

Current Affairs December 2020

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Awards and Honours

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8. Universal Service Obligation Fund Scheme
9. India & UN-Based Better than Cash Alliance organizes Peer learning exchange
10. RTGS to be available 24x7 from December 14

11. RBI issued draft circular on declaration of dividend by NBFCs
12. Finance ministry OKs Rs 9,800cr for 27 states
13. International Financial Services Centres Authority Regulations, 2020
14. Key Development Projects in Gujarat
15. RCE for North Eastern Region Power System Improvement Project
16. World Bank project to Protect India's Poorest from COVID-19
17. India pledges \$1 million to WADA for scientific research
18. Centre to release ₹18,000 crore under PM-Kisan scheme
19. Green National Highways Corridor Project
20. Vadodara Corporation plans to raise money via municipal bonds
21. China to overtake US to be world's biggest economy by 2028
22. Innovative Govt tool to fund PSBs
23. RBI staff paper says retaining 4% CPI target appropriate for India
24. Kisan Rail carried 27,000 tonnes of produce

Geography, Environment, Biodiversity & Disaster Management

1. World's 'loneliest elephant' heads to Cambodia from Pakistan
2. The rise of the 'wild' Arunachal kiwi
3. Cyclonic storm 'Burevi'
4. India sets up committee for implementation of climate change targets
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7. Himachal Pradesh wants GI status for five products
8. Significance of lions spotted in Gujarat's Jasdan area
9. New Zoos granted recognition by Central government
10. Building bridges in the forest to help wildlife
11. Climate Change Performance Index (CCPI) 2020
12. Novel Species of Muraingrass
13. Climate Ambition Summit 2020
14. Rare Myristica Swamp Treefrog found in Vazhachal forest
15. Extinct Himalayan Serow spotted in Spiti Valley
16. Western Ghats grasslands
17. 'World's ugliest orchid' among new species named in 2020
18. Rescue, Rehabilitation centre for monkeys
19. India's leopard population increases by 60%
20. Cattle competing one-horned rhino's in Assam's Mini Kaziranga
21. Ladakh's Tso Kar Wetland Complex added to list of Ramsar site
22. Significance of the new whale song
23. The giant Antarctic iceberg A68 cause for concern
24. 2 of 15 most-destructive 2020 climate disasters impacted India

History, Art & Culture

1. The first ever SCO Online International Exhibition on Shared Buddhist Heritage
2. Luxury cruise based on Ramayan to be launched in Saryu River
3. Nisarg Gram campus at Pune
4. Hampi stone chariot
5. Gwalior, Orchha on UNESCO World Heritage City List
6. Singapore's beloved street hawker culture
7. Monpa Handmade Paper Industry to Revive the Heritage Art
8. 2,000-year old snack bar unearthed at Pompeii

9. Exhibition 'Raag-Bhopali' being organized to promote Zari-Zardozi crafts of Bhopal

Important Days & Events

1. Guru Nanak Jayanti
2. World AIDS Day 2020
3. International Day for the Abolition of Slavery
4. The First Ever Virtual Aadi Mahotsav
5. Nagaland Statehood day 2020
6. International Day of Persons with Disabilities 2020
7. Operation Trident
8. International Civil Aviation Day 2020
9. Submarine Day 2020
10. Swahid Diwas 2020
11. Chag Hanukkah Sameach
12. Human Rights Day 2020
13. International Bharathi Festival 2020
14. International Universal Health Coverage Day 2020
15. International Mountain Day 2020
16. Vijay Diwas 2020
17. World Minorities Rights Day 2020
18. Subhas Chandra Bose's 125th birth anniversary
19. Vigyanika-International Science Literature Festival
20. National Farmers' Day 2020
21. Good Governance Day 2020
22. India International Science Festival (IISF)-2020

International Affairs

1. China to build 'super' dam on its part of Brahmaputra River
2. 'Burj Khalifa-sized' asteroid flew by earth
3. India hits out at OIC for 'incorrect and unwarranted references' to Jammu and Kashmir
4. Significance of Joe Biden's all-women media team
5. IFSCA gets membership of International Association of Insurance Supervisors
6. Pakistan issues special permit to Saudi Crown Prince
7. Bangladesh-Bhutan Preferential Trade Agreement 2020
8. World's Largest Arms-Producing Companies in 2019
9. 14th ASEAN Defence Ministers' Meeting Plus
10. 'Swadhinata Sarak' between Bangladesh and India
11. Israel-Morocco agree to normalise relations
12. 1st TWG Meeting between India, Iran, Uzbekistan
13. India and USA MoU for exchange of information
14. India-Bangladesh Virtual Summit
15. Iran builds at underground nuclear facility amid US tensions
16. India-Vietnam Leaders' Virtual Summit 2020
17. China justifies its military exercise with Pakistan
18. White House paves way for nuke reactor on moon
19. India's External Affairs Minister met the top leaders of Qatar
20. Turkey's controversial law that will tighten monitoring of civil society

Polity & Governance

1. Jammu & Kashmir's Roshni Act

2. Adult's right to marry a person of choice is fundamental right
3. Karnataka's new anti-cow slaughter bill
4. Maharashtra Bill Proposes Death Penalty for Heinous Crimes Against Women, Children
5. Indian Ports Bill 2020
6. No Winter Session of Parliament
7. Non-Gulf NRIs likely to be first to get postal voting rights
8. Electricity (Rights of Consumers) Rules, 2020
9. Government introduced physical verification of premises is now mandatory
10. Governor's role in calling an Assembly session

Science & Technology

1. India targets to fully convert Andaman and Nicobar, Lakshadweep islands to Green Energy
2. A zebrafish gene which can promote heart regeneration
3. HAL delivered biggest cryogenic propellant tank
4. Influenza makes people vulnerable to bacterial infection
5. Indian Oil launches 100 Octane petrol in India
6. What is Theremin?
7. IIT Kanpur Researchers developed 'Damaru' Inspired Lattice
8. U.K. becomes first country to approve Pfizer-BioNTech Covid-19 vaccine
9. How did a rocket booster from 1966 become a Near-Earth Object?
10. Australian Square Kilometre Array Pathfinder (ASKAP)
11. Why the collapse of the Arecibo telescope is a loss for astronomy
12. Scientists suggest a new indicator for measuring its health impact
13. AI and Robotics Park in Bengaluru
14. India to surpass 350 mn 5G connections by 2026
15. Mumbai offers Highest Quality of Life
16. 'Artificial Sun' Nuclear Fusion Reactor
17. Lab-grown meat approved by Singapore Food Agency (SFA)
18. Japan's Hayabusa2 mission
19. Co-WIN mobile app for COVID-19 vaccine delivery
20. Software to crack down on child porn
21. BSNL launched world's largest NB-IoT
22. DRDO-designed sub-machine gun
23. India's first indigenous mRNA vaccine
24. High-speed Wide Area Network (WAN)
25. Quantum communication
26. Geminids Meteor Shower 2020
27. Digital payment app 'DakPay'
28. SpaceX Crew-3 mission
29. GPS-Based Toll Collection System
30. PSLV-C50 successfully launched CMS-01
31. What is SolarWinds hack?
32. ATAGS howitzer best artillery gun in world
33. China's Chang'e 5 lunar mission
34. India's first hypersonic wind tunnel
35. What is Winter Solstice?
36. DRDO launched Medium Range Surface to Air Missile (MRSAM)
37. Mobile app launched to identify and geotag insanitary latrines
38. Initial data for Chandrayaan-2 mission

39. U.K. Coronavirus Mutation is Worrying but Not Terrifying
40. First possible radio signal emanating from an exoplanet
41. IISER scientists identify the gene that greens plants
42. Scientists discovered new Species of Wild Sun Rose
43. Country's First Pneumococcal Conjugate Vaccine
44. New interest in Proxima Centauri, the closest star to our Sun
45. Bhabha Atomic Research Centre, Mumbai develops Eye Cancer therapy

Society and Social Justice

1. Child-friendly police station inaugurated in Pune
2. WHO World Malaria Report 2020
3. Two homes for trans children in Bengaluru
4. Top 10 Police Stations of country
5. Farmer's protesting at Singhu Border
6. Rohingya Refugees of Bangladesh
7. Tharu tribals of Uttar Pradesh
8. Atmanirbhar Bharat Rojgar Yojana (ABRY)
9. Public Wi-Fi Networks by Public Data Office
10. School Bag Policy 2020
11. Socio-Economic profiling of PM SVANidhi beneficiaries & their families
12. India Water Impact Summit 2020
13. Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
14. Prime Minister's Special Scholarship Scheme (PMSSS)
15. India drops two ranks in Human Development Index
16. 75th National Conference of Tuberculosis and Chest Diseases
17. Human Freedom Index 2020
18. Matru Sahyogini Samitis Scheme
19. JSA II: Catch the Rain Awareness Generation Campaign
20. Shigella infection in Kerala's Kozhikode
21. Post matric scholarship scheme for SC students
22. SEHAT health insurance scheme for Jammu-Kashmir
23. Manipur's Zomi people push for BTC-like council
24. Government launched e-Sampada for ease of living for citizens
25. Non-redressal of payment and overtime issues
26. Umla Village in Ladakh has been electrified

Sports

1. Target Olympic Podium Scheme (TOPS)
2. Yogasana as Competitive Sport
3. Four indigenous sports in Khelo India Youth Games 2021

Security

1. India deployed MARCOS in Ladakh as part of tri-service operation
2. Govt finally approves crucial Army post recommended after Doklam in 2017
3. India-US MoU on Intellectual Property cooperation
4. S-400 deal with Russia
5. Defence Minister handed over DRDO systems to Armed Forces Chiefs
6. Army to seek waiver from Defence Ministry to expedite helicopter deal

Miscellaneous

1. Task force set up to prepare roadmap for imparting technical education in mother tongue
2. AYUSH Day Care Therapy Centres for Central Government employees
3. MDH Spices owner Dharampal Gulati passed away
4. Honey marketed by prominent Indian brands failed a key test of purity
5. Surgery as a part of Ayurveda
6. AYUSH Export Promotion Council
7. New height of Mount Everest
8. New Parliament building bhoomi puja
9. Kerala detects rare malaria-causing parasite in soldier
10. Ten universities to set up Kamdhenu Chairs
11. Recognition scheme for hygiene rating audit agencies
12. India is on US watchlist for 'currency manipulation'
13. How dangerous is ammonia?
14. FASTag to be mandatory for vehicles from January 1
15. Innovation challenge for portable water testing devices
16. A K Bhalla released progress report of e-HRMS
17. India's first driverless metro in Delhi
18. Amit Shah launched several development projects in Manipur
19. Centre launched Ayushman Bharat PM-JAY SEHAT
20. Amit Shah distributed financial grants to 8,000 Namghars
21. IMD advised people in north India not to drink alcohol during the cold wave
22. PM Modi dedicates to nation section of Eastern Dedicated Freight Corridor in UP
23. 7th National Summit on Good, Replicable Practices & Innovations

Awards and Honours

Bibi Jagir Kaur is new SGPC president

After a gap of 15 years, former Punjab cabinet minister Bibi Jagir Kaur (66) made a comeback as chief of the Shiromani Gurdwara Parbandhak Committee (SGPC). She was elected after the voting in the SGPC House during the Sikh body's annual meeting at Teja Singh Samundri Hall.

The Shiromani Gurdwara Parbandhak Committee (or SGPC) is an organization in India responsible for the management of gurdwaras, Sikh places of worship in three states of Punjab, Haryana, and Himachal Pradesh and union territory of Chandigarh.

SGPC also administers Darbar Sahib in Amritsar. The SGPC is governed by the chief minister of Punjab.

The SGPC manages the security, financial, facility maintenance and religious aspects of Gurdwaras as well as keeping archaeologically rare and sacred artifacts, including weapons, clothes, books and writings of the Sikh Gurus.

It was formed in 1920. The first and the only woman and also incumbent President of SGPC is Jagir Kaur.

British Indian author Anita Anand's Jallianwala Bagh story wins history prize

British Indian journalist and author Anita Anand's book that tells the story of a young man caught up in the 1919 Jallianwala Bagh massacre in Amritsar has won a prestigious history-literary prize in the UK.

'The Patient Assassin: A True Tale of Massacre, Revenge and the Raj' beat six other titles for the PEN Hessel-Tiltman Prize for History 2020, awarded annually for a non-fiction book of specifically historical content.

English PEN, which stands for Poets, Playwrights, Editors, Essayists, Novelists, is one of the world's oldest human rights organisations championing the freedom to write and read.

It is the founding centre of PEN International, a worldwide writers' association with 145 centres in more than 100 countries.

Marjorie Hessel-Tiltman was a member of PEN during the 1960s and 1970s and on her death in 1999, she bequeathed 100,000 pounds to the PEN Literary Foundation to found a prize in her name.

Entries are required to be works of high literary merit - that is, not primarily written for the academic market - and can cover all historical periods.

Gitanjali Rao is Time Magazine's first 'Kid of the Year'

A 15-year-old Colorado high school student and young scientist who has used artificial intelligence and created apps to tackle contaminated drinking water, cyberbullying, opioid addiction and other social problems has been named Time Magazine's first-ever "Kid of the Year."

Gitanjali Rao (born 2005) is an American inventor, author, scientist and a STEM promoter.

She won the Discovery Education 3M Young Scientist Challenge in 2017.

She was recognized as Forbes 30 under 30 for her innovations. She was named TIME Top young innovator in 2020 for her innovations and "innovation workshops" she conducts across the globe.

On its December 4, 2020 cover, Time named Rao "Kid of the Year". Rao is the first person to receive TIME magazine's Kid of the Year designation.

Jehan Daruvala: First Indian to win F2 race

Jehan Daruvala created history as he became the first Indian to win an F2 race when he finished ahead of the likes of Mick Schumacher and Dan Ticktum in sprint race in Sakhir, Bahrain.

The FIA Formula 2 Championship is a second-tier single-seater racing championship organised by the Federation Internationale de l'Automobile (FIA).

The championship was introduced in 2017, following the rebranding of the long-term Formula One feeder series GP2.

It is designed to make racing affordable for the teams and to make it an ideal training ground for life in Formula One.

Global Teacher Prize 2020

A Maharashtra's Solapur district primary school teacher has won the one-million US dollar Global Teacher Prize 2020 for promoting girls' education. Ranjitsinh Disale from Paritewadi village, was awarded in recognition of his efforts to promote girls' education and initiating a quick-response (QR) coded textbook revolution in India.

Ranjitsinh Disale from Paritewadi village, was awarded in recognition of his efforts to promote girls' education and initiating a quick-response (QR) coded textbook revolution in India.

The 32-year-old teacher emerged the winner from 10 finalists from across the world for the annual prize. He has announced that he will share half of the one million dollar award money with the nine other finalists so that they too may continue their good work.

The award was established by the London-based Varkey Foundation and is given in partnership with UNESCO.

In the past, Disale had been named as the Innovative Researcher of the Year 2016 and has featured in the Satya Nadella's book 'Hit Refresh'.

UN Investment Promotion Award 2020

Prime Minister Narendra Modi has congratulated Invest India for winning the 2020 United Nation's Investment Promotion Award.

The award ceremony took place on 7th December 2020 at UNCTAD Headquarters in Geneva.

The award recognizes and celebrates the outstanding achievements and best practices of Investment Promotion Agencies (IPAs) across the globe.

This United Nations Investment Promotion Award is the most coveted award for Investment Promotion Agencies.

UNCTAD is a central agency that monitors performance of IPAs and identifies global best practices. Germany, South Korea and Singapore have been some of the past winners of the award.

Anil Soni to lead the WHO Foundation as first CEO

India-origin global health expert Anil Soni has been appointed as the first Chief Executive Officer of the newly established The WHO Foundation. The WHO Foundation will work alongside the World Health Organisation to tackle the most pressing health challenges around the world.

The Geneva-headquartered Foundation is an independent grant-making agency launched this May to complement the World Health Organization's efforts (WHO) in addressing urgent global health challenges.

As a separate legal entity, the Foundation acts as a platform for new types of public-private engagement, while protecting the WHO's neutrality and independence as the world's leading international health authority.

Mr Soni will assume his role as The WHO Foundation's inaugural Chief Executive Officer on January 1 next year.

Soni's appointment adds to the list of Indian-origin health experts being recently named to top-jobs, including Vivek Murthy as the United States Surgeon General.

The WHO itself has Soumya Swaminathan as its Chief Scientist; she had joined the WHO as Deputy Director General in 2017.

1st Indian woman to score in a top-tier European league

Waving the Indian flag high in European football, Indian footballer Bala Devi scored her first goal for Scottish side Rangers as her team defeated Motherwell 9-0 in the Scottish Women's Premier League.

Ngangom Bala Devi is an Indian women's footballer who plays as a forward for Scottish Women's Premier League club Rangers and India women's national football team.

She was born in Manipur in 1990.

The forward joined the Scottish club in January 2020, and became the first Indian woman to sign a professional football contract overseas.

Social Entrepreneur of the Year award

Two organisations that look at training youth for leadership roles, Pravah and ComMutiny, won the Social Entrepreneur of the Year (SEOY) award instituted by the Schwab Foundation and JubilantBhartia Foundation.

Ashraf Patel is the co-founder of Pravah and ComMutiny Youth Collective.

In partnership with UNICEF ROSA, they developed an appreciative enquiry tool to assess the impact of COVID 19 on the lives of adolescents in 8 South Asian countries.

ComMutiny members across 17 states reached 30 thousand vulnerable households with relief supplies in the times of COVID 19 crisis.

International Prize in the field of 'Creative Economy'

The UNESCO has decided to launch an international prize in the field of 'creative economy' in the name of Bangabandhu Sheikh Mujibur Rahman. Starting November 2021, the dollar 50 thousand award will be given away once in two years for global economic initiatives of the youth.

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The award will recognise exceptional initiatives taken by cultural workers and organizations in the development of the creative economy.

Currently, there are 23 UNESCO International Awards in the name of international celebrities and organisations.

UNESCO has declared 2021 as 'International Year of Creative Economy for Sustainable Development'.

Meghdoot awards

Department of Posts conducted Meghdoot Award Function 2020 on December 15, 2020 in the Conference Hall of MeitY, Electronics Niketan, CGO Complex, New Delhi.

The Meghdoot award is given every year for excellence in postal service.

The meghdoot award 2019-20 was given in eight categories.

A memorandum of Understanding was signed by Department of Posts with CSC e-Governance Services India Limited.

This will give a flip to setting a common service centres in more than 10000 Post Offices across the country for providing various G2C (Government to Citizen) and B2C (Business to Citizens) services to citizens in rural and remote areas of the country.

Shashi Shekhar Vempati elected as Vice President of ABU

Prasar Bharati has achieved another global milestone in broadcasting with the CEO, Shashi Shekhar Vempati being elected as the Vice President of Asia Pacific Broadcasting Union (ABU), one of the largest broadcasting associations in the world.

The election happened during the General Assembly of the Union which was held virtually due to COVID-19.

The Asia Pacific Broadcasting Union (ABU) was formed in 1964.

It as a professional association of broadcasting organisations with over 286 members in 57 countries and regions.

Headquarters: Kuala Lumpur, Malaysia

One of the ABU's activities is Asiavision, a daily exchange of news feeds by satellite among television stations in 20 countries in Asia.

Pandit Deendayal Upadhyay Telecom Skill Excellence Awards

Ministry of Communications and Electronics &IT has presented the Pandit Deendayal Upadhyay Telecom Skill Excellence Awards including cash award of Rs 50,000 and Rs 30,000 respectively, to both awardees.

Department of Telecommunications (DoT) launched Pandit Deendayal Upadhyay Telecom Skill Excellence Awards scheme in 2017.

Objective is to reward the successful telecom skilled people for their special contributions in the areas of Telecom Skilling, Telecom Services, Telecom Manufacturing, deploying Telecom Applications in different fields such as agriculture, commerce, health, education etc.

The award was named after Pandit Deendayal Upadhyay ji to commemorate his birth centenary.

UN Population Award for 2020

HelpAge India has been presented the UN Population Award for 2020 (institutional category), according to a release issued by UNFPA.

Established by the United Nations General Assembly in 1981, the United Nations Population Award recognises contributions in the fields of population and reproductive health.

The Committee for the United Nations Population Award, which made the selections, is chaired by Ion Jinga, the permanent representative of Romania to the United Nations, and is composed of representatives of nine other UN Member States.

For the first time in the history of the UN Population Award, the honour is being conferred on an Indian institution.

HelpAge India, which has been working for 'the cause and care of disadvantaged older persons to improve their quality of life' for over four decades, is the first Indian institution to receive this award.

The last time the Award came to an Indian was 28 years ago, back in 1992, when it was awarded to Mr. J.R.D. Tata as an individual laureate.

CII-ITC Sustainability Awards 2020

NTPC Ltd has been conferred "Excellence" in the prestigious CII-ITC Sustainability Awards 2020 in Corporate Social Responsibility (CSR) Domain. NTPC has been honoured in the Corporate Excellence Category, Commendation for Significant Achievement.

This is the highest award conferred by CII-ITC in CSR domain.

NTPC is the only PSU to receive the award in the Corporate Excellence category.

NTPC wins the prestigious CII-ITC Sustainability Awards in Corporate Excellence category second time in a row i.e. in the year 2019 and 2020.

Arya Rajendran becomes Mayor of Thiruvananthapuram

21 years old Arya Rajendran, the Communist Party of India-Marxist (CPM) councilor from Mudavanmugal in Thiruvananthapuram was sworn in as the new Mayor of the city corporation.

Arya won as councillor from Mudavanmukal ward of Thiruvananthapuram corporation at the 2020 Kerala local body elections at the age of 21 and was appointed as the mayor of the corporation which made her the youngest mayor of the Thiruvananthapuram Corporation.

The Guinness world record for the youngest Mayor is now held by Michael Sessions, who became Mayor of Hillsdale in the USA at the age of 18 years in 2005.

In India, Suman Koli who became the Mayor of Bharatpur in Rajasthan at 21 years in 2009 is one of the youngest.

Economic Development

Lucknow civic body raises ₹200 cr via BSE bond platform

Lucknow Municipal Corporation's (LMC) bonds made their debut on the BSE. The civic body of Uttar Pradesh's capital city is the ninth in the country to have raised money through municipal bonds.

UP Chief Minister Yogi Adityanath said Ghaziabad will be the next to issue a municipal issue and it will be followed by Prayagraj, Varanasi, Agra and Kanpur.

Lucknow is the ninth city in the country to raise capital through municipal bonds.

Until now, a cumulative amount of Rs 3,600 crore has been raised via muni bonds in the country. The money raised using such bonds is typically used for infra projects such as roads, water and housing.

In 2015, market regulator SEBI had issued the framework for raising capital by way of muni bonds.

Among the key eligibility criteria for issuing these bonds is that the local body shouldn't have negative net worth in any of the three preceding financial years and shouldn't have defaulted on payments in the last one year.

RBI tightens oversight of NBFCs, UCBs

The Reserve Bank of India (RBI) announced the introduction of risk-based internal audit norms for large urban cooperative banks (UCBs) and non-banking financial companies (NBFCs), as part of measures aimed at improving governance and assurance functions at supervised entities.

The RBI also moved to harmonise the guidelines on appointment of statutory auditors for commercial banks, UCBs and NBFCs in order to improve the quality of financial reporting.

The growing significance of NBFCs and their interlinkages with different parts of the financial system had made it imperative to enhance the sector's resilience. Thus it had been decided to put in place transparent criteria for the declaration of dividends by different categories of NBFCs.

With a view to deepening financial markets, regional rural banks would be allowed to access the liquidity adjustment facility (LAF) and marginal standing facility (MSF) of the RBI, as also the call/notice money market.

To significantly improve the ecosystem of digital payment channels with robust security and convenience for users, the RBI has proposed to issue Digital Payment Security Controls directions for the regulated entities.

Vadhavan Port Project

Villagers in Vadhavan in Maharashtra's Dahanu taluka, about 131 km from Mumbai, came out in protest against a biodiversity survey commissioned by the Jawaharlal Nehru Port Trust (JNPT) for the construction of the Vadhavan Port that received in-principle approval from the Union Cabinet in February.

Dahanu is one of the eight talukas in Maharashtra's newest district of Palghar, which was created in 2014.

But over two decades prior to that, the Union Ministry of Environment and Forests (MoEF) had, under the provisions of The Environment (Protection) Act, 1986, declared Dahanu an "ecologically fragile area" and imposed restrictions on setting up of industries that have a detrimental effect on the environment.

The locals have said that the construction of the port will not only hurt the flora and fauna of Dahanu, but will also disrupt allied activities like fishing and farming.

Dahanu was only one of three places in India where live conches can be found, and which gives the seafront of Vadhavan the name of "Shankhodar". The rocks, moss, and corals in the sea are favourable not just for fishing but also for fish seeding.

Petroleum board's new unified tariff structure

The Petroleum and Natural Gas Regulatory Board (PNGRB) has notified a new tariff structure for 14 natural gas pipelines, which, it says, aims to reduce the cost of natural gas for users further away from sources of natural gas and LNG terminals on the west coast of the country.

Under the new unified tariff structure, buyers will be charged a fixed tariff for the transport of gas within 300 kms of a source and a fixed tariff for the transport of gas beyond 300 kms on a single pipeline network.

This would be significantly cheaper for buyers further away from the source of gas who were earlier charged on the basis of the number of pipelines used and the distance from the source of gas.

Therefore, a buyer using multiple pipelines in GAIL's networks would likely benefit significantly from this change.

The changes in the tariffs will likely incentivise greater investment into gas transmission infrastructure as natural gas becomes more affordable for users further away from the west coast of the country.

An expert noted that this highlighted the government's emphasis on boosting the consumption of natural gas in the country. The government is aiming to boost the consumption of natural gas which currently accounts for 6.2% of India's energy basket to 15% by 2030.

NBCFDC & NSFDC enters into MoA with Central Bank of India

Implementation of Interest subvention Scheme of Ministry of Social Justice & Empowerment, Government of India – Vanchit Ikai Samooh aur Vargon ki Aarthik Sahayta (VISVAS) Yojana for financial empowerment of economically marginalized OBC/SC SHGs & Individuals got a major boost with signing of Memorandum of Agreements (MoAs) by National Backward Classes Finance & Development Corporation (NBCFDC) and National Scheduled Castes Finance and Development Corporation (NSFDC) with Central Bank of India a premier and leading Public Sector Bank.

