

My Notes....

NATIONAL

GOOD GOVERNANCE INDEX LAUNCHED

A good governance index (GGI) was launched on 25 December 2019 by the central government to assess the state of governance in the country. The objectives of GGI are to provide quantifiable data to compare the state of governance in all states and Union territories, enable them to formulate and implement suitable strategies for improving governance and shift to result oriented approaches and administration.

What

- The good governance index is a uniform tool across states to assess the status of governance and impact of various interventions taken up by the state government and union territories.
- The GGI takes into consideration 10 sectors — agriculture and allied sectors, commerce and industries, human resource development, public health, public infrastructure and utilities, economic governance, social welfare & development, judicial and public security, environment and citizen-centric governance.
- These 10 governance sectors are further measured on a total of 50 indicators. These indicators are given different weightage under one governance sector to calculate the value.
- For instance, under agriculture and allied sector, there are six indicators with different weightage such as growth rate of agriculture and allied sector, growth rate of food grains production, growth rate of horticulture produce, growth rate of milk production, growth rate of meat production and crop insurance.
- The states and UTs are ranked on all indicators separately, at the same time composite ranking is also calculated for these states and UTs under their respective groups based upon these indicators.
- The good governance day is observed on the birth anniversary of former prime minister Atal Bihari Vajpayee.

Rank	Big states	Score	Rank	Big states	Score
1	Tamil Nadu	5.62	10	West Bengal	4.84
2	Maharashtra	5.40	11	Telangana	4.83
3	Karnataka	5.10	12	Rajasthan	4.8
4	Chhattisgarh	5.05	13	Punjab	4.57
5	Andhra Pradesh	5.05	14	Orissa	4.44
6	Gujarat	5.04	15	Bihar	4.40
7	Haryana	5.00	16	Goa	4.29
8	Kerala	4.98	17	Uttar Pradesh	4.25
9	Madhya Pradesh	4.85	18	Jharkhand	4.23

Agriculture & allied	MADHYA PRADESH
Commerce & industries	JHARKHAND
Human resource development	GOA
Public health	KERALA
Public infrastructure	TAMIL NADU
Economic governance	KARNATAKA
Social welfare and development	CHHATTISGARH
Judicial and public security	TAMIL NADU
Environment	WEST BENGAL

States in GGI

- Tamil Nadu topped the Good Governance Index launched by the Centre. Maharashtra, Karnataka, Chhattisgarh and Andhra Pradesh followed among the 'Big States'.
- Among the 'Big States', the poor performers

are Odisha, Bihar, Goa, and Uttar Pradesh with Jharkhand coming last.

3. The States and UTs are divided into three groups — Big States, North-East and Hill States, and Union Territories.
4. Among the North-East and Hill States, Himachal Pradesh was ranked first, followed by Uttarakhand, Tripura, Mizoram and Sikkim.
5. The worst performers in this group are Jammu and Kashmir, Manipur, Meghalaya and Nagaland, with Arunachal Pradesh coming last.
6. Puducherry is the best governed Union Territory followed by Chandigarh and Delhi. Lakshwadeep is the worst performing UT.

INDIA'S FIRST CDS

Indian Army chief General Bipin Rawat has been named India's first Chief of Defence Staff (CDS). General Rawat has been named the first CDS a day before he is scheduled to retire from service after his three-year term as the Chief of Army Staff. General Rawat was the frontrunner for the post that was announced just a few days ago. The CDS will serve as the single-point advisor to the government on all matter related to the military.

The role of responsibilities of the CDS:

1. The Chief of Defence Staff would create synergy in operations and finances for all three armed forces.
2. Procurement of military equipment for all the three armed forces would be one of the key responsibilities of the CDS.
3. The officer would act as the sole advisor to the government on all military matters as per the Kargil Review Committee in 1999.
4. A Chief of Defence Staff would be the Principal Military Adviser to the Defence Minister on tri-services matters.
5. CDS will be member of Defence Acquisition Council and Defence Planning Committee.
6. The officer would also work to bring in seamless coordination in operations, logistics, transport, training, support services, communications, repairs and maintenance, etc. of the three services within three years of the first CDS assuming office.
7. Enhance the share of indigenous equipment.

Flashback

1. The proposal for a CDS has been there for two decades. The K Subrahmanyam committee appointed after the Kargil conflict of 1999 to recommend higher military reforms first made it.
2. The group of ministers under the chairmanship of the then deputy prime minister L K Advani had also endorsed the **Kargil Review Committee's** report.
3. Then **PM Vajpayee's Cabinet Committee on Security** had also approved the appointment of CDS. However, lack of consensus and apprehensions among services meant it never moved forward.
4. In 2012, the Naresh Chandra high-powered committee recommended the appointment of a Permanent Chairman of Chiefs of Staff Committee (COSC) as a midway to allay apprehensions over the CDS. The recommendations were biased towards bureaucracy found to be a diluted form of CDS.
5. The CDS is also one of the 99 recommendations made by the Lt General D B Shekatkar (ret'd) Committee, which submitted its report in 2019, and which had 34 recommendations pertaining to the tri-services.

8. Implement five-year Defence Capital Acquisition Plan (DCAP), and the two-year roll-on Annual Acquisition Plans (AAP), as a follow-up of Integrated Capability Development Plan (ICDP).
9. Assign inter-services prioritisation to capital acquisition proposals based on the anticipated budget.
10. Prepare strategy papers on military matters for consideration of the competent authority.
11. A CDS will identify and end obsolete practices, which may have crept in due to the colonial legacy.

ATAL BHUJAL YOJANA

The Union Cabinet on 24 December 2019 approved the Atal Bhujal Yojana, a ₹6,000 crore scheme for sustainable management of ground water resources, Union Minister Prakash Javadekar said. Atal Bhujal Yojana (ATAL JAL) is a Central Sector Scheme to be implemented over a period of 5 years (2020-21 to 2024-25).

What

1. The scheme aims to improve ground water management through community participation in identified priority areas in seven States, viz. Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.
2. Implementation of the scheme is expected to benefit nearly 8350 Gram Panchayats in 78 districts in these States. ATAL JAL will promote panchayat led ground water management and behavioural change with primary focus on demand side management
3. Out of the total outlay of Rs. 6000 crore, 50% shall be in the form of World Bank loan, and be repaid by the Central Government.
4. The remaining 50% shall be through Central Assistance from regular budgetary support. The entire World **Bank's loan component and Central Assistance** shall be passed on to the States as Grants.

Background

1. Ground water contributes to nearly 65% of total irrigated area of the country and nearly 85% of the rural drinking water supply.
2. The limited ground water resources in the country are under threat due to the increasing demands of growing population, urbanization and industrialization.
3. Intensive, and unregulated groundwater pumping in many areas has caused rapid and widespread decline in ground water levels as well as reduction in the sustainability of ground water abstraction structures.
4. The problem of reduction in ground water availability is further compounded by deteriorating ground water quality in some parts of the country.
5. The increasing stress on ground water due to over-exploitation, contamination and associated environmental impacts threaten to endanger the food security of the nation, unless necessary preventive/remedial measures are taken on priority.

ATAL JAL has two major components:

1. Institutional Strengthening and Capacity Building Component for strengthening institutional arrangements for sustainable groundwater management in the States including improving monitoring networks, capacity building, strengthening of Water User Associations, etc.
2. Incentive Component for incentivising the States for achievements in improved groundwater management practices namely, data dissemination, preparation of water

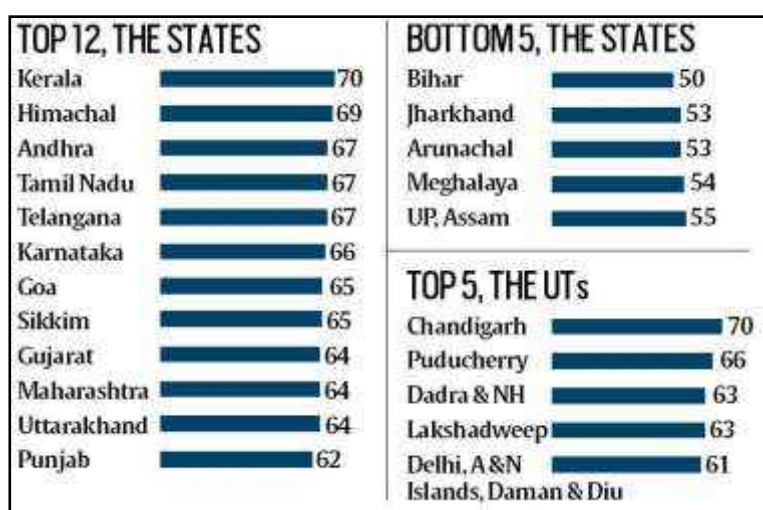
security plans, implementation of management interventions through convergence of ongoing schemes, adopting demand side management practices etc.

