CURRENT AFFAIRS
1ST TO 7TH OCTOBER 2018

RIVER POLLUTION ABATEMENT PROJECT

In an effort to supplement the efforts of State Governments in pollution abatement in identified stretches of various rivers through National River Conservation Plan (NRCP) for implementation of projects on cost-sharing basis between the Centre and State Governments, the Ministry of Environment, Forest and Climate Change has sanctioned a project for 'Pollution abatement of rivers Devika and Tawi in Udhampur, Jammu & Kashmir.

HIGHLIGHTS

- The project is scheduled for completion by March 2021.
- Upon completion, the project will have a significant and direct beneficial impact in terms of reduction of pollution load in the two rivers and improvement in their water quality.
- As full sewerage system will be laid in the town and its entire sewage will be treated, the project will improve the aesthetics and sanitation conditions in Udhampur and support the Swachh Bharat Abhiyan towards ensuring cleanliness in the town.
- The total sanctioned cost of the project is Rs. 186.74 crore, will be shared between the Government of India and Government of J&K on *90:10* cost-sharing basis respectively.
- The *Urban Engineering and Environment Department (UEED*) is the implementing agency of the project.

The main reason for the pollution of Devika and Tawi rivers in Udhampur is discharge of untreated sewage from the town. Presently, no sewerage system and Sewage Treatment Plant (STP) exist in Udhampur. The project for 'Pollution abatement of rivers Devika and Tawi rivers in Udhampur under NRCP has been sanctioned by the Ministry.

National River Conservation Plan (NRCP)

- National River Conservation Plan (NRCP) commenced with Ganga Action Plan (GAP) in 1985.
- Extended as GAP-II in 1993 to cover the tributaries Gomti, Yamuna, Mahananda and Damodar.
- Enlarged in 1995 as National River Conservation Plan (NRCP) to include other major rivers of the country.
- Implementation of NRCP overseen by NRCD (National River Conservation Directorate).
- National River Conservation Authority (NRCA) chaired by the Prime Minister to provide the policy framework and oversee implementation of NRCP.
- NGRBA constituted in February, 2009 to exclusively take up works for conservation of Ganga in a comprehensive manner.
- Work of rejuvenation of river Ganga and its tributaries allotted to MoWR, RD & GR on 31.7.2014

Reduction of pollution load into river through:

a) interception, diversion & treatment of sewage.
b) some non-core schemes also implemented
   - crematoria.
   - low cost sanitation.
   - river front development.
   - public participation & awareness.

Project proposals submitted by the State Governments are considered for financial assistance under NRCP depending on degree of pollution in the river and priority, State's commitment to bear matching share, conformity with the NRCP guidelines and availability of funds under the programme

IMPROVING REGIONAL CONNECTIVITY

The Asian Development Bank (ADB) and India signed a $150 Million Loan to finance continued improvements to road connectivity and efficiency of the International Trade Corridor in West Bengal and North-Eastern Region of India.

HIGHLIGHTS

- The Tranche 2 Project will upgrade about 65 kilometers of lmphal-Moreh Section of National Highway in Manipur, construction of about 1.5 km of an international bridge between India and Nepal, and completion of about 103 km of a State Highway in Manipur between Imphal and Tamenglong under Project-I.
- The Project will reduce transaction costs along the targeted cross-border corridors substantially, creating economies of scale and commercial prosperity.

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members-48 from the region. ln 2017, ADB operations totalled $32.2 billion, including $11.9 billion in co-financing.

GRAM PANCHAYAT DEVELOPMENT PLAN (GDPD)-Sabki Yojana, Sabka Vikas

The People's Plan Campaign will be rolled out as 'Sabki Yojna Sabka Vikas' from 2nd October to 31st December 2018. During the campaign structured Gram Sabha meetings will be held for preparing Gram Panchayat Development Plan for the next financial year 2019-2020.

HIGHLIGHTS

- Monitoring of People's Plan Campaign would involve geotagged visuals of GS meetings, report of facilitators in standard format, Plan-plus uploading of GDPD for all 29 sectors, visit to Gram Sabhas for every district /state /central level official of concerned departments and NLM (national level monitors) visits to random Gram Sabhas.
- The campaign is being undertaken on a large scale, given the number of Gram Panchayats in the country.
- Special efforts have been made to ensure maximum participation of vulnerable sections of society like SC/ST/Women etc.
- The *Gram Panchayat Development Plan* aims to strengthen the role of 31 lakh elected Panchayat leaders and 2.5 crore SHG Women under DAY-NRLM in effective gram sabha.
- There will be a Public Information Campaign of all programmes   in Gram Panchayat office and on *Gram Samvad App*.
- The structured Gram Sabha meetings will be spread over 2nd October -31st December, with physical presence and presentation by frontline workers/supervisors on 29 sectors *– Agriculture, Land improvement, Minor irrigation, Animal husbandry, Fisheries, Social Forestry, Minor forest produce, Small scale industries, Khadi, village and cottage industry, Rural housing, Drinking water ,Fuel and fodder, Roads, Rural electrification ,Non–conventional energy ,Poverty alleviation programme ,Education ,Vocational education, Adult and informal education, libraries,*

Cultural activities, Markets and fairs ,Health and sanitation ,Family welfare, Women and child development, Social welfare ,Welfare of weaker sections ,Public distribution system and Maintenance of community assets.

- The GDPD will be an intensive and structured exercise for planning at Gram Sabha level through convergence between Panchayati Raj institutions and concerned departments of the State.
- As part of this Campaign, it is also proposed to complete the exercise of ***Mission Antodaya (MA)*** data collection in respect of all Gram Panchayats. This is currently available for about 44,111 GPs and is required to be collected for the balance number of GPs out of a total about 2.49 lakh GPs.
- In view of the large scale of the campaign, a ***special social media campaign*** has been launched for this period to ensure outreach to the community.
- This will consist of information about the Panchayats and about the Gram Panchayat Development Plan.
- It will also have snippets about the type of activities that can be taken up and showcasing of best practices from various Panchayats, so that these can be replicated.

IBSAMAR-VI

The sixth edition of IBSAMAR, a joint Multi – National Maritime Exercise between the Indian, Brazilian and South African Navies, is being held at Simons Town, South Africa from 01 – 13 Oct 18.

HIGHLIGHTS

- The last edition of IBSAMAR (IBSAMAR V) was conducted off Goa, from 19 – 26 Feb 16.
- The aim of the exercise is to undertake collective training for participating navies, building interoperability and mutual understanding as well as sharing of best practices.
- The Indian Navy is represented in IBSAMAR VI by Guided Missile Frigate Tarkash, Guided Missile Destroyer Kolkata, Long Range Maritime Patrol Aircraft P8I, Seaking and Chetak helicopters as well as a MARCOS contingent.
- The exercise includes both harbour and sea phases with various navigation and seamanship evolutions, surface weapons firing, force protection exercises, antipiracy exercise, anti-air and anti-submarine exercise as well as flying operations.

UNNAT BHARAT ABHIYAN

Under "Unnat Bharat Abhiyan" scheme, 688 institutes selected in the phase-1 are involved in various activities aimed to enrich rural India.

This includes field visits, house to house survey, identifying the felt needs of the rural masses, developing technology or process to improve their lives.

Now, in the next phase, on a challenge mode, 840 Institutions have been selected and will be part of UBA 2.0. Out of these 840 Institutes, 521 are Technical Institutions and 319 are Non-Technical Institutions.

UNNAT BHARAT ABHIYAN

The **Ministry of Human Resource Development (MHRD**) along with the **Ministries of Rural Development and Panchayati Raj** has agreed to link all Higher Education Institutes (HEIs) with rural development processes under Unnat Bharat Abhiyaan (UBA).

HIGHLIGHTS

- In this regard, a Tripartite Agreement between MHRD, Ministry of Rural Development and Ministry of Panchayati Raj was also signed as an attempt to bring about substantial improvements in the formulation and delivery of developmental schemes in the rural areas.
- It is envisaged that representatives of Higher Education Institutions interact with local bodies and community in selected village clusters and provide knowledge inputs into the Gram Panchayat Development Plans.
- MHRD, Department of Higher Education has formulated this scheme and first phase is under implementation in several parts of the country. Indian Institute of Technology (IIT) Delhi has been designated as the Coordinating Institute.
- The MHRD has advised all the HEIs which are funded by the Central /State Government and all institutions approved by the regulatory bodies, to adopt clusters of backward Gram Panchayats / villages in their vicinity and apply their knowledge and expertise to improve the infrastructure in the Gram Panchayats (GPs).
- HEIs in the districts are expected to carry out detailed field study, participate in conceptualising & preparation of community-level development plans along with the Rural Development and Panchayat Raj personnel by providing technical, managerial inputs and by suggesting innovative solutions to the issues faced in the day-to-day lives of the households therein, in the areas of livelihoods, energy security, environment and basic living amenities.
- The institutions have been advised to continue their engagement with chosen Panchayats and offer assistance to the Rural Development and Panchayat Raj personnel. The programme is to be implemented over the next two years, with additional clusters.

INDIA & SINGAPORE

The Union Cabinet has given its ex-post facto approval to the Second Protocol amending the Comprehensive Economic Cooperation Agreement (CECA) between India and Singapore.

Signing of the Second Protocol will enhance bilateral trade and will deepen the Economic Cooperation between India and Singapore. It will also improve utilization of CECA.

CECA & CEPA

- **CECA** is the acronym for **Comprehensive Economic Cooperation Agreement** while **CEPA** is the representation for **Comprehensive Economic Partnership Agreement.**
- These two forms of economic agreements are India's way of forging economic ties with other Asian countries like Malaysia, Singapore, and Thailand (for CECA) and Japan, Sri Lanka, and South Korea.
- CECA is a stepping stone for CEPA. CEPA also has a broad scope in terms of its aspects and items.
- CECA deal mostly with the elimination or reduction of tariffs while CEPA's concerns are the same with the addition of investments and services.
- A subtle difference is the use of the word "cooperation" in CECA and "partnership" in CEPA.
- The word choice denotes the degree of relationship between two parties. "Cooperation" implies a cohesive but distant effort, but a partnership can entail a more personal and deeper relationship between two parties.