It is an Interest subvention Scheme of Ministry of Social Justice & Empowerment for financial empowerment of economically marginalized OBC/SC SHGs & Individuals.

The scheme will benefit OBC/SC SHGs with loans/borrowings up to Rs.4.00 Lakh and OBC/SC individuals with loan/borrowing up to Rs.2.00 Lakh with a quick interest subvention benefit of 5% directly into the standard accounts of borrowing SHGs/beneficiaries.

Finance Ministry released 'Smuggling in India Report 2019-20'

Finance Ministry has released the Smuggling in India Report 2019-20 which analyses organised smuggling trends on Gold and Foreign Currency, Narcotic Drugs, Security, Environment and Commercial Frauds.

The report has been compiled by the Directorate of Revenue Intelligence (DRI).

The Directorate of Revenue Intelligence detected 412 cases of smuggling resulting in the seizure of contraband worth ₹1,949 crore in 2019-20. It arrested 837 economic offenders and also unearthed 761 complex cases of Customs duty evasion amounting to ₹2,183 crore.

On the occasion, the DRI Utkrisht Seva Samman, 2020 was awarded to Sankaran, an officer of the 1961 batch of the Indian Revenue Service.

Phase-1 of Agra Metro rail project

Prime Minister Modi has inaugurated the construction of Phase 1 of Agra Metro Rail Project (AMRP). The ceremony was held at 15 Battalion PAC parade ground in Agra. UP Governor Anandiben Patel and Chief Minister Yogi Adityanath also joined the programme.

Uttar Pradesh Metro Rail Corporation has set a deadline of five years for the completion of two corridors of Agra metro which will connect all the major tourist destinations.

Agra Metro will take around 3 years for the first metro train on the priority section between Taj mahal to Jama Masjid.

For the first time Heritage impact assessment was done with the help of IIT Madras and archaeological survey of India as per the guidelines of UNESCO before starting of work.

Agra is also one of the most polluted cities of Uttar Pradesh and the Metro will definitely help in decreasing the pollution level of the city.

The Prime Minister informed that 450 km metro line has been operationalized after 2014, as compared to mere 225 km before that. He also informed that work is progressing expeditiously on the 1000 km long metro lines. He said, the work is underway in 27 cities of the county.

Universal Service Obligation Fund Scheme

The Union Cabinet has given its approval for provision of a Universal Service Obligation Fund (USOF) Scheme for providing Mobile Coverage in Arunachal Pradesh and two Districts of Assam, namely Karbi Anglong and Dima Hasao, under the Comprehensive Telecom Development Plan (CTDP) for North Eastern Region (NER).

The project envisages to provide mobile coverage to 2374 uncovered villages (1683 in Arunachal Pradesh and 691 in two districts of Assam) at an estimated cost of implementation about Rs.2,029 crore including operational expenses for five years.

The project would be funded by Universal Service Obligation Fund. The project is targeted to be completed by December, 2022.

The work related to provision of 4G mobile services in identified uncovered villages will be awarded through open competitive bidding process as per extant USOF procedures.

India & UN-Based Better than Cash Alliance organizes Peer learning exchange

Department of Economic Affairs, Ministry of Finance hosted a learning session “Accelerating Responsible Digital Payments: Unlocking the Role of Fintech in Last Mile Service Delivery” with leaders from States and Union Territories across India.

Based at the United Nations, the Better Than Cash Alliance is a partnership of governments, companies and international organizations that accelerates the transition from cash to responsible digital payments.

The Alliance has 75 members which are committed to digitizing payments.

The Alliance Secretariat works with members on their journey to digitize payments by:

- Providing advisory services based on their priorities.
- Sharing action-oriented research and fostering peer learning on responsible practices.
- Conducting advocacy at national, regional and global level.

It was created in 2012. It was launched by the United Nations Capital Development Fund, the United States Agency for International Development, the Bill & Melinda Gates Foundation, Citigroup, the Ford Foundation, the Omidyar Network, and Visa Inc.

RTGS to be available 24x7 from December 14

Just within a year of operationalising NEFT 24x7, the Reserve Bank has announced that the Real Time Gross Settlement System or the RTGS facility will now be available for round the clock transactions.

Round the clock availability of RTGS will provide extended flexibility to businesses for effecting payments. The system can also be leveraged to enhance operations of Indian financial markets and cross-border payments.

RTGS, which began its operations on 26th March, 2004 with a soft launch involving four banks, presently handles 6.35 lakh transactions daily for a value of 4.17 lakh crore rupees across 237 participant banks.

RBI has informed that RTGS uses ISO 20022 format which is the best-in-class messaging standard for financial transactions.

The term real-time gross settlement (RTGS) refers to a funds transfer system that allows for the instantaneous transfer of money and/or securities.

RTGS is the continuous process of settling payments on an individual order basis without netting debits with credits across the books of a central bank.

Once completed, real-time gross settlement payments are final and irrevocable.

RBI issued draft circular on declaration of dividend by NBFCs

Reserve Bank of India has issued draft circular on declaration of dividend by non-banking financial companies (NBFCs) in pursuance to the announcement made in the monetary policy declared.

Accordingly, deposit-taking NBFCs and systemically important non-deposit-taking NBFCs must have their net non-performing assets below 6 percent and a capital adequacy ratio of at least 15 percent for the last three years, including the accounting year for which it proposes to declare dividend.

RBI has added that non-systemically important, non-deposit-taking NBFCs should have a leverage ratio of less than seven while core investment company - CIC should have Adjusted Net Worth (ANW) of at least 30 percent of its aggregate risk-weighted assets on balance sheet.

The apex bank has invited public comments on the draft circular, which need to be submitted by 24th of this month.

While announcing the monetary policy earlier this month, RBI Governor Shaktikanta Das had said that the growing significance of NBFCs and their interlinkages with different segments in the financial system has made it imperative to enhance their resilience.

Finance ministry OKs Rs 9,800cr for 27 states

The finance ministry had approved Rs 9,879 crore for capital expenditure for 27 states under the Aatmanirbhar Bharat package.

The scheme was announced by the Finance Minister on 12th October as a part of the Aatmanirbhar Bharat package.

The Scheme is aimed at boosting capital expenditure by the State Governments who are facing a difficult financial environment this year due to the shortfall in tax revenue arising from the COVID 19 pandemic.

Capital Expenditure has a higher multiplier effect, enhancing the future productive capacity of the economy, and results in a higher rate of economic growth.

Therefore, despite the adverse financial position of the Central Government, it was decided to extend a special assistance to the State Governments in respect of capital expenditure in 2020-21.

International Financial Services Centres Authority Regulations, 2020

In the Union Budget 2020, Union Minister of Finance Corporate Affairs Smt. Nirmala Sitharaman had made an announcement for setting up an International Bullion Exchange at the International Financial Services Centre in GIFT City, Gandhinagar, Gujarat.

Subsequently, the Government of India had notified the bullion spot delivery contract and bullion depository receipt (with bullion as underlying) as Financial Products and related services as Financial Services under the International Financial Services Centres Authority (IFSCA) Act, 2019.

IFSCA has been entrusted with the responsibility of operationalization of this Exchange.

In this regard, International Financial Services Centres Authority (Bullion Exchange) Regulations 2020 were approved by the Authority in its meeting held on October 27, 2020. The said regulations have been notified and published in the Gazette of India on December 11, 2020.

The regulations inter alia cover the Bullion Exchange, Clearing Corporation, Depository and Vaults.

The regulations are divided into the 16 chapters. First half of the regulation deals with the Exchange and Clearing Corporations while the second half pertains to the Vaults and Depositories and related provisions.

Key Development Projects in Gujarat

Prime Minister Narendra Modi has visited Dhordo in Kutch, Gujarat and lay the foundation stone of several development projects in the state. These projects include a desalination plant, a hybrid renewable energy park, and a fully automated milk processing and packing plant.

Hybrid Renewable Energy Park:

Hybrid Renewable Energy Park is world's biggest Renewable Energy Park, being set up close to Indo Pak border, near Khavda village in Kutch district.

It will produce 30 Giga watt solar and wind energy on a vast expanse of waste land situated beyond India bridge from Khavda village to Vighakot, where civilian access is not permitted and area is controlled by BSF and Indian Army.

Desalination plant:

The PM will also lay foundation stone virtually for a desalination plant coming up at Gundiyali village near Mandvi in Kutch district. This plant aims to convert sea water for potable purposes for a population 8 lakh of 300 villages.

The desalination plant assumes great importance for Kutch peninsula which is perennial rain-deficit area with no other source of water.

Fully automated milk processing of Sarhad dairy:

Prime Minister Modi will also lay foundation stone, virtually, for 130 crore rupees milk processing plant of Sarhad dairy, an apex dairy cooperative entity.

This massive 2 lakh litre per day milk processing and packaging facility will come up under Rashtriya Kisan Vikas Yojna.

RCE for North Eastern Region Power System Improvement Project

The Cabinet Committee on Economic Affairs (CCEA) has approved the Revised Cost Estimate (RCE) of the North Eastern Region Power System Improvement Project (NERPSIP) at an estimated cost of Rs.6,700 crore.

This is a major step, towards the economic development of the North Eastern Region through the strengthening of Intra-State Transmission and Distribution systems.

The scheme is being implemented through POWERGRID, a Public Sector Undertaking (PSU) under Ministry of Power in association with six beneficiary North Eastern States namely, Assam, Manipur, Meghalaya, Mizoram, Nagaland, and Tripura.

The scheme is targeted to be commissioned by December 2021. After commissioning, the project will be owned and maintained by the respective North Eastern State Utilities.

The main objective of the project is economic development of North Eastern Region through strengthening of Intra - State Transmission and Distribution systems.

The Scheme was initially approved in 2014 as a Central Sector Plan Scheme of Ministry of Power.

It is being funded with the assistance of World Bank fund and by the Government of India (Gol) through the Budget support of Ministry of Power on 50:50 basis (World Bank: Gol) except for the capacity building component for Rs 89 crore, which will be entirely funded by the Gol.

World Bank project to Protect India's Poorest from COVID-19

The Government of India and the World Bank signed a \$750 million of \$1 billion proposed for Accelerating India's COVID-19 Social Protection Response Programme to support India's efforts at providing social assistance to the poor and vulnerable households, severely impacted by the COVID-19 pandemic.

This is the second operation in a programmatic series of two. The first operation of \$750 million was approved in May 2020.

The programme will strengthen the capability of state and national governments in India to provide coordinated and adequate social protection to the poor and vulnerable from the shocks triggered by the COVID-19 pandemic.

This programme will help further expand and deepen the coverage of India's social protection systems by helping these vulnerable groups in urban and peri-urban areas across the country.

The \$400 million credit is from the International Development Association (IDA) – the World Bank's concessional lending arm.

India pledges \$1 million to WADA for scientific research

India has pledged \$1 million to the World Anti-Doping Agency's scientific research budget, the "highest among contributions made by other world governments."

The World Anti-Doping Agency is a foundation initiated by the International Olympic Committee to promote, coordinate and monitor the fight against drugs in sports.

The agency's key activities include monitoring of the World Anti-Doping Code, whose provisions are enforced by the UNESCO International Convention against Doping in Sport.

Headquarters: Montreal, Quebec, Canada.

Established in: 1999.

Centre to release ₹18,000 crore under PM-Kisan scheme

Centre will release the next instalment of financial benefit under Pradhan Mantri Kisan Samman Nidhi (PM-KISAN). With the push of a button, the Prime Minister will enable the transfer of more than Rs. 18 thousand crore to more than 9 crores beneficiary farmer families.

Pradhan Mantri Kisan Samman Nidhi Yojana is implemented as a central sector scheme by the Government of India.

This scheme was introduced to augment the source of income of many small and marginal farmers. The main objectives of the PM-KISAN scheme is to provide income support to all eligible land-holding farmers and their families.

PM-KISAN scheme also aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income.

The scheme is expected to increase the coverage of PM-KISAN to around 14.5 crore beneficiaries. It aims to cover around 2 crores more farmers with an estimated expenditure of Rs. 87,217.50 crores that will be funded by the Central Government for the year 2019-20.

Under the PM-KISAN Scheme, a financial benefit Rs. 6,000 per year is provided to small and marginal farmers, payable in three equal 4-monthly installments of Rs. 2,000 each.

The fund is transferred directly to the bank accounts of the beneficiaries.

Green National Highways Corridor Project

The Government of India recently inked USD 500 million project with World Bank to build safe and green national highway corridors in Rajasthan, Himachal Pradesh, Uttar Pradesh and Andhra Pradesh.

The Green National Highways Corridors Project will support the Road Transport and Highways Ministry to construct 783 kilometres of highways in various geographies by integrating safe and green technology designs such as local and marginal materials, industrial by-products and other bioengineering solutions.

The project will help reduce GHG emissions in the construction and maintenance of highways.

The project will also enhance the capacity of the Ministry of Road Transport and Highways in mainstreaming safety and green technologies.

The \$500 million loan from the International Bank for Reconstruction and Development (IBRD), has a maturity of 18.5 years including a grace period of five years.

Vadodara Corporation plans to raise money via municipal bonds

The Vadodara Municipal Corporation (VMC) is expected to launch municipal bonds in January, and will become the third Urban Local Body (ULB) in Gujarat to use this method to raise money to fund development work sanctioned under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

Ahmedabad was the first city in south Asia to launch a municipal bond of Rs 100 crore in 1998. Surat Municipal Corporation was the second city in Gujarat to announce bonds in 2018.

A municipal bond is a kind of debt instrument where investors offer loans to local governments.

They are issued by civic bodies for specific projects and usually have a 10-year tenure.

The ULB pays the annual interest on the bonds to the investor at the decided rate. The difference between a bank loan and a municipal bond is that any institution can secure a bond only if it has favourable credit ratings.

The bond helps raise funds from the stock market. The bond also increases the number of investors available to the civic body, as compared to a loan from a single bank.

Under the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme, urban local bodies (ULBs) are encouraged to tap the bond market. Bonds help ensure improved credit profiles, direct transfer of funds by the Centre, transparency and efficient revenue generation.

China to overtake US to be world's biggest economy by 2028

China is going to overtake the US to become the world's biggest economy by 2028, five years earlier than previously forecast, due to the COVID-19 pandemic.

Japan would remain the world's third-biggest economy, in dollar terms, until the early 2030s when it would be overtaken by India, pushing Germany down from fourth to fifth.

The United Kingdom, currently the fifth-biggest economy by the CEBR's measure, would slip to sixth place from 2024.

Indian scenario:

India, which appears to have been pushed back to being the world's sixth biggest economy in 2020, will again overtake the UK to become the fifth largest in 2025 and race to the third spot by 2030

India had overtaken the UK in 2019 to become the fifth largest economy in the world but has been relegated to 6th spot in 2020.

Innovative Govt tool to fund PSBs

The government has used financial innovation to recapitalise Punjab & Sind Bank by issuing the lender Rs 5,500-crore worth of non-interest bearing bonds valued at par.

Punjab & Sind Bank MD and CEO said these are special types of zero coupon bonds issued by the government after proper due diligence and these are issued at par.

Since these bonds are not tradable, the lender has kept them in the Held-To-Maturity (HTM) bucket, not requiring it to book any mark-to-market gains or losses from these bonds.

Though these will earn no interest for the subscriber, market participants term it both a 'financial illusion' and 'great innovation' by the government where it is using Rs 100 to create an impact of Rs 200 in the economy.

Unlike the previous tranches of recapitalisation bonds which carried interest and were sold to different banks, these "non-interest bearing, non-transferable special GOI securities" have a maturity of 10-15 years and issued specifically to Punjab & Sind Bank.

RBI staff paper says retaining 4% CPI target appropriate for India

Maintaining the inflation target at 4% is appropriate for India, according to a working paper titled "Measuring Trend Inflation in India" released by RBI.

The paper seeks to estimate trend inflation in India to find the answer to a question that goes to the root of flexible inflation targeting (FIT) – is the choice of the target for inflation consistent with its trend?

The 4% target for inflation — with an upper tolerance limit of 6% and a lower limit of 2% — was set by the Centre in consultation with the RBI in 2016 and its validity expires on March 31, 2021.

The paper finds a steady decline in trend inflation to 4.1- 4.3% since 2014.

A target set too [significantly] below the trend imparts a deflationary bias to monetary policy because it will go into overkill relative to what the economy can intrinsically bear in order to achieve the target, the paper said.

Analogously, a target that is fixed above the trend renders monetary policy too expansionary and prone to inflationary shocks and unanchored expectations. Hence, maintaining the inflation target at 4% is appropriate for India.

Kisan Rail carried 27,000 tonnes of produce

Kisan Rail trains have ferried around 27,000 tonnes of produce so far, and half of the trips made so far were by trains running between Devlali in Maharashtra and Danapur in Bihar.

The Kisan Rail train carries vegetables such as cauliflower, capsicum, cabbage, drumsticks, chillies, onion, etc, as well as fruits like grapes, oranges, pomegranate, banana, custard apple.

The loading and unloading of perishable commodities will be permitted at all en route stoppages and no minimum or maximum size of consignment. The government has extended a subsidy of 50 per cent on transportation of fruits and vegetables.

The multi-commodity train service has been popular as it also carries relatively small quantities of produce brought in by small, individual farmers.

So far, the Kisan Rail has run regularly on 10 routes. One route — between Yeshvantpur and Delhi — exhausted its seasonal demand a while ago.

Kisan Rail trains have ferried around 27,000 tonnes of produce so far, and half of the trips made so far were by trains running between Devlali in Maharashtra and Danapur in Bihar.

Geography, Environment, Biodiversity & Disaster Management

World's 'loneliest elephant' heads to Cambodia from Pakistan

The "world's loneliest elephant" embarked on a mammoth move from Pakistan to retirement in a Cambodian sanctuary.

Kaavan is dubbed the "world's loneliest elephant" after languishing alone for years in a Pakistani zoo.

The plight of the male Asian elephant, who's been alone since the death of his partner Saheli in 2012, has captured worldwide attention.

The loss of his mate Saheli in 2012 took a toll on Kaavan's mental health. Elephants are social animals that thrive on the company of other elephants.

The rise of the 'wild' Arunachal kiwi

Twenty years ago, the kiwis that grew wild in Arunachal Pradesh's Ziro Valley barely caught anyone's attention. However, in the last decade, farmers slowly recognised the commercial value of the fruit. The kiwis of the region are the only certified organic fruit of their kind in the country.

Arunachal is first in the country to obtain Organic Certification for Kiwi under Mission Organic Value Chain Development for North East Region (MOVCD-NER).

The organic certification was provided by the Mission Organic Value Chain Development for North East Region (MOVCD-NER), a scheme for the northeastern states by the Ministry of Agriculture & Farmers' Welfare under the Central government.

Kiwis of Ziro Valley — located in Lower Subansiri district — were certified as organic following a standard three-year-process.

An agricultural practice/product is considered organic when there are no chemical fertilisers or pesticides involved in its cultivation process.

Such certifications in India can be obtained after strict scientific assessment done by the regulatory body, Agricultural and Processed Food Products Export Development Authority (APEDA).

Cyclonic storm 'Burevi'

The Deep Depression over southwest Bay of Bengal moved west-north westwards with a speed of 09 kmph during past six hours, intensified into Cyclonic Storm 'Burevi'.

The India Meteorological Department (IMD) announced that a cyclone brewing in the Bay of Bengal is likely to affect Tamil Nadu and Kerala, less than a week after cyclone Nivar wreaked havoc in the southern states.

The cyclone will cross the Sri Lanka coast on December 2 and bring heavy rain over Tamil Nadu and Kerala.

India sets up committee for implementation of climate change targets

The Centre has set up high-level inter-ministerial Apex Committee for Implementation of Paris Agreement (AIPA) under the chairmanship of Secretary, MoEFCC to oversee the implementation of climate change targets that India has committed to under the 2015 Paris Agreement.

The purpose of AIPA is to generate a coordinated response on climate change matters that ensures India is on track towards meeting its obligations under the Paris Agreement including its Nationally Determined Contributions (NDC).

Senior officials from fourteen ministries will serve as Members to AIPA who will oversee the progress in implementation of India's NDC

1. Operate as a National Authority to regulate carbon markets in India under Article 6 of the Paris Agreement,
2. Formulate guidelines for consideration of projects or activities under Article 6 of the Paris Agreement,
3. Issue guidelines on carbon pricing, market mechanism, and other similar instruments that have a bearing on climate change and NDCs.

Malayan Giant Squirrel

Zoological Survey of India (ZSI), in a first-of-its-kind study, has projected that numbers of the Malayan Giant Squirrel could decline by 90% in India by 2050, and it could be extinct by then if urgent steps are not taken.

The Malayan Giant Squirrel, one of the world's largest squirrel species that has a dark upper body, pale under parts, and a long, bushy tail.

The species is listed as Near Threatened on IUCN's 2016 list, and it is protected under India's Wildlife Protection Act.

It is currently found in parts of West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, and Nagaland. It is also distributed through Southern China, Thailand, Laos, Vietnam, Burma, the Malayan Peninsula, Sumatra, and Java.

It is found mostly in evergreen and semi-evergreen forests, from plains to hills at elevations of 50 m to 1,500 m above sea level.

Destruction of its habitat could restrict the squirrel to only southern Sikkim and North Bengal by 2050, according to the ZSI.

Only 43.38 per cent of the squirrel's original habitat in India is now favourable to it, says the study; by 2050, the favourable zone could shrink to 2.94 per cent of the area the species was meant to inhabit.

India is home to three giant squirrel species; the other two – Indian Giant Squirrel and Grizzled Giant Squirrel – are found in peninsular India.

Unlike the nocturnal flying squirrels, giant squirrels are diurnal, but arboreal (tree-dwelling) and herbivorous like the flying squirrels.

Professor rescues vulnerable turtle from Assam fish market

A turtle of a vulnerable species was rescued from a fish market in Assam's Silchar, courtesy quick thinking and action on the part of a university professor.

The Indian peacock softshell turtle (*Nilssonia hurum*) is a species of turtle found in South Asia.

It is listed on the IUCN Red list as vulnerable species.

It is a schedule I species in the Indian Wildlife Protection Act, 1972, and is accorded the highest protection.

According to a report by Guwahati-based conservation NGO, Help Earth, 29 species of turtles have been recorded in India, out of which 20 are found in Assam.

Himachal Pradesh wants GI status for five products

The Himachal Pradesh government is trying to obtain GIs (Geographical Indication) for five products from the state – Karsog Kulth, Thangi of Pangi, Chamba Metal Crafts, Chamba Chukh, and Rajmah of Bharmour.

Karsog Kulth: Kulthi or Kulth (horse gram) is a legume grown as a kharif crop in Himachal Pradesh. Kulth grown in the Karsog area of Mandi district is believed to be particularly rich in amino acids.

Pangi ki Thangi: It is a type of hazelnut which grows in Pangi valley located in the north-western edge of Himachal. It is known for its unique flavour and sweetness.

Chamba metal crafts: These include items such as metal idols and brass utensils which, historically, were made by skilled artisans in the courts of kings of Chamba. There are efforts to revive the trade, and a plate made from a brass-like alloy and having carvings of gods and goddesses is still popular.

Chamba Chukh: It's a chutney made from green and red chillies grown in Chamba, and prepared in traditional and unique ways. The practice has largely declined in rural households of Chamba, but survives to some extent at the small-scale industrial level.

Bharmouri Rajmah: It's more specifically called the Kugtalu Rajmah, since it grows in the area around Kugti Pass in the Bharmour region of Chamba district. It is rich in proteins and has a unique flavour.

These include four handicrafts (Kullu Shawl, Chamba Rumal, Kinnauri Shawl and Kangra Paintings), three agricultural products (Kangra Tea, Basmati and Himachali Kala Zeera) and one manufactured product (Himachali Chulli Oil).

Significance of lions spotted in Gujarat's Jasdan area

Leaving their known habitat in Dhari in Gir (east) wildlife division in Amreli district, three Asiatic lions—a female and two sub-adult males, have walked around 100 km to reach Jasdan taluka of Rajkot district and have been camping in a grassland and revenue areas of Jasdan.

This is for the second year in a row that lions have visited Jasdan. A look at the implications of the development.

Lions keep moving from surrounding areas to Gir National Park and Wildlife Sanctuary (NGPWLS), creating what is called lion corridors.

But their Jasdan visit differs for the fact that it is second year in a row, that too around same time of the year. Also, Jasdan is not connected to Amreli by any contiguous riverine patch associated with corridors like Krakach.

Lions are considered top predators of grassland and shrubland ecosystems. Jasdan, Vinchhiya and Chotila talukas have grasslands, both private as well as in protected forest areas.

New Zoos granted recognition by Central government

At the 37th General Body meeting of Central Zoo Authority chaired by Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar two new zoos the Rajgir Zoo Safari in Nalanda, Bihar and Shaheed Ashfaque Ullah Khan Prani Udyaan in Gorakhpur, Uttar Pradesh were granted recognition.

Rajgir Zoo Safari, Nalanda, Bihar

- The zoo is established exclusively comprising on only safari enclosures which, on contrary to conventional enclosure, offer larger space for captive animals.
- The zoo is located close to the historically important Nalanda.

Shaheed Ashfaque Ullah Khan Prani Udyaan, Gorakhpur, U.P.

- With the establishment of this zoo, the state of Uttar Pradesh has a total of 9 zoos.
- The zoo is situated in the spiritual land of Gorakhpur and has a high visitation.

Building bridges in the forest to help wildlife

Ramnagar Forest Division in Nainital district, Uttarakhand, recently built its first eco-bridge for reptiles and smaller mammals.

Eco-ducts or eco-bridges aim to enhance wildlife connectivity that can be disrupted because of highways or logging.

These include:

1. Canopy bridges (usually for monkeys, squirrels and other arboreal species);
2. Concrete underpasses or overpass tunnels or viaducts (usually for larger animals); and
3. Amphibian tunnels or culverts.

Usually these bridges are overlaid with planting from the area to give it a contiguous look with the landscape.

Climate Change Performance Index (CCPI) 2020

India remains in the top 10 for the second year in a row in the latest global Climate Change Performance Index (CCPI) released in Germany. The biggest current emitter of greenhouse gases (GHG) China figures at 33rd rank while the largest historical polluter, the USA, appears at the bottom of the list.