NITI'S SDG INDEX 2019

For the second year in a row, Kerala retained its first rank among states and Bihar came last in the **Niti Aayog's Sustainable Development Goals (SDG) India Index for 2019**. The index, which evaluates progress of states and union territories on defined social, economic and environmental parameters, was launched in 2018. Kerala retained the top slot with a score of 70 (out of 100) in 2019 — last year, the southern state had shared the top position with Himachal Pradesh — while Chandigarh maintained its rank as the top UT on the index, with a similar score of 70. Bihar, Jharkhand and Arunachal Pradesh were the worst performing states in the index in 2019.

What

- Uttar Pradesh, Odisha and Sikkim have shown maximum improvement while **Gujarat's ranking has dropped from 4th in 2018** to 9th in 2019, as its score stagnated at 64.
- The composite score for India improved from 57 in 2018 to 60 in 2019. Five goals drove the positive push – clean water and sanitation; affordable and clean energy; industry, innovation, and infrastructure; life on land; and peace, justice, and strong institutions.
- While in 2018, three states belonged to the lowest category of aspirants with a score of less than 50, none of the states found themselves in this category in 2019.
- Assam, Bihar, and Uttar Pradesh graduated to the category of performers (scores between 50 and 64). Bihar retained its 28th rank, the lowest among the states.
- The percentage of children under 5 years of age who are stunted is the highest in Bihar at 42% while the state also saw the highest percentage (39.73%) of drop-outs at the secondary level, followed by Jharkhand at 36.64%, according to the report.



Flashback

- The SDG India Index, launched last year by NITI Aayog with the help of United Nations took into account 16 out of 17 goals specified by the United Nations as SDGs.
- The Index has been developed by NITI Aayog in coordination with the Ministry of Statistics and Programme Implementation, United Nations in India and Global Green Growth Institute.
- UN Resident Coordinator Renata Dessallien said the world is entering final decade for achieving the SDGs — the Decade for Action.
- The SDG India Index 2.0 and the dashboard enables India to both track and encourage accelerated progress to meet the SDGs across all its states and UTs.

6. On the **SDG's first goal of removing poverty, Tamil Nadu was the top performer.** On the third goal of good health and well-being, Kerala and Puducherry topped the ranking.
7. The year 2020 will be the fifth anniversary of the adoption of SDGs by 193 countries at the UN General Assembly. The SDGs targets are to be achieved by **2030. India, with the world's 17% of the population, holds the key to global SDG achievement.**
8. The report, unveiled on 30 December 2019, noted that the indicator set for SDG India Index 2019-20 is large (100 indicators) as compared to SDG India Index 2018 (62 indicators) and thereby two indices are strictly not comparable.

NPR APPROVED

The Union Cabinet, led by Prime Minister Narendra Modi, has given the go-ahead to clear the budgetary allocation for conducting the decennial Census exercise along with updating the National Population Register (NPR). Both the exercises will be conducted simultaneously through door-to-door enumeration in September 2020. The NPR exercise, which is to commence from April 2020, aims to collect biometric and **demographic details of the "usual resident,"** who is defined as a person who has resided in an area for the past six months or more, or a person who intends to reside in that area for the next six months or more. It is mandatory for every "usual resident" of India to register in the NPR.

What

1. The NPR was updated in 2010 and 2015. The data for NPR was collected in 2010 along with the house-listing phase of Census of India 2011.
2. The 2015 update was done by conducting door-to-door surveys. The digitisation of the updated information has been completed.
3. It has now been decided that NPR will be updated along with the house-listing phase of Census 2021 from April to September 2020 in all the States/Union Territories, except Assam, according to the website of the Office of the Registrar General and Census Commissioner. A gazette notification to this effect was issued in August last.
4. The NPR will be prepared at the local (village/sub-Town), sub-district, district, State and national level under provisions of the Citizenship Act 1955 and the Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003.
5. The objective of the NPR is to create a comprehensive identity database of every "usual resident" in the country.

Why is Assam Excluded?

1. As of now, the NPR exercise is not being undertaken in Assam. Assam recently had the NRC exercise undertaken to identify and detain illegal immigrants.
2. The purpose of a pan-India NRC is to detect illegal immigrants and detain them, irrespective of faith, however there are concerns it could arbitrarily exclude genuine Indian citizens.

What is NPR?

1. The National Population Register (NPR) is a register of usual residents of the country being prepared at the local (village/sub-town), sub-district, district, state and national level under provisions of the Citizenship Act 1955 and the Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003.
2. It is mandatory for every usual resident of India to register in the NPR. Under the NPR, a usual resident is defined as a person who has resided in a local area for

the past six months or more or a person who intends to reside in that area for the next six months or more.

What is its purpose?

1. NPR's purpose is to create a comprehensive identity database of every usual resident in the country.
2. The database would contain demographic as well as biometric particulars.
3. Aadhaar, mobile number, PAN, driving license, voter ID details and Indian passport numbers are among the details that will be collected from all usual residents of India. Sharing of Aadhaar is voluntary in view of the Supreme Court ruling in this regard.

INDIA IN GENDER GAP REPORT

India is 112th among nations ranked in terms of the gap between genders, and it was among the bottom five for women's health and survival and economic participation, said an annual survey on 17 December 2019. Iceland remained the world's most gender-neutral country on the World Economic Forum's Gender Gap Report. India moved down the ladder from its 108th position last year to rank below countries like China (106th), Sri Lanka (102nd), Nepal (101st), Brazil (92nd), Indonesia (85th) and Bangladesh (50th). Yemen is ranked the worst (153rd), while Iraq is 152nd and Pakistan 151st.

What

1. The time it will take to close the gender gap narrowed to 99.5 years in 2019. While an improvement on 2018 -- when the gap was calculated to take 108 years to close -- it still means parity between men and women across health, education, work and politics will take more than a lifetime to achieve, the WEF said.
2. Geneva-based WEF, an international organisation for public-private cooperation, said this year's improvement can largely be ascribed to a significant increase in the number of women in politics.
3. The political gender gap will take 95 years to close, compared to 107 years last year. Worldwide, women now hold 25.2 percent of parliamentary lower-house seats and 21.2 percent of ministerial positions, compared to 24.1 per cent and 19 per cent respectively last year.
4. However, the economic opportunity gap has worsened, widening to 257 years, compared to 202 years last year. The report said one of the greatest challenges to closing this gap is women's under-representation in emerging roles, such as cloud computing, engineering and data and AI.
5. The WEF said economic opportunities for women are extremely limited in India (35.4 per cent), Pakistan (32.7 per cent), Yemen (27.3 per cent), Syria (24.9 per cent) and Iraq (22.7 per cent).
6. It also named India among countries with very low women representation on company boards (13.8 per cent), while it was even worse in China (9.7 per cent).

Flashback

1. The WEF had published its first gender gap report in 2006, when India was ranked relatively higher at 98th place.
2. Since then, India's rank has worsened on three of four metrics used for the overall ranking.
3. India has improved to 18th place on political empowerment, it has slipped to 150th on health and survival, to 149th in terms of economic participation and opportunity and to 112th place for educational attainment.

7. On health and survival, four large countries -- Pakistan, India, Viet Nam and China -- fare badly with millions of women there not getting the same access to health as men, the WEF said.
8. It also flagged abnormally low sex ratios at birth in India (91 girls for every 100 boys) and Pakistan (92/100).
9. The WEF said India has closed two-thirds of its overall gender gap, but the condition of women in large fringes of India's society is precarious and the economic gender gap runs particularly deep.
10. Since 2006, the gap has significantly widened and India is the only country among the 153 countries studied where the economic gender gap is larger than the political one.