Despite the differences between the two types of agreements, both CECA and CEPA encourage economic trade and investment efforts from both countries for the benefit of both parties. These two pacts also help in paving the way for more economic solutions and improvements in terms of export items, investments, and service quality.

UDYAM ABHILASHA

On the occasion of Birth Anniversary of Mahatma Gandhi, Small Industries Development Bank of India (SIDBI), had launched a National Level Entrepreneurship Awareness Campaign, Udyam Abhilasha (उद्यम अभिलाषा) in 115 Aspirational Districts identified by NITI Aayog in 28 States and reaching to around 15,000 youth.

HIGHLIGHTS

- The campaign would be running parallelly from 3rd October to 8thOctober, 2018 across India.
- The campaign would create and strengthen cadre of more than 800 trainers to provide entrepreneurship training to the aspiring youths across these districts thus encouraging them to enter the admired segment of entrepreneurs.
- SIDBI has partnered with CSC e-Governance Services India Limited, a Special Purpose Vehicle, (CSC SPV) set up by the Ministry of Electronics & IT, Govt. of India for implementing the campaign through their CSCs.
- **The objectives of the missionary campaign include:**
    a) To inspire rural youth in aspirational districts to be entrepreneurs by assisting them to set up their own enterprise.
    b) To impart trainings through digital medium across the country.
    c) To create business opportunities for CSC VLEs.
    d) To focus on women aspirants in these aspirational districts to encourage women entrepreneurship.
    e) To assist participants to become bankable and avail credit facility from banks to set up their own enterprise.
- SIDBI is also taking-up with stakeholders including Banks, NABARD, NBFCs, SFBs, District Industries Centres, State Govt. etc. to be a part of this campaign and ensure mutlifold impact.
- Further, CSC Village Level entrepreneurs (VLEs) would play role of catalyst for these aspiring entrepreneurs.
- Apart from training, VLEs would also provide handholding support to the aspirants to establish new units by assisting them in availing loans for their enterprise and making them aware about various initiatives of Government of India like Pradhan Mantri Mudra Yojana, SUI etc. and educate the youths in these districts on business literacy.

SIDBI

- Small Industries Development Bank of India (SIDBI), is the Principal Financial Institution for the Promotion, Financing, Development and Coordination of the Micro, Small and Medium Enterprise (MSME) sector.
- SIDBI meets the financial and developmental needs of the MSME sector with a Credit+ approach to make it strong, vibrant and globally competitive.
- SIDBI, under its revamped strategy SIDBI 2.0, has adopted the theme of ease of access to MSEs and being Impact Multiplier & Digital Aggregator.

JIMEX 2018

Japanese Maritime Self Defence Force (JMSDF) would be participating in the third edition of Japan-India Maritime Exercise (JIMEX) with the ships of Eastern Fleet of the Indian Navy (IN) from 07 to 15 October 18.

- JIMEX-18 is aimed to enhance interoperability, improve understanding and imbibe the best practices of each other.
- JIMEX 18, spread over eight days, will comprise a Harbour Phase and a Sea Phase of four days each.
- The last edition of JIMEX was conducted in Dec 2013 off Chennai.
- The conduct of JIMEX-18 after five years is indicative of an upswing in the Indo-Japanese defence relations and the continued efforts of both Governments to work closely to enhance safety and security of the global commons in keeping with 'rule-based order'.
- It is pertinent to highlight that JMSDF is a regular participant in the Malabar series of exercises between Indian and US Navies.
- In addition, the ships of the two navies have been working in close coordination in Anti-Piracy Operations in the Gulf of Aden (GoA) for the past few years.
- JMSDF Ships also participated in the recently concluded MALABAR 18 off Guam (along with Indian and US Navy units) in the Pacific Ocean in Jun and biennial multilateral exercise RIMPAC-18 off Hawaii, USA.

AIM-SIRIUS COOPERATION

To promote innovative cooperation between students of India and Russia, a Memorandum of Understanding was exchanged between India's Atal Innovation Mission (AIM) and the Russian Federation's SIRIUS Educational Foundation in New Delhi on 5th October 2018.

HIGHLIGHTS

- The MoU hopes to remove cultural and language barriers between students of Russia and India, share the best practices in the promotion of educational, scientific, innovative achievements, promote innovative cooperation, and search and develop talented youth of both countries fostering a knowledge driven innovation ecosystem in both the countries.

AIM-SIRIUS Innovation Festival 2018

To promote a spirit of collaborative innovation, young innovators of Atal Tinkering Labs and SIRIUS Educational Foundation came together at a four-day Indo-Russian ATL innovation boot-camp. The boot-camp was organized by Atal Tinkering Labs, Atal Innovation Mission, with support from Department of Design, IIT Delhi. The innovations developed across space technology, healthcare, smart mobility, clean energy and agricultural technology.

Atal Innovation Mission

- Atal Innovation Mission (AIM) is NITI Aayog's flagship initiative to promote a culture of innovation and entrepreneurship in India.
- AIM has been established to create and promote an ecosystem of innovation and entrepreneurship in a holistic manner through various initiatives at school, university and industry levels.
- AIM also serves as a platform for promotion of world-class Innovation Hubs, Grand Challenges, Start-up businesses and other self-employment activities in India, leveraging state of the art, advanced and affordable emerging technologies.

The Atal Innovation Mission has thus two core functions:

1. **Innovation promotion**: to provide a platform where innovative ideas are generated.

2. **Entrepreneurship promotion:** Wherein innovators would be supported and mentored to become successful entrepreneurs at Incubation Centres.

SIRIUS Educational Foundation

Fund "Talent and success" is a unitary, non-profit, non-standard educational organization. The activities of the Foundation are aimed to identify and support children and young people who have shown outstanding abilities. It helps in assistance in obtaining general and additional education for such personalities, including education in the fields of arts, natural sciences, physical culture and sports.

SEZ POLICY REVIEW COMMITTEE

The SEZ Policy Review Committee, headed by Baba Kalyani, met in New Delhi.

OBJECTIVES

To evaluate the SEZ policy framed in 2000 and suggest measures to make the policy WTO compatible, give suggestions which will encourage manufacturing and services sector and lead to maximizing utilization of vacant land in SEZs and create seamlessness between SEZ policy and other schemes like Costal Economic Zone, Delhi-Mumbai Industrial Corridor, National Industrial Manufacturing Zone, Food Parks and Textile Parks.

HIGHLIGHTS

- The Committee held extensive discussions with representatives of Government of India and states.
- The changes in the macro-economic environment in India required a re-look at the SEZ Policy framework so that focus is on enabling generation of 100 million jobs in the manufacturing sector, manufacturing competitiveness within the framework of WTO rules, bringing in services sectors like health care, financial and legal services, repair and design services under SEZs.
- The Committee was of the opinion that SEZ should now transform into "Employment and Economic Enclaves" (3Es) which will be an integrated ecosystem that focuses on ease of doing business, quality and infrastructure in order to reduce costs.

SEZ

Special economic zone or SEZ refers to a totally commercial area specially established for the promotion foreign trade.

- A Special Economic Zone (SEZ) is a geographical region that has economic laws more liberal than a country's typical economic laws. Usually the goal is flourishment in foreign investment.
- In other word, SEZs are specifically delineated enclaves treated as foreign territory for the purpose of industrial, service and trade operations, with relaxation in customs duties and a more liberal regime in respect of other levies, foreign investments and other transactions.
- Typically, they are regions designated for economic development oriented toward inward FDI and exports fostered by special policy incentives.
- The SEZs in India are the outcome of the present governments industrial policy which emphasizes deregulation of Indian industry and to allow the industries to flexibly respond to the market forces.

- All undertakings other than the small-scale industrial undertakings engaged in the manufacture of items reserved for manufacture in the small-scale sector are required to obtain an industrial license and undertake an export obligation of 50% of the annual production.
- This condition of licensing is, however, not applicable to those undertakings operating under 100% Export Oriented Undertakings Scheme, the Export Processing Zone (EPZ) or the Special Economic Zone Schemes (SEZs).

Basic Difference between EPZs and SEZs

The SEZs are the new nomenclature of modified earlier Export Promotion Zones or EPZs. The first EPZ in India was set up in 1965 Kandala. They were created as privileged zones with the facilities of liberal tax and labour laws. They were to attract the foreign investors to import materials for use and export the manufactured commodities. In this way jobs would be created and export got enhanced.

The main difference between an EPZ and a SEZ is that the former is just an industrial enclave but the latter is an integrated township with fully developed infrastructure.

METHANOL COOKING FUEL PROGRAM

Northeast and Assam Petro-chemicals, a state-owned company for launching Asia's first cannisters based and India's first "Methanol Cooking Fuel Program".

HIGHLIGHTS

- 500 households inside the Assam Petro Complex will be the first pilot project, scaling it to 40,000 households in Uttar Pradesh, Maharashtra, Gujarat, Telangana, Goa and Karnataka.
- The project is a natural extension of vision of reducing import of crude and an effort to provide clean, import substitute, cost effective and pollution free cooking medium.
- Assam Petrochemicals Limited has been manufacturing methanol for the last 30 years and is in the process of upgrading their 100 TPD methanol plant to 600 TPD by Dec 2019.
- The safe handling cannister based cooking stoves are from Swedish Technology and through a Technology transfer a large-scale cooking stove manufacturing plant will come up in India in the next 18 months producing 10 lakh Cookstoves and 1 Crore Cannisters per year. This technology is very unique, it handles methanol extremely safely, does not need regulator or any piping system.
- The cooking medium can directly substitute LPG, Kerosene, Wood, Charcoal and any other fuel for cooking.
- The gaseous form, Methanol - DME, can be blended in 20% ratio with LPG. LPG-DME blending program is expected to start in the country by next year.

GI TAG TO ALPHONSO

Alphonso from Ratnagiri, Sindhudurg, Palghar, Thane and Raigad districts of Maharashtra, is registered as Geographical Indication (GI).

The king of mangoes, Alphonso, better known as 'Hapus' in Maharashtra, is in demand in domestic and international markets not only for its taste but also for pleasant fragrance and vibrant colour. It has long been one of the world's most popular fruit and is exported to various countries including Japan, Korea and Europe. New markets such as USA and Australia have recently opened up.

