My Notes....

NATIONAL

FIRST EVER HCI RELEASED

The World Bank released on 11 October 2018 a Human Capital Index (HCI) as part of the World Development Report 2019. The World Bank ranked India 115th among 157 countries in its first-ever Human Capital Index (HCI), drawing sharp criticism from **the government. India's neighbours Bangladesh, Nepal and Sri Lanka were better placed at** 106th, 102nd and 74th position, respectively. The index took into account parameters like child mortality, health and education. Broader theme of the World Development Report **(WDR) this year is** "The Changing Nature of Work". **As part of this report,** the World Bank has launched a Human Capital Project (HCP). The HCP programme is claimed to be a program of advocacy, measurement, and analytical work to raise awareness and increase demand for interventions to build human capital.

What

1. There are three components of HCP- a cross-country human capital measurement metric called the Human Capital Index (HCI), a programme of measurement and research to inform policy action, and a programme of support for country strategies to accelerate investment in human capital.

INDIA AND NEIGHBOURS
Human Capital Index

India 0.44 Bangladesh 0.48 Sri Lanka 0.58 Nepal 0.49 Pakistan 0.39
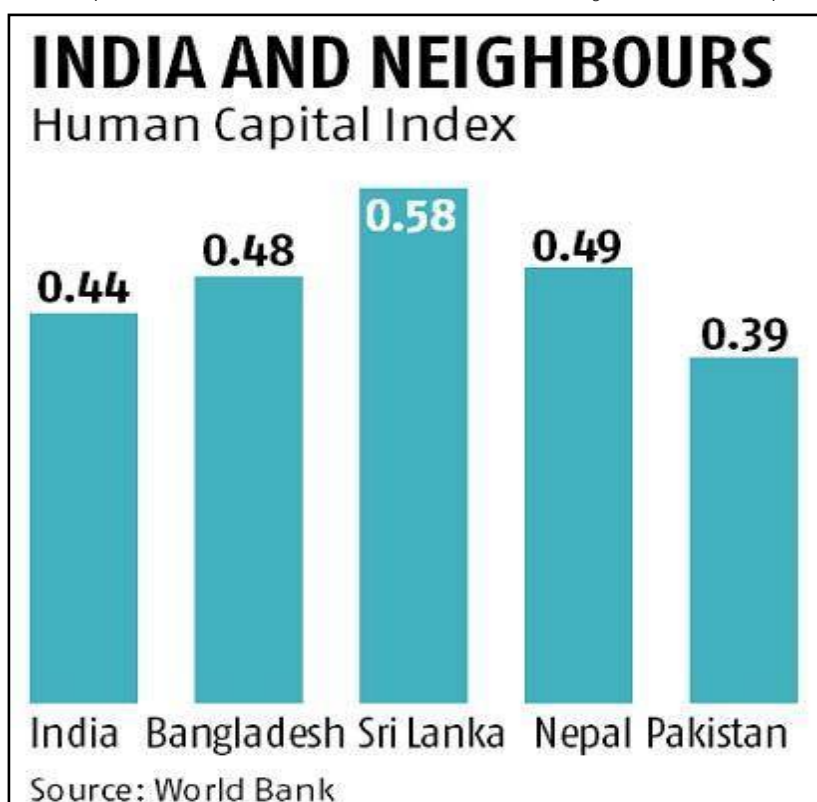
Source: World Bank

2. The HCI has been constructed for 157 countries. It claims to seek to measure the amount of human capital that a child born today can expect to attain by age 18.

3. The HCI index values are contended to convey the productivity of the next generation of workers, compared to a benchmark of complete standard education and full health.

The HCI has three components

1. Survival, as measured by under-5 mortality rates

2. Expected years of Quality-Adjusted School which combines information on the quantity and quality of education (quality is measured by harmonizing test scores from major international student achievement testing programs and quantity from number of years of school that a child can expect to obtain by age 18 given the prevailing pattern of enrolment rates across grades in respective countries); and

3. Health environment using two proxies of (a) adult survival rates and (b) the rate of stunting for children under age 5.

The key observations regarding India

1. Human Capital Index: A child born in India today will be only 44 per cent as productive when she grows up as she could be if she enjoyed complete education and full health.
2. The HCI in India for females is marginally better than that for males.
3. Further, there has been marked improvement in the HCI components in India over the last five years.
4. Probability of Survival to Age 5: 96 out of 100 children born in India survive to age 5.
5. Expected Years of School: In India, a child who starts school at age 4 can expect to complete 10.2 years of school by her 18th birthday.

World Banks's Human Capital Index	UN's Human Development Index
HCI uses survival rates and stunting rate as measure of health	HDI uses life expectancy as measure of health
HCI uses quality-adjusted learning as measure of education	HDI uses years of schooling as measure of education
HCI excludes per capita income	HDI includes per capita income
HCI excludes income component	HDI includes income component

6. Harmonized Test Scores: Students in India score 355 on a scale where 625 represents advanced attainment and 300 represents minimum attainment.
7. Learning-adjusted Years of School: Factoring in what children actually learn, expected years of school is only 5.8 years.
8. Adult Survival Rate: Across India, 83 per cent of 15-year olds will survive until age 60.
9. Healthy Growth (Not Stunted Rate): 62 out of 100 children are not stunted. 38 out of 100 children are stunted, and so at risk of cognitive and physical limitations that can last a lifetime.
10.
11. Gender Differences: In India, HCI for girls is marginally higher than for boys.

Purpose

1. The purpose of the Index has been stated to be to create political incentive for increased spending on health and education.
2. Unfortunately, the indicators used for measured the Index are so slow moving that none can really be excited about setting out the programme of Index improvement.
3. Adult survival rates, stunting, and under 5 mortality are outcome indicators will change at a relatively slow rate as compared to process indicators used in computing for example the Ease of Doing Business.
4. Several key factors, on the other hand, seem to have been neglected. As against the variability of outcomes for similar levels on investment, it would be more useful to

The top 10 countries
1. Singapore – 0.88
2. Korea – 0.84
3. Japan – 0.84
4. Hong Kong SAR – 0.82
5. Finland – 0.81
6. Ireland – 0.81
7. Australia – 0.80
8. Sweden – 0.80
9. Netherlands – 0.80
10. Canada – 0.80

developing countries if the Index focused on enabling them to measure and improve the cost-effectiveness of their spending on health and education.

5. Also, the differences in development outcomes arising from governance issues, political systems, socio-cultural context, and legacy issues have been totally ignored. The metric of HCI is too simplistic at one level and too ignorant of development realities at another.
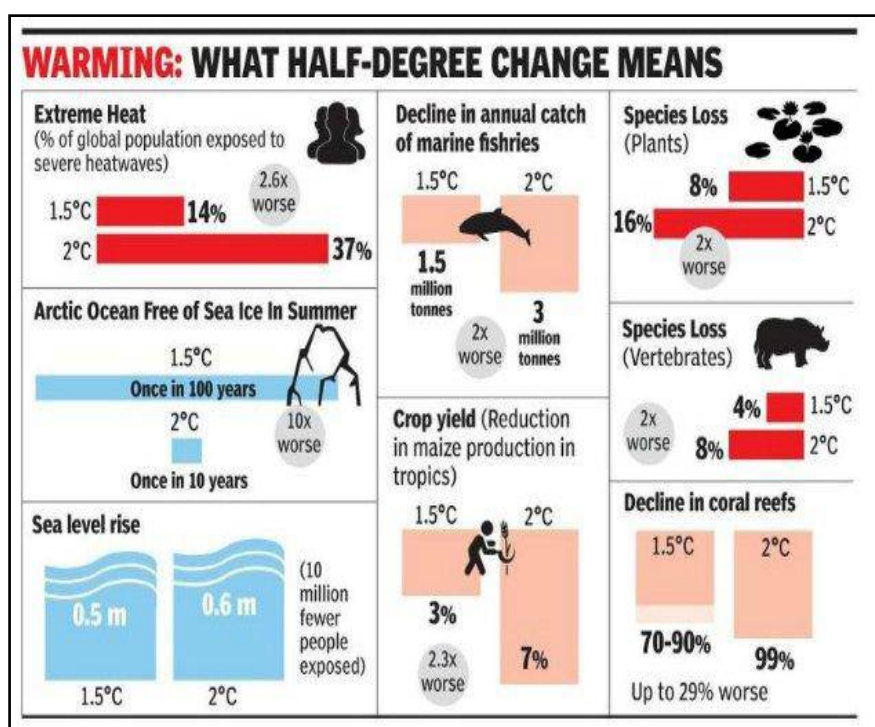
IPCC REPORT ON CLIMATE CHANGE

United Nations Intergovernmental Panel on Climate Change (IPCC) has released special report on global warming in Incheon, South Korea. The report includes contributions from 91 authors and review editors from 40 countries. It will be key scientific input in upcoming Katowice Climate Change Conference in Poland in December 2018.

Key Points

1. It clearly shows how half degree of warming makes big difference, adversely impacting global population and overall ecosystem through intense heat waves, melting of Arctic, sea level rise, erratic rainfall, reduction of farm yield and vanishing of living species.

2. It is possible to meet new warming target, provided nations together take rapid and far reaching transitions over next 10 to 20 years in energy, industry, land use, buildings, transport and cities to cut emissions and reach net zero around 2050 — 25 years earlier than

WARMING: WHAT HALF-DEGREE CHANGE MEANS

planned under earlier 2-degree goal.

3. It lists four pathways to curb global warming and through which the 1.5 degree target can be achieved.

4. In each of pathways, global average temperature is projected to overshoot 1.5 degrees Celsius target by some amount before returning to that level before the end of this century.

5. Each of these pathways is also dependent on some amount of Carbon Dioxide Removal (CDR), a reference to physical removal of stock of CO_2 from atmosphere to reduce its concentrations.

6. It refers to climate models that project robust differences in regional climate characteristics between present-day and global warming of 1.5 degrees Celsius and between 1.5 and 2 degrees Celsius.

7. It also lists several specific advantages of keeping the global temperature rise within 1.5 degrees celsius from pre-industrial levels.

8. By 2100, global sea level rise would be 10 cm lower with global warming of 1.5 degrees compared with 2 degrees Celsius.

9. Arctic Ocean free of sea ice in summer would be once per century with global warming of 1.5 degrees, compared with at least once per decade with 2 degrees Celsius.
10. Coral reefs will decline by 70-90% with global warming of 1.5 degrees, whereas virtually all (over 99%) would be lost with 2 degrees Celsius.
11. It also points out that climate-related risks to health, livelihoods, food security, water supply, human security and economic growth are projected to increase with global warming of 1.5 degrees Celsius and increase further with 2 degrees Celsius.

Intergovernmental Panel on Climate Change (IPCC)

1. IPCC is the leading international body for the assessment of climate change.
2. It was established in 1988 by the United Nations Environment Programme (UNEP) and World Meteorological Organization (WMO).
3. It is headquartered in Geneva, Switzerland. Currently 195 countries are its members.
4. It comprises a group of several hundred scientists of different nationality who assess climate change science.
5. Every 5 or 6 years, IPCC comes out with comprehensive periodic reports on Climate Change called Assessment Reports (AR).
6. IPCC neither monitors climate related parameters nor does it conduct any research work.
7. It merely assesses the most recent scientific, socio-economic and technical information produced worldwide relevant to the understanding of climate change.
8. **IPCC's 4th AR had helped them to win Nobel Peace Prize in 2007**. During this time R.K. Pachauri was its Chairman.

