

My Notes....

NATIONAL

NATIONAL POLICY ON BIOFUELS 2018

The Cabinet on 16 May 2018 **approved the national policy on biofuels** which allows doping of **ethanol produced from damaged foodgrains, rotten potatoes, corn and sugar beet with petrol** to cut oil imports by Rs4,000 crore this year alone. **Till now only ethanol produced from sugarcane was allowed to be mixed in petrol.** A meeting of the union cabinet, headed by Prime Minister Narendra Modi, approved the **new policy which categorises biofuels as First generation (1G)**, which produce bio-ethanol from molasses and bio-diesel from non-edible oilseeds.

What

1. **Second generation (2G) ethanol can be produced from municipal solid waste and third generation (3G) fuels like bio-CNG.**
2. **The Policy expands the scope of raw material for ethanol production** by allowing use of **sugarcane juice, sugar containing materials like sugar beet, sweet sorghum, starch** containing materials like corn, cassava, damaged food grains like wheat and broken rice, and rotten potatoes.
3. It also **allows use of surplus food grains for production of ethanol for blending with petrol** with the approval of National Biofuel Coordination Committee.
4. Under the policy, **“a viability gap funding scheme for 2G ethanol bio refineries of Rs 5000 crore in 6 years** in addition to additional tax incentives, higher purchase price as compared to 1G biofuels” will be provided.
5. **The policy also encourages setting up of supply chain mechanisms for biodiesel production from non-edible oilseeds** used cooking oil and short gestation crops. Mixing of one crore litre of bio-ethanol in petrol saves Rs28 crore of foreign exchange on oil imports.
6. **At present oil marketing companies are in the process of setting up 12 2G bio refineries** with an investment of around Rs10,000 crore. Further addition of 2G bio refineries across the country will spur infrastructure investment in the rural areas and create jobs.
7. **By adopting 2G technologies**, agricultural residues/waste which otherwise are burnt by the farmers can be converted to ethanol and can fetch a price for these waste if a market is developed for the same.

Flashback

1. In order to promote biofuels in the country, a **National Policy on Biofuels was made by Ministry of New and Renewable Energy during the year 2009.**
2. Globally, biofuels have caught the attention in last decade and it is imperative to keep up with the pace of developments in the field of biofuels. Biofuels in India are of strategic importance as it augers well with the ongoing initiatives of the Government such as **Make in India, Swachh Bharat Abhiyan, Skill Development** and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation.
3. Biofuels programme in India has been largely impacted due to the sustained and quantum non-availability of domestic feedstock for biofuel production which needs to be addressed.

ZOJILA PROJECT IN LEH INAUGURATED

Prime Minister Narendra Modi on 19 May 2018 **inaugurated the Rs 6,809 crore Zojila tunnel project in Jammu and Kashmir's Leh** kickstarting the work for **India's longest tunnel and Asia's longest and strategic bi-directional tunnel**, which will provide all-

weather connectivity between Jammu and Kashmir's Srinagar, Kargil and Leh. **The project will be finished within five years.**

What

1. **It (tunnel) will lead to all-round economic and socio-cultural integration of these regions.** It also has immense strategic importance.
2. The Cabinet Committee on Economic Affairs chaired by PM Modi had in January this year, approved the construction of the tunnel in the state, keeping in mind that Srinagar, Kargil and Leh remain cut-off from the rest of the world due to heavy snowfall during winters (December to April).
3. The Zojila tunnel **will reduce the travel time between Srinagar and Leh drastically.** It also aims to provide safe, fast and cheap connectivity.
4. The project will provide all-weather connectivity to the region. The project has strategic and socio-economic importance and shall be an instrument for the development of the economically backward districts in Jammu and Kashmir.
5. The tunnel shall be an engineering marvel as first of its kind in such a geographical area.
6. The pass is situated at an altitude of 11,578 feet on Srinagar-Kargil-Leh National Highway and remains closed during winters due to heavy snowfall which cuts off Ladakh region from Kashmir.
7. **It is implemented by the Ministry of Road Transport and Highways (MoRT&H) through the National Highways and Infrastructure Development Corporation Limited (NHIDCL).**



GREEN GOOD DEEDS

Green Good Deeds, the societal movement launched by Environment, Forest & Climate Change Minister Dr Harsh Vardhan **to protect environment and promote good living has found acceptance by the global community.** Dr Harsh Vardhan at the ongoing **4th BRICS Environment Ministerial in Durban**, South Africa had urged the BRICS nations to jointly help in development of a social movement to fight for the protection and conservation of environment. The BRICS Ministerial on Environment has agreed to include **“Green Good Deeds” in its official agenda in the next Ministerial in Brazil** and another meeting in Russia said Dr Harsh Vardhan.

What

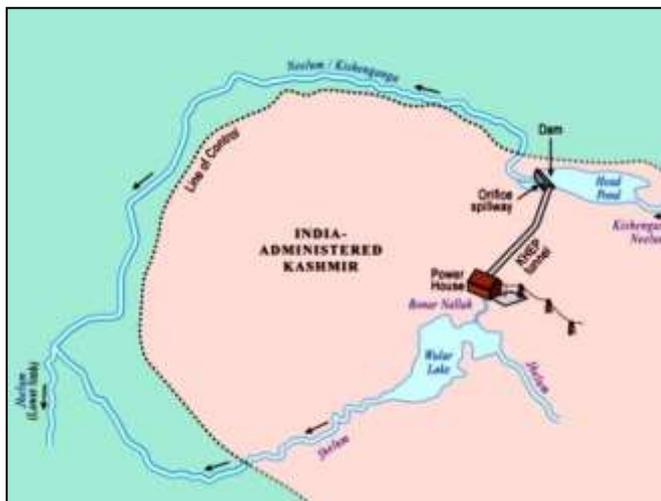
1. There was wide acceptance to the suggestion and UN Environment Programme representative at the conclave Jorge Laguna Celis, acting Deputy Executive Director lauded the initiative.
2. The minister had launched a nationwide social movement to protect the environment and promote healthy living. The Ministry of Environment, Forest & Climate Change had drawn up a list of over 500 Green Good Deeds and asked people **to alter their behaviour to Green Good Behaviour to fulfil their Green Social Responsibility.**
3. These small positive actions to be performed by individuals or organisations to strengthen the cause of environmental protection, were put on a mobile application named “Dr Harsh Vardhan App”.
4. The minister had formally launched the nation-wide campaign in January 2018. He enlisted the cooperation of thousands of people – students, teachers, voluntary organisations, Residents Welfare Associations, professionals to adopt these deeds.

KISHANGANGA HYDROPOWER PROJECT

Prime Minister on 19 May 2018 dedicated the state run NHPC Ltd's Kishanganga hydro power project in Jammu and Kashmir to the nation. The development assumes significance given the strategic importance of the 330 megawatt (MW) project on the river Kishanganga, a tributary of Jhelum. While Pakistan had challenged the project under the Indus Waters Treaty of 1960, the International Court of Arbitration at The Hague ruled in India's favour in 2013.

What

1. The Jhelum originates in India and flows into Pakistan, and according to the Indus Water Treaty, whoever builds the project first will have the first rights on the river water.
2. The project in Bandipora district will provide 13% free power to the state including 1% for local area development fund amounting to around Rs133 crore per year.
3. This come at a time when the projects in Jammu and Kashmir are being expedited in the backdrop of China developing the China-Pakistan Economic Corridor (CPEC), part of its showpiece "One Belt One Road" (OBOR) infrastructure initiative.
4. These projects include developing roads totaling 683.31 km in length, with an investment of Rs10, 204.45 crore, constructing the marquee 14-km-long Zojila tunnel and the 6.5-km Z-Morh tunnel on Srinagar-Kargil road.
5. The Indus Waters Treaty regulates the use of Indus river waters by India and Pakistan. Pakistan's argument was that the Indian project would affect the Neelum-Jhelum project constructed by Pakistan downstream of the Kishanganga project.
6. India has also been critical of China developing the CPEC, cutting through Gilgit and Baltistan areas of Pakistan-occupied Kashmir (PoK).
7. OBOR, first unveiled by Chinese president Xi Jinping in 2013, aims to put billions of dollars in infrastructure projects, including railways, ports and power grids across Asia, Africa and Europe.



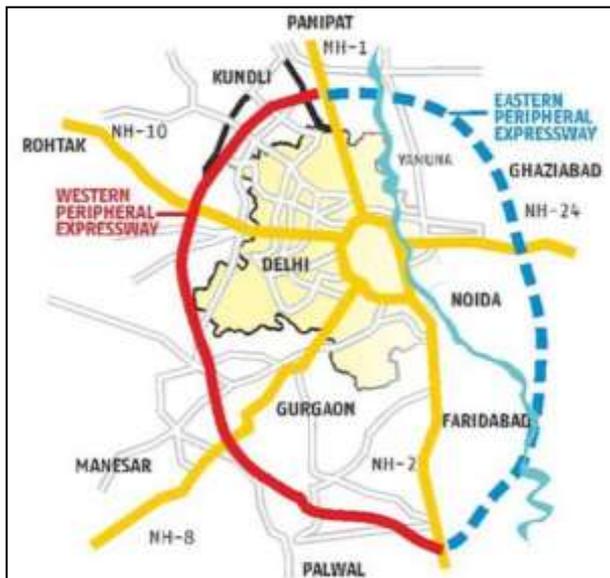
EPE INAUGURATED

Prime Minister on 27 May 2018 the Eastern Peripheral Expressway (EPE) which connects Haryana's Kundli on NH 1 and Palwal on NH 2 as well as the phase-1 of the Delhi-Meerut Expressway, India's first "14-lane highway". The twin projects happen to be one of India's most ambitious road network initiatives in recent times. The 14-laned (Six lanes+ four service lanes on both sides), 82-kilometre-long Delhi-Meerut Expressway, which connects Delhi to eastern parts of Uttar Pradesh, is equipped with several features to improve the air quality and reduce pollution in Delhi NCR.

Delhi-Meerut Expressway

1. Delhi-Meerut Expressway is expected to cut down the travel time between the two cities to 60 minutes. The first 27.74 kms of the expressway will be 14-lane, while the rest will be six-lane.
2. The project was built at an approximate cost of Rs 4975.17 crore. Also, this will be the first expressway to have dedicated bicycle tracks on the 28-kilometre stretch between Delhi and Dasna.

3. **The National Highway Authority of India (NHAI) has commissioned various street artists, agencies and NGOs for the beautification of the newly built flyovers of the Delhi Meerut Expressway.**
4. The first phase of Delhi-Meerut Expressway measures 8.360 kms and stretches from Nizammudin Bridge to Delhi-UP border, including a six-lane Expressway and four service lanes (4+4) on both sides.
5. **The first phase of the expressway was completed in 18 months** at a cost of Rs. 841.50 crore. It has a 2.5-metre-wide cycle track on both sides of the highway, a vertical garden on the Yamuna Bridge, solar lighting system and a drip irrigation system to water plants in the garden. These measures have been included to check the alarming levels of air pollution in Delhi.
6. **The project entails construction of 11 flyovers/interchanges**, five major and 24 minor bridges, 3 ROBs (rail over bridges), 36 vehicular and 14 pedestrian underpasses. It will also have an elevated section of 5.91 kms. The entire project has been divided into four packages:



Eastern Peripheral Expressway (EPE)

1. **The foundation for the Eastern Peripheral Expressway was laid on November 5, 2015.**
2. **The EPE is a part of the Peripheral Expressways project** that has been envisaged with the desire of 'decongesting and de-polluting the national capital by diverting the traffic not destined for Delhi'.
3. **EPE is the first expressway in India to use a solar powered-lighting system on the entire length of 135 km.** There are eight solar power plants, with a capacity of 4000 KW (4 megawatt) for the lighting of the underpasses and powering solar pumps for watering of plants on the expressway.
4. **Rainwater harvesting has been provided at every 500 meters on the EPE** and there is a drip irrigation system for watering of plants all along the expressway.
5. Another **special feature of the EPE is that the toll will be collected only for the distance travelled and not for the entire length of the expressway.** Also, Weigh-in-Motion (WIMs) equipment have been installed at all 30 entry points of the Expressway to stop entry of overloaded vehicles.

