

My Notes....

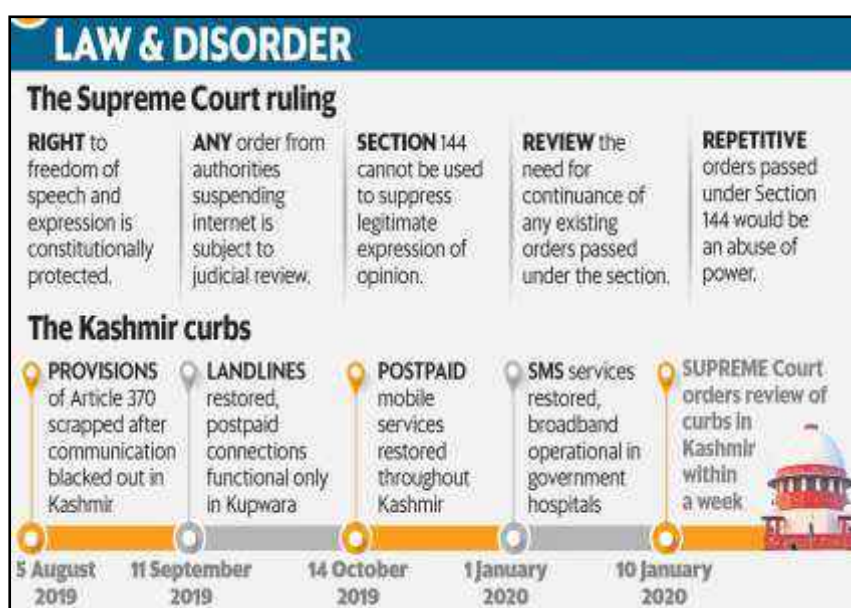
NATIONAL

INTERNET SHUTDOWNS VERDICT

The Supreme Court declared that the fundamental right to freedom of speech and expression and the right to carry on trade or business using the Internet are constitutionally protected on 10 January 2020. This came in the backdrop of the five-month-long **Internet shutdown in Kashmir**. While **India's longest Internet suspension** continues, the verdict has laid down a framework of how the Internet can be suspended, and what rights and legal recourses a citizen has when it is suspended.

What

- Although the court stopped short of ruling that access to Internet is a fundamental right, it said that the Internet as a medium is used to exercise other fundamental rights.
- Expression through the Internet has gained contemporary relevance and is one of the major means of information diffusion, the court said.
- The observations made by the court essentially laid out guidelines that Internet shutdowns cannot be arbitrary and can be challenged in courts.
- However, for Kashmir, the court did not test the legality of the shutdown and has instead directed the government to review the orders.
- The court also said the orders suspending the Internet would have to necessarily state how the action was justified and proportionate to the imminent threat to law and order.



Procedure to suspend Internet services

- The Information Technology Act, 2000, the Criminal Procedure Code (CrPC), 1973 and the Telegraph Act, 1885 are the three laws that deal with suspension of Internet services.
- Before 2017, Internet suspension orders were issued under Section 144 of the CrPC.
- A law retained from the colonial era, it empowers a district magistrate, a sub-divisional magistrate or any other executive magistrate specially empowered by the state government in this behalf to issue orders to prevent and address urgent cases of apprehended danger or nuisance.
- The use of Section 144 to suspend mobile internet was challenged before the Gujarat High Court in 2015 but the court upheld the power of the magistrate to issue such orders.
- In 2017, the central government notified the Temporary Suspension of Telecom Services (Public Emergency or Public Service) Rules under the Telegraph Act to govern suspension of Internet.

6. These Rules derive their powers from Section 5(2) of the Indian Telegraph Act, **which talks about interception of messages in the** “interests of the sovereignty and integrity of India”.

GLOBAL ELECTRICITY GRID PLAN

India has started consultations with the World Bank as its technical partner to implement an ambitious global electricity grid plan pitched by Prime Minister Narendra Modi. With the world grappling with climate change concerns, the multilateral funding organization may prepare a feasibility report for the project announced in October 2018, which can further bolster **India’s image as a clean energy champion**. The proposed global grid plans to leverage solar power generated in geography to feed the electricity demands of other nations. This comes against the **backdrop of China’s** attempts to co-opt countries into its ambitious One Belt One Road initiative, a programme to invest billions of dollars in infrastructure projects, including railways, ports and power grids, across Asia, Africa and Europe.

What

1. The proposed global grid plans to leverage solar power generated in geography to feed the electricity demands of other nations.
2. This comes against the **backdrop of China’s attempts to co-opt** countries into its ambitious One Belt One Road initiative, a programme to invest billions of dollars in infrastructure projects, including railways, ports and power grids, across Asia, Africa and Europe.
3. India has been supplying power to Bangladesh and Nepal and has been championing a South Asian Association for Regional Cooperation (Saarc) electricity grid minus Pakistan to meet electricity demand in the region.
4. The power-starved Bangladesh wants to buy electricity from large solar parks being set up in Gujarat and Rajasthan, with fostering cross-border energy trade being an **important part of Modi’s South Asia-focused neighbourhood-first policy**.
5. The Prime Minister gave us a vision when he inaugurated the International Solar Alliance. **The vision is** ‘one-world, one-sun, one-grid.’
6. The World Bank Group has been closely involved with capacity building in India.
7. Its president David R. Malpass had visited India last October to give a lecture on the ‘**role of financial sector in development**’ to **India’s top policy makers**, as part of the series hosted by **India’s federal think tank NITI Aayog**.
8. **India’s plans to help** set up a global electricity grid that may initially aim to link countries such as Myanmar, Thailand, Cambodia, Laos and Vietnam with the sub-continent as part of an evolving energy security architecture.

NITI’S REPROT ON SDG

India has performed dismally on UN’s Sustainable Development Goals (SDG) with only seven Indian states successfully addressing “hunger and malnutrition”. The worst performers in the zero hunger goals were Bihar, Madhya Pradesh and Jharkhand. Overall, India performed worse than last year with its score **falling from 2018’s 48 to 38 in 2019**, according to **NITI Aayog’s report on Sustainable Development Goals 2019**.

What

1. The same is in line with the findings of Global Hunger Index 2019 which was released in October 2019. The SDG 2019 report also highlights special attention is needed towards achieving zero hunger goal.
2. Two goals — 2 (zero hunger) and 5 (gender equality) demand special attention, as the overall country score is below 50, the report said.
3. Despite **India’s agricultural produce going** up by six times in the last 70 years, food loss and wastage keep millions hungry.
4. More than one in every three children aged below five is stunted in India and 40% of children aged between 6-59 months are anaemic.

5. It is important to emphasise that hunger is a problem not because there is not **enough food for everyone...** Food wastage and loss remain a major concern... Globally nearly 40% of the fruits and vegetables, and 30% of cereals that are produced are lost, the report said.
6. However, some states and Union Territories have performed well in achieving the goal. Goa and Chandigarh are the top-performing among States and UTs, respectively.
7. Seven states and two UTs bagged a position in the category of Front Runners (with Index score higher than/equal to 65), the report said.
8. Besides Goa and Kerala, these states include mostly north-eastern states — Mizoram, Nagaland, Manipur, Arunachal Pradesh and Sikkim.



DECLINE OF HARAPPAN CITY DHOLAVIRA

A recent study conducted by the Indian Institute of Technology (IIT) Kharagpur reveals that the decline of Harappan city Dholavira was caused by drying up of river like Saraswati river and Meghalayan drought. These researchers have for the first time connected the decline of Harappan city Dholavira to the disappearance of a Himalayan snow-fed river which once flowed in the Rann of Kutch. They have been able to connect the dots between the growth and decline of the Dholavira, located in the Rann with this river which resembles the Himalayan River Saraswati.

What

1. The research team that also included researchers from Archaeological Survey of India, Deccan College PGRI Pune, Physical research laboratory, and Department of Culture, Gujarat, besides researchers from IIT Kharagpur, dated archaeological remains from all the stages and also inferred climate shifts through time which led to the rise and fall of the Harappan city.