GOVT BREAKS 150-YEAR TRADITION

The Union Cabinet on 24 December 2019 gave approval to restructuring of the Railway board through merger of its existing eight Groups A services into a central service called the Indian Railway Management Service (IRMS). The new board will have a leaner structure on functional lines headed by the chairman and four members — covering infrastructure, operations and business development, rolling stock, and finance.

What

1. In addition, the board will also include sectoral experts from industry, finance, economics, and management fields. Moving in corporate lines, the chairman will now be called as chief executive officer.
2. The government is seeing this as a reform, breaking a 150-year-old tradition of **'working in silos' that can remove departmental tussles**, seen as a roadblock in fast decision making.
3. **Unification of services will end 'departmentalism' and promote smooth working of Railways**, expedite decision making, create a coherent vision for organisation and promote rational decision making, Piyush Goyal, minister of railways told.
4. This is also considered as the removal of another colonial tradition, after the decision to merge the Railway Budget with the Union Budget in September 2016.
5. Based on the decision, the chairman will be the cadre controlling officer responsible for human resources (HR) with assistance from a director general (HR).
6. In addition, the existing service of Indian Railway Medical Service (IRMS) will be consequently renamed as Indian Railway Health Service (IRHS).
7. The government has lined up a massive infrastructure development plan of ~50 trillion to modernise the national transporter in the next 12 years — improving safety, speed, and services.
8. This requires speedy decision making by various departments. At present, the Railway services are organised into departments like traffic, civil, mechanical, electrical, signal and telecom, stores, personnel, and accounts.
9. These departments are vertically separated from top to bottom and are headed by secretary-level officers called as members in the Railway Board. There are pros and cons for this move.
10. In the past 25 years, various committees — Prakash Tandon Committee (1994), Rakesh Mohan Committee (2001), Sam Pitroda Committee (2012), and Bibek Debroy Committee (2015) — have been formed to recommend reforms.
11. The current restructuring will be a zero-cost exercise and money will be saved by surrendering posts in the board and stopping duplication of works. In addition, at the lower level, technical staff will become multitasker, that may promote skilling and improvement in services.

MINORITY STATUS BASED ON STATE-WISE POPULATION

The Supreme Court on 17 December 2019 dismissed a petition challenging the validity **of the Centre's 26-year-old** notification according minority status to five communities — Muslims, Christians, Sikhs, Buddhists and Parsis, saying religion must be considered pan-India. A bench headed by Chief Justice S A Bobde refused to entertain the PIL filed by BJP leader and lawyer Ashwini Kumar Upadhyay seeking laying of guidelines to accord minority status based on state-wise population of a community.

What

1. Upadhyay, in his PIL, had sought framing of guidelines to grant minority status to a religious community based on their population in a particular state and claimed that Hindus which are in minority in eight states, are deprived of minority benefits.
2. Languages are restricted state wise. **Religions don't have state borders.** We have to take a pan India approach. In Lakshadweep, the Muslims follow the Hindu law, the bench said.
3. It took note of submissions of Attorney General K K Venugopal, who was asked to assist the court, that there have been judgments of the apex court which say that minority can be decided based on all India population of a religious group.
4. During the brief hearing, the bench asked senior advocate Mohan Parasaran, appearing for Upadhyay, to show the judgments where it has been held that state-wise population can be considered for granting minority status.
5. **It asked as to how can there be guidelines to decide this and observed, "I don't think we should entertain this". The bench said** languages have been used to create states and it is not the case with religion and hence minority status cannot be granted to a community based on state-wise population.
6. In his petition, the BJP leader had said Hindus, who are a majority community as per national data, are a minority in several north-eastern states and in Jammu and Kashmir. However, the Hindu community is deprived of benefits which are available to minority communities in these states, the plea had said.

PINAKA MISSILE CLEARS TEST AGAIN

Indigenous Pinaka Missile System which has been developed by the Defence Research and Development Organisation (DRDO) was successfully flight-tested from the Integrated Test Range, Chandipur off the Odisha coast on 19 December 2019. For extending the range of Pinaka-II, a guidance system was fitted onboard in 2013, which to improve its accuracy is now using a new guided rocket with an Israeli designed Trajectory Control System (TCS). These were tested in 2013 and have a range of 65km in 2013 which has now been increased to up to 90km range system. The DRDO is working to have a rocket with a 120km range.

What was tested today?

1. The system tested has the capability of striking into the enemy territory with high precision and has a range of 75 km.
2. The Pinaka-II modified by the DRDO and has been integrated with the Navigation, Control and Guidance System which will help to improve the end accuracy and to enhance the range. The Navigation system

What is the Pinaka system?

1. It is a complete system, with a single battery comprising six launcher vehicles, each with 12 rockets.
2. There are six loader-replenishment vehicles.
3. Three replenishment vehicles and two Command Post vehicles with a fire control computer and DIGICORA radar.
4. A Pinaka regiment has three batteries plus reserves.

- of the missile is aided by the Indian Regional Navigation Satellite System (IRNSS).
- All the objectives which included enhancing the range, accuracy and sub-system **functionality was achieved during today's test and was fired from** Pinaka launcher system in the deployment configuration.
 - According to the DRDO, it was tracked by multiple range systems including Telemetry, Radars, Electro-optical targeting system (EOTS).
 - The Pinaka Missile System which is an indigenous weapon system and has gone through various modifications. And various DRDO laboratories have been part of this missile system like Armament Research & Development Establishment (ARDE), Research Centre Imarat (RCI), Defence Research and Development Laboratory (DRDL), Proof & Experimental Establishment (PXE) and High Energy Materials Research Laboratory (HEMRL).

INDIA SUCCESSFULLY TEST-FIRES QRSAM

India on 23 December 2019 successfully test-fired its Quick Reaction Surface to Air Missile (QRSAM) system, likely to be inducted into the armed forces by 2021, from a base off Odisha coast. The missile, developed by the Defence Research and Development Organisation (DRDO), was flight-tested from the Integrated Test Range (ITR) at Chandipur.

What

- The QRSAM was flight-tested with full configuration in deployment mode intercepting the target mid-air, meeting the mission objectives.
- The entire event was monitored by ground telemetry systems, range radar systems and electro optical tracking system.
- The QRSAM weapon system, which operates on the move, comprises fully automated command and control, active array battery surveillance radar, active array battery multifunction radar and launcher.
- Both the radars are four-walled having 360-degree coverage with search on move and track on move capability.
- With this mission, the developmental trials of the weapon system have been successfully completed and it is expected to be ready for induction by 2021.

INTERNATIONAL

UN EXTENDING SYRIA CROSS-BORDER AID VETOED

Russia and China used their vetoes on 20 December 2019 to block a UN Security Council resolution that would have extended for a year cross-border humanitarian aid to four million Syrians. Humanitarian aid currently flows into Syria through UN-designated checkpoints without the formal permission of the regime in Damascus, but that authority is due to expire on January 10.

What

- Germany, Belgium and Kuwait presented a resolution extending that authority for a year, winning the support of 13 council members but drawing the vetoes of Russia and China.
- A competing Russian resolution that would have granted a six-month extension while reducing the number of UN crossing points was rejected, having failed to get the minimum nine votes.
- Russia is a close ally and major supporter of Syrian President Bashar al-Assad, and has used its veto 14 times on Syrian issues since the start of the civil war there in 2011.

4. Russia's ambassador to the United Nations, Vassily Nebenzia, said the latest resolution was "obsolete" because the authorities in Damascus have "retaken control of most" of Syria's territory.
5. But the UN humanitarian relief department says the aid remains crucial as the situation on the ground has deteriorated over the past year and Syria is heading into winter.
6. Four million Syrians directly benefit from the cross-border aid shipments while 11 million benefit from international aid after eight years of war.
7. The latest resolution failed just as tens of thousands of civilians flee the northwestern Idlib region due to heavy bombardments by Assad's government, backed by Russia, in the last bastion of the jihadist opposition.
8. The text vetoed called for a one-year extension of the authorization to ship humanitarian relief supplies into Syria — in effect since 2014 — through three checkpoints, two in Turkey and one in Iraq.
9. Earlier in the week, Russia offered a competing draft resolution calling for a six-month extension, but only via the two Turkish checkpoints.
10. Put to a vote, that proposal was rejected, with the United States, France, Britain, Poland, Peru and the Dominican Republic voting against. Germany, Belgium, Kuwait and Indonesia abstained.