FIRS EVER ADVENTURE TOURISM GUIDELINES

In a first, the government 31 May 2018 **came out with guidelines for adventure tourism in the country**, governing activities such as **mountaineering, bungee jumping and scuba diving** to ensure that they are conducted in a safe manner. **The guidelines cover 15 land-based, seven air-based and seven water-based activities.** Ministry of Tourism, along with the **Adventure Tour Operators Association of India (ATOAI)**, has formulated the guidelines which will standardise the safety and quality norms for adventure tourism in India.

What

1. **70 per cent of Himalayas are in our country** and we have 8,000 km of coastline, we have tropical forests, deserts and beaches. Why can't we have a share of the pie of adventure tourism? We have to make these activities safe and secure for tourists.
2. The 170-page document covers land, air and water based activities which include mountaineering, trekking, bungee jumping, paragliding, kayaking, scuba diving, snorkeling, river rafting and many other sports.

3. **The guidelines codify the standard operating procedures (SOPs)** and instructions for risk mitigation and emergencies as well as provide set rules for safety precautions, training required, insurance, medical safety and other requirements to participate in such activities.
4. It has also issued SOPs for rescues, age limit for every sport, training, flying permissions, equipments, use of sign board, trained manpower, risk management strategy, inspections and maintenance among others. Insurance liabilities, death and disabilities are also covered in the guidelines.
5. Detailed guidelines are aimed at educating tour operators and other concerned agencies about important safety requirements and lesser-known dangers.
6. **The guidelines also enumerate the basic minimum standards** for grant of recognition to operators which includes mandatory registration with the local tourism department, minimum qualification for staff, regular training of staff, and a 'leave no trace' policy to conform to high sustainability standards.
7. **As of now, the adventure tourism industry is a 430 billion dollar industry** and growing at a rate of 46 per cent per annum. It is expected to hit the one trillion marks in the next 10 years.

8 components of the tourism sector	
Transportation	Events
Accommodation	Travel Services
Food & Beverage	Adventure Tourism & Outdoor Recreation
Attractions	Tourism Services

SUCCESSFULLY TEST-FIRES BRAHMOS MISSILE

India on 21 May 2018 successfully test-fired the Indo-Russian joint venture BrahMos supersonic cruise missile from a test range along the Odisha coast to validate some new features. **The missile was test-fired from a mobile launcher stationed at Launch pad 3 of the Integrated Test Range (ITR)** at Chandipur at 10.40 am. The trial was conducted to validate its **"life extension" technologies developed for the first time in India by DRDO** and team BraHmos, said an official of the ITR.

What

1. **The successful test will result in huge savings of replacement cost of missiles** held in the inventory of the Indian Armed Forces.
2. The **two-stage missile—first being solid and the second one, a ramjet liquid propellant**—has already been introduced in the Army and Navy, while the Air Force version had witnessed successful trial. **BrahMos variants can be launched from land, air, sea and under water.**
3. India successfully launched the **world's fastest supersonic cruise missile from a Sukhoi-30 MKI combat jet for the first time** against a target in the Bay of Bengal in November, 2017.
4. **The missiles land and naval variants are already in service.** At least two Su-30 squadrons with 20 planes each are planned to be equipped with the air-launch variant BrahMos missile, 500kg lighter than land/naval variants.
5. **India has already extended the range of the three-tonne missile from its earlier 290km to 400km** and successfully test-fired the variant in March 2017.
6. **Increasing the missile's range from 400km to further 800km is now possible after India's induction into the Missile Technology Control Regime (MTCR) in June 2016.**
7. Prior to that, India was bound by restrictions that limited the range of the missile, which is an Indo-Russian joint venture product, to less than 300km.
8. **Currently the Army is equipped with three regiments of Block 111 version of Brahmos missile.** Induction of the first version of BrahMos missile system in Indian Navy began with INS Rajput in 2005. It is now fully operational with two regiments of the Army.
9. After two successful test trials of **BrahMos missile from INS Kolkata in June 2014 and February 2015**, the **test firing from INS Kochi on 30 September, 2015**, had

validated the newly commissioned ship's systems. The air launch version and the submarine launch version of the missile system are in progress.

10. So far, the Army has placed orders for the BrahMos missile which are to be deployed by three regiments. Two of them are already operational. The last land-based trial was conducted from the same base on 11 March, 2017 successfully.

SURYA KIRAN BEGINS

A joint military exercise between India and Nepal began at Pithoragarh on 30 May 2018 with soldiers from both the countries sharing their experiences of counter insurgency and counter terrorist operations.

What

1. **The military exercise, which is set to conclude on June 12, is called 'Surya Kiran'** and is conducted alternatively in **India and Nepal every six months**.
2. Notably, Surya Kiran with Nepal is India's largest military exercise in terms of troop participation. Over 300 soldiers from both the countries are taking part in the exercise.
3. The aim of this exercise is to conduct battalion level joint training with emphasis on counter terrorism operations in mountainous terrain.
4. The joint military exercise will enhance the level of defence cooperation between the two neighbours which will further strengthen bilateral relations.

SWACHH SURVEKSHAN 2018

Indore emerged as the cleanest city, followed by Bhopal and Chandigarh in the government's cleanliness survey. The results of **Swachh Survekshan 2018**, which aims to estimate levels of cleanliness across cities in the country, were announced on 16 May 2018 by Minister of State for Housing Hardeep Singh Puri.

What

1. **Jharkhand was adjudged the best performing state in the survey followed by Maharashtra and Chhattisgarh.**
2. Compared to the previous surveys, this year's exercise allocated substantial weightage to the feedback from citizens based on their daily experience.
3. **Indore was the cleanest city last year as well but that survey was conducted only for around 430 cities.**
4. This time it was conducted for around 4,200 cities. The names of the worst performing cities would be announced on the day the awards would be presented.

Flashback

1. **Swachh Survekshan is a ranking exercise taken up by the Government of India** to assess rural and urban areas for their levels of cleanliness and active implementation of Swachhata mission initiatives in a timely and innovative manner.
2. The objective of the survey is **to encourage large scale citizen participation** and create awareness amongst all sections of society about the importance of working together towards making towns and cities a better place to live in.
3. Additionally, the survey also intends to foster a spirit of healthy competition among towns and cities to improve their service delivery to citizens, towards creating cleaner cities and towns.
4. **The Ministry of Urban Development, Government of India takes up the Swachh Survekshan in urban areas** and the Ministry of Drinking Water and Sanitation in rural areas. The Quality Council of India (QCI) has been commissioned the responsibility of carrying out the assessment.
5. **The Swachh Survekshan was launched in January 2016** to assess the sanitation and solid waste management status in 73 major cities in India (comprising 40% of India's total urban population) - including 53 cities with a population of above 10 lakhs each, and state capitals.

UGC (ONLINE COURSES) REGULATIONS 2018 APPROVED

In a landmark reform in the field of Higher Education, University Grants Commission has approved UGC (Online Courses) Regulations, 2018 in its meeting held on 24th May, 2018. Higher Educational Institutions can offer Certificate, Diploma and Degree Programmes in full-fledged online mode in only those disciplines in which it has already been offering the same or similar Programmes /Courses at graduation level in regular mode (of classroom teaching) or in Open and Distance Learning mode and from which at least one batch has been graduated and approved by the statutory councils, as applicable.

What

1. Online Programmes requiring Practical/ Laboratory Courses as a curricular requirement shall not be permitted. The Examinations shall be conducted in **proctored mode and in conformity with any norms for such examinations stipulated by the commission.**
2. The online learning shall have minimum four quadrants: video lectures, e- content, self-assessment and discussion forum to clarify doubts.
3. **The Higher Educational Institutions will be eligible to offer Online Programmes** if they have been in existence for at least five years and are accredited by the **National Assessment and Accreditation Council (NAAC)** with a valid minimum score of 3.26 on a 4-point scale; and should be in the top-100 in overall category in the **National Institutional Ranking Framework (NIRF)** for at least two years in the previous three years.
4. However, NAAC and NIRF conditions shall not be applicable to existing government Open Universities till NAAC or similar accreditation system or NIRF are made available.
5. **Aadhaar and Passport shall be used to authenticate the Indian and foreign students respectively** for all online interactions including teaching-learning and examinations.
6. The learners' engagement will be monitored via participation in asynchronous / synchronous discussions, assignment activity and Programme involvement. The analytics of Learning Management System shall be used for ensuring the learner's participation at least for 2 hours every fortnight.
7. Overall Regulations provide enabling provisions for maintaining sanctity of admissions, teaching-learning, examination, authenticity of the learner and mandatory disclosure of Programme-wise information such as duration, start & end dates, fee, number of students, name of students with identifier, results, on HEI website/public domain.
8. These regulations will be made applicable from the academic session 2018-19. **This initiative is a big step towards attaining the targeted GER of 30% by the year 2020.**

INTERNATIONAL

GDPR COME INTO EFFECT

The **General Data Protection Regulation (GDPR)** that gives **citizens of the European Union (EU) more rights to control their personal information** comes into effect from 25 May 2018. With the new regulations in force, companies working in the EU — or any association or club — **must now get express consent to collect personal information**, or face hefty fines.

What

1. **The new EU legislation, passed in April 2016**, is seen as an attempt by the European lawmakers to restrict the powers of the technology companies.
2. The new regulations give the **users of tech companies the right to see what information about them is being collected** and also have them deleted if they wish so.

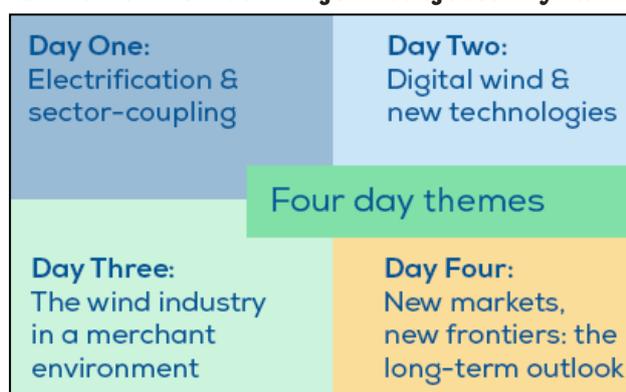
3. **It also makes mandatory for companies to tell all affected users about any data breach**, and inform the overseeing authority within 72 hours.
4. To ensure that companies in the EU comply with the GDPR rules, EU member states must set up supervisory authorities which will work in a coordinated manner.

FIRST EDITION OF THE GLOBAL WIND SUMMIT

The first edition of the **Global Wind Summit** will be held in **Hamburg (Germany)** from **September 25-28, 2018**. The organisers of the four-day event are expecting speakers from about 100 countries, including **India, China, the US, Spain and Denmark**. A number of Indian companies would be participating in the global event. **The conference on wind is the largest and most important meeting of the wind industry worldwide**. The event combines two conferences, **WindEnergy Hamburg** and **WindEurope**, **Holinsky** said, adding both the events together will witness about 1,400 exhibitors and 250 speakers from all over the world.

What

1. **The event will provide a platform for experts from across the globe** to discuss innovative and green technologies for harnessing wind energy making.
2. The focus of the conferences **would be on three major subjects. Dynamic markets, cost efficiency and smart energy**. How to develop new markets, make product competitive in auctions and use wind power for all energy applications (will be discussed).
3. **India is fourth largest country -- after China, the US and Germany --** in terms of wind energy installation capacity at around 33 GW, the government has set a **target of achieving 60 GW by 2022**.
4. Comprising the world's leading wind industry expo **WindEnergy Hamburg** and the **WindEurope global** on and offshore conference, the event shows the highlights of one of the most innovation-driven sectors.
5. The great importance of wind energy for the energy needs of the world is an uncontested fact. The industry is making giant strides in overcoming its core challenge: to further reduce the **levelised cost of electricity (LCOE)** while opening up new markets.



GLOBAL HEALTH MONITORING MECHANISM

The **World Health Organization (WHO)** and **World Bank Group** has launched a new **mechanism** that intends to strengthen global health security through monitoring and **regular reporting of preparedness to tackle outbreaks, pandemics, and other emergencies with health consequences**. The **new monitoring board is established** in response to the recommendation by UN Secretary-General's Global Health Crises Task Force. The Board's Secretariat will be housed at **WHO headquarters in Geneva, Switzerland**.