GI

- A Geographical Indication or a GI is an indication used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
- Such a name conveys an assurance of quality and distinctiveness which is essentially attributable to its origin in that defined geographical locality.
- Darjeeling Tea, Mahabaleshwar Strawberry, Blue Pottery of Jaipur, Banarasi Sarees and TirupatiLaddus are some of the GIs.
- The first product to get a GI tag in India was the Darjeeling tea in 2004. There are total of 325 products from India that carry this indication.

ADVANTAGES

- GI products can benefit the rural economy in remote areas, by supplementing the incomes of artisans, farmers, weavers and craftsmen. Rural artisans possess unique skills and knowledge of traditional practices and methods, passed down from generation to generation, which need to be protected and promoted.
- The Department of Industrial Policy and Promotion has taken several initiatives in this regard and is actively involved in promotion and marketing of GIs with a vision to enhance the horizon both socially and economically for GI producers.

GI Logo & Slogan
अतुल्य भारत की अमूल्य निधि
Invaluable Treasures of Incredible India

Recently, Union Minister of Commerce and Industry, launched the logo and tagline for the Geographical Indications (GI) of India and said that the GI will give the rightful share in the intellectual property to the artisan and the place of origin of the product.

NATIONAL DATABASE ON SEXUAL OFFENDERS

India recently launched a National Database on Sexual Offenders (NDSO), the ninth country to do so.

OBJECTIVE

- The Criminal Law Act, 2018, provides for a national registry of sexual offenders.
- Accessible only to law enforcement agencies, the database will include offenders convicted of rape, gang-rape, under the POCSO (Protection of Children from Sexual Offences) Act, and of "eve teasing".
- It will be maintained by the National Crime Records Bureau (NCRB).

- At present the database contains 4.4 lakh entries. State police forces have been asked to regularly update the database from 2005 onwards; this will help keep track of released convicts who have moved from one place to another.

There are two reasons for starting the database from 2005.

a) At most prisons, records before 2005 have not been digitised.
b) Second, in many cases, the maximum punishment is life imprisonment which is calculated as 14 years, so many convicted prior to 2005 will have served their sentences. (In 2012, the Supreme Court clarified that life imprisonment would mean an entire lifetime.)

DATA

The database will include names and aliases, identifiers including PAN and Aadhaar, information of date of birth, criminal history, fingerprints and palm prints, and various other details. It will only have details of persons who are aged 18 or more. Whenever the details of a convict are entered into a prison database anywhere in the country, the name will be uploaded to the registry. Appeals against a conviction will have to be updated by state prisons; an accused can be tracked until an acquittal on appeal.

WORLWIDE

Similar databases of sexual offenders are maintained in the US, the UK, Australia, Canada, Ireland, New Zealand, South Africa and Trinidad & Tobago. While the registry in the US is available to the public and communities, except data on juveniles, other countries limit access only to law-enforcement agencies. Everywhere, only convicted persons are entered.

CRITICISM

In some western countries, there have been demands for a review of the decision to maintain a registry amid a view that it does not serve as a deterrent or help people who have survived sexual violence.

In India, critics have pointed out most sex crimes are committed by a person known to the victim; NCRB data of 2015 states that out of 34,651 reported rape cases, 33,098 were committed by people known to the victim. "Once such a registry comes into being, it might lead to people not reporting rapes or sexual offences, because most of them are by people known to the victims.

S-400 AIR DEFENCE SYSTEM DEAL

S-400 TIUMF

- A missile defence system is intended to act as a shield against incoming ballistic missiles.
- The Russian-built S-400 Triumf — identified by NATO as the SA-21 Growler — is the world's most dangerous operationally deployed modern long-range surface-to-air missile system, and is considered much more effective than the *Terminal High Altitude Area Defence system developed by the US.*
- The S-400 is a mobile system that integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and a command and control centre. It can be deployed within five minutes, and is capable of firing three types of missiles to create a layered defence.

- It can engage all types of aerial targets including aircraft, unmanned aerial vehicles, and ballistic and cruise missiles within a range of 400 km, at an altitude up to 30 km.
- It can simultaneously track 100 airborne targets, including super fighters such as the US-built F-35, and engage six of them at the same time.

Why does India need it?

It is important for India to have the capability to thwart missile attacks from the two likeliest quarters, Pakistan and China.

Beijing signed a deal with Moscow in 2015 to buy six battalions of the S-400 system, and deliveries began in January 2018. While the Chinese acquisition has been seen as a "gamechanger" in the region, the concern for India is limited because of the system's range. However, the S-400 can play a crucial role in case of a two-front war.

In October 2015, the Defence Acquisition Council considered buying 12 units, but it was subsequently determined that five would be adequate for India's needs. Turkey and Saudi Arabia are among others negotiating for the S-400; Iraq and Qatar, too, have shown interest.

US ROLE

In August 2017, US signed into law the Countering America's Adversaries Through Sanctions Act (CAATSA), which specifically targets Russia, Iran, and North Korea. Title II of the Act seeks to punish Russia for its military intervention in Ukraine and its alleged meddling in the 2016 US Presidential elections, by taking aim at its oil and gas industry, defence and security sector, and financial institutions.

Section 231 empowers the US President to impose at least five of 12 listed sanctions — enumerated in Section 235 — on persons engaged in a "significant transaction" with the Russian defence and intelligence sectors.

How did India get around CAATSA?

Concerns about Russia apart, CAATSA also impacts the United States' ties with India, and dents its image when it is trying to project India as a key partner in its Indo-Pacific strategy.

Over the last decade, US defence deals with India have grown from near zero to worth $15 billion, including key Indian acquisitions such as C-17 Globemaster and C-130J transport aircraft, P-8(I) maritime reconnaissance aircraft, M777 lightweight howitzers, Harpoon missiles, and Apache and Chinook helicopters. The US will likely accept India's request for Sea Guardian drones, and American manufacturers including Lockheed Martin and Boeing are contenders for mega arms deals with India.

In July, the US communicated that it was ready to grant India (along with Indonesia and Vietnam) a waiver on the CAATSA sanctions. The waiver also conveyed the acceptance by the US that India could not be dictated on its strategic interests by a third country.

INDIA – RUSSIA DEFENCE COOPERATION

- Stringent implementation of CAATSA would have impacted not just the S-400s, but also the procurement of Project 1135.6 frigates and Ka-226T helicopters, and joint ventures like Indo Russian Aviation Ltd, Multi-Role Transport Aircraft Ltd, and Brahmos Aerospace.

- It would have also affected purchase of spares, components, raw materials and other assistance.
- The bulk of India's military equipment is of Soviet/Russian origin — including the nuclear submarine INS Chakra, the supersonic Brahmos cruise missile, MiG and Sukhoi fighters, the Il transport aircraft, the T-72 and T-90 tanks, and the Vikramaditya aircraft carrier.

BACKGROUND

Indio-Russian trade is at $10 bn, compared to Indo-US at $100 bn. Yet, India needs Russia for spare parts for its legacy defence equipment. Also, Russia gives India technologies that the US doesn't yet want to share, including nuclear-powered submarines. As India tries to balance its relations between an unpredictable US administration and an assertive China, it would like Russia on its side; Moscow as an ally in the UN Security Council is valuable. At the same time, Russia's growing proximity with China, and its newfound relationship with Pakistan, makes India uncomfortable.

ROHINGYAS

BACKGROUND

The Rohingya, Muslims from Rakhine province on Myanmar's western coast, started arriving in sizeable numbers in India's Northeast in late 2011 following stepped-up persecution by the Myanmar armed forces. The seven men were arrested in 2012 for having entered India illegally. The Chief Judicial Magistrate, Cachar, convicted them of violating The Passport (Entry into India) Act, 1920, and sent them to prison for three months, followed by detention pending repatriation. The men had been lodged at the Silchar Central Prison in Assam ever since.

After reconfirming their willingness to be repatriated, India moved to send them back. The seven men were handed over to the Myanmarese authorities at the Moreh border in Manipur after the Supreme Court declined to intervene in the process.

Who is an illegal immigrant in India? How is an illegal immigrant different from a refugee?

India is not a signatory to the *1951 United Nations Convention* and *1967 Protocol Relating to the Status of Refugees*, and it does not currently have a national law on refugees. In 2011, the Union government circulated to all states and Union Territories a Standard Operating Procedure to deal with foreign nationals who claimed to be refugees.

- **An illegal immigrant can be:**
  a) a foreign national who enters India on valid travel documents and stays beyond their validity, or
  b) a foreign national who enters without valid travel documents.

- In the view of the Indian government, illegal migrants "infringe on the rights of Indian citizens" and are "more vulnerable for getting recruited by terrorist organisations".
- Section 3(2)(c) of The Foreigners Act, 1946, gives the central government the right to deport a foreign national.
- The power to identify and deport foreign nationals who are in India illegally has been delegated to state governments, Union Territories and the Home Ministry's Bureau of Immigration.
- Illegal immigrants who are intercepted at the border while entering India unauthorisedly can be sent back then and there.

- According to the government, the ***Mission Mode Project on Immigration, Visa and Foreigners Registration & Tracking (IVFRT)*** will facilitate improved tracking of foreigners by integrating and sharing information captured at Indian missions during the issuance of visas, during checks at Immigration Check Posts (ICPs), and at Foreigners' Regional Registration Offices (FRROs).

How many Rohingya are currently in India? In which parts of the country are they concentrated?

- As per Home Ministry data, there are more than 14,000 UNHCR-registered Rohingya in India.
- However, security agencies estimate the number of Rohingya living illegally in India at 40,000.
- There are clusters of Rohingya population in Jammu, Hyderabad, and Delhi-NCR, besides the states of Haryana, UP, and Rajasthan.
- The UN says the Indian government has an international legal obligation to acknowledge the institutionalised discrimination, persecution, hate and human rights violations the Rohingya face in their country of origin, and to provide them with necessary protection.

FIXING MSP FOR CROPS

The government has seemingly put itself in a bind by accepting the so-called Swaminathan formula of fixing minimum support prices (MSP) for crops at 1.5 times their estimated production costs.

The issue here is not about "what" production costs are taken into consideration – whether A2, A2+FL or C2.