2. Our data suggest that prolific mangroves grew around the Rann and distributaries of Indus or other palaeochannels dumped water in the Rann near southern margin of Thar Desert.
3. This is the first direct evidence of glacial fed rivers quite like the supposedly **mythological Saraswati, in the vicinity of Rann**” said IIT Kharagpur's Anindya Sarkar and the lead researcher.
4. Dr. Ravi Bhushan and Navin Juyal from PRL, Ahmedabad dated the carbonates from human bangles, fish otolith and molluscan shells by accelerator mass spectrometer and found that the site was occupied from pre-Harappan period to ~3800 years before present i.e. Late Harappan period.
5. The Dholavirans were probably the original inhabitants in the region, had a fairly advanced level of culture even at its earliest stage.
6. They built spectacular city and survived for nearly 1700 years by adopting water conservation suggested the researchers.

ASER REPORT 2019

The number of girls getting enrolled in government schools is higher than boys in the age group of 4-8 years, according to the 14th Annual Status of Education Report (ASER) launched on 14 January 2020. The ASER for 2019 is based on a survey conducted in 26 districts across 24 states in India, covering over 36,000 children in the age group of 4-8 years.

What

1. Gender gaps are visible even among young children with more girls than boys enrolled in government institutions and more boys than girls enrolled in private institutions, the report said.
2. According to the report, among 4-5 year old children, 56.8 percent girls and 50.4 per cent boys are enrolled in government schools or preschools while 43.2 percent girls and 49.6 percent boys are enrolled in private pre-schools or schools.
3. The gap in enrolment between boys and girls is larger among 6-8 year olds, with 61.1 per cent of all girls versus 52.1 per cent of all boys in this age group going to a government institution.
4. In 2017, ASER 'Beyond Basics' focused on the abilities, experiences, and aspirations of youth in the 14-18 age group.
5. In 2019, ASER aims to shine the spotlight on the early years, reporting on the schooling status as well as on a range of important developmental indicators for young children in the age group 4-8.

Flashback

1. ASER is an annual survey that aims to **provide reliable estimates of children's** enrolment and basic learning levels for each district and state in India.
2. ASER has been conducted every year since 2005 in all rural districts of India. It is the largest citizen-led survey in India.
3. It is also the only annual source of **information on children's learning** outcomes available in India today. Unlike most other large-scale learning assessments, ASER is a household-based rather than school-based survey.
4. Every year, some additional tests are also administered. These vary from year to year. In 2007, 2009, and 2012, for example, children were tested in Basic English.
5. The ASER model has been adapted for use in several countries around the world: Kenya, Uganda, Tanzania, Pakistan, Mali and Senegal.

KOLKATA PORT TRUST RENAMED

Prime Minister Narendra Modi on 12 January 2020 rechristened Kolkata Port Trust after Jan Sangh founder Syama Prasad Mookerjee. PM said, while addressing the 150th anniversary programme of Kolkata Port Trust, invoked Mookerjee and BR Ambedkar and

said their contributions had led to the development of the country post Independence, but suggestions made by them were not implemented after they resigned from the government.

What

1. Development of waterways has improved Kolkata Port Trust's connectivity with industrial centres in east India, made trade easier for our neighbouring countries, Bhutan, Myanmar and Nepal.
2. Our country's coasts are gateways to development; the (central) government has started the Sagarmala programme to improve connectivity.
3. It is the oldest operating port in India and was constructed by the British East India Company. Kolkata is a freshwater port with no variation in salinity.
4. In the 19th century, the Kolkata Port was the premier port in British India. After slavery was abolished in 1833, there was a high demand for laborers on sugar cane plantations in the British Empire.
5. From 1838 to 1917, the British used this port to ship off over half a million Indians from all over India — mostly from the Hindi Belt (especially Bhojpur and Awadh) — and take them to places across the world, such as Mauritius, Fiji, South Africa, Trinidad and Tobago, Guyana, Suriname and other Caribbean islands as indentured laborers.
6. There are millions of Indo-Mauritians, Indo-Fijians, and Indo-Caribbean people in the world today. After independence, the port's importance decreased because of factors including the Partition of Bengal (1947), reduction in size of the port hinterland, and economic stagnation in eastern India.

INTERNATIONAL

INDIA, PAKISTAN EXCHANGE NUCLEAR INSTALLATIONS

Continuing a 29-year unbroken practice, India and Pakistan on 1 January 2020 exchanged a list of their nuclear installations under a bilateral arrangement that prohibits them from attacking each other's atomic facilities. The two countries exchanged the list of nuclear installations and facilities covered under the Agreement on the Prohibition of Attack against Nuclear Installations between India and Pakistan.

What

1. This was done simultaneously through diplomatic channels in New Delhi and Islamabad.
2. The exchange of the list came amid tense diplomatic ties between the two countries over the Kashmir issue.
3. The agreement was signed on December 31, 1988 and came into force on January 27, 1991.
4. The pact mandates the two countries to inform each other of nuclear installations and facilities to be covered under the agreement on the first of January of every calendar year.
5. This is the 29th consecutive exchange of the list with the first one taking place on January 1, 1992.

U.S STRIKE AT BAGDAD

Revolutionary Guards commander Qasem Soleimani, who was killed on 3 January 2020 in a U.S. strike, was one of the most popular figures in Iran and seen as a deadly adversary by America and its allies. General Soleimani, who headed the external operations Quds Force for the Guards, had wielded his regional clout publicly since 2018 when it was revealed that he had direct involvement in top-level talks over the formation of Iraq's government. It was no surprise at the time for a man who has been at the centre of power-broking in the region for two decades.

India's delicate ties with Tehran

1. US President Donald Trump's decision to take precipitate action in directing the assassination of a top Iranian general complicates India's delicate ties with Tehran, already under strain because of Washington's relentless sanctions against a country that has had civilisational ties with New Delhi going back millennia.
2. The US strike took place barely a week after India's external affairs minister S Jaishankar visited Tehran to review ties, with the two sides agreeing to accelerate development of the India-backed Chabahar project after Washington gave New Delhi what it termed a "narrow exemption" to allow access to land-locked Afghanistan subject to Iran's Revolutionary Guards Corps (IRGC) not participating in the project.
3. Chabahar, which means "four springs" on account of its clement weather, was called Tis when Alexander the Great marched through the region.
4. It is barely 100 kilometres from Gwadar, a Pakistani port developed with Chinese assistance, on which the Islamabad-Beijing axis has pinned its strategic and economic hopes.
5. Long before Pakistan came into existence, the legendary 10th century Persian scholar-explorer-historian -- chronicler Al-Biruni wrote that the sea coast of India began at the port of Chabahar.
6. But following Washington's frayed ties with Iran -- a country that was a US ally before the Islamic Revolution in 1979 - India has had to re-adjust its own relations with Tehran even as it seeks to maintain strategic ties with the US and Israel, whose strong partnership is in part responsible putting Iran in the doghouse.
7. The primarily Shia Iran is also at odds with other mostly Sunni monarchies in the Gulf, including its regional rival Saudi Arabia, making India's task of navigating the divide even more precarious.
8. In fact, India has had to fight hard to convince the US of its equities in Chabahar, whose access into land-locked Afghanistan also helps Washington which like New Delhi has enormous stakes in the stability of the landlocked country.
9. All that could come under threat if the region collapses into a broader war. There is also the small matter of more than 5 million Indian expatriates working in the Gulf.
10. It will be 20 years this August since India had to evacuate 170,000 Indian nationals from Kuwait and Iraq - in what is regarded as the largest civilian airlift in history - following a regional war.

SE ASIAN DITHER ON JOINING SOLAR ALLIANCE

The India-**headquartered International Solar Alliance's (ISA's)** drive to co-opt countries from South-East Asia is facing problems with some countries holding back because of **New Delhi's decision to not join the Regional Comprehensive Economic Partnership (RCEP)** trade deal. Vietnam, Malaysia, Singapore, Philippines, Thailand, Brunei, Indonesia, and Laos are yet to become a signatory of the ISA, the first treaty-based international government organization headquartered in India.

What

1. Myanmar has signed and ratified the agreement, while Cambodia is yet to ratify it and has the status of observer.
2. **This comes against the backdrop of China's attempts to co-opt countries into its ambitious One Belt One Road initiative, a programme to invest billions of dollars in infrastructure projects, including railways, ports and power grids, across Asia, Africa and Europe.**
3. Some of these countries are linking joining ISA with our reluctance to join RCEP. As many as 84 countries have signed the framework ISA agreement. Of these 63 have ratified it.
4. RCEP is a proposed free trade agreement (FTA) between the 10 member states of the Association of Southeast Asian Nations (Asean) —Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam—and its six FTA partners.