What

1. **The Global Preparedness Monitoring Board was created on the margins of the 71st Session of the World Health Assembly on 24th May**, led by WHO Director-General Tedros Adhanom Ghebreyesus and World Bank Group President Jim Yong Kim.
2. The board will report annually on adequacy of financing, progress on relevant research and development, and the strength of health crisis preparedness at the global, regional and national levels.

3. Based on the report, **the Board will advocate for health crisis preparedness**. It aims to ensure that all stakeholders keep these issues on the political agenda and are held accountable for making nations better prepared to respond to outbreaks and emergencies with health consequences.
4. Further, **the Board will be co-chaired by Gro Harlem Brundtland, former Prime Minister of Norway** and former WHO Director-General, and Elhadj As Sy, Secretary General of the International Federation of the Red Cross and Red Crescent Societies.
5. It will include political leaders, heads of UN agencies and world-class health experts, serving in their individual, independent capacities.
6. Pandemic preparedness must be as much local as global, and we must meaningfully engage local communities in preparedness, detection, response and recovery to disease outbreaks.
7. The Board will monitor preparedness activities on a global scale, and will hold all actors, from private and public sectors, accountable for building essential public health capacities, generating sustainable financing and ensuring that necessary research and development is conducted.

US PACIFIC COMMAND RENAMED

In recognition of the increasing connectivity between the Indian and Pacific Oceans, the Trump administration **renamed the US Pacific Command to US Indo-Pacific Command**. The move is also reflective of the **growing importance of the Indian Ocean in US strategic thinking**. Henceforth, the storied US Pacific Command, or Pacom, which was formed after World War II, will be known as the **Indo-Pacific Command**.

What

1. Soon after coming to power, the Trump administration **had renamed Asia Pacific as Indo-Pacific and identified India as one bookend of the region**.
2. The latest announcement was made by the US defence secretary Jim Mattis during the change of guard ceremony at Joint Base Pearl Harbour wherein Admiral Phil Davidson replaced Admiral Harry Harris as Commander, US Indo-Pacific Command or IndoPacom.
3. In recognition of the increasing connectivity, the Indian and Pacific Oceans, today we rename the US Pacific Command to **US Indo-Pacific Command**.
4. **Referring to the 2018 National Defence Strategy** which acknowledges Pacific challenges and signals America's resolve and lasting commitment to the Indo-Pacific.
5. **America's vision is shared by most nations in the region**. For every state, sovereignty is respected, no matter its size and it's a region open to investment and free, fair and reciprocal trade not bound by any nation's predatory economics or threat of coercion, for the Indo-Pacific has many belts and many roads.
6. **America continues to invest vigorously in Indo-Pacific stability, bolstering the free and open rules-based international order** that has enabled this region to grow and thrive for over 70 years.

NOT RECOGNISE COUNTRY-SPECIFIC SANCTIONS

With the US pulling out of the Iran nuclear deal creating uncertainty over dealings with Tehran, External Affairs Minister Sushma Swaraj made it clear that **India does not recognise country-specific sanctions. Our foreign policy is not made under pressure from other countries**, she said.

What

1. US President Donald Trump, earlier this month, announced **his country's withdrawal from the nuclear deal signed in 2015 between Iran**, the European Union and the P5+1 group (five permanent members of the UN Security Council, plus Germany).
2. Still they work against India and love Pakistan in the name of Religion. They will not allow the Kashmiri Pandits back to Kashmir, even after decades.
3. **India and Iran have friendly relations** and significant trade ties in many areas, particularly in crude oil imports into India and diesel exports to Iran.

4. **Iran is the second largest supplier of crude oil to India**, supplying more than 425,000 barrels of oil per day, and India is one of the biggest foreign investors in Iran's oil and gas industry.

FIRST EVER STRATEGIC BOMBERS IN SCS

China has for the first time landed strategic bombers on an island in the disputed South China Sea (SCS), drawing sharp reaction from the US which said that the move will “raise tensions and destabilise the region”. China’s air force said that its fighter jets, including an H-6K bomber, had recently conducted take-off and landing training on an island reef in the resource-rich South China Sea (SCS).

What

1. **The Chinese move invoked sharp reaction from the US** which said that it will “raise tensions and destabilise the region”.
2. China had established Sansha City, a prefecture-level city of Hainan Province, in 2012 to administer the South China Sea islands identified by China as Xisha, Zhongsha and Nansha island groups and their surrounding waters.
3. In early May, the US said that **it was prepared to take measures against militarisation of the South China Sea**, after Beijing reportedly installed new missiles on outposts in the Spratly Islands — known in China as the Nansha Islands — that are also claimed by Vietnam and the Philippines.
4. China claims almost all of the South China Sea but Vietnam, the Philippines, Malaysia, Brunei and Taiwan have counter claims. The US is periodically deploying its naval ships and fighter planes to assert freedom of navigation.

Flashback

1. The Iran nuclear deal, **formally known as the Joint Comprehensive Plan of Action**, offered Tehran billions of dollars in sanctions relief in exchange for agreeing to curb its nuclear program.
2. The agreement was aimed at ensuring that **"Iran's nuclear program will be exclusively peaceful."** In return, it **lifted U.N. Security Council and other sanctions**, including in areas **covering trade, technology, finance and energy**.
3. **The deal was sealed in July 2015, under President Barack Obama.**
4. Tehran **acceded to a 10-year restriction on nuclear production**, agreed to shut down thousands of centrifuges and exported almost all of its bomb-making material.
5. Under the agreement, **Iran agreed that "under no circumstances will Iran ever seek, develop or acquire any nuclear weapons."**

DISPUTE OVER POWER PLANT IN INDIA

The **U.S. Supreme Court agreed to consider reviving a lawsuit by Indian villagers seeking to hold a Washington-based international financial institution** responsible for widespread **environmental damage they blame on a power plant it financed**. The justices will hear an **appeal by the villagers of a lower court ruling that the International Finance Corp was immune from such lawsuits under federal law**. IFC, **part of the World Bank Group**, is an international institution with 184 member countries that helps secure financing for projects in developing nations.

What

1. **The case revolves around the IFC's decision in 2008 to provide \$450 million in loans to help construct the coal-fired Tata Mundra Power Plant in Gujarat, India.** IFC loans include provisions requiring that certain environmental standards are met.
2. The legal question before the justices is **whether there are limits to immunity for entities like the IFC under the 1945 International Organizations Immunity Act**, as there are for foreign countries under a 1976 law called the Foreign Sovereign Immunities Act.
3. Lead plaintiff Budha Ismail Jam and other fisherman and farmers who live near the plant sued in federal court in Washington in 2015, saying the IFC had failed to meet its obligations.

4. They said **the plant's construction and operations did not comply with the environmental plan set out for the project.** The local environment has been devastated, according to the plaintiffs, with marine life killed by water discharges from the plant's cooling system and coal dust contaminating the air.
5. A district court in 2016 and the U.S. Court of Appeals for the District of Columbia Circuit in 2017 ruled that the lawsuit was barred because the IFC is immune from such litigation under the 1945 law.
6. The court will hear arguments and decide the case in its next term, which begins in October.

CHINA EXTENDS CURRENCY SWAP DEAL

China on 24 May 2018 **extended currency swap agreement with Pakistan** amid reports that Beijing has given a \$1 billion loan to Islamabad to help it avert a foreign currency crisis. The People's Bank of China, the country's central bank, said today it had extended a currency swap agreement with the State Bank of Pakistan. **The swap is sized at 20 billion yuan (\$3.1 billion)** or 351 billion Pakistani rupees.

What

1. **The two parties believe the extension will facilitate bilateral trade and investment** to help economic development in the two countries. Valid for three years, the agreement can be extended upon mutual consent.
2. **A currency swap deal allows two institutions to exchange payments in one currency for equivalent amounts in the other** to facilitate bilateral trade settlements and provide liquidity support to financial markets.
3. The money strengthens the financial, political and military ties between the two countries," the top Pakistani banker was quoted as saying by the paper.
4. Pakistan's foreign exchange reserves have dropped from \$18.1 billion in April last year to \$10.8 billion in May this year.
5. According to the report, Pakistani officials also hope that borrowing from Chinese banks will save the nation from seeking help from the International Monetary Fund (IMF).
6. **Lending money to Pakistan also favours China**, as it does not wish to disclose details of the loans that are part of the China-Pakistan Economic Cooperation (CPEC) project.
7. China is investing almost \$60 billion on building infrastructure in Pakistan. However, Beijing is reluctant to reveal the sum it is lending to Islamabad as part of the CPEC project.

ECONOMY

RBI APPOINTS ITS FIRST CFO

Sudha Balakrishnan, until recently the vice-president of National Securities Depository Ltd (NSDL), has been appointed the **first chief financial officer (CFO) of the Reserve Bank of India (RBI)** with effect from May 15. Balakrishnan, a chartered accountant, will be the **12th executive director of the RBI.** A recruitment notice issued by the RBI in October, 2017 said that the new CFO, in one of his/her key roles will be in **charge of the Department of Government and Bank Accounts** and **will be responsible for formulating the accounting policy of the Bank**, maintaining the internal accounts and reporting of financial results through various statements of accounts, Balance Sheet and Profit & loss Account.

What

1. **Balakrishnan will also be in charge of formulating the policy related to provident fund (PF)** and the PF interest rates under the corporate strategy function.
2. **So far, RBI's balance sheet and other financial functions were managed internally** and there was no dedicated officer to do the job.

3. RBI had first released an advertisement in May 2017 and again in October 2017 and Balakrishnan was selected after a long process.
4. **It was during Raghuram Rajan's tenure as RBI governor** that the idea of a dedicated officer for managing RBI's internal financial functions was mooted.
5. After Urjit Patel took over as the governor of RBI in September 2016, it was decided to have a position of a CFO equal to the rank of an executive director.
6. Balakrishnan stands eligible for a cost per month of Rs 200,000 with housing and Rs 400,000/ per month without housing.
7. The appointment will initially be for a three-year period, which could be extended further, subject to an annual review.

CFO responsibilities

1. Accurate and timely presentation and reporting of financial information of the bank.
2. Establish accounting policies and procedures wherever required.
3. Compliance with financial regulations and standards wherever applicable.
4. Communicate both the bank's expected and actual financial performance.
5. Overseeing the budget process, collecting inputs and comparing the bank's actual performance vis-à-vis the budget estimates.
6. Flagging risks to the finances—operational, market etc.
7. Developing strategies to counter/mitigate the same.

NEW REPORTING STANDARD

State-owned Oil and Natural Gas Corp. (ONGC) plans to adopt stringent reporting standard on environment, social and corporate governance (ESG) to help improve its credit rating. ONGC, India's top oil and gas producer, will be the first public sector company to adopt reporting standards that are at par with international benchmarks, which will bring greater transparency. The new ESG reporting would help raise the company's credit rating, which will increase its capacity to raise funds—both debt and equity—from markets worldwide.

What

1. Under the new reporting format, **the three parameters of environment, social and corporate governance are extensively studied.**
2. **Under the environment head**, factors such as **energy and emissions, preservation of the ecosystem, water utilisation and waste management** are covered.
3. **Under the social head**, key factors such as **community engagement, local employment, human rights and workforce inclusiveness** are emphasised.
4. **Under the corporate governance head**, parameters like health and safety, ethics and compliance and customer protection are covered.
5. ONGC plans to hire a consultant shortly to revamp its integrated reporting system to strengthen its corporate governance policy and ensure greater transparency in its business, they said.
6. **The ESG reporting will be benchmarked with the world's best practices in terms of sustainability reporting.** As an energy company, ONGC relentlessly pursues to promote environmental consciousness and protect the ecosystem.
7. Corporate governance and sustainability factor high in ONGC's business model and with this new reporting standard, ONGC would pave the way for aligning itself with global best practices.
8. The system embraces sustainability factors to help identify companies with superior business model and is said to offer investors long-term performance advantages.
9. **It is one of the foremost companies in terms of initiatives for carbon footprint mitigation**, with 15 Clean Development Mechanism (CDM) projects registered with the UNFCCC, and 4 more projects in the pipeline.