IORA COUNTRIES ADOPT THE DELHI DECLARATION

As many as 21 countries in the Indian Ocean Rim Association (IORA) on 4 October 2018 adopted the Delhi Declaration on Renewable Energy in the Indian Ocean Region, post the 2nd IORA Renewable Energy Ministerial Meeting held at the 2nd Global Re-Invest India-ISA Partnership **Renewable Energy Investor's** Meet & Expo in Greater Noida. The Delhi Declaration on Renewable Energy in the Indian Ocean Region 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.

What

1. The declaration also calls for promotion of technology development and transfer, strengthening of public private partnerships in renewable energy and collaboration among IORA member states and the member nations of the International Solar Alliance (ISA).

Flashback
1. The Indian Ocean Rim Association was set up with the objective of strengthening regional cooperation and sustainable development within the Indian Ocean Region with 21 Member States and 7 Dialogue Partners.
2. The last Renewable Energy Ministerial Meeting was held on 21st January, 2014 in Abu Dhabi, UAE. Subsequently, during the meeting of IORA Council of Ministers, held in October, 2016 in Bali, Indonesia, it was decided that the next conference will be held in India.
3. In line with the commitment made, India hosted the 2nd IORA Renewable Energy Ministerial meet.
4. India, Australia, Iran IR, 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.

2. IORA member countries also resolved to collaborate with the International Renewable Energy Agency (IRENA).

3. As per the declaration adopted, IORA member nations will collaborate with the ISA member nations to exchange knowledge and share views and potential interests in the renewable energy sector; paved by the Memorandum of Understanding (MoU) signed between IORA and ISA on 3 October 2018, with a focus on joint capacity-building programs, research & development activities in solar energy and exchange of best practices.

4. Additionally, IORA member nations and IRENA will undertake the expansion of the Global Renewable Energy Atlas, **the world's largest**-ever joint renewable resource data project, coordinated by IRENA, thereby creating the Indian Ocean region's first and most comprehensive map and database which can then be used to tap the sizable renewable energy potential of the region; and to collaborate on opportunities available under the International Renewable Energy Learning Platform (IRELP).

GI TAG FOR ALPHONSO

Alphonso Mango from Ratnagiri, Sindhudurg and other adjoining areas in Maharashtra, finally gets a Geographical Indication (GI) Tag. A Geographical Indication or a GI is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. 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 Tirupati Laddus are some of the GIs.

What

1. GI products can benefit the rural economy in remote areas, by supplementing the incomes of artisans, farmers, weavers and craftsmen.
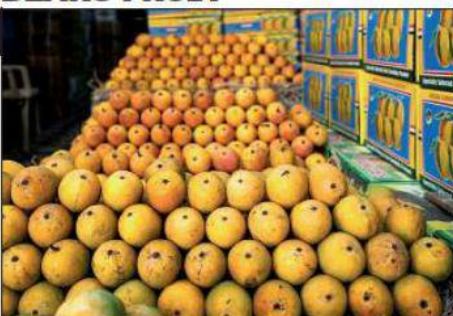
2. Our rural artisans possess unique skills and knowledge of traditional practices and methods, passed down from generation to generation, which need to be protected and promoted.

LOBBYING BEARS FRUIT

Facts about Alphonso mangoes
- One of the most expensive varieties of mango, Alphonso is grown mainly in western India, including Sindhudurg, Ratnagiri and Raigad districts
- The thin skin of a ripe Alphonso turns bright golden yellow with a tinge of red which spreads across the top of the fruit
- Each Alphonso weighs between 150gm and 300gm

BENEFIT OF GI TAG
GI products can benefit the rural economy by supplementing the incomes of artisans, farmers, weavers and craftsmen. The GI creates a distinct identity of the product, assures buyers of quality & creates global market for product

What is a GI | It is a name or a sign used on products which corresponds to a specific geographical location or origin such as a town, a region or a country

Maha fruits with GI tag | Nagpur orange, Mahabaleshwar strawberry, Nashik grapes, Solapur pomegranate

Other products | Puneri pagdi, Warli painting, Navapur tur dal, Lasalgaon onion, Sindhudurg and Ratnagiri kokum, Mangalwedha jowar, Kolhapuri jaggery and **Kolhapuri chappal**

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

4. **He emphasised that it's an area of strength and optimism for India, whereby GI tag has given protection to a large number of hand-made and manufactured products, especially in the informal sector.**

5. 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.

6. **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.
7. 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.
8. The first product to get a GI tag in India was the Darjeeling tea in 2004. There are a total of 325 products from India that carry this indication.

DRAFT OF NPE 2018

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

What

1. Draft NPE aims to promote domestic manufacturing in entire value-chain of ESDM sector for spur economic development in the country.
2. It also aims to double the target of mobile phone production from 500 million units in 2019 to 1 billion by 2025 to meet objective.
3. It replaces existing incentive schemes like Modified Special Incentive Package Scheme (M-SIPS), with schemes that are easier to implement such as interest subsidy and credit default guarantee etc.
4. It also takes into consideration interest subsidy and credit default guarantee in order to encourage new units and in expansion of existing units in electronics manufacturing sector.
5. It proposes to push development of core competencies in all sub-sectors of electronics including electronic components and semiconductors, automotive electronics, defence electronics, industrial electronics, strategic electronics etc.
6. It proposes to set up 20 greenfield and three brownfield electronic manufacturing cluster projects have been sanctioned with project outlay of Rs 3,898 crore, including Rs 1,577 crore from Central Government.
7. It proposes suitable direct tax benefits, including inter-alia investment-linked deduction under Income Tax (IT) Act for electronics manufacturing sector, for setting up of new manufacturing unit or expansion of an existing unit.
8. The proposal includes increasing tax benefits on expenditure incurred on R&D, enhancing rate of duty drawback for electronics sector, reimbursement of state levies and other levies for which input tax credit is not available, allowing duty free import of second-hand capital goods for electronics hardware manufacturing etc.
9. It also proposes cess on select electronic goods resources to promote certain critical sub-sectors of electronic manufacturing such as semiconductor wafer fabrication and display fabrication units.

UDYAM ABHILASHA LAUNCHED

On the occasion of Birth Anniversary of Mahatma Gandhi on October 02, 2018, Small Industries Development Bank of India (SIDBI) had launched a National Level Entrepreneurship Awareness Campaign, Udyam Abhilasha in 115 Aspirational Districts identified by NITI Aayog in 28 States and reaching to around 15,000 youth. **SIDBI will join to contribute to "the transformation mission"** unleashed for these districts. The campaign would be running parallelly from 3rd October to 8thOctober, 2018 across India.

What

1. 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.

2. 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.

3. 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.

4. 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.

> **The objectives of the missionary campaign includes**
> 1. To inspire rural youth in aspirational districts to be entrepreneurs by assisting them to set up their own enterprise
> 2. To impart training through digital medium across the country
> 3. To create business opportunities for CSC VLEs
> 4. To focus on women aspirants in these aspirational districts to encourage women entrepreneurship
> 5. To assist participants to become bankable and avail credit facility from banks to set up their own enterprise

5. 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.

6. SIDBI meets the financial and developmental needs of the MSME sector with a Credit approach to make it strong, vibrant and globally competitive.

7. SIDBI, under its revamped strategy SIDBI 2.0, has adopted the theme of ease of access to MSEs and being Impact Multiplier & Digital Aggregator.

8. Efforts have been initiated to strengthen the ecosystem both in setting up and stepping up stages of business cycle. To take the agenda forward, SIDBI has had series of initiatives.

INDIA'S FIRST EVER NES TO KICK OFF

India's first ever National Environment Survey (NES) will be kicked off from 55 districts across 24 states and three Union Territories in January, 2019. The earliest the first set of complete green data from the survey will be available is 2020, providing an important tool in the hands of policy-makers for decision making at all levels - district, state and national.

What

1. The survey will be done through a grid-based approach, using grids measuring 9x9 km, to collect comprehensive data on various environmental parameters such as air, water, soil quality; emission inventory; solid, hazardous and e-waste; forest & wildlife; flora & fauna; wetlands, lakes, rivers and other water bodies.

2. It will also assess carbon sequestration potential of all the districts across the country. The NES will rank all the districts on their environmental performance and document their best green practices.

3. Unless policy-makers have exact data on all environmental parameters, they cannot take appropriate decisions. **The country's first ever environment survey** will fill the gaps in existing data, the Environmental Information System (ENVIS) said which will conduct the survey through its hubs and resource partners across the country.

4. At present, the country has secondary data on most of these parameters. The NES will, however, for the first time provide primary data on all the green heads in the same way that the National Sample Survey (NSS) periodically collects various socio-economic data.

5. The first set of data will be compiled in one year because we need to cover seasonal cycles in terms of air pollution and flora & fauna.

6. All 716 districts in the country are expected to be surveyed in a period of three to four years. Currently, all necessary preparatory works and training are being done in all the 55 districts where the NES will be conducted next year.

7. These 55 districts include south Delhi, Pune and Palghar in Maharashtra, Gurugram and Mewat (Nuh) in Haryana, Kullu in Himachal Pradesh, Nalanda in Bihar, Dhanbad in Jharkhand, Jamnagar and Mehsana in Gujarat, Alwar and Barmer in Rajasthan, Coimbatore and Madurai in Tamil Nadu, Shimoga in Karnataka and Hyderabad in Telangana among others.

GSLV MK-III CRYO ENGINE TESTED

The Indian Space Research Organisation (Isro), on 12 October 2018 said it has successfully tested the Cryogenic Engine (CE-20) for GSLV Mk-III, which is earmarked for the launch of **India's second moon mission, Chandrayaan**-2. The test was done on October 11. The GSLV MK-**III vehicle's upper stage is powered by the CE**-20, which operates on a gas generator cycle using a combination of liquid oxygen (LOX) and liquid hydrogen (LH2) propellants.

What

1. The fifth hardware of CE-20 integrated engine designated as E6 is earmarked for GSLV Mk-III M1-Chandrayaan 2 mission.

2. **According to Isro, the "**flight acceptance hot test**" test las**ted 25 seconds, and it was conducted at the High Altitude Test facility, Isro Propulsion Complex (IPRC), Mahendragiri.

3. The test demonstrated steady state operation of engine and the performance of all engine subsystems were observed to be normal during the hot test.

4. The major subsystems of the engine are thrust chamber, gas generator, LOX and LH2 turbo pumps, igniters, thrust and mixture ratio control systems, Start-up system, control components and pyro valves.,

5. CE-20 develops a nominal thrust of 186.36 kN with a specific impulse of 442 seconds in vacuum.

6. Chandrayaan-2, unlike the first mission, involves a Lander soft-landing on the lunar surface and unloading a Rover to study and take measurements from the Moon, while the orbiter will go around the Earth's satellite.