5. Last November, India decided not to join RCEP, with the government being under intense pressure from domestic industry, farmers and political parties over fears that joining would lead to dumping of Chinese goods that could wipe out small scale industries.
6. **The ISA has become India's calling card on climate change** and is increasingly seen as a foreign policy tool. ISA was termed as a political project by France at the **solar alliance's second general assembly held in New Delhi from 30 October to 2 November last year.**
7. Initially, ISA envisaged 121 sunshine countries situated between the tropics of Cancer and Capricorn as its members. Prime Minister Narendra Modi later **announced the "universalization" of membership with India moving** the proposal to make all United Nations members eligible for ISA membership.
8. The alliance has achieved some success, with the cost of solar-powered agricultural pumps coming down by half.
9. **India's state-run Energy Efficiency Services Ltd** conducted the largest global price discovery exercise by aggregating the demand from 22 ISA member nations, in a potential order valued at \$2.7 billion.
10. India has pitched ISA as a counterweight to Vienna-based Organization of the Petroleum Exporting Countries (Opec), with fossil fuel consumers calling for a **global consensus on "responsible pricing" against the backdrop of uncertain global oil prices.**

IRAN NUCLEAR-DEAL DISPUTE ACTION

Britain, France and Germany have launched action under the Iran nuclear agreement paving the way for possible sanctions in response **to Tehran's attempts to roll back** parts of the deal, European Union foreign policy chief Josep Borrell said. The three countries, which signed the international agreement in 2015 along with the US, Russia and China, informed Borrell, who supervises the pact, in a letter that they are **triggering its "dispute mechanism", ratcheting up pressure on the Islamic Republic.**

What

1. The leaders of the three nations said in a statement **that they've been "left with no choice, given Iran's actions, but to register today our concerns that Iran is not meeting its commitments".**
2. The powers said they are referring this matter to the Joint Commission under the Dispute Resolution Mechanism, as set out in the nuclear deal. German foreign minister Heiko Maas said in a statement that the

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. The deal was sealed in July 2015, under President Barack Obama.
3. 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.
4. Under the agreement, Iran agreed that "under no circumstances will Iran ever seek, develop or acquire any nuclear weapons."
5. Iran also allowed a strict monitoring regime, permitting international inspectors to gain access to sites suspected of nuclear weapons-related activities.
6. The agreement did allow for a commercial nuclear program "for exclusively peaceful purposes."

three European countries "could no longer leave the growing Iranian violations of the nuclear agreement unanswered".

3. Our goal is clear: we want to preserve the accord and come to a diplomatic solution within the agreement, he added. We will tackle this together with all partners in the agreement.
4. We call on Iran to participate constructively in the negotiation process that is now beginning. Borrell insisted that the move does not mean that sanctions will automatically be reimposed.
5. The mechanism allows two weeks for ministers to resolve any problems, although that period can be extended if all sides agree. If needed, an advisory board would have an extra 20 days to adjudicate.

SEA GUARDIANS-2020

China and Pakistan on January 14 concluded a nine-day mega naval exercise during which they carried out advance-level joint drills and naval maneuvers in the North Arabian Sea. The **sixth 'Sea Guardians' exercise** took place in the midst of heightened tension between India and Pakistan over the Kashmir issue. Key platforms of both China and Pakistan, including submarines, destroyers and frigates, were part of the exercise.

What

1. During the exercise, Pakistan Navy and PLA (Navy) Flotilla comprising naval platforms and assets along with Marines Corps Detachments carried out advance level joint drills and naval maneuvers in North Arabian Sea.
2. The harbour and sea activities of the exercise were also witnessed by senior officials from both navies.
3. Exercise Sea Guardians-2020 was designed to share professional experiences on contemporary and non-traditional threats as well as to enhance bilateral cooperation and interoperability between the two navies.
4. India had deployed its aircraft carrier INS Vikramaditya in the Arabian Sea at the time China and Pakistan were holding the nine-day mega naval exercise in the region.
5. China has been expanding its presence in the North Arabian Sea and is developing **Pakistan's deep water Gwadar port in the region.**
6. Gwadar is being connected through the over \$60 billion China Pakistan Economic **Corridor (CPEC) to China's Xinjiang province**, providing a key land route to China to access the Arabian Sea.
7. The Arabian Sea provides entry to the Indian Ocean where China has built a logistics base at Djibouti in the Horn of Africa.
8. **In September, the Indian Navy drove out a Chinese PLA ship from India's Exclusive Economic Zone** and had warned that such activities will be dealt with sternly.

PRELIMINARY DEAL IN NILE DAM DISPUTE

Officials from Egypt, Ethiopia and Sudan say they have reached a preliminary agreement aimed at clearing the way for the filling and operation of a \$5 billion dam project on the Nile River. The Foreign Ministers and Water Resources officials of the three countries concluded three days of meetings in Washington on 15 January 2020 with Treasury Secretary Steven Mnuchin and World Bank President David Malpass. The project, called the Grand Ethiopian Renaissance Dam, is around 70% complete and promises to **provide much needed electricity for Ethiopia's 70** million people.

What

1. However, Egyptian officials are concerned that filling the reservoir behind the dam could significantly reduce the amount of Nile water available to Egypt.
2. The discussions this week were aimed at developing the rules and guidelines that would mitigate drought conditions based on the natural flow of the Nile and water **release rates from the dam's reservoir.**
3. In a joint statement, officials from the three countries said that they had agreed that the filling of the dam should be done in stages during the rainy season, which generally runs from July to August.

4. The guidelines said that filing the reservoir could continue into September under certain conditions with the goal of achieving the early generation of electricity while providing mitigation measures for Egypt and Sudan in case of severe droughts.
5. The ministers agree that there is a shared responsibility of the three countries in managing drought and prolonged drought.
6. The joint statement said these preliminary decisions **on the dam's operation** will not become final until the countries agree on all points in a final operating agreement.
7. The countries plan to meet again in Washington on January 28-29 with the goal of reaching a final agreement **on the dam's filing and operation**.
8. The ministers recognize the significant regional benefits that can result from concluding an agreement ... with respect to trans-boundary cooperation, regional development and economic integration, the joint statement said.
9. In an address to the United Nations General Assembly last fall, Egyptian President Abdel-Fattah el-Sissi **said he would never allow Ethiopia to impose a "de facto situation" by filing the dam without an agreement on its operation.**

Flashback

1. The Nile River, considered the longest river in the world, is approximately 4,258 miles (6,853 kilometers) long, but its exact length is a matter of debate.
2. Flowing northward through the tropical climate of eastern Africa and into the Mediterranean Sea, the river passes through 11 countries: Tanzania, Uganda, Rwanda, Burundi, the Democratic Republic of the Congo, Kenya, Ethiopia, Eritrea, South Sudan, Sudan and Egypt.
3. The Nile has two major tributaries: the longer White Nile, considered the prime stream and headwaters; and the Blue Nile, which carries about two-thirds of the river's water volume and most of the silt.

OMAN'S SULTAN QABOOS DIES

Oman's Sultan Qaboos bin Said died on 10 January 2020 evening, state media said early on 11 January 2020 without mentioning a cause of death, and a three-day period of national mourning was declared. Western-backed Qaboos, 79, had ruled the Gulf Arab state since he took over in a bloodless coup in 1970 with the help of Oman's former colonial power Britain. Qaboos had no children and had not publicly appointed a successor. A 1996 statute says the ruling family will choose a successor within three days of the throne becoming vacant.

What

1. Prime Minister Narendra Modi on 11 January 2020 **condoled the demise of Oman's Sultan Qaboos bin Said. He said Qaboos's strong leadership had built a vibrant strategic partnership between India and Oman and that he was a true "friend to India"**.
2. Sultan Qaboos was a true friend of India and provided strong leadership for developing a vibrant strategic partnership between India and Oman.
3. In his nearly five decades in power, Qaboos, 79, transformed his Persian Gulf kingdom from an isolated enclave into a developed nation. He was known for brokering quiet talks between global foes.
4. Internationally, as the longest-serving leader in the Arab world, he used **Oman's place in a turbulent region, next to one of the world's busiest shipping lanes**, to become a discreet but essential diplomatic player.
5. In a region rife with sectarianism, political divides, and foreign interference, the soft-spoken, diminutive Qaboos championed a foreign policy of independence and nonalignment.
6. He became a rare leader who maintained ties with a wide range of powers that hated one another, including Iran, Israel, the United States, Saudi Arabia and the Houthi rebels in Yemen.

