

## **EVERYDAY CURRENT AFFAIRS – OCTOBER 4, 2020**

### **TAMIL NADU**

- **The Tamil Nadu government - has announced an incentive of ₹70 and ₹50 per quintal of ordinary and fine varieties of paddy procured at the direct procurement centres (DPCs) of the Civil Supplies Corporation**
  - ✓ This will be provided in addition to the minimum support price (MSP) of the Centre
  - ✓ The centre has announced an MSP (Minimum Support Price) of ₹1,888 and ₹1,868 per quintal for ordinary and fine varieties.
  - ✓ With the new announcement, farmers will totally get Rs 1,958 for fine variety and Rs 1,918 for ordinary variety.
  - ✓ The new price system came into effect on October 3
  - ✓ This was announced by the state food minister R Kamaraj.
  - ✓ A total of 527 DPCs were opened across the state, which include 227 in Thanjavur, 189 in Tiruvarur, 126 in Nagapattinam and 43 in Cuddalore this kharif season.
  - ✓ According to the minister, the state created history by procuring 32.41 lakh tonnes of paddy last year from 2,135 DPCs.
  - ✓ An amount of ₹6,120 crore, including ₹205 crore as incentive, was credited to the bank accounts of 5.85 lakh farmers within 24 hours.
  - ✓ The DPCs were opened by the state government way back in 1972, when only around 100 to 200 bags arrive to DPCs for sale, as harvesting was done manually by labourers then.
  - ✓ Tarpaulins have been given to all the centres to safeguard paddy bags from rain
  - ✓ The minister visited various DPCs in Nagapattinam and Tiruvarur districts on the day.
  
- **On October 3, Tamil Nadu – reported 5,622 new cases of Covid-19, taking the state’s cumulative case tally to 6,14,507**
  - ✓ As many as 5,596 persons were discharged after treatment, taking the total number of persons recovered so far to 5,58,534.

**Keeping count** | A tracker, across parameters, on how the pandemic has affected the State so far

	Until Sept. 26	Sept. 27	Sept. 28	Sept. 29	Sept. 30	Oct.1	Oct.2	Oct.3	Total
Cases reported	5,75,017	5,791	5,589	5,546	5,659	5,688	5,595	5,622	<b>6,14,507</b>
Recovered/ discharged	5,19,448	5,706	5,554	5,501	5,610	5,516	5,603	5,596	<b>5,58,534</b>
Deceased	9,233	80	70	70	67	66	67	65	<b>9,718</b>

Persons tested		
		73,04,809
		73,90,255

Active cases	Recoveries	Deaths
46,294	5,52,938	9,653
46,255	5,58,534	9,718

\*Changes in 24 hours    As on Oct. 2, 6 p.m.    As on Oct. 3, 6 p.m.

Districts with maximum cases	
Chennai	1,71,415
Chengalpattu	36,745
Coimbatore	33,611
Tiruvallur	33,104
Kancheepuram	22,417

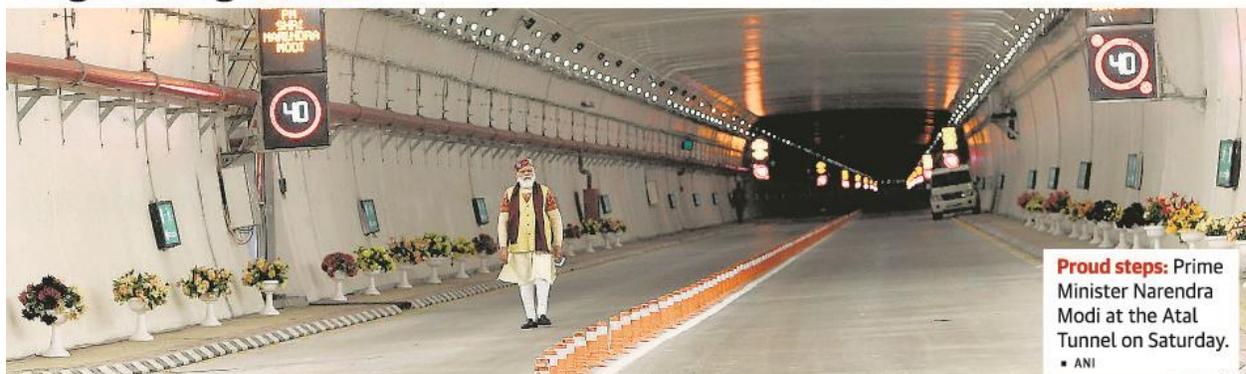
- ✓ The number of active cases stood at 46,255 in various healthcare facilities
- ✓ A total of 65 persons died on the day, taking the State's death toll to 9,718.
- ✓ Chennai reported the maximum of 1,364 fresh cases on the day
- ✓ There were 486 new cases in Coimbatore, while Chengalpattu and Salem recorded 395 and 351 cases respectively.
- ✓ Further, Tiruvallur reported 290 cases, while Thanjavur continued to witness a surge, with 244 new infections.
- ✓ A total of 87,311 samples were tested on the day, taking the total number of samples tested till now to 76,13,999