NCVT AND NSDA MERGED INTO NCVET

The Union Cabinet chaired by the Prime Minister Shri Narendra Modi has approved the merger of the existing regulatory institutions in the skills space - National Council for Vocational Training (NCVT) and the National Skill Development Agency (NSDA) into the National Council for Vocational Education and Training (NCVET). NCVET will regulate the functioning of entities engaged in vocational education and training, both

The primary functions of NCVET
1. Recognition and regulation of awarding bodies, assessment bodies and skill related information providers
2. Approval of qualifications developed by awarding bodies and Sector Skill Councils (SSCs)
3. Indirect regulation of vocational training institutes through awarding bodies and assessment agencies
4. Research and information dissemination
5. Grievance redressal

long-term and short-term and establish minimum standards for the functioning of such entities.

What

1. The Council would be headed by a Chairperson and will have Executive and Non-Executive Members. Since NCVET is proposed to be set up through merger of two existing bodies, the existing infrastructure and resources will be utilized for the most part.
2. In addition, a few more posts will be created for its smooth functioning. The regulator will follow the best practices of regulatory processes, which will help ensure that it performs its functions professionally and as per the applicable laws.

Benefits

1. This institutional reform will lead to improvement in quality and market relevance of skill development programs lending credibility to vocational education and training encouraging greater private investment and employer participation in the skills space.
2. This in turn will help achieve the twin objectives of enhancing aspirational value of vocational education and of increasing skilled manpowerfurthering the Prime Minister's agenda of making India the skill capital of the world.
3. Being a regulator of India's skill ecosystem, NCVET will have a positive impact on each individual who is a part of vocational education and training in the country.
4. The idea of skill-based education will be seen in a more inspirational manner which would further encourage students to apply for skill-based educational courses.
5. This is also expected to facilitate the ease of doing business by providing a steady supply of skilled workforce to the industry and services.

IBSAMAR-VI KICKS OFF

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. 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.

What

1. 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.
2. The Commanding Officers of the IN Ships called on the Chief of Fleet Staff of the SA Navy as well as a few other senior officers and the Magistrate and the Commissioner of Simon's Town. A reception was hosted onboard the Brazilian naval ship BNS Barraso in the evening.
3. 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. Apart from professional activities, sports and social engagements are also planned.

32ND CORPAT

Indian Naval Ship Kulish, a Kora class missile corvette, commanded by Commander Deepak Bali and an Indian Dornier (naval maritime time patrol aircraft) from Andaman and Nicobar command entered Belawan harbour, Indonesia for the opening ceremony of the 32nd edition of India – Indonesia coordinated patrol (IND-INDO CORPAT), to be held from 11 – 27 Oct 2018.

What

1. The ships and aircraft from both the countries would undertake patrolling on the respective sides of 236 nautical miles long International Maritime Boundary Line.
2. The patrolling would be conducted in three phases from 14 – 24 Oct 2018 followed by a closing ceremony at Port Blair, Andaman and Nicobar Island, scheduled from 25 – 26 Oct 2018.
3. **The visit seeks to emphasize India's peaceful presence and solidarity with friendly** countries towards ensuring good order in the maritime domain, consolidate interoperability and strengthen existing bonds of friendship between the two countries.
4. During their stay in Belawan, various activities are planned   such as official calls, formal reception onboard, ship open to visitors and professional interactions.
5. In the recent past Indian Naval assets have been increasingly deployed to address maritime concerns of the Indian Ocean Region (IOR).
6. **In addition, as part of the Hon'ble Prime Minister's vision of** SAGAR (Security and Growth for All in the Region), the Indian Navy has also been involved in assisting countries in the IOR with EEZ Surveillance, Search and Rescue, other capacity -building and capability-enhancement activities.
7. **The current deployment will contribute towards the Indian Navy's effort to forge** strong bonds of friendship across the seas and consolidate inter-operability.

FIRST-OF-ITS KIND INTERNSHIP PROGRAMME

NITI Aayog and IBM on 11 October 2018 announced a first-of-its-kind internship programme for students selected by Atal Innovation Mission (AIM). The internship will see 38 students receive a two-week paid internship, and 14 teachers from Atal Tinkering Labs (ATL) across the length and breadth of the country including from states such as Assam, Himachal Pradesh, Andaman & Nicobar and others, to come together and ideate, collaborate and innovate.

What

1. These students will be equipped with the skills for new collar careers in areas like artificial   intelligence, Internet-of-Things, cybersecurity, cloud computing and blockchain. Apart from being trained in emerging technologies, students will also be coached in critical workplace skills.
2. As part of the program, select teachers from ATLs will also be trained by IBM volunteers and mentors to become innovation coaches.
3. The two-week program is designed so students can experience the corporate environment and gain exposure to new technologies. To scale the programme, top-performing students are selected for industry exposure to strengthen their technical skills and prepare them for future jobs.
4. The Atal Innovation Mission conducted the Atal Tinkering Marathon in 2017 where Top 30 innovations across five focus areas - agritech, healthcare, smart mobility, clean energy, waste management, water management - were identified as the top innovations.
5. Students from the Top 30 teams have since been offered various opportunities like the Student Innovator Programme, the ATL Bootcamp with industry partners, opportunity to participate in global innovation contests like World Robot Olympiad (WRO), and an internship opportunity with IBM India at their Bengaluru campus.
6. The IBM internship program is focussed on enhancing the skills of the students via various innovative activities like design thinking approach, developing prototypes and solution for community issues and to solve them.

'OPERATION SAMUDRA MAITRI' LAUNCHED

India has launched a massive operation to provide assistance to the earthquake and tsunami victims in Indonesia, dispatching two aircrafts and three naval ships carrying relief material to the country, the Ministry of External Affairs (MEA) said on 3

October 2018. 'Operation Samudra Maitri' for humanitarian assistance was launched after a telephonic conversation between Prime Minister Narendra Modi and Indonesian President Joko Widodo on October 1, and following Indonesia**'s acceptance of international aid**, the MEA said in a statement.

What

1. Two Indian Air Force aircrafts — C-130J and C-17 — departed on 3 October 2018 morning with medical personnel and relief material.
2. The C-130J aircraft is carrying a medical team along with tents and equipments to set up a field hospital.
3. The C-17 aircraft is carrying medicines, generators, tents and water to provide immediate assistance.
4. Three Indian Naval Ships — INS Tir, INS Sujatha and INS Shardul — have also been mobilised to carry out humanitarian assistance and disaster relief (HADR).
5. These ships are likely to reach the Central Sulawesi province of Indonesia on **October 6. The death toll in Indonesia's twin quake**-tsunami disaster, which decimated parts of the central Indonesian island of Sulawesi, has already climbed to nearly 1,400.
6. The magnitude 7.5 earthquake struck at dusk and generated a tsunami said to have been as high as 6 metres (nearly 20 feet) in places.

NIGHT TRIAL OF PRITHVI-II

India's Strategic Force Command on 6 October 2018 successfully test-**fired it's** indigenously developed nuclear capable Prithvi-II missile during night time as part of a user trial by the Army from a test range in Odisha. The surface-to-surface missile, which has a strike range of 350 km, was launched from a mobile launcher from launch complex-3 of the Integrated Test Range (ITR) at Chandipur near Balasore around 8.30 pm. Prithvi-II was previously successfully test-fired during night time on February 21 this year from the ITR at Chandipur.

What

1. The missile is capable of carrying 500 to 1,000 kilogramme of warheads and is thrusted by liquid propulsion twin engines.
2. The state-of-the-art missile uses advanced inertial guidance system with maneuvering trajectory to hit its target.
3. The missile was randomly chosen from the production stock and the entire launch activities were carried out by the specially-formed Strategic Force Command of the Army and monitored by the scientists of Defence Research and Development Organisation (DRDO) as part of training exercise.
4. The missile trajectory was tracked by radars, electro-optical tracking systems and telemetry stations by the DRDO along the coast of Odisha.
5. The downrange teams on board the ship deployed near the designated impact point in the Bay of Bengal monitored the terminal events and splashdown.
6. On November 21, 2016, two Prithvi-II missiles were successfully test fired in salvo mode in quick succession from the same base.
7. Inducted into the Armed forces of the country in 2003, the nine-metre-tall, single-stage liquid-fuelled Prithvi-II is the first missile to have been developed by the DRDO under the Integrated Guided Missile Development Programme.

JIMEX 18 COMMENCE

Japanese Maritime Self Defence Force (JMSDF) Ships Kaga, an Izumo Class Helicopter Destroyer and Inazuma – a Guided Missile Destroyer arrived at Visakhapatnam on 07 October 2018. The JMSDF Ships under the command of Rear Admiral Tatsuya Fukada, Commander, Escort Flotilla-4 (CCF-4), 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.

What

1. The ships participating are INS Satpura, multipurpose stealth frigate, INS Kadmatt, Anti-Submarine Warfare Corvette, Missile Corvette and INS Shakti, the Fleet Tanker.
2. In addition, one submarine, P8I Long Range Maritime Patrol Aircraft and a number of integral helicopters would also be participating in the exercise.
3. The Indian ships participating would be under the command of Rear Admiral Dinesh K Tripathi, Flag Officer Commanding, Eastern Fleet.
4. JIMEX 18, spread over eight days, will comprise a Harbour Phase and a Sea Phase of four days each.
5. The Harbour Phase of the exercise scheduled from 07 to 10 October 18 will **include professional and social interactions between ship's crews, sports fixtures** and operational planning for the Sea Phase.
6. The Sea Phase would include Anti-Submarine Warfare Exercises, VBSS (Visit, Board, Search and Seizure) Drills, Gun Firings, Cross Deck Helo Operations and coordinated operations in Anti-Submarine/ Anti-Air threat scenarios.
7. 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'.**
8. 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.
9. 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.

INDIA BECOMES SECOND LARGEST SOLAR MARKET

India installed 4.9 GW of solar power, consolidating its position as the second largest solar market in the world, during the first half of calendar year 2018. The country was ranked second, following China during the January-June period, according to a report by Mercom Communications India. India was the fifth-largest solar market **in the world for total installations, the study, 'India Solar Market Leaderboard 1H 2018', said.**

What

1. New leaders are emerging in the highly-competitive Indian solar market, while some of the more established companies maintained their leadership position in the first half of 2018.
2. The top 10 large-scale developers accounted for 55 per cent market share during the reporting period, with others making up the remaining 45 per cent of the market share.
3. There were about 300 utility-scale project developers in the country with projects of at least 5 MW or more in operation.

Solar projects

1. Adani remained the largest project developer in terms of total cumulative installations and top installer in terms of capacity installed through the end of the first half.
2. There are around 70 large-scale project developers with a pipeline of 5 MW or more in India. ReNew Power had the largest project pipeline.
3. During the period, about 16 per cent of solar installations were in the rooftop solar sector, standing at 805 MW.

4. Rooftop installations rose by 55 per cent Y-o-Y with cumulative installations totalling nearly 2,410 MW as of June 2018.

5. The top 10 installers made up only 27 per cent of all rooftop projects installed in India, leaving all other rooftop developers with 73 per cent of the share, a reflection of the fragmented nature of the market.

6. Sterling and Wilson was the top engineering, procurement and construction company cumulatively and during the first half.