The biggest current emitter of greenhouse gases (GHG) China figures at 33rd rank while the largest historical polluter, the USA, appears at the bottom of the list.

Though India slid one position down from ninth in 2019 to 10th this year, the country's journey towards climate protection has been consistent with it improving its ranking from 31st in 2014.

Globally none of the countries assessed for the annual CCPI report are, however, on the path to meet their Paris Agreement commitment of keeping global warming increase below 2 degree celsius by the end of the century and restrict it to 1.5 degree celsius rise.

The CCPI 2021, covering the year 2020, shows that only two G20 countries - the UK and India - are among the high rankers while six others - the USA, Saudi Arabia, Canada, Australia, South Korea and Russia (52nd) – are at the bottom of the index.

The CCPI is developed by not-for-profit organisations Germanwatch and NewClimate Institute (Germany) together with the Climate Action Network (CAN International).

It is an important tool to enhance transparency in international climate politics and enables comparison of climate protection efforts and progress made by individual countries.

The latest list is prepared by assessing performances of 57 countries and European Union (as a whole) in four categories - GHG emissions (40%), renewable energy (20%), energy use (20%) and climate policy (20%). These 57 countries and the EU collectively are responsible for about 90% of global GHG emissions.

Novel Species of Muraingrass

A new species of Indian Muraingrasses known for their ecological and economic importance, such as fodder, have been spotted by scientists in Goa in the Western Ghats, one of the four global biodiversity hotspots of India.

The species was named *Ischaemumjanarthanamii* in honour of Prof. M. K. Janarthanam, Professor of Botany, Goa University, for his contribution to the Indian grass taxonomy and documentation of the floristic diversity of Goa state.

The species has adapted to survive harsh conditions, low nutrient availability, and blossoms every monsoon.

Globally 85 species are known from *Ischaemum*, of which 61 species are exclusively found in India. The Western Ghats have 40 species with the highest concentration of the genus.

Agharkar Research Institute (ARI), Pune, an autonomous institute of the Department of Science & Technology, has been exploring the biodiversity of the Western Ghats for last few decades.

Ischaemumjanarthanamii grows on low altitude lateritic plateaus in the outskirts of Bhagwan Mahavir National Park, Goa.

The vegetation is exposed to extreme climatic conditions like desiccation in drier months and soils with low nutrient availability. However, withstanding these, the species has adapted to survive harsh conditions and blossom every monsoon.

Climate Ambition Summit 2020

The United Nations (UN), United Kingdom (UK) and France are proud to be co-hosting the Climate Ambition Summit 2020, in partnership with Chile and Italy on 12 December, exactly five years since the adoption of the Paris Agreement.

The Climate Ambition Summit, held virtually, marked the five years of the adoption of the Paris Agreement on Climate Change.

PM Modi, while addressing the summit said that India is not only on track to achieve its Paris Agreement targets, but to exceed them beyond expectations.

India has reduced emission intensity by 21% over 2005 levels. Solar capacity has grown from 2.63 GigaWatts in 2014 to 36 GigaWatts in 2020. Renewable energy capacity is the fourth largest in the world.

It will reach 175 GigaWatts before 2022. India has set an even more ambitious target now - 450 GigaWatts of renewable energy capacity by 2030.

And, on the world stage, India has pioneered two major initiatives:

- The International Solar Alliance, and
- Coalition for Disaster Resilient Infrastructure.

Rare Myristica Swamp Treefrog found in Vazhachal forest

Myristica Swamp Treefrog, a rare arboreal species endemic to the Western Ghats that bears the scientific name *Mercurana myristicapalustris*, has been recorded for the first time north of the Shencottah gap in Vazhachal Reserve Forest in Thrissur.

It's scientific name is *Mercurana myristicapalustris*.

These frogs are rare and elusive for the reason that they are arboreal and active only for a few weeks during their breeding season.

During this season, there is a large aggregation of males that descend from the high canopy of the trees. The males vocalise in groups from the low perches in the swamps.

They exhibit unique breeding behaviour. The breeding season, unlike for other frogs, starts in the pre-monsoon season (May) and ends before the monsoon becomes fully active in June.

Extinct Himalayan Serow spotted in Spiti Valley

Extinct Himalayan Serow was spotted in the cold deserts of the Spiti valley in Himachal Pradesh.

The Himalayan serow, or *Capricornis sumatraensis* thar, is a subspecies of the mainland serow (*Capricornis sumatraensis*).

Himalayan serow resembles a cross between a goat, a donkey, a cow, and a pig. It's a medium-sized mammal with a large head, thick neck, short limbs, long, mule-like ears, and a coat of dark hair.

There are several species of serows, and all of them are found in Asia. Himalayan serows are typically found at altitudes between 2,000 metres and 4,000 metres (6,500 to 13,000 feet). They are known to be found in eastern, central, and western Himalayas, but not in the Trans Himalayan region.

Previously assessed as 'near threatened', the Himalayan serow is now been categorised as 'vulnerable' in the IUCN Red List of Threatened Species.

It is listed under Schedule I of The Wildlife Protection Act, 1972, which provides absolute protection.

Western Ghats grasslands

Tropical montane grasslands (TMG) in the Shola Sky Islands of the Western Ghats have suffered big reductions due to invasions by exotic trees such as acacias, pines and eucalyptus, shrinking the range sizes of endemic species, including plants, birds, amphibians and mammals.

TMG are high elevation grasslands forming only 2% of all grasslands in the world.

Among their functions is regulating the global carbon cycle and serving as a source of water to downstream communities.

In India, TMG have even been classified as wastelands in forest management plans since they are unlikely to generate revenue, contrary to the timber (even if exotic) found in forests.

In the Western Ghats, 23% of montane grasslands were reportedly converted into invasive exotic tree cover over a period of 44 years.

'World's ugliest orchid' among new species named in 2020

Orchids are not often called ugly, but that is how the Royal Botanic Gardens in Kew, London, described a new species of the normally vibrant and delicate flower discovered in the forests of Madagascar.

Gastrodia agnicellus, a newly discovered orchid has been named "the ugliest orchid in the world."

It feeds on fungi and has no leaves.

Although assessed as a threatened species, the plants have some protection because they are located in a national park.

Madagascar is an island country in the Indian Ocean, approximately 400 kilometres off the coast of East Africa. Madagascar is the world's second-largest island country.

Rescue, Rehabilitation centre for monkeys

The first rescue and rehabilitation center for monkeys was launched in Telangana's northern district of Nirmal. The forest department has set up a campus in Chincholi village for housing up to 200 monkeys for a period of 10 to 15 days, after which they will be released in forest areas.

Monkeys that venture into human habitations would be caught in a phased manner, brought to the centre where they would be operated on for birth control and would be released into the forests again after the rehabilitation period.

To make the rehabilitation centre a sustainable habitat for the primates, several fruit and flowering plants, a variety of trees that provide shade, and medicinal plants would be grown.

It is the second such facility for the primates in the country. The rehabilitation centre for the monkeys was also the first such facility in south India.

The other facility in the country was in Himachal Pradesh.

India's leopard population increases by 60%

The population of leopard in India has increased by 60 per cent, according to a report released by the government.

The leopard population has been estimated using camera trapping method.

There are 12,852 leopards in India as of 2018 as compared to the previous estimate of 7910 conducted 2014, an increase of 60% in 4 years.

The highest concentration of the leopard in India is estimated to be in Madhya Pradesh (3,421) followed by Karnataka (1,783) and Maharashtra (1,690).

Recent meta-analyses of leopard status and distribution suggest 48–67% range loss for the species in Africa and 83–87% in Asia.

In India, leopards have experienced a possibly human-induced 75-90% population decline in the last ~120-200 years.

In Indian subcontinent poaching, habitat loss, depletion of natural prey and conflict are major threats to leopard populations. All these have resulted in changing the species status from 'Near Threatened' to 'Vulnerable' by the International Union for Conservation of Nature (IUCN).

As for region-wise distribution, the highest number of 8,071 leopards were found in central India and eastern ghats. In the northeast hills, there are just 141 leopards.

Cattle competing one-horned rhino's in Assam's Mini Kaziranga

Too many cattle are robbing the one-horned rhinos of Assam's Pobitora Wildlife Sanctuary, referred to as 'Mini Kaziranga' for similar features, of their nutritious food.

Pobitora Wildlife Sanctuary is situated in the flood plains of River Brahmaputra in the district of Morigaon and about 45 kms from Guwahati, the capital of Assam.

In 1987, Pobitora was declared a wildlife sanctuary.

Pobitora wildlife sanctuary harbors the highest density of Rhinoceros in the world and second highest concentration of Rhinoceros in Assam after Kaziranga National Park.

It is an Important Bird Area and home for more than 2000 migratory birds and various reptiles.

Ladakh's Tso Kar Wetland Complex added to list of Ramsar site

According to the Ministry of Environment, Forest and Climate Change, India has added Tso Kar Wetland Complex in Ladakh as its 42nd Ramsar site, the second one in the Union Territory (UT) of Ladakh.

The Tso Kar Basin is a high-altitude wetland complex, consisting of two principal waterbodies, Startsapuk Tso, a freshwater lake of about 438 hectares to the south, and Tso Kar itself, a hypersaline lake of 1800 hectares to the north, situated in the Changthang region of Ladakh, India.

It is called Tso Kar, meaning white lake, because of the white salt efflorescence found on the margins due to the evaporation of highly saline water.

The Tso Kar Basin is an A1 Category Important Bird Area (IBA) as per Bird Life International and a key staging site in the Central Asian Flyway.

The site is also one of the most important breeding areas of the Black-necked Crane (*Grus nigricollis*) in India.

This IBA is also the major breeding area for Great Crested Grebe (*Podiceps cristatus*), Bar-headed Geese (*Anser indicus*), Ruddy Shelduck (*Tadorna ferruginea*), Brown-headed Gull (*Larus brunnicapillus*), Lesser Sand-Plover (*Charadrius mongolus*) and many other species.

Significance of the new whale song

In a paper published in the journal *Endangered Species Research*, authors described a new whale song, suggesting the existence of a population that was previously unknown. Researchers analysed recordings from three locations in the western Indian Ocean from where they discovered the unique whale song.

Since it is the only blue whale song identified by them in the western Arabian Sea, researchers have called it the “Northwest Indian Ocean”.

Researchers believe the source is either the blue whale or Bryde’s whale since both species have been documented off Oman previously.

Given that this song-type has not been reported before, the presence of it across a large geographic region indicates the likely existence of a previously undefined population of blue whales in the Western Indian Ocean.

The giant Antarctic iceberg A68 cause for concern

The giant iceberg A68, the biggest block of free-floating ice from Antarctica with an area of about 5,800 sq. km, has been drifting in the Atlantic Ocean since 2017. This year, due to an ocean current, the iceberg was propelled into the South Atlantic Ocean and since then it has been drifting towards the remote sub-Antarctic island of South Georgia, prompting fears about the impact the iceberg could have on the island’s abundant wildlife.

Icebergs travel with ocean currents and either get caught up in shallow waters or ground themselves.

Recently, US National Ice Center (USNIC) confirmed that two new icebergs calved from A68a and were large enough to be named and tracked. They are called A68E and A68F.

South Georgia is an island in the southern Atlantic Ocean that is part of the British Overseas Territory of South Georgia and the South Sandwich Islands (SGSSI). The main settlement is Grytviken.

The US National Ice Center (USNIC) is responsible for naming icebergs, which are named according to the Antarctic quadrant in which they are spotted.

2 of 15 most-destructive 2020 climate disasters impacted India

A new global report in its analysis of 15 most destructive climate disasters of 2020 has found that nine of these extreme events, including two in India, caused damage worth at least \$5 billion.

The report, ‘Counting the Cost 2020: A Year of Climate Breakdown’ has been prepared by the UK based non-profit organisation Christian Aid.

Though hurricanes in the US and central American countries turned out to be the most expensive (\$41 billion), floods in India during June-October period caused the loss of highest number of human lives.

In fact, India’s floods, which killed 2,067, caused loss of more human lives than casualties in all other 14 destructive climate disasters put together.

Floods in Pakistan which claimed 410 lives figured at second spot followed by the US and central American countries (400 lives lost in hurricanes) at the third position in the list of 15.

The cyclone 'Amphan', which struck the Bay of Bengal in May, had caused financial losses valued at \$13 billion in just a few days in India and Bangladesh and caused loss of 128 human lives.

History, Art & Culture

The first ever SCO Online International Exhibition on Shared Buddhist Heritage

Vice President of India & Chair of the SCO Council of Heads of Government in 2020 launched the first ever SCO Online Exhibition on Shared Buddhist Heritage, during the 19th Meeting of the SCO Council of Heads of Government (SCO CHG) in New Delhi.

This SCO online International exhibition, first ever of its kind, is developed and curated by National Museum, New Delhi, in active collaboration with Shanghai Cooperation Organisation (SCO) member countries.

The exhibition deploys state of the art technologies like 3D scanning, WebGL platform, virtual space utilization, innovative curation and narration methodology etc.

Buddhist philosophy and art of Central Asia connects Shanghai Cooperation Organization (SCO) countries to each other.

The visitors can explore the Indian Buddhist treasures from the Gandhara and Mathura Schools, Nalanda, Amaravati, Sarnath etc. in a 3D virtual format.

Luxury cruise based on Ramayan to be launched in Saryu River

A luxury cruise based on the epic Ramayan will soon be launched on the Saryu River in Ayodhya, according to a press release from the Ministry of Ports, Shipping and Waterways.

It will be the first-ever luxury Cruise service on the Saryu river (Ghagra/National Waterways-40) in Ayodhya, Uttar Pradesh.

It aims to give mesmerizing experience to devotees with one-of-its-kind spiritual journeys while cruising through the famous ghats of the holy river Saryu.

Tourists will be taken on the 'Ramcharitmanas Tour', of 1-1.5 hour duration, featuring an exclusively made video film of 45-60 minutes duration, based on Ramcharitmanas by Goswami Tulsidas, covering the period from the birth of Lord Ram to his Rajyabhishek.

Ayodhya is the birthplace of Lord Ram, as mentioned in the great Indian epic Ramayan. It is also the first of the seven most important pilgrimage sites (Mokshdayini Sapt Puris) for the Hindus.

Nisarg Gram campus at Pune

Invoking recollections of Mahatma Gandhi's famous Nature Cure campaign of 1946 at the "Nisarg Upchar" Ashram in Uruli Kanchan village near Pune, the upcoming new campus of National Institute of Naturopathy (NIN), Pune will be called "Nisarg Gram".

Located at a distance of 15 Km from NIN's present premises at Bapu Bhavan, the new Institution will be future-ready, with many novelties and innovations incorporated in the project per se and the curriculum of the Naturopathy courses.

NIN, Pune is an Autonomous Body under the Ministry of AYUSH.

The institution was called All India Nature Cure Foundation and was set up under Gandhi Ji's leadership in 1945 at the same premises where the NIN presently functions.

It was subsequently taken over by the Central Government and structured into the present National Institute of Naturopathy.

Hampi stone chariot

Tourists can no longer get too close to the iconic stone chariot in front of the Vijaya Vittala Temple in the UNESCO World Heritage site of Hampi. The architectural marvel has been cordoned off by a protective ring by the Archaeological Survey of India (ASI).

The ASI put up the barricade to prevent people from touching or climbing the monument and causing damage to it in any way.

The chariot inside the temple complex is a shrine dedicated to Garuda, but the sculpture of Garuda is now missing.

The Hampi chariot is one among the three famous stone chariots in India, the other two being in Konark, Odisha, and Mahabalipuram, Tamil Nadu.

The delicately carved chariot at Hampi reflects skill of temple architecture under the patronage of Vijayanagara rulers who reigned from 14th to 17th century CE.

Gwalior, Orchha on UNESCO World Heritage City List

From architecture to music to sports, from education to commerce to tourism, Gwalior in Madhya Pradesh wears many hats. Now, along with its historical neighbour Orchha, the city has been listed under the UNESCO World Heritage List.

Orchha:

Orchha located in the Bundelkhand region of Madhya Pradesh was the 16th century capital of the erstwhile Bundela dynasty.

Orchha Raj Mahal, Jahangir Mahal, Ramaraja Mandir, Rai Praveen Mahal, Laxminarayan Mandir and many other famous temples and palaces are famous for a unique confluence of Rajput and Mughal architectural influences.

Gwalior:

At the same time, Gwalior city has been the capital of Gurjar Pratihar, Tomar, Baghel Kachhwahs and Scindia Rajvansh.

The ancient signs left by them will be found in the form of monuments, forts, palaces.

Singapore's beloved street hawker culture

Singapore's most popular attractions, its vibrant street hawker culture, was designated as an Intangible Cultural Heritage by the UNESCO.

It is now part of a list that includes practices such as yoga from India, reggae music from Jamaica, Finland's sauna culture and Turkey's endangered whistled language.

Intangible culture is that part of culture which cannot be touched but can only be recorded. It includes performing arts like song, music, drama, skills, crafts etc.

Convention for the Safeguarding of the Intangible Cultural Heritage was adopted in 2003. India ratified it in 2007.

UNESCO's list of intangible culture

It is an annual list which focuses on those forms of performing art which are of outstanding value but are vulnerable due to lack of support. The program currently compiles two lists –

- **Representative List:** It comprises cultural practices and expressions that help to demonstrate the diversity of this heritage and raise awareness about its importance. It is longer.
- **Urgent Safeguarding list:** It is composed of those cultural elements “whose continuous recreation and transmission” are threatened and are in need of immediate support. It is shorter.

Monpa Handmade Paper Industry to Revive the Heritage Art

The 1000-year old heritage art, the Monpa Handmade Paper of Arunachal Pradesh, which was driven to the extinction, has come to life once again, with the committed efforts of Khadi and Village Industries Commission (KVIC).

The art of making Monpa handmade paper originated over 1000 years ago. Gradually the art became an integral part of local custom and culture in Tawang in Arunachal Pradesh.

Once produced in every household in Tawang, this handmade paper was a major source of livelihood for the locals.

The fine-textured handmade paper, which is called Mon Shugu in the local dialect, is integral to the vibrant culture of the local tribes in Tawang.

The paper has great historic and religious significance as it is the paper used for writing Buddhist scriptures and hymns in monasteries.

The Monpa handmade paper, will be made from the bark of a local tree called Shugu Sheng, which has medicinal values too.

2,000-year old snack bar unearthed at Pompeii

Researchers have unearthed a thermopolium, Latin for hot drinks counter, in the Roman empire town of Pompeii, one of the world's largest and most significant archaeological sites.

The snack food counter called the thermopolium at the Pompeii archaeological park's Regio V was partially excavated in 2019.

It was found complete with an image of a Nereid riding a sea-horse, decorative still-life frescoes, food residues, animals bones and victims who died during the volcanic eruption of 79 CE.

Significance:

The find is significant because it shows the variety of food consumed by the residents of the town — traces of pork, fish, snails and beef have been found in the containers of the stall.

It is also the first time an entire thermopolium has been excavated, complete with pateras, or bronze drinking bowls, ceramic jars used for cooking stews and soups, wine flasks etc.

Exhibition 'Raag-Bhopali' being organized to promote Zari-Zardozi crafts of Bhopal

Madhya Pradesh Government is introducing Campaign regarding promotion of "Ek Zila- Ek Shilp ". The State Government is focussing on local traditional art of each district in the state and making efforts to promote it.

The first of such kind of exhibition called Raag-Bhopali is being organized to promote Zari-Zardozi crafts of Bhopal.

Embroidery done with metallic threads is called kalabattu and forms the zari. The main zari production centres are Bhopal in Madhya Pradesh.

Here the metal ingots are melted into metal bars called pasa from which lengths are got by beating it after treatment.

This is then pulled through perforated steel plates to make it into wires, followed by the tarkashi process to make it thin with rubber and diamond dies.

The last stage is called badla where the wire is flattened and twisted with silk or cotton thread to become kasab or kalabattu.

Important Days & Events **Guru Nanak Jayanti**

Guru Nanak Jayanti or Gurpurab is celebrated with religious fervour to mark the birth of the first Sikh Guru, Guru Nanak, who laid the foundation of Sikhism.

Guru Nanak (1469 – 1539), also referred to as Baba Nanak was the founder of Sikhism and is the first of the ten Sikh Gurus.

His birth is celebrated worldwide as Guru Nanak Gurpurab on Katak Pooranmashi ('full-moon of the Katak')

Journeys (Udasis): During first quarter of the 16th century, Nanak went on long udasiya ('journeys') for spiritual pursuits. He visited several places in "nau-khand" ('the nine regions of the earth'), presumably the major Hindu and Muslim pilgrimage centres.

He preached the message of ik onkar ('one God'), who dwells in every one of his creations and constitutes the eternal Truth. With this concept, he would set up a unique spiritual, social, and political platform based on equality, fraternal love, goodness, and virtue.

Nanak's words are registered in the form of 974 poetic hymns, or shabda, in the holy text of Sikhism, the Guru Granth Sahib, with some of the major prayers being the Japji Sahib; the Asa di Var; and the Sidh Gohst.

World AIDS Day 2020

World AIDS Day is celebrated on 1 December every year to raise awareness about the Acquired Immuno Deficiency Syndrome (AIDS) disease.

The disease is caused by the pandemic disease known as Human Immunodeficiency Virus (HIV). Due to this disease, people get exposed to vulnerable infections and diseases.

The theme this year is 'Ending the HIV/AIDS epidemic: resilience and impact.'

AIDS is the abbreviation for Acquired Immunodeficiency Syndrome. It is a chronic illness, which can also be potentially life-threatening. The disease is caused by the human immunodeficiency virus, HIV which affects the human immune system.

According to the WHO, In 2019, there were still 38 million people living with HIV infection. In 2019, 6.9 lakh people died from HIV-related causes and 1.7 million people were newly infected.

Since the inception of the National AIDS Control Program in 1992, India has done a commendable job in raising awareness and bringing down the number of HIV infections.

India is a signatory to the United Nations Sustainable Development Goals and has committed itself to achieving the target of ending the epidemic of AIDS by 2030.

International Day for the Abolition of Slavery

The International Day for the Abolition of Slavery international day is observed every year on 2 December since 1986 by the United Nations General Assembly.

The Day marks the date of the adoption, by the UN General Assembly, of the United Nations Convention for the Suppression of the Traffic in Persons and of the Exploitation of the Prostitution of Others (resolution 317(IV) of 2 December 1949).

According to the International Labour Organisation (ILO) more than 40 million people worldwide are victims of modern slavery.

Although modern slavery is not defined in law, it is used as an umbrella term covering practices such as forced labour, debt bondage, forced marriage, and human trafficking.

Essentially, it refers to situations of exploitation that a person cannot refuse or leave because of threats, violence, coercion, deception, and/or abuse of power.

In addition, more than 150 million children are subject to child labour, accounting for almost one in ten children around the world.

ILO has adopted a new legally binding Protocol designed to strengthen global efforts to eliminate forced labour, which entered into force in November 2016.

The First Ever Virtual Aadi Mahotsav

Union Tribal Affairs Ministry has launched the virtual edition of Aadi Mahotsav- Madhya Pradesh. The 10-day long festival, commencing on December 1, 2020, is being hosted on the Tribes India website (www.tribesindia.com).

The main focus is on the tribal craft and culture of Madhya Pradesh.

Aadi Mahotsav is a national tribal festival and a joint initiative of Ministry of Tribal Affairs, Government of India & Tribal Cooperative Marketing Development Federation of India (TRIFED).

The Aadi Mahotsav – A Celebration of the Spirit of Tribal Culture, Crafts, Cuisine and Commerce – is a successful initiative that was commenced in 2017.

The festival showcases traditional art and handicrafts and cultural heritage of the country. It is an attempt to familiarise the people with the rich and diverse craft, culture of the tribal communities across the country, in one place.

Nagaland Statehood day 2020

Nagaland celebrated its 58th Statehood day on 1st December. It became the 16th State of the Union of India on 1st December 1,963. Nagaland is a state in north-eastern India.

It is bordered by the state of Arunachal Pradesh to the north, Assam to the west, Manipur to the south and the Sagaing Region of Myanmar to the east.

Nagaland's capital city is Kohima and its largest city is Dimapur.

After the independence of India in 1947, the area dominated by Naga ethnic groups remained a part of the province of Assam.

Nationalist activities arose amongst a section of the Nagas. Phizo-led Naga National Council demanded a political union of their ancestral and native groups.

In July 1960, following discussion between Prime Minister Nehru and the leaders of the Naga People Convention (NPC), a 16-point agreement was arrived at whereby the Government of India recognised the formation of Nagaland as a full-fledged state within the Union of India.

International Day of Persons with Disabilities 2020

International Day of Persons with Disabilities is observed on 3 November each year by the United Nations since 1992. It has been observed with varying degrees of success around the planet.

The annual observance of the International Day of Disabled Persons was proclaimed in 1992 by United Nations General Assembly resolution 47/3.

Its objective is to promote the rights and well-being of persons with disabilities in all spheres of society and development and to increase awareness.

This year, the International Day of Persons with Disabilities (IDPD) falls on the same week as the Conference of States Parties to the Convention on the Rights of Persons with Disabilities, 30 Nov.-1 and 3 Dec.

2020 and will be observed throughout the week in conjunction with the 13th session of the Conference of States Parties to the CRPD.

Operation Trident | Why India remembers Operation Trident every year

Every year, India celebrates December 4 as Navy Day to commemorate Operation Trident – a key offensive during the 1971 India-Pakistan War, when the Indian Navy inflicted heavy damage on Pakistani vessels in Karachi harbour.

The same day also marks the end of Navy Week, which, too, is celebrated annually.

The India-Pakistan War of 1971 had begun on December 3, when the Pakistan Air Force launched pre-emptive strikes on airfields in Western India. India responded by formally declaring war in the wee hours of December 4.

On December 4, under Operation Trident, the Indian Navy sank three vessels near the Pakistani port city of Karachi. The stars of the mission were the then-recently acquired Soviet Osa missile boats, fitted with 4 SS-N-2 (P-15) Styx missiles.

The Indian Air Force also played a crucial role during Operation Trident, when Karachi's Kemari oil tanks were strafed by the IAF on the same day in an independent operation which it did not claim.