## NATIONAL

- **On October 3, Prime Minister Narendra Modi - inaugurated the Atal Tunnel under the Rohtang pass at an altitude of above 3,000 metre in Himachal Pradesh**
- ✓ The 9.02 km-long-tunnel, built by the Border Roads Organisation (BRO), is the world's longest highway tunnel

### Engineering marvel

A look at some of the features of the longest highway tunnel in the world



**Proud steps:** Prime Minister Narendra Modi at the Atal Tunnel on Saturday.  
• ANI

- Length: **9.02 km**
- Shape: **Horse shoe**

Located below the Rohtang Pass, it connects Manali to Lahaul-Spiti Valley

- Distance reduced: **46 km**
- Time saved: **5 hours**
- Altitude: **3,000 m above mean sea level**
- Single-tube, double lane tunnel
- Maximum vehicle speed: **80 km/hr**

- Telephone facility: **Every 150 m**
- Fire hydrant: **Every 60 m**
- Emergency exits: **Every 500 m**

- Turning cavern: **Every 2.2 km**
- Air quality monitor: **Every 1 km**
- Automatic incident detection system with CCTV cameras: **Every 250 m**

**2002**  
Atal Bihari Vajpayee laid the foundation stone for the approach road to the tunnel

- ✓ The new tunnel will cut travel time between Manali and Leh by 4 to 5 hours and distance by 46 km
  - ✓ It connects Manali to the Lahaul-Spiti Valley
  - ✓ The traffic between Manali and Leh would be usually shut down during the winter between November and April, when heavy snowfall would result in the closure of the Rohtang pass route
  - ✓ The all-weather tunnel will serve as a big boost to the local economy by helping develop tourism, winter sports and horticulture in the region
  - ✓ The tunnel, also significant from the military logistics viewpoint, will provide better connectivity to the armed forces in reaching Ladakh.
  - ✓ The horse-shoe shaped, single tube double lane tunnel with a roadway of 8 metre, is built through the Pir Panjal range of Himalayas
  - ✓ Its South Portal is located at a distance of 25 km from Manali at an altitude of 3,060 metre, while the North Portal is located near village Teling at Sissu in Lahaul Valley at an altitude of 3,071 metre.
  - ✓ The Steel Authority of India (SAIL) has supplied 9,000 tonnes of steel required to build the tunnel
  - ✓ The tunnel was built at a cost of Rs 3,300 crores
  - ✓ It includes an emergency escape tunnel with emergency exit at every 500 metres
  - ✓ The tunnel was conceived by former Prime Minister Atal Bihari Vajpayee who laid the foundation stone for the approach road for this tunnel in 2002
- **India – to have its first animal overpasses on the Delhi-Mumbai Expressway, that is under construction.**
- ✓ The five overpasses will be built on the lines of “animal bridges” in Netherlands for safe passage of wildlife
  - ✓ They have been planned to ensure there are no disturbances caused to the Ranthambore Wildlife Corridor connecting Ranthambhore and Mukundra (Darah) wildlife sanctuaries in Rajasthan.
  - ✓ The passages will be developed as part of a forest corridor with trees so that the natural ‘environment’ remains intact for the animals
  - ✓ They will be set up at every 500 metres interval so as to avoid any chance of conflict
  - ✓ As per the plan, there will be five underground stretches with combined length of 2.5 km.
  - ✓ Also, a boundary wall of 8 metre with noise barriers will also be installed for the safety of animals in the wildlife section.
  - ✓ The work on the ‘animal bridge’ would start in the next two months and would take two years to complete.
  - ✓ The first such wildlife crossings were constructed in France during the 1950s.
- **On October 3, India – recorded 75,186 fresh Covid-19 cases and 939 deaths across the country**

- ✓ This takes the total Covid-19 caseload past the 6.5 million mark to 65,46,410
- ✓ Maharashtra reported 14,348 fresh infections on the day, while cases in Karnataka dropped below the 10,000 mark to 9,886.
- ✓ In Kerala, which has seen a major surge in the pandemic in recent days, 7,834 persons were reported positive for the viral infection
- ✓ Andhra Pradesh added 6,224 infections and 41 deaths on the day
  