ECONOMY

RBI SURVEY ON INDIA'S START-UP CULTURE

Survey on start-ups by the Reserve Bank of India (RBI) has found that **India's** start-up culture is concentrated in a few states, and that most of these emerging firms took shape in the past three years, taking funds from family and friends. The survey was conducted during November 2018 and April 2019 with 1,246 start-up participants. Nearly three-fourths of the participants were from Karnataka, Maharashtra, Telangana, Delhi, and Tamil Nadu, indicating large concentration of the start-up sector in India in a few states, the RBI's pilot survey on Indian start-up sector revealed.

What

- Nearly half of the start-ups were from six sectors — agriculture, data and analytics, education, health, IT consulting/solution, and manufacturing.
- The respondents said there was market or industry demand, both in domestic and international markets, for the services and products they provide.
- The annual turnover for over one-fourth of the respondents was up to Rs 10 lakh, whereas around 20 per cent start-ups did not report any revenue generation. Less than one-fifth of the respondents reported that their turnover exceeds Rs 1 crore.
- Around 43 per cent of the start-ups mobilised funding from families and friends, apart from own funds. About 13 per cent of the start-ups received international funding. Only 1.7 per cent of the start-ups availed of external commercial borrowings.
- Over three-fourths of the start-ups had up to Rs 1 crore of capital investment, whereas around 41 per cent infused capital up to Rs 20 lakh each.
- On the other hand, nearly 5 per cent start-ups infused capital above Rs 10 crore each. Nearly three-fourths of the start-ups had working capital requirement of more than Rs 10 lakh a year.

Flashback

- A startup is defined as an entity that is headquartered in India, which opened less than 10 years ago, and has an annual turnover less than ₹100 crore (US\$14 million).
- Under this initiative, the government has already launched the I-MADE program, to help Indian entrepreneurs build 10 lakh (1 million) mobile app start-ups, and the MUDRA Bank's scheme (Pradhan Mantri Mudra Yojana), an initiative which aims to provide micro-finance, low-interest rate loans to entrepreneurs from low socioeconomic backgrounds.
- Initial capital of ₹20,000 crore (equivalent to ₹210 billion or US\$2.9 billion in 2018) has been allocated for this scheme.

STRATEGIC SALE OF NINL APPROVED

The Cabinet Committee on Economic Affairs approved the strategic sale of Neelachal Ispat Nigam (NINL), in which multiple state-owned companies own a stake. It is learnt that this strategic sale could be completed only after March 31, and hence, will be part of the 2020-21 divestment pipeline. NINL is a joint venture company, in which four central public sector undertakings — MMTC, National Mineral Development Corporation (NMDC), Bharat Heavy Electricals (BHEL), and MECON — and two Odisha government companies, Industrial Promotion & Investment Corporation of Odisha (IPICOL) and Odisha Mining Corporation (OMC), hold stake.

What

- MMTC holds 49.78 per cent share in NINL, followed by OMC (20.47 per cent), IPICOL (12 per cent), NMDC (10.10 per cent), while MECON and BHEL hold 0.68 per cent each.
- The strategic buyer for NINL will be identified through a two-stage auction procedure, said an official statement.

3. The request for proposals to hire transaction and legal advisors and asset valuers are already on the website of the Department of Investment and Public Asset Management (DIPAM).
4. The proposed strategic disinvestment of NINL would unlock resources to be used to finance the social sector/developmental programmes of the government benefiting the public.
5. As is the norm in strategic sales, the successful buyer will bring in new management, technology, and investment for the growth of the company and for the development of the business operations of the company, which may generate more employment opportunities.
6. For 2019-20, DIPAM is expected to fall well short of the Rs 1-trillion target. Officials have now made it clear that big-ticket items like the planned privatisation of Bharat Petroleum, Air India, and Container Corporation of India will not happen this year. This will further expand the fiscal slippage.

Flashback

1. There are different methods for the sale of shares. If the government is selling minority shares, say, less than 50% of the shares in a PSE, it will continue to the owner of the PSE.
2. Usually, the government is retaining the majority shares while selling only a minor proportion of the shares. This is the normal disinvestment followed in the case of PSEs.
3. But in the case of some enterprises, the government will be selling majority shares to a selected private sector or other entity and this method is called strategic disinvestment or strategic sale.

INDIA ONLY 4TH NATION TO PAY BUDGET ASSESSMENTS

The UN has thanked India for paying its regular budget assessments, only the fourth nation to make full contributions within the specified timeframe of the 193-member world body. India paid \$23,396,496 net assessment on January 10, becoming only the fourth country to have paid its regular budget assessments in full by February 1, 2020, within the 30 day due period specified in the Financial Regulation.

What

1. With a fourth country paying up today, we are going to repeat thanks to Armenia, Portugal and Ukraine, and freshly thank India, which paid up today, Stéphane Dujarric, the spokesman of UN Secretary-General António Guterres told.
2. On the timely payment, India's Permanent Representative to the UN Ambassador Syed Akbaruddin tweeted "Very few have already made it... Hope many more make it", referring to the "UN 2020 Honor Roll" of nations having paid their regular budget assessments in full.
3. Dujarric said the UN closed out 2019 with 146 member states having paid their dues in full for the 2019 budget. As of 9 January 2020, 10 member states were in arrears - Central African Republic, Comoros, Gambia, Lebanon, Lesotho, Sao Tome and Principe, Somalia, Tonga, Venezuela and Yemen.
4. The UN General Assembly had late last month adopted a budget of \$3 billion for the United Nations to cover the year 2020, an increase of approximately \$8 million on what was initially requested by Secretary-General António Guterres.
5. It also marked the first time since 1973 that the UN adopted an annual budget instead of a two-year one.
6. Last year also, India was among the handful of only 34 UN member states that had paid their regular budget dues in full and on time to the world organisation.
7. India had paid \$23.25 million in regular budget assessments by January 31, 2019, the 30-day due period specified as per the UN's Financial Regulation rules.
8. Subsequent to the end of the 30 day due period (January 31), 95 additional member states paid their 2019 regular budget assessment in full.
9. In October last year, UN Secretary-General Guterres voiced deep concern over the "severe liquidity crisis" facing the world organisation.

SCIENCE AND TECHNOLOGY

THIRD BATCH OF STARLINK SATELLITES

SpaceX launched its third batch of 60 mini-satellites into orbit, part of its plans to build a giant constellation of thousands of spacecraft that will form a global broadband internet system. A live broadcast by SpaceX showed a Falcon 9 rocket taking off without incident from Cape Canaveral, Florida on 7 January 2020. The satellites are set to release about one hour after takeoff, bringing the total number of satellites that are part **of the US company's Starlink network** to just under 180. But that figure could one day total 42,000, resulting in far more crowded skies, which has raised concerns among astronomers that they may one day threaten our view of the cosmos.

What

- To put that into context, there are currently around 2,100 active satellites orbiting our planet, according to the Satellite Industry Association. The launch was broadcast live by SpaceX, a company created by tycoon Elon Musk, who is also chief executive of Tesla.
- SpaceX's goal is to control a huge share of the future internet market from space.** Several rivals have the same ambition, including London-based startup OneWeb and giant US retailer Amazon, whose Project Kuiper is far less advanced.
- Musk hopes eventually to control three to five percent of the global internet market — a share valued at \$30 billion a year, or 10 times what SpaceX is earning from its space launches, and ploughs the profits back into rocket and spaceship development.
- SpaceX's boss also entertains a long-time dream of colonizing Mars.** His California-based company has so far received US authorization to launch 12,000 satellites in several different orbits, and it has applied to launch as many as 30,000 more. SpaceX says its satellite constellation will be operational for Canada and the northern US by next year.

How old is this idea of space Internet?

