Tamil Nadu - has been adjudged the best performing Big State for the third consecutive year, according to the “India Today-MDRA State of the States study 2020”.

The state has topped in as many as 11 categories from a total of 12, including economy, tourism, infrastructure, inclusive development, law and order, along with entrepreneurship, cleanliness, environment, health, education and agriculture.
Tamil Nadu secured the top spot, scoring a total of 1,263.1 points out of 2,000 for its overall performance.
The State also stood second in fighting the Covid pandemic, securing 74.2 points out of a 100.
Earlier, Tamil Nadu bagged the first position in the composite ranking for good governance index (GGI) last year.
For the third consecutive year, Tamil Nadu had registered a higher economic growth rate (8.03%) than the national average of 4.2% in 2019-20.
During this period, the per capita income of the State stood at Rs.1,53,853 taking it from the 12th place in the previous year to sixth position now.
Tamil Nadu is currently the second largest economy in the country and the sixth most populous State.
It has the third highest GDP per capita and is the most urbanised and industrialised State.
Tamil Nadu has also bagged the top spot in cadaver organ donation for the sixth time in a row.
Tamil Nadu is followed by Himachal Pradesh and Punjab, which have come second and third respectively, as per the study.
In the ‘Covid-19 Management’ category, among the big states, Assam took the top position.
The awards will be presented on December 5.

**Tamil Nadu’s first compressed natural gas (CNG) retail outlet - has been commissioned in Nagapattinam district**
- It was launched by Torrent Gas at a retail outlet being run on behalf of Indian Oil Corporation Ltd. (IOCL) at Porvacheri.
- The CNG became available in 1993 in New Delhi for the very first time.
- Torrent Gas has tied up with GAIL for CNG supply through the Torrent-owned city gate station in Nagapattinam district.
- The company has also tied up with IOCL for use of its retail outlets to start more CNG stations.
- The retail price of CNG in Nagapattinam would be ₹60 a kg.
- Torrent Gas is planning to set up a total of 12 outlets by March 2022 in the region.

**STATES**

**The country’s first Solar Power enabled textile mill in Asia – was announced in Parbhani district of Maharashtra**
- The Jai Bhawani Women cooperative textile mill recently announced that the mill will soon operate on solar power.
- The mill, which processes cotton to cloth, is spread across 30 acres of land.
- Parbhani district of Maharashtra is the leading cotton producing district in the state.
According to Power Grid Corporation of India Limited, applying solar energy for textiles can save Rs 770 crores per annum.

NATIONAL

- Prime Minister Narendra Modi - visited the units of three vaccine manufacturers in India to review the progress of vaccine development and manufacturing process
- The PM visited Zydus Biotech Park in Ahmedabad, Bharat Biotech in Hyderabad and Serum Institute of India (SII) in Pune on November 28.

Firstly, the PM reviewed the vaccine development and manufacturing process of Zydus Group’s indigenous plasmid DNA vaccine – ZyCov-D.
- The company has completed the phase-II human clinical trials of its vaccine ZyCov-D in August and the results are currently being analysed.
- The phase-III trial is expected to begin in December and expected to be completed by March 2021.

The vaccine is likely to come to market after March next year, subject to regulatory approvals.
- Later, the PM visited Bharat Biotech’s facility at Genome Valley in Hyderabad as part of his three-city tour.
Covaxin, India’s first indigenous Covid-19 vaccine, is being developed by the Hyderabad-based vaccine maker.

It is a vaccine candidate developed based on an inactivated strain sourced from the Indian Council of Medical Research and was being tested on 26,000 volunteers.

Finally, the PM visited the vaccine major Serum Institute of India’s new plant at Manjari and interacted with its team about the manufacturing, logistics and distribution of its Covid-19 vaccine — Covishield.

Serum Institute of India (SII) has partnered with the University of Oxford and AstraZeneca for the manufacture and distribution of the vaccine.

At present, the company has stockpiled about 40 million doses, and will ramp up to 100 million doses per month after January.