- **Union Minister for Coal, Mines and Parliamentary Affairs, Pralhad Joshi - directed the Mineral Exploration Corporation Limited (MECL) to start exploring the Kolar gold fields (KGF)**
- ✓ With this, the Bharat Gold Mines Limited (BGML) in the Kolar Gold Field (KGF) is again hopeful for its revival in last 16 years.
- ✓ The Kolar Gold mine fields are located at around 100 km from Bengaluru.
- ✓ The Geological Survey of India (GSI) has declared the pyroclastic and pillow lava at Kolar Gold Fields as a National Geological Monument in order to protect, maintain and encourage the geo-tourism.
- ✓ The mining operations on the fields were stopped by the Union Government on February 28, 2001 because of environmental and economic reasons, following the fall of gold prices
- ✓ One among India's first, the power generation units in Shivanasamudra, Mandya districts were built to support the mining operations in 1889.
- ✓ The Kolar Gold mines, one of the deepest mines of the world, were nationalised in 1956.
- ✓ As per the World Gold Council, India has 10th largest gold reserves in the world with capacity of 600 tonnes.
  - ✓ Karnataka is the largest producer of gold in India, following by Andhra Pradesh
  - ✓ Ramagiri and Anantpur are important gold fields in Andhra Pradesh.
- ✓ US has the highest gold reserves in the world having capacity of 8,133 tonnes, followed by Germany with a capacity of 3,366 tonnes.
- ✓ Further, International Monetary Fund is holding 2,451 tonnes of gold.
- ✓ Mponeng Gold Mines of South Africa is the deepest gold mine of the world
- ✓ China is top gold producing nation, producing around 420 million tonnes (MT) of gold annually, that accounts for 11% of global mine production.
- ✓ Australia is at second place with a production capacity of 330 MT, while Russia ranks third with a capacity of 310 million tonnes.
- ✓ Russia took lead over Australia recently.
- ✓ Currently, India is the largest importer of gold in the world while, China is the world largest exporter of gold.
  
- **Google India - announced the launch of its nationwide campaign "Make Small Strong" recently**



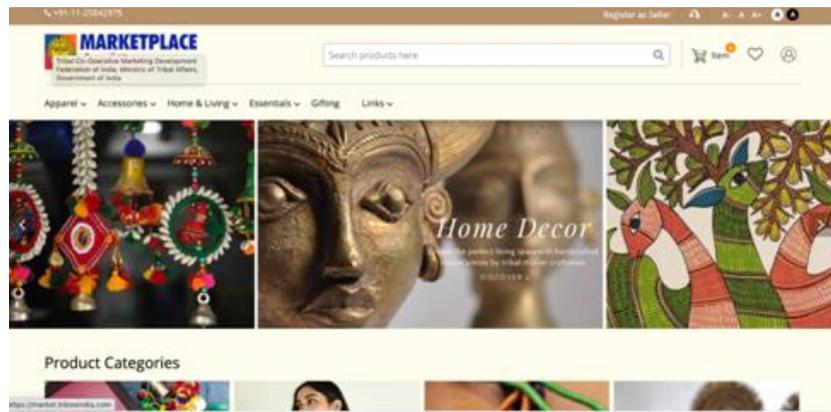
- ✓ The campaign was launched in order to help support small and local businesses and to boost demand for them through customer participation.
- ✓ The new digital initiative is based on feedback from Small and Medium sized Businesses (SMBs).
- ✓ It was announced by Google in collaboration with Jagran Prakashan Limited.
- ✓ As per the analysis of Google, only 50% of the SMBs are engaged with customers through digital channels.
- ✓ Hence, the initiative has been launched to ensure speedy digitization of SMBs to boost demand and business recovery
- ✓ Google India also announced new partnerships with Zoho, Instamojo, Dunzo and Swiggy to support the SMBs
  - ✓ As per the association, Zoho will offer a free three-month subscription for three of its services, Zoho Sites, Zoho Inventory and Zoho Commerce for the SMBs until March 31, 2021.
  - ✓ Further, Instamojo will offer a six-month free subscription for its 'Premium Online Store Solution' to the industries.
  - ✓ Also, Dunzo's 24x7 Merchant support will be provided for free with zero sign-up fees and instant registration to SMBs.
  - ✓ Similarly, Swiggy offered 7-day fast-track on-boarding process for any restaurant to come on its platform.
- ✓ Further, Google will also launch a new television show called Namaste Digital in partnership with Doordarshan.
  - ✓ It will be a mass media program for SMBs to educate about the Internet and help them grow their business.
- ✓ Google is also working with FICCI on an industry-wide digital skilling.
- ✓ It has trained 1.2 million individuals, so far.
- **Prime Minister Narendra Modi – dedicated the country's first museum on Ganga named "Ganga Avlokan" located at the Chandi Ghat, Haridwar to the Nation recently**
  - ✓ During the occasion, the PM also inaugurated six 'Namami Gange' projects mostly relating to the sewage treatment in Uttarakhand
  - ✓ The Prime Minister had also launched a book "Rowing down the Ganges" on the occasion.