- A2 covers all paid-out costs directly incurred by the farmer – in cash and in kind – on seed, fertiliser, pesticide, hired labour, leased-in land, fuel, irrigation, etc.
- A2+FL, the second includes A2, plus an imputed value of unpaid family labour.
- C2 is a more comprehensive cost that factors in the rentals and interest forgone on owned land and fixed capital assets, on top of A2+FL.

HIGHLIGHTS

- The government has settled for the intermediate A2+FL cost formula to arrive at crop MSPs.
- For the upcoming 2018-19 RABI planting season, the ***Commission for Agricultural Costs and Prices (CACP)*** in the Agriculture Ministry has computed the all-India average A2+FL production costs for six crops: ***wheat, barley, chana (chickpea), masur (lentil), rapeseed-mustard and safflower***.
- The CACP used to earlier considers a host of factors apart from cost of cultivation, while recommending the MSP.
- They include:
  a) supply and demand situation for the concerned commodity.
  b) market price trends (domestic and global) and parity vis-à-vis other crops.
  c) implications for consumers (inflation), environment (soil and water use).
  d) terms of trade between agriculture and non-agriculture sectors
- Now - However, this changed with the Union Budget for 2018-19.
- The government accepted the so-called Swaminathan formula of fixing MSP for crops at 1.5 times their estimated production costs.
- The CACP's job thus became simply to estimate production costs of crops for a particular season.
- It then recommends the corresponding MSPs by applying the 1.5-times formula.

DRAFT DATA PROTECTION BILL

A group of industry associations representing some of the world's largest technology corporations has written to the Union government expressing concern over the impact of certain provisions in India's draft data protection Bill, in a combined bid to ratchet up pressure over a contentious issue.

ISSUES

- The proposed Bill contains provisions to mandate Internet firms to store certain types of data within the country, would impact the ability of global technology companies to do business in India, raise costs by 30-60% and not guarantee data security.
- The group requested that the "*forced localisation requirements*" be removed from the draft Bill.
- *Data localisation* requirements in the draft (Bill) will have significant negative effects on the ability of companies to do business in India, do not serve to further privacy protection, and are likely to undermine the security of Indian citizens' data.
- The proposed Bill, submitted by the Justice Srikrishna committee in July, had recommended that while one copy of all personal data has to be stored in India, critical personal data — to be defined by the government — will be stored only in India.
- This particular recommendation has been the subject of much criticism, especially from foreign technology companies which have called it restrictive.

DATA LOCALISATION

The Justice Srikrishna Committee in its report accompanying the draft Personal Data Protection Bill released on July 27 notes that eight of the top 10 most accessed websites in India are owned by U.S. entities.

This reality has often hindered Indian law enforcement agencies when investigating routine crimes or crimes with a cyber element.

The Bill calls for a copy of user data to be mandatorily localised in India, believing that it will "boost" law enforcement efforts to access data necessary for investigation and prosecution of crimes.

ISSUES

- A fundamental error that the Srikrishna Committee seems to have made is in its belief that the location of data should determine who has access to it.
- The reason that Indian law enforcement relies on an outdated Mutual Legal Assistance Treaty (MLAT) process to obtain data stored by U.S. companies is because the U.S. law effectively bars these companies from disclosing user data to foreign law enforcement authorities
- Technology companies are allowed to share data such as content of an email or message only upon receiving a federal warrant from U.S. authorities
- This scenario will not change even after technology companies relocate Indian data to India

HIGHLIGHTS

- The draft bill mandates local storage of data relating to Indian citizens only.
- Localisation can provide data only for crimes that have been committed in India, where both the perpetrator and victim are situated in India.

- Prevalent concerns around transnational terrorism, cyber-crimes and money laundering will often involve individuals and accounts that are not Indian, and therefore will not be stored in India.
- For investigations into such crimes, Indian law enforcement will have to continue relying on cooperative models like the MLAT process.

MEASURES

- Questions around whether access to data is determined by the location of the user, location of data or the place of incorporation of the service provider have become central considerations for governments seeking to solve the cross-border data sharing conundrum.
- The Clarifying Lawful Overseas Use of Data (CLOUD) Act, passed by the U.S. Congress earlier this year, seeks to de-monopolise control over data from U.S. authorities.
- The law will for the first time allow tech companies to share data directly with certain foreign governments.
- This requires an executive agreement between the U.S. and the foreign country certifying that the state has robust privacy protections and respect for due process and the rule of law.
- The CLOUD Act creates a potential mechanism through with countries such as India can request data not just for crimes committed within their borders but also for transnational crimes involving their state interests.

With the highest number of users of American technology offerings and a high number of user data requests, second only to the U.S., India is a clear contender for a partnership under the CLOUD Act. If INDIA recognises this opportunity and reforms laws around government access to data, both the Indian user and law enforcement will be better served in the long run.

NATIONAL MEDICAL COMMISSSION BILL 2017

- The Bill sets up the National Medical Commission (NMC).
- The NMC will regulate medical education and practice.
- It will determine fees for up to 40% seats in private medical institutions and deemed universities.
- The NMC will consist of ***25 members***.
- A Search Committee will recommend names to the central government for the post of Chairperson, and the part time members.
- Four ***autonomous Boards*** have been set up under the supervision of the NMC. These Boards will focus on undergraduate and postgraduate medical education, assessment and rating, and ethical conduct.
- There will be a ***National Licentiate Examination*** for doctors to obtain a licence to practice after graduation. This examination will also be the basis for admission to post-graduate medical courses.
- State Medical Councils will receive complaints relating to professional or ethical misconduct against a doctor. If the doctor is aggrieved of a decision of the State Medical Council, he may appeal to successively higher levels of authority.

ANALYSIS

- Two-thirds of the members in the NMC are medical practitioners. Expert committees have recommended that the regulator should consist of more diverse stakeholders in order to reduce the influence of medical practitioners in regulating medical education and practice.

- The NMC will determine fees for up to 40% of the seats in private medical colleges and deemed universities. There have been various arguments on fee capping by experts. It has been recommended by some experts that fees should be capped to enable access to medical education for all. On the other hand, it has also been suggested that fee capping would discourage entry of private colleges.
- In cases of professional or ethical misconduct by medical practitioners, the practitioners can appeal a decision of the NMC to the central government. It is unclear why the central government, and not a judicial body, is the appellate authority.
- There is no requirement for periodic renewal of the licence to practice. Some countries require periodic testing to ensure that practitioners remain up to date, fit to practice, and give good care to patients.
- The Bill proposes a bridge course for practitioners of AYUSH to enable them to prescribe modern medicines. There are differing views on this provision. While some emphasise the need for greater integration between traditional and modern schools of medicine, others consider this step harmful for the independent development of AYUSH.

JUVENILE JUSTICE (CARE & PROTECTION OF CHILDREN) AMENDMENT BILL 2018

The Juvenile Justice (Care and Protection of Children) Act, 2015 states that adoption of a child is final on the issuance of an adoption order by the court.

- The Bill provides that instead of the court, the district magistrate will issue such adoption orders.
- The Bill seeks to transfer all pending matters related to adoption before any court to the district magistrate having jurisdiction over the area.

ANALYSIS

- Currently, there are 629 adoption cases pending in various courts.
- In order to expedite adoption proceedings, the Bill transfers the power to issue adoption orders to the district magistrate. An issue to consider is whether the level of pendency justifies shifting the load to the district magistrate.
- Adoption of a child is a legal process which creates a permanent legal relationship between the child and adoptive parents. Therefore, it may be questioned whether it is appropriate to vest the power to issue adoption orders with the district magistrate instead of a civil court.

TURBIDITY CURRENTS

Turbidity currents are still a threat today, as people place more and more cables, pipelines, and other structures on the sea floor.

HIGHLIGHTS

- Turbidity currents are fast-moving currents that sweep down submarine canyons, carrying sand and mud into the deep sea.
- It is not just sediment-laden seawater flowing over the sea floor, it involves large-scale movements of the sea floor itself.
- It was first identified in 1929 when a large earthquake triggered a violent current that travelled several hundred kilometres and damaged 12 trans-Atlantic communications cables.
- This discovery could help ocean engineers avoid damage to pipelines, communications cables, and other sea floor structures.

- It is also important to petroleum geologists because they leave behind layers of sediment that comprise some of the world's largest oil reserves.

GLOBAL CLIMATE ACTION SUMMIT

Global climate action summit has recently taken place in California.

The Global Climate Action Summit will bring leaders and people together from around the world to "Take Ambition to the Next Level."

It will showcase the actions states and regions, cities, companies, investors and civil society have taken already to reduce their emissions.

HIGHLIGHTS

- The Summit comes at the half-way mark between the Paris Agreement and the 2020 timeline to recalibrate Nationally determined Contributions (NDCs).
- It provided a perfect opportunity to review the progress achieved thus far, recognise the roadblocks and gear up for increased commitments.
- The positive momentum from this summit should generate a fresh wave of action globally to help pull down the emissions curve by 2020.
- Traditionally, climate conferences have focused on heads of state and national governments.
- However, this summit secured participation of leaders from cities, states, environmentalists, corporates, investors and NGOs, that is "non-state actors", on a mass scale.
- Private institutions and civil society came forward to supplement the state's efforts.
- With steady inflow of "green" private capital, governments would now be expected to up the efforts and announce higher commitments.
- It also focussed on how climate change has impacted women and the steps needed for their empowerment.
- It was also witnessed that women themselves were leading this agenda as in the case of Innovative Finance for Climate, Resilience and Energy, which had three women out of the four participants.
- The summit showcased real people and their achievements, who have successfully implemented plans to reduce carbon footprint.
- This sharing of success stories, technological innovations and creative policies was highly educational and impactful, and should inspire all stakeholders to put extra efforts in the days to come
- It also points towards the emergence of "bottom up" climate action that is rooted firmly enough to ward off any conflicting individual or belief.
- Innovations such as Heat Action Plans, energy conservation building codes, electric vehicles and solar pumps for farmers also bear testimony to India's efforts to cut down carbon dioxide levels.

STAR C

International Solar Alliance has recently approved Solar Technology Application Resource Centre (STAR C) project in its first assembly.

The aim of the project is to set up 121 centres, one in each presently eligible member-country.

- Under the STAR-C, 500 personnel from 121 member-countries would be trained in India on solar infrastructure.