ETHIOPIA LAUNCHES FIRST SATELLITE

Ethiopia launched its first satellite into space on 20 December 2019, as more sub-Saharan African nations strive to develop space programs to advance their development goals and encourage scientific innovation. Before dawn on 20 December 2019, senior officials and citizens gathered at the Entoto Observatory and Research Centre just north of the capital Addis Ababa to watch a live broadcast of the satellite's launch from a space station in China.

What

1. **This will be a foundation for our historic journey to prosperity," deputy prime minister Demeke Mekonnen said in a speech at the launch event broadcast on state television.**
2. The satellite was designed by Chinese and Ethiopian engineers and the Chinese government paid about \$6 million of the more than \$7 million manufacturing costs, Solomon Belay, director general of the Ethiopian Space Science and Technology Institute.
3. Space is food, space is job creation, a tool for technology...sovereignty, to reduce poverty, everything for Ethiopian to achieve universal and sustainable development.

Flashback

1. It is the eighth launch of an African satellite this year, topping the previous record of seven in 2017, according to Temidayo Oniosun, managing director of Space in Africa, a Nigeria-based firm that tracks African space programs.
2. The launch makes Ethiopia the 11th African country to put a satellite into space. Egypt was the first in 1998.
3. China covered most of the \$8 million cost of the satellite, according to an official involved in **Ethiopia's space program who spoke on condition of anonymity** because he was not authorized to disclose details of the project.
4. The space program was originally championed by private individuals who formed the Ethiopian Space Science Society in 2004.
5. The government established the Ethiopian Space Science and Technology Institute in 2016.

4. The satellite will be used for weather forecast and crop monitoring.
5. The African Union adopted a policy on African space development in 2017 and declared that space science and technology could advance economic progress and natural resource management on the continent.

CUBA GETS FIRST PRIME MINISTER

Cuba's first prime minister in more than four decades - long-serving tourism minister Manuel Marrero - has taken office as the country resurrected a post last held by Fidel Castro. The appointment of Marrero, 56, as head of government is part of a process of decentralisation and generational change from the revolutionary old guard that is aimed at extending and protecting Communist Party rule.

What

1. Marrero received a handshake from former president Raul Castro, the leader of the Communist Party.
2. Marrero served as tourism minister from 2004, late in revolutionary hero Fidel Castro's administration, continuing in the post under Fidel's brother Raul and the current president, Diaz-Canel.
3. He began his career in government in 1999 as vice president of the powerful Gaviota Hotel Group belonging to the armed forces, becoming its president a year later - a post he held until 2004.
4. The new premier "has led the tourism industry in a commendable fashion, which constitutes one of the main lines of development of the national economy".
5. The position of prime minister was last held by Fidel Castro in 1976.
6. But the post was abolished when Castro transitioned to the presidency, taking over from Osvaldo Dorticos after the country's constitution was restructured.
7. Cuba's constitution required that the candidate come from the 605-member National Assembly, be at least 35, "be a Cuban citizen by birth and hold no other nationality."
8. The premier has the power to hire and fire state employees as well as overall control of provincial governors, another position restored under the new constitution.

RUSSIA, UKRAINE OUTLINE GAS TRANSIT DEAL

Russia and Ukraine announced terms of a new gas transit deal on 21 December 2019, under which Moscow will supply Europe for at least another five years via its former Soviet neighbour and pay a \$2.9 billion settlement to Kiev to end a legal dispute.

What

1. The deal is a major breakthrough for both countries, which have been seeking to resolve disputes over **Ukraine's eastern Donbass region** and the Crimea peninsula, which Russia annexed in 2014.
2. **Under the new agreement, Russia's Gazprom, which supplies over a third of Europe's gas needs, would use an agent to book the transit of 225 billion cubic metres (bcm) of the fuel via Ukraine over five years.**
3. Of the total, 65 bcm would be shipped in 2020, falling to 40 bcm in 2021 and in each of the subsequent years, Gazprom said.
4. The Russian gas company would also pay Ukraine the \$2.9 billion before Dec. 29, in line with the amount proposed in arbitration rulings between Gazprom and Ukrainian energy firm Naftogaz in 2018.

GULF'S FIRST FEMALE FINANCE MINISTER

Kuwait appointed Mariam Al-Aqeel as finance minister, the first female in the Gulf region to hold the post. Khaled Al-Fadhel retained his posts as minister overseeing oil,

electricity and water in Sheikh Sabah Al-Khaled Al-Sabah's first cabinet, which includes three women and eight new faces.

What

1. The cabinet is expected to serve for less than a year since Kuwait is scheduled to hold parliamentary elections in 2020.
2. The country has witnessed tumultuous relations between the elected legislature and **the government appointed by the country's hereditary emir. This is the eighth cabinet** in as many years.
3. Sheikh Ahmad Nasser Al-Mohammed Al-Sabah was named minister of foreign affairs. **He's the son** of former Prime Minister Sheikh Nasser Al-Mohammed Al-Sabah, who was forced out of office in 2011 by opposition-led protests calling for his ouster.
4. Sheikh Ahmad Mansour Al-Sabah Al-Ahmad Al-Sabah became defense minister, while Anas Al-Saleh was appointed interior minister, a portfolio usually filled by a member of the ruling Al-Sabah family.
5. **Kuwait, home to about 6% of the world's oil reserves**, is the fourth-biggest producer in the Organization of Petroleum Exporting Countries.
6. The International Monetary Fund expects its economy to grow 0.6% this year, squeezed by a reduction in oil output as part of an OPEC agreement.

UN UPS 2020 BUDGET

The United Nations General Assembly adopted a USD 3.07-billion operating budget which for the first time includes funding for the investigation of war crimes in Syria and Myanmar. The budget represents a slight increase from 2019's figure of USD 2.9 billion. The increase is due to additional missions assigned to the UN Secretariat, inflation and exchange rate adjustments, according to diplomats. These include the observer mission in Yemen, a political mission established in Haiti, the investigation of crimes committed in Syria since the outbreak of civil war in 2011, and in Myanmar after the 2017 crackdown on the Rohingya Muslim minority.

What

1. For the first time, the budgets for the Syria and Myanmar investigations -- which were previously financed by voluntary contributions -- will in 2020 be transferred to the UN secretariat's budget and will receive compulsory contributions from the 193 member states.
2. Russia proposed multiple amendments during negotiations in the Committee on Budgetary Questions meeting and in the General Assembly plenary session.
3. At each vote, Russia, Syria, Myanmar and their supporters, including North Korea, Iran, Nicaragua and Venezuela, were outvoted. They all stated that they dissociated themselves from references to investigative mechanisms in the adopted resolutions.
4. Russia said it would examine its future obligatory payments in light of the vote outcome and predicted an increase in the arrears that currently plague the UN's treasury due to countries not paying enough.
5. Moscow argued the investigative mechanism was illegitimate, while Damascus stressed that it had no mandate from the Security Council.
6. The UN's operating budget is separate from the annual budget for peacekeeping operations of some USD 6 billion that is adopted in June.

INDIA, OMAN SIGN MARITIME PACT

India and Oman signed a Maritime Transport Agreement during the visit of foreign minister S Jaishankar to the Sultanate. The pact – the first with any Gulf country – enables India to expand its footprint in the western Indian Ocean, the Persian Gulf and east Africa. Additionally, in a significant development that will have a far-

reaching impact on stability in the Persian Gulf, Strait of Hormuz **and India's interests** in the region, the Jaishankar met his counterparts from Oman and Iran for lunch in Muscat for what can be described as the first trilateral of sorts.

What

1. Oman is playing the role of mediator between the US and Iran and between Iran and the Gulf powers. Iran, Oman and India are part of the Ashgabat Agreement connecting Indian Ocean with Eurasia.
2. **Oman, India's oldest strategic partner in the Gulf**, seeks to emerge as a hub for India for eastern Africa and the Indian Ocean Region, furthering New Delhi's Indo-Pacific strategy.
3. Jaishankar met Omani ministers including his counterpart Yousuf bin Alawi bin Abdullah, deputy PM Sayyid Fahd bin Mahmoud Al Said and defence minister Bader Bin Saud Bin Harib Al Busaidi.
4. Oman and India are linked by geography, history and culture. The two countries enjoy warm and cordial relations attributed to historical maritime trade linkages and **close links of Oman's royal family with India**.
5. Oman has allowed India, including its navy, access to its Duqm port, about 550 km south of the capital Muscat.
6. **The Port of Duqm SEZ, which is earmarked to be the Indian Ocean's largest deep-sea port**, is where an Indo-Oman joint venture, Sebacic Oman, is undertaking a \$1.2 billion project to set up the largest sebacic acid plant in the Middle-East.
7. An agreement to develop Little India, an integrated tourism complex project in Duqm worth \$748 million, has been signed between the two countries.