7. Tata Power Solar had the largest cumulative rooftop portfolio, and CleanMax emerged as the top rooftop installer in 1H 2018.

8. During the first half, ABB remained at the top of the list in terms of solar inverter shipments to the country, while the top five module suppliers accounted for over 37 per cent of the market.

9. As of June end, Trina Solar was the leading module supplier to India in terms of cumulative shipments while ZnShine was the top supplier.

FIRST GLOBAL GUIDELINES ON SANITATION AND HEALTH

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

What

1. **WHO's Sanitation and Health Guidelines** are aimed at securing health and wellbeing for everyone, everywhere by considering sanitation as fundamental foundation of human health and development.

2. These guidelines provide comprehensive framework for health-protecting sanitation, covering policy and governance measures, implementation of sanitation technologies, systems and behavioural interventions, risk-based management, and monitoring approaches.

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

4. By adopting these new guidelines, countries can significantly reduce diarrhoeal deaths due to unsafe water, sanitation and hygiene.

5. For every US $1 invested in sanitation, it is estimated nearly six-fold return as measured by lower health costs, increased productivity and fewer premature deaths.

> **World Health Organization (WHO)**
> 1. WHO is specialized agency of United Nations that acts as coordinating authority on international public health.
> 2. It was established on 7 April 1948, it succeeded the Health Organization, which was an agency of the League of Nations.
> 3. It is a member of UN Development Group (UNDP). It is headquartered at Geneva.

AB MERGED WITH SS SCHEME IN WB

Prime Minister Narendra Modi's flagship health insurance scheme **'Ayushman Bharat (AB)'** has been merged with the Mamata Banerjee government's a 'Swasthya Sathi (SS)' scheme in West Bengal (WB), people familiar with the development said. There will be only one medical insurance scheme in the state under the name of Swasthya Sathi, they said.

What

1. Following an internal amendment on the finance part, the cost for common beneficiaries of Ayushman Bharat and Swasthya Sathi will be shared by the Centre and state in a ratio of 60:40 under the merged scheme.

2. Swasthya Sathi scheme, which Banerjee implemented in February 2016, offers health protection to informal contractual workers in government departments and people belonging to the deprivation index. It provides health

cover to extended family members of the beneficiary, including their parents and spouse.

3. Following the merger of the two schemes, insurance cover provided under Swasthya Sathi has been increased to Rs 5 lakh, which is the cover under Ayushman Bharat, from Rs 1.5 lakh earlier, through a notification last week.

4. West Bengal had 47 lakh beneficiaries under the Swasthya Sathi scheme and around 1.50 crore families from the state had applied for Ayushman Bharat.

5. After the merger, Swasthya Sathi scheme now covers around 6 crore individuals.

6. All these beneficiaries will be covered under the Swasthya Sathi scheme and the cost for the common beneficiaries, who have enrolled for both state and central schemes, will be shared by the Centre and state.

INTERNATIONAL

INDIA, RUSSIA SIGN S-400 MISSILE DEAL

India on 5 October 2018 signed a deal for the purchase of the S-400 Triumf air defence system from Russia. The deal is worth around $5 billion. The deal was signed in New Delhi after talks between Russian President Vladimir Putin and Prime Minister Narendra Modi. India and Russia have been discussing the purchase since 2015. The missile system integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and a control centre. It can provide a multilayered defence given that is capable of firing three types of missiles.

What

1. The S-400 can engage many types of aerial targets such as aircraft, ballistic and cruise missiles, unmanned aerial vehicles — within the range of 400 kilometres and up to an altitude of up to 30 kilometres. It is expected to be deployed along the nearly 4,000-km-long India-China border.

2. The deal has singed after ignoring the threat of US sanctions. US officials had warned that the government could impose sanctions under the Countering America's Adversaries through Sanctions Act or CAATSA legislation, which deals primarily with countries having "significant transactions" with Russia, North Korea or Iran.

3. S-**400 is known as Russia's most advanced long**-range surface-to-air missile defence system.

4. China was the first foreign buyer to seal a government-to-government deal with Russia in 2014 to procure the lethal missile system. Moscow has already started delivery of an undisclosed number of the S-400 missile systems to Beijing.

Eight pacts signed

1. Prime Minister Narendra Modi and Russian President Vladimir Putin also signed eight pacts at the end of the annual summit.

2. The pacts including on cooperation on **India's ambitious human space mission** project Gaganyaan, were signed.

3. Talks with President Putin have given new direction to the bilateral strategic partnership, Modi said in a press statement after the 19th India-Russia annual summit.

4. Pacts were also inked in the fields of nuclear energy, railways and space.

5. A crucial MoU was signed between Indian Space Research Organization (ISRO) **and the Federal Space Agency of Russia 'ROSCOSMOS'** on joint activities in the field of human spaceflight programme Gaganyaan.

6. The two countries have agreed to step up cooperation in combating the menace of terrorism and drug trafficking.

MALAYSIA TO ABOLISH THE DEATH PENALTY FOR ALL CRIMES

Malaysia's Cabinet chaired by Prime Minister Mahathir Mohamad has agreed to abolish death penalty for all crimes and halt pending executions. This decision was taken

in pursuance of strong domestic opposition to colonial practice for being barbarous and unimaginably cruel which has put **terrible stain on the country's human** rights record. It is also in line with move away from capital punishment in the rest of the world.

What

1. Currently capital punishment in Malaysia is mandatory for murder, kidnapping, possession of firearms, treason and drug trafficking, among other crimes.
2. The death penalty in Malaysia is exclusively carried out by hanging and has been legacy of British colonial rule. More than 1200 people are on death row in Malaysia.

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

CODESHARE PACT SIGN WITH AIR SEYCHELLES

Air India and Air Seychelles have signed a codeshare agreement, which will offer enhanced connectivity to travellers on their respective networks. Air India will place **its AI code on Air Seychelles' regional services** between Mumbai and Seychelles and Johannesburg. Air Seychelles will place its **"HM" code on AI domestic services to eight** cities including Ahmedabad, Bangalore, Kolkata, Kochi, Delhi, Hyderabad, Chennai, Trivandrum and also on its international services between Mumbai and Bangkok.

What

1. As per government statistics, the Indian air market in 2017-18 carried 62 million international passengers and is poised to grow at 12.4%.
2. The Inbound arrivals into India for 2017 stood at 26.89 million passengers registering a growth of 8.8%. Not only are Indians travelling to international destinations more; the average spend on travel too is on the rise"
3. This partnership with Air Seychelles will enable our customers have a direct access to this beautiful archipelago in the Indian Ocean. It ensure a seamless travel experience

Flashback
1. A codeshare agreement, also known as codeshare, is an aviation business arrangement in which two or more airlines share the same flight.
2. Sharing, in this sense, means that each airline publishes and markets the flight under its own airline designator and flight number as part of its published timetable or schedule.
3. A seat can be purchased on each airline's designator and flight number, but is operated by only one of these cooperating airlines, commonly called the "operating carrier" or more precisely (and in line with definitions in IATA Standard Schedules Information Manual): "administrating carrier".
4. The term "code" refers to the identifier used in flight schedule, generally the two-character IATA airline designator code and flight number.

from all parts of India to the the direct flight between Mumbai and Seychelles.
4. Apart from providing services to the beautiful islands of the Seychelles, guests travelling from India can also enjoy seamless connection in less than three hours over the Seychelles to Johannesburg.
5. From December 10, 2018, Air Seychelles will provide an additional 544 seats per week between Seychelles and Johannesburg to accommodate the growing demand over the upcoming winter and Easter period thus, offering holidaymakers and

business travellers from India more choice when planning their travel during the peak seasons. The codeshare agreement was signed in Delhi.

FIRST INDIA-ISRAEL INNOVATION CENTRE OPENS

The country's first India-Israel Innovation Centre (IIIC), an entrepreneurial technology hub, was launched in Bengaluru on 10 October 2018. The IIIC is a significant step towards facilitating penetration of Israeli companies in India which aims to forge local partnerships and joint ventures between companies from the two countries. It will provide an ecosystem to support entrepreneurship, partnership with vendors, mentoring and non-formal community development that will assist the growth of the companies in different verticals and covers business, technology, investors and customers.

What

1. Start-ups that are part of IIIC will be given mentorship and guidance and **opportunities to participate at all IIIC's global eve**nts and experience networking avenues with potential customers.
2. The launch of IIIC, at the IoT India Congress in Bengaluru, the first ever in India that aims to meet the long pending need to connect the start-up ecosystems of Israel and India to improve quality, and thereby, the survival rate of the start-ups from our country.
3. The launch of the IIIC was an exciting part of the third edition of the IoT India Congress that concluded.

INDIA WINS SEAT TO UN HUMAN RIGHTS COUNCIL

India was elected to the United Nations' top human rights body on 12 October 2018 for a period of three years beginning January 1, 2019, getting 188 votes in the Asia-Pacific category. The 193-member UN General Assembly held elections for new members to the UN Human Rights Council.

What

1. The 18 new members were elected by absolute majority through a secret ballot. Countries needed a minimum of 97 votes to get elected to the Council.
2. India was vying for a seat in the Asia Pacific category. Along with India, Bahrain, Bangladesh, Fiji and Philippines had also staked a claim in the same regional group.
3. Given that there were five nations vying for five seats in the Asia Pacific category, India's election to the Council was all but certain.

1ST JOINT PROJECT OF INDIA AND CHINA

In a move that could upset Pakistan, India and China have launched their first joint programme for Afghanistan to train its diplomats. An understanding to launch a joint programme in Afghanistan was reached during an informal summit between Prime Minister Narendra Modi and **Chinese President Xi Jinping held in April at China's Wuhan** city.

What

1. As per the understanding, officials of both sides had been asked to identify the project. **Training the Afghanistan's diplomats has been agreed as the first** joint project agreed by both the countries.
2. **Indian Ambassador to Afghanistan (Vinay Kumar) "hosted 10 Afghan** Diplomats who will be travelling to India for the 1st India-China joint training programme for Afghan diplomats under the aegis of the Trilateral Cooperation between India, China and Afghanistan.
3. This will be a first such project in the war-torn country where China while trying to expand its influence has tacitly backed Pakistan, which has been accused by Afghanistan and the US of backing the Taliban and its most violent attacks in the country destabilising any attempts to restore peace.

Page 16

Flashback
1. The first Informal Summit **between Prime Minister Narendra Modi and China's** President Xi Jinping was held in April 2018 at Wuhan in China.
2. The purpose of meeting was to exchange views on overarching issues of bilateral and global importance and to elaborate their respective visions and priorities for national development in context of current and future international situation.
3. They agreed proper management of bilateral relationship for conducive development and prosperity of region, and create conditions for the Asian Century.
4. They decided to strengthen Closer Development Partnership in mutually beneficial and sustainable manner.
5. They also agreed to issue strategic guidance to their forces and strengthen existing mechanisms to maintain peace and tranquillity along the border areas.

INDIA, UZBEKISTAN SIGN 17 AGREEMENTS

India and Uzbekistan inked 17 agreements on 1 October 2018, including for visa free travel for diplomatic passport holders and cooperation in the fields of tourism, national security, training of diplomats and against trafficking. **Prime Minister Narendra Modi and Uzbekistan's President Shavkat Mirziyoyev held delegation** level talks and agreed to collaborate with each other across sectors.