- Space-based Internet systems have, in fact, been in use for several years now — but only for a small number of users. Most of the existing systems use satellites in geostationary orbit.
- This orbit is located at a height of **35,786 km over the Earth's** surface, directly above the Equator.
- Satellites in this orbit move at speeds of about 11,000 km per hour and complete one revolution of the Earth in the same time that the earth rotates once on its axis.
- To the observer on the ground, therefore, a satellite in geostationary orbit appears stationary.

SOUTH INDIA'S FIRST RAC-S

South India's first and the **country's fourth Regional Academy Centre for Space (RAC-S)** by Indian Space Research Organisation (Isro) was inaugurated at National Institute of Technology Karnataka(NITK), Surathkal, on 3 January 2020. In this context, Isro and NITK signed an MoU. The exclusive centre aims to pursue advanced research in the areas of relevance to the future technological and programme needs of the Indian space programme.

What

- The centre will act as facilitator for the promotion of space technology activities in southern region comprising Karnataka, Andhra Pradesh, Telangana, Tamil Nadu, Puducherry, Kerala and Lakshadweep and become an ambassador for capacity building, awareness creation and R&D activities of Isro.
- The activities of RAC-S will be directed to maximize the use of research potential, infrastructure, expertise and experience that exists in ISRO and NITK.

3. The RAC-S will also facilitate and engage other institutes of excellence in the region to take part in capacity building, awareness creation and research and development activities related to space technology, space science and space applications.
4. The RAC-S will consist of faculty members and researchers from NITK and visiting scientists and experts from ISRO. Activities will be guided by a joint policy and management committee (JPMC) consisting top executives from two organizations.
5. The other three RAC-S by Isro are located in MNIT Jaipur, Gauhati University and Kurukshetra University.
6. The RAC-S setup at NITK, Surathkal, will receive an initial funding of Rs 2 crore. Venkitakrishnan said that Isro expects that collaboration with NITK will trigger interest for incubators on space technology.
7. RAC-S will cover Karnataka, Andhra Pradesh, Tamil Nadu, Telangana, Kerala and **Puducherry**. **“Today Isro is venturing into new arenas like navigation systems, Gaganyaan and others.**
8. It is essential to strengthen academic collaboration and also at the same time spread the footprints of space technology to different parts of the country.

‘MANI’ APP LAUNCHED

The Reserve Bank of India (RBI) launched a mobile app to identify currency notes. The visually challenged can identify the denomination of a note by using the application, which can also work offline once it is installed, the central bank said. Users can download the app, **called ‘MANI’, which is an acronym for Mobile Aided Note Identifier**, and will have to scan the notes using the camera; it said adding that the audio output to give out results will be in Hindi and English.

What

1. The app, which is available both on Android and iOS operating systems, was launched by RBI Governor Shaktikanta Das and other officials on 1 January 2020.
2. The central bank also said the app does not authenticate a note as either genuine or counterfeit.
3. The Reserve Bank of India released a batch of new currency notes under the latest 'Mahatma Gandhi Series' after demonetization in November 2016.
4. The new currency notes were launched for different denominations such as Rs 2000, Rs 500, Rs 200, Rs 100, Rs 50, Rs 20 and Rs 10 with significant changes in colour, design and sizes.
5. It was reported that the visually challenged faced many issues in identifying the new currency notes. The new app aims to remove the barriers for them.

INDIA’S OWN BRAIN TEMPLATE

A team of scientists led by senior scientist Pravat Mandal at the Neuroimaging and Neurospectroscopy Laboratory (NINS) of the National Brain Research Center (NBRC), Manesar, Haryana, has developed a brain template, Brahma, which will show intrinsic details about the anatomy of the Indian brain. This comes close on the heels of Mandal in December leading a team that had developed a technology that uses the **brain’s** stress levels and pH for early identification of brain disorders such as **Alzheimer’s** disease, **Parkinson’s disease**, depression and schizophrenia. Brain template is a gross representation from various brain images to understand brain functionality in diseased conditions.

What

1. Brahma will be a crucial guide for Indian brain scientists as doctors have so far relied solely on US and Canadian brain templates for anatomical details for surgery and treatment of Indian patients. However, the American template may differ from the Indian one.
2. The project, funded by the department of science and technology (DST), took more than two years to complete.

3. We conducted the research taking volunteers from across India, from all states, for true representation of an Indian brain template.
4. The critical data was generated at NBRC using state-of-the-art magnetic resonance imaging (MRI) scans using 3T Philips Scanner.
5. Brahma can be used for research and later can be validated for clinical use for surgical procedure. This template will be available for academic use free of charge.
6. Studies have so far been conducted to develop a standard brain template that is compatible to different populations, though the human brain is highly different in shape and size between individuals and basic demographics, according to scientists. Research was focused to develop the population specific brain template to understand this variability.
7. How Brahma is important is simple to understand. If we want to go to any part of India, we use Google maps and we reach there. Similarly, for any brain study or surgical procedure in India, scientists and clinicians previously used US or Canadian MNI (Montreal Neurological Institute) template to analyse the data or plan surgery as we did not have any detailed template from Indian brains, said Researcher.
8. The brain has huge complexity and brain functionality is not completely understood till date. It will be immensely important to conduct multimodal brain study to understand psychiatric disorders such as depression, schizophrenia and bipolar disorders.
9. The development of the Indian brain template will be helpful to achieve a more accurate and precise allocation of brain regions in neurosurgery.

THE FARTHEST GROUP OF GALAXIES

An international team of astronomers linked to Nasa, led by an Indian-origin Goa-born scientist, Vithal Tilvi, have discovered a never-before-seen group of galaxies, now labelled EGS77, which is the farthest group of galaxies to have ever been sighted. In 2013, Tilvi was also part of a team that discovered the farthest single galaxy ever sighted by astronomers. The new group of galaxies, EGS77, is estimated to be over 13 billion light years away from the Earth. It took Tilvi and team over four years to make the findings.

What

1. This group of galaxies can now help astronomers see the universe directly in its infancy, and see what were the chemicals present when the universe was just born.
2. As we look farther and farther, we are looking back in time. This is because, the starlight which carries information about the galaxy group, is reaching the Earth now, after travelling for 13 billion years.
3. Usually, it is difficult to see galaxies as far as EGS77 because of the presence of neutral hydrogen fog in the universe, which blocks some of the galaxy light.
4. Fortunately, intense heat from these same galaxies clears the surrounding hydrogen fog, allowing galaxy light to travel freely to the Earth.
5. Galaxies and galaxy group such as EGS77 must have cleared all the hydrogen fog, leading to the transition from opaque to a transparent universe that we see today. This is a tremendous achievement and will advance our knowledge about how the universe evolved.

In 2013, Tilvi's team discovered the farthest galaxy

1. The findings of the discovery of EGS77 are being presented for the first time on January 5, at the American Astronomical Society conference in Hawaii.
2. While this is the first galaxy group identified as being responsible for clearing hydrogen fog, future Nasa missions will tell us much more, said Sangeeta Malhotra at Nasa.
3. In 2013, Tilvi was part of a team that discovered the farthest galaxy in the universe and, in 2017, he led a team of astronomers that discovered the earliest black hole candidate in the universe.
4. Currently, he is the project leader for a Nasa-funded project to study this black hole using observations taken by the Hubble Space Telescope.

5. **Tilvi is also part of the NASA's Wide Field Infrared Survey Telescope (WFIRST) team, which is going to be launched in 2025.**

ANOTHER EARTH FOUND

NASA said on 6 January 2020 that its planet hunter satellite TESS had discovered an Earth-sized world within the habitable range of its star, which could allow the **presence of liquid water. The planet, named "TOI 700 d", is relatively close to Earth — only 100 light years away, NASA's Jet Propulsion Laboratory announced during the annual American Astronomical Society meeting in Honolulu, Hawaii.** "TESS was designed and launched specifically to find Earth-sized planets orbiting nearby stars.

