: It examines the impact of changes in cooling technologies mandated for thermal power plants and an increased share of renewable energy, on freshwater use (excluding hydropower) and on carbon emissions to year 2030.

- The power sector contributes to and is affected by water stress in the areas where plants are located. Power generation is expected to account for nearly 9% of national water consumption by 2050 (in a business as-usual scenario). Coupled with continuing thermal and renewable capacity development, total water consumption in 2030 is estimated to increase by up to 4 billion cubic metres.
- There is a mismatch between water demand and supply considering usable surface water capacity and replenishable groundwater levels.
- The combination of improved power plant cooling technologies and renewable energy technologies, especially solar PV and wind, could lessen the intensity of freshwater use and carbon intensity of the power sector as shown in infographic.
- Simultaneously, phasing out once-through cooling technologies at existing power plants and restricting their installation at new thermal plants, through enforcement of the announced regulatory water use standards, will substantially reduce water withdrawal.

Energy and Water Interlinkages: A major share of India's electricity (85%) is generated from fossil fuel (coal and natural gas) and nuclear plants, which rely significantly on freshwater for cooling purposes.

As per the World Resources Institute (WRI) working paper published in

January'18,

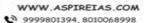
- o India's 90% thermal plants rely on freshwater for cooling and 40 per cent of these plants are located in areas of high or extremely high water stress.
- Freshwater consumption from Indian thermal utilities grew by 43 percent from 2011-2016, from 1.5 to 2.1 billion cubic meters a year.
- In 2016 alone, water shortages cost India about 14 terawatt-hours of potential thermal power generation, cancelling out more than 20 percent of the growth country's total electricity in the generation from 2015.

Why it's a concern?

- Natural water supply sources are subject to increased overuse leading to resource depletion. WRI's India Water Tool 2015 shows that 54% of India's groundwater wells face high to extremely high water stress. This is caused by erratic rainfall, irrigation pumps that run on subsidised electricity and unsustainable management of groundwater.
- According to Central Water Commission, 2015 Report, the energy sector's relative water consumption is projected to grow from 1.4% to 9% between 2025 and 2050 (from 15 billion m3 to 130 billion m3 annually).
- The mismatch between demand and supply could affect the availability of water for different end uses, increasing risk of competition. particularly in constrained areas. Furthermore, as demand increases, water will need to be pumped from sources further away or from deeper underground, thus increasing energy **demand.** In India, for example, **energy now** comprises about 90% of the cost of groundwater.

Government Initiatives

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- In response to growing concern over water shortage, the Ministry of Environment, Forest and Climate Change (MoEF& CC) published the rules in 2015 to reduce and standardize the water consumption by all existing as well as future thermal power plants.
- In its Nationally Determined Contribution (NDC), India committed to increasing the share of non-fossil sources in its installed power capacity to 40% by 2030. India has a related target of 175 gigawatts (GW) of renewable capacity by 2022, including 100 GW of solar PV and 60 GW of wind.

If these ambitious policies are enacted and enforced, the WRI estimates that India will save 12.4 billion cubic meters of freshwater from being withdrawn by power plants.

Way Forward: India's energy demand is expected to double, while electricity demand is expected to almost triple by 2030 compared to 2014 leading to absolute increases in water consumption and carbon dioxide emissions. However, the lower intensity values achieved through improved cooling technologies and higher shares of solar PV and wind will help realise relative savings in both water and carbon.

- India's power sector (excluding hydroelectricity) is largely driven by thermal power plants using once-through cooling systems. Withdrawal intensity could be reduced by **upgrading plant cooling technology** such as dry cooling and by supporting the **development of less water-intensive generation** technologies.
 - o For instance, the operational withdrawal intensity of solar PV in India is around 0.08 m3 /MWh (primarily related to panel cleaning), which is only 0.5% of the thermal average, while for wind, the water withdrawal is zero.
- Power plant efficiency improvements, based on India's new draft National Electricity Plan, 2016, also contribute, although less significantly than other factors.

- Power plants should also be located in places where they will rely not on freshwater resources, but instead on saline, brackish, or reclaimed water.
- It is also important to select the **right types of plants** at the planning stage. **Alternative cooling technologies** for power generation, including dry or hybrid cooling, can reduce water consumption (though the use of such technologies currently is constrained by efficiency losses and higher costs).





Water Use In India's Power Generation

In The News

Despite persisting drought like conditions, many states did not declare, officially, the drought.

Detail

- The India Meteorological Department (IMD) declared that 255 districts (31% of the districts in India) of the country recorded deficient (-59 to -20 per cent) or scanty (-99 to -60) rainfall, thus facing drought like conditions.
- More than 50 per cent of the districts in Bihar, Jharkhand, West Bengal, Gujarat, Nadu, Meghalaya, Karnataka, Arunachal Pradesh and Goa received deficient rainfall.
- states, including Some Maharashtra, Karnataka, Odisha, Andhra Pradesh, Bihar and Jharkhand declared drought.
- However, Gujarat, where 67 per cent of districts received deficient rainfall, is yet to declare a drought. Assam has received -26 per cent of deficit rainfall but not yet declared drought districts.

Reason behind unwillingness of states to declare drought

- The 2016 manual not only has made the parameters to declare drought complex and stringent, but has also limited to Centre's scope offer financial assistance to states in the eventuality of a drought. The Centre will only provide funds under National Disaster Response Fund (NDRF) to state governments in case of "Severe" drought.
- Since the yardstick to measure the severity of drought is stricter, the new conditions make it more difficult for the states to prove "severe" drought and get relief from the Centre. This is a double whammy for most states as they lack drought early warning systems.
- The 2009 norms were supportive of states as they could get the Centre's assistance even if they suffered "moderate" drought.

- Although the new norms don't prevent states to put a drought-hit region under the "moderate" category, the states, however, will have to pay for the relief from their own budget.
- After protest by various states, however, a 29th May 2018 Amendment to the Drought Manual, 2016 says that a state can ask for assistance for even a moderate category drought provided it is unable to meet drought relief through SDRF.

Declaration of Drought

The Manual for Drought Management, released in December 2016 by the Union Ministry of Agriculture and Farmers Welfare, prescribes "new scientific indices and parameters" for a "more accurate assessment of drought" in the country.

The manual lists **five categories of indices**, which include rainfall, agriculture, soil moisture, hydrology, and remote sensing (health of crops).

Rainfall is considered to be the most important indicator and therefore related meteorological data should be mandatorily considered in making any assessment of drought. The other indices are to be evaluated in conjunction with the rainfall related data to assess the impact of rainfall deficiency.

Characteristics of Drought that make it a challenging Hazard

Drought is a complex phenomenon as it involves elements of meteorology like precipitation, evaporation, evapotranspiration, ground water, soil moisture, storage and surface run-off, agricultural practices, particularly the types of crops grown, socio-economic practices and ecological conditions. Drought differs from other natural hazards such as cyclones, floods, earthquakes, volcanic eruptions, and tsunamis in that:

Lack of Uniform Definition: There is no universally accepted definition that can encapsulate the complexity this

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phenomenon adequately.

- **Forecasting:** It is difficult to determine the beginning and end of a drought episode because of the slow, 'creepy' onset, silent spread and gradual withdrawal. In India, it is generally considered to be coterminous with the monsoons.
- **Temporal and Spatial Extent:** An episode could spill over months or even years with or without any accompanying shift in the geographical arena.
 - o Spatial expanse tends to be far greater than in the case of other natural calamities, which when compounded by the difficulties associated with the impact assessment of the disaster, makes effective response highly challenging.
- Measurement of Severity of Drought:
 There is no indicator or index which can precisely forecast the advent and severity of a drought event, nor project its possible impacts.
- **Difficulty in Impact Forecast:** Impacts are generally non-structural and difficult to quantify e.g. the damage to the ecology, the disruption of socio-economic fabric of communities, the long term effects of malnutrition on health and morbidity etc.
- The impact tends to get magnified in the event of successive droughts.

For agriculture, Climate is not always the immediate reason for drought, though it can aggravate the drought precipitation. Some of the factors which can decide drought vulnerability and potential crop losses include-

- Crop MSP (Minimum Support Prices), availability of Credit and Crop Insurance;
- Alternative livelihood, in particular, nonfarm employment avenues (e.g. MGNREGA);
- Development of Water Storage Infrastructure, in particular, farm ponds and water harvesting infrastructure;
- Drought forecasting and interventions to deal with water shortages.

In short, drought vulnerability depends on socioeconomic factors and status of farmers, and the institutional support extended to them. All of these are now part of National Policy on Sustainable Agriculture.