- ✓ It has been co-published by National Mission for Clean Ganga and Wildlife Institute of India.
  - ✓ The Prime Minister also released a logo of Jal Jeevan Mission, 'Margdarshika' operating guidelines for Gram Panchayats and Paani Samitis to implement Jal Jeevan Mission, during the occasion.
  - ✓ The Ganga Avalokan Museum was developed to showcase the biodiversity, rejuvenation and culture in Ganga river.
  - ✓ The Namami Gange programme was launched with an objective to achieve Effective Abatement of Pollution and Conservation and Rejuvenation of National River Ganga.
  - ✓ The mission is operated under Ministry of Jal Shakti and implemented by the National Mission for Clean Ganga.
  - ✓ Recently, the World Bank approved a loan of Rs 3,000 crores for 5 years under the project.
  - ✓ Under the mission, 313 projects have been cleared so far at a cost of Rs 25,000 crores.
- **The Union Minister of Science and Technology Dr Harsh Vardhan - launched the Council of Scientific and Industrial Research Technologies for rural development recently.**



- ✓ It is a joint initiative of IIT-Delhi, CSIR, Unnat Bharat Abhiyan and Vijnana Bharti (VIBHA).
- ✓ The initiative was launched on the occasion of 40th foundation day of CSIR-National Institute of Science, Technology and Development Studies (NISTAD)
- ✓ On the occasion, the Union Minister launched three different technologies to the nations, which included the manufacturing of ginger paste, improved beehive quality alongwith hygienic honey extraction and dehumidified drier for food and agri products and agricultural waste
- ✓ These technologies were developed by Central Food Technological Research Institute, Mysore; CSIR Institute of Himalayan Bioresource Technology and National Institute for Inter disciplinary Science and Technology (NIIST), Thiruvananthapuram respectively

- ✓ In a related government scheme, Unnat Bharat Abhyan programme was launched by the Ministry of Education.
  - ✓ It aims to link the higher education institutions with at least five villages in the rural areas, so as to contribute to their social and economic betterment
  - ✓ The programme has been launched with an objective to engage students and faculties of higher education institutions to identify problems in rural areas and to develop sustainable solutions for it.
  - ✓ The Unnat Bharat Abhiyan 1.0 was launched in 2018.
  - ✓ Currently, Government of India is implementing Unnat Bharat Abhiyan 2.0.
  - ✓ The programme has 45 regional coordinating institutions and 2,614 participating institutions, benefiting around 13,760 villages till date.
- **The Ministry of Housing and Urban Affairs - celebrated six years of Swachh Bharat Mission on the occasion of birth anniversary of Mahatma Gandhi on October 2, 2020**
- ✓ During the event, a GIS portal showcasing the waste management system was also launched.
  - ✓ The Swachh Bharat mission was launched from Rajghat on October 2, 2014 to achieve a Cleaner India by October 2, 2019, the 150th birth anniversary of Mahatma Gandhi.
  - ✓ A total of 4,327 urban local bodies have been declared 'Open Defecation Free' under the Urban component of Swachh Bharat Mission.
  - ✓ Further, a total of 66 lakh individual household toilets and over 6 lakh community or public toilets were constructed under the mission.
  - ✓ Around 97% of wards received door-to-door collection of waste under Sewage Waste Management in last 6 years.
  - ✓ With the launch of mission, now 67% of total waste generated are being processed as against just 14% in 2014.
  - ✓ The Ministry of housing and urban affairs rates the cities based on their performances
  - ✓ Indore, Ambikapur, Navi Mumbai, Surat, Rajkot and Mysore have been rated as 5-star cities for their best performance
- **Arjun Munda, Union Minister for Tribal Affairs - launched India's largest handicraft and organic products marketplace, Tribes India E-Marketplace ([market.tribesindia.com](http://market.tribesindia.com)) on the occasion of Gandhi Jayanti through video conference.**
- ✓ This is an initiative of The Tribal Cooperative Marketing Development Federation of India (TRIFED) under Ministry of Tribal Affairs.
  - ✓ It will showcase the produce and handicrafts of tribal enterprises from across the country.
  - ✓ It will also help them market their produce or products directly on the website.



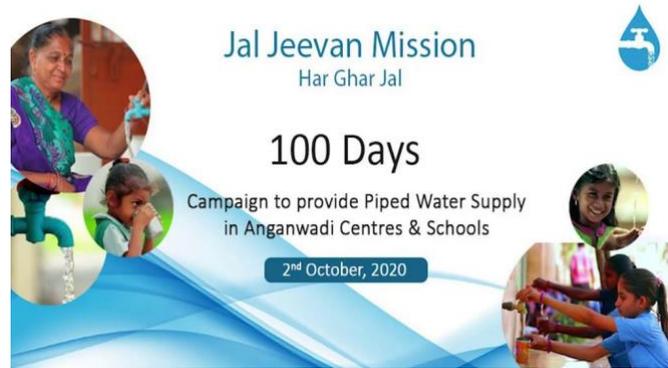
- ✓ On the occasion, the Minister also launched several other TRIFED initiatives that aims to support the tribal community
- ✓ Tribes India e-Marketplace is an initiative through which TRIFED aims to include 5 lakh tribal artisans and manufacturers for sourcing various handicraft, handloom, natural food products across the country
- ✓ The E-Marketplace will help in bringing large number of Tribal Artisans at a common place to avail benefits of online trade.
  - ✓ It will facilitate B2B trade connecting tribals, who are dependent on Minor Forest Produces and Medicinal plants, to the large buyers or manufacturers.
- ✓ Tribal Cooperative Marketing Development Federation of India (TRIFED) was established in 1987.
- ✓ TRIFED is a facilitator and service provider for tribes which helps to sell their product such as metal craft, tribal textiles, pottery, tribal paintings and pottery by providing a common marketplace
- ✓ Functioning under the Ministry of Tribal affairs, it has a network of 13 regional offices and head office in New Delhi
- **Prime Minister Narendra Modi - will inaugurate a global virtual summit on Artificial Intelligence (AI) named RAISE 2020 – ‘Responsible AI for Social Empowerment 2020’ on October 5.**
  - ✓ The summit is scheduled to be held from October 5 to 9, 2020.
  - ✓ It is being organised by the ministry of electronics and information technology (MeitY) and NITI Aayog
  - ✓ Minister of electronics & IT, communications and law & justice, Ravi Shankar Prasad, eminent global AI expert Professor Raj Reddy, IBM CEO Arvind Krishna and Reliance Industries Ltd chairman Mukesh Ambani will also grace the occasion
  - ✓ During the event, Prof. Raj Reddy will also hold a session on October 6, 2020 about developing voice-enabled AI that removes linguistic barriers.
  - ✓ Former Infosys CFO Mohandas Pai, and Brad Smith, president & legal head, Microsoft Global will also participate in the session.
  - ✓ The theme of the event - “Responsible AI for Social Empowerment”