What

1. TESS initially misclassified the star, which meant the planets appeared larger and hotter than they actually are. But several amateur astronomers, including high school student Alton Spencer — who works with members of the TESS team — identified the error.
2. A few other similar planets have been discovered before, notably by the former Kepler Space Telescope, but this is the first discovered by TESS, which was launched in 2018.
3. TESS stabilizes on one area of the sky to detect whether objects — planets — pass in front of stars, **which causes a temporary drop in the stars' luminosity.**
4. This allows TESS to infer the presence of a planet, its size and orbit. Star TOI 700 is **small, about 40 percent of our Sun's size and only about half as hot.**
5. TESS discovered three planets in orbit, named TOI 700 b, c and d. **Only "d" is in the so-called habitable zone, not too far from and not too close to the star, where the temperature could allow the presence of liquid water.**
6. **It is about 20 percent larger than Earth and orbits its star in 37 days. "d" receives 86 percent of the energy that Earth receives from the Sun.**
7. It remains to be seen what d is made of. Researchers have generated models based on **the size and type of star in order to predict d's atmospheric composition and surface temperature.**
8. **In one simulation, NASA explained, the planet is covered in oceans with a "dense, carbon-dioxide-dominated atmosphere similar to what scientists suspect surrounded Mars when it was young."**
9. The planet is tidally locked to the star, meaning that one side always faces the star, as is the case with the Moon and Earth. This synchronous rotation meant that, in another model, one side of the planet was constantly covered in clouds.
10. A third simulation predicted an **all-land world, where winds flow from the planet's dark side to its light one. Multiple astronomers will observe the planet with other instruments, in order to obtain new data that may match one of NASA's models.**

OLDEST SOLID MATERIAL ON EARTH DISCOVERED

Scientists have discovered the oldest solid material ever found on the Earth, in the form of stardust trapped inside a meteorite that crashed into Australia 50 years ago and predates the formation of our solar system. This stardust provides evidence for **a 'baby boom' of new stars that formed 7 billion years ago**, contrary to the theory that star formation happens at a steady, constant rate, according to a study published in the journal PNAS. These are the oldest solid materials ever found, and they tell us about how stars formed in our galaxy, said Philipp Heck, an associate professor at the University of Chicago in the US.

What

1. The materials, the researchers examined are called presolar grains-minerals formed before the Sun was born. They are solid samples of stars, real stardust.
2. These bits of stardust became trapped in meteorites where they remained unchanged for billions of years, making them capsules of the cosmic time before the solar system, the researchers said. However, presolar grains are very tiny and rare, found only in about five per cent of meteorites that have fallen to the Earth.

3. The Field Museum has the largest portion of the Murchison meteorite, a treasure trove of presolar grains that fell in Australia in 1969 and that the people of Murchison, Victoria, made available to science.
4. It starts with crushing fragments of the meteorite down into a powder. Once all the pieces are segregated, it's a kind of paste, and it has a pungent characteristic — it smells like rotten peanut butter. This “rotten-peanut-butter-meteorite paste” was then dissolved with acid, until only the presolar grains remained.
5. It's like burning down the haystack to find the needle. Once the presolar grains were isolated, the researchers figured out what types of stars they came from, and how old they were.
6. Some of these cosmic rays interact with the matter and form new elements. And the longer they get exposed, the more those elements form. By measuring how many of this new cosmic-ray produced elements are present in a presolar grain, we can tell how long it was exposed to cosmic rays, which tells us how old it is.
7. They learned that some of presolar grains in their sample were the oldest ever discovered — based on how many cosmic rays they had soaked up.
8. Most of the grains had to be 4.6 to 4.9 billion years old, and some grains were even older than 5.5 billion years, the researchers said. For context, our Sun is about 4.6 billion years old, and Earth is around 4.5 billion.
9. However, the age of the presolar grains was not the end of the discovery, the researchers said. Since presolar grains are formed when a star dies, they can tell us about the history of stars.
10. Seven billion years ago, there was apparently a bumper crop of new stars forming — a sort of astral baby boom, according to the researchers.

MISCELLANEOUS

107TH INDIAN SCIENCE CONGRESS

The 107th Indian Science Congress (ISC) was inaugurated by Prime Minister Narendra Modi on 3 January 2019 at the University of Agricultural Sciences in Bengaluru.

PM Modi gave the motto of “Innovate, Patent, Produce and Prosper” to the young scientists in the country, saying that these four steps will lead India towards faster development. He stated that “innovation for the people and by the people is the direction of New India”. Theme of the 107th Indian Science Congress is: “Science and Technology: Rural Development”.

What

1. The 107th Indian Science Congress aims to bridge the gap between farmer and tech-developers. Many of the innovations have helped in enhancing market access, crop productivity and diversifying rural livelihood profiles. However, the gap between the farmers and innovators has resulted in only partial exploration of the benefits.
2. The 107th Indian Science Congress will provide the desired platform to the farmers who introduced innovations in agriculture.
3. During the inauguration of the 107th Indian Science Congress, PM Modi also launched the Indian Science Technology and Engineering facilities Map (I-STEM) Portal.
4. The portal has been designed to be the gateway for researchers to locate a specific type of facility they require to conduct their research and development work in India.

Background

1. This year, the Indian Science Congress has a special focus on rural development through science and technology.
2. To boost the same, for the first time, Congress includes a **Farmers’ Science Congress**.
3. **Other events include Children’s Science Congress, Women Science Congress and former Vice-Chancellors’ Science Congress.**

5. The Union Government is aiming to harness technology at a wider scale to achieve the objectives of Good Governance, especially in the area of cost-effective agriculture and farm to the consumer supply chain.
6. PM Modi highlighted the role of Aadhaar enabled technology, Geo Tagging and data science in the timely completion of several rural and urban projects. Besides this, digitization, the advent of e-commerce, the internet and the mobile bank has played a huge role in rural development.
7. Technological solutions can also be chalked out for issues such as stalk burning, groundwater management, prevention of communicable diseases and environment-friendly transportation.

GREEN LIGHT TO IOA FOR HOSTING COMMONWEALTH SHOOTING

The government on 4 January 2020 approved "in principle" the Indian Olympic Association's proposal to host the Commonwealth shooting championships and archery events -- which are not part of the 2022 Commonwealth Games roster -- in March 2022. Earlier, the IOA had withdrawn its threat to boycott the Birmingham Commonwealth Games over shooting's omission and decided to submit a formal proposal to host shooting championships, where the medals won will be counted in the tally of the 2022 edition.

What

1. On 3 January 2020, IOA had written a letter to Commonwealth Games Federation President Dame Louis Martin, outlining the cost of hosting shooting and archery events.
2. Whilst the costs outlined and enclosed in the shooting programs have been graciously accepted to be met largely by the National Rifle Association of India (NRAI), archery programme will likely be funded solely by the Government of India, IOA wrote in the letter.
3. The IOA president Narinder Batra categorically told the CGF that they have conveyed to the government "that medals awarded in these events should be legitimately recognised in the final total medal tally for the XXII Commonwealth Games in addition to those won by the competing nations at the Birmingham 2022.
4. The IOA also asked CGF to "consider the cost and operational complexity of the proposals."
5. The NRAI has informed me that this decision would be necessary to recommend whether the events could be hosted in Chandigarh or New Delhi.
6. The IOA also proposed that the two events are run "adjunct to and some months prior to the XXII Commonwealth Games in Birmingham during 2022.

Flashback

1. India first participated in the Olympics in 1900 in Paris. The country was represented by Norman Pritchard, an Anglo Indian who was holidaying in Paris during that time.
2. The seeds for creation of an organisation for coordinating the Olympic movement in India **was related to India's participation in the 1920 and 1924 Olympics**, when Sir Dorabji Tata suggested the need for a Sports body at National level for promoting Olympic Sport in united India.
3. After the 1920 Games, the Committee sending the team to these Games met, and, on the advice of Sir Dorabji Tata, invited Dr. A.G. Noehren (Physical Education Director of YMCA India) to also join them.
4. Subsequently, in 1923-24, a provisional All India Olympic Committee was set-up, which organised the All India Olympic Games (that later became the National Games of India) in February 1924.
5. Eight athletes from these Games were selected to represent India at the 1924 Paris Summer Olympics, accompanied by manager Harry Crowe Buck.

7. It is proposed that the opening ceremony would coincide with Commonwealth Day on the 14th of March 2022.
8. The IOA also informed CGF its decision to "bid for hosting of 2026 or 2030 Commonwealth Games in India."
9. India had hosted the 2010 edition in the national capital, the build-up to which was marred by one controversy after another.