IP NANI LAUNCHED

The Minister of Commerce and Industry Shri Suresh Prabhu **launched the Intellectual Property (IP) mascot – IP Nani** – at the conference on **National Intellectual Property Rights Policy in New Delhi** on 16 May 2018. The Minister said that **protection of Intellectual Property Rights is critical for building a knowledge based society.**

What

1. **Piracy is a serious crime which should not go unpunished.** Minister also called for creating awareness against stealing Intellectual Property Rights and stressed on the need for participation of society in the effort.
2. **Mascot IP Nani is a tech-savvy grandmother** who helps the government and enforcement agencies in combating IP crimes with the help of her grandson “Chhotu” aka Aditya.
3. **The IP mascot will spread awareness about the importance of Intellectual Property Rights (IPRs)** among people, especially children, in an interesting manner.
4. This character is also in line with the World Intellectual Property Organization’s (WIPO) campaign for the World IP Day which celebrates the brilliance, ingenuity, curiosity and courage of the women who are driving change in our world and shaping our common future.
5. **IPRs are increasingly becoming crucial drivers of social and economic growth** by encouraging creativity and innovation.
6. Realizing the importance of IPRs, the **National IPR Policy was approved by the Union Cabinet on 12th May 2016.**
7. The first and foremost objective of the Policy is “IPR Awareness: Outreach and Promotion”. Under this objective, one of the key focus areas is awareness on IPR for school children, as it is essential to nurture creativity and the ability to innovate starting out from a young age.
8. In this context, the Cell for **IPR Promotion and Management (CIPAM)**, a **professional body under the Department of Industrial Policy and Promotion (DIPP)** collaborated with the **European Union Intellectual Property Office (EU-IPO)** to produce a series of animated videos on IPRs for children with IP Nani as their central character.
9. **CIPAM has been conducting IPR awareness workshops for school students since April 2017.** Till date CIPAM has reached out to over 100 schools sensitizing over 8,000 students on IPRs.

INDUSTRIES PASS THE CLEAN ENERGY TECH TEST

Only four industries were on track in 2017 to meet long-term climate goals, the International Energy Agency has said. The Paris-based global body surveyed technologies or areas that need to go green, such as chemicals or aluminium industries, and found that **only four passed muster — solar PV, lighting (LED), electric vehicles and data centres.** All others, including onshore wind and energy storage, were short of what they ought to have done by that year. The number of areas that **“need improvement” is 23.**

What

1. The IEA looked for progress in five broad areas — **power, building, transport, industry and energy integration**— and was largely disappointed.
2. Under the head ‘power’, only **solar PV had done satisfactorily**, with solar power generation growing 34 per cent in 2017 compared with the required run rate of 17 per cent up to 2030.
3. The IEA report said that electricity production from all solar power plants was 416 TWhr, or **2 per cent of world’s electricity generation.**
4. The IEA report appreciated the **54 per cent rise in electricity vehicles seen in 2017**, a year when 1.1 million electric cars were sold, leading to a global stock of 3 million.
5. With 370,000 buses and 250 million two-wheelers, ‘electric vehicles’ are doing their bit for combating climate change; electric cars should account for 14 per cent of the global car fleet by 2030 from 1 per cent in 2017.

6. Driven by LEDs, the performance of the 'lighting' segment is also consistent with the needs for fighting climate change. LEDs have seized a third of the market for lighting, and the efficacy of LED bulbs has been increasing.

Kudos for India

1. **The report praises India for its pioneering effort in promoting LED use** and holds the country up as an example to others.
2. Recent trends in India suggest that there is a major potential to deploy LEDs rapidly on a large scale, if the right financing and market mechanisms are in place.
3. India is now the biggest market for LEDs, thanks to the **Ujala programme**, which uses bulk procurement to offer bulbs to get the prices down.
4. Nearly 300 million LED lamps have been sold since 2015, out of the targeted 770 million by March 2019," the report noted. (According to the Ujala dashboard, over 300 million LED bulbs have been sold so far, leading to annual energy saving of 39 billion units of electricity.)
5. **Then comes data centres and networks, one of the major consumers of power.** Data centres consumed 194 TWhr of electricity in 2014, and data networks another 185 TWhr, each accounting for per cent of global electricity consumption. Although data centre workload is forecast to triple by 2020, related energy demand is expected to grow only by 3 per cent, thanks to continued efficiency gains, says IEA.
6. **The United Nations Environment Programme (UNEP) has been warning year after year through its Emissions Gap Reports** that the world's efforts today would lead to the planet warming way more than the "2 degrees" target (by 2100, measured from the average temperatures of the pre-industrialisation period of mid-18th century.)

ORDINANCE FOR AMENDMENTS TO BANKRUPTCY CODE

The Cabinet on 23 May 2018 **approved promulgation of an ordinance to amend the 16-month-old Insolvency and Bankruptcy Code (IBC)**, which **proposes to classify home buyers as "financial creditors"** at par with lenders to help them quickly get refunds from defaulting companies. The amendment comes months after a **new Section 29A was added into the bankruptcy code in November**, introducing **four layers of ineligibility for potential bidders**.

What

1. **The present amendment is based on recommendations of a 14-member government appointed committee** that had last month suggested a slew of measures, including addressing woes of home buyers and making recoveries easier for lenders.
2. **The Insolvency Law Committee** had last month recommended to the Ministry of Corporate Affairs, that **home buyers should be treated as financial creditors**, which will allow them to equitably participate in an insolvency resolution process.
3. The panel has **also suggested relaxations for micro, small and medium enterprises (MSMEs) under the IBC**. With realty firms, such as Jaypee Infratech, facing insolvency proceedings, the ordinance, once approved by President Ramnath Kovind and promulgated, will provide relief for home buyers facing hardships due to incomplete real estate projects.
4. Under the code, **financial creditor implies any person to whom a financial debt is owed**. The **financial debt can include money borrowed for interest**.
5. The panel had suggested that the government should exempt MSMEs from application of certain provisions of the code.
6. **Section 29A of the Code pertains to ineligibility criteria for bidders**. Besides, the panel had suggested that only those who contributed to defaults of the company or are otherwise undesirable should be ineligible from bidding for stressed assets under the Code.
7. For withdrawal of resolution application in exception circumstances, the panel has suggested that in such cases, there should be approval from the Committee of Creditors (CoC) with 90% of voting share.
8. In order to facilitate successful implementation of the resolution plan by the successful bidder, it has been proposed to allow one year time to obtain necessary

statutory clearances from central, state and other authorities or such time as specified in the relevant law, whichever is later,” the committee said.

9. In January, **the IBC was amended to prevent unscrupulous persons from misusing the law.** Wilful defaulters and those whose accounts have been classified as non-performing assets, among others, are barred from bidding for stressed assets.
10. **The IBC, which came into force on December 2016,** provides for **market-determined and time-bound insolvency resolution process.**

ANGEL INVESTORS GET INCOME TAX EXEMPTION

The tax department on 26 May 2018 **exempted angel investors from income tax on their investments in start-ups** with effect from April 11. The tax concessions are subject to certain conditions laid down by the Department of Industrial Policy and Promotion last month, which said that the share capital and share premium of the start-up should not exceed Rs 10 crore after such investments.

What

1. **Also the angel investor who plans to subscribe the shares in the start-up will have to fulfil prescribed criteria** and the start-up will have to procure a report from a merchant banker, specifying the fair market value of the shares in accordance with income tax rules.
2. The Central Government notifies that the **provisions of clause (viib) of sub-section (2) of section 56 of the said Act** shall not apply to consideration received by a company for issue of shares that exceeds the face value of such shares, if the consideration has been received for issue of shares from an investor in accordance with the approval granted by the Inter-Ministerial Board of Certification,” the Central Board of Direct Taxes (CBDT) said in the May 24 notification. **This notification comes into effect retrospectively from April 11, 2018.**
3. **The CBDT has also amended Rule 11 UA (2)(b) of I-T Act,** thereby making merchant banker valuation compulsory for the purpose of determining fair market value of unquoted equity shares, and omitted the word ‘accountant’
4. **The decision to give investors in start-ups exemption from income tax** was aimed at addressing a key issue faced by angel investors who put money during early growth stage, and would also provide level-playing field for all investors.
5. According to the notification, **an angel investor with a minimum net worth of Rs 2 crore or an average returned income of over Rs 25 lakh in the preceding three financial years** would be **eligible for 100 per cent tax exemption on investments** made into start-ups above fair market value.
6. Several start-ups had raised concerns over taxation of angel funds under Section 56 of the Income Tax Act, which provides for taxation of funds received by an entity. As many as 18 start-ups had received notices from tax authorities.
7. This section provided that where a closely held company issues its shares at a price more than its fair market value, the amount received in excess of the fair market value will be charged to tax the company as income from other sources.
8. **Start-ups incorporated before April 2016 can seek exemptions from section 56 of the Income Tax Act.**
9. However, the three-year income tax concession would be available to only those that are incorporated after April 1, 2016, and before April 2021.
10. Start-ups also enjoy income tax benefit for three out of seven consecutive assessment years **under section 80-IAC of the Act.** The government has so far extended tax benefits to just 88 start ups out of 8,765 that have been recognised by DIPP since January 2016.
11. An angel investor is the one who put funds in a startup when it is taking baby steps to establish itself in the competitive market. Normally about 300-400 start-ups get angel funding in an year. Their investment in a unit ranges between Rs 15 lakh to Rs 4 crore.
12. The government launched the **‘Start-up India’ initiative on January 16, 2016,** to build a strong ecosystem for nurturing innovation and entrepreneurship.

INDIA DRAGS US TO WTO

India has dragged the US to the World Trade Organisation's dispute settlement mechanism over the imposition of import duties on steel and aluminium. India has stated that the decision **will impact exports of these products to the US** and it is not in compliance with global trade norms. India has filed a dispute under the aegis of the WTO on the issue of imposing import duties by the US on certain steel and aluminium products. The country has sought consultations with the US under the WTO's dispute settlement mechanism.

What

1. Seeking consultation is the first step of dispute settlement process. If the two nations are not able to reach a mutually agreed solution through consultation, India may request for a WTO dispute settlement panel to review the matter.
2. **On March 9, US President Donald Trump imposed heavy tariffs on imported steel and aluminium items**, a move that has sparked fears of a global trade war.
3. Trump signed two proclamations that levied a 25 per cent tariff on steel and a 10 per cent tariff on aluminium imported from all countries except Canada and Mexico.
4. India too has sought exemptions from the hefty tariffs.
5. India's exports to the US in 2016-17 stood at \$42.21 billion, while imports were \$22.3 billion.
6. Both the countries are already involved in disputes at the global trade body. The disputes are in the areas of poultry, solar and steel.
7. The US recently filed a dispute against India on export incentives alleging these support measures harm its workers by creating an uneven playing field.

FINAL NORMS ON NET STABLE FUNDING RATIO

The Reserve Bank of India (RBI) on 17 May 2018 issued final guidelines on so-called net stable funding ratio (NSFR), to ensure banks have sufficient stable sources of funding to finance their activities over the long term. **The concept of NSFR emerged in the aftermath of the global financial crisis**, proposed by the Basel Committee on Banking Supervision to make banking sector more resilient.

What

1. **The NSFR limits overreliance on short-term wholesale funding**, encourages better assessment of funding risk across all on- and off-balance sheet items, and promotes funding stability, the Reserve Bank of India said, adding the ratio is defined as the amount of **available stable funding (ASF)** in relation to the amount of required stable funding (RSF).
2. **ASF is defined as the portion of capital and liabilities expected to be reliable over a year.**
3. The Reserve Bank of India has mandated an NSFR of at least 100%. But after an RBI assessment, individual banks may have to adopt stricter standards to reflect funding risk and compliance.
4. The date of NSFR implementation will be communicated later. Banks will have to submit NSFR data for every quarter within 15 days.
5. According to the Reserve Bank of India, these guidelines are based on NSFR rules published by the Basel Committee in October 2014 and take Indian conditions into account.
6. **Apart from NSFR, the Basel Committee also prescribed a liquidity coverage ratio (LCR)**, to ensure can banks respond promptly to potential liquidity disruptions over the short term.
7. Here, banks must have high quality liquid assets to survive an acute stress scenario lasting for 30 days. In India, LCR would be fully implemented from 1 January, 2019.

INDIA SIXTH WEALTHIEST NATION

India is the sixth wealthiest country in the world with a total wealth of \$8,230 billion, while the **US is the richest nation globally**, says a report. **According to the AfrAsia Bank Global Wealth Migration Review**, the **US is the wealthiest country in the world** with a

total wealth of \$62,584 billion, followed by China (\$24,803 billion) at the second place and Japan (\$19,522 billion) at the third place.