- ✓ RAISE 2020 will have a dedicated session of various stakeholders on building an inclusive AI to empower the human community.
  - ✓ In the session Jenny Lay Flurrie, the Chief Accessibility Officer of Microsoft will be sharing her views.
  - ✓ Anita Bhatia who is an assistant secretary-general, deputy executive director, UN Women will also deliver a keynote in this session.
  - ✓ So far, more than 15,000 stakeholders from across academia, the research industry and government representatives from across the world have registered to participate in RAISE 2020.
- **Union Minister for Social Justice and Empowerment, Thaawarchand Gehlot - launched the “Ambedkar Social Innovation and Incubation Mission (ASIIM) under Venture Capital Fund for SCs recently through video conference.**



- ✓ The mission seeks to promote innovation and enterprise among SC students who are studying in higher educational institutions
- ✓ These students would be identified through Technology Business Incubators (TBIs) set up by the Department of science and technology in these institutions
- ✓ It aims to identify around 1,000 SC youth with the potential of start-up ideas, within a period of four years
- ✓ The identified students would be funded Rs 30 lakhs in three years to convert their start-up ideas into commercial ventures
- ✓ Successful ventures will be qualified for venture funding of up to Rs. 5 Crore from the VCF-SC
- ✓ Venture Capital Fund for SCs (VCF-SC) was launched in 2014-15 to develop entrepreneurship skills amongst the SC/disabled youth
- ✓ The primary objective of this fund is to provide concessional finance to the SC entrepreneurs.

- ✓ Presently, 117 companies promoted by SC entrepreneurs have been sanctioned financial assistance in order to set up business ventures under the fund.
- ✓ The budget for the initiative has been set at Rs. 19320 lakhs for four years.
- **The Union Minister of Jal Shakti Gajendra Singh - has launched the 100-days campaign to provide piped water supply to schools and Anganwadi centres through Gram Panchayats**



- ✓ This campaign was launched on the occasion of 151st birth anniversary of Mahatma Gandhi.
- ✓ The Jal Jeevan Mission is aimed at providing tap connections to every household by 2024.
- ✓ At present, 81.67% of households in India do not receive tap water supply.
- ✓ The scheme is being implemented at National, State, District and Gram Panchayat levels.

## INTERNATIONAL

- **China – to send the world’s first asteroid mining robot into space in November 2020.**
- ✓ The robot is named as ‘asteroid mining robot’ by the private space start-up ‘Origin Space’ in Beijing, China.
- ✓ A Chinese Long March series rocket will launch the asteroid mining robot into space.
- ✓ The primary objective of the mission is to assess the testing capabilities of asteroid mining robot to extract valuable resources
- ✓ It also aims to verify and demonstrate multiple functions including stimulated small celestial body capture, spacecraft orbital manoeuvre and intelligent spacecraft identification.

## INDIA AND OTHER COUNTRIES

- **NITI Aayog and Embassy of the Netherlands, New Delhi - have signed a Statement of Intent (Sol) in order to support the decarbonization and energy transition agenda to accommodate cleaner and more energy.**