International Civil Aviation Day 2020

International Civil Aviation Day is observed on 7 December to raise awareness about the importance of the role played by the organisation of the International Civil Aviation in air transport.

The purpose of International Civil Aviation Day is to help generate awareness of the importance of international civil aviation and of the unique role of ICAO in helping States to cooperate and realize a truly global rapid transit network at the service of all mankind.

Every five years, coinciding with ICAO anniversaries, the ICAO Council establishes a special anniversary theme for International Civil Aviation Day. Between these anniversary years, Council representatives select a single theme for the full four-year intervening period.

The Council has decided that from now until 2023, the theme will be: "Advancing Innovation for Global Aviation Development".

In 1944, delegates from 54 nations gathered in Chicago at the invitation of the United States of America.

At this event, the participants concluded and signed the Convention on International Civil Aviation, also known more popularly as the 'Chicago Convention'.

International Civil Aviation Day was established in 1994 as part of ICAO's 50th anniversary activities.

In 1996, pursuant to an ICAO initiative and with the assistance of the Canadian Government, the United Nations General Assembly adopted resolution A/RES/51/33, which officially recognized 7 December as International Civil Aviation Day in the UN system.

Submarine Day 2020

Submarine Day is observed on 8 December each year to remember and honour submariners who made supreme sacrifice in their service.

It was on December 8 that the Indian Naval Ensign was unfurled on INS Kalvari, the first submarine to be inducted in the Indian Navy, at Riga in Latvia, the erstwhile USSR, in 1967.

INS Kalvari was a diesel-electric submarine of the Foxtrot Class from the erstwhile USSR.

Kalvari is the Malayalam name for Tiger Shark, a predator in the Indian Ocean. The Kalvari was decommissioned in 1996 after 29 years of service.

The Indian Navy is inducting several submarines in Kalvari Class, named after the very first submarine inducted into service.

INS Kalvari, a diesel-electric submarine of Scorpene-class, was inducted into service in 2017 after having being built at the Mazagon dock in Mumbai. It has been designed by French company DCNS.

INS Khanderi is the other submarine of Kalvari class currently in service. The other submarines slated to join service under this class are Vela, Karanj, Vaghir and Vaghsheer.

Swahid Diwas 2020

Prime Minister Narendra Modi has paid homage to the martyrs of the Assam Movement on Swahid Diwas on 10 December.

Assam has been paying tribute to the martyrs who had made supreme sacrifice in the historic Assam Movement from 1979 to 1985.

The Assam Movement (1979-1985) was an popular uprising in Assam, that demanded the Government of India to detect illegal immigrants, delete their names from electoral rolls and deport them.

The movement ended in 1985 with the Assam Accord.

It was led by All Assam Students Union and All Assam Gana Sangram Parishad, an umbrella organization of different political groups. The agitation leaders formed a political party, Asom Gana Parishad. It came to power in the state of Assam in the Assembly elections of 1985 and later in 1996.

Chag Hanukkah Sameach

Prime Minister Narendra Modi greeted the people of Israel on the festival of Chag Hanukkah Sameach on 10 December.

Hanukkah is also known as Chanukah.

It is an eight-day Jewish celebration that marks the rededication during the second century BC of the Second Temple in Jerusalem, where according to legend, Jews had risen up against their Greek-Syrian oppressors in the Maccabean Revolt.

Human Rights Day 2020

Human Rights Day is celebrated annually across the world on 10 December every year.

Human Rights Day is celebrated to commemorate the Universal Declaration of Human Rights (UDHR), which was adopted and proclaimed by the General Assembly of the United Nations in 1948.

The Declaration recognizes that the inherent dignity and the equal and inalienable rights of mankind are the foundation of justice, freedom and peace in the world.

2020 Theme: Recover Better - Stand Up for Human Rights.

Since its inception on the 12th October, 1993, the National Human Rights Commission of India (NHRC) has endeavoured to promote a culture of human rights.

The NHRC, like most of the human rights institutions in the world, is a recommendatory body as per the Protection of Human Rights Act passed by Parliament.

International Bharathi Festival 2020

The International Bharathi Festival is being organised by Vanavil Cultural Centre to celebrate the 138th birth anniversary of Mahakavi Subramanya Bharathi.

Subramania Bharati (1882 – 1921) was a Tamil poet, Indian independence activist and a social reformer from Tamil Nadu.

He is also known as ‘Bharathiyar’ and ‘Mahakavi Bharati’.

He is considered as one of the pioneers of modern Tamil literature. He used Nondi Chindu in most of his works.

His poetry covered political (related to Indian Independence movement), social (women and Dalit empowerment) and spiritual themes.

The word ‘Chindu’ refers to a couplet or poem in Tamil set to a particular meter.

There are various types of Chindus. Nondi Chindus were meant for by ‘Nondis’, the narrators or announcers in folk dramas and event.

International Universal Health Coverage Day 2020

International Universal Health Coverage Day is celebrated every year on December 12 to raise awareness of the need for strong and resilient health systems and universal health coverage with multi-stakeholder partners.

On 12 December 2012, the United Nations General Assembly endorsed a resolution urging countries to accelerate progress toward universal health coverage (UHC) – the idea that everyone, everywhere should have access to quality, affordable health care - as an essential priority for international development.

On 12 December 2017, the United Nations proclaimed 12 December as International Universal Health Coverage Day (UHC Day) by resolution 72/138.

In view of the global pandemic, the theme of this year is Health For All - Protect Everyone.

International Mountain Day 2020

International Mountain Day is celebrated annually on 11 December to create awareness about the importance of mountains to life, to highlight the opportunities and constraints in mountain development, and to build alliances that will bring positive change to mountain peoples and environments around the world.

Mountains are home to 15% of the world’s population and host about half of the world's biodiversity hotspots. They provide freshwater for everyday life to half of humanity. Their conservation is a key factor for sustainable development and is part of Goal 15 of the SDGs.

The increasing attention to the importance of mountains led the UN to declare to 2002 the UN International Year of Mountains. The first international day was celebrated for the first time the following year, 2003.

Its roots date back to 1992, when the document “Managing Fragile Ecosystems: Sustainable Mountain Development” (called Chapter 13), was adopted as part of the action plan Agenda 21 of the Conference on Environment and Development.

Vijay Diwas 2020

Bijoy Dibos or Vijay Diwas is observed every year on 16 December in India and Bangladesh, to observe Bangladesh’s victory over Pakistan in War of 1971 for the liberation of Bangladesh from Pakistan.

Prime Minister Narendra Modi will light up ‘Swarnim Vijay Mashaal and begin 50th anniversary celebrations of Indo-Pak War.

In December 1971, the Indian Armed Forces secured a decisive and historic Victory over Pakistan Army, which led to creation of a Nation- Bangladesh and also resulted in the largest Military Surrender after the World War-II.

Four Victory Mashaals will be lit from the Eternal Flame of National War Memorial. These Mashaals will be carried to various parts of the country including to villages of Param Vir Chakra and MahaVir Chakra Awardees of 1971 War.

Soil from the villages of these Awardees and from areas where major battles were fought in 1971 are being brought to the memorial in New Delhi.

World Minorities Rights Day 2020

The World Minorities Rights Day is observed every year on December 18, to safeguard the Constitutionally-guaranteed rights of religious minorities.

United Nations on December 18, 1992 adopted and broadcast the Statement on the individual's Rights belonging to religious or Linguistic National or Ethnic Minorities. The same year the National Commission for Minorities was set up by the Government of India.

The Ministry of Minority Affairs was established in January 26, 2006. It was carved out of the Ministry of Social Justice and Empowerment.

The day is celebrated by the National Commission for Minorities in India which focuses on religious harmony, respect, and a better understanding of all minorities’ communities.

The Constitution of India provides equal rights for all citizens and safeguards the rights of linguistic, ethnic, cultural, and religious minorities. It also has provisions for economically or socially disadvantaged people, including the people of scheduled tribes and scheduled castes.

Subhas Chandra Bose’s 125th birth anniversary

Government has decided to constitute a High Level Committee to commemorate the 125th Birth Anniversary of Netaji Subhas Chandra Bose. The Committee will decide on the activities for a one year long commemoration starting 23rd January, 2021.

The High Level Committee will be headed by the Union Home Minister, Shri Amit Shah. The members will include experts, historians, authors, family members of Netaji Subhas Chandra Bose, as well as eminent persons associated with Azad Hind Fauj/INA.

In the recent past, Government of India has taken several steps towards conserving the heritage of Netaji Subhas Chandra Bose.

A museum has been set up on Netaji at Red Fort, New Delhi, which was inaugurated by the Prime Minister on 23.01.2019.

In 2015, Government of India decided to declassify the files relating to Netaji Subhas Chandra Bose and make them accessible to public.

In 2018, the Prime Minister renamed 3 islands in Andaman and Nicobar. The Ross Island was renamed as Netaji Subhas Chandra Bose Dweep; the Neil Island as Shaheed Dweep; and the Havelock Island as SwarajDweep.

Vigyanika-International Science Literature Festival

CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR), Ministry of Earth Sciences (MOES) and Vijnana Bharati (VIBHA) jointly organised the inaugural session of Vigyanika-International Science Literature Festival to mark the birth anniversary of Srinivasa Ramanujan.

The event is aimed to take science and literature to the masses and showcase strategies to employ various aspects of science communication to promote self-reliance and global welfare.

Vigyanika is an annual event organised by Ministry of Science and Technology and Earth Sciences

It is coordinated by the CSIR-NISCAIR (National Institute of Science Communication and Information Resources), Vigyan Bharati and Vigyan Prasara

It will also feature innovative formats of science communication such as poetry, drama and magic.

National Farmers' Day 2020

Farmers' Day is celebrated on December 23 to celebrate the national contributions of farmers and agriculturists. The day is observed in India to honour India's farmers and mark the birth anniversary of the nation's fifth prime minister, Choudhary Charan Singh.

Chaudhary Charan Singh, who briefly served as prime minister between 1979 and 1980, is widely regarded as one of the country's most famous peasant leaders.

Charan Singh served twice as chief minister of India's biggest agrarian state, Uttar Pradesh, where he played a major role in shaping land reforms. He was behind several major farmer-forward Bills, including the Land Utilisation Bill of 1939 and the Debt Redemption Bill in 1939.

While serving as agriculture minister in 1952, he led UP in its efforts to abolish the zamindari system. In fact, he went on to draft the UP Zamindari and Land Reforms Bill himself.

On 23 December, 1978, he founded the Kisan Trust — a non-political, non-profit making body — with the aim of educating India's rural masses against injustice, and fostering solidarity among them.

In 2001, the government decided to recognise Choudhary Charan Singh's contribution to the agriculture sector and welfare of farmers by celebrating his birth anniversary as Kisan Diwas.

Good Governance Day 2020

Good Governance Day is observed in India annually on 25 December on the birth anniversary of former-Prime Minister Atal Bihari Vajpayee. Good Governance Day was established in 2014 to honor Prime Minister Vajpayee by fostering awareness among the Indian people of accountability in government.

He implemented the reform agenda and delivered good governance to the nation amidst great challenges. Good governance to him was providing a responsive administration to the people, especially to the most vulnerable sections of the society.

He brought systematic changes in the governance of the country through technology, innovation and research to improve the lives of people.

Initiatives like 'Pradhan Mantri Grameen Sadak Yojana', 'Golden Quadrilateral project', 'Telecom Revolution', 'Sarva Shiksha Abhiyaan' etc. led to socio-economic development of India.

In 2014, Good Governance Day was established to honour Prime Minister Vajpayee, by fostering awareness among the Indian people of accountability in government.

India International Science Festival (IISF)-2020

The 6th India International Science Festival to be held in Virtual format from 22nd to 25th December, 2020

IISF is an annual event organised jointly by science & technology-related Ministries and Departments of the Government of India and Vijnana Bharati (Vibha).

The first and second IISF were held in New Delhi, the third in Chennai, the fourth in Lucknow, and the fifth IISF was held in Kolkata.

IISF is a festival to celebrate the achievements of India's scientific and technological advancements with students, innovators, craftsmen, farmers, scientists and technocrats from India and abroad.

IISF-2020 was held from 22nd to 25th December, 2020 at virtual platform. This year's theme for IISF was 'Science for Aatmanirbhar Bharat and Global Welfare'.

IISF 2020 is being organized jointly by Council of Scientific and Industrial Research (CSIR), Department of Science and Technology (DST), Ministry of Earth Sciences, Department of Biotechnology (DBT), Indian Council of Medical Research (ICMR) in association with Vijnana Bharati (VIBHA).

The nodal institution for science festival this year is CSIR-National Institute of Science, Technology and Development Studies (NISTADS), New Delhi.

International Affairs

China to build 'super' dam on its part of Brahmaputra River

China is going to build a "super" dam on the lower reaches of the Yarlung Zangbo river, close to the Line of Actual Control, in Tibet, in a move that could have long-term impact on northeast India's water security.

Originating in the Tibet Autonomous Region (TAR), the trans-border Yarlung Zangbo flows into Arunachal Pradesh where it is called Siang and then to Assam as Brahmaputra before flowing into Bangladesh.

The dam could come up in the Medog county of TAR, which is close to Arunachal Pradesh.

China has already built several smaller dams on the Yarlung Zangbo river.

The new dam's ability to generate hydropower could be three times that of central China's Three Gorges Dam, which has the largest installed hydropower capacity in the world.

'Burj Khalifa-sized' asteroid flew by earth

An asteroid named (153201) 2000 WO107, that is more than 800 metre high and over 500 metre wide - bigger than skyscraper Burj Khalifa - barrelled past earth on November 29 and closest to our planet.

Burj Khalifa is the world's tallest building with a height of 829.8 metre and asteroid 2000 WO107, which was discovered in 2000, has a diameter is 820 metre.

The massive asteroid has been classified as a Near-Earth Asteroid (NEA). NEA is a group of comets and asteroids pulled into the orbit due to the gravitational forces of nearby planets, which allows them to enter the Earth's neighbourhood.

Nasa's Jet Propulsion Laboratory has classified it as a 'Potentially Hazardous Asteroid' due to its predicted close pass with Earth.

India hits out at OIC for 'incorrect and unwarranted references' to Jammu and Kashmir

India strongly hit out at the Organisation of Islamic Cooperation (OIC) for making factually incorrect and unwarranted references to Jammu and Kashmir in resolutions adopted by the grouping at a meeting in Niger, and asserted that the union territory is an integral and inalienable part of the country.

The 47th session of the OIC Council of Foreign Ministers on November 27-29 at Niamey, Niger, had made a reference to India over its policies on J&K.

The OIC — formerly Organisation of the Islamic Conference — is the world's second largest inter-governmental organisation after the UN, with a membership of 57 states.

The OIC's stated objective is "to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world".

OIC has reserved membership for Muslim-majority countries. Russia, Thailand, and a couple of other small countries have Observer status.

At the 45th session of the Foreign Ministers' Summit in 2018, Bangladesh, the host, suggested that India, where more than 10% of the world's Muslims live, should be given Observer status, but Pakistan opposed the proposal.

In 1969, India was dis-invited from the Conference of Islamic Countries in Rabat, Morocco at Pakistan's behest.

Significance of Joe Biden's all-women media team

US President-elect Joe Biden and Vice President-elect Kamala Harris on November 29 announced an all-women team of the White House staff to serve in senior communication roles. Biden's office claims that this will be the first time the communications positions will be filled entirely by women.

The move to appoint an all-women senior media team shows Biden's continued commitment to building an administration that "looks like America".

Four of the seven appointments are women of colour. Harris has called the team "barrier shattering".

He has chosen former Barack Obama administration's State Department spokesperson Jen Psaki as his White House press secretary.

US President-elect Joe Biden is expected to nominate Indian-origin Neera Tanden as his budget chief. Tanden is the president and CEO of the left-leaning think tank Centre for American Progress (CAP), and the CEO of the American Progress Action Fund.

IFSCA gets membership of International Association of Insurance Supervisors

The International Financial Services Centres Authority (IFSCA) obtained membership of International Association of Insurance Supervisors (IAIS). Established in 1994, the IAIS headquartered in Switzerland.

It is a voluntary membership organization of insurance supervisors and regulators from more than 200 jurisdictions, constituting 97% of the world's insurance premiums. Some of the leading members of IAIS are:

- United Kingdom- Financial Conduct Authority (FCA),
- USA- National Association of Insurance Commissioners (NAIC),
- India- Insurance Regulatory and Development Authority of India (IRDAI) etc.

It is the international standard-setting body responsible for developing and assisting in the implementation of principles, standards and other supporting material for the supervision of the insurance sector.

With this membership IFSCA would have access to IAIS's global network and would be able to exchange ideas and information with other global regulators. This would help in developing a vibrant global Insurance hub in IFSC at GIFT City.

Pakistan issues special permit to Saudi Crown Prince

Pakistan has issued special permits to Saudi Crown Prince Mohammed bin Salman and two other members of the royal family to hunt the internationally protected houbara bustards during the hunting season 2020-21.

The houbara bustard, which lives in arid climates, comes in two distinct species as recognised by the International Union for Conservation of Nature, one residing in North Africa (*Chlamydotis undulata*) and the other in Asia (*Chlamydotis macqueenii*), commonly known as MacQueen's bustard.

The population of the Asian houbara bustards extends from northeast Asia, across central Asia, the Middle East, and the Arabian Peninsula to reach the Sinai desert.

According to the International Fund for Houbara Conservation (IFHC), roughly 33,000 Asian houbara bustards remain today.

After breeding in the spring, the Asian bustards migrate south to spend the winter in Pakistan, the Arabian Peninsula and nearby Southwest Asia. Some Asian houbara bustards live and breed in the southern part of their ranges including parts of Iran, Pakistan and Turkmenistan.

It is listed as Vulnerable under IUCN Red List Status.

Bangladesh-Bhutan Preferential Trade Agreement 2020

Bangladesh recently has signed its first Preferential Trade Agreement (PTA) with Bhutan allowing duty free access to a range of goods between the two countries. This is the first PTA Bangladesh has signed with any country in the world.

The agreement was signed on the occasion marking the 50 years of diplomatic ties between the two countries.

In 1971, Bhutan was the first country in the world, followed by India as the second, to recognise Bangladesh as an independent country.

Under the PTA 100 Bangladeshi products will get duty free access to Bhutan. At the same time, 34 items from Bhutan will get duty free access into Bangladesh. Further items can be added in the list later on the basis of discussion between the two countries.

Bangladesh is expected to sign 11 more PTAs and Free Trade Agreements (FTAs) with countries like Indonesia and Nepal by June next year.

World's Largest Arms-Producing Companies in 2019

According to the report by the Stockholm International Peace Research Institute (SIPRI) U.S. and Chinese companies dominated the global arms market in 2019, while West Asia made its first appearance among the 25 biggest weapons manufacturers.

The U.S. arms industry accounted for 61% of sales by the world's "Top 25" manufacturers last year, ahead of China's 15.7%.

Total sales by the "Top 25" rose by 8.5% to \$361 billion, or 50 times the annual budget of the UN's peacekeeping operations.

Six U.S. companies and three Chinese firms were in the top 10, rounded out by Britain's BAE Systems in seventh spot.

S. companies Lockheed Martin, Boeing, Northrop Grumman, Raytheon and General Dynamics clinched the top five spots, while China's AVIC, CETC and Norinco held spots six, eight and nine. U.S. group L3Harris Technologies was in 10th place.

For the first time, a company from the West Asia made it into the "Top 25": EDGE, of the United Arab Emirates, was formed by the consolidation of some 25 defence entities in 2019.

India, however, continues to flounder in the domestic defence production arena. It remains stuck in the position of being the world's second-largest arms importer, just behind Saudi Arabia.

No major proposed 'Make in India' project to manufacture fighter jets, diesel-electric submarines, light-utility helicopters, minesweepers or infantry combat vehicles has actually taken off in the last six years.

14th ASEAN Defence Ministers' Meeting Plus

Raksha mantri Shri Rajnath Singh, attended the 14th ASEAN Defence Ministers' Meeting Plus organized online at Hanoi, Vietnam on 10 December 2020 that marked the 10th anniversary of ADMM Plus.

ASEAN Defense Minister's Meeting-Plus (ADMM-Plus).

ADMM-Plus is the only official framework of Defense Minister's meetings in the Asia-Pacific Region. It is a platform for ASEAN and its eight Dialogue Partners to strengthen security and defence cooperation for peace, stability, and development in the region.

The ADMM-Plus comprises the ten ASEAN countries as well as Australia, China, Japan, India, the Republic of Korea, New Zealand, Russia and the United States.

'Swadhinata Sarak' between Bangladesh and India

The 'Swadhinata Sarak' between Bangladesh and India will be opened on 26 March next year.

The road remains functional on the Indian side while it will be connected through Mujibnagar, Meherpur district in Bangladesh.

Chilahati-Haldirbari rail link which was active till 1965 will be inaugurated during the summit meeting between the two Prime Ministers on December 17, 2020.

Israel-Morocco agree to normalise relations

Israel and Morocco agreed to normalize relations in a deal brokered with U.S. help, making Morocco the fourth Arab country to set aside hostilities with Israel in the past four months.

A former Spanish colony, Western Sahara is a vast, arid region in northwest Africa.

It is mineral rich: home to abundant reserves of phosphate, a key ingredient in the manufacturing of synthetic fertilisers. It has also lucrative fish resources and is believed to have off-shore oil.

The region first came under Spanish control in 1884, and was made a province called 'Spanish Sahara' by the European country in 1934. Then in 1957, its northern neighbour Morocco, which had become independent from French rule just a year before, staked its claim over the entire territory, reasserting a centuries-old position.

Then in 1975, ten years after the UN called for its decolonisation, Spain withdrew from Western Sahara, partitioning the region between Morocco, which received the region's northern two-thirds, and Mauritania the remaining third in the south.

Since then, Morocco has controlled around 80 per cent of Western Sahara, including its phosphate reserves.

Combined with its own deposits of the mineral, Morocco currently holds over 72 per cent of the world's phosphate reserves. China, which has the second-most reserves, has less than 6 per cent.

1st TWG Meeting between India, Iran, Uzbekistan

The first Trilateral Working Group Meeting between India, Iran and Uzbekistan on the joint use of Chabahar Port was held virtually.

The Meeting was jointly chaired by Secretary (Shipping), Government of India, Deputy Minister of Transport, Uzbekistan and Deputy Transport Minister of Iran.

During the meeting, the participants discussed joint use of Chabahar Port for trade and transit purposes and enhanced regional connectivity.

All sides also welcomed India's proposal to hold "Chabahar Day" on the side-lines of the International Maritime Summit scheduled to be hosted by India in January 2021.

The meeting was held as a follow up of decisions taken during the virtual summit held between Prime Minister Narendra Modi and President of Uzbekistan on 11th of this month.

India and USA MoU for exchange of information

The Union Cabinet has given its approval for Central Electricity Regulatory Commission's proposal for entering into a Memorandum of Understanding between Central Electricity Regulatory Commission (CERC), India and Federal Energy Regulatory Commission (FERC), United States of America (USA) for exchange of information and experiences in areas of mutual interest to both in the electricity sectors.

The MoU will help in improving regulatory and policy framework for developing efficient whole sale power market and enhancing grid reliability.

Under the MoU, the two sides will identify energy-related issues and develop topics and possible agendas for the exchange of information and regulatory practices in areas of mutual interest.

India-Bangladesh Virtual Summit

India and Bangladesh have agreed to further enhance their cooperation in the field of multilateral projects and institutions after the summit level virtual meeting between Prime Minister Narendra Modi and Prime Minister Sheikh Hasina.

The two sides jointly inaugurated the Bangabandhu-Bapu Digital Exhibition.

The two sides jointly inaugurated a railway link between Haldibari in India and Chilahati in Bangladesh during the summit. Haldibari - Chilahati route will be beneficial for transit into Bangladesh from Assam and West Bengal.

Both sides also agreed to hold an early meeting of the Joint Boundary Conference to prepare a new set of strip maps along the stretch of Icchamati, Kalindi, Raimongol and the Hariabhanga Rivers.

Bangladesh requested India to name the historic road from Mujib Nagar to Nodia on Bangladesh-India border as "Shadhinota Shorok" commemorating the historic significance of the road during Bangladesh's Liberation War.

The following bilateral development partnership projects were also inaugurated:

- Beautification and city development project in Rajshahi City;
- Construction of Khalishpur Collegiate Girl's School in Khulna.

List of MoUs/Agreements signed during the Summit:

1. Framework of Understanding on Cooperation in the Hydrocarbon Sector
2. MoU regarding Indian Grant Assistance for Implementation of High Impact Community Development Projects through Local Bodies and other Public Sector Institutions
3. Protocol on Transboundary Elephant Conservation
4. MoU for Supply of Equipment & Improvement of Garbage/Solid Waste Disposal Ground at Lamchori Area for Barishal City Corporation

5. MoU on Cooperation in the field of Agriculture
6. MoU between Father of the Nation Bangabandhu Sheikh Mujibur Rahman Memorial Museum, Dhaka, Bangladesh and the National Museum, New Delhi, India
7. Terms of Reference of India-Bangladesh CEO's Forum.

Iran builds at underground nuclear facility amid US tensions

Iran has begun construction on a site at its underground nuclear facility at Fordo amid tensions with the U.S. over its atomic program.

Fordow Fuel Enrichment Plant (FFEP) is an Iranian underground uranium enrichment facility located 20 miles northeast of the Iranian city of Qom, near Fordow village.

It is the second Iranian uranium enrichment facility, the other one being that of Natanz.

Iran has not publicly acknowledged any new construction at Fordow, whose discovery by the West in 2009 came in an earlier round of brinkmanship before world powers struck the 2015 nuclear deal with Tehran.

While the purpose of the building remains unclear, any work at Fordow will likely trigger new concern in the waning days of the Trump administration before the inauguration of U.S. President-elect Joe Biden.

India-Vietnam Leaders' Virtual Summit 2020

Prime Minister of India Narendra Modi held a Virtual Summit with H.E. Nguyen Xuan Phuc, Prime Minister of the Socialist Republic of Vietnam.

A 'Joint Vision for Peace, Prosperity and People' document was adopted during the Summit, to guide the future development of the India-Vietnam Comprehensive Strategic Partnership.