What

1. **Total wealth refers to the private wealth held by all the individuals living in each country.** It includes all their assets (property, cash, equities, business interests) less any liabilities. We exclude government funds from our figures. Larger countries have an advantage due to higher populations.
2. Other countries in the top 10 wealthiest list includes the **UK (\$9,919 billion), Germany (\$9,660 billion), India (\$8,230 billion), Australia (\$6,142 billion), Canada (\$6,393 billion)**, France (\$6,649 billion) and Italy (\$4,276 billion).
3. **Factors that will help in wealth creation in India** include, **large number of entrepreneurs, good educational system, robust outlook for IT, business process outsourcing**, real estate, healthcare and media sectors which will result in a 200 per cent rise 10-year wealth growth forecast.
4. In the coming decade, China is expected to witness a significant rise in total wealth to \$69,449 billion by 2027, while wealth of the US would be around \$75,101 billion.
5. Globally, the total private wealth held worldwide amounts to around \$215 trillion and there are around 15.2 million HNWI's in the world, each with net assets of \$1 million or more.
6. **There are about 584,000 multi-millionaires in the world**, each with net assets of \$10 million or more and 2,252 billionaires in the world, each with net assets of \$1 billion or more, the report added.
7. Global wealth is expected to rise by 50 per cent over the next decade, reaching \$321 trillion by 2027. The fastest growing wealth markets are expected to be Sri Lanka, India, Vietnam, China and Mauritius.

FIRST SHIPMENT OF OIL FROM UAE REACHES

The first consignment of 2 million barrels of crude oil from United Arab Emirates (UAE) reached the strategic petroleum reserve at Mangaluru on 21 May 2018. **The oil cargo from state-run Abu Dhabi National Oil Co. (ADNOC)**, the only one to partner with India on its crude oil reserve programme till date, is for filling up one of the two **strategic petroleum reserve (SPR)** caverns built by **Indian Strategic Petroleum Reserve Ltd (ISPRL)** at Mangalore. The filling up began with the two million barrels reaching Mangalore on 21 May 2018.

What

1. **ADNOC will bring additional crude oil** and fill up the Mangalore cavern later this year, India's petroleum ministry said in a statement on 21 May 2018.
2. **The oil storage facility will enable ADNOC meet market demand across Asia** at a time when the global energy architecture is changing, with buyers at the centre of growth plans of oil majors. The development also assumes importance given that UAE supplies 6% of India's crude oil imports.
3. **Of the 39 million barrels of strategic crude oil storage facility built by India**, the world's third largest oil importer, 5.86 million barrels will be supplied by ADNOC that can be used during an emergency.
4. ISPRL has an agreement with ADNOC under which the latter will store crude oil at its own cost. This agreement was signed during Prime Minister Narendra Modi's visit to UAE in February this year.
5. Further, as an incentive for storing crude oil at its own cost, **the agreement allows ADNOC to sell part of the crude oil to Indian refineries during normal times.**
6. **ADNOC's investment by way of crude oil in Indian SPR facility is the first time** that a private, including a foreign entity, is filling up an Indian SPR cavern with crude oil.
7. The US has also evinced interest to collaborate with India on its crude oil reserve programme as part of a strategic energy partnership that covers sectors such as oil and gas, power, renewable energy and coal.

8. **India's strategic crude oil storages are located at Visakhapatnam (1.33 million tonnes), Mangalore (1.5 million tonnes) and Padur (2.5 million tonnes).**
9. The entire Vishakhapatnam facility and one of the two caverns at the Mangalore facility have been filled with crude oil under government funding. The second cavern at Mangalore facility is now being filled by ADNOC of UAE at its own cost under the agreement with ISPRL.

SCIENCE AND TECHNOLOGY

TRAI PROPOSES USE OF BLOCKCHAIN TECHNOLOGY

Telecom regulator Trai on 29 May 2018 **issued new draft norms to curb pesky calls and SMSes by using blockchain technology** to ensure that telemarketing messages are sent only to those who have subscribed to them and that too by authorized entities. Blockchain will ensure two things—**non- repudiative and confidentiality**. Only those authorised to access details will be able to access subscriber details and only when they need to deliver service... Trai will become first organisation to implement this kind of regulation.

What

1. The **Telecom Commercial Communications Customer Preference Regulations 2018 draft** will be open for public comment till 11 June.
2. The new technology based norms will record all communication between subscribers and entities, capturing customer consent for information and authorised telemarketing agencies.
3. The new system will give access to only authorised agencies at the time they need to deliver service and details of only those subscribers who have agreed to receive the message.
4. The digital record will show entire communication between entries involved. The draft proposes to check misuse of repeated unsolicited calls being made even to those subscribers who have given consent. "A subscriber may have given consent for a service but that consent is liable to be misused.
5. Under the proposed regulation. **The subscriber will be able to revoke consent given to entities** whenever he or she desires through Trai app and other mechanism that will be provided under the regulation.

CLOUD ENABLED DATA CENTRE

A centralized cloud environment has been established to host multiple applications with simplified operations and increased application responsiveness to support the **new generation of distributed applications** while accommodating existing virtualized and non-virtualized environments. The Data Centre and Cloud Services are being offered from the Data Centres **established by NIC. The ICT Infrastructure at Bhubaneswar will be energized** in the modular fashion with software defined ICT Infrastructure. This will facilitate provisioning of services over Cloud with more agility and will also integrate with the NIC National Cloud Services.

It will provide following benefits

1. **On-demand access to ICT Infrastructure** to ensure easy availability and quick deployment of applications.
2. **Standardized platforms of deployment to deliver ICT systems** that are compliant to government policies and enable easy sharing of data across applications.
3. Service-oriented approach for sharing ICT infrastructure to achieve economies of scale.
4. Cost-effective, service-oriented approach for sharing computing resources.

Following portals will be released under NIC Offerings

1. **All districts of Odisha has been converted into SwaaS websites:** In a major boost, all districts of Odisha have migrated into NIC's S3WaaS platform (Secure, Scalable & Sugama Website as a Service).

2. Districts are the key entities in the government structure where actual execution of schemes and programmes take place and district level websites is an implicit cyber space and an important link between the administration and citizen.
3. **S3Waas has been envisaged to bridge this gap** and built with an objective to empower the District administrations to generate, configure, deploy and manage secure, scalable and accessible websites for publishing district specific information and services without much effort and technical knowhow.

Launch of E-Saubhagya- Mobile Application

1. With the launching of NDC Bhubaneswar Cloud service offerings of NIC would **allow departments to provision infrastructure and add to the computing capacity on demand** and release them when not required.
2. This elastic nature of the cloud allows departments not only to bring the solution to deployment quickly but also to scale up based on the demand of peak or low loads.
3. **In the traditional model departments** has to budget and procure infrastructure at the commencement of the project, this results in either over provisioning of infrastructure or under sizing of the requirements which leads to scalability challenges.
4. **This would result in waste of resources and refreshing technology would take longer.**
5. The Data Centres are the ideal solutions for offering a robust & highly available infrastructure with adequate redundancy enabling government to render effectively the e-Governance services to the citizens.

Flashback

1. **National Informatics Centre (NIC) was established in 1976**, and has since emerged as a "prime builder" of e-Government / e-Governance applications up to the grassroots level as well as a promoter of digital opportunities for sustainable development.
2. **NIC, through its ICT Network, "NICNET", has institutional linkages with all the Ministries /Departments of the Central Government,** 36 State Governments/ Union Territories, and about 708 District administrations of India.
3. **NIC has been instrumental in steering e-Government/e-Governance applications in government ministries/departments** at the Centre, States, Districts and Blocks, facilitating improvement in government services, wider transparency, promoting decentralized planning and management, resulting in better efficiency and accountability to the people of India.

WEB PORTAL 'PRAAPTI' LAUNCHED

In a bid to rein in **errant distribution companies (discoms)** that delay payments to power generation companies, **the Power Ministry has launched the Praapti web portal. 'Praapti' stands for 'Payment ratification and analysis in power procurement for bringing transparency in involving of generators'.** This portal will help power distribution companies be apprised of invoicing by generators and also bring transparency in their payments to them.

What

1. The power distribution companies **can clear the invoices and reply to claims raised by the generators on this portal.** The portal will also compare and rank State discoms on outstanding bills and the frequency of clearing them.
2. **In a demonstration of the portal's working, February 2018 data was shared.** A bulk of the claims for outstanding payments was to independent power producers and NTPC Ltd.
3. The portal will be updated as and when an invoice is raised by the power generator. And, every time a payment is made, that will also be logged in. Since the portal has just been launched, the updates will be more frequent.

IIT-KANPUR TO DEVELOP VTOL AIRCRAFT

The **Indian Institute of Technology-Kanpur** has signed a **Rs 15 crore-Memorandum of Understanding to develop prototypes for self-piloted vertical take-off and landing (VTOL) aircraft**. These prototypes will be used as **air taxis for civilians**. The deal was signed a couple of months ago with the **VTOL Aviation Pvt Ltd**, the project will be completed within a span of five years. The project will be a **milestone under the 'Make In India' project**.

What

1. A couple of instalments have already been allotted to **IIT-Kanpur researchers to conduct a pre-feasibility study** before embarking on the project.
2. The project was challenging, but at the same time offered several advantages. **The development of such prototypes would be revolutionary** and help ease traffic congestion, owing to the flexibility of aircraft to take off from and land on any terrain.
3. The VTOL technology **equips the aircraft to perform manoeuvres** that are impossible with traditional aircraft, and also comes across as a big advantage for air combat and rescue.
4. Other features like **an ability to carry enough payload and minimal readiness time make it handy in emergency situations** like rapid deployment of ground troops, precise location hovering for delivery of supplies.
5. These aircraft will also be **very useful for rapid medical evacuation of troops from difficult terrains**. VTOL aircraft can be used for surveillance, rescue mission, combat situations, paramedics, and civil aviation.
6. The IIT official, however, said air traffic regulations need to be calibrated in case of such aircraft. **VTOL aircraft are being seen as the futuristic solution to ease traffic congestion in major cities**.
7. These aircraft could be operated in both steered and pilotless modes from any trivial base like helipads or any ground surface, it has capabilities to sustain high ground speeds attributed to a fixed wing.

NEW ELEMENT WITH MAGNETIC PROPERTIES

Scientists have discovered that the chemical element ruthenium (Ru) is the fourth element to have unique magnetic properties at room temperature. The discovery, led by researchers at the University of Minnesota in the US, **could be used to improve sensors, devices in the computer memory and logic industry**, or other devices using magnetic materials.

What

1. **The use of ferromagnetism**, or the basic mechanism by which certain materials (such as iron) form permanent magnets or are attracted to magnets, reaches back as far as ancient times when lodestone was used for navigation.
2. Since then **only three elements on the periodic table have been found to be ferromagnetic at room temperature - iron (Fe), cobalt (Co), and nickel (Ni)**. The rare earth element **gadolinium (Gd) nearly misses by only 8 degrees Celsius**.
3. **Magnetic materials are very important in industry and modern technology** and have been used for fundamental studies and in many everyday applications such as sensors, electric motors, generators, hard disk media, and most recently spintronic memories.
4. As thin film growth has improved over the past few decades, so has the ability to control the structure of crystal lattices - or even force structures that are impossible in nature.
5. Researchers showed that **Ru can be the fourth single element ferromagnetic material by using ultra-thin films to force the ferromagnetic phase**.
6. This is an exciting but hard problem. It took us about two years to find a right way to grow this material and validate it. This work will trigger magnetic research community to look into fundamental aspects of magnetism for many well-known elements.
7. **The ability to manipulate and characterize matter at the atomic scale** is the cornerstone of modern information technology.

8. Magnetic recording is still the dominant player in data storage technology, but magnetic based random-access memory and computing is beginning to take its place.
9. **These magnetic memories and logic devices put additional constraints on the magnetic materials**, where data is stored and computed, compared to traditional hard disk media magnetic materials.
10. This push for novel materials has led to renewed interest in attempts to realise predictions which show that under the right conditions, non-ferromagnetic materials, **such as Ru, palladium (Pd) and osmium (Os) can become ferromagnetic.**
11. From an application perspective, **Ru is interesting because it is resistant to oxidation**, and additional theoretical predictions claim it has a high thermal stability - a vital requirement for scaling magnetic memories.