Convention On Biological Diversity

In The News

Recently, Conference of the Parties (COP 14) to the Convention on Biological Diversity (CBD) was held, adopting **Sharm El-Sheikh Declaration.**

Highlight of COP-14

- Adoption of Sharm El-Sheikh Declaration on Investing in Biodiversity for People and Planet.
 - o Governments commit to mainstream biodiversity through, integrating biodiversity values in legislative and policy frameworks, and development and finance plans.

Other Important Highlight

- New Deal for Nature: It is an agreement on a comprehensive and participatory process to develop post-2020 global biodiversity framework to further achieve the 2050 Vision for Biodiversity.
- Launch of International Alliance of Nature and Culture to advance work on biological and cultural diversity in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) and indigenous peoples and local communities.
- It called for UN General Assembly to designate 2021 to 2030 as the UN Decade of Ecosystem Restoration.

Convention on Biological Diversity (CBD)

- Aim: To promote the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from the use of genetic resources.
- It's a near universal convention with a participation of 196 member countries.

Protocols adopted under the Convention.

• Cartagena Protocol on Biosafety: It seeks

- to protect biological diversity from the potential risks posed by **living modified organisms** resulting from modern biotechnology.
- Nagoya Protocol on Access and Benefit Sharing: It aims at sharing the benefits arising from the utilization of genetic resources in a fair and equitable way, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies.







Effects Of Climate Change On The Ocean

In The News

According to a recent study, all oceans in the world are heating up **60 per cent faster** than what IPCC had stated in its Fifth Assessment report.

Background

- According to IPCC Fifth Report, world's oceans have absorbed 90% of the temperature rise caused by man- made carbon emissions, while only 1% in the atmosphere.
- IPCC had recommended a 20 per cent cut in climate emissions by 2030 and then finishing them completely by 2075 to keep global warming from exceeding 2 degrees Celsius above preindustrial levels.

Way forward

- Limiting greenhouse gas emissions: There is an urgent need to achieve the mitigation targets set by the Paris Agreement on climate change and hold the increase in the global average temperature to well below 2°C above pre-industrial levels. This will help prevent the massive and irreversible impacts of growing temperatures on ocean ecosystems and their services.
- Protecting marine and coastal ecosystems: Well-managed protected areas can help conserve and protect ecologically and biologically significant marine habitats. This will regulate human activities in these habitats and prevent environmental degradation.
- Restoring marine and coastal ecosystems:
 This can include building artificial structures such as rock pools that act as surrogate habitats for organisms, or boosting the resilience of species to warmer temperatures through assisted breeding techniques.
- Improving human adaptation: for example by setting precautionary catch limits and eliminating subsidies to prevent overfishing. Coastal setback zones which prohibit all or certain types of development

- along the shoreline can minimise the damage from coastal flooding and erosion. New monitoring tools can be developed to forecast and control marine disease outbreaks.
- Strengthening scientific research: Governments can increase investments in scientific research to measure and monitor ocean warming and its effects. This will provide more precise data on the scale, nature and impacts of ocean warming, making it possible to design and implement adequate and appropriate mitigation and adaptation strategies.





Montreal Protocol Assessment

In The News

The quadrennial (four-yearly) review of the Montreal Protocol reveals a healing ozone layer, global warming reduction potential, and options for more ambitious climate action.

Key findings of the Scientific Assessment of **Ozone Depletion: 2018**

- Actions taken under the Montreal Protocol have led to decreases in the atmospheric abundance of controlled ozone-depleting substances (ODSs) and the start of the recovery of stratospheric
- The atmospheric abundances of both total tropospheric chlorine tropospheric bromine from long-lived ODSs controlled under the Montreal Protocol have continued to decline since the 2014 Assessment.
- Outside the Polar Regions, upper stratospheric ozone layer has recovered at a rate of 1-3% per decade since 2000.
- The Antarctic ozone hole is recovering, while continuing to occur every year. As a result of the Montreal Protocol much more severe ozone depletion in the Polar Regions has been avoided.
- At projected rates, Northern Hemisphere and mid-latitude ozone is scheduled to heal **completely** (i.e. equivalent to 1980 values) by the 2030s followed by the Southern Hemisphere in the 2050s and Polar Regions by 2060.
- The Kigali Amendment is projected to reduce future global average warming in 2100 due to hydrofluorocarbons (HFCs) from a baseline of 0.3-0.5 degree Celsius to less than 0.1 degree Celsius.

Ozone change and its influence on climate

Ozone is important in the climate system and its changes can influence both the troposphere and the stratosphere.

Influence on stratospheric Decreases in stratospheric ozone caused by ODS increases have been an important contributor to observed stratospheric cooling.

- New studies find that ODSs thereby contributed approximately one third of the observed cooling in the upper stratosphere from 1979 to 2005, with two thirds caused by increases in other GHGs.
- Influence on surface climate and oceans: Lower stratospheric cooling due to ozone depletion has very likely been the dominant cause of late 20th century changes in Southern Hemisphere climate in summer. These changes include the observed pole shift in Southern Hemisphere tropospheric circulation, with associated impacts on surface temperature precipitation.
 - Changes in tropospheric circulation driven by ozone depletion have contributed to recent trends in Southern Ocean temperature and circulation; the impact on Antarctic sea ice remains unclear.

Future Global Ozone changes: The key drivers of future ozone levels continue to be declining ODS concentrations, upper stratospheric cooling because of increased GHGs, and the possible strengthening of the **Brewer-Dobson circulation** (a model which attempts to explain how tropical air has less ozone than polar air, even though the tropical stratosphere is where most atmospheric ozone is produced) from climate change.

- CO2, CH4, and N2O will be the main **drivers** of 60°S–60°N stratospheric ozone changes in the second half of the 21st century. These gases impact both chemical cycles and the stratospheric overturning circulation, with a larger response in stratospheric ozone associated stronger climate forcing.
- Given that ODS levels are expected to decline slowly in coming years, a large enhancement of stratospheric sulphate





aerosol in the next decades would result in additional chemical ozone losses. of additional **Possible** sources stratospheric sulphate aerosol include volcanic eruptions (like Mt. Pinatubo in 1991) and geoengineering.

Why Montreal Protocol Worked?

The Montreal Protocol is one of the most successful and effective environmental treaties ever negotiated and implemented. No single factor led to its success.

- **Approach of Cooperation:** From the start, negotiation relied heavily on leadership and innovative approaches. Much negotiation was held in small, informal groups. This enabled a genuine exchange of views and the opportunity to take some issues on trust, such as the subsequent development of the Multilateral Fund. The people negotiating the treaty also included scientists, which lent credibility.
- Principles based: The "precautionary principle", and the concept of common, but differentiated, responsibility took root in the Montreal Protocol when developing countries were given longer time to phase- out ODS.
- accommodate newer to **Flexibility** information: This flexibility meant the protocol could be amended to include stricter controls: more ozone-depleting substances added to the control list and total phase-out, rather than partial phase-out, called for. Starting out modestly also encouraged a greater confidence in the process.
- Trade Provisions and restrictions: These limited the signatories to trade only with other signatories. This increasingly limited the supplies of CFCs and other ozonedepleting substances (ODS) to nonsignatories countries which forced them to ratify the Protocol.
- Clear List of Targeted Sectors: The chemicals and sectors (refrigeration, primarily) involved are clearly articulated. This let governments prioritise the main sectors early.

- **Incentive to Industry:** The Montreal Protocol also provided a stable framework that allowed industry to plan long-term research and innovation. Transitioning to newer, reasonably priced formulations with lower- or no- ozone depleting potential benefited the environment and industry.
- **Institutional Support:** Another feature of protocol has been the independent Technology and Economic **Assessment Panel** (and its predecessors). These have helped signatories reach solid and timely decisions on often-complex given countries matters. They have confidence to start their transition.
 - The **Multilateral Fund** has been another reason for the protocol's success.
 - ✓ It provides incremental funding for **developing countries** to help them meet their compliance targets.
 - Significantly, it has also provided institutional support. This helps countries build capacity within their governments to implement phase-out activities and establish regional networks so they can share experiences and learn from each other.

Compliance Procedure:

- This was designed from the outset as a **non-punitive procedure.** It prioritised helping wayward countries back into compliance.
- Developing countries work with a UN agency to prepare an action plan to get themselves back into compliance. If the resources from necessary, Multilateral Fund are available for some short-term projects.
- It is telling that all 142 developing countries were able to meet the 100% phase-out mark for CFCs, halons and other ODS in 2010.

Way Forward: The Assessment, which is intended to add to the scientific basis for decisions made by the Parties to the Montreal Protocol, also





presents updated scenarios for hastening ozone recovery through:

- Complete elimination of controlled and uncontrolled emissions of substances such as carbon tetrachloride and dichloromethane.
- Bank recapture and destruction of chlorofluorocarbons (CFCs), halons, and hydrochlorofluorocarbons (HCFCs).
- Elimination of HCFC and methyl bromide production.
- Mitigation of nitrous oxide emissions.
- o Focus on achieving the Kigali Targets.