**SIGN STATEMENT OF INTENT  
DECARBONIZATION AND  
ENERGY TRANSITION AGENDA**



- ✓ The Sol was signed by NITI Aayog CEO Amitabh Kant and Ambassador of the Netherlands to India, Marten van den Berg.
- ✓ The main focus of the association is on co-creating innovative technological solutions through an exchange of knowledge and collaborative activities.
- ✓ The Sol aims to reduce the net carbon footprint in industrial and transport sectors and to promote bio-energy technologies
- ✓ It also seeks to adopt clean air technologies, realize the target potential of natural gas and to adopt next-generation technologies including hydrogen and carbon capture utilization
- ✓ The Sol meet the two objectives of generating climate-resilient economic growth and safeguarding the environment for future generations.
- ✓ India is committed to reduce emissions' intensity by 33%–35% by 2030.
- **India and Bangladesh - have agreed to set up a 'High Level Monitoring Committee' to regularly review the progress of implementation of projects which are being run with Line of Credit (Loc) provided by India.**
- ✓ The committee would be headed by the Secretary, Economic Relations Division of Bangladesh and High Commissioner of India in Bangladesh.
- ✓ The decision was taken during the 6th meeting of the Joint Consultative Commission (JCC) held on a virtual platform.
- ✓ The meeting was chaired by External Affairs Minister Dr. S. Jaishankar and Foreign Minister of Bangladesh Dr. A.K. Abdul Momen jointly.
- ✓ Both sides agreed to hold the next meeting of the Annual Defence Dialogue in November.
- ✓ Both sides also agreed to strengthen the Coordinated Border Management Plan (CBMP) to prevent militant insurgency along the borders.

## **SCIENCE, TECHNOLOGY & ENVIRONMENT**

- **On October 3, a spacecraft named in memory of Kalpana Chawla – blasted into space from Nasa's Wallops Flight in Virginia**



- ✓ An US resupply mission to the International Space Station dedicated to Indian-American astronaut Kalpana Chawla lifted off from Pad 0A at the Mid-Atlantic Regional Spaceport in Virginia.
  - ✓ The SS Kalpana Chawla is a Cygnus spacecraft developed by an US firm Northrop Grumman
  - ✓ It was launched along with an Antares rocket for the NG-14 mission to the International Space Station
  - ✓ The capsule is carrying over 3600kg of scientific investigation equipment, crew supplies and other cargo.
  - ✓ It carries a new space toilet called the Universal Waste Management System, which is 65% smaller and 40% lighter than the current toilet being used at ISS.
  - ✓ The capsule also carried a radish-growing experiment in order to learn about survival and feasibility of growing plants in space
  - ✓ It also carried the required equipment for cancer treatment technique, to test cancer drugs in micro gravity conditions.
  - ✓ It will reach ISS on October 5.
  - ✓ Dr Kalpana Chawla was the first Indian-born woman to travel to space.
  - ✓ She died while she was on a space mission in the Columbia spacecraft.
  - ✓ India has renamed “MetSat-1” satellite that was launched in 2002 was renamed as “Kalpana-1”
  - ✓ An asteroid, ‘Asteroid 51826 Kalpana chawla’ in the outer Asteroid belt of solar system has been named after her.
- **The Indian Council of Medical Research, in collaboration with the Hyderabad based biopharmaceutical company Biological E ltd - has developed “Purified Antisera”**
- ✓ The new therapy could be used as a potential treatment for Covid-19
  - ✓ The antiserum has been prepared by injecting inactivated SARS-CoV2 in horses which can be used as a prophylaxis
  - ✓ The therapy is similar to the existing plasma therapy, except that the plasma is obtained from animals
  - ✓ In this technique, the serum has antibodies called Equine Antisera which can be used against the corona virus.

- ✓ The Equine Antiserum was segregated by ICMR led National Institute of Virology, Pune which was invited by ICMR in June 2020.
- ✓ Antiserum is a blood serum that builds “passive immunity” through blood donation as it is done in case of Plasma Therapy.
- ✓ These are blood serum which is high in antibodies against specific antigens
- ✓ Passive immunity is immunity that is induced with the help of ready-made antibodies in the humans.
- ✓ It is induced in persons when they cannot generate their own antibodies.
  
- **Reliance Life Sciences - has developed an indigenous ‘real-time reverse transcription-polymerase chain reaction’ (RT-PCR) kit that detect Covid-19 infection in about 2 hours**
- ✓ It has been named as ‘R-Green Kit’
- ✓ Presently, Covid-19 RT-PCR test takes up to 24 hours to give a diagnosis.
- ✓ The kit has been developed by Computational biologists at Reliance Life Sciences a subsidiary of Reliance Industries Ltd.
- ✓ The kit has been technically validated by ICMR for satisfactory performance.
- ✓ R-Green Kit can detect the presence of E-gene, R-gene, RdRp gene of SARS COV2 virus with Actin as an internal control.
- ✓ According to the ICMR results, the kit is 98.7 % sensitive and 98.8 % specific.
  
- **The French Space Agency CNES - announced that it going to participate in ISRO’s Venus Mission, which has been named SHUKRAYAAN.**
- ✓ The mission is going to be launched in 2025.
- ✓ ISRO intends to send the Shukrayaan orbiter mission to Venus in order to study the dense and hot atmosphere of Venus, primarily consisting of carbon dioxide.
- ✓ It will also study the planet’s surface using a probe.
- ✓ The French payload will be flown on an Indian exploration mission for the first time.
- ✓ For the mission, ISRO have also selected The VIRAL (Venus Infrared Atmospheric Gases Linker) instrument
- ✓ The instrument has been co-developed with the Russian federal space agency Roscosmos and the LATMOS atmospheres, environments and space observations laboratory attached to the French national scientific research centre CNRS.
- ✓ The mission will study the atmospheric chemistry, compositional variations and dynamics of Planet Venus.
- ✓ Earlier, the mission was scheduled to be launched in 2023.