ECONOMY

'OPERATION TWIST' IN DESI AVATAR

The Reserve Bank of India (RBI) has commenced something that is akin to the famous "Operation Twist" **conducted by the US Federal Reserve** by deciding to buy the long-tenor 10-year benchmark bonds worth Rs. 10,000 crore and selling four short-dated securities worth the same amount under open market operations (OMOs). On 19 December 2019, the RBI said it would be buying the 6.45% yielding notes maturing in 2029 — the benchmark bonds — and would be selling four papers maturing in 2020.

What

1. The step is liquidity neutral — meaning the OMOs would not be adding any further liquidity to the system that is already flush with excess liquidity to the tune of over Rs. 2 lakh crore.
2. The simultaneous purchase and sale of securities would also help in flattening the steep yield curve — where long tenor yields have been high and short-term yields have been low.
3. For instance, despite a 60 bps reduction in the repo rate across two monetary policies in August and October, the benchmark yield remains higher by 38 basis points since August.

What is the US Fed's 'Operation Twist'?

1. Operation Twist is the name given to a monetary policy tool that the Jerome Powell-led US Federal Reserve had started to influence the **rate of interest in the world's largest economy**.
2. The process involves buying and selling of both short- and long-term government bonds — depending upon its objective relating to rates — at the same time.
3. The method was later adopted by several other central banks.

4. At the same time, the system liquidity has been so high that short-tenor yields have remained fairly low. In some instances, even the 364-day treasury bill yield has gone below the repo rate — a not so usual occurrence.
5. It is an acknowledgement from RBI, after their surprise policy where they did not cut rates, that term premia in the government securities market is hovering around all time high.
6. This is a signal to the market that the central bank might intervene to calm the rising yields. My view is that there could be more OMOs like these. However, the market will wait out for the final jury on the Budget day when we will come to know what kind of fiscal deficit does the government announced.
7. During the December monetary policy when the RBI governor was asked about the possibility of an Operation Twist, he did not make any specific comments on the matter.
8. Experts believe that the central bank may do more of these OMO purchases/sales in coming times that will eventually bring down excess supply of long-tenor bonds in the market.

SEZS DEEMED TO BE MULTI-SECTOR SEZS

Central government has notified that all notified and existing Special Economic Zones (SEZs) shall be deemed to be multi-sector economic zones. This would release land parcels in single commodity SEZs for other sectors. The aim is to get more entities to set up manufacturing facilities in SEZs and to help developers to monetise their unutilised land. This amendment to the SEZ rules of 2006 ensures units from two or more sectors can start operations in any, including trading and warehousing.

What

1. Besides, the minimum area required for an SEZ or Free Trade Warehousing Zone (other than for information technology, IT-enabled services, biotech or health services) has been fixed as 50 hectares; in some northern and northeastern states, 25 hectares.
2. For IT, ITeS, biotech or health (other than hospital) services, there is no minimum area requirement for an SEZ.
3. The requirement for minimum built-up area has been brought down from 100,000 sq metres to 50,000 sq m in Category A cities, from 50,000 sq m to 25,000 sq m in Category B and from 25,000 sq m to 15,000 sq m in Category C cities.

Flashback

1. India was one of the first in Asia to recognize the effectiveness of the Export Processing Zone (EPZ) model in promoting exports, with Asia's first EPZ set up in Kandla in 1965.
2. With a view to overcome the shortcomings experienced on account of the multiplicity of controls and clearances; absence of world-class infrastructure, and an unstable fiscal regime and with a view to attract larger foreign investments in India, the Special Economic Zones (SEZs) Policy was announced in April 2000.
3. This policy intended to make SEZs an engine for economic growth supported by quality infrastructure complemented by an attractive fiscal package, both at the Centre and the State level, with the minimum possible regulations.
4. SEZs in India functioned from 1.11.2000 to 09.02.2006 under the provisions of the Foreign Trade Policy and fiscal incentives were made effective through the provisions of relevant statutes.

4. Senior officials from the state government here took the credit for the change to their continuous lobbying in this regard. The Tamil Nadu government has been raising the issue continuously with the Union ministry of commerce.
5. Business representatives say in the 13 years since the rules were made, much has changed. Sector-specific SEZs did not have enough takers.
6. Besides, technology has entered many sectors, making units sector-agnostic and breaching the standard definitions at earlier sector-specific SEZs.
7. The Government of India has given formal approval for 417 SEZs; the number of those notified is 349. Of these, the number of operational SEZs is 238.
8. The number of units which are approved in these SEZs is 5,168; almost two-thirds are IT SEZs. The non-IT ones had a lot of unutilised land. Total land area for the approved SEZs is 48,000 hectares.
9. The government is no longer going to set up artificial barriers to curtail the choices for a prospective investor. There are a lot of units in China-US trade war that are looking to move out of China or starting additional factories.
10. With this, the existing SEZs will get more units coming in, and more approved SEZs will be active, it is expected. Earlier, it required 500 hectare to get a multiproduct SEZs, now brought down to 50 ha.

MOSPI CONSTITUTES COMMITTEE

A high-level panel under India's first chief statistician **Pronab Sen** will review and develop the country's surveys on employment, industry and services sector amid criticism of official statistics. The Ministry of Statistics and Programme Implementation has set up a single standing committee on economic statistics (SCES) to deliberate and develop methodologies for surveys on industry, services and employment in place of multiple panels on these issues.

What

1. Comprising 27 members, including academics and industry representatives, the SCES will subsume in it the four standing committees on labour force statistics, industrial statistics, services sector and unincorporated sector enterprises.
2. It will review the existing framework of data sources, indicators and definitions of index of industrial production, periodic labour force survey, time use survey, **economic census and unorganised sector statistics, among others.** "The idea is to make these statistics talk to each other and make them consistent," said Sen.
3. The committee has been set up at a time when the credibility and independence **of India's official statistics have been doubted on various grounds**, including the gross domestic product (GDP) growth numbers and methodology, employment and expenditure surveys.
4. This is a consolidated committee dealing with issues which are interlinked. It will look at producing sectors, said an official.

CARBON TAX WAIVER FOR COAL MOOTED

Prime Minister Narendra Modi's office has proposed waiving a tax on coal to help finance pollution-curbing equipment, according to documents, but the move would also make coal more competitive in price with solar and wind energy. **Mr. Modi's office** has proposed waiving the carbon tax of ₹400 per tonne that was levied on the production and import of coal, according to the documents. The documents say the savings would improve the financial health of utilities and distribution companies, and help power producers to install pollution-curbing equipment. The PMO and the Power Ministry did not respond to requests seeking comment on the proposal.

What

1. Despite struggling with some of the **world's worst air pollution levels**, India has already pushed back a deadline to cut emission levels to up to 2022.
2. **Over half of India's coal-fired plants** are already set to miss a phased deadline starting December 2019 to cut emissions of sulphur oxides, which have been proven to contribute to lung disease.
3. The proposal is a big win **for India's coal industry**, which has lobbied for government help, citing high debt levels and burgeoning payment dues from government-owned power distribution companies.
4. Distribution companies owed power producers more than \$11 billion in dues as of October, according to government data.

Flashback

1. A carbon tax is a fee imposed on the burning of carbon-based fuels (coal, oil, gas). More to the point: a carbon tax is the core policy for reducing and eventually eliminating the use of fossil fuels whose combustion is destabilizing and destroying our climate.
2. A carbon tax is a way — the only way, really — to have users of carbon fuels pay for the climate damage caused by releasing carbon dioxide into the atmosphere.
3. If set high enough, it becomes a powerful monetary disincentive that motivates switches to clean energy across the economy, simply by making it more economically rewarding to move to non-carbon fuels and energy efficiency.