- ISA has also provisionally approved the Work Plan 2019, under which agricultural pumps, finance mobilisation, mini grid, rooftop solar, and solar e-mobility and storage.

DELHI DECLARATION ON RENEWABLE ENERGY

The Indian Ocean Rim Association (IORA) countries has adopted "Delhi Declaration on Renewable Energy in the Indian Ocean Region" in its 2nd Renewable Energy Ministerial Meeting.

HIGHLIGHTS

- It calls for collaboration among IORA member states in Meeting the growing demand for renewable energy in the Indian Ocean littorals, Development of a common renewable energy agenda for the Indian Ocean region and Promote regional capacity building.
- As per the declaration, IORA member nations will collaborate with the ISA member nations to exchange knowledge and share potential interests in the renewable energy sector.
- Global Renewable Energy Atlas is the world's largest-ever joint renewable resource data project.
- IORA countries will undertake the expansion of Atlas which will be coordinated by International Renewable Energy Agency (IRENA).

SAHYAG HOP TAC 2018

- It is a naval joint exercise between India and Vietnam.
- It was recently conducted off the Coast of Chennai.
- It was aimed at enabling the Coast Guard units to acquaint themselves with each other's capabilities, strengthening the working-level relationship to rescue lives at sea and refining joint operation procedures.

ANCIENT CITY OF SABRATHA

- It is located west of Tripoli in Libya's Mediterranean Coastal area.
- It is one of three former cities that constituted Roman Tripolitania.
- It was declared as a World Heritage Site by UNESCO.
- In 2016, UNESCO classified it as an "Endangered" site along with four other Libyan sites on its World Heritage list.
- The listing is because of great damage caused by armed groups and excavation and smuggling of antiquities due to lack of security.

SWACHH SURVEKSHAN GRAMEEN AWARDS

Swachh Survekshan Grameen - 2018 was commissioned by the Ministry of Drinking Water and Sanitation.

HIGHLIGHTS

- Under it, an independent survey agency developed ranking of all districts on the basis of sanitation parameters.
- As per the ranking, Haryana was ranked as the best State while Satara District of Maharashtra was ranked as the best district.
- Uttar Pradesh was rewarded for maximum citizens' participation and Nashik was ranked first in maximum citizens' participation in district wise.
- The awards were recently given at the concluding session of Mahatma Gandhi International Sanitation Convention organised by the Ministry of Drinking Water and Sanitation.

DRAFT POLICY ON MARICULTURE

The centre recently released a draft policy on mariculture.

MARICULTURE

- Mariculture is a specialised branch of aquaculture involving the cultivation of economically important marine plants and animals in the sea or any other water body having tidal influence.
- It involves three phases using the following types of facilities in land or in the sea and distinct skill sets –
  a) Hatchery - Involves land-based facilities to rear broodstock and produce seeds.
  b) Nursery - Involves rearing of juveniles to a size conducive to stocking in the grow-out systems which are land based or inshore.
  c) Grow-out- Includes culture of marine plants and animals in the sea, water bodies withtidal influence and land-based re-circulating systems using seawater.

DRAFT POLICY

- It aims to enhance mariculture production, increase income and employment opportunities in a sustainable way and to promote entrepreneurship by facilitating technical and financial inputs.
- The policy has mooted mariculture zones by demarcating special areas in the sea for activities such as cage farming, bivalve farming, pen culture, seaweed culture, hatcheries and nurseries based on scientific criteria.
- The policy has also suggested farming of genetically modified (GM) species only in closed mariculture systems after stringent risk assessment and monitoring.
- It will not be permitted in open sea culture.
- Satellite remote sensing data and GIS will be used to identify potential zones for mariculture on the basis of scientific evaluation of environmental parameters suitable for various types of farming.
- This will avoid conflict with other users and protecting the livelihoods of local fishing communities.
- Sea areas identified in this manner will be designated as mariculture technology parks by the respective States.
- In a bid to support fish breeding, culture, packaging and trade, the policy proposes encouraging the establishment of off-shore technology parks and coastal embankment systems.
- Marine protected areas, ecologically sensitive areas such as coral reefs, mangroves, seagrass beds, and other coastal areas with strategic interest will not be considered for mariculture zones.
- The policy advises the government to formulate financial assistance programmes, including prioritised lending schemes, subsidised credit and investment subsidies, to promote mariculture.
- The policy has made provisions for leasing the water bodies and regulating the activities in the open sea waters to ensure security of the mariculture enterprises.
- All mariculture farms in the sea would operate only in an area leased out for the purpose by the respective maritime states.
- In addition, the state would register and license all farms for a specific period ensuring all protection to the farm assets.
- In the case of natural water bodies, the leases would be given by respective local self-governments.

- Efficient market logistics would be promoted to minimize post-harvest losses and preserving the nutritional quality and value of fish.
- Institutional support will be extended for development of domestic market infrastructure for hygienic handling, processing and cold storage.

WORLD PEACE MONUMENTS

Vice President of India has recently inaugurated the world's largest dome at the Maharashtra Institute of Technology (MIT).

- It is built atop the MIT World Peace Library and the World Peace Prayer Hall in World Peace University Campus in MIT.
- The structure is called World Peace Monument.
- It is 160ft in diameter and larger in area than the dome at St. Peter's Basilica in Vatican City.
- MIT World Peace Library and Prayer Hall are named after the 13th century poet-saint and philosopher Dnyaneshwar, a pivotal figure of the Bhakti movement in Maharashtra.

MARRAKESH TREATY

European Union has recently ratified Marrakesh Treaty to ease access to reading material for print-disabled people.

HIGHLIGHTS

- Marrakesh Treaty was adopted by United Nations - World Intellectual Property Organisation (WIPO).
- With the ratification of European Union, the treaty now expands to 70 countries.
- India was among the earliest to ratify the Marrakesh treaty in June 2014.
- The governments that are party to the Marrakesh treaty are obliged to adopt laws authorising the conversion of books into accessible formats such as braille, e-text, audio and large print by designated organisations.
- They are also allowed to exchange these alternative formats across national borders without clearance by copyright owners.

CREAMY LAYER IN SC/ST PROMOTIONS

The Supreme Court's recent ruling, approving creamy layer concept to SC/ST promotions, has some concerns in terms of equality and career growth.

HIGHLIGHTS

- The 2006 verdict on *Nagaraj vs Union of India* brought in a creamy layer filter for promotions for SC/ST employees.
- Also, the state had to collect 'quantifiable data on backwardness' of the SC/ST class if it wished to provide reservation in promotions.
- Correcting only the second anomaly, the court has now held that the government need not collect quantifiable data to demonstrate backwardness of SC/STs.
- But when it comes to promotion of SC/ST employees, the court held that the creamy layer concept does apply.
- So now, only in direct recruitment of the SC/STs, the creamy layer concept does not apply.
- However, the state governments have the discretion to invoke Articles 16 (4A) and 16 (4B).

- This is to provide for reservations in promotions for Scheduled Castes and Scheduled Tribes with consequential seniority.
- "*Consequential seniority*" refers to promotions made purely on reservation basis despite another person waiting for promotion being actually senior to him/her.

CONCERN

- It has been clearly stated in Indra Sawhney (1992) case, that any discussion on creamy layer "has no relevance" in the context of SC/STs.
- Going by the creamy layer ceiling of Rs 8 lakh per annum, even "Group D" functionaries will come under the definition of creamy layer.
- But notably, the SC/STs lack representation mainly at the Group A level which do not have direct recruitment provisions.
- Promotions are the way through which members of SC/ST communities make it to this level.
- So, the consequence of the judgement will be that promotions will stop even at the Group D and Group C levels.
- The SC/STs are given job reservations not because they are poor but because they are excluded.
- The Constitution made the Scheduled Castes and Scheduled Tribes as a separate category of subjects to protect them from caste aggression.
- It was also to help them gain the strength they need to withstand it and to grow autonomously.
- The first part of Article 335 stipulates job reservations for SC/STs as a right of representation, not as a welfare measure.
- However, the creamy layer among SC/ST employees helps fulfil the second part of Article 335 that requires maintaining the "efficiency of administration".
- So, the recent judgement largely undoes the affirmative action of ensuring equality of opportunity.
- The court also failed to address this, as at present, an SC/ST candidate does not have the right to reject reservations.
- It is also a punishable offence to withhold one's caste status while seeking government employment.
- But allowing SC/ST candidates to compete in the general category would help thousands to leave the space for the less privileged among them.
- Also, by competing as non-reserved candidates, the well-qualified SC/ST group would corner a substantial number of open posts.
- So theoretically, SC/STs would end up garnering more posts than at present.

SC/ST ENTREPRENEURS

Addressing the limitations in government measures to promote SC/ST entrepreneurs is essential to meet the intended objectives.

Capital can break caste system

RECENT MEASURES

- The government recently tried to ensure a market for MSMEs by reserving a fifth of all purchases of PSUs and ministries for them.
- While doing so, it reserved a certain portion for Scheduled Castes and Scheduled Tribes (SC/ST) entrepreneurs.

- At 4% of the total spending of around Rs 6 lakh crore, this means government departments and PSUs have to buy Rs 24,000 crore of goods and services from SC/ST enterprises every year.
- There is no price preference; the enterprises have to agree to match the lowest bidder.
- If their quality is up to the mark, they will get the order, subject to the 4% cap.

LIMITATION

- Getting SC/ST enterprises to an adequate level of quality can often mean completely reorienting their business practices.
- This, in turn, would mean entailing large investments which, often, they cannot make.
- There is also a concern that the lack of capital is a consequence of casteist bank managers.
- Banking - Besides the above, most banking is collateral-based.
- But millions of poor youth, with no family history of business or sufficient collateral, find it difficult to raise bank loans.
- So, scaling up businesses is not easy irrespective of caste background.
- The above is compounded by red tapism in most firms, high costs of land, high electricity tariffs, impossible labour laws, etc.
- Naturally, the burden is higher for smaller firms as unlike large ones, there are no agents to handle these issues.

IORA-RENEWABLE ENERGY MINISTERIAL MEETING

The Indian Ocean Rim Association (IORA) was set up with the objective of strengthening regional cooperation and sustainable development within the Indian Ocean Region.