The company will be applying in the next two weeks for an emergency licence to permit the use of the ‘Covishield’ vaccine

Prime Minister Narendra Modi - recently chaired the 33rd PRAGATI interaction on November 25.

During the meeting, projects worth of Rs 1.41 lakh crores were reviewed along with other public grievances and programmes

These projects were taken up by DPIIT, Ministry of Railways, Power Minister and Ministry of Road, Transport and Highways in ten states and union territories

The States/UTs involved includes Odisha, Maharashtra, Karnataka, Uttar Pradesh, Jammu & Kashmir, Gujarat, Haryana, Madhya Pradesh, Rajasthan and Dadra and Nagar Haveli

In the previous 32 such meetings, a total of 275 projects worth Rs 12.5 lakh crore have been reviewed

Further, 47 programmes/schemes and grievances across 17 sectors have also been taken up in the earlier meetings

PRAGATI refers to ‘Pro-Active Governance and Timely Implementation’.

It is an ICT-based multi-modal platform involving Central and State governments

Launched in 2015, it aims to provide pro-active governance and timely implementation of projects.
The PRAGATI platform brings the Secretaries of Government of India and the Chief Secretaries of the State on one stage, promoting Cooperative Federalism. PRAGATI is a three-tier system that includes the Prime Minister Office, Central government secretaries and Chief Secretaries of the state. Under PRAGATI, the Prime Minister will hold interactions with the secretaries through video conferencing every month. The programme is held on every fourth Wednesday of the month. This day is called “PRAGATI Day”. On this day, the PM reviews the progress, based on the database from public grievances, pending projects and ongoing programmes. The data bases are collected from Project monitoring groups and Ministry of Statistics and Programme Implementation.

The PRAGATI platform was designed by the Prime Minister Office in collaboration with the National Informatics Centre. The three main objectives of PRAGATI are grievance redressal, project monitoring and project implementation.

The Union Minister of Environment, Forest and Climate Change Prakash Javadekar - recently launched the India Climate Change knowledge portal.

The portal will hold information about the steps taken by the government at both National and international levels to address climate change issues and initiatives of the government. During the launching event, the Minister said that India has achieved its pre-2020 climate action targets. The portal provides adaptation and mitigation efforts taken by different Ministries. The eight major components of the portal are climate profile of India, India’s NDC goals, National Policy Framework, adaptation action, bilateral and multilateral cooperation, report and Publication, mitigation actions, International climate negotiations.

India is the only G20 country that is on track to meet the 2015 Paris agreement of two degree Celsius target. According to TERI (The Energy and Resources Institute), 19 other emerging and leading economies are far from achieving their goals.
✓ This includes US, China and the European Union.

➢ The Union Education Minister Ramesh Pokriyal ‘Nishank’ -inaugurated the Lilavati Awards recently.
✓ The award is an initiative of All India Council for Technical Education (AICTE).

✓ The Lilavati Award aims to recognise the efforts of AICTE affiliated institutions in treating women and is to be presented based on the theme of women empowerment.
✓ There are seven categories that are included in the award, which includes literacy, self-defence, women entrepreneurship, legal awareness, women health and sanitation and hygiene.
✓ The main objective of the awards is to create awareness in the issues such as sanitation, hygiene, health and nutrition using traditional Indian values.
✓ Also, the awards aim to increase awareness in technology, literacy, employment, innovation, credit, skill development, natural resources utilisation, marketing and women rights.
✓ The award has been named after the 12th century book called “Lilavati”, which was written by the mathematician Bhaskara II.
✓ Lilavati was the daughter of Indian Mathematician Bhaskara II.
✓ The prize was handed out for the first time at the International Congress of Mathematicians that was held in 2010.
✓ Bhaskara II, a leader at cosmic observatory at Ujjain, lived during 12th century.
✓ His major works are Siddhantha-Siromani, meaning Crown of Treaties.
✓ This main work of the genius, Bhaskara II has been divided into four parts namely Lilavati, Grahaganita, Bijaganita and Goladhyaya.
✓ Bhaskara II is known for his discovery of principles of differential calculus.