SCIENCE AND TECHNOLOGY

UN DRAFT TREATY TO COMBAT CYBERCRIME

The UN General Assembly approved a resolution on 27 December 2019 that will start the process of drafting a new international treaty to combat cybercrime over objections from the European Union, the United States and other countries. The Russian-drafted resolution was approved by the 193-member world body by a vote of 79-60 with 33 abstentions. The resolution establishes an expert committee representing all regions of the world "to elaborate a comprehensive international convention on countering the use of information and communications technologies for criminal purposes". It says the committee will meet in August 2020 to agree on an outline of its activities.

What

1. US deputy ambassador Cheri L. Johnson told the assembly before the vote that "this resolution will undermine international cooperation to combat cybercrime at a time when enhanced coordination is essential".
2. There is no

What does Cybercrime mean?

1. Cybercrime is defined as a crime in which a computer is the object of the crime (hacking, phishing, spamming) or is used as a tool to commit an offense (child pornography, hate crimes).
2. Cybercriminals may use computer technology to access personal information, business trade secrets or use the internet for exploitative or malicious purposes.
3. Criminals can also use computers for communication and document or data storage. Criminals who perform these illegal activities are often referred to as hackers.
4. Cybercrime may also be referred to as computer crime.

- consensus among the member states on the need or value of drafting a new treaty. "It will only serve to stifle global efforts to combat cybercrime."
3. Chalet and the Finnish representative speaking for the European Union both stressed that the UN's existing intergovernmental expert group on cybercrime is already tackling the question of whether a new treaty is needed.
 4. It is wrong to make a political decision on a new treaty before cybercrime experts can give their advice, Chalet said, adding that the resolution "prejudges" and "will undermine" the experts' work.
 5. Russia's representative underscored that the resolution requires that the new committee must take into account the results of the work of the expert group on cybercrime, expected next year, which Moscow supports.
 6. Taking that into account, the Russian representative said substantive work on the new convention will begin in 2021.

'MAKE IN INDIA' SUCCESS OF BRAHMOS

The Indo-Russian BrahMos supersonic cruise missile was on 17 December 2019 test-fired successfully from an Integrated Test Range in Chandipur, Odisha. The land-attack version of the deadly BrahMos missile was tested successfully. The BrahMos supersonic cruise missile that was test-fired today featured an indigenously-made airframe and fuel management system.

What

1. It was complemented with DRDO-designed indigenous seeker and other major **indigenous components**. Thus, today's test launch validates the growing 'Make in **India**' nature of the BrahMos missile.
2. The BrahMos missile system is at present operational with all the three services of Indian Armed Forces; Indian Army, Indian Navy and the Indian Air Force.
3. The BrahMos missile **is the world's fastest** anti-ship cruise missile and has the capability to be fired from submarines as well.
4. The BrahMos missile has also been integrated on Indian **Air Force's (IAF's)** frontline fighter jet, the Sukhoi 30-MKI.
5. The lethal missile has been test-fired successfully from the Su-30 MKI and after some more tests is expected to be inducted in that version on the Su-30 MKI.
6. This makes it the heaviest missile to be integrated on the frontline fighter jet of a country.

Flashback

1. BrahMos Aerospace was formed as a joint venture between Defence Research and Development Organisation (DRDO) of India and **Joint Stock Company "Military Industrial Consortium" "NPO Mashinostroyenia"** (earlier known as Federal State Unitary Enterprise NPOM of Russia).
2. The company was established in India through an Inter-Governmental Agreement signed on February 12, 1998, between The Republic of India and The Russian Federation.
3. BrahMos - the name represents the fury of Brahmaputra and the grace of Moskva rivers.
4. The company was established with an authorised capital of \$250 million with 50.5% from Indian side and 49.5% from Russian side.
5. The company is responsible for designing, developing, producing and marketing the BRAHMOS supersonic cruise missile with active participation of a consortium of Indian and Russian industries.

7. BrahMos has a range of 290 kilometres, but a 450-km version of the BrahMos missile has also been tested in recent years. With India gaining membership of the Missile Technology Control Regime (MTCR), the Indo-Russian missile's range will also be extended to around 800 kilometres.
8. Meanwhile, work is underway to develop a lighter version of the BrahMos missile, the **BrahMos NG, for India's Light Combat Aircraft (LCA) Tejas**.
9. The lighter version of BrahMos, the BrahMos NG, can also be integrated on the Su-30 MKI in multiple numbers.

'KALPANA' CAN FORESEE BRAIN DISORDERS

It is now possible to detect brain disorders well before time. Indian scientists at National Brain Research Center (NBRC) have developed a technology that uses the **brain's stress levels and pH to identify brain disorders such as Alzheimer's disease**. The technology can also be applied for Parkinson, depression and schizophrenia.

What

1. The project, funded by the Ministry of Information Technology, was developed in the form of a package and named KALPANA (imagination).
2. Considering that life expectancy is increasing and age associated brain diseases are increasing substantially in India, the package will be available free of cost for academic research in India and abroad.
3. Popularly used simple magnetic resonance imaging (MRI) of the brain or radio-labeled induced positron-emission tomography (PET) scan cannot provide the **early cause of common brain diseases such as Alzheimer's, Parkinson, depression and schizophrenia**.
4. KALPANA, developed by a team of scientists at the Neuroimaging and Neurospectroscopy Laboratory (NINS) at NBRC, can detect brain signals through MRS/MRI and quantify it for early prediction of brain disorders.
5. It only takes 15 minutes to generate brain signals using a 3T (Tesla) MRI scanner. Tesla is the unit of measurement used to describe the strength of the magnet used in an MRI. These signals from the brain regions are critical and it is equally critical to process those small chemicals and receptors with diagnostic accuracy.
6. KALPANA is unique to measure and quantify brain stress levels, brain pH non-invasively. The process uses no surgery, no radiation and no blood test.

THREAT TO OUTER SPACE SECURITY

Rising the space power China on 23 December 2019 attacked the newly created US Space Force as a "direct threat to outer space peace and security". China is "deeply concerned about it and resolutely opposed to it". The relevant US actions are a serious violation of the international consensus on the peaceful uses of outer space, undermine global strategic balance and stability, and pose a direct threat to outer space peace and security, Geng said at a regular briefing. China's space program has advanced rapidly since its first crewed mission in 2003.

What

1. In a report last February, the Pentagon asserted that China and Russia have embarked on major efforts to develop technologies that could allow them to disrupt or destroy American and allied satellites in a crisis or conflict.
2. China in 2007 conducted an unannounced missile strike against one of its own defunct satellites, creating an enormous amount of space debris.
3. Geng dismissed such concerns, calling them "unfounded counter charges" that merely provided the US with a justification for its own actions. China, he said, has

consistently opposed the weaponization of space and believes international treaties on arms control in outer space need to be negotiated.

4. We hope that the international community, especially the major powers concerned, will adopt a cautious and responsible attitude to prevent outer space from becoming a new battlefield and work together to maintain lasting peace and tranquility in outer space.
5. The establishment of the Space Force is seen by the US military as a recognition of the need to more effectively organize for the defense of US interests in space, especially satellites used for navigation and communication. The Space Force is not designed or intended to put combat troops in space.
6. The Global Positioning System, for example, provides navigation services to the military as well as civilians.
7. Its constellation of about two dozen orbiting satellites is operated by the 50th Space Wing from an operations centre at Schriever Air Force Base in Colorado.
8. China has established a similar, independent network, the BeiDou Navigation Satellite System, assembled from 42 separate satellite launches.

What is the international law on weapons in outer space?

1. The principal international Treaty on space is the 1967 Outer Space Treaty.
2. India is a signatory to this treaty, and ratified it in 1982.
3. The Outer Space Treaty prohibits only weapons of mass destruction in outer space, not ordinary weapons.
4. India expects to play a role in the future in the drafting of international law on prevention of an arms race in outer space including inter alia on the prevention of the placement of weapons in outer space in its capacity as a major space faring nation with proven space technology.
5. On March 27, 2019 India conducted Mission Shakti, an anti-satellite missile test, from the Dr. A P J Abdul Kalam Island launch complex.
6. This was a technological mission carried out by DRDO.
7. The satellite used in the mission was one of **India's existing satellites operating in lower orbit.**
8. India is not in violation of any international law or Treaty to which it is a Party or any national obligation.

SATELLITE TO MONITOR AMAZON RAINFOREST

An Earth observation satellite jointly developed by China and Brazil launched into space on 20 December 2019 under a bilateral programme seen as a template for broader cooperation among BRICS nations. The China-Brazil Earth Resource Satellite-4A was launched on a Long March-4B rocket in the northern Chinese province of Shanxi.