Ease Of Doing Business

In The News

India jumped 23 ranks in the World Bank's Ease of Doing Business (EoDB) Index 2018 to 77 from 100 in 2017 among 190 nations.

More on report

- The Doing Business report ranks countries on the basis of distance to frontier (DTF), a score that shows the gap of an economy to the global best practice.
- The World Bank has recognised India as one of the top improvers for the year. This year, India features among the report's list of top 10 improvers for the second year in a row and only one in BRICS to feature in
- India is seeking to reach the **30th position** by 2020, according to an output-outcome framework document prepared by the government.
- It will help India maintain its goal of **strong** and sustained economic growth, attract more FDI, achieve sound living standards and moderate inflation.
- The Doing Business 2019 report bases the rankings on field surveys and interviews with corporate lawyers and company executives in Delhi and Mumbai.

Reasons for Improvement

- **Improving MSME sector**: India's strong reform agenda to improve the business climate for small and medium enterprises is bearing fruit.
- Faster registration process: Starting a was made easier through consolidation of multiple application forms and introduction of a goods and services tax (GST), while getting electricity was made faster and cheaper.
- Infrastructural Development and fiscal reforms: Government focus on logistics and supply chain centred initiatives and fiscal reforms like Insolvency and Bankruptcy Code has helped in promoting trade and business.

- **Reduction in Corruption:** Many initiatives such as Aadhaar, making registration online, acceptance of electronic signatures etc. has been taken. In fact, there has been a considerable year- on-year fall in the companies that number of viewed 'corruption' as a major barrier – from 51% in 2015 to 25% in 2017.
- Improvement in construction permits: It was improved by implementing the singlewindow clearance system in Delhi and the online building permit approval system in Mumbai.
- Improvement in trading across borders: It was achieved by reducing the time and cost to export and import through various initiatives, including the implementation of electronic sealing of containers, upgrading infrastructure and port allowing electronic submission of supporting documents with digital signatures under its National Trade Facilitation Action Plan 2017-2020.

Recent Government **Initiatives** for **Promotion of Ease of Doing Business**

- **Ease of Doing Business Grand Challenge:** The objective of this challenge is to invite innovative ideas based on Artificial Intelligence, Internet of Things, Big Data Analytics, Blockchain and other cutting edge technology to reform Government processes. The platform for the Grand Challenge is the Startup India Portal.
- Companies Amendment (Ordinance), **2018:** The Ordinance, which has been promulgated based on the recommendations of the Committee appointed by the Government to review offences under the Companies Act, 2013.
- **Industrial Park Rating System:** Under this Industrial Department of Policy Promotion (DIPP), Ministry of Commerce & Industry has undertaken the exercise to rate the industrial parks on parameter such infrastructure, internal external





infrastructure, business services and facilities, environment, safety management and connectivity.

Relaxation in Building Norms:

- The Ministry of Environment, Forest and Climate Change (MoEFCC) issued a notification easing the green norms for the building and construction sector, wherein residential projects up to 1.5 lakh square metres (built-up area) will not require 'prior environmental clearance'.
- Urban local bodies such as municipalities will now have the power to grant building permission, directly benefiting the EoDB ranking for the housing and construction sector.
- Challenges
- Challenges like **fluctuating commodity prices and exchange rates, and lack of basic infrastructure continue to persist.**
- Doing business in a country like ours, with its cultural, geographical, demographical diversity is not an easy endeavor.
- There remain significant complaints about around **the lack of transparency around business approvals**, particularly in the case of statutory approvals for investments.
- The **extent of digitalisation**, however, varies markedly across sectors, as does **corruption**, with those engaging in infrastructure projects still reporting significant issues relating to corruption.
- The key issue for those outside India is increasingly market demand for their products and services relative to
- government and bureaucracy-related barriers.
- Those currently doing business in India cite 'taxation issues' as a consistent barrier, whilst those looking to enter the Indian market understandably rate 'identifying a suitable partner' as their most salient issue after a considerable decline in 'legal and regulatory impediments' from 2017 to 2018.
- Relaxing Building norms for EoDB has sent ripples of fear and anticipation among environmentalists and green activists across the nation considering the extent of

corruption in municipalities across the nation.

Way Forward

- Cooperation: As highlighted by the Economic Survey, addressing deep-rooted problems will only be possible through extensive cooperation between the organs of the government—"cooperative separation of powers".
- Need for Strong Contract Enforcement:
 - O A sound contract enforcement mechanism is essential for maintaining business confidence, reducing uncertainty and promoting fair play in the economy.
 - The Economic Survey 2017-18 tried to highlight the impact of this problem by drawing attention to the costs of stalled projects and legal fees.
- Ease of Taxation & Improvements in GST: Further simplification of returns processes, addressing concerns for India's huge MSME/SME sectors etc. are necessary steps that need to be taken to reap the kind of benefits envisioned during GST inception.
- Simplified Infrastructure and Government frameworks: Better roads and transportation facilities speed up the transportation of goods and brings up the efficiency of the business. Introduction of Ebills and changing regulatory Wav frameworks around inter/intra state bill movements for instance is a good example of unified policies that will help in further building the right frameworks.

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World Development Report

In The News

Recently, World released World Bank Development Report with a theme The Changing Nature of Work.

Historical Background

- Since, Industrialization (18th century) there is concern of joblessness among individual as machine can replace human from many routine task and ought to eliminate many low-skill jobs. However, they have created more prosperity than they have destroyed.
- Technology through innovation, generates new sectors and new tasks, which provides opportunities to create new jobs, increase productivity, and deliver effective public services

Finding of the report

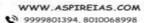
- **Technology** is blurring the boundaries of the firm: Using digital technologies, entrepreneurs are creating global platformbased businesses that differ from the traditional production process in which inputs are provided at one end and output delivered at the other.
- **Technology reshaping the skills:** There is an increasing demand for three types of skills i.e advanced cognitive skills such as problem-solving, complex sociobehavioral skills such as teamwork, and skill combinations that are predictive of adaptability such as reasoning and selfefficacy.
- **Change in Nature of Employment:** There is a shift in employment from manufacturing to services in high income countries while in some developing countries, it's increasing in manufacturing sector.
- **High Informality in developing countries:** A large number of workers remain in lowproductivity jobs, often in informal sector firms whose access to technology is poor.
- Societal Crisis: Inequality of opportunity or a mismatch between available jobs and

- skills, can lead to migration or societal fragmentation. eg: Europe Refugee Crisis
- Inefficient Social Security Structure of **Developing Countries**: It found that systems that depend on contributions from employers and employees, to finance oldage security, are not a good fit for developing countries.
- **Tax Evasion:** Digital economy is making it easier for corporations to avoid taxation, as it's easier to shift profits to low-tax jurisdictions.

Suggestion in report to Improve Human Capital

- **Improving Social Investment:** Investing in human capital, particularly early childhood education, to develop high-order cognitive and socio-behavioral skills in addition to foundational skills.
- **Enhancing social protection:** A guaranteed social minimum (Universal basic income) strengthened social complemented by reforms in labor market rules in some emerging economies is must for developing a just and equitable society.
- Creating fiscal space for public financing of human capital development and social protection by imposing property taxes in large cities, excise taxes on sugaror tobacco, carbon taxes etc to increase a government's revenue.
- **Optimizing taxation policy** and improving tax administration to increase revenue by eliminating the tax avoidance techniques used by firms to increase their profits.
- **Developing countries:** They will need to take rapid action to ensure they can compete in the economy of the future and harness the benefits of technological disruptions.









Talanoa Dialogue Synthesis Report And Yearbook Of Global Climate Action 2018

In The News

UNFCCC released two key publications, Talanoa Dialogue Synthesis Report and Yearbook of Global Climate Action 2018.

Highlights of the Report

- Both the reports are based on various studies and climate reports such as IPCC report, Emission Gap Report, WMO Greenhouse Gas Bulletin and other inputs received from across the globe.
- It highlights that success in tackling the global climate crisis can be achieved, but only if public and private sector actions are urgently stepped up.

The reports aim to respond to the three Talanoa Dialogue questions in regards to the progress on Climate actions

Where are we?

- o As of 18 November 2018, 184 Parties to the UNFCCC (over 90 per cent) had ratified the Paris Agreement; 180 had formally recorded their NDC in the registry; 10 had communicated a longlow-emission development strategy; and 91 were working on a national adaptation plan.
- o National governments have taken steps to strengthen national policy, regulatory institutional frameworks to and address climate change. Climaterelated laws come to a total of 1,500.
- o Action under the UNFCCC and the Kyoto Protocol up to 2020 is under way; however, much more of global effort is still required to deliver the expected level of action and support.
- Perceived trade-offs of the changes towards transition to low-emission development with competing national priorities (e.g. poverty alleviation, job or competitiveness, security) misalignments between national and sectoral policies, insufficient leadership

as well as cultural and psychological barriers are the major challenges.