Both leaders also welcomed the signing of a Plan of Action for period 2021-2023 for further implementation of Comprehensive Strategic Partnership to implement the Joint Vision.

Announcements made:

Implementation of the High Speed Guard Boat (HSGB) Manufacturing Project for Vietnam Border Guard Command under the US\$ 100 million Defence Line of Credit extended by Government of India to Vietnam;

Completion and handing over of seven Development Projects with Indian 'Grant-in-Aid' Assistance of US\$ 1.5 million for the benefit of local community in Vietnam's Ninh Thuan province.

Enhancing the number of annual Quick Impact Projects (QIPs) from currently five to ten commencing FY 2021-2022.

Three new Development Partnership projects in heritage conservation in Vietnam (F-block of Temple at My Son; Dong Duong Buddhist Monastery in Quang Nam province; and Nhan Cham Tower in Phu Yen province).

Launch of bilateral project for preparing an Encyclopaedia on India - Vietnam Civilizational and Cultural Relations.

China justifies its military exercise with Pakistan

China justified its ongoing joint air exercise "Shaheen-IX" with Pakistan, even though it had expressed apprehensions about India's "Malabar exercise".

China defended "Shaheen-IX" exercise with Pakistan air force as a routine arrangement, which experts believe is reflective of a larger strategic posture towards India.

The Air Forces of China and Pakistan are holding their annual exercise "Shaheen-IX" since 9th December in Pakistan's southern Sindh province near Indian border.

India recently hosted the Malabar 2020 naval exercise with the U.S., Japan and Australia.

- A Chinese state media had termed the Malabar naval drill as an ill-intentioned attempt to corner China.
- India had categorically stated that the orientation of Malabar exercise had been towards a free, open, inclusive Indo-Pacific as well as a rule-based international order.

White House paves way for nuke reactor on moon

USA's plan to have the first nuclear reactor on the moon by the end of 2026 for which the US Department of Energy in collaboration with NASA intends to solicit industry design proposals in early 2021, got an impetus with a recent White House directive.

On December 16, outgoing President Donald Trump, issued the "National Strategy for Space Nuclear Power and Propulsion".

Under it, he asked Nasa to "initiate fission surface power project for lunar surface demonstration by 2027 with scalability to a power range of 40 kilowatt-electric and higher to support a sustained lunar presence and exploration of Mars".

NASA aims to establish a flight hardware system that is ready for integrating with the lunar lander by 2026-end. The fission power system — as the nuclear reactor is called — will benefit future robotic and human exploration missions to the moon as well as Mars.

The availability of safe, efficient, and readily available power is critical to these missions and a fission surface power system meets those requirements.

The fission surface power system will be fully manufactured and assembled on earth and integrated on a lander as a payload.

The system — consisting of four major subsystems including a nuclear reactor, an electric power conversion unit, heat rejection array, and power management and distribution subsystem — will be designed to operate for up to 10 years.

India's External Affairs Minister met the top leaders of Qatar

Indian External affairs minister S Jaishankar met business leaders in Qatar and highlighted the investment opportunities in India while appreciating the commitment for strengthening bilateral partnerships.

The visit is part of India's ongoing outreach to West Asia, which the country sees as part of its extended neighbourhood.

India and Qatar agreed to maintain regular consultations and coordination on all issues of mutual interest at multilateral fora.

Issues of mutual interest include energy, power, petrochemicals, investments, infrastructure, development, project exports and education.

Discussed ways to strengthen the multifaceted bilateral relationship in areas such as energy, trade, investment, food processing, healthcare, education, culture, defence and security.

Both the countries have decided to set up a special task force to facilitate investments by the Qatar Investment Authority, part of India's ongoing outreach to key West Asian states to overcome the economic impact of the Covid-19 pandemic.

The two sides have agreed on institutionalising measures to promote and protect the rights of workers, including settling labour issues and facilitating the movement of people between the two countries in a safe and secure manner.

Turkey's controversial law that will tighten monitoring of civil society

The Turkish parliament passed a bill that would increase the monitoring of civil society groups. The act is called "Preventing Financing of Proliferation of Weapons of Mass Destruction" and was proposed by president Recep Tayyip Erdogan's ruling Justice and Development party in order to comply with UN Security Council's recommendations to keep terror financing and money laundering in check.

The Bill has come following the 2019 report on Turkey prepared by the intergovernmental body Financial Action Task Force (FATF) meant to fight money laundering and terror financing.

The bill consists of 43 articles and has made changes to seven laws on Turkey's Law of Associations and is meant to keep Turkey from being blacklisted by the Paris-based watchdog of terror financing.

The Bill gives the Turkish government the power to appoint trustees to non-governmental organisations (NGOs), to suspend their activities, seize their assets and monitor their sources of funding.

Polity & Governance

Jammu & Kashmir's Roshni Act

The Jammu & Kashmir administration has recently released a series of lists of alleged beneficiaries of the Roshni Act of 2001, now scrapped, which gave ownership rights to the unauthorised occupants of state land against payment of a premium.

Political leaders and bureaucrats have been among those named. The transfers are being probed by the CBI.

Following a recent order by the Jammu & Kashmir High Court, the administration has annulled the Act (it was earlier repealed prospectively) and decided to retrieve land transferred under the Roshni scheme.

Formally the Jammu and Kashmir State Land (Vesting of Ownership to the Occupants) Act, 2001, Roshni Act was passed by the then National Conference government to give ownership to people in possession of state land, with a cut-off of 1990, and against a payment as determined by the government.

Since the aim was to generate resources for hydroelectric power projects, it was called Roshni (Light) Act.

In its 2014 report, the CAG termed the scheme a Rs-25,000-crore scam. In October 2018, then Governor Satya Pal Malik repealed the Roshni Act prospectively.

Adult's right to marry a person of choice is fundamental right

An Adult individual's right to marry a person of his or her choice is a fundamental right that cannot be denied on the basis of caste or religion by anybody, according to an observation made by a division bench of the Karnataka High Court last week.

The ruling came even as the Karnataka government followed other BJP-ruled states in claiming the need for a special law to stop inter-religious marriages, especially those involving women from majority communities with men from minority communities.

A division bench of the Allahabad High Court recently ruled in the case of a Muslim-Hindu couple Salamat Ansari and Priyanka Khanwar alias Alia that the "right to live with a person of his/her choice irrespective of religion professed by them, is intrinsic to right to life and personal liberty".

Karnataka's new anti-cow slaughter bill

The BJP-led government in Karnataka passed the Karnataka Prevention of Slaughter and Preservation of Cattle Bill (2020) in the Assembly on December 9 amid strong opposition from the Congress and the Janata Dal (Secular).

The Bill envisages a ban on all forms of cattle slaughter and stringent punishment for offenders.

While 'beef' is defined as the flesh of cattle in any form, the word 'cattle' is defined as "cow, calf of a cow and bull, bullock, and he or she buffalo below the age of thirteen years".

The Bill also terms shelters established for the protection and preservation of cattle registered with the Department of Animal Husbandry and Fisheries as 'gau shalas'.

Police officers ranked sub-inspector and above or a competent authority will have the power to search premises and seize cattle and materials used or intended to use to commit the offence.

Terming cow slaughter as a cognizable offence, violators can attract three to seven years of imprisonment. While a penalty between Rs 50,000 and Rs 5 lakh can be levied for the first offence, second and subsequent offences can attract penalties ranging between Rs 1 lakh and Rs 10 lakh.

Maharashtra Bill Proposes Death Penalty for Heinous Crimes Against Women, Children

In a bid to curb heinous crimes against women and children in Maharashtra, the state cabinet on Wednesday approved a draft Bill that includes provisions for stern punishment – including a death penalty, life sentence, and hefty fines, for the perpetrators as well as speedy trials.

The two interconnected bills, which will be tabled in the winter session of the state legislature as part of the Shakti Act, are the Maharashtra Shakti Criminal Law (Maharashtra Amendment) Act 2020 and the Special Court and Machinery for Implementation of Maharashtra Shakti Criminal Law 2020.

Drafted on the lines of the Disha Act framed by Andhra Pradesh, they seek to amend relevant sections of the Indian Penal Code (IPC), Criminal Procedural Code (CrPC) and Protection of Children from Sexual Offences Act.

The bills also have provisions to increase the quantum of punishment, including life term, cover new categories of crimes, and propose a mechanism for speedy trials.

The media is not allowed to report the name of a rape victim. The proposed Acts will provide similar protection to victims of molestation and even acid attack.

The draft bills propose to amend IPC Section 376 (rape) to increase the quantum of punishment to life term or death penalty in heinous cases where there's adequate conclusive evidence or exemplary punishment is warranted.

Indian Ports Bill 2020

Ministry of Ports, Shipping and Waterways circulated the draft of Indian Ports Bill 2020 for public consultation which will repeal and replace the Indian Ports Act, 1908.

The Bill also seeks to create an enabling environment for the growth and sustained development of the ports sector in India through the following broad methods:

- Constitution of Maritime Port Regulatory Authority
- Formulation of the National Port policy and National Port plan in consultation with Coastal State Governments, State Maritime Boards and other stakeholders.
- Formulation of specialised Adjudicatory Tribunals namely Maritime Ports Tribunal and Maritime Ports Appellate Tribunal to curb any anti-competitive practises in the port sector and act as a speedy and affordable grievance redressal mechanism.

The draft Indian Ports Bill, 2020, is aimed at enabling the structured growth and sustainable development of ports to attract investments in the port sector.

No Winter Session of Parliament

The winter session of Parliament will not be held this year in view of the COVID-19 pandemic and that it will be appropriate to convene the budget session in January next year.

The power to convene a session of Parliament rests with the government.

The decision is taken by the Cabinet Committee on Parliamentary Affairs, which currently comprises nine ministers, including those for Defence, Home, Finance, and Law.

The decision of the Committee is formalised by the President, in whose name MPs are summoned to meet for a session.

The summoning of Parliament is specified in Article 85 of the Constitution. This provision specified that the central legislature had to be summoned to meet at least once a year, and that not more than 12 months could elapse between two sessions.

India does not have a fixed parliamentary calendar. By convention, Parliament meets for three sessions in a year.

Non-Gulf NRIs likely to be first to get postal voting rights

The Election Commission's (EC) proposal to grant postal voting rights to Non-Resident Indians (NRIs) may get implemented first for voters based in the US, Canada, New Zealand, Japan, Australia, Germany, France and South Africa.

The ECI proposed amending the Conduct of Election Rules, 1961, in order to allow this facility. The postal ballots will be sent to NRIs electronically and they will send these ballots after choosing their candidate via post.

This partially electronic facility is now available for service voters (being a member of the armed Forces of the Union; or a member of a force to which provisions of the Army Act, 1950), and is being sought to be extended to overseas NRI voters.

Prior to 2010, an Indian citizen who is an eligible voter and was residing abroad for more than six months owing to employment, education or otherwise, would not have been able to vote in elections.

After the passing of the Representation of the People (Amendment) Act, 2010, eligible NRIs who had stayed abroad beyond six months have been enabled to vote, but only in person at the polling station where they have been enrolled as an overseas elector.

Now the ECI has approached the government to permit NRIs to vote via postal ballots similar to a system that is already used by service voters (the Electronically Transmitted Postal Ballot System, or ETPBS).

Electricity (Rights of Consumers) Rules, 2020

The Central government notified the Electricity (Rights of Consumers) Rules, 2020. These rules serve to “empower” consumers with rights that would allow them to access continuous supply of quality, reliable electricity.

Consumers across the country will now have the right to a minimum standard of service for supply of electricity. DISCOMs have to ensure minimum standard of service under the rules.

This will also include the right to round-the-clock electricity supplies, unless stated otherwise for a specific category, such as an agricultural connection.

These rules provide for rights of consumers and obligations of distribution licensees, release of new connection and modification in existing connection, metering arrangement, billing and payment, among others.

An automatic compensation mechanism will be put in place. It will include no supply to a consumer beyond a particular duration and certain number of interruptions in supply, which will be specified by the regulatory commission.

A new connection has to be given within a maximum time period of seven days in metro cities, 15 days in other municipal areas, and 30 days in rural areas.

The rules recognise consumer as a prosumer as well, where prosumers will maintain consumer status and have the same rights as a general consumer. They will also have right to set up renewable energy generation unit, including rooftop solar photovoltaic systems — either on their own or through a service provider.

Government introduced physical verification of premises is now mandatory

The government has introduced mandatory physical verification of business premises for the purposes of obtaining GST registration.

The GST Council Secretariat said that the move, aimed at controlling the menace of GST fake invoice frauds, was recommended by the Council’s law committee.

Separately, a new rule has been introduced by the Central Board of Indirect Taxes and Customs that mandates businesses with monthly turnover of over ₹50 lakh to pay at least 1% of their GST liability in cash instead of using input tax credits to discharge their entire liability.

The validity of e-way bills has also been tweaked, doubling the distance to be covered for each day of validity, effective January 1.

Till now, an e-way bill for transporting goods under GST allowed transporters to cover 100 km in one day. Now, that distance for each day of validity has been increased to 200 km.

Governor's role in calling an Assembly session

In yet another tug-of-war between Kerala Governor Arif Mohammad Khan and Chief Minister Pinarayi Vijayan, the Governor has turned down a request to summon a special sitting of the Assembly to debate the new three central farm laws.

According to Article 174 of the Constitution "The Governor shall from time to time summon the House or each House of the Legislature of the State to meet at such time and place as he thinks fit".

The provision also puts on the Governor the responsibility of ensuring that the House is summoned at least once every six months.

Although it is the Governor's prerogative to summon the House, according to Article 163, the Governor is required to act on the "aid and advice" of the Cabinet.

So when the Governor summons the House under Article 174, this is not of his or her own will but on the aid and advice of the Cabinet.

Can the Governor refuse the aid and advice of the Cabinet?

There are a few instances where the Governor can summon the House despite the refusal of the Chief Minister who heads the Cabinet.

When the Chief Minister appears to have lost the majority and the legislative members of the House propose a no-confidence motion against the Chief Minister, then the Governor can decide on his or her own on summoning the House.

But the actions of the Governor, when using his discretionary powers can be challenged in court.

A number of rulings by the Supreme Court has settled the position that the Governor cannot refuse the request of a Cabinet that enjoys majority in the House unless it is patently unconstitutional.

Science & Technology

India targets to fully covert Andaman and Nicobar, Lakshadweep islands to Green Energy

The Andaman & Nicobar, and Lakshadweep Islands will be using renewable energy to meet their total requirement under the goals set by the centre, according to Minister of State (Independent Charge) for Power and New and Renewable Energy R K Singh.

Government is aiming for 100 per cent renewable energy in Andaman & Nicobar and Lakshadweep and India is ready to share expertise among other small island nations.

India has installed about 1,36,000 megawatts (MW) of Renewable Energy capacity with capacity addition of another 57,000 MW under implementation. The target is now to achieve 450 gigawatts of Renewable Energy capacity by 2030.

He was addressing delegates from multiple countries including Mauritius, Fiji, Suriname, Guyana, Trinidad & Tobago and South Africa here under the Know India Programme.

The programme is managed by the ministry of external affairs for engagement with Indian origin youth to enhance their awareness about India's art and culture.

A zebrafish gene which can promote heart regeneration

A tiny freshwater fish named 'Zebrafish', barely 2-3 cm long can efficiently regenerate its damaged heart within a short time period. Scientists at Pune-based Agharkar Research Institute have used this tiny animal model and identified genes that can promote heart regeneration.

As reported in the high-impact Development journal, scientists have sought to decode the heart regeneration processes using this animal model.

Zebrafish is found in the tropical and subtropical regions.

The fish is native to South Asia's Indo-Gangetic plains, where they are mostly found in the paddy fields and even in stagnant water and streams.

It is a popular aquarium fish, frequently sold under the trade name Danio.

HAL delivered biggest cryogenic propellant tank

Hindustan Aeronautics Limited announced that it had delivered the largest-ever cryogenic propellant tank (C32 LH2) fabricated by the state-run company to the Indian Space Research Organisation.

The main goal of launch vehicle designers is to increase a launch vehicle's weight-lifting ability while being mindful of its reliability and cost

ISRO made history on 5 June 2017 when it launched the Mk III variant of its GSLV to the Geosynchronous Transfer Orbit (GTO)

Yet, the Ariane 5 rocket, along with Delta IV Heavy, firmly remained key components required for ISRO to launch heavier communication satellites into orbit.

The C32-LH2 tank is a developmental cryogenic propellant tank of aluminium alloy designed for improving the payload capability of GSLV MK-III launching vehicle of ISRO.

The tank designed by HAL can load 5755 kg propellant fuel in the 89 cubic meter volume. Even earlier HAL had partnered with ISRO to supply satellite structures for the PSLV, GSLV Mark II and III launch vehicles.

Cryogenic fuels are fuels that require storage at extremely low temperatures in order to maintain them in a liquid state.

These fuels are used in machinery that operates in space because ordinary fuel cannot be used there due to the very low temperatures often encountered in space, and due to absence of an environment that supports combustion.

Cryogenic fuels most often constitute liquefied gases such as liquid hydrogen.

Influenza makes people vulnerable to bacterial infection

Influenza is caused by a virus, but the most common cause of death in influenza patients is secondary pneumonia caused by bacteria, rather than the influenza virus itself. While this is well known, what is largely unknown is why influenza infections lead to an increased risk of bacterial pneumonia.

Pneumococcal infections are the most common cause of community-acquired pneumonia and a leading global cause of death.

A prior influenza virus infection sensitizes for pneumococcal infections, but mechanisms behind this increase susceptibility are not fully understood.

Researchers at Karolinska Institutet have now identified influenza-induced changes in the lower airways that affect the growth of pneumococci in the lungs.

The researchers found that different nutrients and antioxidants, such as vitamin C, leak from the blood. This creates an environment in the lungs that favours growth of the bacteria.

The bacteria adapt to the inflammatory environment by increasing the production of an enzyme called HtrA. The presence of HtrA weakens the immune system and promotes bacterial growth in the influenza-infected airways.

Indian Oil launches 100 Octane petrol in India

Indian Oil Corporation (IOC) has launched 100 Octane petrol in India. Branded as XP100, this premium-grade petrol will initially be available in only 10 cities - Delhi, Gurgaon, Noida, Agra, Jaipur, Chandigarh, Ludhiana, Mumbai, Pune, and Ahmedabad.

Branded as XP100, the premium grade petrol was launched across ten cities by Dharmendra Pradhan, Minister of Petroleum and Natural Gas.

The technology for India's first octane petrol has been indigenously created by Indian Oil Research and Development.

The availability of XP100 puts India in an elite group of countries, having access to such high-quality oil. The petrol will provide high quality and power to the engine.

Indian Oil plans to roll-out XP100 premium grade petrol in 15 identified cities across the country in two phases.

What is Theremin?

The theremin is an electronic musical instrument controlled without physical contact by the thereminist (performer). Theremin instrument turned 100 years old this year.

The instrument was invented in 1920. It is named after its inventor, Leon Theremin, who patented the device in 1928.

The instrument's controlling section usually consists of two metal antennas that sense the relative position of the thereminist's hands and control oscillators for frequency with one hand, and amplitude (volume) with the other.

The electric signals from the theremin are amplified and sent to a loudspeaker.

IIT Kanpur Researchers developed 'Damaru' Inspired Lattice

IIT Kanpur researchers have demonstrated how with the use of a micro-structured hour-glass shaped metastructure in the lattice unit, one can get a wider variation of propagation and stop bands. The hour-glasses are developed in the Smart

Inspiration of the lattice they developed has come from a two-headed drum called 'Damaru' or 'Damaru' which is used in ancient Hinduism and Tibetan Buddhism. It is said that Lord Shiva has produced a special sound through this musical instrument to create and regulate the universe.

In this application, IIT Kanpur researchers have shown the nature of stiffness of a vibrating medium could be altered drastically by controlling the lattice micro-structure from regular honeycomb to auxetic honeycomb structure.

This has wide applications in the field of vibration isolation in high speed trains, stealth submarines and helicopter rotors.

This work is sponsored by a SPARC project of Ministry of Education.

U.K. becomes first country to approve Pfizer-BioNTech Covid-19 vaccine

The United Kingdom became the first country to formally approve the Pfizer and BioNTech Covid-19 vaccine, a symbolic milestone in the fight against the pandemic.

The British regulator Medicines and Healthcare products Regulatory Agency (MHRA) declared that the vaccine offers protection of up to 95 per cent and is safe to be used for immunisation against Covid-19.

The American pharmaceutical giant Pfizer and its German partner BioNTech last month concluded phase 3 study of their mRNA-based Covid-19 vaccine candidate BNT162b2, meeting all primary efficacy endpoints.

BNT162b2 is a COVID-19 vaccine candidate developed by BioNTech and Pfizer and given by intramuscular injection.

It is an RNA vaccine composed of nucleoside-modified mRNA encoding a mutated form of the spike protein of SARS-CoV-2, and is encapsulated in lipid nanoparticles.

How did a rocket booster from 1966 become a Near-Earth Object?

NASA has confirmed that the Near-Earth Object called 2020 SO is the rocket booster that helped lift the space agency's Surveyor spacecraft toward the Moon in 1966.

The Surveyor-2 spacecraft was supposed to make a soft landing on the Moon's surface in September 1966, during which time one of the three thrusters failed to ignite as a result of which the spacecraft started spinning and crashed on the surface.

The aim of the mission was to reconnoiter the lunar surface ahead of the Apollo missions that led to the first lunar landing in 1969.

While the spacecraft crashed into the Moon's surface, the rocket booster disappeared into an unknown orbit around the Sun.

Australian Square Kilometre Array Pathfinder (ASKAP)

A powerful new telescope ASKAP, in Australia has mapped vast areas of the universe in record-breaking time, revealing a million new galaxies and opening the way to new discoveries.

ASKAP is a telescope designed over a decade ago and located about 800 km north of Perth. It became fully operational in February 2019 and is currently conducting pilot surveys of the sky before it can begin large-scale projects from 2021 onward.

ASKAP surveys are designed to map the structure and evolution of the Universe, which it does by observing galaxies and the hydrogen gas that they contain.

One of its most important features is its wide field of view, because of which it has been able to take panoramic pictures of the sky in great detail.

The telescope uses novel technology developed by CSIRO, which is a kind of a "radio camera" to achieve high survey speeds and consists of 36 dish antennas, which are each 12m in diameter.

The present Rapid ASKAP Continuum Survey (RACS) taken by the ASKAP telescope is like a "Google map" of the Universe where most of the millions of star-like points are distant galaxies, about a million of which have not been seen before.

Why the collapse of the Arecibo telescope is a loss for astronomy

Puerto Rico's massive Arecibo telescope, famous for its stellar contributions to astronomy, collapsed, leaving many among the scientific community in shock and anguish. The collapse was devastating also for many Puerto Ricans, for whom the observatory was culturally significant.

The second-largest single-dish radio telescope in the world, Arecibo was first built in 1963. The US National Science Foundation owned the telescope.

Being the most powerful radar, scientists employed Arecibo to observe planets, asteroids and the ionosphere, making several discoveries over the decades, including finding prebiotic molecules in distant galaxies, the first exoplanets, and the first millisecond pulsar.

In 1967, Arecibo was able to discover that the planet Mercury rotates in 59 days and not 88 days as had been originally thought.

In 1993, scientists Russell Hulse and Joseph Taylor were awarded the Nobel Prize in Physics for their work on the observatory in monitoring a binary pulsar, providing a strict test of Einstein's Theory of General Relativity and the first evidence for the existence of gravitational waves.

Scientists suggest a new indicator for measuring its health impact

Scientists from the world's three leading research institutions took part in this extensive research and suggested that oxidative potential of air particles should also be taken into account in future air-quality regulation measures to reduce the adverse health impact of inhaling poor quality air by the people.

Exposure to the fine particle matter with diameters generally below 10 micrometres pose the greatest health risk. It is because they can get deep into lungs and even into bloodstream.

The capability of these tiny airborne particulate matter (PM) to react with oxygen to form highly reactive chemical molecules is known as reactive oxygen species (ROS) or oxidative potential (OP).

A reactive oxygen species build-up in cells may cause damage to DNA, RNA, proteins, and may cause cell death.

AI and Robotics Park in Bengaluru

An Artificial Intelligence and Robotics Technologies Park (ARTPARK), set up in Bengaluru, will promote technology innovations in AI and robotics.

ARTPARK, is a unique not-for-profit foundation established by Indian Institute of Science (IISc), Bengaluru with support from AI Foundry in a public-private model.

With seed funding of Rs. 170 Cr (\$22mn) from Department of Science & Technology (DST), Govt. of India, under the National Mission on Inter-disciplinary Cyber-Physical Systems (NM-ICPS), it will bring about collaborative consortium of partners from industry, academia and government bodies.

ARTPARK will develop DataSetu - that will enable confidentiality and privacy-preserving framework to share data and run analytics spurring the data-sharing ecosystem and create a data marketplace, boosting AI applications and solutions.

India to surpass 350 mn 5G connections by 2026

India is expected to surpass 350 million 5G subscriptions by 2026, accounting for 27% of all mobile subscriptions in the country, according to a report by Swedish telecom equipment maker Ericsson.

As per the 'The Ericsson Mobility Report 2020,' four out of every ten mobile subscriptions in 2026 will be 5G globally with 5G subscriptions forecast to reach 3.5 billion.

In the India region, LTE (long-term evolution technology) subscriptions are forecast to increase from 710 million in 2020 to 820 million in 2026" by which time 3G will be phased out.

In India, the reliance of people on mobile networks to stay connected as well as work from home during the pandemic has resulted in average traffic per smartphone user rising from 13.5 GB a month in 2019 to 15.7 GB in 2020, the highest globally.

Mumbai offers Highest Quality of Life

IIT-Bombay researchers have come up with an urban quality of life index tailored to the reality of life in India. And, for the first time, they have factored in gender parity. Chennai, it turns out, is the most women-friendly and Patna the least.

Overall, Mumbai tops the list of 14, followed closely by Delhi, Kolkata and Chennai.

“Women experience cities differently; meeting women’s needs becomes essential in promoting sustainable urban development,” the paper, in press to be published in Elsevier journal ‘Transport Policy’. The study found that Jaipur has the highest crime rate against women, Chennai has the lowest.