What
1. The agreements signed between the two countries included collaboration on military education, agriculture and allied sectors, cooperation on science and technology and in the field of health and medical science. An MoU was also signed on cooperation in the pharma sector.
2. The two countries have also agreed to cooperate in combating trafficking and illicit narcotic drugs.
3. The two countries will also cooperate in exploring the outer space for peaceful purposes.
4. Business relationships between the two countries will be promoted through the India-Uzbekistan Business Council, for which an agreement was signed.

CANADA, US REACH DEAL TO SAVE NAFTA

The United States and Canada reached a deal on 30 September 2018 to salvage NAFTA as a trilateral pact with Mexico, beating a midnight deadline with agreements to substantially boost American access to Canada's dairy market and protect Canada from possible US auto tariffs. President Donald Trump had threatened to splinter the nearly 25-year-old North American Free Trade Agreement into a bilateral pact with Mexico and tax Canadian vehicle exports to the United States if Ottawa had failed to sign on before a midnight on 30 September 2018 deadline (0400 GMT 1 October 2018). But Trump has **approved the "framework" deal with Canada**, a source familiar with the decision said, just days after he sharply criticized Canadian Prime Minister Justin Trudeau and his NAFTA negotiating team.

What
1. Trump blames NAFTA for the loss of American manufacturing jobs and wants major changes to the pact, which underpins $1.2 trillion in annual trade. Markets fear its demise would cause major economic disruption.
2. Negotiators from both sides spent two days talking by phone as they tried to settle a range of difficult issues such as access to Canada's closed dairy market and US tariffs.
3. The deal will preserve a trade dispute settlement mechanism that Canada fought hard to maintain to protect its lumber industry and other sectors from US anti-dumping tariffs, Canadian sources said. But this came at a cost.

4. Canada had agreed to provide US dairy farmers access to about 3.5 per cent of its approximately $16 billion annual domestic dairy market, the sources said, adding that the Canadian government is prepared to offer compensation to dairy farmers hurt by the deal.

5. The influential Dairy Farmers of Canada lobby group, which strongly opposes the idea, said in a statement that it insisted "any final NAFTA deal should have no further negative impact on the dairy sector."

6. Canada also agreed to a quota of 2.6 million vehicles exported to the United States in the event that Trump imposes 25 per cent global autos tariffs on national security grounds, Canadian and US auto industry sources said.

7. The quota would allow for significant growth in tariff-free automotive exports from Canada above current production levels of about 2 million units, safeguarding Canadian plants. But the deal failed to resolve US tariffs on Canada's steel and aluminum exports.

8. US business groups opposed turning NAFTA into a bilateral deal because the three nations' economies have become closely intertwined since the original pact came into force in 1994. Officials have blown through several deadlines since the talks started in August 2017.

ECONOMY

COUNTRY'S FIRST HYBRID INDICES

NSE Indices on 1 October 2018 said it has launched two dynamic asset allocation indices, which are designed to tactically combine equity and debt. The two indices are -- Nifty 50 & short duration debt -Dynamic P/E index and Nifty 50 & short duration debt Dynamic P/B index, NSE Indices, an NSE group company, said in a statement.

What

1. Within these indices, the asset allocation between debt and equity is dynamically managed based on a model that compares the current price-earnings ratio (P/E) or price-book ratio (P/B) with historical P/E or P/B ratio of Nifty 50 in the previous seven years.

2. The two newly launched Nifty dynamic asset allocation indices employ a dynamic, rule-based asset allocation mechanism, designed to tactically combine equity and debt.

3. The unique asset allocation model alters the index's exposure to equity based on whether equity market presently appears to be relatively expensive or cheaper, thereby optimising the risk-return ratio for investors.

4. These indices also appropriately fill the gap due to the absence of a relevant benchmark for performance comparison of the popular dynamic asset allocation category offered by mutual funds in the country.

INDIA IN GEAR LIST 2018

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

What

1. It is an Economist Intelligence Unit (EIU) global Index and benchmarking study commissioned by financial services corporation Visa.

2. It ranks governments by quantifying their e-payment capabilities based on various indicators.

3. It evaluates extent to which major countries around world have adopted e-payment systems, based on digital platform.

4. 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.

India's performance GEAR 2018

1. India leads B2G category, along with other countries like Australia, Singapore and South Korea.
2. It also leads in G2B category as well, along with four other countries.
3. It was ranked third C2G category, along with four other countries, while France and UAE has topped the list in this category.
4. In G2C category, India still lags behind at 25th place. It was also ranked very low at 58th position in infrastructure and socio-economic categories.
5. In the socio-economic category, India was ranked 60th out of 73 countries. In policy environment, it was ranked low at 40th.

GST CONSTITUTIONALLY VALID: SC

The Supreme Court 3 October 2018 upheld the constitutional validity of Goods and Services Tax (Compensation to States) Act saying it was not beyond the legislative competence of the Parliament. The top court said the Compensation to States Act, enacted by the Parliament in 2017, is not a "colourable legislation". A bench of Justices A K Sikri and Ashok Bhushan said the Act does not violate the Constitution (One hundred and first amendment) Act, 2016 nor is against the objective of Constitution (One Hundred and First Amendment) Act, 2016. It held that the levy of 'Compensation to States' Cess is an increment to goods and services tax which is permissible under the law.

What

1. The bench while dealing with constitutional validity of the (Compensation to States) Act said that the expression 'cess' means a tax levied for some special purpose, which may be levied as an increment to an existing tax.
2. The Scheme of Compensation to States Act, 2017 as noticed indicate that the cess is with respect to goods and services tax. There are more than one reason to uphold the legislative competence of Parliament to enact the Compensation to States Act, 2017.
3. The bench said that Article 248 read with Articles 246 and 246A clearly indicate that residuary power of legislation is with the Parliament.
4. It said that in the present case, no contention has been raised that the subject matter of legislation was within the competence of State Legislature, and that the Parliament had no competence to legislate.
5. The bench said that after Constitution (One Hundred and First Amendment) Act, 2016, as per Article 270, Parliament can levy cess for a specific purpose under a law made by it.
6. It said that when Constitution provision empowers the Parliament to provide for Compensation to the States for loss of revenue by law, the expression "law" used therein is of wide import which includes levy of any cess for the above purpose.
7. The Compensation to States Act, 2017 has been enacted under the express Constitution (One Hundred and First Amendment) Act, 2016.
8. The apex court verdict came on an appeal filed by Centre against the Delhi High Court order passed in a case of Mohit Mineral Pvt Ltd which has challenged the validity of the Goods and Services Tax (Compensation to States) Act, 2017 and the Goods and Services Tax Compensation Cess Rules, 2017.
9. The Delhi High Court in its interim order provided that additional levy on the stocks of coal on which petitioner Mohit Minerals Ltd had already paid Clean Energy Cess in terms of Finance Act, 2010, shall not be required to make any further payment.

10. It had said however that on stocks of coal on which no Clean Energy Cess under the Finance Act, 2010 was paid any payment in terms of the Act would be subject to the result of the petition before it.

SGB SCHEME FY19 LAUNCHED

As part of efforts to cut down gold imports and lower the current account deficit, the government on 9 October 2018 launched the Sovereign Gold Bond (SGB) Scheme FY19. The scheme retains the incentives offered in the earlier tranche—of 2.5% interest rate and capital gains tax exemption on redemption.

What

1. Sovereign gold bonds will be sold every month from October 2018 to February 2019 through banks, Stock Holding Corporation of India Ltd, designated post offices, and recognized stock exchanges, a finance ministry statement said.

2. The tenor of the bond will be for a period of eight years with exit option in the fifth, sixth and seventh year.

3. Payment for the bonds can be made through demand draft, cheque and electronic banking, while cash payment is allowed up to a maximum of 20,000.

4. Gold and crude oil have played a role in India's widening current account deficit. The government, however, chose not to increase import duty on gold when it raised duty on non-essential imports last month to narrow the current account deficit, fearing a surge in gold smuggling. **India's gold im**ports were pegged a $33.7 billion in FY18.

5. The current account deficit had widened to a four-quarter-high at 2.4% of gross domestic product (GDP) in the April-June period on the back of rising crude oil prices, from 1.9% of GDP in the January-March quarter of 2017-18.

SCIENCE AND TECHNOLOGY

EARLY WARNING SYSTEM LAUNCHED

Air Quality Early Warning System for Delhi was launched in Delhi on 15 October 2018 by the Union Minister for Earth Sciences and Environment, Dr. Harsh Vardhan .The System is designed to predict extreme air pollution events and give alerts to take necessary steps as per Graded Response Action Plan (GRAP) of the Government of India. The air pollution system has been developed jointly by the scientists at Indian Institute of Tropical Meteorology (IITM), Pune, India Meteorological Department and National Centre for Medium Range Weather Forecasting (NCMRWF).

What

1. The early warning system will help in proactively forewarning, 3-4 days in advance, any large scale air pollution events which may occur over the Delhi region.

2. Outlining a series of efforts that the central government has taken the Union Minister said that the Central Pollution Control Board (CPCB) has constituted a 41 member team which will continuously monitor the air pollution levels in Delhi and NCR region and will report to the board.

3. Badarpur thermal power plant is being closed today, western peripheral expressway is likely to become operational in the first week of November, the Central govt. has released nearly 600 crores to concerned states for in-situ management of crop-residue and a slew of mitigation measures have been taken by the government.

4. Ministry of Earth Sciences will be making further attempts to assimilate more data of other pollutants and also to improve accuracy of predictions with the technical support from the NCAR, USA and Finnish Meteorological Institute.

5. The prediction systems were developed by scientists of MoES institutions with the technical support from the National Centre for Atmospheric Research (NCAR), USA and the Finnish Meteorological Institute (FMI).

6. The prediction part of the system consists of two modelling framework, one is based on NCAR atmospheric chemistry transport model and the second one is based on Finnish Meteorological Institute model.

7. The modelling framework typically consists of a high resolution weather prediction model with an atmospheric chemistry transport model. Both the models have data assimilation facility, which can assimilate data from satellites on dust aerosols, particulate matter from stubble burning and other air pollutants like SO2 and NO2.

8. The models will take into account the background aerosols and pollutants, long range transport of dust from dust storms and particulate matter from stubble burning. The predictions are now available up to 72 hours lead time.

> The warning system consists of
> 1. Real time observations of air quality over Delhi region and details about natural aerosols like dust (from dust storms) and particulate matter using different satellite data sets
> 2. Predictions of air pollutants from two different air quality prediction systems based on state-of-the-art atmospheric chemistry transport models
> 3. Warning Messages and Alerts and Bulletins.

9. Union Minister also released a mega emission inventory of Delhi which was made by scientists at IITM Pune who carried out a mega emission inventory campaign involving around 140students mapping all possible local sources of air pollution with around 37,500 hours of work.

10. The final product with 400 m x 400m high-resolution emission inventory of Delhi and fringe area of all eight important air pollutants (like PM2.5, PM10, NOx, CO, SO2, BC, OC and VOCs) was released.