## **DEFENCE**

- **India - tested an advanced version of the nuclear-capable Shaurya missile from a launch facility off the Odisha coast on October 3.**



- ✓ The surface-to-surface Shaurya missile has a strike range of 750 to 1,000-km
  - ✓ It was test-fired from a hermetically-sealed canister from the Abdul Kalam Island test range.
  - ✓ The missile is designed to achieve hypersonic speed as it nears the target
  - ✓ The canister-launch for the two-stage missile makes it deadlier, as it provides the requisite operational flexibility to swiftly transport and fire it from anywhere.
  - ✓ The missile had been developed by the Defence Research and Development Organisation (DRDO) for the usage of Indian Armed Forces.
  - ✓ It has the capability to carry a conventional or nuclear warhead payload of 200kg to 1 ton.
  - ✓ These missiles cannot be detected by enemy surveillance or satellites till they are fired from storage-cum-launch canisters
  - ✓ The solid-fueled Shaurya is essentially a land variant of 750-km range K-15 submarine-launched ballistic missile
  - ✓ The submarine-launched version of the missile is loaded currently at the country's solitary nuclear-powered nuclear ballistic missile submarine INS Arihant.
  - ✓ Recently, India has successfully test fired the BrahMos supersonic cruise missile which can hit targets at over 400 km strike range.
- **Defence Minister Rajnath Singh - has launched the Defence India Startup Challenge (DISC 4) during the iDEX event recently.**
- ✓ The challenge features the innovative initiatives for Defence Excellence (iDEX) ecosystem.
  - ✓ Further, the Minister also launched 'iDEX4Fauji' initiative and Product Management Approach (PMA) guidelines during the event
  - ✓ Under the DISC 4, eleven challenges from Armed forces, OFB&DPSUs were thrown open to startups, innovators and MSMEs to offer their innovative ideas on technologies.
  - ✓ These technologies could have their application in the defence sector.



- ✓ iDEX4Fauji is a first of its kind initiative, that has been launched to support the innovations identified by members of the Indian Armed Forces, like soldiers and field formations
- ✓ The iDEX initiative is one of the most effective and well-executed defence Startup ecosystem of the country.
- **The Indian Coast guard Vessel, Kanaklata Barua - was commissioned at Kolkata recently through video conferencing.**



- ✓ The ICGS Kanaklata Barua is one among the five Fast Patrol Vessels (FPVs)
- ✓ It has been built by Kolkata based Garden Reach Shipbuilders and Engineers (GRSE).
- ✓ This is the 105th vessel delivered by the defence PSU shipyard in June 2020
- ✓ The 49-metre-long vessel is designed to carry one high-speed rigid inflatable boat (RIB) and one Gemini boat that will help in swift boarding, search and rescue operations.
- ✓ These ships can achieve speeds exceeding 34 knots and are also fitted with 40/60 Gun as the main armament.

**AWARDS**

- **The Union Jal Shakti Minister Gajendra Singh Shekawat - presented the Swachh Bharat Awards, 2020 on October 2, 2020.**