Overall, climate action is on the rise, generating momentum throughout the planet and providing opportunities and experiences that can be replicated. However, global greenhouse gas (GHG) emissions are still increasing, as is the concentration of GHGs in the atmosphere (See Box- WMO Greenhouse Gas Bulletin).

- Where do we want to go? It is imperative to keep global warming to below 1.5 °C, as a matter of life and death for small islands and other vulnerable communities.
 - CO2 emission reductions that limit global warming to 1.5 °C involve different portfolios of measures, striking different balances between lowering energy and resource intensity, rate of decarbonization and the reliance on CO2 removal: different portfolios face potential different challenges and synergies and trade-offs with sustainable development.

How do we get there?

- Strict adherence to climate goals as committed in NDCs and various global forums such as Doha Amendment to Kyoto Protocol, Paris Agreement, Sendai Framework and 2030 Agenda for Sustainable Development.
- Private sector actors continue, and step-up, initiatives and concerted action to reduce emissions and enhance resilience in line with the requirements of the Paris Agreement.
- Civil society groups strengthen their collective contribution and active engagement to promote climate action at the regional, national, State and local level.
- o **Finance:** Solutions lie in investments in ex ante climate resilience building, as much as in scaled- up adaptation financing.
- **Technological Innovations:** This could





be achieved by developing a strong and diversified **entrepreneurial ecosystem** that fosters and protects innovation and fair competition, e.g. through incentive programmes and the establishment and strengthening of incubators and accelerators and appropriate schemes for intellectual property rights.

- o **Capacity Building:** According to the IPCC, international cooperation is a critical enabler for developing countries and vulnerable regions. This can be achieved by
 - ✓ Establishing and strengthening national frameworks for the governance and monitoring of climate action, and develop and implement policies and measures relating to mitigation and adaptation action;
 - ✓ Support the establishment and enhancement of South–South cooperation initiatives, in particular those with the potential to facilitate research and development and large-scale deployment of low- emission and climate-resilient technologies;

Related Information WMO Greenhouse Gas Bulletin

- Published annually, the Greenhouse Gas Bulletin reports on atmospheric concentrations of greenhouse gases.
- It is based on observations from the WMO Global Atmosphere Watch Programme (GAW), which tracks the changing levels of greenhouse gases as a result of industrialization, energy use from fossil fuel sources, intensified agricultural practices, increases in land use and deforestation.

Key Findings of the Greenhouse Gas Bulletin-2018

- Carbon dioxide is the main long-lived greenhouse gas in the atmosphere. Concentrations reached 405.5 ppm in 2017, 146% of the pre-industrial era (before 1750).
- Methane (CH4) is the second most important long-lived greenhouse gas and is

- now 257% of the pre-industrial level.
- Atmospheric concentration of **Nitrous oxide** (**N2O**) in 2017 was 329.9 parts per billion. This is 122% of pre-industrial levels.
- **CFC-11** (trichlorofluoromethane): Since 2012 its rate of decline has slowed to roughly two thirds of its rate of decline during the preceding decade.

Emissions Gap Report 2018: This is the 9th edition of the UN Environment Emissions Gap Report.

- It focuses on the "gap" between the emissions reductions necessary to achieve the agreed targets at lowest cost and the likely emission reductions from full implementation of the Nationally Determined Contributions (NDCs), which form the foundation of the Paris Agreement.
- It is prepared by United Nations Environment Programme (UNEP).

Major Findings

• Pathways reflecting current NDCs imply global warming of about 3°C by 2100, with warming continuing afterwards.

Global greenhouse gas emissions show no signs of peaking. Global CO2 emissions from energy and industry increased in 2017, following a three year period of stabilization.

The Marrakech Partnership for Global Climate Action, established at the CoP22 (UNFCCC), aims to mobilize climate actions quickly and to reap the benefits in efficiency and effectiveness through partnerships and coordination between different actors.

It lists out some of the **progressive steps taken** and benefits of Climate action in the Yearbook of Global Climate Action 2018:

- About 60 per cent of the initiatives are producing outputs that put them on a path to achieving their desired environmental or social outcomes.
- The outputs from **cooperative initiatives** are increasingly being delivered in low- or middle-income countries. This reflects increased climate action in developing





countries and increased international cooperation.

- Climate action is **re-shaping the financial sector** to help transition to a net-zero carbon and resilient society. Businesses and investors are also reporting on and are managing climate risks and opportunities and implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
- Increasingly mainstreaming of climate change into financial institutions' operations and investment decisions. E.g. the green bond market. In 2018, the total value of climatealigned bonds peaked at USD 1.45 trillion.





Capital Conservation Buffer

In The News

Reserve Bank of India (RBI) decided to extend the deadline for implementing last tranche of an additional 0.625% to be set aside as capital conservation buffer, required under the Basel III norms, by a year (upto March 31, 2020).

What is Capital Conservation Buffer (CCB)?

- It is the mandatory capital that financial institutions are required to hold above minimum regulatory requirement.
- According to CCB norms, banks will be required to hold a buffer of 2.5% Risk Weighted Assets (RWAs) in the form of Common Equity, over and above Capital Adequacy Ratio of 9%.
- CCB currently stands at 1.875% and remaining 0.625% was to be met by March 2019.

Significance of CCB

- It is designed to ensure that banks build up capital buffers outside periods of stress which can be drawn down, as losses are incurred.
- Regulations targeting the creation adequate capital buffers are designed to reduce the procyclical nature of lending promoting the creation countercyclical buffers as suggested Basel III norms. During credit expansion, banks have to set aside additional capital, while during the credit contraction, capital requirements be loosened. can Systematically important banks are subject to higher capital requirements.
- The capital buffers increase the **resilience of** banks to losses, reduce excessive or underestimated exposures and restrict the distribution of capital. These macroprudential instruments limit systemic risks in the financial system.

Why banks are unable to adhere to CCB

☐ Mounting pile of stressed assets has resulted

into low credit growth, deterioration in asset quality, low profitability of Indian banks & over-reliance on capital infusion from the Government. In order to protect their margins & first meet the basic capital ratios i.e. CRAR of 9%, banks have slowed down the adoption of CCB Basel III norms.

Types of Bank Capital

- Tier I capital (Core Capital): It consists of money kept as Statutory Liquidity Ratio (SLR), in physical cash form & as share capital and secured loans. At least 6% of CAR must come from Tier 1 capital. This capital can absorb losses without bank ceasing its trading operations.
- Tier II capital (supplementary capital): It includes after tax income, retail earnings of the bank, capital in the form of bonds/hybrid instruments & unsecured loans (getting serviced).
- Tier III capital: Includes Non-Performing Assets (NPAs), subordinated loans (not getting serviced) & undisclosed reserves from the balance sheet.

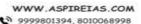
Capital Adequacy Ratio (CAR)

- CAR = (Tier I + Tier II Capital)/Risk Weighted Assets
- Expressed as a percentage of a bank's risk weighted credit exposures.
- Measure of bank's financial strength to ensure that banks have enough cushions to absorb losses before becoming insolvent and losing depositors' funds.
- **CAR** is required to be 9% by RBI (based on BASEL III norms), where 7% has to be met by Tier 1 capital while the remaining 2% by Tier 2 capital.

Provisioning requirement

- Setting aside a portion of profits, in proportion of risk weighed loans given, to compensate a probable loss due to incomplete loan recovery is called provisioning.
- Like CCB & CAR requirements, provisioning









is one of the contingency measures to contain risk.

- Different types of assets have different risk profiles e.g. Government debt has 0% risk weight
- A high-risk weight discourages lending by increasing the capital requirement for lenders.

About BASEL norms

- Basel Committee on Banking Supervision is an international committee formed in 1974 to develop standards for banking regulation.
- It consists of central bankers from 27 countries and the European Union. It is headquartered in the office of Bank for International Settlements (BIS) in Basel, Switzerland.
- It developed a **series of policy recommendations known as Basel Accords**, which suggested minimum capital requirements to keep bank solvent during the times of financial stress.

Way Forward

While relaxation of the buffer norms and capital infusion by the government are welcome steps in the time of exigency, it must be ensured that good money is not thrown after bad money. Improving credit discipline and risk management systems are the need of the hour for public sector banks. The governance issues of the banks and their overenthusiastic lending in the past needs to be addressed.