11. Ground level activity data about emissions from as many as 23 different sources of pollution were also collected.

12. The emission inventory suggests that there is a substantial increase of emissions from transport and industrial sector, while the contributions from residences have shown a substantial decline.

GOVERNMENT RECONSTITUTES EPCA

Union Ministry of Environment, Forests and Climate Change (MoEFCC) has reconstituted Supreme Court-empowered Environment Pollution (Prevention and Control) Authority (EPCA). This comes after tenure of the last EPCA expired on October 3, 2018.

What

1. Former IAS officers Bhure Lal will continue to be Chairman of reconstituted EPCA.

2. EPCA is Supreme Court mandated body tasked with taking various measures to tackle air pollution in the National Capital Region.

3. It was notified in 1998 by Environment Ministry under Environment Protection Act, 1986.

4. Its mandate is to protect and improve quality of environment and prevent and control environmental pollution in National Capital Region.

5. It is also mandated to enforce Graded Response Action Plan (GRAP) in NCR as per the pollution levels.

6. In November 2017, EPCA had enforced several measures, including ban on brick kilns, closure of Badarpur thermal power plant, hot mix plants and stone crushers, and construction activities in NCR.

FIRST HYPERLOOP CAPSULE UNVEILED

Hyperloop Transportation Technologies Inc. unveiled its first full-scale passenger capsule, offering the world a peek at the future of travel. The capsule, 105 feet (32 meters) long and weighing 5 tons, was shown in Spain and will be moved to Toulouse, France, for additional assembly before it's used on one of the first commercial tracks, the California-based startup, known as HyperloopTT. Named the Quintero One, the product is made almost entirely out of composite material.

What

1. Hyperloop is a technology that gained popularity after billionaire Elon Musk touted it in 2013, prompting several companies to join the race to build a high-speed transportation system.
2. It envisages moving passengers in capsules at speeds of more than 750 miles (1,200 kilometers) per hour through low-pressure tubes, in order to reduce friction.
3. The technology will be able to propel trains faster than existing methods such as the Maglev, which uses a levitation technology to lift the train cars above a track to eliminate surface drag.
4. In July, HyperloopTT set up a joint venture to build a test system in a mountainous southwest province in China.
5. The Los Angeles area is emerging as a hyperloop center, home to competitors Arrivo, Virgin Hyperloop One, and HyperloopTT. **Musk's Boring Co. also has its** base there.

FIRST EVIDENCE OF MOON OUTSIDE SOLAR SYSTEM

Using the Hubble Space Telescope and the Kepler Space Telescope, astronomers have found the first compelling evidence for a Neptune-sized moon orbiting a giant gas planet 8,000 light-years away. The detection of the candidate exomoon — moons orbiting planets in other star systems — is unusual because of its large size, comparable to the diameter of Neptune. Such gargantuan moons do not exist in our own solar system, where nearly 200 natural satellites have been catalogued.

What

1. Astronomers first found exoplanets — planets outside our own Solar System — 30 years ago. However, the search for moons orbiting these exoplanets was not successful — until today.
2. This would be the first case of detecting a moon outside our solar system, said David Kipping, Assistant Professor at the Columbia University in New York.
3. If confirmed by follow-up observations, the finding could provide vital clues about the development of planetary systems and may cause experts to revisit theories of how moons form around planets.
4. To look for exomoons, the team analysed data from 284 Kepler-discovered planets that were in comparatively wide orbits, with periods greater than 30 days, around their host star.
5. The observations measured the momentary dimming of starlight as a planet passed in front of its star, called a transit. The researchers found one instance, in Kepler 1625b, that had intriguing anomalies.
6. The moon is estimated to be only 1.5 per cent the mass of its companion planet, which itself estimated to be several times the mass of Jupiter.
7. This value is close to the mass-ratio between the Earth and its moon. Like its moon, Kepler-1625b is also bigger than its counterparts in the Solar System.
8. The exoplanet is a gas giant, several times more massive than Jupiter. It orbits its parent star at a distance similar to the distance between the Sun and Earth, which puts it — and its candidate moon — at the inner edge of the habitable zone of the star system.
9. The host planet and its moon lie within the **solar mass star's (Kepler 1625)** habitable zone, where moderate temperatures allow for the existence of liquid water on any solid planetary surface.

PARKER COMPLETES FIRST VENUS FLYBY

NASA's historic mission to solve the mysteries of the Sun has successfully completed its flyby of Venus, the US space agency said. On October 3, Parker Solar Probe successfully completed its flyby of Venus at a distance of about 1,500 miles during the first Venus gravity assist of the mission. These gravity assists will help the spacecraft tighten its orbit closer and closer to the Sun over the course of the mission.

What

1. Launched on August 12, **Parker Solar Probe, NASA's historic small car**-sized probe will journey steadily closer to the Sun, until it makes its closest approach at 3.8 million miles.
2. Throughout its mission, the probe will make six more Venus gravity assist and 24 total passes by the Sun. **This manoeuvre will change Parker Solar Probe's** trajectory to take the spacecraft closer to the Sun.
3. The probe expected to surpass a heliocentric speed of 153,454 miles per hour. This is the record for fastest spacecraft measured relative to the Sun, set by Helios 2 in 1976.
4. These speed and distance estimates could change after Parker Solar Probe performs its Venus gravity assist on October 3.
5. It is also expected to come within 27 million miles of the Sun. This is the record currently held by Helios 2, set in 1976.
6. The probe is named after Eugene Parker, a solar physicist, who in 1958 first predicted the existence of the solar wind, a stream of charged particles and magnetic fields that flow continuously from the Sun.

SPACEX SUCCESSFULLY LANDS ROCKET

Elon Musk's rocket company launched a commercial satellite for Argentina on 7 October 2018 evening, **marking SpaceX's 17th mission** of 2018 in the type of steady success that so far has eluded his electric-car maker Tesla Inc. The Falcon 9 rocket lifted **off from Vandenberg Air Force Base on California's central coast** about 7:21 p.m. local time. About 8 minutes after liftoff, the rocket's first stage returned and landed at Vandenberg in a first for a California-based SpaceX launch.

What

1. The second stage deployed SAOCOM 1A, an Argentine Earth-imaging satellite, roughly 12 minutes after the launch.
2. Elon Musk's SpaceX turned heads in California when it lit up the night sky after a rocket was launched propelling 10 satellites into orbit. Witnesses were both puzzled and alarmed by the illumination at around 5.30pm in Los Angeles.
3. **Having a rocket's first stage return safely to Earth is part Sp**ace Exploration **Technologies Corp.'s strategy** to reduce launch costs and win market share. SpaceX already has recovered rocket boosters several times, both on land in Florida and on drone ships at sea.
4. Musk is the chief executive officer, chairman and largest shareholder of both SpaceX and Tesla, two companies that are pushing frontiers of technology while surrounded by different degrees of drama.

FIRST AIRLINE TO OFFER WIFI

SpiceJet, the low-cost carrier will be the first in India to offer onboard wifi when it is cleared by the government- And it will not charge its flyers for it. Instead, it will charge the advertisers whose will brand their companies through pop-up ads. SpiceJet will join the club of a handful of carriers providing inflight wifi for free. Among global carriers, JetBlue, Qatar Airways, Turkish Airlines provide wifi as free. Normally, airlines charge a fee for providing the service.

What

1. In May this year, Telecom Commission - the highest policy-making body of the Department of Telecommunication had approved the proposal for allowing internet inside flights.

2. SpiceJet has tied up with Immarsat -- a mobile satellite service communication provider to equip its 737 Max aircraft with Satcom (Satellite Communication) antennas which will enable its aircraft to provide onboard internet service.

3. **The wifi will be available in SpiceJet's new Boeing 737 Max**, the first of which the airline inducted today.

4. The airline which has 200 such aircraft on order will induct nine more by the end of 2018. SpiceJet's decision to provide free WiFi will free the passengers from having to enter a credit card, password, and other information on what's normally a slow connection up there in the air.

5. **SpiceJet's strategy to offer free inflight wifi is in tandem with its st**rategy to blur the lines between low-cost and full-service airlines.

6. In the past few months, the airline has launched onboard entertainment, has revamped its loyalty programme. It will also retrofit its aircraft with USB charging points.

CHANDRA SHUTS DOWN IN ORBIT

Another NASA space telescope has shut down and halted science observations. Less than a week after the Hubble Space Telescope went offline, the Chandra X-ray Observatory did the same thing. NASA said that Chandra's automatically went into so-called safe mode, possibly because of a gyroscope problem. Hubble went into hibernation due to a gyroscope failure.

What

1. Both orbiting observatories are old and in well-extended missions: Hubble is 28, while Chandra is 19. Flight controllers are working to resume operations with both.

2. NASA said **it's coincidental both went "asleep" within a week of one another**. An astronomer who works on Chandra, Jonathan McDowell of the Harvard-Smithsonian Center for Astrophysics said that "Chandra decided that if Hubble could have a little vacation, it wanted one, too."

3. The Parker Solar Probe was launched in a mission to venture closer to the Sun than ever before.

4. Launched by space shuttles in the 1990s, Hubble and Chandra are part of **NASA's Great Observatories series**.

5. The others are the Compton Gamma Ray Observatory, which was also launched in the 1990s but eventually failed and was destroyed, and the Spitzer Space Telescope, launched in 2003 and still working. Each was intended to observe the cosmos in different wavelengths.

MISCELLANEOUS

NOBEL PRIZE FOR MEDICINE 2018 AWARDED

James Allison and Tasuku Honjo won the 2018 Nobel Prize for Physiology or Medicine for discoveries leading to breakthroughs in cancer therapy, the award-giving body said on 1 October 2018.

What

1. Allison and Honjo showed how different strategies for inhibiting the brakes on the immune system can be used in the treatment of cancer, the Nobel Assembly at Sweden's Karolinska Institute said on awarding the prize of 9 million Swedish crowns ($1 million).

2. Medicine is the first of the Nobel Prizes awarded each year.

3. The prizes for achievements in science, literature and peace were created in accordance with the will of dynamite inventor and businessman Alfred Nobel and have been awarded since 1901.

4. The literature prize will not be handed out this year after the awarding body was hit by a sexual misconduct scandal.

INTERNATIONAL DAY OF OLDER PERSONS

The International Day of Older Persons (IDOP) is observed every year on October 1 to raise awareness about issues affecting elderly and to appreciate contributions that older people make to society. It also seeks to raise awareness about issues affecting elderly, such as senescence and elder abuse.

What

1. **The theme for this year is** "Celebrating Older Human Rights Champions".
2. The theme reaffirms commitment to promoting full and equal enjoyment of all human rights and fundamental freedoms by older persons to celebrated 70th anniversary of Universal Declaration of Human Rights (UDHR).
3. The International Day of Older Persons was instituted by United Nations General Assembly (UNGA) by adopting resolution in December 1990 for raising awareness about issues affecting elderly, such as senescence and elder abuse.
4. It is also day to appreciate the contributions that older people make to society.
5. The observance of the day is also focus of ageing organizations and the United Nations Programme on Ageing

INTERNATIONAL DAY FOR DISASTER REDUCTION

International Day for Disaster Reduction (IDDR) is observed every year on October 13 to promote a global culture of risk-awareness and disaster reduction. The observance of day seeks to encourage citizens and governments to take part in building more disaster resilient communities and nations.