IOA DISAFFILIATES KAI

Indian Olympic Association (IOA) has disaffiliated the Karate Association of India (KAI) for violating its constitution and guidelines. The IOA took the decision during its Annual General Meeting on December 30 but the formal letter informing the disaffiliation was sent to the World Karate Federation (WKF) on 6 January 2020. The AGM of IOA deliberated on governance issue of karate in India. The IOA had granted affiliation to KAI on 08/08/2017, subject to ratification of executive council/General Body.

What

1. The ratification of **KAI's affiliation remained pending as there has been an increasing** number of complaints about them in the last two years.
2. During the AGM, it was agreed that any national federation violating the principles of the Constitution of IOA and its guidelines should not have the patronage of the Olympic movement in India.
3. IOA unanimously decided to annul the affiliation of KAI and to discontinue any association with it.
4. In September 2018, the IOA had constituted a three-member ad hoc committee to hold elections of KAI within 120 days after ruling that the tenure of the office bearers of the national sports federation expired and poll process has been delayed.
5. **The IOA's decision to form an** ad hoc committee was challenged before the Delhi High Court but later withdrawn, according to the letter.
6. The KAI later held its polls (not under the supervision of the ad hoc committee of the IOA) in January last year and elected Likha Tara as president and Ambedkar Gupta as general secretary.
7. The duo was called by the IOA top brass for a discussion on December 27 but they did not turn up.
8. **KIA's election had no presence of an observer from the IOA and there have been** various allegations on the validity of the process.
9. The newly-elected office bearers of KAI were invited to the office of IOA for a meeting on 27/12/2029 **to discuss on a roadmap to resolve the issues. But KAI's** refusal to engage in a dialogue and insistence on defiance was shocking, the IOA letter to the WKF said.

EIU SURVEY ON URBAN AREAS

Three cities in Kerala feature among the fastest-growing urban areas across the world, according to a ranking released by the Economist Intelligence Unit (EIU) survey. The three cities — Malappuram, Kozhikode and Kollam — are the only places from India to feature in the top 10 rankings. While Malappuram is the fastest growing city over the past five years with a 44.1 percent change, Kozhikode occupies the fourth slot with a change percentage of 34.5 per cent. Kollam, the third city, has jumped 31.1 per cent, the ranking says.

What

1. Thrissur from Kerala also finds a mention in the list at 13th position. **Thrissur's** ranking has seen a 30.2 percent jump between 2015 and 2020.
2. **Gujarat's Surat comes in at 26th position** with 26.7 percent change, while Tamil Nadu's Tiruppur is ranked the 30th fastest growing city in the world in the last five years.
3. Other than India, the top 10 ranking includes three cities from China and one from Nigeria, Oman, UAE and Vietnam each.

4. In another ranking released by EIU in September last year, Vienna grabbed the top spot on the Global Liveability Index for 2019.
5. The Austrian capital, which attracts tourists for its classical music scene and imperial history but also has abundant green spaces and excellent public services, **last year ended Melbourne's** seven-year run at the top of the survey of 140 cities, helped by an improved security outlook across Europe.

Flashback

1. The EIU is part of The Economist magazine and provides forecasting and advisory services through research and analysis.
2. The Economist Intelligence Unit (The EIU) was created in 1946. **We have over 70 years'** experience in helping businesses, financial firms and governments to understand how the world is changing and how that creates opportunities to be seized and risks to be managed.

RELIANCE JIO LAUNCHES WI-FI CALLING

Reliance Jio on 8 January 2020 launched voice and video calling over Wi-Fi service, less than a month after rival Airtel launched a similar service in Delhi-NCR. The service allows customers to switch seamlessly from LTE to Wi-Fi-based calling when **they are at home or office**. **Jio said it has been "testing this service over the past few months** to provide a robust experience to every customer at launch. Customers can use any Wi-Fi network for Jio Wi-Fi-calling. The voice and video calls will seamlessly switch over between VoLTE and Wi-Fi to provide an enhanced voice/video-calling experience. Jio Wi-Fi Calling will be enabled pan-India between January 7 and 16.

What is Wi-Fi calling?

1. One of the biggest issues mobile phone users are facing these days as far as mobile networks are concerned is call drop. The incidents of call drop have increased drastically in the last few years.
2. To combat the issue telecom operators are introducing Wi-Fi calling service. Some have already launched the service while others have started testing it.
3. Wi-Fi calling basically aims at offering an enhanced and seamless voice calling experience to users even when the cellular network is patchy. Since the service uses stable Wi-Fi connections to make calls, incidents of call drops should not happen.

How Wi-Fi calling works?

1. The Wi-Fi calling service uses high speed internet connection offered by broadband network to allow users make and receive high definition (HD) voice calls.
2. It works similar to WhatsApp calls. Similar to the voice calling apps, Wi-Fi calling allows users to make phone calls, **but it doesn't require them to install an application for it**. **The service also doesn't charge the user and consumes very minimal data.**

UN'S CHILD MORTALITY REPORT

India is among the few countries in the world where, in 2018, the mortality under-5 years of girls, exceeded that of boys, **according to the 'Levels and Trends in Child Mortality' report by the United Nations (UN) inter-agency group for child mortality**. The global report states that in 2018 fewer countries showed gender

disparities in child mortality, and across the world, on average, boys are expected to have a higher probability of dying before reaching age-5 than girls. But this trend was not reflected in India.

What

1. In some countries, the risk of dying before age 5 for girls is significantly higher than what would be expected based on global patterns. These countries are primarily located in Southern Asia and Western Asia, said the report.
2. According to **India's 2017 Sample** Registration System (SRS) the States with the highest burden of neonatal mortality are Madhya Pradesh, Odisha and Uttar Pradesh with 32, 33 and 30 neonatal deaths per 1,000 live births, respectively. **India's neonatal mortality rate is 23 per 1,000 live births.**
3. Also States and Union Territories, Jharkhand, Bihar and Uttarakhand showed the largest gender gaps in under-5 mortality.
4. The burden of child mortality is determined both by the mortality rate (the proportion of children who die) and by the estimated population of any given State (total number of annual births).
5. In this sense, Uttar Pradesh is the State with the highest number of estimated newborn deaths in India, both because of the high neonatal mortality rate and because of the large cohort of births that occur every year in the State, noted **information released by UNICEF (United Nations Children's Fund).**

Five countries

1. According to the report, half of all under-5 deaths in 2018 occurred in five countries: India, Nigeria, Pakistan, the Democratic Republic of the Congo and Ethiopia. India and Nigeria alone account for about a third.
2. Estimates indicate that the majority of child mortality cases in India are attributable to deaths during the neonatal period. The major causes of neonatal mortality are pre-term birth, intrapartum related events, and neonatal infection. In the post-neonatal period, the major direct causes of death are diarrhoea and pneumonia.
3. The report adds that despite the tremendous progress in child survival that has been made over the past two decades, one child or young adolescent died every five seconds in 2018.
4. Globally, 85% of deaths among children and young adolescents in 2018 occurred in the first five years of life, accounting for 5.3 million deaths, of which 2.5 million (47%) occurred in the first month of life, 1.5 million (29%) at age 1-11 months, and 1.3 million (25%) at age 1-4 years. An additional 0.9 million deaths occurred among children aged 5-14 years, noted the report.

Urgent need

1. The report adds that it is urgently required to further accelerate progress in preventing child deaths.
2. Current trends predict that close to 10 million 5- to 14-year-olds, and 52 million children less than 5 years of age, will die between 2019 and 2030.
3. Almost half of these under-5 deaths will be newborns whose deaths can be prevented by reaching high coverage of quality antenatal care, skilled care at birth, postnatal care for mother and baby, and care of small and sick newborns, said the study.

LIFETIME ACHIEVEMENT HONOUR FOR KAPIL DEV

P.V. Sindhu was adjudged the Sportstar of the Year and Kapil Dev honoured for Lifetime Achievement at the Sportstar Aces Awards in Mumbai. Sindhu, who won a historic badminton World Championship gold in 2019, was also declared Sportswoman of the Year (racquet sports) before an audience of some of the finest Indian sporting stars.