The government should initiate long- pending reforms (recommended by the

P.J. Nayak Committee):

- Cede control of nationalized banks and cut its stake below 51%.
- Form an independent Banking Investment Company (BIC) for corporatized governance of PSBs.
- Performance related pay structure and incentives for upper management functionaries.







Credit Rating Agencies

In The News?

SEBI has tightened disclosure norms for credit rating agencies (CRAs) after they failed to warn investors on time about the deteriorating credit profile of Infrastructure Leasing and Financial Services Ltd (IL&FS) which underwent a crisis recently.

Detail

- The rating agencies will now need to disclose the liquidity position of the company being rated and also check for asset-liability mismatch. This would lead to timely availability of information about company. This would parameters such as: Liquid investments or cash balances, Liquidity coverage ratio, Access to unutilized credit lines and adequacy of cash flows for servicing debt obligation.
- CRAs would also need to disclose the source and rationale if the company is expecting additional funds to deal with its
- In order to promote transparency and to enable the market to best judge the performance of the ratings, the CRA should publish information about the historical average rating transition rates across various rating categories, so that investors can understand the historical performance of the ratings assigned by the CRAs. The transition rate indicates the number of instances when credit ratings have changed over a specified period.

Issues with Credit Rating Agencies

- **Conflict of interest:** The CRA Regulations in India currently recognise only the issuerpays model, under which, the rating agencies charge issuers of bond and debt instruments a fee for providing a ratings opinion. Thus, this model has an inbuilt conflict of interest.
 - o Another example of conflict of interest is non-rating services such as risk consulting,

funds research and advisory services given to issuers for which ratings have been provided.

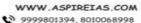
- **Rating shopping:** It is the practice of an issuer choosing the rating agency that will either assign the highest rating or that has the most lax criteria for achieving a desired rating. Hence, the system does not permit publishing a rating without the issuer's consent.
- Less competition: Credit-rating market in India is oligopolistic, with high barriers to entry. Lack of competition in the market enables CRAs to have longer, wellestablished relationships with the issuers which can hamper their independence.
- Poor Rating Quality: Often ratings are provided on limited information. For e.g. If the issuer decides not to answer some determinant questions, the rating may be principally based on public information. Many rating agencies don't have enough manpower which often leads to poor quality.
- **Independence of the ratings committee:** Over the years, the membership of the ratings committee has shifted from external experts to employees of the ratings agency which has raised concerns about their independence.

Suggestions for addressing these challenges

- Removal of conflict of Interest: Moving back to the earlier "subscriber pays" model in which investors pay for the ratings can be a possible approach.
- More Players: Rules should be made easier for new players to enter the credit rating space and compete against them.
- **Improve Quality of Ratings:**
 - SEBI must also assess the predictive ability of the current rating models followed by the agencies. There is a need to invest in high-tech predictive **modelling** techniques.
 - Increased remuneration for manpower to











attract the best talent must be ensured.

- Cursory disclosure of all ratings: CRAs can be asked to provide briefly in their press release to the ratings given by other CRAs to the same borrower. This can help in discouraging "rating shopping".
- Legal protection for CRAs: There are instances of Indian CRAs being sued by the company it rates, in a bid to prevent the rating downgrade. The regulator should consider framing laws that allow CRAs to express their rating opinion without fear of being sued.
- Awareness among Investors: Investors should be made aware about the rating process and be asked to conduct a review by themselves too and stop relying solely on the ratings.
- Rotation of rating agencies: SEBI can also explore the possibility of a mandatory rotation of rating agencies by the debt issuers (like corporations are required to change their auditors periodically under the Companies Act, 2013).

Credit rating agencies in India:

- The Securities and Exchange Board of India (Credit Rating Agencies) Regulations, 1999 empower SEBI to regulate CRAs operating in India.
- All the credit agencies need to be registered with SEBI in order to operate in India.
- There are seven Credit Rating Agencies registered with SEBI, viz. CRISIL, ICRA, CARE, India Ratings and Research, SMERA, Infomerics and Brickworks.

Importance of CRAs

- They provide retail and institutional investors with **information** that assists them in determining if debtor will be able to meet their obligations.
- They help investors, customers etc. to get an overall idea of the strength and stability of an organization and enable them to make informed decisions.
- These agencies also help build trust between the investors and the governments by quantifying the level of risk

- associated with investing in a particular country. For example-Sovereign credit ratings are given to the national governments which highlight a country's economic and political environment.
- CRAs help **strengthening of secondary market** by increasing borrower pool.
- Credit ratings ensure a discipline amongst corporate borrowers due to because of this desire to have a good image.







National Financial Reporting Authority

In The news?

Recently, government notified the rules determining the jurisdiction, powers, and functions of the National Financial Reporting Authority (NFRA).

Why the need arises for NFRA?

- The recent failure of ICAI (Institute of Chartered Accountants of India) to spot corporates fraud, raised the demand for setting up of an independent regulator NFRA.
- NFRA was one of the key changes brought by the Companies Act 2013 but its provisions were not notified for the last five years.

About the NFRA Rule 2018

- It will oversee the auditors of banks. insurers, electricity firms and other entities referred to it by the government.
- NFRA can investigate the auditors of:
 - o Listed entities, unlisted entities with paid-up capital of not less than ₹500 crore or annual turnover of over ₹1,000 crore.
 - o Those having aggregate loans, debentures or deposits of not less than ₹500 crore.
- It enables the NFRA to debar erring auditors or audit firms and it can also refer service of an auditors to **Quality Review Board** under **Chartered Accountants Act.**

What is NFRA?

- It is established as an independent regulator to oversee the auditing profession and accounting standards.
- It consists of a Chairperson, three full time members and nine part-time members.
- Chairperson and full-time members would be selected through a search-cum-selection committee headed by Cabinet Secretary.

- With the constitution of NFRA, India is now eligible to become a member of the **International Forum of Independent Audit Regulators (IFIAR).**
- This shows a distinct shift from selfregulation to an independent oversight of auditors which is line with international best practices.
- NFRA will strengthen the working mechanism of ICAI because it will provide greater assurance that improper conduct will punished which would further strengthen the functional credibility of
- The rising challenges of technology require minded attention **development**, now, ICAI will be able to pay more attention to educating and training current and future members.
- Apart from this, NFRA will have a positive impact on current corporate governance **regime** in the country.

Significance of NFRA







ECB Norms

In The news?

Recently RBI eased the minimum average maturity requirement for External Commercial Borrowings (ECBs) in the infrastructure space.

About External Commercial Borrowings

- It refers to commercial loans raised by eligible Indian resident entities from non-resident lenders with a minimum average maturity of 3 years.
- It can be in the form of bank loans, buyers' credit, suppliers' credit or securitized instruments. If the foreign money is used to finance the Equity Capital, it is termed as Foreign Direct Investment
- ECBs are governed under the **FEMA** guidelines. They can be assessed under two routes i.e. Automatic route and approval route. Generally, companies in businesses (such as hotel, hospitals and software) can access the automatic route.

Advantages of ECBs

- Cost of raising ECBs is lower than domestic borrowings if borrowed from economies with a lower rate of interest. It also improves profitability of company
- o The borrower can diversify the investor base as it provides access to international markets for the borrowers.
- o The government can direct inflows into specific sectors by allowing higher ECBs in them, thus promoting development.

• Issues with ECBs

- o It increases the external debt of the country
- o The borrower lends in trouble if the borrowings are not hedged properly and the currency depreciates sharply.
- o There is also concern that dependence on ECB is rising to fund the current account deficit which can have negative consequences.







Legal Entity Identifier

In The news?

Reserve Bank of India has made **Legal Entity Identifier** (LEI) code mandatory for all market participants, other than individuals.

What is LEI?

- It is a **20 character global reference number** conceived by G20 that uniquely identifies every legal entity or structure that is party to a financial transaction, in any jurisdiction.
- Internationally LEI is implemented and maintained by Global Legal Entity Identifier Foundation through Local Operation Units (LOU) established by each country independently and voluntarily.
- LEI information is publicly available free of charge and It is reviewed, updated and validated annually by LOUs.
- In India entities can obtain LEI from Legal Entity Identifier India Ltd (LEIL) (only LOU of India), subsidiary of The Clearing Corporation of India Ltd, recognized by RBI under Payment and Settlement Systems Act, 2007.

Need and benefits of LEI in India:

- Monitoring debt: Banks are now required to acquire LEI number from the borrower and report it to Central Repository of Information on Large Credit. A consolidated data under LEI mechanism will help banks to monitor debt exposure of corporate borrowers and also prevent multiple loans against the same collateral, thus helping reduce NPAs
- Money Laundering: Global financial transactions are difficult to track. However, LEI being a unique global identifier, making it mandatory for all transactions regulated by RBI will help identifying the entity party to the transaction easily and accurately.
- **Tool for RBI**: To gain better insight into corporate actions (particularly M&A activity).
- Other benefits: LEI will improve internal

data flow and risk monitoring processes and allow the industry to meet regulatory reporting requirements while minimizing costs.