➢ The first convergence project of India to generate Green Energy for agriculture and rural areas - is to be set up in Goa
✓ In this regard, the Energy Efficiency Services Limited signed a Memorandum of Understanding with the Department of New and Renewable Energy, Goa recently.
✓ The project is to focus on evolving energy solutions based on the concepts that combine climate change, renewable energy and Artificial Intelligence.
The main objective of the project is to connect areas such as LED lights, solar energy and energy storage in order to provide solutions that will enable decarbonisation.

Goa had set a target of generating 150 MW of green energy in next three years.

Convergence projects are those projects where physical, social, institutional and economic infrastructures are integrated.

As of September 2020, 36.17% of installed electricity generation in India is from renewable sources.

The country has set a target of achieving installing 40 GW of roof top solar energy by 2022.

This is part of the country’s ambitious target of achieving 450 GW of renewable energy by 2022.

India’s supercomputer Param Siddhi – has been ranked at 63rd position in TOP 500 most powerful non-distributed computer system list in the world

Param Siddhi is a high-performance computing-artificial intelligence (HPC-AI) supercomputer that was established at C-DAC under the National Supercomputing Mission

Param Siddhi was jointly developed by Ministry of Electronics and Information Technology and Department of Science and Technology.

The supercomputer has a speed of 5.267 petaflops.

Param Siddhi was built on NVIDIA DGX SuperPOD reference architecture networking.

Petaflop is a unit of computing speed and refers to the number of arithmetic operations a machine can do in a second.

One petaflop equals to one thousand million million floating point operations (FLOP) per second.

In a non-distributed computer system, all the components are to be located in a single location.

In case of Param Siddhi, all of its components are located in Pune.

India is currently implementing third phase of National Supercomputing Mission.
✓ The main aim of the mission is to install 70 supercomputers in the country in three phases with a budget of Rs. 4,500 crores
✓ The National Supercomputing Mission was launched in 2015 to support “Digital India” and “Make in India” initiatives of the government.
✓ Under the mission, the first supercomputer of India - Param Shivay - was installed in IIT-BHU, Varanasi.
✓ China has maximum number of super computers followed by US, Japan, France, Germany, Netherlands, Ireland and UK.

➢ The Defence Minister Rajnath Singh - launched a portal for defence land management system.
 ✓ The system will bring in transparency, speed and efficiency in dealing with defence lands

✓ The portal, ‘Land Transportation Management System’ (LTMS) has been integrated with GIS (Geographical Information System) based tools.
✓ Defence Land encroachment is the major issue in defence land management.
✓ Uttar Pradesh, Haryana and Maharashtra are the three states that have reported highest encroachments on defence lands in the three years (2017-20).
✓ These states are followed by Assam, Sikkim and Andhra Pradesh.
✓ The Defence lands are managed by the Directorate General, Defence Estates.
✓ Around 80% of the Defence lands are owned by Indian Army.
✓ The ‘Bhuvan’ Application, developed by ISRO, allows users to explore the maps in 2D/3D on satellite images
✓ The Raksha Bhoomi is a software used to register details of two types of defence lands - General Lands Register (for lands within the cantonments) and Military Land Register (for lands outside cantonments)

➢ The Ministry of New and Renewable Energy - has proposed a new scheme to develop Wind-Solar Hybrid Parks.
✓ The Wind-Solar Hybrid park will be a concentrated zone of power projects, which includes evacuation facilities as well to minimize the risks
✓ The sites to develop the wind-solar hybrid parks are to be selected by National Institute of wind Energy
The capacity of each park is expected to be 500 MW and more.
In case of lower capacity parks, the capacity of the park should not be less than 50 MW.
Wind energy and Solar Energy are emerging as alternative sources of energy to conventional energy sources in India.
The estimated wind power potential of India is 695 GW and that of solar power is 749 GW.
Wind power is mainly concentrated in Maharashtra, Gujarat, Madhya Pradesh, Andhra Pradesh, Tamil Nadu and Rajasthan.
The scheme will help the DISCOMs to fulfil their non-solar Renewable Purchase Obligation (RPO).