HIGHLIGHTS

- The association comprises ***21 Member States*** and 7 Dialogue Partners.
- India, Australia, Iran, Indonesia, Thailand, Malaysia, South Africa, Mozambique, Kenya, Sri Lanka, Tanzania, Bangladesh, Singapore, Mauritius, Madagascar, UAE, Yemen, Seychelles, Somalia, Comoros and Oman are members of IORA.
- Neither Pakistan nor Myanmar are member of IORA.
- The Coordinating Secretariat of IORA is located at Ebene, Mauritius.
- The apex body is the Council of (Foreign) Ministers (COM).
- The first Renewable Energy Ministerial Meeting was held in Abu Dhabi, UAE in the year 2014.
- India is going to host 2nd IORA Renewable Energy Ministerial meet in October, 2018.
- Ministers and delegates from all 21 member-countries are expected to participate.

GLOBAL GEOPARKS

Global Geoparks are single, unified geographical areas where sites and landscapes of international geological significance are present.

HIGHLIGHTS

- It is a designation given by UNESCO.
- In 2004, 17 European and 8 Chinese geoparks came together at **UNESCO** headquarters in Paris to form the **Global Geoparks Network (GGN).**
- In 2015, the 195 Member States of UNESCO ratified the creation of a new label, the UNESCO Global Geoparks.

- The Geopark tag is akin to that of a '**World Heritage Site'** for historical monuments that can bring famed geological features to the global stage.
- Global Geopark uses its geological heritage, in connection with all other aspects of the area's natural and cultural heritage, to enhance awareness and understanding of key issues facing society.
- At present, there are **140 UNESCO Global Geoparks in 38 countries**. There is **no site from India** in the list.

GEOLOGICAL SITES IN INDIA

- Geological Survey of India has nominated two sites in India for the first time for Global Geoparks status.
- The sites are **Lonar Lake in Maharashtra** and **St. Mary's Island and Malpe beach in coastal Karnataka.**
- **Lonar Lake** is an ancient circular lake created by a meteorite strike.
- It is the only known meteorite crater in basaltic rock and is world famous.
- It became a geo-heritage site in 1979.
- A meteorite estimated to weigh two-million-tonnes slammed into the Earth, creating a 1.83-km diameter crater where the lake formed.

- **St. Mary's island** is a unique phenomenon where a hexagonal mosaic of basaltic rocks are present.
- It was declared as a national geo-heritage site in 1975.
- It is estimated to be an 88-million-year-old formation that goes back to a time when Greater India broke away from Madagascar.

"A GLASS HALF FULL: THE PROMISE OF REGIONAL TRADE IN SOUTH ASIA" REPORT

World Bank released 'A Glass Half Full: The Promise of Regional Trade in South Asia' report recently.

HIGHLIGHTS

- The report estimates India's potential trade in goods with South Asia at $62 billion against its actual trade of $19 billion.
- It said the trade between India and Pakistan is $2 billion but without trade barriers, this could be $37 billion.
- Intra-regional trade in South Asia is negligible and stands at a mere 5% of the region's total trade.
- The report recommends an approach of open regionalism, and views intraregional trade as complementary to deeper global integration.
- India can play a critical role in regional cooperation for mutual economic and welfare gains.
- It highlights two specific examples of cooperation in the region that sheds light on both the barriers and the opportunities related to regional trade and connectivity.
- One is the setting up of borders haats by India and Bangladesh, which enabled small-volume trading among local communities on both sides of the border.
- Another is the liberalization of India-Sri Lanka air services, which has improved connectivity, reduced air fares, increased passenger traffic and air cargo volume.

- Both serves as a model for an incremental approach towards deeper trade cooperation in the South Asian region.
- Deeper regional trade and connectivity can reduce the isolation of Northeast India and will give Indian firms better access to markets in South Asia and East Asia.
- It will also allow these regions to substitute fossil fuels by cleaner hydropower from Nepal and Bhutan.
- Indian consumers will also gain from availability of greater variety of consumer goods at cheaper prices.

AIR SAFETY OVERSIGHT SCORE

A report on "Air Safety Oversight Score" was recently released by International Civil Aviation Organisation (ICAO).

HIGHLIGHTS

- It seeks to identify if countries have effectively and consistently implemented the critical elements of a safety-oversight system.
- India has slipped below its previous ranking of 66% to 57%.
- India is one of the 15 countries that are below the minimum target rates.
- India's score is lower than that of Myanmar, Bangladesh, Maldives, Pakistan, Sri Lanka, Nepal and even North Korea in the Asia-Pacific region.
- The only countries that rank below India are small and little known such as Papua New Guinea, Timor-Leste, Vanuatu and Samoa.
- A downgrade would mean Indian airlines won't be able to mount new flights to the US or form alliances with US airlines.
- This can stifle Indian carriers' plans of global expansion.

COMMODITY DERIVATIVES

The Bombay Stock Exchange became the first stock exchange in the country to launch commodity derivatives contract in gold and silver.

- Till date, commodity derivatives contracts are available only in the 2 specialsed commodity derivatives - Multi-Commodity Exchange (MCX) and National Commodity Derivatives Exchange (NCDEX).
- The launch of commodity derivatives platform on the BSE will help in efficient price discovery, reduce timeline and make it cost-effective.
- BSE also waived off transaction charges for the first year in the commodity derivatives segment.

Derivatives - They are financial contracts that derive their value from an underlying asset.

- These could be stocks, indices, commodities, currencies, exchange rates, or the rate of interest.
- These financial instruments helps to make profits by betting on the future value of the underlying asset. This is why they are called 'Derivatives'.

ECOSYSTEM SERVICES

There is a critical need for preserving biodiversity by the development firms to ensure the "flow" of ecosystem services.

BACKGROUND

- Ecosystems are communities formed by the interaction between living (plants, animals, microbes) and non-living organisms (air, water, mineral soil).
- Human beings are both part of ecosystems and benefit from ecosystems in many ways.
- The acquired benefits are known as ecosystem services
- For example, Wetlands provide fresh, clean water, regulate pollution, and reduce climate risk and uncertainty for people, agriculture and aquaculture (fisheries).
- They are also hotbeds of biodiversity and are home to a vast range of animals, especially bird species.

HIGHLIGHTS

- The recognition of biodiversity conservation has become extremely important from the perspective of treating the biodiversity as "natural capital".
- The Earth Summit of 1992 adopted the Brundtland Commission Report's definition of "sustainable development" and it provides an important framework on biodiversity conservation.
- Convention of Biological Diversity (CBD) provides the framework of an international law, recognising conservation of biological diversity as an integral part of the development process.
- The Millennium Ecosystem Assessment (MA) of 2005 enhanced human understanding of the fact that the ecosystem functions in its own inimitable ways to provide ecosystem services to the society in the form of –
    a) Provisioning services (food, raw materials, genetic resources, water, etc).
    b) Regulating services (carbon sequestration and climate regulation).
    c) Cultural services (tourism and religion).
    d) Supporting services that are necessary for production of all other ecosystem services (nutrient recycling and soil formation, among others).
- Natural Capital Protocol entails a standardised framework for identification, measurement and valuation of the ecosystem services.
- It helps the firms understand their dependencies on nature and also the impact of their initiatives on the ambient environment and the biodiversity.

What is the importance of ecosystem service valuation?

- The recognition of biodiversity conservation has become extremely important from the perspective of treating the biodiversity as "natural capital" in recent times.
- While new investment can lead to addition in capital stock thereby raising production, investment in "natural capital" can help in sustaining the good health of the ecosystem and its services.
- The Economics of Ecosystems and Biodiversity (TEEB) recognised that ecosystem services are "GDP of the poor", as the poor's incomes and survival are dependent on the ecosystem.
- A monetary value to ecosystem services helps humans understand the importance of the ecosystem to the society and will offer an objective instrument for decision-making.
- Valuation can raise awareness of policy-makers on the importance of the ecosystem services under consideration.
- Ecosystem service valuation can also help legal proceedings determine damages caused by the relevant party.

- For instance, pollution resulting from upstream areas that affects the downstream ecosystems negatively can be adequately measured.
- This will pave the way for proper compensation policies in accordance with the economic value of the harm so caused.
- It can also help revise investment decisions, if the particular development process causes harm to the ecosystem services.

CURRENT SCENARIO

- In a recent research on the Terai Arc Landscape (TAL) in Uttarakhand conducted by WWF India, the aggregate values of seven ecosystem services were found to be around $6 billion in 2015-16.
- Thus, the implication being ruining this landscape tantamount to destroying a value of $6 billion.
- More than half the population in TAL-Uttarakhand is living below poverty levels and an earning member of a household gets as little as $1.9/day.
- The ecosystem dependency of these households is higher than those earning average per capita incomes, as they earn more from ecosystem services than incomes from various sources.
- This implies that any policy towards land-use change in the landscape leads to land-use change in the wildlife habitats.
- Thus, there is a dire need to consider ecosystem service loss along with economic value loss, as it is the poor who suffer the most from the loss in ecosystem services.

Thus, valuation of ecosystem services and natural capital assessments should be inculcated at the core of development firms.

BLACK SPOTTED TURTLES

According to a recent report by TRAFFIC, India accounts for 29% of black spotted turtles seized from across seven countries in South Asia.

HIGHLIGHTS

- Black spotted turtle or spotted pond turtle is a medium-sized freshwater turtle and native to South Asia.
- The species was once smuggled for its meat and is now sought after as an exotic pet.
- It is classified as Vulnerable by the IUCN (International Union for Conservation of Nature) Red List of threatened species.
- In India, the species is distributed across the north, northeast and a few parts of central India.
- The States are West Bengal, Assam, Bihar, Haryana, Uttar Pradesh and Uttarakhand, and parts of Madhya Pradesh, Punjab, Rajasthan and Meghalaya.
- According to TRAFFIC, in turtles seizure rate, India is followed by Thailand (19%) and Hong Kong (17%),Bangladesh (12%).

TRAFFIC

- TRAFFIC, the wildlife trade monitoring network, is a leading non-governmental organisation working globally on trade in wild animals and plants.
- It is a strategic alliance of **IUCN** and **World Wide Fund** for Nature (WWF).
- Its mission is to ensure that trade in wild plants and animals is not a threat to the conservation of nature.