What

1. Kapil, who led India to World Cup victory in 1983, expressed his happiness through a heartfelt video message.
2. Rohit Sharma was chosen the Sportsman of the Year (Cricket) for a hugely successful year, when he finished the top run-scorer at the World Cup while also making a roaring start to life as a Test opener.
3. **Yuvraj Singh, who accepted the award on Rohit's behalf spoke of his appetite for runs.**
4. Smriti Mandhana emerged Sportswoman of the Year (Cricket), and was presented **the award by Cricket Australia Director and former Australia women's cricketer Mel Jones.**
5. The jury, which presided over all but two awards, was chaired by Sunil Gavaskar and also comprised N. Ram, Chairman, The Hindu Group, Viswanathan Anand, Aparna Papat, Anjali Bhagwat and M.M. Somaya.
6. The **Chairman's Choice Award went to Australian batsman Steve Smith** for his remarkable performance in the Ashes, and was received on his behalf by Cricket Australia chair Earl Eddings.

US REVERSES CHINA 'CURRENCY MANIPULATOR' LABEL

The United States has removed the currency manipulator label it imposed on China last summer, in a sign of easing tensions between the two economic powers after nearly two years of conflict. Just two days before President Donald Trump is set to sign a "phase one" trade agreement with China, the US Treasury said in its semi-annual report to Congress that the yuan has strengthened and Beijing is no longer considered a currency manipulator. Although Treasury refrained from slapping the label on China in its report last May, Trump in August angrily accused Beijing of weakening its currency "to steal our business and factories," re-stating a long-standing grievance.

What

1. Chinese authorities in August allowed the yuan to fall below 7 to the dollar, sending shudders through stock markets at the time and stoking Trump's ire.
2. Over the summer, China took concrete steps to devalue its currency," also known as the renminbi (RMB), and those moves "left the RMB at its weakest level against the dollar in over 11 years, Treasury said.
3. However, more recently it strengthened to 6.93 to the dollar. Treasury said the new trade pact addresses currency issues.
4. In this agreement, China has made enforceable commitments to refrain from competitive devaluation and not target its exchange rate for competitive purposes. However that commitment is identical to the one Beijing has long made as part of the Group of 20 major global economies.

5. Though the semi-annual currency report always gains attention as a key sign of relations between the powers, the currency manipulator designation was largely symbolic.
6. The label calls for the US Treasury committed to work with the International Monetary Fund to "eliminate the unfair competitive advantage" created by China's alleged actions and to consult with Beijing about the matter.
7. As part of the trade deal, China has also agreed to publish relevant information related to exchange rates and external balances. However, many economists questioned the decision to label China a manipulator in the first place.
8. However, Treasury said Beijing still needs to take steps "to stimulate domestic demand and reduce the Chinese economy's reliance on investment and exports."
9. After multiple rounds of tariffs, the US trade deficit in goods through November 2019 was running at over USD 320 billion, which is about \$62 billion below the same period of 2018.
10. The Treasury Department had not labeled China a currency manipulator since 1994. Beijing had recently met just one of the department's three criteria needed for such a designation - a large bilateral trade surplus with the United States.
11. The currency report had eight other countries on the "monitoring list" due to concerns about their currency practices: Germany, Ireland, Italy, Japan, South Korea, Malaysia, Singapore, Switzerland, and Vietnam.

What is currency manipulation?

1. Countries can weaken their currency by intervening in currency markets and purchasing U.S. dollars.
2. This makes dollars more expensive and the other **country's currency weaker. Once the** currency is weaker, goods from that country become cheaper on international markets, potentially providing a substantial boost to exports.
3. The U.S. Treasury monitors for this behavior to determine if countries are trying **to gain** "an unfair competitive advantage in international trade."
4. Weakening the currency in this way is considered artificial because it is the result of government policy rather than the natural market forces of international trade and capital flows.
5. In recent years, China has been the center of concerns. Policy makers from both parties have long worried that China artificially weakened its currency to make its exports cheaper on the world market, boosting its manufacturing sector.

RARE DISEASES LISTED

Rare diseases listed out by Union Health Ministry. Updating its 2017 policy on rare diseases, the Union Ministry of Health and Family Welfare on 13 January 2020 published the National Policy for Rare Diseases 2020. The policy has been updated keeping in view the suggestions and feedback from various stakeholders and in consultation with the state governments.

What

1. The policy enlists as many as 450 rare diseases prevalent in India. However, the policy does not elaborate on the treatments for these conditions.

2. Since India does not have adequate data to recognise rare diseases in terms of prevalence, as done across the globe, the ministry has divided the diseases into three categories – diseases that can be treated with a one-time curative treatment, diseases which need long-term treatment and are inexpensive, and diseases needing life-long treatment and are expensive.
3. According to the ministry, as many as 95% of rare diseases do not have approved treatments and only 10% of people receive disease-specific treatments.
4. According to the report, Haemophilia, Thalassaemia, Sickle cell anaemia and Primary ImmunoDeficiency in children, auto-immune diseases, Lysosomal storage disorders **such as Pompe disease and Gaucher's disease** have been listed among the rare diseases.
5. Globally, as many as 7,000 to 8,000 diseases have been recognised to be rare. However, tertiary care hospitals have only recorded 450 of these diseases. Apart from this, the policy also intends to have the Indian Council of Medical Research to maintain a registry on rare diseases in India.
6. While formulating the policy, the ministry also had to deal with the question on the kind of assistance the government can provide to patients suffering from such diseases.
7. It has been decided that the Centre will provide financial assistance of up to Rs 15 lakh to patients suffering from rare diseases that require one-time treatment.
8. These patients must be covered under the Pradhan Mantri Jan Arogya Yojana and they must seek treatments at government tertiary hospitals.
9. The policy further added that the state can consider providing assistance to patients suffering from rare diseases that require long-term low-cost treatments. Apart from that, the government will also form a portal as an alternative funding mechanism for individuals and corporates to donate for the treatments of patients.
10. Rare disease treatments are expensive due to small target group and high cost of research and development of medicines. Due to this, not many pharmaceutical companies manufacture drugs to treat rare diseases.
11. India has no domestic manufacturers. The policy has estimated that for a child weighing 10 kg, the treatment cost falls between Rs 10 lakh and Rs 1 crore every year, and this cost increases as a person ages.

FIRST EVER A ETHNIC GROUP IN US CENSUS

Sikhs in the US will be counted as a separate ethnic group in the 2020 census, an organisation of the minority community said, describing it as a milestone. President of the Sikh Society of San Diego Baljeet Singh said that the Sikh community's efforts have come to fruition. This has paved the way forward nationally not only for the Sikh community but also for other ethnicities in the United States.

What

1. Describing this as a milestone, the United Sikhs said that this will be the first time the minority group will be counted and coded in the decennial US Census. A delegation of the United Sikhs has had several meetings with the US Census in the recent past with the last one being in San Diego on January 6.

2. It's clear that a separate code is needed to ensure an accurate count of Sikhs in the United States, recognising a unique identity, said US Census Deputy Director Ron Jarmin.
3. According to the United Sikhs, the current estimates of Sikhs living in the US are at 1 million. Sikhs meet the criteria for representation in the US Census as a distinct ethnic group and have a distinct unified appearance, culture, language, food and history.
4. The United Sikhs has advocated for the separate coding for more than two decades and filed commentary with the US Federal Register advocating for Sikhs to be added as an ethnic group, in large part, so that action can be taken to address major Sikh issues such as bullying, intimidation and hate crimes against the community.
5. With the 2020 census approaching, many historically undercoded communities will be at-risk for being under-counted and under-served, said Ruben Singh, United Sikhs Census Manager
6. The Sikh Coalition has partnered with the Census Bureau for the 2020 census. This is because Sikhs have traditionally been a 'hard to count' population in the United States, said Satjeet Kaur, Sikh Coalition executive director.

Flashback

1. Ethnic group, a social group or category of the population that, in a larger society, is set apart and bound together by common ties of race, language, nationality, or culture.
2. Ethnic diversity is one form of the social complexity found in most contemporary societies.
3. India is a diverse multiethnic country that is home to thousands of small ethnic and tribal groups. That complexity developed from a lengthy and involved process of migration and intermarriage.
4. The great urban culture of the Indus civilization, a society of the Indus River valley that is thought to have been Dravidian-speaking, thrived from roughly 2500 to 1700 BCE.
5. An early Aryan civilization—dominated by peoples with linguistic affinities to peoples in Iran and Europe—came to occupy northwestern and then north-central India over the period from roughly 2000 to 1500 BCE and subsequently spread southwestward and eastward at the expense of other indigenous groups.