The gap in literacy rate between men and women is the widest in Jaipur (13.2%) and lowest in Kolkata (5.4%). Literacy was the highest in Pune (91%) and, surprisingly, the lowest in Hyderabad (83%).

The unemployment rate for women is the highest in Patna — at 346, it is more than four times the urban average of 73.

Another often overlooked factor are the basics — power, water, education. Only 36% urban households in Patna have access to treated tap water.

'Artificial Sun' Nuclear Fusion Reactor

According to the state media report, China successfully powered up its "artificial sun" nuclear fusion reactor for the first time, marking a great advance in the country's nuclear power research capabilities.

The HL-2M Tokamak reactor is China’s largest and most advanced nuclear fusion experimental research device, and scientists hope that the device can potentially unlock a powerful clean energy source.

It uses a powerful magnetic field to fuse hot plasma and can reach temperatures of over 150 million degrees Celsius, approximately ten times hotter than the core of the sun.

Located in Sichuan province and completed late last year, the reactor is often called an “artificial sun” on account of the enormous heat and power it produces.

Chinese scientists have been working on developing smaller versions of the nuclear fusion reactor since 2006.

Fusion reaction is what powers our sun. It merges atomic nuclei to create massive amounts of energy - the opposite of the fission process used in atomic weapons and nuclear power plants, which splits them into fragments.

Unlike fission, fusion emits no greenhouse gases and carries less risk of accidents or the theft of atomic material.

Lab-grown meat approved by Singapore Food Agency (SFA)

The Singapore Food Agency (SFA) has recently approved the sale of a lab-grown meat product. This is the first time cultured meat has been cleared for sale anywhere in the world.

The product approved by the SFA is cultured chicken, produced by US-based East Just.

The company has announced the product will be manufactured with local partners under its new brand GOOD Meat.

The latter is made from plant sources such as soy or pea protein, while cultured meat is grown directly from cells in a laboratory.

Both have the same objective- to offer alternatives to traditional meat products that could feed a lot more people, reduce the threat of zoonotic diseases, and mitigate the environmental impact of meat consumption.

In terms of cellular structure, cultured or cultivated meat is the same as conventional meat — except that cultured meat does not come directly from animals.

According to the Good Food Institute (GFI)'s 2019 State of the Industry Report on cultivated meats, compared to conventional meat, cultivated meat could reduce land use by more than 95%, climate change emissions by 74-87% and nutrient pollution by 94%.

Since cultivated meat is created in clean facilities, the risk of contamination by pathogens such as salmonella and E coli, which may be present in traditional slaughterhouses and meat-packing factories, is significantly reduced.

It does not require antibiotics either, unlike animals raised for meat, thereby reducing the threat posed to public health by growing antibiotic resistance.

Japan's Hayabusa2 mission

Six years after Japan's Hayabusa2 mission was launched, it is set to return back to Earth on December 6 carrying with it samples from the one-kilometre wide Ryugu asteroid that orbits the Sun.

The mission is similar to NASA's OSIRIS-REX mission that brought back samples from asteroid Bennu late in October.

According to the Japanese Aerospace Exploration Agency (JAXA), this is the first time that a probe has visited a celestial body that is under 100 metres in diameter.

Hayabusa2's predecessor, the Hayabusa mission brought back samples from the asteroid Itokawa in 2010.

Ryugu is classified as a Potentially hazardous asteroids (PHAs). It was discovered in 1999 and was given the name by the Minor Planet Center in 2015. It is 300 million kilometres from Earth and it took Hayabusa2 over 42 months to reach it.

Co-WIN mobile app for COVID-19 vaccine delivery

The Central government has introduced a new digital platform called Co-WIN for COVID-19 vaccine delivery. There will be a new mobile app as well with the same name that will allow people to register for the vaccine.

There will be a new mobile app as well with the same name that will allow people to register for the vaccine. The CO-WIN app is yet to be available for smartphone users and it is expected that it will be publicly available soon.

The platform will be used for recording vaccine data and will form a database of healthcare workers too. All COVID-19 related data necessary for the delivery of the vaccine is presently being uploaded on the CO-WIN platform.

The app will have separate modules for administrator, registration, vaccination, beneficiary acknowledgement and reports. Once people start to register for the app, the platform will upload bulk data on co-morbidity provided by local authorities.

Software to crack down on child porn

The cyber wing of the Maharashtra Police recently acquired a software from Interpol that would help them track down child pornography uploaded online.

Earlier this year, 12 officers of Maharashtra cyber were trained by the Interpol officers in the use of this software after which they were provided access to it.

These 12 officers form the core of Tactical Response Against Cyber Child Exploitation (TRACE) Unit.

The TRACE unit was primarily set up to act against child pornography in Maharashtra that is part of a larger campaign against Child Sexual Abuse Material (CSAM) across the country since 2019.

'Operation Blackface' is part of the larger action taken against CSAM across the country.

Acting on the tip off provided by NCRB, Maharashtra Cyber cops started forwarding complaints to the districts where FIR's were registered against accused persons.

BSNL launched world's largest NB-IoT

BSNL, in partnership with Skylotech India, announced a breakthrough in satellite-based NB-IoT (Narrow Band-Internet of Things), in pursuance of the Prime Minister, Shri Narendra Modis vision of a truly Digital India starting with fishermen, farmers, construction, mining and logistics enterprises.

With this solution, India will now have access to a ubiquitous fabric of connectivity for millions of yet unconnected machines, sensors and industrial IoT devices.

This new 'Made in India' Solution, which is indigenously developed by Skylo, will connect with BSNLs satellite- ground infrastructure and provide PAN-India coverage, including Indian seas.

The coverage will be so vast that it will not leave any dark patch within the boundary of India.

This is the world's first satellite-based NB-IoT network.

This new technology supports the Department of Telecom and NITI Aayogs plan of bringing indigenous IoT connectivity to India's core sectors.

Examples of where this technology has already been tested successfully include, Indian Railways, fishing vessels, and enabling connected vehicles across India.

A small, smart, incredibly rugged box, the Skylo 'User Terminal' interfaces with sensors and transmits data to the Skylo Network and into people's hands.

DRDO-designed sub-machine gun

A 5.56x30 mm sub-machine gun designed by the Defence Research and Development Organisation (DRDO) has successfully undergone the defence ministry's user trials.

JVPC is a Gas Operated Semi Bull-pup automatic weapon having more than 700 rpm rate of fire.

The effective range of the carbine is more than 100 m and weighs about 3.0 kg with key features like high reliability, low recoil, retractable Butt, ergonomic design, single hand firing capability, and multiple Picatinny rails etc.

These features make it a very potent weapon for Counter Insurgency /Counter Terrorism operations by security agencies.

The carbine has been designed as per Indian Army's GSQR, by Armament Research and Development Establishment (ARDE), a Pune based laboratory of DRDO.

The Weapon is manufactured at Small Arms Factory, Kanpur while the Ammunition is manufactured at ammunition Factory, Kirkee Pune.

India's first indigenous mRNA vaccine

India's first indigenous mRNA vaccine candidate has received approval from Indian Drug regulators to initiate Phase one and two human clinical trials.

The novel mRNA vaccine candidate, HGCO19 has been developed by Gennova, Pune and supported with seed grant under the Ind-CEPI mission of the Department of Biotechnology.

The mRNA vaccines do not use the conventional model to produce immune response. Instead, they carry the molecular instructions to make the protein in the body through a synthetic RNA of the virus.

mRNA-based vaccines are scientifically the ideal choice to address a pandemic because of their rapid developmental timeline. The mRNA vaccine is considered safe as is non-infectious, non-integrating in nature, and degraded by standard cellular mechanisms.

High-speed Wide Area Network (WAN)

As many as 2927 Court complexes across India have been connected so far by a high-speed Wide Area Network (WAN) under e-Courts Project. It has led to completion of 97.86 % sites out of 2992 sites conceived to be connected with high speed WAN under the project.

Department of Justice (DoJ) along with BSNL is working relentlessly on connecting the remaining sites.

The Government approved the computerization of 14,249 district & subordinate Courts under the e-Courts Phase I project (2007-2015).

The objective of the e-Courts project is to provide designated services to litigants, lawyers and the judiciary by universal computerization of district and subordinate courts in the country by leveraging Information and Communication Technology (ICT) for improved justice delivery.

Envisaging further ICT enhancement through universal computerization of all the courts, the Phase II of the project was approved by the Cabinet in July 2015 with a cost of Rs 1670 crore under which 16,845 courts have been computerized.

Under e-Courts Project, one of the largest digital networks of the world was conceived by Department of Justice along with the e-Committee of the Supreme Court of India to connect the 2992 court complexes located all over India by a high-speed Wide Area Network (WAN) via different modes of connectivity.

Quantum communication

The Defence Research and Development Organisation (DRDO) successfully demonstrated communication between its two labs using Quantum Key Distribution (QKD) technology, which is a "robust" way to share encryption keys, said an official statement.

The technology is developed by CAIR, Bengaluru and DYSL-QT, Mumbai.

Quantum Communication using time-bin Quantum Key Distribution (QKD) scheme was performed under realistic conditions. The setup also demonstrated the validation of detection of a third party trying to gain knowledge of the communication.

Quantum based security against eavesdropping was validated for the deployed system at over 12kms range and 10dB attenuation over fibre optic channel.

Continuous wave laser source was used to generate photons without depolarization effect. The timing accuracy employed in the setup was of the order of picoseconds.

The Single photon avalanche detector (SPAD) recorded arrival of photons and key rate was achieved in the range of kbps with low Quantum bit error rate.

The work being done at DRDO will be used to enable start-ups and SMEs in the domain of Quantum information technologies.

It will also serve to define standards and crypto policies that can leverage the QKD system in a unified Cipher Policy Committee (CPC) framework for more secure and pragmatic key management for current and future military cryptographic systems.

Geminids Meteor Shower 2020

The Geminids meteor shower, believed to be the strongest of the year, is active from December 4-December 20, with December 13 and 14 considered to be the best nights for viewing these meteor showers.

The Geminids meteor showers are unique because their origin does not lie in a comet, but what is believed to be an asteroid or an extinct comet. The Geminids emerge from 3200 Phaethon, which meteor scientists consider to be an asteroid.

NASA says that Geminids travel at a speed of 78,000 mph or 35 km/s, which is over 1000 times faster than a cheetah.

Meteors are best visible on a cloudless night and when the Moon is not extremely bright.

Meteors are bits of rock and ice that are ejected from comets as they manoeuvre around their orbits around the sun.

When a meteor reaches the Earth, it is called a meteorite and a series of meteorites, when encountered at once, is termed a meteor shower.

According to NASA, over 30 meteor showers occur annually and are observable from the Earth.

Digital payment app 'DakPay'

Department of Posts and India Post Payments Bank unveiled a new digital payment app DakPay.

DakPay is a suite of digital financial and assisted banking services provided by India Post and India Post Payments Bank (IPPB) through the trusted Postal ('Dak') network across the nation to cater to the financial needs ('Pay') of various sections of the society.

DakPay UPI app allows users to create UPI ID and link multiple accounts across banks in a single mobile app.

The app facilitates instant money transfers, QR based payments in merchant stores and online shopping on e-commerce websites.

SpaceX Crew-3 mission

Indian-American US Air Force Colonel Raja Chari has been selected as the Commander of the SpaceX Crew-3 mission to the International Space Station (ISS) by NASA and the European Space Agency.

The Indian-American will command the mission, which is expected to launch in the fall of 2021.

Earlier this year in January, Chari became one of the 11 astronauts to join NASA's ranks. The new graduates completed more than two years of basic training and became the first to graduate from NASA's Artemis programme. Under the programme, NASA wants to send the next man and first woman to the Moon by 2024.

The Crew-3 mission is part of NASA's contract with SpaceX, under its Commercial Crew Programme, as per which SpaceX will provide six crew missions to the ISS for NASA astronauts.

The idea is to provide reliable, safe and cost-effective crew access to the space station and the low-Earth orbit.

The crew members will spend six months at the ISS.

GPS-Based Toll Collection System

The Government of India has cleared the use of GPS-based for toll collection in the country. This move will ensure seamless movement of vehicles across the country, and it will also help India becomes a 'toll booth free' nation in the next two years.

The toll amount will be deducted directly from the bank account based on the movement of vehicles.

While now all commercial vehicles are coming with vehicle tracking systems, the Government will come up with some plan to install GPS technology in old vehicles.

The Minister expressed hope that the toll collections may reach Rs 34 thousand crore by March 2021.

By using GPS technology for toll collection, the toll income in next five years will be Rs 1.34 lakh crore.

PSLV-C50 successfully launched CMS-01

India's communication satellite CMS-01 was successfully launched by PSLV-C50 on December 17, 2020 from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota.

CMS-01 is envisaged to provide services in the extended-C Band of the frequency spectrum that will cover the Indian mainland, the Andaman and Nicobar and Lakshadweep Islands.

It was India's 42nd communication satellite with a mission life of over seven years.

The satellite will be placed in the specified slot in the geosynchronous orbit. Subsequently, it will function as the continuation of GSAT11 launched 11 years back."

PSLV-C50 is the 52nd flight of PSLV and 22nd flight of PSLV in 'XL' configuration (with 6 strap-on motors).

What is SolarWinds hack?

The 'SolarWinds hack', a cyberattack recently discovered in the United States, has emerged as one of the biggest ever targeted against the US government, its agencies and several other private companies.

This is being called a 'Supply Chain' attack: Instead of directly attacking the federal government or a private organisation's network, the hackers target a third-party vendor, which supplies software to them.

In this case, the target was an IT management software called Orion, supplied by the Texas-based company SolarWinds.

Orion has been a dominant software from SolarWinds with clients, which include over 33,000 companies. SolarWinds says 18,000 of its clients have been impacted.

The hackers gained "access to victims via trojanized updates to SolarWinds' Orion IT monitoring and management software. Once installed, the malware gave a backdoor entry to the hackers to the systems and networks of SolarWinds' customers.

ATAGS howitzer best artillery gun in world

According to a top DRDO scientist's report, ATAGS howitzer is the best gun in the world with the capability to strike targets at the longest range of 48 kilometers.

The indigenous gun can meet Indian Army's full requirement of 1800 artillery guns systems and there was no need for imports in this field.

The ATAGS is a 155-mm, 52-calibre artillery gun jointly developed by the DRDO in partnership with Bharat Forge of the Kalyani Group and the Tata Power SED.

In August 2018, the Defence Acquisition Council approved the purchase of 150 of these guns at an approximate ₹3,365 crore which would be split between the two companies.

China's Chang'e 5 lunar mission

China's Chang'e 5 lunar mission returned to Earth in the early hours of carrying around 2 kilograms of the first fresh rock samples from the moon in 44 years.

The probe, named after the ancient Chinese goddess of the moon, first took off from the Wenchang Spacecraft Launch Site in Hainan on November 24th.

Two of the Chang'e 5's four modules landed on the moon on 1st December and collected about 2 kilograms (4.4 pounds) of samples by scooping them from the surface and drilling 2 meters into the moon's crust.

The samples were deposited in a sealed container that was carried back to the return module by an ascent vehicle.

The retrieved re-entry capsule of Chang'e-5 will be airlifted to Beijing, where the capsule will be opened and the samples will be ready for analysis.

Oceanus Procellarum:

The samples were retrieved from a previously unvisited area of the moon.

The latest samples come from a part of the moon known as the Oceanus Procellarum, or Ocean of Storms, near a site called the Mons Rumker that was believed to have been volcanic in ancient times.

Mons Rumker, never sampled before, is geologically younger than the sampling areas of the U.S. and the Soviet missions.

India's first hypersonic wind tunnel

Defence Minister Rajnath Singh inaugurated the advanced Hypersonic Wind Tunnel (HWT) test facility, making India the third country after the US and Russia to have such a facility.

The state-of-the-art HWT Test facility is "pressure vacuum driven enclosed free jet facility having nozzle exit diameter of 1 metre and will simulate Mach No 5 to 12.

It is an indigenous development and an outcome of synergistic partnership with Indian industries.

The facility has the capability to simulate hypersonic flow over a wide spectrum and will play a major role in the realization of highly complex futuristic aerospace and defence systems.

Hyderabad-based DRDO labs showcased various indigenously developed systems and technologies in wide-ranging areas including missiles, avionics systems, advanced materials, electronic warfare, quantum key distribution technology, directed energy weapons, Gallium Arsenide and Gallium Nitride technology capabilities.

This included the Hypersonic Technology Demonstration Vehicle (HSTDV), Anti-Radiation Missile (RUDRAM), Quick Reaction Surface to Air Missile (QRSAM), Supersonic Missile Assisted Release Torpedo (SMART) and Quantum Key Distribution (QKD) technology during the last six months.

What is Winter Solstice?

December 21, is Winter Solstice, the shortest day of the year in the Northern Hemisphere. In the Southern Hemisphere, conversely, this day is Summer Solstice — in places like Australia, New Zealand and South Africa, therefore, December 21 is the year's longest day.

The Earth's axis of rotation is tilted at an angle of 23.5 degrees away from the perpendicular. This tilt — combined with factors such as Earth's spin and orbit — leads to variations in the duration of Sunlight that any location on the planet receives on different days of the year.

The winter solstice, hiemal solstice or hibernal solstice occurs when one of the Earth's poles has its maximum tilt away from the Sun.

It happens twice yearly, once in each hemisphere (Northern and Southern).

For that hemisphere, the winter solstice is the day with the shortest period of daylight and longest night of the year, when the Sun is at its lowest daily maximum elevation in the sky. Its opposite is the summer solstice.

The winter solstice occurs during the hemisphere's winter.

In the Northern Hemisphere, this is the December solstice (usually December 21 or 22) and in the Southern Hemisphere, this is the June solstice (usually June 20 or 21).

DRDO launched Medium Range Surface to Air Missile (MRSAM)

Defence Research and Development Organisation (DRDO) achieved a major milestone with the maiden launch of Medium Range Surface to Air Missile (MRSAM), Army Version from Integrated Test Range, Chandipur, off the Coast of Odisha around 1600 hrs.

The missile completely destroyed a high speed unmanned aerial target which was mimicking an aircraft with a direct hit.

Army version of MRSAM is a surface to Air Missile developed jointly by DRDO, India and IAI, Israel for use of the Indian Army.

MRSAM Army weapon system comprises of Command post, Multi-Function Radar and Mobile Launcher system.

The complete Fire Unit has been used during the launch in the deliverable configuration. The team from the users i.e. Indian Army also witnessed the launch.

Number of range instruments such as Radar, Telemetry and Electro-Optical Tracking System were deployed and captured the complete mission data, validating the weapon system performance including the destruction of the target.

Mobile app launched to identify and geotag insanitary latrines

A mobile application to identify and geotag insanitary latrines and manual scavengers was launched by Union Minister for Social Justice and Empowerment.

He urged all citizens to download the app, "Swachhata Abhiyan", and through it provide the authorities concerned details of any insanitary latrine or manual scavenger they notice.

This would help in rehabilitating all manual scavengers and replace insanitary latrines with sanitary ones.

Census 2011 reported that there were over 26 lakh insanitary latrines in the country. Existence of insanitary latrines is the main reason for manual scavenging.

Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, mandates survey of insanitary latrines, their demolition and construction of sanitary ones in their place. The government has been implementing Swachh Bharat Mission for the same purpose.

Initial data for Chandrayaan-2 mission

The Indian Space Research Organisation has released the first set of data from the country's second mission to the Moon, the Chandrayaan-2, for the general public.

The Orbiter, which was injected into a lunar orbit on September 2, 2019, carried eight experiments/payloads, all of which have been performing well and sending data received.

The public release data archived at the Indian Space Science Data Center (ISSDC) in Byalalu, near Bengaluru is prepared in the standard, globally followed planetary data system-4 (PDS4) format for public release.

The set released recently is basic data — what ISRO calls Level-0 and Level-1 datasets — prepared using PDS4 standards. The ISSDC is the nodal center of planetary data archive for planetary missions of ISRO.

U.K. Coronavirus Mutation is Worrying but Not Terrifying

A new mutated form of the novel coronavirus that appears more transmissible than the original has raised alarm in the U.K. and around the world. It does not appear to cause more severe disease, and the newly available vaccines do seem to protect people against it.

In an RNA virus such as SARS-CoV-2, proteins are made of a sequence of amino acids. Such a virus contains some 30,000 'base pairs', which are like bricks placed next to each other to form a structure. An alteration in this base can be a mutation, effectively changing the shape and behaviour of the virus.

In the UK variant, one mutation has made the virus more likely to bind with human proteins called receptors. This is called N501Y.

N501Y:

In simple words, the amino acid represented by the letter N, and present at position 501 in the coronavirus genetic structure, has been replaced in that position with another amino acid, represented by Y.

The position where this alteration has taken place is in the spike protein's receptor-binding domain. (It is the spike protein of the virus that binds with the human receptor.)

Therefore, the mutation has increased the binding affinity of the coronavirus. The mutated virus reportedly accounts for 60% of recent infections in London.

First possible radio signal emanating from an exoplanet

An international team of scientists has collected the first possible radio signal from a planet beyond our solar system, emanating from an exoplanet system about 51 light-years away.

Using the Low-Frequency Array (LOFAR), a radio telescope in the Netherlands, the researchers uncovered emission bursts from the Tau Bootes star-system hosting a so-called hot Jupiter, a gaseous giant planet that is very close to its own sun.

Tau Bootes is an F-type main-sequence star approximately 51 light-years away in the constellation of Bootes. It is a binary star system, with the secondary star being a red dwarf.

If confirmed through follow-up observations, this radio detection opens up a new window on exoplanets and provides a novel way to examine alien worlds that are tens of light-years away.

IISER scientists identify the gene that greens plants

Researchers at the Indian Institute of Science Education and Research (IISER) have identified a gene that facilitates in the greening of plants by playing a crucial role in regulating the levels of protochlorophyllide — an intermediate in the biosynthesis of the green pigment chlorophyll.

IISER scientists have identified the gene 'BBX11' and their study was recently published in the prestigious British journal *New Phytologist*.

The synthesis of chlorophyll in plants is a lengthy, multi-step process. When a seedling emerges from under the soil it must quickly synthesise chlorophyll to start supporting its own growth.

In order to facilitate quick synthesis of chlorophyll, plants make a precursor of chlorophyll called 'protochlorophyllide' in the dark, which glows red when blue light is shone on the plant.

As soon as the plant comes out into the light from under the soil, light-dependent enzymes convert protochlorophyllide to chlorophyll.

Using genetic, molecular and biochemical techniques, the duo found a mechanism where two proteins oppositely regulate the 'BBX11' gene to maintain optimum levels of 'BBX11'.

The amount of protochlorophyllide synthesised needed to be proportional to the number of enzymes available to convert them to chlorophyll.

If there is excess of free protochlorophyllide, then exposure to light converts it into molecules that cause 'photobleaching'.

Scientists discovered new Species of Wild Sun Rose

Scientists have discovered a new species called *Portulaca laljii*. This is a wild sun rose found in the Eastern Ghats. *Portulaca laljii* was found in the Prakasam area of Andhra Pradesh.

The new species, named *Portulaca laljii*, discovered from Prakasam district of Andhra Pradesh has unique features such as a tuberous root, no hair in its leaf axils, a reddish pink flower, prolate-shaped fruits, and copper brown seeds without lustre.

The flowers are very attractive and bloom for months from June to February.

The plant bears beautiful, tiny pink flowers for eight months. It is because of the succulent nature of tuberous roots that the plant can survive on rocky crevices.

Portulaca laljii has been named to honour the contribution of Lal Ji Singh, an eminent botanist of the Botanical Survey of India associated with its Andaman and Nicobar Centre.

Country's First Pneumococcal Conjugate Vaccine

Union Minister for Health and Family Welfare inaugurated India's first pneumococcal conjugate vaccine (PCV). The vaccine "Pneumosil" has been developed by the Serum Institute of India Private Limited (SIPL) in collaboration with partners like the Bill and Melinda Gates Foundation.

SIPL developed and got the license of the first indigenous Pneumococcal Conjugate Vaccine (PCV) from the Government of India during COVID-19 pandemic lock-down.

This Indigenous Pneumococcal Conjugate Vaccine will be available in the market under the brand name "Pneumosil" at an affordable price in a single dose (vial and pre-filled syringe) and Multidose (vial) presentations.

Pneumosil is effective in the prevention of Pneumonia disease.

New interest in Proxima Centauri, the closest star to our Sun

Astronomers running the world's largest initiative to look for alien life have recently picked up an "intriguing" radio wave emission from the direction of Proxima Centauri, the closest star to our Sun.

The news has sparked renewed interest in Proxima Centauri, one of whose planets is believed to revolve in the star's habitable zone, giving rise to the possibility that it could have, or does, sustain life.

Proxima Centauri is 4.2 light-years away from the Sun – considered a close distance in cosmic terms.

Its mass is about an eighth of the Sun's, and it is too dim to be seen with the naked eye from Earth.

Proxima b, one of the two planets that revolve around the star, is the subject of significant curiosity.

Sized 1.2 times larger than Earth, and orbiting its star every 11 days, Proxima b lies in Proxima Centauri's "Goldilocks zone" i.e. the area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets (e.g. Earth is in the Sun's Goldilocks zone).

However, this does not mean for sure that water is present on Proxima b. It could also be hostile to life, if its atmosphere has been stripped away by solar flares from Proxima Centauri.

Bhabha Atomic Research Centre, Mumbai develops Eye Cancer therapy

Bhabha Atomic Research Centre (BARC) Mumbai has developed Eye Cancer therapy in the form of the first indigenous Ruthenium 106 Plaque for treatment of Ocular Tumours.

The handling of plaque is very convenient for the Surgeon and it has been acknowledged to be at par with the international standards.

So far the BARC plaques made in India through the Department of Atomic Energy have been used for seven cases for Ocular Cancer.

Ocular tumours are tumours inside the eye. They are collections of cells that grow and multiply abnormally and form masses.

Ruthenium-106 is a radioactive form of the rare heavy metal ruthenium, which is a "platinum group" metal similar to platinum.

Ruthenium-106 is produced from the fission or splitting of uranium-235, the type of uranium used in nuclear fission reactors, so it's found in spent nuclear fuel.

It's used in medicine for cancer radiation therapy, especially for eye and skin tumours. It's also used in radioisotope thermoelectric generators that power satellites.