- It plays a vital role in tackling illegal wildlife trade through conducting research and analysis, advocacy and awareness work and by supporting remedial action against illegal wildlife trade.
- It is currently working in the following projects,
  a) **ReTTA - Reducing trade threats to Africa's wild species and ecosystems** through strengthened knowledge and action in Africa and beyond.
  b) **Wildlife-TRAPS - Wildlife Trafficking Response, Assessment and Priority Setting**.
  c) The **Global Shark and Ray Initiative** – It works to secure the future of our oceans through shark and ray conservation.

MiG-21 FIGHTER JETS

In the upcoming India-Russia Bilateral summit, India is likely to gift 3 MiG fighter jets to Russia.

HIGHLIGHTS

- MiG-21 fighter jets will be phased out of service by 2021-22.
- Tejas, an indigeneous fighter aircraft will replace the ageing MiG-21.
- MiG is a product of Soviet Union which entered in to the service in 1959.
- India inducted the MiG-21 in 1963 and got full technology transfer and rights to license-build the aircraft in the country.
- It is the first supersonic fighter aircraft of the Indian Air Force.
- Russia stopped producing the aircraft in 1985, while India continued operating the upgraded variants.

EXERCISE YUDH ABHYAS 2018

- Exercise Yudh Abhyas is a joint Indo-US Military exercise
- Its 2018 edition was recently concluded in Uttarakhand.
- The exercise was started in the year 2004 under US Army Pacific Partnership Programme.
- It is one of the largest joint running military training and defence corporation endeavours between India and USA.

CRIMES IN MYANMAR

UN Human Rights Council has recently passed a resolution for creating an international body to look into grave crimes in Myanmar.

- The resolution was a joint initiative of the **Organisation of Islamic Cooperation and the European Union.**
- The resolution mandates the new body to,
  a) Collect, consolidate, preserve and analyze evidence of the most serious international crimes in Myanmar since 2011,
  b) Prepare files to facilitate and expedite fair and independent criminal proceedings.
  c) The resolution calls on the UN secretary-general to appoint staff and allocate the resources necessary to support the body's work.
  d) The resolution follows the report by the UN Fact-Finding Mission on Myanmar.
  e) The fact finding mission found that Myanmar's security forces committed war crimes, crimes against humanity, and genocide against ethnic Rohingya in Rakhine State.

ARCTIC WARMING

A cargo vessel had recently passed through the Russian Arctic on a trial journey as a result of melting sea ice. This is more an indication of emergence of new shipping routes as global warming continues.

A P Moller-Maersk is the world's biggest shipping group. It had one of its cargo vessels pass through the Russian Arctic on a trial journey. The ship arrived in St Petersburg on the Gulf of Finland after leaving Vladivostok on the North Pacific.

IMPACT

- Climate change is resulting in parts of the Arctic warming up to 100% faster than elsewhere.
- The extent of sea ice covering the Arctic Ocean has declined in every decade since the 1980s.
- There is evidence that ancient, thick ice is disappearing as well.
- The average Arctic sea ice volume was 3,302 cubic miles (or more than 13,750 cubic km) between 1985 and 2000.
- This is expected to fall to an average of 1,480 cubic miles between 2015 and 2030 under a moderate emissions scenario.
- It could well come down to just 737 cubic miles (3,000 cubic km) on average between 2045 and 2060.

Northern Sea Route

- Northern Sea Route Normally navigable without icebreakers for two to four months each year
- Southern Route

Sea ice extent 15 July 2013

HIGHLIGHTS

- The world is likely on the cusp of a shipping revolution as a consequence of climate change.
- "Middle of the road" warming is a warming phenomenon higher than the 2015 Paris Climate Accord target but lower than the most extreme forecasts of climate change.
- Resultantly, as sea ice reduce decade on decade, it will open up vast swathes of the Arctic Ocean.
- The ships may, by the middle of this century, be able to pass directly over the North Pole.
- The route from the north of Russia to the north of Canada can be taken at least for some weeks in the summer-fall.
- The **Northern Sea Route** could potentially cut the travel distance between East Asia and Western Europe.
- It could bring down the distance from 21,000 km to just 12,800 km, and the journey time by 10-15 days.
- The current route is via the Malacca Strait, Indian Ocean, Gulf of Aden and Suez Canal.
- As voyage times fall significantly, shipping could become more attractive in north than the southern routes.
- Shipping activity in the region is thus likely to increase significantly over the next decade.

- It is also aided by the fact that Russia is likely to develop oil and gas fields in Siberia.

DIGI YATRA

Union Ministry of Civil Aviation has released policy on biometric based digital processing of passengers at airports called Digi Yatra. With this initiative, ticket booking, airport entry and boarding pass security check-in will be made digital.

DIGI YATRA

- The initiative seeks to promote paperless and hassle-free air travel. It will be operational by end of February, 2019 at Bengaluru and Hyderabad airports.
- In later phase, Airports Authority of India (AAI) will roll out this initiative at Kolkata, Varanasi, Pune and Vijayawada airports by April 2019.
- Under it, there will be one-time verification at departure airport while travelling for first time using ID.
- After successful verification, facial recognition biometric will be captured and stored in Digi Yatra ID.
- For this system, passengers will be registered through centralized system and will be given Digi Travel ID.
- This ID will include details such as names of passengers, their e-mail id, mobile number and any other identity card in case of non-basis. Travelers can also use this ID when booking tickets.

CONFERENCE ON DISAMAMENT

Pankaj Sharma has been appointed as ambassador and India's permanent representative to United Nations Conference on Disarmament in Geneva.

- The Conference on Disarmament (CD) is a multilateral disarmament forum established by the international community to negotiate arms control and disarmament agreements based at the Palais des Nations in Geneva.
- The Conference meets annually in three separate sessions in Geneva.
- The Conference was first established in 1979 as the Committee on Disarmament as the single multilateral disarmament negotiating forum of the international community.
- It was renamed the Conference on Disarmament in 1984.
- The Conference succeeded three other disarmament-related bodies: the Ten-Nation Committee on Disarmament (1960), the Eighteen-Nation Committee on Disarmament (1962–68) and the Conference of the Committee on Disarmament (1969–78).
- The conference is currently composed of 65 formal members, representing all areas of the world, as well as all known nuclear-weapon states.
- Additionally, members are organized into a number of informal regional groups to facilitate their preparation for, and representation in the plenary meetings of the Conference.

MAONETARY POLICY COMMITTEE

To achieve the goals of broad economic policy, the Reserve Bank of India (RBI) uses monetary policy to control inflation, interest rates, supply of money and credit availability.

HIGHLIGHTS

The RBI has a government-constituted **Monetary Policy Committee (MPC)** which is tasked with framing monetary policy using tools like the repo rate, reverse repo rate, bank rate, cash reserve ratio (CRR).

MPC

- The committee will have six members. Of the six members, the government will nominate three.
- No government official will be nominated to the MPC.
- The other three members would be from the RBI with the governor being the ex-officio chairperson.
- Deputy governor of RBI in charge of the monetary policy will be a member, as also an executive director of the central bank.
- Decisions will be taken by majority vote with each member having a vote.
- The RBI Governor will chair the committee. The governor, however, will not enjoy a veto power to overrule the other panel members, but will have a casting vote in case of a tie.
- The government nominees to the MPC will be selected by a Search-cum-Selection Committee under Cabinet Secretary with RBI Governor and Economic Affairs Secretary and three experts in the field of economics or banking or finance or monetary policy as its members.
- Members of the MPC will be appointed for a period of four years and shall not be eligible for reappointment.

WAGE COMPENSATION SCHEME

Assam Government has become the first Indian state to offer a Wage Compensation Scheme for pregnant women working in the tea gardens of the state.

OBJECTIVE

The scheme is aimed at providing better health and nutrition supplements to the pregnant women. It stresses on providing proper healthcare facilities to the pregnant women working in the tea gardens of the state.

HIGHLIGHTS

- Under the scheme, an amount of Rs 12,000 will be given to the pregnant women so that they can take care of themselves and the unborn baby without compromising the livelihood of their family.
- The compensation of wages to pregnant women will be given in 4 instalments – Rs 2,000 in the first trimester, Rs 4,000 in the second trimester, Rs 3,000 for institutional delivery and Rs 3,000 for registration of the child's birth.
- The women would also be given a maternity leave. They will not be engaged in work from the third trimester of pregnancy to three months after delivery.
- In addition, they will get assistance for ante-natal care and the first cycle of immunization of the child.

OPERATION SAMUDRA MAITRI

India has launched massive humanitarian operation Samudra Maitri to provide assistance to earthquake and tsunami victims in Indonesia.

Under this operation, India has dispatched two aircraft C-130J and C-17 and three naval ships carrying relief material and personnel to the country.

GOVERNMENT E-PAYMENT ADOPTION RANKING 2018

The 2018 Government E-Payments Adoption Ranking (GEAR) study has been released by Visa, a global leader in payments technology. This is the third edition of the study after those in 2007 and 2011.

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

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

HIGHLIGHTS

▪ In the latest study, India is ranked 28th among 73 countries. This is up from 36th rank in 2011.

B2C category: India leads the Business to Government category, along with Australia, Singapore and South Korea. The category refers to the ease with which businesses can calculate and make their tax payments, register and renew their registrations online and digitally calculate their pension fund contributions, thereby making those payments on a periodic basis.

G2B category: At the same time, by simplifying refund and loan application processes, wherein businesses can track status digitally, coupled with dedicated digital portals to submit proposals for government procurement services, India leads the Government to Business category as well.

The **C2G category** evaluates the extent to which citizens can complete various transactions electronically by assessing six indicators, including online one-stop shops, income tax payments, and obtaining an ID card. India ranks third in this category, along with four other countries, while France and the UAE top the list.

The **G2C category** captures the extent to which various government transfers like tax refunds, pension and welfare benefits and unemployment benefits can be accessed electronically. In India, while everything pertaining to tax filing and pension and welfare benefits has smoothly migrated to digital, the unemployment benefits system continues to be driven by paper processes, as a result of which the country still lags behind, in 25th place.