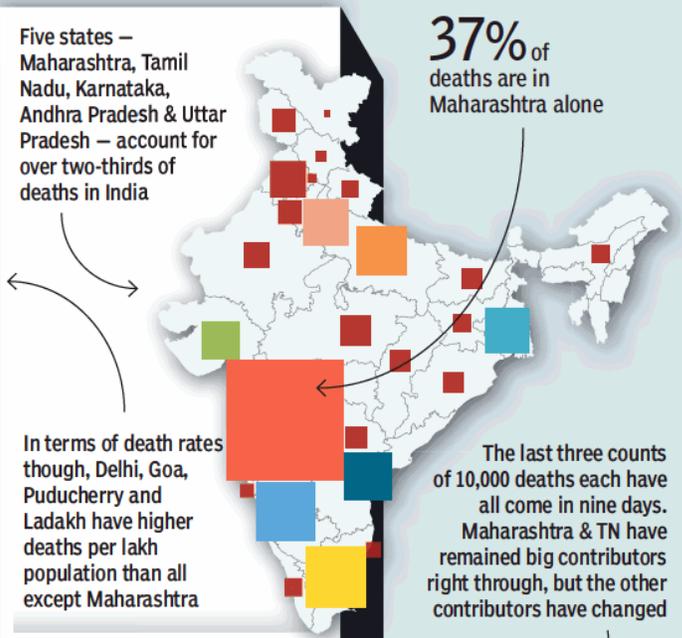


- ✓ The awards were presented under the cleanliness and drinking water categories.
- ✓ The key three categories of the awards were - Swachh Sundar Samudayik Shouchalaya, Gandagi Mukth Bharat and Samudayik Shouchalaya Abhiyan.
- ✓ The winners under the subsequent categories were -
- ✓ Samudayik Shouchalaya Category
  - ✓ Gujarat won the first prize at state level.
  - ✓ Tirunelveli of Tamil Nadu got the first prize at district level.
  - ✓ Kharchrod block in Ujjain district, Madhya Pradesh won the first prize at block level.
  - ✓ Chinnanur village of Tamil Nadu got the first prize a Gram Panchayat level
- ✓ Samudayik Shouchalya category
  - ✓ Gujarat and Uttar Pradesh were announced as the best performing states.
  - ✓ Prayagraj and Bareilly were the best performing districts.
- ✓ Gandagi Mukth Bharat Mission
  - ✓ Telangana and Haryana got the first prize.
- ✓ Swachh Sundar Samudayik Shauchalaya is an initiative involving clean and beautiful toilet contest.
  - ✓ It involves the decoration of toilets to show their significance.
- ✓ Gandagi Mukth Bharat Abhiyan aims to clean all cities, urban and rural areas to ensure proper sanitation, hygiene, clean roads and streets.
- ✓ Swachh Bharat Mission was launched in 2014.
- ✓ Presently, the Centre is implementing Swachh Bharat Mission Phase II between 2020-21 and 2024-25 with a budget of Rs 1,40,881 crores
- ✓ Phase II of the mission focuses on open defecation free plus (ODF+).
- ✓ The ODF+ primarily focus on greywater management, plastic waste management, faecal sludge management and biodegradable solid waste management.
- ✓ This phase also generate employment by involving infrastructure programmes for compost pits, waste stabilisation ponds, soak pits, material recovery facilities.

## **ONE LAKH COVID DEATHS IN INDIA – A REPORT**

June was the worst month for India – case fatality rate had peaked at 3.4% and the average daily growth rate of deaths was at over 10%. Both rates have come down sharply, but now Covid cases and deaths are spread all across the country

	Death toll	Toll/lakh	CF rate	
1	Maharashtra	37,056	30.3	2.6
2	Tamil Nadu	9,586	12.7	1.6
3	Karnataka	8,994	13.7	1.5
4	Andhra	5,869	11.2	0.8
5	Uttar Pradesh	5,864	2.6	1.5
6	Delhi	5,401	27.3	1.9
7	West Bengal	5,017	5.2	1.9
8	Gujarat	3,463	5.1	2.5
	Punjab	3,451	11.6	3.0
	MP	2,336	2.8	1.8
	Rajasthan	1,500	1.9	1.1
	Haryana	1,402	4.9	1.1
	J&K	1,198	9.1	1.6
	Telangana	1,145	3.1	0.6
	Chhattisgarh	986	3.4	0.8
	Odisha	928	2.1	0.4
	Bihar	906	0.8	0.5
	Kerala	772	2.2	0.4
	Jharkhand	721	1.9	0.9
	Assam	711	2.1	0.4
	Uttarakhand	625	5.6	1.3
	Puducherry	525	34.9	1.9
	Goa	440	28.6	1.3
	Himachal	190	2.6	1.2
	Chandigarh	164	13.9	1.4
	Ladakh	58	19.8	1.4



First death	Days taken	Growth rate %	CF rate	Contribution in each 10,000 deaths
10,000	96	10.3	3.4	KERALA
20,000	20	2.7	2.8	MAHA 46% DEL GUJ WB
30,000	17	2.5	2.4	MAHA DEL TN UP
40,000	13	2.2	2.1	MAHA TN UP KA AP
50,000	10	2.1	1.9	MAHA TN UP KA AP
60,000	11	1.8	1.8	MAHA TN UP KA AP
70,000	10	1.5	1.7	MAHA TN UP KA AP
80,000	9	1.5	1.6	MAHA TN UP KA AP
90,000	9	1.4	1.6	MAHA TN WB UP KA
1,00,000	9	1.2	1.6	MAHA 37% TN WB UP KA

### Better than the US, worse than neighbours

Compared to the others in the top 5 list in terms of deaths, India has much lower deaths per million population and a lower case fatality rate (deaths per 100 cases). But compared to its neighbourhood, India is worst off on both parameters

	Deaths per lakh	CFR
US	64.2	2.8
Brazil	68.0	3.0
India	7.2	1.6
Mexico	60.4	10.4
UK	62.1	9.2
Pakistan	2.9	2.1
Bangladesh	3.2	1.4
Nepal	1.7	0.6
Sri Lanka	0.1	0.4



### New hotspots emerge

Over the last one month, the states that have seen the sharpest rise in deaths are not the ones with big shares so far and that's a worrying sign of new problem areas, though in some cases like Himachal, it's due to a low base

	Growth since Sept 1
Himachal Pradesh	414%
Chhattisgarh	256%
Kerala	161%
Punjab	138%
Uttarakhand	132%
Assam	131%
Haryana	103%
Jharkhand	73%
Jammu & Kashmir	70%

Graphics: Sajeew Kumarapuram