NEW DEVICE TO REMOVE ARSENIC IN WATER

ADO Additives and the Indian Institute of Science Education and Research (IISER), Kolkata, has devised a solution **to detect the level of arsenic in water** and also to remove it. The ADO Muktaadhara — **'Arsenic Sensor and Removal Media'** — promises to provide an effective sensing of the level of arsenic in water in a 'simple and cost-effective manner'.

What

1. According to Sanjib Parial, Managing director and CEO, ADO Additives, **while the arsenic sensor will be made commercially available in the market immediately**, the company is in talks with several water purifier brands to introduce the cartridge in their machines.
2. **The company will collaborate with the State government to distribute the sensors.** Plans are also afoot for the construction of a water treatment plant.
3. While the product will be initially available in West Bengal, based on its success, it will be rolled out pan-India, he said.
4. **West Bengal has the highest number of arsenic-affected people in the country.**
5. As per a recent report, there are 83 blocks in eight districts where the groundwater is arsenic contaminated.
6. Concerns have been rising of diseases due to exposure to high concentration of arsenic in groundwater even at deep levels.
7. **The methodology currently available for testing the level of arsenic in water is tedious**, expensive and difficult to be conducted at home, said Raja Shunmugam, Associate Professor and Ramanujan National Fellow, Department of Chemical Sciences, IISER Kolkata.
8. The arsenic sensor will be priced at 250 for 50 paper strips. The testing kits currently available in the market are priced at 6,000-8,000.

FIRST EVER WHO LISTS ESSENTIAL TESTS?

In a first, the World Health Organisation (WHO) has published a list of essential diagnostic tests which **identifies the most needed examinations for diseases** like **Type-2 diabetes, HIV and tuberculosis**. An accurate diagnosis is the first step to getting effective treatment, WHO director-general Dr Tedros Adhanom Ghebreyesus said. "No one should suffer or die because of lack of diagnostic services, or because the right tests were not available."

What

1. **The move assumes significance as many developing countries** have a list of essential medicines but **this is for the first time that any health agency has recommended adoption of diagnostics** as critical to prevention of premature deaths through early management of diseases.
2. **Of the 113 tests on the list, 58 are listed for detection and diagnosis of common conditions** that can help screening and management of patients.
3. **The remaining 55 tests are designed for detection, diagnosis and monitoring of "priority" diseases** such as HIV, tuberculosis, malaria, Hepatitis-B and C, human papillomavirus and syphilis.

- Health experts say essential diagnostics are key to improving access to treatment and while the government has been working in the direction to make diagnostic facilities accessible and available to all, the WHO's Essential Diagnostics List is likely to serve as a reference for countries to update or develop their own list of essential diagnostics.

FIRST EVER RAILWAYS TO USE AI

For the first time, **the railways will use artificial intelligence (AI) to control air circulation, signages and even supervision and maintenance work** in the **10.28 km-long tunnel in Imphal as part of its 110 km railway line from Jiribam to Manipur's capital city**. While the national transporter is already using this technique to detect flaws or problems in the signalling system on a real-time basis and rectifying it in order to avoid possible delays and mishaps, this is the first time that such a technology will be used in a tunnel in the country.

What

- The system will control air circulation in the system, along with other aspects.** It will alert the passenger in case of fire and help us in quick evacuation in case of any issue.
- This tunnel is especially unique as it also has a safety tunnel at every 500 meters.** In case of an accident or any mishap, all a passenger has to do is go 500 meters into the safety tunnel and through signages find his way out.
- The entire thing will be controlled by artificial intelligence. This tunnel is one of 47 such tunnels in the Jiribam-Imphal line and part of the railways' project to bring connectivity to the capital city.
- The system will continuously monitor signals, track circuits, axle counters and their sub-systems of interlocking, power supply systems, including the voltage and current levels, relays, timers – collect the data on a pre-determined interval and send them to a central location.** While it will help run trains safely through the tunnel, it will also help its management and maintenance.
- AI will help engineers and inspectors organise and analyse data collected about specific tunnels. The results of this data can then be evaluated and used to predict future tunnel deterioration patterns and corresponding maintenance needs. **This system will also be used in the Hyderabad, Mumbai and Ahmedabad metros.**

Flashback

- AI (artificial intelligence) is the simulation of human intelligence processes by machines,** especially computer systems.
- These processes include learning (the acquisition of information and rules for using the information), reasoning (using the rules to reach approximate or definite conclusions) and self-correction.
- Particular applications of AI include expert systems, speech recognition and machine vision.

MISCELLANEOUS

WORLD COMPETITIVENESS RANKING 2018

India has moved up to 44th position on IMD's World Competitiveness Ranking 2018, up one rank from last year. **The United States continues to be the most competitive country in the world,** followed by Hong Kong, Singapore, Netherlands and Switzerland. IMD measures a country's competitiveness based on its performance on **four key pillars — economy, government efficiency, business efficiency and infrastructure.**

What

- The improvement in India's performance over the past year** can be traced largely to an improvement in infrastructure.
- The country is now ranked 56th on infrastructure,** up from 60th last year. Much of this increase is due to an improved performance on basic and technological infrastructure. India ranked first in investments in the telecom sector.

3. **Global Competitiveness Index Global Competitiveness Index** “The India government’s efforts help run businesses efficiently in India shows, as the rating improved by 5.22% (2018),” noted the report.
4. However, while the country saw an improvement in investment activity, the report points to the fall in the country’s ranking on ‘domestic economy’ and ‘international investments’.
5. **Some of the challenges which India has to face for the year 2018 would be skilling of manpower and employment generation**, streamlining the implementation of goods and services tax and balancing high growth with sustainable development goal.
6. Digital literacy and adequate bandwidth at rural areas and mobilisation of resources for infrastructure development needs are a few key areas where the government needs to focus on.”
7. **The 15 biggest improvements in India during the last year** include bandwidth speed, mobile broadband subscribers, adjusted consumer price inflation, pupil-teacher ratio in primary education, total health expenditure, exchange rates, pupil-teacher ratio in secondary education, labour productivity, computers per capita, productivity, brain drain, student mobility inbound, credit, and banking and financial services.

CSIR BAGS INNOVATION AWARD 2018

Council of Scientific & Industrial Research has been awarded the Clarivate Analytics India Innovation Award 2018 in the Government Research Organizations Category.

This award yet again recognizes CSIR as the top innovator. The citation reads as “CSIR is a pioneer of **India’s intellectual property movement** and a leader in terms of sheer volume of patents published during the analysis period. While **CSIR’s patent portfolio touches a wide spectrum of areas in science and technology**, some of the top filing areas include: **polymers and applications in medicine, materials, electrical industry, pharmaceutical research, fermentation, enzymes, catalysis and applications**, chemical & biological treatment of water, etc.

What

1. **With over 2800 citations received by their patents**, CSIR scored well on patent citation impact in the government research organization category indicating the relevance and impact of CSIR’s innovations.
2. A look at one such cited patent, titled **Magnetic nanoparticles decorated activated carbon nanocomposites for purification of water**, indicates that it is very relevant to one of the pressing needs of the society at large in India”.
3. **Every year, Clarivate Analytics – formerly the IP & Science division of Thomson Reuters** - recognizes the most innovative companies in India according

Flashback

1. CSIR has a dynamic network of 38 national laboratories, 39 outreach centres, 3 Innovation Complexes and 5 units. CSIR’s R&D expertise and experience is embodied in about 4600 active scientists supported by about 8000 scientific and technical personnel.
2. **CSIR covers a wide spectrum of science and technology – from radio and space physics, oceanography, geophysics, chemicals, drugs, genomics, biotechnology and nanotechnology to mining, aeronautics, instrumentation, environmental engineering and information technology.**
3. It provides significant technological intervention in many areas with regard to societal efforts which include environment, health, drinking water, food, housing, energy, farm and non-farm sectors.
4. Further, CSIR’s role in scientific human resource development is noteworthy. According to the **SCImago Institutions Ranking World Report 2017, CSIR has been ranked 9th in the world amongst the 1207 government institutions**, with an overall global ranking of 75 in the world, covering 5250 institutions.

to **patent-related metrics** that get to the essence of what it means to be truly innovative.

4. This analysis is done using proprietary Clarivate Analytics data and tools. The evaluation is strictly driven by metrics for both patent volume (patents published) as well as patent quality (grant success rate, extent of globalization, and citations).
5. **The Council of Scientific & Industrial Research (CSIR), a contemporary R&D organization**, is known for its cutting edge R&D knowledge base in diverse science & technology areas.

NEW CHIEF OF LALIT KALA AKADEMI

President **Ram Nath Kovind** appointed Mumbai-based sculptor **Uttam Pacharne** the **chairman of Lalit Kala Akademi**. Pacharne, who is a member of the advisory committees at Kala Academy, Goa, and PL Deshpande State Lalit Kala Academy, Maharashtra, received the **National Lalit Kala Award in 1985. He was the Chairman of the 127-year-old Bombay Art Society (BAS) for three terms.** President of BAS Vasudeo Kamath, said: "Pacharne is a noted name in the region. He works in mediums such as stone, bronze, clay and fibre, and is equally comfortable in making realistic as well as abstract sculptures."

What

1. **In 2006, he created a 13-foot bronze statue of Veer Savarkar at Borivali park**, which has been dubbed to be the tallest statue of Savarkar in India. Last year, his statue of Deendayal Upadhyay was installed on the Gorakhpur University campus.
2. However, his most popular work is the Swatantra Jyot installation at the Andaman Cellular Jail, which became a bone of contention between the BJP and the UPA government in 2004 after Mani Shankar Aiyar, then Union petroleum minister, had got Savarkar's quote removed from the plaque.
3. **BJP leader Ram Naik, who had commissioned the work in 2003**, later pointed out later that by doing this, Aiyar violated the intellectual property rights of the sculptor.
4. Pacharne will hold office at the Akademi for three years from the date on which he assumes the charge of his office, a statement issued by the Ministry of Culture said.
5. In March, ML Srivastava, Joint Secretary (Akademies), Ministry of Culture, was appointed protem chairman of the Lalit Kala Akademi.

Flashback

1. **The Lalit Kala Akademi or National Academy of Art is India's national academy of fine arts.**
2. It is an autonomous organisation, **established in New Delhi in 1954 by Government of India** to promote and propagate understanding of Indian art, in and outside the country.
3. **It provides scholarships and a fellow program**, and sponsors and organises exhibitions in India and overseas. **It publishes a bilingual journal.**
4. **It is funded by the Union Ministry of Culture.** Its headquarters are at Ravindra Bhawan, Ferozshah Road, New Delhi.
5. In April 2015, Government of India took over management control of Lalit Kala Akademi citing complaints regarding alleged administrative and financial irregularities in its functioning.

FIRST PERSON ON NO-FLY LIST

A **Mumbai-based jeweller**, who created a hijack scare onboard a Jet Airways flight in October last year, **has become the first person to be put on the 'National No Fly List'**, eight months after it was unveiled. Incidentally, **he was also the first to be booked under the stringent Anti-Hijacking Act**, which **had replaced the vintage law of 1982.** 37-year-old Birju Kishore Salla was arrested in October last year by the crime branch following **the emergency landing made by the Mumbai-Delhi Jet Airways plane at the Ahmedabad airport** after the pilot was alerted about a note carrying details of hijackers and a bomb that was found in the plane's washroom by a cabin crew.

What

1. **Mr Salla, the guy who had created the hijack scare in a Jet Airways flight last year**, is the first person to be put on the no-fly list, a senior Directorate General of Civil Aviation (DGCA) official said.
2. **Under the revised civil aviation requirement (CAR)**, a passenger can be considered to be placed under three categories of unruly behaviour, with category three bearing the harshest punishment. **Salla has been placed under the third category.**
3. It says that **if a passenger's behaviour is considered life-threatening like affecting the safety of the aircraft** then he or she can be banned for up to two years or more.
4. Unruly behaviour is probed by an internal committee set up by every domestic airline under the chairmanship of a retired District and Sessions judge.
5. Its members are from different scheduled airlines and passenger associations, consumer associations and retired officials of the consumer dispute redressal forum.
6. **Salla is a multi-millionaire jeweller having his office in the Zaveri Bazar area of Mumbai** and a flat in a posh locality of the metropolis.
7. According to the DGCA, it is the responsibility of Jet Airways now to inform other airlines about the grounding of this particular passenger under the CAR. The DGCA will continue to maintain a database of such passengers.