The **infrastructure and socio-economic categories** examine the supportive infrastructure for e-payments and their acceptance in society at large. With respect to infrastructure, while India has witnessed an increase in Internet penetration over recent years, substantial pockets of communities continue to lack reliable access, leaving country ranked 58th.

In the **socio-economic category**, India is ranked 60th out of 73 countries, highlighting an urgent need to focus efforts on enhancing educational levels, as well as improving citizens' and businesses' engagement with Internet-enabled services.

The **policy category** assesses the policy environment and examines how it spurs e-payments adoption. Though India ranks at a low 40th owing to a few inhibiting policy decisions, the

government's efforts to strengthen Intellectual Property Rights (IPR) with an objective to foster innovation and protect country's traditional knowledge could motivate innovation and act as a catalyst-businesses to grow. Incentives to consumers and merchants to adopt digital payments are also restricted to selected e-payment methods, potentially limiting the effectiveness of these measures.

USMCA

Canada has agreed to sign a trade deal with the United States and Mexico, revamping the North American Free Trade Agreement after almost a year of negotiations. The new deal has been named the United States-Mexico-Canada Agreement (USMCA).

The trilateral pact is expected to be signed by the three North American countries before the end of November, after which it would be submitted to Congress.

UNITED STATES-MEXICO-CANADA AGREEMENT (USMCA)

- It's basically NAFTA 2.0, with major changes on cars and new policies on labour and environmental standards, intellectual property protections, and some digital trade provisions. The changes include:
- Automobiles must have 75% of their components manufactured in Mexico, the US, or Canada to qualify for zero tariffs (up from 62.5 percent under NAFTA).
- 40 to 45 percent of automobile parts have to be made by workers who earn at least $16 an hour by 2023. Mexico has also agreed to pass laws giving workers the right to union representation, extend labour protections to migrant workers, and protect women from discrimination. The countries can also sanction one another for labour violations.
- The US got Canada to open up its dairy market to US farmers, which was a big issue for Trump.
- The deal extends the terms of copyright to 70 years beyond the life of the author (up from 50). It also extends the period that a pharmaceutical drug can be protected from generic competition.
- It also includes new provisions to deal with the digital economy, including prohibiting duties on things like music and e-books, and protections for internet companies so they're not liable for content their users produce.

Sunset clause: The agreement puts in a 16-year "sunset" clause — meaning the terms of the agreement expire, or "sunset," after a set period of time. The deal is also subject to a review every six years, at which point the US, Mexico, and Canada can decide to extend USMCA.

NAFTA

NAFTA is the initialism for the North American Free Trade Agreement, an agreement signed by Canada, Mexico, and the United States that reduced or eliminated trade barriers in North America. (Since the U.S. and Canada already had a free trade agreement (signed in 1988), NAFTA merely brought Mexico into the trade bloc.)

Negotiations for the trade agreement began in 1990 under the administration of George H.W. Bush and were finalized under Bill Clinton's presidency in 1993. The agreement went into effect on January 1, 1994.

NATIONAL REAL ESTATE DEVELOPMENT COUNCIL (NAREDCO)

Realtors body National Real Estate Development Council (NAREDCO) has signed Memorandum of Understanding (MoU) with Ministry of Housing and Urban Affairs to provide skill training and jobs in construction sector for 2.5 lakh poor people.

The partnership will strengthen skill trainings and employment opportunities in construction sector for urban poor under ***Deendayal Antyodaya Yojana-National Urban Livelihoods Mission.***

National Real Estate Development Council (NAREDCO)

- It is autonomous self-regulatory body under Ministry of Housing and Urban Affairs. It was established in 1998 and is headquartered in New Delhi.
- It serves as apex national body for real estate industry and provides single platform for Government, industry and public to discuss various problems and opportunities face to face for speedy resolution of issues.
- Its mandate also includes to induce transparency and ethics in real estate business and transform unorganized Indian real estate sector into matured and globally competitive business sector.

ONE WORLD ONE SUN ONE GRID

India would generate 40% of power from non-fossil fuels by 2030 and has called for connecting solar energy supply across borders giving the mantra of 'One World One Sun One Grid'.

The 121-country International Solar Alliance can be seen as the future of OPEC (Organization of Petroleum Exporting Countries) for meeting energy needs of the world. Solar power can thus, play the same role that oil wells have played over the past few decades.

HIGHLIGHTS

- The challenges of global warming and climate change is becoming serious and efforts need to be done by moving more towards cleaner fuels to resolve it.
- Limiting the rise in global average temperature by 2*C as per the Paris Agreement and even further to 1.5*C require that the world should move towards fossil-fuel free economy by about 2040. This is a huge challenge and requires to act rigorously to achieve it.
- India, Europe, United States etc are more or less covered with an integrated grid for power supply.
- Integration of nations over the world with a common grid can be very helpful. This can help in generating, for example, solar energy in regions where it is largely available (like deserts of the world) to places where it is less available.
- For example, solar energy generated in Sahara Desert can be taken to Europe and reduce Europe's dependence on gas.
- Pitching International Solar Alliance to becoming a global body like United Nations is going to be a very important foreign policy tool for India (as its Headquarter is in Gurugram, India) apart from being helpful from environment, economy and energy points of views.
- India has an installed capacity of 345GW in electricity sector with one National Grid. Solar energy is fast developing industry in India and its capacity has reached 23 GW till June 2018.

- India has developed solar energy in large solar parks. But, the solar energy needs to be made available in lakhs of villages as well. This will be helpful for farmers to a large extent in increasing his productivity.
- Government of India has worked on programmes like increasing use of LED bulbs in rural and urban areas both. Such initiatives need to be taken further to save both energy and climate. A major challenge towards achieving solar energy all over India is storage technology (like using batteries). This will help in getting solar power in different areas and in non-peak times of solar energy.

NOBEL PRIZE IN CHEMISTRY 2018

Frances H. Arnold "for the directed evolution of enzymes" and the other half jointly to George P. Smith and Sir Gregory P. Winter "for the phage display of peptides and antibodies".

HIGHLIGHTS

One half of this year's Nobel Prize in Chemistry is awarded to *Frances H. Arnold.*

- In 1993, she conducted the first directed evolution of enzymes, which are proteins that catalyse chemical reactions. Since then, she has refined the methods that are now routinely used to develop new catalysts.
- The uses of Frances Arnold's enzymes include more environmentally friendly manufacturing of chemical substances, such as *pharmaceuticals, and the production of renewable fuels for a greener transport sector.*

The other half of this year's Nobel Prize in Chemistry is shared by *George P. Smith and Sir Gregory P. Winter.*

- In 1985, George Smith developed an elegant method known as *phage display*, where a bacteriophage – a virus that infects bacteria – can be used to evolve new proteins.
- Gregory Winter used phage display for the directed evolution of antibodies, with the aim of producing new pharmaceuticals.
- The first one based on this method, adalimumab, was approved in 2002 and is used for rheumatoid arthritis, psoriasis and inflammatory bowel diseases.
- Since then, phage display has produced anti-bodies that can *neutralise toxins, counteract autoimmune diseases and cure metastatic cancer.*

NOBEL PRIZE IN PHYSICS 2018

The Nobel Prize in Physics 2018 was awarded to Arthur Ashkin, Gérard Mourou and Donna Strickland.

Their inventions have revolutionised laser physics. Extremely small objects and incredibly rapid processes are now being seen in a new light. Advanced precision instruments are opening up unexplored areas of research and a multitude of industrial and medical applications.

HIGHLIGHTS

The Nobel Prize in Physics 2018 was awarded "for groundbreaking inventions in the field of laser physics" with one half to *Arthur Ashkin "for the optical tweezers* and their application to biological systems", the other half jointly to *Gérard Mourou and Donna Strickland "for their method of generating high-intensity, ultra-short optical pulses."*

- *Arthur Ashkin* invented optical tweezers that grab particles, atoms, viruses and other living cells with their laser beam fingers. This new tool allowed using the radiation pressure of light to move physical objects. He succeeded in getting laser light to push small particles towards the centre of the beam and to hold them there. Optical tweezers had been invented.
- *Gérard Mourou and Donna Strickland* paved the way towards the shortest and most intense laser pulses ever created by mankind.
- Using an ingenious approach, they succeeded in creating *ultrashort high-intensity laser pulses without destroying the amplifying material*.
- First, they stretched the laser pulses in time to reduce their peak power, then amplified them, and finally compressed them. If a pulse is compressed in time and becomes shorter, then more light is packed together in the same tiny space – the intensity of the pulse increases dramatically.
- *Strickland and Mourou's* newly invented technique, called *chirped pulse amplification*, CPA, soon became standard for subsequent high-intensity lasers. Its uses include the millions of corrective eye surgeries that are conducted every year using the sharpest of laser beams.

NOBEL FOR PHYSICS

- Physics was the prize area which Alfred Nobel mentioned first in his will from 1895.
- At the end of the nineteenth century, many people considered physics as the foremost of the sciences, and perhaps Nobel saw it this way as well. His own research was also closely tied to physics.
- The Nobel Prize in Physics is awarded by The Royal Swedish Academy of Sciences, Stockholm, Sweden.

NOBEL PRIZE FOR MEDICINE 2018

The Nobel Prize in Physiology or Medicine 2018 was awarded to James P. Allison and Tasuku Honjo "for their discovery of cancer therapy by inhibition of negative immune regulation."

The Laureates has shown how different strategies for inhibiting the brakes on the immune system can be used in the treatment of cancer. Their discoveries are a landmark in our fight against cancer.

NOBEL PRIZE FOR PEACE 2018

Courageously combating war crimes and seeking justice for victims

- Both laureates have made a crucial contribution to focusing attention on, and combating, war crimes.
- **Denis Mukwege** is the helper who has devoted his life to defending these victims.
- **Nadia Murad** is the witness who tells of the abuses perpetrated against herself and others.
- Each of them in their own way has helped to give greater visibility to war-time sexual violence, so that the perpetrators can be held accountable for their actions.

NOBEL PRIZE FOR ECONOMIC SCIENCES 2018

Integrating innovation and climate with economic growth

This year's Laureates have designed methods for addressing some of our time's most basic and pressing questions about how we create long-term sustained and sustainable economic growth. Their contributions provide us with fundamental insights into the causes and consequences of technological innovation and climate change.