What

1. The satellite was the sixth developed under the China-Brazil Earth Resources Satellite (CBERS) programme that began in 1988. The satellites are designed for Earth observation from orbit for non-military use.
2. The CBERS-4A will support the Brazilian government's monitoring of the Amazon rainforest and changes in the country's environment.
3. Another eight satellites were put into orbit by the same rocket, including a wide-range, multi-spectral, remote-sensing microsatellite donated to Ethiopia.

4. Brazil, Russia, India, China and South Africa - collectively known as BRICS - have been in talks on a framework agreement to create a constellation of satellites for Earth remote-sensing and share data obtained by each others' satellites.
5. Each country will provide one to two satellites to the constellation, according to the China National Space Administration in 2018.
6. The CBERS satellites would be included in the constellation programme.
7. Currently, only South Africa in the BRICS bloc does not have satellites of its own.

BOEING SPACECRAFT RETURNED TO EARTH

Boeing's new Starliner unmanned spacecraft returned to Earth on 22 December 2019, landing in the New Mexico desert in the United States six days early after a clock problem prevented a rendezvous with the International Space Station. What

1. The Starliner capsule was launched from Cape Canaveral in Florida, but shortly after separating from its Atlas V launch rocket, its thrusters failed to activate as planned, preventing it from reaching an orbit high enough to meet up with the ISS. The space station orbits at an altitude of about 400 kilometers (250 miles) above sea level.
2. The flight -- carrying only a dummy -- was meant to be a final dress rehearsal before a crewed flight. After calculating that the craft had burned too much propellant for several minutes, Boeing and NASA were forced to guide the Starliner back to Earth without fulfilling its planned mission.
3. Jim Chilton, senior vice president of Boeing's space and launch division, told reporters that "we started the clock at the wrong time."
4. Starliner's failure was the latest serious setback for Boeing, which is still reeling from two fatal crashes of its 737 Max airliner. The crashes, in October 2018 in Indonesia and in March 2019 in Ethiopia, claimed a total 346 lives. Boeing plans to suspend production of the plane in January.
5. NASA administrator Jim Bridenstine insisted that the space mission was not a complete failure.
6. Starliner was able to establish a communications link with the ISS, and to test in space its docking mechanism as well as its solar panels, batteries, thrusters and heat regulation system.
7. The Starliner re-entered the atmosphere at 25 times the speed of sound, with its thermal shield resisting the intense heat created by friction with the atmosphere.
8. In a test in November only two of the three parachutes opened, although they proved sufficient for the landing.
9. NASA will have to decide whether to carry out another test flight or to trust that the vehicle is safe to carry astronauts.
10. Starliner's first crewed flight had been scheduled for early 2020 -- a much-anticipated development ever since NASA sent up its last space shuttle in 2011.

MISCELLANEOUS

INDIA'S GREEN COVER INCREASED

India's green cover increased by 5,188 sq km (0.6%), an area the size of Goa and Delhi put together, in the past two years, shows a new assessment report of the government on the status of forest and tree cover in the country, released on 30 December 2019. The increase accounts for rise in forest cover by 3,976 sq km and tree cover by 1,212 sq km, putting the total green cover of India at 8,07,276 sq km which is **24.56% of the country's geographical area**. Without accounting for tree cover (95,027

sq km) which includes trees in all formations including scattered trees on the roadside or elsewhere, the total forest cover of the country stands at 7,12,249 sq km which is 21.67% of the geographical area.

What

1. The forest cover alone too recorded an increase of nearly 0.6% this year compared to 2017. Analysis of past reports shows that the country has consistently been recording increase in forest cover since 2011.
2. Referring to increase in forest and tree covers, Union environment minister Prakash Javadekar said, **“This is the result of sustained conservation, protection and afforestation efforts implemented on the ground under the policies of the national government and state governments.”**
3. He claimed that the increase also reflected **“the direct impact of various government schemes in the recent years, like ‘Pradhan Mantri Ujjwala Yojana’ which has considerably reduced the dependence of rural households on forests for fuel wood.**
4. Though the **increase in forest and tree covers is in sync with the country’s** ongoing efforts to reach its ultimate goal of greening one-third of its geographical area in due course, the India State of Forest Report 2019 - released by Javadekar - **shows two worrying aspects of country’s greening programme in terms of quality of forest.**
5. **It shows a decrease of 330 sq km of forest in ‘Recorded Forest Area’ (RFA)** and continued loss of forests in north-eastern states which are known for old forests having capacity to sink more carbon as compared to newly developed green cover. The old forests are also important for conserving the country's rich biodiversity.
6. The RFA is used for all such lands which have been notified as forest under any government act or rules **or recorded as ‘forest’ in the government records.** The RFA may or may not have forest cover, but the forest bureaucracy is expected to conserve such areas.
7. The country, however, recorded 4,306 sq km of forest cover outside the RFA including social forestry, putting the total increase of forest cover at 3,976 sq km.
8. Karnataka recorded the highest increase (1,025 sq km) in forest cover in the past two years followed by Andhra Pradesh (990 sq km), Kerala (823 sq km), erstwhile state of Jammu & Kashmir (371 sq km) and Himachal Pradesh (334 sq km).
9. On the other hand, all the top five states where forest cover has decreased are in north-east. These are Manipur (decrease of 499 sq km), Arunachal Pradesh (276 sq km), Mizoram (180 sq km), Meghalaya (27 sq km) and Nagaland (3 sq km). Forest covers in hill districts of the country, however, show an increase of 544 sq km in 2019 compared to 2017. There are 140 hill districts in India.
10. It is heartening to note the slight increase of 544 sq km of forest cover in hill districts. However, continued loss of forests in north-eastern states i.e. a loss of 765 sq km in this assessment and 630 sq km in previous assessment in these states clearly indicates that we are losing pristine forests of Eastern Himalayas, which are abode of unique and endemic biodiversity.
11. The report also analysed **the green cover in terms of ‘carbon stock’, noting its** increase in 2019 compared to 2017 - a positive trend which may help India achieve its 2015 Paris Agreement goal of creating additional carbon sink through increasing forest and tree cover by 2030.
12. The increase of over 13,000 sq km of green cover since 2015 clearly shows that the country is well on track to meet its Paris Agreement target.
13. In the present assessment, total carbon stock in forest is estimated as 7,124.6 million tonnes. There is an increase of 42.6 million tonnes in the carbon stock of the country as compared to the last assessment of 2017.

14. It shows annual increase of 21.3 million tonnes, which is 78.1 million tonnes of CO2 equivalent. As part of its Paris Agreement commitment, India had in 2015 pledged creating an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent through additional forest and tree cover.
15. The biennial report, brought out by the Forest Survey of India (FSI), covers even **those areas in J&K which come under “illegal” occupation of Pakistan and China.**
16. The FSI compiled the latest report by interpreting satellite imageries (October 2017 to February 2018 period) which were subsequently supported by ground truthing.
17. **The FSI claimed that the accuracy level achieved in the current assessment is “the highest amongst all the previous assessments”.**
18. Noting that a total of 5,283 sample points, spread across the country, have been collected for **scientific assessment, it said, “The accuracy of forest cover classification has been assessed 93.17% while the accuracy of classification between forest and non-forest classes has been assessed at 97.20%”.**
19. India by 54 sq km (1.1%) over the previous assessment. The top three states, showing increase in mangrove cover include Gujarat (37 sq km), Maharashtra (16 sq km) and Odisha (8 sq km). The current assessment shows a decrease of 741 sq km of forest cover within the RFA in the tribal districts.
20. As far as tree cover (95,027 sq km) is concerned, Maharashtra recorded the maximum (10,806 sq km) followed by Madhya Pradesh (8,339 sq km), Rajasthan (8,112 sq km) and combined Jammu & Kashmir (7,944 sq km).

NATIONAL BROADBAND MISSION

The government promised broadband access in all villages by 2022, as it launched the ambitious National Broadband Mission entailing stakeholder investment of Rs 7 lakh crore in the coming years. The mission will facilitate universal and equitable access to broadband services across the country, especially in rural and remote areas. It also involves laying of incremental 30 lakh route km of Optical Fiber Cable and increase in tower density from 0.42 to 1 tower per thousand of population by 2024. The mission unveiled by Communications Minister Ravi Shankar Prasad will also aim at significantly improving quality of services for mobile and internet.