Society and Social Justice



Child-friendly police station inaugurated in Pune

The city's first "child-friendly" police station was inaugurated at the cantonment police station premises by Abhay Karandikar, director, Indian Institute of Technology (IIT).

The mandate for a "child-friendly" police station arisen out of Juvenile Justice Act 2015 outlines the steps to be taken for the protection of rights of children in need of care and protection as well as for the children in conflict with the law.

Child-friendly police station is an innovative concept in the direction of preventing juvenile crimes and children reforms.

This police station will work towards character building among children and will also work in changing the notion that police are not enemies but friends of people.

The child friendly police station houses books and toys and will also work towards character building among children.

WHO World Malaria Report 2020

The World Malaria Report (WMR) 2020 released by WHO, which gives the estimated cases for malaria across the world, based on mathematical projections, indicates that India has made considerable progress in reducing its malaria burden.

India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018. The Annual Parasitic Incidence (API) reduced by 27.6% in 2018 compared to 2017 and by 18.4% in 2019 as compared to 2018. India has sustained API less than one since year 2012.

India has also contributed to the largest drop in cases region-wide, from approximately 20 million to about 6 million. The percentage drop in the malaria cases was 71.8% and deaths was 73.9% between 2000 to 2019.

India achieved a reduction of 83.34% in malaria morbidity and 92% in malaria mortality between the year 2000 and 2019, thereby achieving Goal 6 of the Millennium Development Goals (50-75% decrease in case incidence between 2000 and 2019).

States of Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh disproportionately accounted for nearly 45.47 percent of malaria cases and 70.54 percent of falciparum Malaria cases in 2019. 64% of malaria deaths were also reported from these states.

WHO has initiated the High Burden to High Impact (HBHI) initiative in 11 high malaria burden countries, including India. Implementation of HBHI initiative has been started in four states i.e. West Bengal and Jharkhand, Chhattisgarh and Madhya Pradesh in July, 2019.

National Framework for Malaria Elimination (NFME) was launched in India in 2016 by the Ministry of Health and Family Welfare.

National Strategic Plan for Malaria Elimination (2017-22) was launched by the Health Ministry in July, 2017 which laid down strategies for the next five years.

Two homes for trans children in Bengaluru

India's first homes for transgender children in need of care and protection will soon be established in Bengaluru. Two government-run homes for transgender children will be established in Bengaluru Urban.

The Ministry of Women and Child Development gave its nod for the project last week.

Many transgender children in State-run children's homes for girls or boys were not comfortable.

It is essential that a home is established for transgender children as they face a lot of stigma and abuse.

Establishing a separate home and giving them attention and care at a young age will help address some of their concerns."

Top 10 Police Stations of country

The Ministry of Home Minister announced country's top 10 Police Stations on the basis of their performance and selected from a total of 16,671 police stations on certain parameters prescribed by the Government.

The Government of India selects best performing Police Stations across the country every year, to incentivize more effective functioning of police stations and bring healthy competition among them.

The list was in accordance with Prime Minister Narendra Modi's directions while addressing the 2015 Directors General of Police (DGP) Conference in Kutch, Gujarat.

Here are India's top 10 police stations for the year 2020:

1. Nongpok Sekmai (Thoubal, Manipur)
2. AWPS-Suramangalam (Salem, Tamil Nadu)
3. Kharsang (Changlang, Arunachal Pradesh)
4. Jhilmili (Surajpur, Chhattisgarh)
5. Sanguem (South Goa, Goa)
6. Kalighat (North and Middle Andaman, Andaman and Nicobar Islands)
7. Pakyong (East district, Sikkim)
8. Kanth (Moradabad, Uttar Pradesh)
9. Khanvel (Dadra and Nagar Haveli, Dadra and Nagar Haveli)
10. Jammikunta Town (Karimnagar, Telangana)

Farmer's protesting at Singhu Border

Farmers protesting at Singhu Border have called for a Bharat bandh on December 8, ahead of their fifth round of talks with the central government over farm bills.

Singhu border has become the focal point of the protests. The farmer unions have also called for more farmers to gather at Ghazipur and Tikri borders with UP and Haryana respectively in the days to come so they can build pressure on the Centre.

Singhu village is widely known as "Singhu Border" in Delhi.

Situated near National Highway No. 1 (GT Road), it is the first village in Delhi while entering from Haryana. Neighbouring villages are Singhola, Alipur, Kundli Sersa and Janti Kalan (the last three are in Haryana). It is situated near Narela in North-west of Delhi.

Rohingya Refugees of Bangladesh

Bangladesh has begun sending Rohingya refugees to Bhasan Char, the site where from the overcrowded camps at Cox's Bazar, is an island formed by sedimentation (char is Bengali for sediment) close to the coast.

It is estimated that more than 8 lakh Rohingya, who fled an army crackdown in Myanmar's Rakhine Province in 2016, live in the camps at Cox's Bazar in unhygienic conditions.

Bangladesh's plan is to move some 1 lakh refugees to Bhasan Char, 39 km from Naokhali on the mainland.

Prime Minister Sheikh Hasina said it would be a temporary measure. One of her ministers said those relocated to the island would not be allowed to leave from there unless they are going back to Myanmar. The decision has evoked international concern.

Bhasan Char is less an island and more mud flat, and is vulnerable to going under water from tides and flooding. Much of it is submerged during the monsoon.

Located near the mouth of the river Meghna where it flows into the Bay of Bengal, Bhasan Char surfaced only in 2006 from the sediment deposited by the river.

Located close to the much larger Sandwip, Bhasan Char spans 40 sq km.

Tharu tribals of Uttar Pradesh

The Uttar Pradesh government has recently embarked upon a scheme to take the unique culture of its ethnic Tharu tribe across the world. The intention is to put Tharu villages on the tourism map, and to create jobs and bring economic independence to the tribal population.

The community of Tharu people belongs to the Terai lowlands, amid the Shivaliks or lower Himalayas. Most of them are forest dwellers, and some practice agriculture.

The word tharu is believed to be derived from sthavir, meaning followers of Theravada Buddhism. Tharus worship Lord Shiva as Mahadev, and call their supreme being “Narayan”, who they believe is the provider of sunshine, rain, and harvests.

The Tharus live in both India and Nepal. In the Indian terai, they live mostly in Uttarakhand, Uttar Pradesh, and Bihar.

Members of the tribe survive on wheat, corn and vegetables grown close to their homes. A majority still lives off the forest.

They speak various dialects of Tharu, a language of the Indo-Aryan subgroup, and variants of Hindi, Urdu, and Awadhi. In central Nepal, they speak a variant of Bhojpuri, while in eastern Nepal, they speak a variant of Maithili.

Tharu women have stronger property rights than is allowed to women in mainstream North Indian Hindu custom.

Atmanirbhar Bharat Rojgar Yojana (ABRY)

The Union Cabinet has given its approval for Atmanirbhar Bharat RojgarYojana (ABRY) to boost employment in formal sector and incentivize creation of new employment opportunities during the Covid recovery phase under Atmanirbhar Bharat Package 3.0.

Government of India will provide subsidy for two years in respect of new employees engaged on or after 1st October, 2020 and upto 30th June, 2021.

Government of India will pay both 12% employees' contribution and 12% employers' contribution i.e. 24% of wages towards Employees' Provident Fund (EPF) in respect of new employees in establishments employing upto 1000 employees for two years.

Government of India will pay only employees' share of EPF contribution i.e. 12% of wages in respect of new employees in establishments employing more than 1000 employee for two years.

An employee drawing monthly wage of less than Rs. 15000/- who was not working in any establishment registered with the Employees' Provident Fund Organisation (EPFO) before 1st October, 2020 and did not have a Universal Account Number or EPF Member account number prior to 1stOctober 2020 will be eligible for the benefit.

Any EPF member possessing Universal Account Number (UAN) drawing monthly wage of less than Rs. 15000/- who made exit from employment during Covid pandemic from 01.03.2020 to 30.09.2020 and did not join employment in any EPF covered establishment up to 30.09.2020 will also be eligible to avail benefit.

Public Wi-Fi Networks by Public Data Office

Union Cabinet has given its approval for the proposal of DoT for setting up of Public Wi-Fi Networks by Public Data Office Aggregators (PDOAs) to provide public Wi-Fi service through Public Data Offices (PDOs) spread across length and breadth of the country to accelerate proliferation of Broadband Internet services through Public Wi-Fi network in the country.

This Public Wi-Fi Access Network Interface will be known as PM-WANI.

PM-WANI eco-system will be operated by different players as described herein under-

1. **Public Data Office (PDO):** It will establish, maintain, and operate only WANI compliant Wi-Fi Access Points and deliver broadband services to subscribers.
2. **Public Data Office Aggregator (PDOA):** It will be an aggregator of PDOs and perform the functions relating to Authorization and Accounting.
3. **App Provider:** It will develop an App to register users and discover WANI compliant Wi-Fi hotspots in the nearby area and display the same within the App for accessing the internet service.
4. **Central Registry:** It will maintain the details of App Providers, PDOAs, and PDOs. To begin with, the Central Registry will be maintained by C-DoT.

While no registration would be required for PDOs, PDOAs and App Providers will get themselves registered with DoT through online registration portal (SARALSANCHAR;) of DoT, without paying any registration fee.

There shall be no license fee for providing Broadband Internet through these public Wi-Fi networks.

The proposal will promote the growth of Public Wi-Fi Networks in the country and, in turn, will help in proliferation of Broadband Internet, enhancement of income and employment and empowerment of people.

School Bag Policy 2020

The Education Ministry recommended a slew of measures under the new school bag policy with the focus on the New Education Policy.

School bags should not be more than 10% of the body weight of students across classes I to X and there should be no homework till class II.

The new 'Policy on School Bag 2020' of the Union ministry of education also recommends that the weight of the bag needs to be monitored on a regular basis in schools.

They should be light-weight with two padded and adjustable straps that can squarely fit on both shoulders and no wheeled carriers should be allowed.

The policy even recommends that the weight of each textbook may come printed on them by the publishers.

The recommendations have been arrived based on various surveys and studies conducted by the National Council of Educational Research and Training (NCERT).

The 'Policy on School Bag 2020' made 11 recommendations on the weight of the bags, including adequate good quality mid-day meal and potable water to all the students so that they need not carry lunch boxes or water bottles.

The policy said there should be no bags in pre-primary. For classes I and II the bag weight range should be between 1.6 kg to 2.2 kg. Like-wise it should be 1.7 kg to 2.5 kg, 2 kg to 3 kg, 2.5 to 4 kg, 2.5 kg to 4.5 kg and 3.5 kg to 5 kg for classes III to V, classes VI and VII, class VIII, classes IX and X and classes XI and XII respectively.

Socio-Economic profiling of PM SVANidhi beneficiaries & their families

Housing and Urban Affairs Secretary Durga Shanker Mishra launched a programme of Socio-Economic Profiling of PM SVANidhi beneficiaries and their families, as an additional component of PM SVANidhi Scheme, in the presence of representatives of various Central Ministries and State officials.

Under this, a complete profile of each PM SVANidhi beneficiary and their family members will be prepared. Based on the profiled data, benefits of the various eligible Central Schemes would be extended to them for their holistic socio-economic upliftment.

The launch has been in the context that PM SVANidhi scheme should not be seen merely from the perspective of extending loans to street vendors but should also be seen as an instrument for outreach to street vendors and their families for their holistic development and socio-economic upliftment.

In the first phase, 125 cities have been selected for the programme. The profile will identify potential eligibility of beneficiaries and their family members for select Central Government schemes and facilitate linkages.

The Ministry of Housing and Urban Affairs is implementing Prime Minister Street Vendors AtmaNirbhar Nidhi, PM SVANidhi Scheme since 1st June this year with an objective to provide affordable working capital loan up to 10 thousand rupees to Street Vendors for facilitating resumption of their livelihoods adversely affected by the COVID-19 pandemic.

India Water Impact Summit 2020

India Water Impact Summit continues with many more experts from India and abroad sharing their insights on the topic of conservation and development. Experts from Norway joined their Indian counterparts to discuss 'Arth Ganga – River Conservation Synchronised Development' on 4th day of the summit.

India Water Impact 2020 is a five-day long summit, hosting experts and academicians from all over the world to discuss and debate issues related to water conservation, water security and river rejuvenation.

The event is co-organised by National Mission for Clean Ganga and Centre for Ganga River Basin Management and Studies.

During the event, Norwegian Institute of Bioeconomy Research signed MOU with cGanga (think-tank of NMCG) for development of sludge management framework in India.

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)

The Government of India and the New Development Bank (NDB) signed a loan agreement for lending \$1,000 million for 'supporting India's economic recovery from COVID-19' by supporting expenditures on rural infrastructure related to natural resource management (NRM) and rural employment generation under Government of India's Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).

The programme will support Government to enable economic recovery in the rural areas through Natural Resource Management (NRM) works.

The programme proposes creation of durable rural infrastructure assets relating to NRM and generation of employment opportunities for rural poor, especially migrant workers who have returned from urban areas and have lost their livelihoods due to the COVID-19 pandemic.

The \$1 billion loan from the NDB has a tenor of 30 years, including a 5-year grace period.

The NDB was established based on the Inter-Governmental agreement among the BRICS countries (Brazil, the Russian Federation, India, China and South Africa) signed in 2014.

The purpose of the Bank is to mobilise resources for infrastructure and sustainable development projects in BRICS and other emerging market economies and developing countries.

Prime Minister's Special Scholarship Scheme (PMSSS)

Extending support to J&K and Ladakh students, AICTE has decided to release the instalment of Rs. 20,000/- as maintenance allowance under Prime Minister's Special Scholarship Scheme (PMSSS). The decision has been taken to support & empower students for completing their online studies.

An Expert Group was constituted by the Prime Minister for enhancing employment opportunity among youths of J&K and Ladakh and formulate job opportunities in public and private sectors.

Subsequently, Prime Minister's Special Scholarship Scheme (PMSSS) is being implemented by the All India Council for Technical Education (AICTE), New Delhi.

The Scheme aims to build the capacities of the youths of J&K and Ladakh by Educating, Enabling and Empowering them to compete in the normal course.

Under the Scheme, the youths of J&K and Ladakh are supported by way of scholarship in two parts namely the academic fee and maintenance allowance.

India drops two ranks in Human Development Index

India dropped two ranks in the United Nations' Human Development Index this year, standing at 131 out of 189 countries. However, if the Index were adjusted to assess the planetary pressures caused by each nation's development, India would move up eight places in the ranking, according to the report.

However, if the Index were adjusted to assess the planetary pressures caused by each nation's development, India would move up eight places in the ranking, according to the report.

Norway topped the index, followed by Ireland and Switzerland. Hong Kong and Iceland complete the top five.

India, Bhutan, Bangladesh, Myanmar, Nepal, Cambodia, Kenya, and Pakistan were ranked under countries with medium human development with a rank in between 120 and 156 among the 189-countries.

In the BRICS grouping, Russia was 52 in the human development index, Brazil 84, and China 85.

India's gross national income (GNI) per capita on the basis of purchasing power parity (PPP), too, fell from \$6,829 in 2018 to \$6,681 in 2019, it said.

India's HDI value for 2019 is 0.645, which put the country in the medium human development category, positioning it at 131 out of 189 countries and territories.

Between 1990 and 2019, India's HDI value increased from 0.429 to 0.645, an increase of 50.3%.

Between 1990 and 2019, India's life expectancy at birth increased by 11.8 years, mean years of schooling increased by 3.5 years, and expected years of schooling increased by 4.5 years. India's GNI per capita increased by about 273.9% between 1990 and 2019.

HDI measures average achievement on three basic aspects of human development, life expectancy, education, and per capita income.

For the first time, the United Nations Development Programme introduced a new metric to reflect the impact caused by each country's per-capita carbon emissions and its material footprint, which measures the amount of fossil fuels, metals and other resources used to make the goods and services it consumes.

75th National Conference of Tuberculosis and Chest Diseases

Union Minister for Health and Family Welfare digitally addressed the Platinum Jubilee of the National Conference of Tuberculosis and Chest Diseases (NATCON).

The Tuberculosis Association of India (TAI) is one of the oldest and largest voluntary organizations having its affiliates all over the country.

It was set up in February, 1939 as a registered society by incorporating the King Emperor's Anti-Tuberculosis Fund and King George Thanks-giving (Anti-Tuberculosis) Fund.

Since the year 1939 the Association is organizing National Conference on Tuberculosis and Chest Diseases (NATCON), an annual conference wherein around 500 delegates from all over India assemble and exchange views on tuberculosis.

Human Freedom Index 2020

The Human Freedom Index presents the state of human freedom in the world based on a broad measure that encompasses personal, civil, and economic freedom in which placed India at the 111th spot out of 162 countries. India ranked 94 on the index in 2019.

India's scored 6.30 out of 10 in personal freedom and 6.56 in economic freedom. The country's overall human freedom score was 6.43.

New Zealand, Switzerland and Hong Kong bagged the first three spots.

The United States and United Kingdom are tied at the 17th spot on the index. War-torn Syria ranked the last on the list.

The index put China at 129 rank, Bangladesh at 139 and Pakistan at 140.

The index was published by American think tank Cato Institute and Fraser Institute in Canada. Fred McMahon and Ian Vásquez are the authors of the report.

It takes into account 76 indicators of personal, civil, and economic freedoms to rank 162 countries from 2008 to 2018.

The institutes noted that the world has seen a notable decline in personal freedom since 2008.

Matru Sahyogini Samitis Scheme

The MP government has issued an order for the appointment of committees led by mothers to ensure better monitoring of services delivered at Anganwadi or day-care centres across the State.

These Committees will comprise 10 mothers at each anganwadi representing the concerns of different sets of beneficiaries under the Integrated Child Development Services, or National Nutrition Mission — children between six months to three years, children between three years and six years, adolescent girls and pregnant women and lactating mothers.

These mothers will keep a watch on weekly ration distribution to beneficiaries as well as suggest nutritious and tasteful recipes for meals served to children at the centres, in a move that is aimed at strengthening community response to the problem of hunger and malnutrition in the State.

The committees will include mothers of beneficiary children as well as be represented by pregnant women and lactating mothers who are enrolled under the scheme.

The Committees will also include a woman panch, women active in the community and eager to volunteer their support to the scheme, teachers from the local school, and women heads of self-help groups (SHG).

JSA II: Catch the Rain Awareness Generation Campaign

National Water Mission under Ministry of Jal Shakti in collaboration with Nehru Yuva Kendra Sangathan under Ministry of Youth Affairs and Sports has launched the JSA II: Catch the Rain Awareness Generation Campaign in New Delhi.

Nehru Yuva Kendra Sangathan will undertake the campaign covering 623 districts across the nation from December 2020 to March 2021.

NWM has launched a campaign "Catch the rain" with tag line "catch the rain, where it falls, when it falls" in order to nudge all stake-holders to create Rain Water Harvesting Structures (RWHS) to store rain water as rains falling in the four/five months of monsoon are the only source of water for most parts of the country.

Shigella infection in Kerala's Kozhikode

Health officials in Kozhikode district of Kerala kicked in preventive measures last week after six cases of shigella infection and nearly two dozen suspected cases were detected.

Shigellosis, or shigella infection, is a contagious intestinal infection caused by a genus of bacteria known as shigella.

The bacteria is one of the prime pathogens responsible for causing diarrhoea, fluctuating between moderate and severe symptoms, especially in children in African and South Asian regions.

The bacteria, after entering the body through ingestion, attacks the epithelial lining of the colon resulting in inflammation of the cells and subsequently the destruction of the cells in severe cases.

The common symptoms are diarrhoea (often bloody and painful), stomach pain, fever, nausea and vomiting.

The infection is known to spread person-to-person when the bacteria is swallowed accidentally. Spread through contaminated food and water is the most common form of transmission across the world.

Prevention: It's important to wash hands with soap especially after dealing with a child's diaper and before preparing/eating food.

Post matric scholarship scheme for SC students

The Cabinet Committee on Economic Affairs (CCEA) has approved Rs. 59,048 Crore post matric scholarship scheme for more than four Crore Scheduled Castes students in 5 years.

The Central Government will spend Rs. 35,534 Crore for it which is 60 per cent and the balance 40 per cent will be spent by the State Governments.

It is estimated that 1.36 Crore such poorest students, who are currently not continuing their education beyond 10th standard would be brought into the higher education system in the next 5 years.

SEHAT health insurance scheme for Jammu-Kashmir

Prime Minister Narendra Modi is to launch the PMJAY - SEHAT scheme on December 26 for Jammu and Kashmir.

The scheme will provide free cashless treatment for the inhabitants of Jammu and Kashmir up to Rs 5 lakhs of health cover.

The beneficiaries of the scheme are to be provided with a card.

The Common Service Centres are to be effectively used in the implementation of the scheme.

The scheme will include all the Indoor Patient Department cases of Pradhan Mantri Jan Arogya Yojana.

The scheme will also use the help of Arogya Mitras to cover maximum number of people.

The Jammu and Kashmir Medical Supplies Corporation is to provide the medical supplies for the hospitals under the scheme.

Manipur's Zomi people push for BTC-like council

Ahead of Union Home Minister Amit Shah's go to Manipur on December 27, the State's Zomi ethnic group has renewed its demand for a self-administered zone on the strains of the Bodoland Territorial Council (BTC) in Assam.

The Zou people or Zomi are an indigenous community living along the frontier of India and Burma. They are a sub-group of the Zo people (Mizo-Kuki-Chin).

In India, they live with and are similar in language and habits to the Paite and the Simte peoples.

In India, the Zou are officially recognized as one of the thirty-three indigenous peoples within the state of Manipur, and are one of the Scheduled tribes.

According to the 2001 Census, the Zou/Jou population in Manipur is around 20,000, less than 3% of the population. The community is concentrated in Churachandpur and Chandel districts of Manipur.

Government launched e-Sampada for ease of living for citizens

The Directorate of Estates, Ministry of Housing and Urban Affairs dedicated to the nation, a new Web Portal and Mobile App, e-Sampada in line with the objectives of boosting transparency and accountability while ensuring ease of living for the citizens.

The new application provides a single window for all these services including allotment for over one lakh government residential accommodations, office space allotment to government organisations, booking of 1,176 holiday home rooms and venues like 5, Ashoka Road for social functions etc.

In its endeavour to provide 'One Nation, One System', the erstwhile four websites (gpra.nic.in, eawas.nic.in, estates.gov.in, holidayhomes.nic.in), and two Mobile Apps (m-Awas & m-Ashoka5) of the Directorate of Estates have been integrated into one.

Non-redressal of payment and overtime issues

Worker unrest following the non-redressal of payment and overtime issues at a new factory of Wistron Infocomm Manufacturing India Pvt Ltd, a subsidiary of Wistron Corporation, resulted in a riot at the Industrial plant at Narasapura in Kolar district.

Wistron Corporation is a major original design manufacturer (ODM) based in Taiwan.

It was the manufacturing arm of Acer Inc. before being spun off in 2000.

As an ODM (original design manufacturer) Wistron designs and manufactures products for other companies to sell under their own brand name.

Wistron focuses on ICT (information and communication technology) products, including notebook PCs, desktop PCs, servers, storage, LCD TVs, handheld devices, and devices and equipment for medical applications.

Umba Village in Ladakh has been electrified

Five Mohallas in Umba village in Ladakh received electricity connection recently. The village which is 60 KM away from district headquarter Kargil, is situated in toughest terrain at 13,000 thousand feet height and remains cut off for five months during winters.

Under the guidance of Kargil Renewable Energy Development Authority (KREDA), the Global Himalayan Expedition (GHE) in partnership with the CSR project of Royal Enfield has installed a 17.5kW Solar Electricity system in Umba.

The system covers Massar Yuljuk, Malikbar Thama, Mailkbar Skilma, Shilabar and Madd hamlets in Umba village and serve with a total of 97 Households and 7 Masjids with more than 500 LED Lights, along with street lighting for the community.

Sports

Target Olympic Podium Scheme (TOPS)

8 Track and Field Athletes were included in the core group of the Target Olympic Podium Scheme at the 50th MOC meeting held on November 26. 7 Track and Field Athletes were included in the TOPS developmental group.

The Target Olympic Podium Scheme is a flagship program of the Ministry of Youth Affairs and Sports which is an attempt to provide assistance to India's top athletes.

The Scheme looks to add a premium to the preparations of these athletes so that they can win Olympic medals in 2020 and 2024 Olympics.

Under the Scheme, the Department of Sports shall identify athletes who are potential medal winners in 2020 / 2024 Olympics.

The idea of the Scheme is to also keep an eye in the future and fund a Developmental Group of Athletes who are medal prospects for the Olympic Games in Paris in 2024 and Los Angeles Games in 2028.

The Mission Olympic Cell is a dedicated body created to assist the athletes who are selected under the TOP Scheme. The MOC is under the Chairmanship of the Director General, Sports Authority (DG, SAI).

Yogasana as Competitive Sport

The Ministry of AYUSH (Ayurveda Yoga and Naturopathy Unani Sidda Homoeopathy) and Ministry of Youth Affairs and Sports formally recognised yogasana as a competitive sport.

The origins of Yogasana competitions can be traced to the Indian Yoga tradition, where such competitions have been held for centuries.

Yogasana is an integral and important component of Yoga, which is psycho-physical in nature and popular across the globe for its efficacy in fitness and general wellness.

Competitions that will arise out of the recognition of Yogasana as a sport will enhance interest in Yoga among people around the globe.

Government of India is planning to include Yogasana as a Sport discipline in National Games, Khelo India and international sports events.

Four indigenous sports in Khelo India Youth Games 2021

The Sports Ministry has approved the inclusion of four indigenous Games to be a part of Khelo India Youth Games 2021, scheduled to take place in Haryana. The games include Gatka, Kalaripayattu, Thang-Ta and Mallakhamba.

Kalaripayattu has its origin from Kerala and has practitioners all over the world; Bollywood actor Vidyut Jammwal being one.

Mallakhamba, meanwhile, has been well-known across India and Madhya Pradesh and Maharashtra have been the hotspots of this sport.

Gatka originates from the State of Punjab and this traditional fighting style of the Nihang Sikh Warriors is used both as self-defense as well as a sport.

Thang-Ta, a Manipur marital art has passed into oblivion in the recent decades, but the sport will get national recognition again with the help of the Khelo India Youth Games 2021.