Hyperspectral Imaging Satellite (HYSIS)

In The News?

- ISRO's PSLV C43 launched India's first Hyperspectral Imaging Satellite (HvsIS) along with 30 foreign satellites from Satish Dhawan Space Centre, Sriharikota.
- HysIS is an earth observation satellite built around ISRO's Mini Satellite-2 (IMS-2) bus.
- **Hyperspectral** About the **Imaging Technology**
 - It combines the power of digital imaging and spectroscopy to attain both spatial and spectral information from an object.
 - This result can be then used to identify, measure and locate different materials and their chemical and physical properties. Every pixel in the image contains a continuous spectrum (in radiance or reflectance) and can be used to characterize the objects in the scene with great precision and detail.
 - Hyperspectral images provide much more detailed information about the scene by dividing the spectrum into many more bands than a normal color camera, which only acquires three different spectral channels corresponding to the visual primary colors red, green and blue.
 - It was first tried by ISRO in an experimental satellite in May 2008 and later on Chandrayaan-1 mission for mapping lunar mineral resources, this is the first time a full-fledged hyperspectral imaging satellite has been launched.

Application

- o **Hyperspectral** remote sensing is used for a range of applications like agriculture, forestry, soil survey, geology, coastal zones. inland water studies. environmental studies, detection pollution from industries and the military for surveillance or anti-terror operations.
- Other utilities include online industrial monitoring/sorting/classification

- laboratory measurements, clinical instruments for medical diagnostic and airborne and satellite based remote sensing tools.
- **Challenges:** This technology accompanied with high cost and complexity. There is a need for fast processing of data (fast computers), sensitive detectors and large data storage capacities for hyperspectal data.

Polar Sun-Synchronous orbit

It is a nearly polar orbit around a planet, in which the satellite passes over any given point of the planet's surface at the same local mean solar time.

Geosynchronous orbit

It is an orbit around Earth of a satellite with an orbital period that matches Earth's rotation on its axis, which takes one sidereal day.

Geostationary orbit

It is a circular geosynchronous orbit 35,786 km (22,236 mi) above Earth's equator and following the direction of Earth's rotation.

Related Information

Spectral Imaging

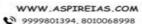
It is imaging that uses multiple bands across the electromagnetic spectrum like using infrared, the visible spectrum, the ultraviolet, x-rays, or some combination of the above.

Hyperspectal imaging multi spectral VS imaging

- The main difference between multispectral and hyperspectral is the number of bands and how narrow the bands are.
- Hyperspectral imaging (HSI) uses continuous and contiguous ranges of wavelengths (e.g. 400 - 1100 nm in steps of 0.1 nm) whilst multispectral imaging (MSI) uses a subset of targeted wavelengths at











chosen locations (e.g. 400 - 1100 nm in steps of 20 nm).

 Hyperspectral imagery consists of much narrower bands (10-20 nm). A hyperspectral image could have hundreds or thousands of bands. In general, it comes from an imaging spectrometer.









GSLV-MK III D2

In The news?

Recently, ISRO launched satellite-GSAT-29 through the launcher GSLV-Mk III D2.

About the Launcher- GSLV-Mk III D2

- It is the **fifth generation**, **India's heaviest launch vehicle** designed to place satellites of up-to **4,000 kg into Geosynchronous Transfer Orbit (GTO)** or satellites weighing about 10,000 kg to a Low Earth Orbit (LEO).
- It is the **second launch of GSLV-Mk III**, which earlier in 2017 carried GSAT-19 satellite as the first development flight.
- It is a **three-stage heavy-lift rocket** with two solid fuel strap-on engines in the first stage, a **liquid propellant** core as second stage and a **cryogenic engine** for the third stage.
- The **cryogenic propellant system** in upper stage called the C25 engine, is an advanced version of cryogenic technology.
- The indigenous cryogenic C25 engine provides an unprecedented thrust power to GSLV rockets which keeps fuel loads on the rocket relatively low.

Significance of GSLV-Mk III

- Its successful launch will provide a thrust to future space missions such as Chandrayaan 2, ISRO's moon and man missions etc.
- India is among six nations apart from the US, Russia, France, Japan and China — to possess cryogenic engine technology. This launch will further expand ISRO's space programmes on several fronts such as commercial international space market.

Significance of GSAT 29

- With a lift-off mass of 3423 kg, GSAT 29 is a multi-beam, multiband communication satellite of India and is the heaviest satellite launched from India.
- It will bridge the digital divide of users including those in Jammu & Kashmir and North Eastern regions of India.





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Extra-Judicial Killings

In The news?

Delhi High Court has sentenced 16 members of the Provincial Armed Constabulary (PAC) in Uttar Pradesh for Hashimpura extrajudicial killings.

What is Extra-judicial killing?

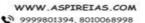
Any act of killing that happens outside the judicial process is called Extra Judicial Killing. It has not been defined explicitly by the international law. However, US Torture Victim Protection Act defines it as "a deliberate killing not authorized by a previous judgement pronounced by a regular constituted court affording all the judicial guarantees which are recognized as indispensible by civilized peoples". Government authorities such as Police, Army, Intelligence agencies, etc. are found involved in extrajudicial killings e.g. encounters, targeted killings/assassinations, custodial deaths/killings of prisoners in jail and killing under AFSPA.

Different Ethical Perspective on Extra-Judicial Killings:

Theory	View	Perspective on Extra Judicial Killings
Deontology	If means adopted are right, and duty demands it, the action is moral.	Taking life of a person without following procedure established by law is unethical.
Teleology	Believes that morality of action depends upon the end purpose it serves, and not upon the means used.	
Ethical Egoism	When consequences are more favourable than unfavourable to agent who is performing the action	A policeman who is killing an alleged criminal is morally right if it creates deterrence among potential criminals and a better law and order situation in her area of administration.
Utilitarianism	When consequences have some utility and produces greatest good for the greatest number, the action is ethical.	If the law and order situation becomes better, it can be said that extra-judicial killings are ethical. But this utility is of short term. Under long term perspective, such killings will lead towards autocracy where there will be no guarantee of life and liberty of the citizens. Such a consequence is not desired in democracy. Therefore, such killings will be unethical.
Virtue Ethics	Justice is a cardinal virtue and one must avoid injustice.	It is unjust to kill a person based on allegations.
Applied Ethics	It is based on Principle of justice, Principle of Lawfulness, Principle of harm, Principle of benevolence and honesty, etc.	Extrajudicial killings violate them all.
Post-Modern Ethics	They deny the existence of a universal moral reality. Therefore, it discards universal and unchanging principles and believe in cultural relativism (different cultures have different moral values).	It believes that physical elimination of suspected enemies by government authorities can be regarded as ethical and an exceptional means of warfare. They justify the killing of Osama Bin Laden and others on that basis











Ethical issues involved in Extra-Judicial Killings:

- **Violation of law:** EJK is a crime; it is a murder and a cognisable offence under the law of the land.
- Violation of Fundamental Right to Life and Liberty: Since, life is being taken away without following the procedure established by law.
- Lack of Objectivity: Those who are generally killed belong to either poor background, or from depressed castes and minority groups.
- Violation of the Principle of Presumption of innocence: One is considered innocent until proven guilty.
- Justification of death in the name of Social order: However, State tyranny can be far worse than the violence caused by terrorist groups.
- Miscarriage of justice: Shooting in cold blood is preferred over systematic investigations, trial and conviction because of rampant corruption, delayed justice and prejudice against a community or caste.
- Factually guilty but legally innocent: There is a possibility that a guilty person is legally innocent e.g. children involved in terrorist groups.
- Cash-for-encounter Raj: As observed in Uttar Pradesh, staged shootouts appear to be a shortcut to promotions, bribes and publicity for police officials
- Undermining the value of life: Recently the Philippines President compared his extrajudicial killings as a lesser crime than of stealing a peso.
- Counterproductive: Violence begets violence and leads to the brutalisation of society, and hence is counterproductive.
- Lack of compassion: People do not necessarily celebrate the death of criminals. But, there is no palpable uproar over extrajudicial killings and the readiness to kill.

Power must not be conferred arbitrarily. It is essential to follow procedures established by law. In Manipur PIL, Supreme Court held that even

AFSPA is not out of the ambit of judicial review and ordered a CBI enquiry in it. Every Extra-Judicial killing has to be investigated according to the set of guidelines issued by Supreme Court in PUCL VS State of Maharashtra case. Else, the society may suffer from fear psychosis and will eventually loose trust in the system.