BILLIONS REVENUE FROM E-VISA SCHEME

The government has earned Rs 14 bn as revenue from the **highly successful e-Visa scheme, offered to citizens of 163 countries** visiting India as tourists, since its launch in 2014. Union Home Ministry officials said the **popular e-Visa scheme was availed by 1.9 million tourists in 2017** and it is expected that more than 25 lakh tourists will avail the facility in 2018. **Since its launch in 2014, the e-Visa scheme has earned revenue of more than Rs 14 bn**, a senior home ministry official said.

What

1. **The e-Visa fees are divided into four slabs of zero, USD 25, USD 50 and USD 75** which were fixed on reciprocity and depending on nationality.
2. **The e-Visa scheme has been implemented by the foreigners' division of the home ministry** with a view to improving the efficiency and transparency of various services being provided to foreign nationals.
3. **The facility is now available for nationals of 163 countries** for entry into India through **25 international airports and five sea ports.**
4. Under the e-visa scheme, an applicant, when an online application is submitted, receives an e-mail authorising him or her to travel to India after it has been approved.
5. The tourist can travel with a print-out of this authorisation. On arrival, the visitor has to present the authorisation to the immigration authorities who would then allow the entry into the country.
6. **The e-Visa scheme also covers business and medical categories, apart from tourism. Visitors on e-Visa could stay in India for two months.**
7. The window for application under **e-Visa scheme has been increased from 30 days to 120 days** and duration of stay on e-Visa has been increased from 30 days to 60 days with double entry on e-tourist and e-business visa and triple entry on e-medical visa.
8. With a view to promoting cruise tourism, cruise tourists with e-Visas have been exempted from the requirement of biometric enrolment till December 31, 2020, as many of the cruise ships coming to India are mega ships with 2,000 -4,000 passengers on board.

HISTORIC CIRCUMNAVIGATION COMPLETED

Indian Naval Sailing Vessel Tarini (INSV Tarini) entered Goa harbour and came alongside the INS Mandovi jetty on completion of a historic global circumnavigation voyage on 21 May 18. The **all-women crew of Tarini was received at the jetty by Smt. Nirmala Sitharaman**, the Hon'ble Raksha Mantri who had also flagged them off on 10 Sep last year.

What

1. It was a poignant moment for the “**Navika Sagar Parikrama**” team which included a number of naval personnel who worked behind the scenes from the time of origination of the idea of circumnavigation by an all women crew, right through the planning, implementation and training till the **successful execution of the voyage**.
2. **This is the first-ever Indian circumnavigation of the globe by an all-women crew.** The vessel was skippered by Lieutenant Commander Vartika Joshi, and the crew comprised Lieutenant Commanders Pratibha Jamwal, P Swathi, and Lieutenants S Vijaya Devi, B Aishwarya and Payal Gupta.
3. During her 254 day long voyage, **the vessel has covered over 22,000 Nautical miles, visiting five countries – Australia, New Zealand, Falkland Islands (UK), South Africa and Mauritius.**
4. At each of these countries the crew received a rousing welcome both from the Indian diaspora as also from the local community.
5. During the course of her voyage, the vessel has met all criteria of circumnavigation, viz. **crossing the Equator twice, crossing all Longitudes**, as also the three great capes (**Cape Leeuwin, Cape Horn and Cape of Good Hope**).
6. **The expedition was covered in six legs**, with halts at 5 ports: **Fremantle (Australia), Lyttleton (New Zealand), Port Stanley (Falklands), Cape Town (South Africa) and Port Louis (Mauritius).**
7. The crew and the vessel encountered rough seas on numerous occasions during the voyage. The extremely cold climate coupled with stormy weather conditions especially in the Southern Ocean made the task of circumnavigating the globe highly daunting and challenging. The vessel also witnessed winds in excess of 60 knots and waves up to 7 meters high, whilst crossing the Pacific Ocean.
8. **The indigenously-built INSV Tarini is a 56-foot sailing vessel, which was inducted in the Indian Navy in February 2017**, and has showcased the ‘Make in India’ initiative on the International forum.
9. **The expedition titled ‘Navika Sagar Parikrama’** is in consonance with the National policy to empower women to attain their full potential. It has showcased ‘Nari Shakti’ on the world platform and helped change societal attitudes and mindset towards women in India by raising visibility of their participation in challenging environs.
10. **The crew also collated and updated meteorological, ocean and wave data on a regular basis for accurate weather forecast by India Meteorological Department (IMD)**, as also monitored and reported marine pollution on the high seas. They interacted extensively with the local populace, especially children, during the port halts to promote Ocean sailing and the spirit of adventure.

NIPAH VIRUS INFECTION

At least three people have died due to a rare infection caused by Nipah virus in Kerala. The **National Institute of Virology** in Pune has attributed three deaths in Changaroth village of Perambra to the virus. Medical camps have been **organised to assist people who may be developing symptoms of viral fever**. A control room has also been set up in order to inform people about the symptoms and treatment of the virus.

What

1. **Nipah is infection spread through fruit bats and can both affect humans as well as domestic animals including dogs, cats, goats, horses and sheep.** Also referred as NiV virus, the infection in humans has a range of clinical presentations, from asymptomatic infection to acute respiratory syndrome and fatal encephalitis.
2. **NiV was first identified during an outbreak of disease that took place in Kampung Sungai Nipah in Malaysia during 1998.** Then, pigs were the intermediate hosts. However, in subsequent NiV outbreaks, there were no intermediate hosts.
3. **The disease first appeared in human beings in 2004 in Bangladesh.** The infection was a result of consuming date palm sap that had been contaminated by infected fruit bats.

4. **In Bangladesh and India, there have been reports of possible human-to-human transmission of the disease.** Up to March 31, 2012 a total of 209 human cases of NiV infection in Bangladesh were reported; 161 (77%) of them died, the WHO website said.
5. **In India, the disease was first reported in 2001 and then in 2007.** Seventy-one cases with 50 deaths were reported during the two outbreaks. Both the times, the disease was reported in areas of West Bengal bordering Bangladesh.
6. **Indonesia, Thailand and Timor-Leste have identified antibodies against NiV in the bat population** and the source of the virus has been isolated.
7. Nipah cases tend to occur in a cluster or as an outbreak, although 18% of cases in Bangladesh were isolated. NiV outbreaks mostly occur between the period of December and May.
8. **The infection presents as an encephalitic syndrome** marked by fever, headache, drowsiness, disorientation, mental confusion, coma, and potentially death. The virus can be transferred from a human through close contact, body fluids, saliva and cough.
9. **There is no vaccine for the disease and the primary treatment is intensive supportive care, according to WHO.**

IEEFA REPORT

Five out of the world's biggest under-construction solar parks, designed to accommodate total solar power capacity of **7,475 MW, are in India.** When one of them — **Bhadla Industrial Solar Park, in Rajasthan** — houses solar plants to its fullest capacity (2,225 MW), it will be the world's biggest. When it comes to operating solar plants, **India has two of the world's top ten**, says a report on emerging solar trends produced by the US-based **Institute for Energy Economics and Financial Analysis (IEEFA)**, a research body backed by a bunch of philanthropic organisations including the **Rockefeller Brothers Fund and the Rockefeller Family Fund.** These two are the 1,000-MW ultra mega project in **Kurnool, Andhra Pradesh** and the **Adani group's 648-MW Kamuthi project in Tamil Nadu.**

What

1. **India has made rapid strides in installation of solar power capacity.** In the calendar year 2017, India contributed 8 GW to the 98 GW global addition of solar capacity, or 8.1 per cent. (Incidentally, China contributed 53 GW.) As of end March 2018, India had 21,651 MW of solar plants, thanks to 9009.81 MW set up in the financial year 2017-18 alone.
2. Some distinctions
3. **The world's biggest single rooftop solar plant happens to be in India.** The **19-MW Dera Baba rooftop solar project in Amritsar, Punjab, has been installed on the 82-acre campus of the RSSB Educational and Environmental Society**, says the IEEFA report. However, India is likely to lose this distinction to the US, where Tesla is building a 70-MW rooftop solar plant on its 'Gigafactory' in Reno, Nevada.
4. As the IEEFA report notes, **India's name also figures in the list of top 'corporate PPAs'** — instances when companies directly buy solar power from developers.
5. The Airports Authority of India plans to buy power from 200 MW of solar plants. **India's Kochi airport, with 40 MW, is the world's first airport to be fully powered by solar energy.**
6. **India could also emerge as one of the leaders in floating solar plants.** JSW Energy has announced plans to scale up its 4-MW floating solar plant to 250 MW that would come up across several reservoirs the company owns.
7. In March, the government of India-owned SECI tendered out a 100-MW solar plant to be put up on the reservoir of Rihand Dam in Uttar Pradesh. In the following month, SECI raised the proposed capacity to 150 MW.
8. But India draws a blank in 'concentrated solar power' and also fares poorly in storage and solar manufacturing capacity, the IEEFA report shows.

COMMISSION FOR THOOTHUKUDI VIOLENCE

The Tamil Nadu government on 23 May 2018 **appointed a one-person Commission of Inquiry headed by a retired judge of the Madras High Court** to probe the violence at Thoothukudi in which ten people were killed. **The inquiry will cover the “law and order incidents following the siege of the District Collectorate** by thousands of persons violating prohibitory orders.

What

1. **Appointing retired Judge Aruna Jagadeesan for the task**, the government said she would submit her report to the government. However, the time-frame for submitting the report has not been specified.
2. **The violence during a protest, seeking permanent closure of Vedanta group’s Sterlite Copper plant over alleged pollution issues** also saw several dozens of men and women sustaining an injury which includes police personnel as well.
3. According to the police, eight men and two women were killed in the violence. Hurling stones and setting government vehicles and public property on fire, the agitators went on the rampage in the town, about 600 km from Tamil Nadu capital Chennai.

Background

1. **Vedanta’s Sterlite Copper plant**, which is facing intense protests over its failure to follow environmental norms, is a business unit of Vedanta Limited, **formerly known as Sesa Sterlite Limited/Sesa Goa Limited**.
2. Vedanta Limited is one of the world’s largest diversified natural resource majors with operations in zinc-lead-silver, oil and gas, iron ore, copper, aluminium and commercial power.
3. **The company has units in Tamil Nadu and in the Union Territory of Dadra & Nagar Haveli**. It operates a 400,000 metric tonnes per annum (MTPA) copper smelter as well as a 160 MW coal-based power plant in Thoothkudi (Tuticorin).
4. **Apart from this, it has two copper rods plants in Silvassa** — one in Chincpada and another in Piparia. Tuticorin, a coastal city, hosts one of the biggest ports in the country, aiding the company’s operations.
5. **Protests against Sterlite Copper’s operations, which began nearly two decades ago**, intensified earlier this year after the company announced expansion of its plant, entailing a doubling of the capacity of the smelter to 800,000 tonnes per year.
6. At least nine people were killed in police firing on 22 May 2018, as **15,000 people marched towards the collectorate demanding closure of the plant**. Residents claim the plant’s operations have contaminated the ground water in the area, causing severe health problems.

MAN BOOKER PRIZE 2018

Polish novelist Olga Tokarczuk won the prestigious Man Booker International Prize for fiction with “Flights,” a novel that charts multiple journeys in time, space and human anatomy. “Flights” beat five other finalists, including Iraqi writer Ahmed Saadawi’s horror story “Frankenstein in Baghdad” and South Korean author Han Kang’s meditative novel “The White Book.”

What

1. **Tokarczuk’s novel combines tales of modern-day travel with the story of a 17th century anatomist** who dissected his own amputated leg and the journey of composer Frederic Chopin’s heart from Paris to Warsaw after his death.
2. The judging panel led by writer Lisa Appignanesi called the “Flights” a witty, playful novel in which “the contemporary condition of perpetual movement” meets the certainty of death.
3. **Tokarczuk is one of Poland’s best-known authors**. She has been criticized by Polish conservatives — and received death threats — for criticizing aspects of the country’s past, including its episodes of anti-Semitism.
4. The prize is a counterpart to the Man Booker Prize for English-language novels and is open to books in any language that have been translated into English.
5. The 50,000-pound (\$67,000) award is split evenly between the writer and her translator, Jennifer Croft.