Security

India deployed MARCOS in Ladakh as part of tri-service operation

The government has deployed the Marine Commandos (MARCOS) of the Indian Navy in the Pangong lake area in eastern Ladakh. The deployment comes after the stationing of Indian Air Forces Garud commandos and Indian Army para special forces in the conflict zone for over more than past six months.

The Marine Commandos, abbreviated to MARCOS and officially called the Marine Commando Force (MCF), is the special forces unit of the Indian Navy that is responsible for conducting special operations.

MARCOS was founded in February 1987. MARCOS are capable of operating in all types of environments; at sea, in air and on land.

The force has gradually acquired experience and an international reputation for professionalism. The MARCOS regularly undertake specialised maritime operations in Jammu and Kashmir through the Jhelum River and Wular Lake.

Govt finally approves crucial Army post recommended after Doklam in 2017

The government has finally approved the creation of a crucial new Army post, the acute operational need for which was felt during the 73-day troop face-off at Doklam with China in 2017, amidst the ongoing military confrontation in eastern Ladakh.

In an order issued on December 2, the government has given its nod to create the position of a third Deputy Chief of Army, who will act as a “single-point advice” person to the Vice Chief of Army on operational issues.

The new Deputy Chief (Strategy) will head operations, intelligence, perspective and information warfare.

The Directorate General of Military Operations and the Directorate General of Military Intelligence, both headed by Lieutenant General-rank officers, will be under him.

Two new offices, for Perspective Planning and Strategic Communications, which will also be headed by director generals of Lt Gen-rank, will also come under the new Deputy Chief.

Current DGMO Lt Gen Paramjit Singh is likely to be appointed the first Deputy Chief (Strategy).

India-US MoU on Intellectual Property cooperation

India, and US have signed Memorandum of Understanding on Intellectual Property cooperation. Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry signed the MoU with US Patent and Trademark Office, Department of Commerce of the US.

Union Cabinet in its meeting on 19th February this year gave the approval for signing the MoU with USPTO in the field of IP Cooperation.

The MoU aims at increasing IP co-operation between the two countries.

It will facilitate exchange and dissemination of best practices, experiences and knowledge on IP among the public, and between and among the industry, universities, research and development organizations, and Small and Medium-sized Enterprises.

S-400 deal with Russia

The United States has imposed sanctions on Turkey over Ankara's acquisition of Russian S-400 air defence systems. Ankara acquired the Russian S-400 ground-to-air defenses in mid-2019 and says they pose no threat to NATO allies.

Washington has long been threatening sanctions on Turkey and had removed the country from an F-35 jet program last year.

The S-400 Triumf, (NATO calls it SA-21 Growler), is a mobile, surface-to-air missile system (SAM) designed by Russia.

It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed Terminal High Altitude Area Defense system (THAAD).

The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles within the range of 400km, at an altitude of up to 30km. The system can track 100 airborne targets and engage six of them simultaneously.

The S-400 Triumf air defence system integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and control centre. It is capable of firing three types of missiles to create a layered defence.

Defence Minister handed over DRDO systems to Armed Forces Chiefs

Defence Minister has handed over three indigenously developed Defence Research and Development Organisation (DRDO) systems Indian Maritime Situational Awareness System (IMSAS) to the Chief of Naval Staff, ASTRA Mk-I Missile to Air Chief Marshal and Border Surveillance System (BOSS) to Army, Navy and Air Force at a function held in DRDO Bhawan.

BOSS is An all-weather electronic surveillance system successfully designed and developed by Instruments Research & Development Establishment (IRDE), Dehradun. The system facilitates monitoring and surveillance by automatically detecting the intrusions in harsh high-altitude sub-zero temperature areas with remote operation capability.

The IMSAS is high performance intelligent software system that provide Global Maritime Situational Picture, Marine planning tools and Analytical capabilities to Indian Navy. Centre for Artificial Intelligence & Robotics (CAIR), Bengaluru and Indian Navy has jointly conceptualised and developed the product and the BEL, Bengaluru has implemented it.

The ASTRA Mk-I is the indigenously developed first Beyond Visual Range (BVR) Missile, which can be launched from Sukhoi-30, Light Combat Aircraft (LCA), Mig-29 and Mig-29K. it was developed by Defence Research & Development Laboratory (DRDL) Hyderabad.

Army to seek waiver from Defence Ministry to expedite helicopter deal

With the deal for Ka-226T utility helicopters with Russia not concluded five years after it was announced and its fleet of Cheetah and Chetak helicopters at the end of their service life, the Army is set to approach the Defence Ministry for a waiver to take the deal forward.

The Kamov Ka-226 is a small, twin-engine Russian utility helicopter.

The Ka-226 features an interchangeable mission pod, rather than a conventional cabin, allowing the use of various accommodation or equipment configurations.

Deal with India:

In 2015, India and Russia had concluded an Inter-Governmental Agreement (IGA) for at least 200 Ka-226T twin-engine utility helicopters estimated to cost over \$1 billion with 60 helicopters to be directly imported and remaining 140 manufactured locally.

They are to replace the ageing and obsolete Cheetah and Chetak fleet of the Army and the Air Force.

A joint venture India Russia Helicopters Ltd. (IRHL) has been set up between Hindustan Aeronautics Ltd. (HAL) and Russian Helicopters (RH) which will assemble the helicopters in India.

The Ka-226T deal with Russia has been stuck over indigenisation. So the Army is approaching the Ministry of Defence [MoD] for a waiver to conclude the deal.

Miscellaneous

Task force set up to prepare roadmap for imparting technical education in mother tongue

Education Minister Ramesh Pokhriyal 'Nishank' has set up a task force for preparing a roadmap on imparting technical education in Mother Tongue. The task force set up under the chairmanship of Secretary, Higher Education will take into consideration the suggestions made by various stakeholders and will submit a report in a month.

The decision was taken by the Minister at a high level meeting held yesterday on imparting technical education in Mother Tongue.

The Minister said that no language will be imposed on any student but enabling provisions should be made so that bright students are not deprived of Technical Education due to lack of knowledge of English language.

AYUSH Day Care Therapy Centres for Central Government employees

Ministry of Health and Family welfare has approved the proposal of Day Care Therapy Center facility under Ayurveda, Yoga, and Naturopathy systems for central government employees and pensioners.

Private Day Care Therapy centers of Ayurveda, Yoga and Naturopathy will be empanelled under Central Government Health Scheme (CGHS) shortly, in a manner similar to empanelment of Day Care Therapy Centers of conventional (Allopathy) medicine already provided by CGHS.

All CGHS beneficiaries, serving as well as pensioners will be able to avail the benefit of these centres.

Initial empanelment of Day Care Therapy Centres will be undertaken on pilot basis for Delhi and NCR for a period of one year and subsequently would be considered for other places.

The aim of the scheme is to improve the health and wellbeing, reduce health care expenditure and provide excellence in service delivery, efficiency, and comfort to the patients.

MDH Spices owner Dharampal Gulati passed away

MDH Spices owner Dharampal Gulati, fondly known as “Mahashayji”, died at the age of 98 years.

Dharampal Gulati (1923 – 2020), also known as Mahashay Dharampal Gulati, was an Indian businessman, and founder and CEO of MDH (Mahashian Di Hatti), an Indian spice company.

He was referred to as 'spice-king' in reference to his pioneering of ready-to-use ground spices.

He was awarded the Padma Bhushan, India's third highest civilian award, in 2019.

MDH is the second largest leader in the Indian market with 12% market share, following Everest Spices.

Honey marketed by prominent Indian brands failed a key test of purity

Honey marketed by prominent brands failed a key test of purity, the Centre for Science and Environment (CSE) has claimed, citing an investigation it conducted on various brands of Indian honey.

Current regulations specify around 18 parameters that honey must comply with for producers to label it 'pure honey'.

Most brands passed muster but when subjected to one test, called Nuclear Magnetic Resonance (NMR) that was done at a lab in Germany, only three brands passed: Saffola, Markfed Sohna and Nature's Nectar. There were often multiple samples tested for each brand.

Nuclear Magnetic Resonance (NMR) Test can ascertain the composition of a product at the molecular level)

The NMR test is not required by Indian law for honey that is being marketed locally but is needed for export.

Surgery as a part of Ayurveda

A government notification listed out specific surgical procedures that a postgraduate medical student of Ayurveda must be “practically trained to acquaint with, as well as to independently perform”.

The notification has invited sharp criticism from the Indian Medical Association, which questioned the competence of Ayurveda practitioners to carry out these procedures, and called the notification an attempt at “mixopathy”.

The IMA has planned nationwide protests on December 8 against this notification, and has threatened to withdraw all non-essential and non-Covid services on December 11.

Ayurveda practitioners take pride in the fact that their methods trace their origins to Sushruta, an ancient Indian sage and physician, whose comprehensive medical treatise Sushruta Samhita has also detailed accounts of surgical procedures and instruments.

There are two branches of surgery in Ayurveda — Shalya Tantra, which refers to general surgery, and Shalakyata Tantra which pertains to surgeries related to the eyes, ears, nose, throat and teeth.

IMA's objections:

IMA doctors insist that they are not opposed to the practitioners of the ancient system of medicine.

But the new notification gives the impression that the skills or training of the Ayurveda doctor in performing modern surgeries are the same as those practising modern medicine. This is misleading, and an “encroachment into the jurisdiction and competencies of modern medicine”.

AYUSH Export Promotion Council

The Ministry of Commerce and Industry and the Ministry of AYUSH have decided to work together to set up an Export Promotion Council to boost AYUSH exports. This decision was taken recently in a joint review of AYUSH trade and Industry by Piyush Goyal, Minister of Commerce and Industry and Shripad Naik, Minister of AYUSH.

It was also decided in the review that the entire AYUSH sector will work together to achieve price and quality competitiveness to boost AYUSH exports.

The review was held through video conference on 4th December 2020, which was attended by nearly 50 industry and trade leaders from the AYUSH Sector.

More than 2000 stake-holders of the AYUSH Sector also attended the e-event through live streaming on virtual platforms.

This decision was taken recently in a joint review of AYUSH trade and Industry by Minister of Commerce and Industry and Minister of AYUSH. The following are the action points that emerged from the meeting:

- Ministry of AYUSH and Ministry of Commerce and Industry will work together for establishing an AYUSH Export Promotion Council (AEPC). The proposed AEPC can be housed at Ministry of AYUSH.
- Standardisation of HS code for AYUSH will be expedited.
- Ministry of AYUSH will work in collaboration with Bureau of Indian standards to develop international standards for AYUSH products as well as services.
- AYUSH industry will work on ensuring quality and standards of AYUSH products as well as to become price-competitive.
- AYUSH will figure in the Brand India activities.

New height of Mount Everest

The Foreign Ministers of Nepal and China jointly certified the elevation of Mount Everest at 8,848.86 metres above sea level 86 cm higher than what was recognised since 1954.

The common declaration meant that the two countries have shed their long-standing difference in opinion about the mountain's height 29,017 feet (8,844 m) claimed by China and 29,028 ft (8,848 m) by Nepal. In feet, the new elevation is about 29,031 ft, or about 3 ft higher than Nepal's previous claim.

This was determined by the Survey of India in 1954, using instruments like theodolites and chains, with GPS still decades away.

The elevation of 8,848 m came to be accepted in all references worldwide — except by China. Mount Everest rises from the border between Nepal and China.

The devastating earthquake of April 2015 triggered a debate among scientists on whether it had affected the height of the mountain.

The Nepal's government subsequently declared that it would measure the mountain on its own, instead of continuing to follow the Survey of India findings of 1954.

New Parliament building bhoomi puja

Prime Minister Narendra Modi has laid the foundation stone of the new Parliament building in New Delhi at an event that was attended by leaders from various political parties, cabinet ministers and ambassadors of different countries.

The new parliament building will be the highlight of the ambitious ₹ 20,000 crore Central Vista project that PM Modi said will become "a symbol of a new and self-reliant India".

The four-story building will be triangular and its interiors will have three national symbols - the lotus, the peacock and the banyan tree - as its themes.

The triangular shape of the new parliament was a reference to "sacred geometries in various religions and cultures of India".

In the Lok Sabha chamber, the national bird (peacock) will be the theme. In the Rajya Sabha the national flower (lotus) and in the central lounge the national tree (banyan) will be the theme.

The parliament building alone will cost an estimated ₹ 971 crore and will, the government hopes, be ready before India's 75th Independence Day anniversary (in 2022). However, construction cannot yet begin as a legal challenge is pending in the Supreme Court.

To be constructed by Tata Projects Ltd, the new parliament building will overlook the old - which was built nearly 100 years ago at a cost of ₹ 83 lakh and will be turned into a museum.

The new Lok Sabha and Rajya Sabha halls will have increased seating capacities (888 and 384 seats, respectively) in anticipation of an expanded Parliament; a 25-year-old freeze on increasing state-wise distribution of seats ends in 2026.

In addition, seating in the Lok Sabha hall can be expanded to 1,272 to host joint sessions.

Dholpur stone will be the primary construction material (as it was with the current building) and red granite may replace red sandstone in some interior sections.

The building will be equipped with modern audio-visual communication systems. The new parliament will also be fully wheelchair- and disabled-access friendly.

Kerala detects rare malaria-causing parasite in soldier

Kerala has reported a rare species of the plasmodium parasite that causes malaria in people. Kerala 'Plasmodium ovale' has been detected in the state during the hospitalisation of a soldier, who had recently returned to Kannur from Sudan.

Malaria is caused by the bite of the female Anopheles mosquito, if the mosquito itself is infected with a malarial parasite.

There are five kinds of malarial parasites — Plasmodium falciparum, Plasmodium vivax (the commonest ones), Plasmodium malariae, Plasmodium ovale and Plasmodium knowlesi.

Plasmodium ovale:

P ovale rarely causes severe illness and there is no need for panic because of the case detected in Kerala.

P ovale is very similar to P vivax, which is not a killer form. Symptoms include fever for 48 hours, headache and nausea, and the treatment modality is the same as it is for a person infected with P vivax. P ovale is no more dangerous than getting a viral infection.

It is termed ovale as about 20% of the parasitised cells are oval in shape.

P ovale malaria is endemic to tropical Western Africa. P ovale is relatively unusual outside of Africa.

Ten universities to set up Kamdhenu Chairs

Ten universities from across the country have announced that they will set up Kamdhenu Chairs in their respective institutions of higher learning.

Over 500 vice-chancellors and officials of universities from across the country took part in an open house organized by Rashtriya Kamdhenu Aayog (RKA) to promote the idea of setting up 'Kamdhenu Chairs' in universities.

Now the Government has started to explore the Potentials of Cows and Panchgavya.

There is need to bring forth the Science related to Indigenous Cows and our Education system should provide platform as well as push in Research on benefits mentioned about Cows with modern scientific and process oriented approach.

Among other objectives of setting up the chairs, RKA has proposed setting up of certificate and diploma courses on cow-based entrepreneurship and sensitizing students about the scientific, economic, environmental and spiritual importance and impact of cow.

Recognition scheme for hygiene rating audit agencies

The Quality Council of India (QCI) has come out with a scheme for approval of hygiene rating audit agencies with an aim to help consumers take informed decisions regarding food outlets where they prefer to eat by encouraging businesses to improve hygiene and safety standards.

The recognised agency will verify compliance with food hygiene and safety procedures laid down by the Food Safety and Standards Authority of India (FSSAI).

FSSAI's initiative of 'Food Hygiene Rating Scheme' is a certification system for food businesses supplying food directly to consumers, either on or off premise.

The food establishments are rated based on food hygiene and safety conditions observed at the time of audit.

The hygiene rating will be in the form of smileys (1 up to 5) and the certificate should be displayed prominently in the consumer facing area.

The scheme aims to allow consumers to make informed choices/decisions pertaining to the food outlets where they eat by encouraging food businesses to improve their hygiene and safety standards.

India is on US watchlist for 'currency manipulation'

The United States has once again included India in its monitoring list of countries with potentially "questionable foreign exchange policies" and "currency manipulation".

This comes a year after India was removed from the watchlist in the US Treasury Department's semi-annual foreign-exchange report to the US Congress.

The term 'currency manipulator' is a label given by the US government to countries it feels are engaging in "unfair currency practices" by deliberately devaluing their currency against the dollar.

The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others. This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.

An economy meeting two of the three criteria in the Trade Facilitation and Trade Enforcement Act of 2015 is placed on the Monitoring List. This includes:

- A “significant” bilateral trade surplus with the US — one that is at least \$20 billion over a 12-month period.
- A material current account surplus equivalent to at least 2 percent of gross domestic product (GDP) over a 12-month period.
- “Persistent”, one-sided intervention — when net purchases of foreign currency totalling at least 2 percent of the country’s GDP over a 12 month period are conducted repeatedly, in at least six out of 12 months.

Once on the Monitoring List, an economy will remain there for at least two consecutive reports “to help ensure that any improvement in performance versus the criteria is durable and is not due to temporary factors.

How dangerous is ammonia?

Several took ill in a major ammonia gas leakage at the Indian Farmers Fertilizer Cooperative Limited (IFFCO) unit at Prayagraj. The victims had come in contact with the concentrated form of ammonia gas that leaked heavily from the plant.

A tri-hydroid of nitrogen (NH_3), ammonia is a building block for ammonium nitrate (NH_4NO_3) that is used in agriculture as a high-nitrogen fertiliser.

Ammonia is stored for industrial use in liquid form under high pressure or in gaseous form at low temperature.

Ammonia, which is highly soluble in water, is found in soil, air, and water; it is naturally present in the body and secreted by the kidneys to neutralise excess acid. However, it is highly diluted when in the environment and does not affect the human body to a noticeable level.

Ammonia is critical in the manufacturing of fertilizers, and is one of the largest-volume synthetic chemicals produced in the world. More than 80 per cent of ammonia made is consumed in the manufacturing of fertilizer, and most of the remainder goes into the production of formaldehyde.

FASTag to be mandatory for vehicles from January 1

Union Minister for Road Transport, Highway announced that FASTag is being made mandatory for all vehicles in the country from 1st of January, 2021. The FASTags were launched in the year 2016.

Union Ministry of Road Transport and Highways had issued a notification in November this year making FASTag mandatory by 1st of January 2021 in old vehicles also sold before 1st December, 2017 through amendments in CMVR, 1989.

As per Central Motor Vehicles Rules, 1989, since 1st December 2017, the FASTag had been made mandatory for all registration of new four wheeled Vehicles and is being supplied by the Vehicle Manufacturer or their dealers.

It had further been mandated that the renewal of fitness certificate will be done only after the fitment of FASTag for the Transport Vehicles.

For National Permit Vehicles, the fitment of FASTag was mandated since 1st October 2019.

It has also been mandated that a valid FASTag is mandatory while getting a new 3rd Party Insurance through an amendment in FORM 51 (certificate of Insurance), wherein the details of FASTag ID shall be captured. This shall be applicable w.e.f. 1 April 2021.

This would be a major step for ensuring that the payment of fees be 100% at Toll Plazas through the Electronic Means only and that the vehicles pass seamlessly through the Fee Plazas. There would be no waiting time at the Plazas and would save fuel.

Innovation challenge for portable water testing devices

The Jal Jeevan Mission and the Department of Promotion of Industry and Internal Trade have launched an innovation challenge to develop portable devices for water testing.

Water quality testing is one of the priority areas under Jal Jeevan Mission, the flagship programme of Union Government.

The aim of the innovation challenge is to ensure that water sources are tested at various locations, at different levels; thereby, helping the policy framers to design programs which address the water contamination issues.

Jal Jeevan Mission is under implementation in partnership with the States to enable every rural home to have tap water connection by 2024.

The Uniform Drinking Water Quality Protocol, 2019 has specified some important parameters to be monitored for assuring portability of drinking water as per BIS IS 10500:2012 and subsequent amendments.

A K Bhalla released progress report of e-HRMS

Home Secretary and Secretary DoPT, A K Bhalla released the progress report of e-HRMS (Electronic-Human Resource Management System).

e-HRMS was launched by Minister for Personnel, Public Grievances and Pensions on 25th December, 2017 and it had 25 applications of 5 modules of the system.

e-HRMS is also known as Manav Sampada (appropriately name for Human Capital, being the most important factor for the success of any Government, Organisation or Company).

It is a standard ICT solution for the Government sector, addressing maximum requirements of State Governments related to personnel management.

It further assists the top management in knowing the exact number of employees, the retirement pattern, additional requirements in coming year for planning recruitments, funds required for retiring employees, re-allocation of surplus employees to other Departments/organisations within the State, ACR/Property Return status, seniority lists etc.

India's first driverless metro in Delhi

India's urban mass rapid transit marked a milestone on December 28, 2020 after Prime Minister Narendra Modi flagged off the country's first 'driverless' metro in Delhi.

The first 'driverless' train will roll out on the 38-km Line 8 or Magenta Line of the Delhi Metro, which has a 390-km-long network spread across the national capital and adjoining cities such as Noida, Gurugram, Faridabad, Ghaziabad and Bahadurgarh.

The Centre has also notified changes in the Metro Railways General Rules, 2020 as the previous norms did not allow driverless services.

The trials of DMRC's new 'driverless trains' were started in December 2017, along the 20-km stretch on Pink Line.

The trials were to test the automation of the new metro trains, that were equipped with Unattended Train Operations (UTO) and CBTC (Communication Based Train Control) signalling systems.

Amit Shah launched several development projects in Manipur

The Union Home Minister Shri Amit Shah inaugurated several development projects in Manipur. He inaugurated the e-office and Thoubal Multipurpose Project (Thoubal Dam) in Imphal through virtual mode.

He inaugurated the e-office and Thoubal Multipurpose Project (Thoubal Dam) in Imphal through virtual mode which will irrigate 35,104 hectares.

He also laid the foundation stone of projects, including the Churachandpur Medical College, IT-SEZ at Mantripukhri, Manipur Bhawan in New Delhi and the Integrated Command and Control Center at Imphal.

Shri Shah said earlier projects were abandoned after performing ground-breaking ceremonies and work is now being done under the leadership of Modi ji, to inaugurate all projects whose foundation stones were laid by previous governments.

Centre launched Ayushman Bharat PM-JAY SEHAT

Central government of India has launched Ayushman Bharat PM-JAY SEHAT to extend coverage to all residents of Jammu & Kashmir.

The scheme will provide a financial cover of Rs. 5 lakh per family for in-patient care and surgical procedures.

Getting free treatment of up to 5 lakh rupees under this scheme would improve the ease of living. Right now about 6 lakh families of the state are getting the benefit of Ayushman Bharat Scheme. All 21 lakh families will get the same benefit after the SEHAT scheme.

Another benefit of this scheme would be that treatment is not limited to government and private hospitals in Jammu and Kashmir only. Rather, treatment can be availed from thousands of hospitals empanelled under this scheme in the country.

Amit Shah distributed financial grants to 8,000 Namghars

Union home minister Amit Shah distributed financial grants to 8,000 Namghars (traditional Vaisnavite monasteries) in Assam besides laying the foundation stone of the new medical college in North Guwahati.

Namghars (literally meaning Prayer House) are places for congregational worship associated with the entire Assamese community and the Ekasarana sect of Hinduism, in particular, that is native to Assam.

Besides forming the primary structure used for worship, they also function as meeting houses for congregations, as well as theatres for dramatic performances (bhaona).

The Namghar, also called the kirtanghar, is also the central structure in the Sattras (monasteries of the Ekasarana religion) where the other buildings are positioned around it.

Namghars were introduced in Assam by the Vaishnavite saints Damodaradeva, Madhavadeva and Sankaradeva for Assamese people where they can culture and practice naam (devotional songs) and Bhakti of God (devotion).

IMD advised people in north India not to drink alcohol during the cold wave

The Indian Meteorological Department (IMD) issued a rather unusual advisory predicting a severe cold wave in the national capital and several other parts of North India. In an impact-based advisory, the IMD urged residents of India's northernmost states to protect themselves from the biting cold by avoiding alcohol.

To avoid an adverse reaction to the cold wave, the IMD shared a list of recommendations, one of which was avoiding alcohol as it "reduces your body temperature".

According to Health Experts, while alcohol may make you feel warmer, it actually reduces your body temperature and compromises your immunity if you then venture out into the cold.

Alcohol can decrease the core temperature of the body and increase the risk of hypothermia during cold exposure.

Alcohol is a vasodilator, which means that it causes blood vessels to relax and dilate or open. So after consuming alcohol, the volume of blood brought to the skin's surface increases, making you feel warmer as a result.

PM Modi dedicates to nation section of Eastern Dedicated Freight Corridor in UP

Prime Minister Narendra Modi dedicated to the nation the ambitious New Bhaupur-New Khurja section of Eastern Dedicated Freight Corridor in Uttar Pradesh through video conference.

The 351-kilometre New Bhaupur- New Khurja section of EDFC is built at a cost of Rs. 5,750 crore and most of its part passes through Uttar Pradesh.

The section will decongest the existing Kanpur-Delhi main line and will enable Indian Railways to run faster trains.

The agro products of Uttar Pradesh will now reach at a faster speed to other parts of the country and it will increase the export capacity of the state which is a landlocked area and doesn't have any port to send the items abroad.

The Prime Minister also inaugurated Eastern Dedicated Freight Corridor's Operation Control Centre at Prayagraj. This will act as the command centre for the entire route length of the EDFC.

Talking about the Operation Control Centre at Prayagraj Prime Minister said that it is equipped with state of the art facilities which are indigenously designed.

7th National Summit on Good, Replicable Practices & Innovations

The Union Minister of Health and Family Welfare digitally inaugurated the 7th National Summit on Good, Replicable Practices & Innovations through a video conference.

Ministry of Health & Family Welfare holds the National Summit on Good, Replicable Practices and Innovations in Public Healthcare Systems in India.

While the first one was held in 2013 at Srinagar to recognize, showcase and document various best practices and innovations in public healthcare system, the last was held at Gandhinagar, Gujarat.

Union Minister of Health also launched New Health Management Information System (HMIS) along with the Operational Guidelines for TB services at AB-HWCs and the Operational Guidelines 2020 on Active Case Detection and Regular Surveillance for Leprosy.

Prime Minister Narendra Modi ji has set a bold target of a TB-free India by 2025, five years ahead of the SDG targets of 2030.

Best of Luck for Your Exams!