What

1. It also celebrates how people and communities around world are reducing their exposure to disasters and raising awareness about the importance of reining in risks that they face.
2. It also seeks to spread awareness about reining risks of disasters around world and also reduce exposure of people and communities to disasters.
3. The theme of 2018 International Day for Disaster Reduction was 'Reducing Disaster **Economic Losses'**.
4. It focuses on Target C of Sendai Framework, which **aims at 'reducing disaster** economic losses in relation **to global GDP by 2030'.**
5. UN General Assembly (UNGA) in 1989 had instituted International Day for Natural Disaster Reduction to promote a global culture of risk-awareness and disaster reduction. Earlier, this day was celebrated annually on the second Wednesday of October.
6. But in 2009, the UNGA formally designated 13 October and changed its name to International Day for Disaster Reduction by adopting Resolution.

Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-30
1. SFDRR is an international Treaty that was approved by UN member states in March 2015 at Third World Conference on Disaster Risk Reduction held in Sendai, Japan.
2. It is voluntary and non-binding treaty which recognizes that UN member State has primary role to reduce disaster risk.
3. It has framework for 15-year (2015 to 2030). It calls for sharing the responsibility with other stakeholders including local government, the private sector and other stakeholders.
4. It is successor of the Hyogo Framework for Action (2005–2015), which had been the most encompassing international accord on disaster risk reduction. 7 Global Targets of SFDRR are (refer image below)

NO WINNERS FOR INTERNATIONAL GANDHI PEACE PRIZE

As the country celebrates the 149th birth anniversary of Mahatma Gandhi on 2 October 2018, the annual 'International Gand**hi Peace Prize',** named after Father of the

Nation, has not been conferred for the last four years. An official of the Ministry of Culture, the nodal agency which receives proposals for conferring the award, said nominations were made during the last four years for the coveted award, but an approval has been awaited.

What

1. As a tribute to the ideals espoused by Gandhi, the Government of India launched the International Gandhi Peace Prize in 1995 on the occasion of his 125th birth anniversary.
2. Last time, the award was conferred in 2014 to the Indian Space Research Organisation (ISRO).
3. The annual award is given to individuals and institutions for their contribution towards social, economic and political transformation through non-violence and other Gandhian methods.
4. The award carries Rs 1 crore (10 million) in cash, convertible in any currency in the world, a plaque and a citation. The honour is open to all persons regardless of nationality, race, creed or gender.

> **Flashback**
> 1. The first recipient of the award was Julius K Nyerere, former President of Tanzania in 1995, and in the next year A T Ariyaratne, Founder President of Sarvodaya Sharamadana Movement, Sri Lanka was conferred with the award. In 1997, Gerhard Fischer of Germany received the award.
> 2. Rama Krishna Mission was selected for the award in 1998 and in 1999. Baba Amte has also received the prestigious award.
> 3. The award was jointly given in 2000 to Nelson Mandela and Grameen Bank of Bangladesh.
> 4. Archbishop Desmond Tutu won the award in 2005. After a gap of eight years in 2013, Chandi Prasad Bhatt, noted environmentalist associated with Chipko Movement, received the award.

5. A jury consisting of the Prime Minister of India, Leader of the Opposition in the Lok Sabha, Chief Justice of India and two other eminent persons decide the awardee each year.
6. The jury considers such proposals as have been received by the office of the Ministry of Culture up to April 30 of that year for which the award is to be given.

NOBEL PRIZE FOR PHYSICS 2018

The 2018 Nobel Prize for Physics was awarded to Arthur Ashkin as well as jointly to Gerard Mourou and Donna Strickland on 2 October 2018 for their groundbreaking **discoveries in 'laser physics'.** Strickland became the third female Nobel laureate in physics. Ultra-sharp laser beams make it possible to cut or drill holes in various materials extremely precisely – even in living matter. Millions of eye operations are performed every year with the sharpest of laser beams.

What

1. Nobel Prize considered a pride to regard people who have made great advances and discoveries in different fields. Nobel Prize in Physiology or Medicine, Physics, and Chemistry are conferred upon people who have excelled in the field of science.
2. The winners will be awarded with nine million kronor (£770,000) which has been decided by the Royal Swedish Academy of Sciences.
3. **Among this year's top contenders were scientists who worked on a technology** which showcased the development of solar cells based on a class of mineral called perovskites, devices whose performance is on par with that of silicon solar cells, and which are less costly and energy-intensive to produce.
4. Another discovery touted to be a winner are scientists who have worked on quantum entanglement – which means that even when two particles are separated by vast **expanses, they are still "in touch" with each other so by measuring the** properties of one, the properties of the other are also known.

5. **This phenomenon was famously described by Einstein as "spooky action at a** distance".

6. The last Nobel Prize for Physics awarded to a woman was nearly 55 years ago, which was in 1963 to Maria Goeppert Mayer who was accorded a share of the prize for her discoveries around how protons and neutrons are arranged in the nucleus of atoms.

7. Marie Curie remains the only other woman to have achieved the title back in 1903, and was one among the four winners that year.

8. **Last year's prize was awarded to the trio of Rainer Weiss, Barry Barish and Kip** Thorne for their work which led to the detection of gravitational waves: ripples in the fabric of spacetime, produced during violent events, such as the merger of black holes.

46TH CHIEF JUSTICE OF INDIA

Justice Ranjan Gogoi was on 3 October 2018 sworn in as the 46th Chief Justice of India. He succeeds Justice Dipak Misra. President Ram Nath Kovind administered the oath to 63-year-old Justice Gogoi at a brief ceremony in Rashtrapati Bhavan's Darbar Hall. Justice Gogoi will have a tenure of a little over 13 months and will retire on November 17, 2019.

What

1. The 63-year-old is the first Chief Justice from the North Eastern region of the country.

2. Born on November 18, 1954, he is the son of Keshab Chandra Gogoi, who was the chief minister of Assam in 1982.

3. He joined the bar in 1978 and practised mainly in the Gauhati High Court.

4. On February 28, 2001, he was appointed as Permanent Judge of Gauhati High Court.

5. As CJI, Justice Gogoi will be heading the bench of the top court that, for the first time in its history, will face a camera inside the courtroom for live-streaming of the proceedings.

6. Justice Gogoi has also been heading a bench in the apex court that is monitoring the preparation of the National Register of Citizens (NRC) in his home state Assam. The bench has been supervising the process of updating the NRC, prepared to identify residents of the state and weed out illegal migrants.

7. Justice Gogoi has also been overseeing the case relating to setting up of special courts across the country to exclusively hear and decide on criminal cases against sitting Members of Parliament and State Assemblies.

8. Justice Gogoi is also heading a bench looking over the progress in the appointment of Lokpal and Lokayuktas.

9. **He was also hearing Central Bureau of Investigation's appeal against the acquittal** of Rajesh and Nupur Talwar in the sensational Arushi Talwar murder case.

NOBEL PRIZE 2018 IN CHEMISTRY

The 2018 Nobel Prize in Chemistry was awarded on 3 October 2018 to Frances H. Arnold of the United States, and jointly to George P. Smith of the United States and Gregory P. Winter of Britain for their work on evolutionary science.

What

1. Dr. Arnold conducted the first directed evolution of enzymes, proteins that catalyze chemical reactions.

2. Dr. Smith developed a method, known as phage display, in which a virus that infects bacteria can be used to evolve new proteins.

3. Dr. Winter has used phage display to produce new pharmaceuticals.

4. These scientists had managed to harness the power of evolution in test tubes. Enzymes produced through directed evolution are used to manufacture everything from biofuels to medical treatments.

5. Phage display has produced antibodies that can neutralize toxins, counteract autoimmune diseases and even cure metastatic cancer.

6. **This year's Nobel Laureates in chemistry have been inspired by the power of** evolution and used the same principles — genetic change and selection — to **develop proteins that solve mankind's chemical problems.**

7. Dr. Arnold is a professor of chemical engineering, bioengineering and biochemistry at the California Institute of Technology in Pasadena.

8. Dr. Smith is a professor emeritus of biological sciences at the University of Missouri in Columbia and Dr. Winter is research leader emeritus at the M.R.C. Laboratory of Molecular Biology in Cambridge, England.

9. Half of the roughly $1 million prize would be awarded to Dr. Arnold and that the other half would be shared by her fellow laureates, Dr. Smith and Dr. Winter.

INDIA'S FIRST DEPORTATION

The Supreme Court on 4 October 2018 allowed the deportation of seven Rohingyas, who have illegally immigrated to Assam in India, to their country of origin Myanmar. The top court rejected lawyer Prashant Bhushan's petition for stalling the repatriation of seven Rohingya illegal immigrants through the border point at Moreh in Manipur. The order was passed by a bench comprising Chief Justice Ranjan Gogoi and Justices S K Kaul and K M Joseph.

What

1. The court said the seven Rohingyas were found to be illegal immigrants by the competent court and Myanmar had accepted them as its citizens. We are not inclined to interfere on the decision taken, the apex court ruled.

2. The government had earlier informed the court that these seven had entered India in 2012 and were convicted under the Foreigners Act and detained at Assam's Silchar detention centre.

3. Myanmar has accepted the Rohingyas as their citizens and agreed to take them back. That's the reason why we are facilitating their return to their own country.

4. When the bench headed by CJI Ranjan Gogoi dismissed Bhushan's plea, the lawyer said this court must realise its responsibility to protect right to life of Rohingyas.

5. In response, the chief justice said "We are fully aware of our responsibility towards right to life and no one needs to remind us about our responsibilities."

SSG AWARDS 2018

Prime Minister Shri Narendra Modi gave awards to top Ranked State, District and State with maximum citizen participation based on the National Swachh Survekshan Grameen 2018 commissioned by Ministry of Drinking Water and Sanitation. The awards by Prime Minister were given at the concluding session of Mahatma Gandhi International Sanitation Convention at Rahtrapati Bhawan Cultural Centre. Haryana was ranked as the best State while Satara District of Maharashtra was ranked as the best district as per the ranking undertaken by Swachh Survekshan Grameen 2018.

What

1. Uttar Pradesh was **rewarded for maximum citizens' participation**. Later, Ms Uma Bharti, Union Minister for Drinking Water and Sanitation gave awards at Pravasi Bhartiya Kendra, New Delhi to top three States and Districts from all the zones of the country.

2. The Ministry of Drin**king Water and Sanitation had commissioned "**Swachh Survekshan Grameen-**2018" (SSG 2018)** through an independent survey agency to develop ranking of all districts of India on the basis of quantitative and qualitative sanitation (Swachhata) parameters.

3. This ranking was done based on a comprehensive set of parameters including surveys of public places like schools, Anganwadis, PHCs, Haat/ Bazaars, **Panchayat and citizen's**

perception of Swachhata and their recommendations for improvement of the program and data from the SBM-G IMIS.

4. As part of Swachh SurvekshanGrameen, 6786 villages in 685 Districts across India were covered. 27,963 public places namely schools, anganwadis, public health centres, haat/ bazaars/religious places in these 6786 villages were visited by an independent agency for survey.