INTERNATIONAL

- China - has powered up its first domestically developed nuclear reactor — the Hualong One

The development is seen as part of China’s attempts to become less dependent on Western allies for energy security and critical technology.
The reactor was connected to the national grid on November 27.
It has the capability to generate 10 billion kilowatt-hours of electricity each year and cut carbon emissions by 8.16 million tons, according to China National Nuclear Corporation (CNNC).
Nuclear plants supplied less than 5% of China’s annual electricity needs in 2019.
This share is expected to grow as China attempts to become carbon neutral by 2060.
Work on the Hualong One reactor started in 2015 and there are currently six other reactors under construction at home and abroad.
The Hualong One, deployed at a plant in east China’s Fujian province, will be put into commercial use by the end of the year after undergoing tests.
China has 47 nuclear plants with a total generation capacity of 48.75 million kilowatts — the world’s third highest after the U.S. and France.
Beijing has invested billions of dollars to develop its nuclear energy sector in recent years as it struggles to move away from the dependence of its economy from coal.
Thirteen nuclear plants are under construction, more than in any other country.

- The World Health Organization - released the “Global Strategy to Accelerate the Elimination of Cervical Cancer” recently during the 73rd World Health Assembly
- As part of the campaign, the WHO aims to reduce more than 40% of new cases of Cervical Cancer by 2050 by proper screening, vaccination and treatment.
- Cervical cancer is the fourth most common cancer among women in the world.
- Under the mission, the WHO has set three targets to eliminate the Cervical Cancer by 2030
- The three targets are -
  - To vaccinate 90% of girls of age 15 years with the Human Papillomavirus Vaccine
  - To screen 70% women of age between 35 years and 45 years using high-performance tests
  - To identify at least 90% of women with cervical cancer disease
- According to the WHO, around 3.25 USD will be returned to the economy for every 1 USD invested in the cervical cancer programme.
- The initiative assumes significance as the number of new cervical cancer cases are to increase from 570,000 to 700,000 between 2018 and 2030.
- Also, the annual number of deaths is forecasted to increase from 311,000 to 400,000.
- In India, cervical cancer contributes to 6% to 29% of all cancers in women.
- Further, India accounts to one-fourth of world cervical cancer deaths.
- The National Cancer Registry Programme that was established by Indian Council of Medical Research acts as a surveillance system for all the cancers in the country.

- The United Nations along with “the Vaccine Confidence Project” of University of London - launched “Team Halo” recently.
- More than 100 scientists from different parts of the world have come together under the project.
- Team Halo aims to tackle misinformation on safety and effectiveness of Covid-19 vaccines.
- Under the initiative, the scientists will create social-media friendly videos on Covid-19 vaccine science based on their personal experiences.
- Also, Team Halo will act as a communication platform for the scientists working on Covid-19 vaccines.
- Over 22 Indian scientists are part of the initiative.
- The scientists from Post Graduate Institute of Medical Education and Research, Institute of Medical Science, SRM Research Institute, etc. have joined the initiative.
The World Economic Forum selected 36 cities from 22 countries for pioneering a policy road map for smart cities.

- These smart cities are being developed under the G20 Global Smart Cities Alliance.
- Of the 36 cities selected, four are Indian cities - Bengaluru, Faridabad, Indore and Hyderabad.
- The selected 36 cities will collaborate with global experts and enhance their city policies in areas ranging from cyber security to services to be provided to physically challenged people.
- These 36 cities will adopt five policies - better broadband coverage, privacy protection, accountability for cyber security, better accessibility to digital city services for physically disabled and increased openness of city data.
- The other cities selected under the programme are Toronto, London, Moscow, Brasilia, Dubai, Melbourne, etc.
- The G20 Global Smart City Alliance was established in June 2019 during the Osaka G20 Summit (held in 2019).
- India joined the alliance as a founding partner.
- The main objective of the alliance is to accelerate best practices, foster greater openness and mitigate potential risks and public trust.