PT POINTERS



'COPE INDIA 2019'

- What is it? It is a bilateral exercise between Indian Air Force (IAF) and US Air Force (USAF) conducted on and over Indian soil. The 2019 edition will be held in West Bengal.
- The first such exercise was conducted at IAF air force station in Gwalior from February 2004.

KONKAN 18

- What is it? It is the naval exercise between India and United Kingdom. The 2018 edition will be held in Goa.
- Bilateral KONKAN exercise started in 2004 and since then has grown in scale. The exercise is aimed at deriving mutual benefit from each other's' experiences and is indicative of continuing cooperation between two countries.

COUNTRY'S FIRST OWL FESTIVAL IN PUNE

- The Indian Owl Festival, the country's first owl fest, is being held at Pingori village in Purandar taluka of Pune.
- The two-day festival, organised by Ela Foundation, an NGO working towards nature education and conservation, will give information on owl conservation.
- It is a first-of-its-kind festival in the country that is being organised with the intention of creating awareness about owl as a bird and debunking numerous superstitions associated with it.
- Indian Owl is protected under the Wildlife (Protection) Act of India.

AERB

In The News? Union Government has appointed renowned scientist Nageshwara Rao Guntur as Chairperson of Atomic Energy Regulatory Board (AERB).

About AERB:

- It was established in November 1983 to carry out certain regulatory and safety functions in the fields of nuclear and radiation safety on a countrywide basis.
- It was constituted by President of India by exercising powers conferred by Section 27 of Atomic Energy Act, 1962 to carry out certain regulatory and safety functions under the Act.
- The regulatory authority of AERB is derived from rules and notifications promulgated under Atomic Energy Act, 1962 and Environmental (Protection) Act, 1986.
- Its mission is to ensure that use of ionising radiation and nuclear energy in India does not cause undue risk to health and environment.

LEGION D'HONNEUR (LEGION OF HONOUR)

- In The News? Global software major Wipro Chairman Azim Premji has been conferred with the highest French civilian award 'Chevalier de la Legion d'Honneur' (Knight of the Legion of Honour) in recognition Bengaluru, in contribution to the Indian IT industry and philanthropy.
- What is it? The Legion of Honour, instituted in 1802 by Napoleon Bonaparte, is the highest civilian award given by the French Republic for outstanding service to France, regardless of the nationality of the recipients. The President of France is the Grand Master of the Order of the Legion of Honour.

HOG DEER

ontext: Indian scientists have discovered in India an endangered sub-species of hog deer (Axis porcinus annamiticus), earlier believed to be confined to the eastern part of central Thailand.

Key facts:





- Researchers reported the presence of a small population of hog deer in Keibul National Park Lamiao (KLNP), *Manipur*. The population genetically resembles A. p. annamiticus. The study indicates that the western limit of hog deer is Manipur; not central Thailand as believed.
- Significance: Since hog deer is losing habitat in other countries, the genetically distinct and evolutionarily significant population found in KLNP—considered a biodiversity hotspot on the India-Myanmar border—is significant for conservation.



- The hog deer or Pada is an endangered species in the IUCN Red List and is protected under Schedule I of the Indian Wild Life (Protection) Act, 1972. The species has lost ground in most of its distribution range. A small and isolated population of under 250 was reported from Cambodia. However, it was widely distributed throughout the Southeast Asian countries at the beginning of the 20th century.
- Two sub-species of hog deer have been reported from its range. The western race is distributed from Pakistan and the terai grasslands (along the Himalayan foothills, from Punjab to Arunachal Pradesh), while the eastern race of hog deer is found in Thailand, Indo-China, Laos, Cambodia, and Vietnam.

ODISHA NOW HAS A LEXICON FOR RARE TRIBAL LANGUAGES

- The Odisha government has come out with lexicons of 21 tribal languages.
- The bilingual tribal dictionaries will be used in multilingual education (MLE) initiated by the State government at the elementary level in tribal-dominated districts.
- The bilingual tribal dictionaries for MLE and trilingual tribal language proficiency modules in all the 21 tribal languages have been formulated by the Special Development Council. Both will help in enhancing proficiency in tribal languages.
- Background: Odisha has a unique place on the tribal map of India for having the maximum number of Scheduled Tribe communities. The State is home to 62 different tribal communities, including 13 particularly vulnerable tribal groups. These tribes speak 21 languages and 74 dialects. Of the 21 tribal languages, seven have their own scripts. However, Odia is used as the medium of communication in the dictionaries.

70-FEET TALL STATUE OF LORD BUDDHA UNVEILED AT RAJGIR IN NALANDA DISTRICT

Bihar Chief Minister Nitish Kumar has unveiled 70-feet tall statue of Lord Buddha at Rajgir in Nalanda district of state. It is second tallest statue of Buddha in the country.

Key Facts:

- The statue has been installed above 16 metre radius pedestal in middle of lake Ghora Katora. Ghora Katora is natural lake surrounded by five hills.
- It has been made from 45,000 cubic foot pink sand stone.





SPECIES NEW OF **SHARK** IDENTIFIED IN INDIAN OCEAN



- A new species of a deep sea shark- the Pygmy false catshark, has been found in the northern Indian Ocean, the first such discovery in India since 2011 when the Mangalore houndshark was identified.
- The Pygmy false catshark is currently known only from deep waters (200-1000m depth) and has a length of about 65cm. It is dark brown without any prominent patterns.
- The new species was found off the southwestern coast of India and north of Sri Lanka.
- Its scientific name is *Planonasus indicus* - from 'planus' meaning flat and 'nasus' meaning nose.
- The new species was first observed was on April 26, 2008, when it was caught in fishing nets in Kochi, Kerala.

ADMIRAL SUNIL LANBA, CHIEF OF THE NAVAL STAFF TO VISIT RUSSIA

What to Study?

• Dynamic Part: India-Russia Maritime Exercise

Aim of the visit:

- defence To consolidate bilateral relations with Russia, and
- To explore new avenues for defence cooperation.

Background:

- The **Indian** Navy and the Russian Federation Navy cooperates on many aspects like operational interactions, training, hydrography cooperation and exchange of Subject Matter Experts in various fields through the medium of Navy- to-Navy staff Talks.
- They both have conducted bilateral Maritime Exercise 'INDRA NAVY'. since 2003, followed by INDRA Tri-Services Exercise since 2017 (Next edition of INDRA NAVY Exercise is scheduled at Visakhapatnam December 2018).

WOMEN **EMPOWERMENT** RESOLUTION CAMPAIGN

- Uttar Pradesh Government has launched Women Empowerment Resolution Campaign to develop leadership capacities in women and make them vocal for their rights. The purpose of this campaign is to ensure the empowerment of women through different programs in the state.
- Under it, the women employees of the state government will go to their house to know about schemes introduced by Center and the state government for women. Issues like education, self-employment, health, sanitation and nutrition will be included under this campaign.





MAHATMA **GANDHI** STATUE **UNVEILED IN SYDNEY**

Context: President Ram Nath Kovind has unveiled a statue of Mahatma Gandhi at the Jubilee Park in the town of Parramatta, Sydney. The unveiling of the statue is part of the celebrations of the 150th anniversary of the Father of the Nation, which is being observed in different parts of the world.



VAJRA PRAHAR

- What is it? 'Vajra Prahar' is a Indo-US Special Forces joint training exercise conducted alternately in India and the US.
- In The News? The 2018 edition of this exercise has commenced at Mahajan Field Firing Range (MFFR), Bikaner in Rajasthan.
- Aim and objectives of the exercise: The aim of the exercise is to promote military relations between the two countries by enhancing interoperability and mutual exchange of tactics between Special
- The objectives of the joint training is to share the best practices between the two armies and to develop joint strategies by sharing expertise of conducting operations in a counter- insurgency and counterterrorism environment, while capitalising on the rich repository of experiences of each other armies.

RUSSIAN IGLA-S MISSILE SYSTEM

Context: Indian Army has picked Russia's Igla-S missile system as choice for its multibillion dollar contract for man-portable air defence systems (MANPADS).

About IGLA-S missile system:

- It is latest model of Russian MANPADS portable air-defense technology. It offers superior performance over earlier supplied SA-18 missiles to India. It is designed for use against visible aerial targets at short range such as tactical aircraft, helicopters, unmanned aerial vehicle (UAVs), cruise missile, head-on or receding, in presence of natural (background) clutter and countermeasures.
- As per requirements of Indian Army, it will have maximum range of 6km, altitude of 3km along with all-weather capability. Igla-S missile system will replace the existing Igla in service which is in urgent need of replacement.

NEW **SPECIES OF** INDIAN HORNED **FROGS** FROM HIMALAYAN REGIONS

Context: Scientists have discovered four new species of Indian horned frogs from Himalayan regions of Northeast India.