5. Around 182,531 citizens were interviewed for their feedback in villages on SBM-G related issues. Also, citizens were mobilised to provide feedback on sanitation relation related issues online using an application developed for the purpose.

6. The collection of data from Direct Observation was based on physical observation of the sanitation status in public places by the survey agency.

7. The survey agency used maps and simple handheld device/recording formats to record their observations and findings along with Photographs/videos, wherever necessary.

8. Feedback from people were obtained using Community wide open meetings,Personal Interviews and Focussed Group Discussions. FGDs were conducted in each village. More than 1.5 crore people participated in the SSG 2018 and provided their feedback.

9. The SSG 2018 turned out to be massive mass mobilisation exercise with communities in each village undertaking special drives to improve the general cleanliness in their villages.

10. Gram Panchayats invested funds from their local area development fund to augment the sanitation situation in public places.

Top 3 States - Zonal and UT Level

Zones/UT	State Rank-1	State Rank-2	State Rank-3
Northern	Haryana	Rajasthan	Himachal Pradesh
Southern	Andhra Pradesh	Telangana	Karnataka
Eastern	Chhattisgarh	West Bengal	Jharkhand
Western	Gujarat	Maharashtra	Madhya Pradesh
North-East	Sikkim	Mizoram	Meghalaya
Union Territories	D & N Haveli	Daman & Diu	Chandigarh

Top 3 Districts - Zonal and UT Level

Zones/UT	District Rank-1	District Rank-2	District Rank-3
Northern	Rewari, Haryana	Gurgaon, Haryana	Karnal, Haryana
Southern	Peddapalli, Telangana	Thoothukudi, Tamil Nadu	Warangal, Telangana
Eastern	Surajpur, Chhattisgarh	Surguja, Chhattisgarh	Hazaribagh, Jharkhand
Western	Satara, Maharashtra	Patan, Gujarat	Nashik, Maharashtra
North-East	Tawang, Arunachal Pradesh	Aizawl, Mizoram	East Sikkim, Sikkim
Union Territories	D & N Haveli	Daman	Diu

KSG

NEW ACADEMY PRIZE IN LITERATURE

Guadeloupean author Maryse Conde (81) was awarded New Academy Prize in Literature, an alternative award formed in protest to Nobel Literature Prize. She was selected from 47 authors who were nominated by Swedish librarians and voted on by nearly 33,000 people from around the world.

What

1. Conde is author of some 20 novels, including Desirada, Segu and Crossing the Mangrove.
2. She is considered as grand storyteller who belongs to world literature.
3. Her writings mostly describe ravages of colonialism and post-colonial chaos in language which is both precise and overwhelming.
4. New Academy Prize in Literature was formed by New Academy consisting of more than 100 Swedish writers, artists and journalists in protest to denounce what its founders called bias, arrogance and sexism of Swedish Academy, which selects Nobel laureates.
5. The Swedish Academy was plunged into turmoil in 2017 over its ties to Frenchman Jean-Claude Arnault, who was jailed for two years in early October for rape after the scandal came into light as part of the #MeToo movement.

DELHI'S STATEHOOD VERDICT

The Supreme Court on 5 October 2018 dismissed a plea seeking full statehood for Delhi saying it has become "infructuous" in view of the Constitution bench verdict which had held that Delhi cannot be accorded the status of a state. The matter came up for hearing before a bench comprising Justices Madan B Lokur, S Abdul Nazeer and Deepak Gupta and the advocate appearing for the petitioner referred to the judgement delivered by a five-judge Constitution bench on July 4. It (petition) is infructuous," the bench said while dismissing the plea.

What

1. The court was hearing a plea seeking to declare Article 239AA (which deals with powers and status of Delhi) of the Constitution and The Government of National Capital Territory of Delhi Act 1991 as "unconstitutional" on the ground that a territory of India has to be either a full state or a union territory.
2. The plea had also alleged that constitutional arrangements for Delhi were responsible for the mismanagement in administration of the national capital which results in several problems including air pollution, traffic jams, water logging, unauthorised constructions.
3. It claimed that these issues could be resolved by giving full statehood to Delhi.
4. On July 4, a Constitution bench of the top court had unanimously held that Delhi cannot be accorded the status of a state and had clipped the powers of the Lieutenant Governor saying he has no "independent decision making power" and has to act on the aid and advice of the elected government.
5. The apex court had said that except for three issues -- public order, police and land -- the Delhi government has the power to legislate and govern on other issues.
6. It had also held that there was no independent authority vested with the Lieutenant Governor to take independent decisions.

NOBEL PEACE PRIZE 2018

The 2018 Nobel Peace Prize has been awarded to Denis Mukwege and Nadia Murad for their efforts to end the use of sexual violence as a weapon of war and armed conflict. Mukwege, a gynecologist, has long worked to treat thousands of women and girls affected by rape and sexual violence in the Democratic Republic of Congo. Murad is a Yazidi woman from the northern Iraqi town of Sinjar, who was held as a sex slave by ISIS. In 2016, at age 23, she was made a UN goodwill ambassador for the dignity of survivors of human trafficking.

What

1. Both laureates have made a crucial contribution to focusing attention on, and combating, such war crimes.

2. 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.

3. Each of them in their own way has helped to give greater visibility to wartime sexual violence, so that the perpetrators can be held accountable for their actions.

4. Mukwege has earned the moniker "The man who mends women" for the work he and his colleagues at Panzi Hospital have done since he founded the clinic 20 years ago.

> **Flashback**
> 1. Last year's prize was awarded to the International Campaign to Abolish Nuclear Weapons (ICAN) "for its work to draw attention to the catastrophic humanitarian consequences of any use of nuclear weapons and for its groundbreaking efforts to achieve a treaty-based prohibition of such weapons."
> 2. The 2016 Nobel Peace Prize went to Colombian President Juan Manuel Santos "for his resolute efforts to bring the country's more than 50-year-long civil war to an end," after brokering a deal with the leftist rebel group FARC.
> 3. The Peace Prize is the fourth Nobel award to be announced this week.

5. Denis Mukwege is the foremost, most unifying symbol, both nationally and internationally, of the struggle to end sexual violence in war and armed conflicts. His basic principle is that 'justice is everyone's business'.

6. Murad becomes the 17th woman to win the Nobel Peace Prize and is its second-youngest recipient after Malala Yousafzai.

7. There were 331 candidates for the Nobel Peace Prize for 2018 -- the second-highest number ever. Of those, 216 were individuals and 115 were organizations, according to Nobel organizers. The names of the nominees cannot be revealed until 50 years have passed.

8. The recipient is chosen by a committee of five people elected by the Norwegian Parliament.

NOBEL PRIZE IN ECONOMICS 2018

The Nobel Prize in Economics was jointly awarded on 8 October 2018 to Americans William Nordhaus and Paul Romer for integrating climate change and technological innovation into the macroeconomic analysis, the Royal Swedish Academy of Sciences announced. Their findings have significantly broadened the scope of economic analysis by constructing models that explain how the market economy interacts with nature and knowledge.

What

1. Nordhaus, a professor at Yale University, and **Romer of New York University's** Stern School of Business **have addressed "some of our time's most** basic and pressing questions about how we create long-term sustained and sustainable **growth," the academy said.**

2. No Nobel Prize for Literature will be given this year over sexual misconduct allegations that has seen a string of board members resign from the board of the Swedish Academy that awards the prize.

3. Nordhaus in the 1990s became the first person to create a model that **"describes the** global interplay between the economy and the climate**". The model showed that "the** most efficient remedy for problems caused by greenhouse gases is a global scheme of universally imposed **carbon taxes".**

4. On the other hand, Romer, 62, has shown how economic forces govern the willingness of firms to produce new ideas and innovations, laying the foundations for a new model for development, known as endogenous growth theory.

Flashback

1. The economics sciences prize was created by the Swedish central bank **"in memory of Alfred Nobel" and** first awarded in 1969, unlike the other prizes which were created in his last will and testament and first awarded in 1901.

2. As with the other Nobels, nominations and **deliberations are kept secret for 50 years, so it's** nearly impossible to know which way the prize committee is leaning each year.

3. From a historical perspective, there are about as many conservative as liberal economists in recent years and the trend has been for diversification: the range of fields of research that have been honoured has been vaster; the choice of laureates has been more eclectic.

4. Last year, the prize went to US economist Richard Thaler, a co-founder of the so-called **"nudge" theory, which demonstrates how people** can be persuaded to make decisions that leave them healthier and happier.

5. The heart of the Nobel prizes is the awards for science, peace and literature. The economics prize is not formally a Nobel Prize.

ESIC WINS ISSA GOOD PRACTICE AWARD 2018

The **Employees' State Insurance Corporation (ESIC)** has won the **'ISSA Good** Practice Award' for **Administrative Solution for Coverage Extension at the "Regional** Social Security Forum for Asia and the Pacific" held at Kuala Lumpur, Malaysia. The award recognizes the measures taken by ESIC for extension of coverage-SPREE (Scheme for Promoting Registration of Employers and Employees), reduced rate of contribution rates for 24 months in newly implemented areas and raising the wage limit for coverage under the ESI Act, etc.

What

1. The Regional Social Security Forum for Asia and the Pacific is a triennial Forum, which is the most important social security event in the Region.

2. For the triennial Regional Forum, ISSA invites submissions for the ISSA Good Practices Award for Asia and the Pacific Regions. The Forum provides unique opportunities to CEOs and Managers of ISSA Member Institutions to discuss key social security challenges and share their experiences.

3. The ISSA (International Social Security Association) is the principal international organization for Social Security Organizations, Govts. and Departments of Social Security.

4. The ISSA, founded in 1927 under the auspices of the International Labour Organization (ILO), Geneva, promotes excellence in social security administration through professional guidelines, expert knowledge, services and support to enable its Members to develop dynamic social security systems.

5. The ESI Corporation hosts ISSA Liaison Office for South Asia at New Delhi. The Liasion Office coordinates with the Member countries and Social Security Institutions in Bhutan, Nepal, Bangladesh, Sri Lanka and Iran on activities of ISSA related to social security.

UN-BACKED AWARD FOR SIKKIM

Sikkim, the country's first fully organic State, won the top prize in a UN-backed award on 12 October 2018, with organisers saying its policies had helped more than 66,000 farmers, boosted tourism and set an example to other countries. The small Himalayan State on the border with Tibet was declared fully organic in 2016 after phasing out chemical fertilisers and pesticides and substituting them with sustainable alternatives.

What

1. The awards have previously honoured policies combating desertification, violence against women and girls, nuclear weapons and pollution of the oceans.
2. **This year's was for agroecology**, which includes shunning chemicals, using crop residues as compost, planting trees on farms and rotating crops to improve the soil and protect against pests.
3. Proponents say agroecology could increase farmers' earnings and make farms more resilient to climate change as erratic rainfall and extended dry periods hamper food production.
4. Tourism numbers in Sikkim rose by 50 per cent between 2014 and 2017, according to the World Future Council.
5. Sikkim sets an excellent example of how other countries worldwide can successfully upscale agroecology.