**INDIA AND OTHER COUNTRIES**

- India and the United States have extended the Indo-US Civil Nuclear Energy agreement for another ten years.
  - India buys the nuclear material from United States based on this agreement, which is also called ‘123 agreement’
  - The extension of the agreement was signed at the Global Centre for Nuclear Energy Partnership (GCNEP).
  - The U.S.-India Civil nuclear energy deal took more than 3 years as it had to go through several complex stages, including amendment of U.S laws.
  - This was mainly because India is not a signatory of Non-Proliferation Treaty (NPT).
  - In spite of this, the NSG granted the waiver to India to sign the agreement with the US, thereby allowing the access to civilian nuclear technology and fuel from others.
  - There are 22 nuclear power reactors in India.
  - Currently, 3.22% of electricity in India is generated through nuclear power.

**CONFERENCES & SUMMITS**
India - will host the 19th edition of Heads of Government Council meeting of the eight-nation Shanghai Cooperation Organisation (SCO) on November 30

- However, Prime Minister Narendra Modi will not attend the meeting and it will be chaired by Vice-President M. Venkaiah Naidu.
- The Prime Ministers of China, Russia, Kyrgyzstan, Tajikistan, Uzbekistan, and Kazakhstan will attend the virtual conference.
- Pakistan Prime Minister Imran Khan will also miss the meeting, after deputing his Parliamentary Secretary for Foreign Affairs, Andleeb Abbas, in his place.
- It will be the first time that a summit-level meeting will be held under India’s chairmanship, since it gained full membership of the organisation in 2017.
- This summit is held annually at the level of Prime Ministers of SCO and deals primarily with the trade and economic agenda of the organisation.
- On November 30, the PM is expected to spend the day in Varanasi, his Parliamentary constituency instead.
- While the SCO Heads of Government Council consists of Prime Ministers, PM Modi had been deputing others for the event in previous years as well.
- Earlier, the External Affairs Minister attended the SCO HoG meets in 2017 and 2018, while Defence Minister Rajnath Singh represented the PM in 2019.
- PM Modi had already attended the SCO Heads of State meeting in November, which is normally held at the presidential-level.
- Apart from the eight member states, the meeting will be attended by four observer states of the SCO.
- President of Afghanistan Ashraf Ghani will attend along with the First Vice-President of Iran, the Prime Minister of Belarus and the Deputy Prime Minister of Mongolia.
- Turkmenistan has been invited as a special guest by India and will be represented by the Deputy Chairman of the Cabinet of Ministers.

RANKINGS

- India – ranked at 77th position in the Global Bribery Risk Matrix, which was released by TRACE recently.
  - Earlier, in 2019, India was ranked at 78th position with a score of 48.
  - This year, Bhutan was the only neighbour country that was ranked better than India, after being ranked at 48th place.
  - The ranking is prepared by TRACE International, which is the world’s leading anti-bribery standard setting organisation.
  - The TRACE Bribery Risk Matrix, 2020 measured bribery in 194 jurisdictions, which were ranked based on scores across four parameters.
  - The four parameters are - Government and civil service transparency, business interactions with government, capacity for civil society oversight and anti-bribery deterrents and enforcement.
  - When a country gets highest score, it means that the country is at higher risk of business bribery.
The overall score of India was 45 in the global list.
India scored scores of 50, 53, 36 and 40 in the domains of Interactions with Government, Anti-bribery deterrence and enforcement, Government and Civil Service Transparency and civil oversight respectively.
Denmark topped the list followed by Norway, Finland, Sweden and New Zealand.
The bottom most ranks were occupied by North Korea, Turkmenistan, South Sudan, Venezuela, Eritrea.