Flashback

1. **The prize, which launched in 1969**, aims to promote the finest in fiction by rewarding the best novel of the year written in English and published in the United Kingdom.
2. To maintain the consistent excellence of The Man Booker Prize, judges are chosen from a wide range of disciplines, including critics, writers and academics, but also poets, politicians and actors, all with a passion for quality fiction.
3. **The winner of The Man Booker Prize receives £50,000** and, like all the shortlisted authors, a cheque for £2,500 and a designer bound copy of their book.
4. Fulfilling one of the objectives of the prize - to encourage the widest possible readership for the best in literary fiction - the winner and the shortlisted authors now enjoy a dramatic increase in book sales worldwide.
5. **The Man Booker International Prize was established in 2005, biannually** rewarding an author for a body of work originally written in any language as long as it was widely available in English.

THE GLOBAL BURDEN OF DISEASE STUDY

India ranks 145th among 195 countries in terms of quality and **accessibility of healthcare behind its neighbours like China, Bangladesh, Sri Lanka and Bhutan**, according to a Lancet study. **The Global Burden of Disease study**, however, mentioned that India has seen improvements in healthcare access and quality since 1990. In 2016, India's healthcare access and quality scored at 41.2 (up from 24.7 in 1990).

What

1. **India lags behind China (48)**, Sri Lanka (71), Bangladesh (133) and Bhutan (134) while its health index was better than those of Nepal (149), Pakistan (154) and Afghanistan (191).
2. The five countries with the highest levels of healthcare access and quality in 2016 were **Iceland (97.1 points), Norway (96.6), the Netherlands (96.1), Luxembourg (96.0)**, and Finland and Australia (each with 95.9).
3. The countries with the lowest scores were the Central African Republic (18.6), Somalia (19.0), Guinea-Bissau (23.4), Chad (25.4), and Afghanistan (25.9).
4. **India performed poorly in tackling cases of tuberculosis, rheumatic heart diseases, Ischaemic heart diseases**, stroke, testicular cancer, colon cancer and chronic kidney disease among others.
5. Subnational inequalities were particularly pronounced in China and India, although high-income countries, including England and the US, also saw considerable local gaps in performance.
6. **The study stated large disparities in subnational levels of personal healthcare access** and quality emerged for several countries, especially China and India.
7. These results emphasise the urgent need to improve both access to and quality of health care across service areas and for all populations; otherwise, health systems could face widening gaps between the health services they provide and the disease burden experienced by local communities.
8. **The study used an index to measure the quality and accessibility of healthcare, based on 32 causes of death** which should be preventable with effective medical care. Each of the 195 countries and territories assessed were given a score between 0-100. For the first time, the study also analysed healthcare access and quality between regions within seven countries: Brazil, China, England, India, Japan, Mexico, and the US.
9. The study found that China and India had the widest disparities in healthcare access and quality with 43.5 and 30.8 point differences, respectively. Japan had the narrowest differences with 4.8 points.
10. **In 2016, the global average healthcare access and quality score was 54.4**, increasing from 42.4 points in 2000.
11. Disparities between countries remained similar in 2016 and 2000, with a 78.5 point gap between the best and worst performing countries in 2016 (18.6 in the Central

African Republic and 97.1 in Iceland), compared with 79.3 points in 2000 (13.5 in Somalia and 92.8 in Iceland).

THE UNION REPORT

India not only has the highest burden of paediatric tuberculosis but also records the maximum gap between children who require preventive therapy and those who actually receive it, according to a **report released at the 71st World Health Assembly** — the decision-making body of World Health Organization (WHO). The report, released by **international voluntary scientific organisation The Union**, shows that **only 1.84 per cent of children, aged up to 14, in India receive preventive TB treatment.**

What

1. **Preventive therapy is given to those who do not have active TB**, but live in contact of infected TB patients and are prone to the bacterial infection. In India, a six-month regimen is provided under **Revised National Tuberculosis Control Programme (RNTCP)** as preventive therapy.
2. **The Union report**, however, finds that of projected 3.6 lakh Indian children in need of preventive therapy, only 6,637 (1.84 per cent) were given the therapy in 2016.
3. The gap in access to preventive therapy in India is the largest globally, followed by Democratic Republic of Congo where of 75,000 children exposed to TB, only 4,725 are receiving preventive treatment.
4. **Most TB-related deaths in children occur in young children who have not been diagnosed or treated**, representing a missed opportunity for prevention.
5. The burden of multi drug-resistant TB (MDR-TB) in children is still largely unknown, but it is estimated that less than 10 per cent of all children with MDR-TB are detected and treated.
6. According to the WHO, **only 13 per cent of children eligible to be treated with isoniazid**, as preventive therapy, receive it globally.
7. Current preventive therapy involves primary screening. A child at risk of contracting TB is put on six-month regimen for preventive therapy.
8. **Data analysed in 20 countries showed that India recorded 1.2 lakh children**, the maximum, who contracted TB in 2016, followed by China at 53,000 and Philippines at 37,000 children aged up to 14.

CYCLONE MEKUNU LASHES OMAN

Cyclone Mekunu blew into the Arabian Peninsula early on 26 May 2018, **drenching arid Oman and Yemen**, cutting off power lines and leaving at least three dead and 40 missing. **Portions of Salalah, Oman's third-largest city**, lost electricity as the cyclone made landfall. **The Arabian Sea churned** on 26 May 2018 morning, sending mounds of sea foam into the air.

What

1. As **Mekunu barreled overhead**, the eye of the storm provided a moment's respite. At one luxury hotel, which already had evacuated its guests, workers sat down early for a traditional "suhoor," a meal Muslims eat before sunrise during the holy fasting month of Ramadan.
2. **India's Meteorological Department** said the **storm packed maximum sustained winds of 170-180 kilometers (105-111 miles) per hour** with gusts of up to 200 kph (124 mph). It called the cyclone "extremely severe."
3. The **Cyclone is named by Maldivies**. It means "mullet" in Dhivehli, the language of Maldivians. In the past, cyclones were christened with exotic names like Helen, Lehar, Sagar and Mora.

CHILDHOOD INDEX 2018

India finds space at 113 in Save the Children's "End of Childhood Index 2018" which **ranked 175 countries this year** against indicators to determine the quality of childhood children have access to. **Ranked at 116 last year, the improvement in India's**

overall score by 14 points from 754 to 768 on a scale of 1000, is being attributed to reduced rate of child marriage. The study however, puts India in the category of countries characterised by poverty and discrimination against girls. However, **the Index which is part of the report titled “The Many Faces of Exclusion”** shows that under five mortality rate (deaths per 1000 live births) was 43 which is a cause of concern. Also child stunting (children aged 0-59 months) was 38.4% and rated as high.

What

1. On the child marriage issue the Index **shows that adolescents currently married or in union (girls aged 15-19) was 15.2%**.
2. This was 21.1% in the 2017 index where India figured as 116 out of 172 countries ranked. It is significant to point that the child marriage data assessed does not include data on consensual unions.
3. **The Index this year ranked 175 countries** with regards to where childhood is threatened as a result of poor health, malnutrition, exclusion from education, child labour, child marriage, early pregnancy and extreme violence.
4. In terms of the global scenario the report states that more than half of all children globally – over 1.2 billion – are threatened by conflict, widespread poverty or discrimination against girls.
5. **Launched by the voluntary organisation to mark International Children’s Day on June 1**, the report examines how these three key factors are robbing children of their childhoods around the world.
6. More than one billion children live in countries plagued by poverty; 240 million in countries affected by conflict and fragility; and more than 575 million girls live in countries where gender bias is a serious issue.
7. Almost 153 million children are living in 20 countries affected by all three threats — including South Sudan, Somalia, Yemen and Afghanistan,” it is stated in the report.
8. **It is reported that malnutrition, disease and inadequate healthcare kill over 20 times** as many children in war zones as conflict-related violence.
9. The incidence of child labour in countries affected by armed conflict is 77 per cent higher than the global average. Conflict also makes girls more vulnerable to child marriage.
10. It report notes that despite their economic, military, and technological might, **the United States (36th), Russia (37th) and China (40th)** trail all western European countries in the index. Singapore and Slovenia are placed at the top sharing the first place in the index and Niger figures at the end of the list at 175.

MODEST TARGET FOR ELECTRIC VEHICLE SALES

The Union government has **set a target of increasing the number of electric cars to 4% of the overall new vehicle sales in the next five years starting from 2018-19**. The target, which takes into consideration the impediments on the road to successful adoption of electric mobility, has been set for the next stage of the **Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme**, according to the documents sent by the **department of heavy industries (DHI)** to the **executive finance committee (EFC)**.

What

1. In the **National Electric Mobility Mission Plan (NEMMP) unveiled in 2013** by then prime minister Manmohan Singh, the **target was to achieve sales of 5-6 million electric and hybrid vehicles by 2020** which is much higher than the current number of these vehicles and the target being set by the government in the FAME scheme.
2. The Union government has now realized that **it will not be easy to adopt electric mobility or any other form of future technology** unless we have the proper infrastructure for it.
3. There are also other challenges such as that regarding development of local manufacturing of components which will take some time. As of now we are way behind the target set by NEMMP.

4. According to the documents, **DHI has estimated that Rs9, 381 crore will need to be spent in the next five fiscal years to 2022-2023.** In the first year, the funds required will be Rs629 crore, while in the subsequent years it will Rs1,215 crore, Rs2,304 crore, Rs2,604 crore, and Rs2,629 crore.
5. DHI also wants to earmark Rs1,000 crore for promoting the manufacture of electric vehicle components, Rs5,250 crore for demand incentives and Rs1,000 crore for setting up charging infrastructure in the next five years.

OUTLINE OF ROHINGYA RETURN DEAL

The **United Nations said on 31 May 2018 it had struck a deal with Myanmar** aimed at eventually allowing hundreds of thousands of Rohingya Muslims sheltering in Bangladesh to return safely and by choice. **Since August 2017, about 700,000 Rohingya Muslims have fled a military crackdown in mainly Buddhist Myanmar**, many reporting killings, rape and arson on a large scale, U.N. and other aid organisations have said.

What

1. Myanmar's government said in a brief statement late on 31 May 2018 the MoU would be signed "soon" and U.N. agencies would "support access to livelihoods through the design and implementation of community-based interventions".
2. Myanmar civilian government spokesman Zaw Htay said **he had nothing to add to the statement.** Myanmar and Bangladesh agreed in January to complete the voluntary repatriation of the refugees within two years but differences between the two sides remain and implementation of the plan has been slow.
3. In a separate statement, Myanmar's government said it would set up an independent commission to investigate "the violation of human rights and related issues" in Rakhine State following the army operation there in response to attacks by Rohingya insurgents on security posts.
4. **The commission will be assisted by international experts**, the statement said without elaborating. The United Nations and aid agencies have described the crackdown on the Rohingya as "**a textbook example of ethnic cleansing**", an accusation Myanmar rejects.
5. The Security Council asked Myanmar in November to ensure no "further excessive use of military force" and to allow "freedom of movement, equal access to basic services, and equal access to full citizenship for all".
6. Myanmar has for years denied Rohingya citizenship, freedom of movement and access to basic services such as healthcare. Many in Myanmar regard the Rohingya as illegal immigrants from mostly Muslim Bangladesh.

Flashback

1. **FAME, launched in fiscal 2015**, was meant **to run for two years until March 2017.** The scheme was extended twice till March 2018.
2. In April, the Union government **decided to extend the FAME scheme by six months until 30 September 2018**, or till the time the second phase of the scheme is approved by it.
3. According to the EFC memorandum on 26 April, DHI has written to the ministry of electronics and information technology (MEITY) to subsume the rest of the electric vehicle components within their scheme MSIPs.
4. If this is found acceptable, MEITY may include electric vehicle (EV) components in their scheme subject to suitable increment in the budget for it.
5. The procurement of the first set of 500 electric vehicles by Energy Efficiency Services Ltd (EESL) from Tata Motors and Mahindra and Mahindra was delayed because of the lack of charging infrastructure.