What

1. The mission will enable strengthening of technological infrastructure for education, health, entrepreneurship and development.
2. The Minister urged the states to extend full support to the mission, to take the benefits of technology (fuelled by high speed connectivity) to people.
3. The mission will envisage stakeholder investment of USD 100 billion (Rs 7 lakh crore) including Rs 70,000 crore from Universal Service Obligation Fund (USOF) in coming years.
4. Overall, the broadband

Broadband Readiness Index

1. The Department of Telecom (DoT) and the Indian Council for Research on International Economic Relations (ICRIER) signed a Memorandum of Understanding (MoU) on July 2019 to develop a Broadband Readiness Index (BRI) for Indian States and Union Territories (UT).
2. The first estimate will be made in 2019 and subsequently every year until 2022.
3. The National Digital Communication Policy (NDCP) 2018 acknowledged the need for building a robust digital communications infrastructure leveraging existing assets of the broadcasting and power sectors including collaborative models involving state, local bodies and the private sector.

mission aims to fast-track growth of digital communications infrastructure, bridge the digital divide, facilitate digital empowerment and inclusion, and provide affordable and universal access of broadband for all. It will lay emphasis on universality, affordability and quality of services.

5. The centre will work with states and UTs for having consistent policies pertaining to expansion of digital infrastructure including for Right of Way (RoW) approvals required for laying of optical fibre cable.
6. The mission also involves the Development of Broadband Readiness Index to measure the availability of digital communications infrastructure, and foster conducive policy ecosystem within a State/UT.
7. It will also strive for creation of a digital fiber map of the communications network and infrastructure, including Optical Fiber Cables and Towers, across the country.

MGNREGS NATIONAL AWARD

Rajanna-Sircilla district (in Telangana) has bagged the National Award for effective implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for the year 2018-19. Among the 18 districts from across the country which have been selected for the awards, Rajanna-Sircilla district bagged the first place.

What

1. National Rural Employment Guarantee Act 2005 (later renamed as the "Mahatma Gandhi National Rural Employment Guarantee Act", MGNREGA), is an Indian labour law and social security measure that aims to guarantee the 'right to work'. This act was passed in September 2005.
2. It aims to enhance livelihood security in rural areas by providing at least 100 days of wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work.

SAHITYA AKADEMI AWARD

Shashi Tharoor was on 18 December 2019 named as one of the winners of the Sahitya Akademi Award, 2019, for his book "An Era of Darkness". The national academy of letters announced the names of 23 recipients for the prestigious award on 18 December 2019. The awards were recommended by distinguished jury members representing 23 Indian languages and approved by the Executive Board of the Sahitya Akademi which met under the Chairmanship of Chandrashekhara Kambar, President, Sahitya Akademi," K Sreenivasarao, Secretary of the Akademi, said in a statement.

What

1. Tharoor won the award in creative non-fiction category (English). Vijaya (Kannada) and Shafey Kidwai (Urdu) won the award for their work on autobiography and biography respectively.
2. Playwright Nand Kishore Acharya also won the prestigious award for his book of Hindi poetry, "Chheeratey Hue Apne Ko".
3. Seven poets will be given the award — Phukan Ch. Basumatary (Bodo), Nand Kishore Acharya (Hindi), Niba A Khandekar (Konkani), Kumar Manish Arvind (Maithili), V Madhusoodanan Nair (Malayalam), Anuradha Patil (Marathi), and Penna Madhusudan (Sanskrit).
4. Joysree Goswami Mahanta (Assamese), L Birmangol Singh (Manipuri), Cho Dharman (Tamil) and Bandi Narayan Swami (Telugu) will receive the award for their novels.
5. Six authors will get the recognition in short story category — Abdul Ahad Hajini (Kashmiri), Tarun Kanti Mishra (Odia), Kripal Kazak (Punjabi), Ramswaroop Kisan (Rajasthani), Kali Charan Hembram (Santali), and Ishwar Moorjani (Sindhi).

6. Three books of essay by Chinmoy Guha (Bengali), Om Sharma Jandriari (Dogri), and Ratilal Borisagar (Gujarati) were also named for the prestigious award.
7. The winners will receive an engraved copper plate and Rs 1 lakh cash prize at a special function on February 25, 2020 in Delhi.

WHAT IS WI-FI CALLING?

Wi-Fi calling is the buzz word in the Indian telecom industry right now. Airtel has already launched its Wi-Fi calling service in the country (available only in some areas for now), while Reliance Jio is still testing it in some circles and is expected to announce it very soon. Wi-Fi calling is voice calls made with the help of a Wi-Fi network. It works similar to normal calls but uses Wi-Fi connection instead of mobile network, which often **doesn't work properly in indoors.**

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.**

DADASAHEB PHALKE AWARD

President Ram Nath Kovind on 29 December 2019 presented megastar Amitabh Bachchan with the Dadasaheb Phalke Award, **Indian cinema's highest honour, in a special ceremony at the Rashtrapati Bhawan.**

What

1. The award, named after Dhundiraj Govind Phalke who is revered as the Father of Indian cinema, was instituted in 1969, the year Bachchan made his debut in Hindi **film industry with "Saat Hindustani".**
2. The Dadasaheb Phalke Award comprises a Swarna Kamal (Golden Lotus) medallion, a shawl, and a cash prize of Rs 10,00,000.
3. The government honoured Bachchan with the Padma Shri in 1984, the Padma Bhushan in 2001 and the Padma Vibhushan in 2015 for his contributions to the arts.
4. He has also stayed relevant through his campaigns for polio, tuberculosis, the girl child and other programmes.

SCIENTIST WHO EDITED **BABIES' GENES** SENTENCED

The **Chinese scientist who created the world's first genetically altered babies** has been sentenced to three years in prison and a lifelong ban from working in reproductive technology, state media reported on 30 December 2019. He Jiankui, a Shenzhen researcher who drew widespread condemnation when he revealed his experiment

last year, will also have to pay a 3 million yuan (\$430,000) fine, said a report, citing the verdict of a court in the southern Chinese city.

What

1. Two others who assisted him were also sentenced. Zhang Renli, a researcher at the **Guangdong Provincial People's Hospital**, received a **prison term of two years** and Qin Jinzhou, a researcher at the Shenzhen Luohu Hospital Group, received a term of 18 months, suspended for two years.
2. The **verdict is China's first public statement on the fate of He**, who disappeared from public view after his 2018 experiment sparked a global backlash?
3. His work to edit the genes of embryos to make babies who are resistant to the virus that causes AIDS was sharply critiqued by the international scientific community as an abuse of new gene-engineering methods that are still not fully understood.
4. **He's experiment** -- which took place in near secrecy and was revealed only after twin baby girls were born -- also ignited concern that China is not properly regulating its ambitious researchers in its push to become a global leader in science and medicine.
5. **He's experiment**, for which he recruited couples with HIV who did not want to pass the disease to their offspring, two women became pregnant and three gene-edited babies were born. The trial proceedings were not made public to protect the identities of the children and their parents, said Xinhua.
6. The court found that He and the two others had forged ethical review documents **and used** "impersonating and concealing tactics" on unsuspecting doctors to complete their experiment.
7. In the wake of the controversy, China said earlier this year that it would more strictly control clinical trials involving gene-editing and other experimental life science technologies. Researchers will now require approval from the highest level of government before they can do such work.

Flashback

1. He Jiankui, an independent Chinese researcher, triggered global controversy and confusion over claims that his experiments produced the first genetically altered babies using gene editing technology.
2. The scientist claims to have used CRISPR/Cas9 technology to alter the DNA (deoxyribonucleic acid) of embryos before implanting them into the **mother's womb to make** the twin babies resistant to HIV.
3. The unverified claim by He—propagated through media and online videos—has stoked public fears and renewed apprehensions that babies might one **day be "designed"**.
4. It raises an urgent need for sound governance and greater public dialogue on gene editing.
5. While it is illegal to deliberately alter the genes of human embryos in India, in the US, and many other countries, the legal position on gene editing in China is less clear.
6. However, within the scientific community in China, **He's claims were openly chided. Some Chinese scientists made clear that He's claims were "a huge blow to the global reputation and development of Chinese science"**.