What are Horned frogs? Horned frogs get their name from fleshy horn-like projection on upper eyelids of some species

Key facts:

- They were discovered in the forests of Meghalaya and Arunachal Pradesh.
- Scientists have named them as Himalayan horned frog (Megophrys himalayana), Garo white-lipped horned frog (Megophrys oreocrypta); Yellow spotted white-lipped horned frog (Megophrys flavipunctata) and







Himalayan Giant horned (Megophrys periosa).

These frogs vary in size — yellow spotted whitelipped horned frog measures about 5.7-7.5 cm and is smallest among four. Giant Himalayan horned frog measures about 7.1 to 11.2 cm, making it largest of 15 horned frog species found in Northeast India.

CSE GETS 2018 INDIRA GANDHI **PRIZE**

• Context: Centre for Science and **Environment** (CSE), the New Delhi (India)-based independent research and advocacy think tank, has been named the recipient of the prestigious Indira Gandhi Prize for Peace. Disarmament Development for the year 2018.

About CSE:

Established in 1980 under the leadership of late Anil Aggarwal and presently headed by Sunita Narain CSE has been working for the last four decades to incorporate environmental sustainability into development policies.

It has worked on extending awareness and education about environmental issues, on air and water pollution, waste water management and industrial pollution, food safety and energy, climate change and above all in influencing official policy and actions for sustainable public development.

About Indira Gandhi Prize for Peace, Disarmament and Development:

The award is accorded annually by the Trust to individuals or organisations in recognition of creative efforts toward promoting international peace, development and a new international that economic order, ensuring scientific discoveries are used for the larger good of humanity, and enlarging the scope of freedom.

AIRSEWA 2.0

The government has launched the upgraded version

of AirSewa 2.0 web portal and mobile app.

- Major improvements include features such as secure sign-up and log-in with social media, chatbot for travellers support, improved grievance management including social media grievances, realtime flight status and details flight schedule.
- The upgrade and improved version of AirSewa operates through an interactive web portal as well as through a mobile app for both android and iOS platforms and will offer passengers a convenient and hassle-free air travel experience.
- The web portal and application will help to capture air travellers' feedback for policy interventions.

MY SON TEMPLE COMPLEX

- **Context**: President Kovind has visited the My Son temple complex in Kwangnan province in Vietnam.
- About My Son temple complex: A UNESCO World Heritage Site, the My Son temple complex is among Vietnam's most cherished cultural treasures.

PUNJAB BECOMES 3RD STATE TO BAN HOOKAH BARS OR **LOUNGES**

- Punjab has become the third state in the country after Maharashtra and Gujarat to ban hookah bars or lounges.
- President Ram Nath Kovind has given his assent to Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) (Punjab Amendment) Bill, 2018.
- The objective of this law is to check use of





tobacco in various forms and prevent diseases caused by use of the tobacco products.

INDIA'S FIRST ELEPHANT **HOSPITAL OPENS IN MATHURA**

- India's first specialized hospital for elephants has been formally opened in Mathura.
- The unique medical centre offers wireless digital X-ray, laser treatment, dental Xray, thermal imaging,

ultrasonography, hydrotherapy and quarantine facilities.

Located close to the elephant conservation and care centre, the hospital is designed to treat injured, sick or geriatric elephants and is equipped with a medical hoist for lifting elephants, as also an elephant restraining device with a dedicated indoor treatment enclosure for long duration medical procedures.

WORLD TOILET DAY

- Context: In 2013, the United Nations General Assembly officially designated November 19 as World Toilet Day.
- World Toilet Day is coordinated by UN-Water in collaboration with governments and partners. Previously, World Toilet Day was established by the World Toilet Organization in 2001.

About World Toilet Day:

- World Toilet Day is a day to raise awareness and inspire action to tackle the global sanitation crisis - a topic often neglected and shrouded in taboos.
- **SDG** 6 aims to ensure that everyone has a safe toilet and that no-one practises open defecation by 2030. Failure to achieve this goal risks the entire 2030 Agenda for Sustainable Development.

2018 Theme: When Nature Calls.

RASHTRIYA EKTA DIWAS

- Rashtriya Ekta Diwas was observed on **31st October** across the nation. It marks the occasion of the birth anniversary of Sardar Vallabhbhai Patel.
- The government, in 2015, decided to observe Sardar Patel Jayanti Day as Ekta Diwas. This occasion provides an opportunity to re-affirm the inherent strength and resilience of the nation to withstand the threats to its unity, integrity and security.

WORLD'S LONGEST DNA SEQUENCE DECODED

- A team of *UK scientists have claimed the* record for decoding the world's longest DNA sequence. The new holder of the trophy for world's longest DNA read is a team led by Matt Loose at Nottingham University.
- The scientists produced a DNA read that is about 10,000 times longer than normal, and twice as large as a previous record holder, from Australia.

DHARMA GUARDIAN 2018

- What is it? It is a joint military exercise between India and Japan.
- In The News? The first edition of this joint military exercise is being held in Mizoram.
- **Aim**: The exercise is aimed at developing mutual understanding and respect between militaries of both countries, as also facilitate in tracking worldwide phenomenon of terrorism.





CHINA-PAKISTAN BUS **SERVICE LAUNCHED**

Context: A private bus service between Lahore in Pakistan and Kashgar in China has been launched.



CENTRAL TRIBAL UNIVERSITY

- What? Union Cabinet has approved setting up of Central Tribal University.
- Where? The proposed university will come up in Andhra Pradesh after necessary amendment in the Central Universities Act, 2009.

About Central Tribal University:

- It will be set up in Relli village of Vizianagaram District of Andhra Pradesh.
- It will be established under Thirteenth Schedule Andhra Pradesh to Reorganisation Act, 2014.

SIMBEX 18 - MARKS SILVER JUBILEE THIS YEAR

- The 25th edition of SIMBEX, an acronym for "Singapore-India Maritime Bilateral Exercise" is being held off Andaman Sea and Bay of Bengal.
- SIMBEX 2018 will be the largest edition since 1994 in terms of scale and complexity.

WORLD'S **FIRST NEWS** AI ANCHOR DEBUTS IN CHINA

• Context: The world's first artificial intelligence (AI) news anchor made "his" debut at the ongoing fifth World Internet Conference in east China's Zhejiang province.

Key facts:

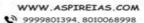
- The AI news anchor has a male image with a voice, facial expressions and actions of a real person.
- He learns from live broadcasting videos by himself and can read texts as naturally as a professional news anchor.
- The AI news anchor was jointly developed by Xinhua and the Chinese search engine company, Sogou.com. The AI anchor has become a member of reporting team and can work 24 hours a day on its official website and various social media platforms, reducing news production costs and improving efficiency.

NASA TO SEND ORGANS ON CHIPS TO SPACE

NASA is planning to send small devices containing human cells in a 3D matrix — known as tissue chips or organs-on-chips — to the International Space Station (ISS) to test how they respond to stress, drugs and genetic changes.

The "Tissue Chips in Space" initiative seeks to better understand the role of microgravity on human health. Made of flexible plastic, tissue chips have ports and channels to provide nutrients and oxygen to the cells inside them.









BILATERAL NAVAL 'SAMUDRA SHAKTI'

EXERCISE

• *Context:* Indian Navy and Indonesian Navy has scheduled Bilateral Exercise 'Samudra Shakti'.

Exercise 'Samudra Shakti':

- The aim of the exercise is to strengthen bilateral relations, expand maritime co- operation, enhance interoperability and exchange best practices.
- The exercise seeks to promote India's solidarity with Indonesia towards ensuring good order in the maritime domain and to strengthen existing bonds between the navies of the two nations.

'AMBASSADOR OF CONSCIENCE' **AWARD**

Context: Amnesty International has stripped Myanmar's leader Aung San Suu Kyi of its highest honour, the 'Ambassador of Conscience' award, over her indifference to atrocities committed by the Myanmar military against and increasing intolerance of freedom of expression.

What's the issue?

- The Amnesty International, international human rights group, named Suu Kyi as its Ambassador of Conscience Award recipient when she was still under house arrest for her opposition to Myanmar's oppressive military.
- However, considering her failure to speak out and her shielding of the security forces from accountability for the violence against the Rohingya, the organisation withdrew the honour from her.

INDRA 2018

- What is it? It is a joint military exercise between Indian and Russia combating insurgency under the aegis of United Nations (UN).
- In The News? The latest edition is being conducted at Babina Field Firing Ranges, Babina Military Station.
- The aim of the exercise is to practice joint planning and conduct to enhance interoperability of the two Armies in keeping/ peace enforcement environment under the aegis of the UN. It focuses upon training on enhancing team building, special tactical level operations such as Cordon and Search, house intervention, handling neutralisation of Improvised Explosive Devices and integrated employment of force multipliers.





