

Rooftop Solar Scheme



- The Government of India has taken an ambitious target of 100,000 MW of solar power by 2022 out of which 40,000 MW is to be achieved through Rooftop Solar (RTS) power plants as per the clean climate commitments.
- To generate solar power by installing solar panels on the roof of the houses, Ministry of New and Renewable Energy is implementing this scheme Objectives
- Promote the grid connected SPV rooftop and small SPV power generating plants among the residential, community, institutional, industrial and commercial establishments
- Mitigate the dependence on fossil fuel-based electricity generation and encourage environment friendly Solar electricity generation
- Create enabling environment for investment in solar energy sector by private sector, state government and the individuals
- Create enabling environment for supply of solar power from rooftop and small plants to the grid
- Encourage innovation in addressing market needs and promoting sustainable business models and ensure employment opportunities
- Provide support to channel partners and potential beneficiaries, within the framework of boundary conditions and in a flexible demand driven mode
- Create a paradigm shift needed for commoditization of grid connected SPV rooftop applications
- Encourage replacement of diesel, wherever possible
- Main PV Rooftop programme Actors
- State Nodal Agencies (SNAs)
- Distribution Company (DISCOM)
- Chief Electrical Inspector to Government
- Channel Partners
- Solar Energy Corporation of India (SECI)
- Financial Institutions/Banks

- In a solar rooftop system, the solar panels are installed in the roof of any residential, commercial, institutional and industrial buildings.
- This can be of two types: (i) Solar Rooftop System with storage facility using battery, and (ii) Grid Connected Solar Rooftop System.
- In grid connected rooftop or small SPV system, the DC power generated from SPV panel is converted to AC power using power conditioning unit and is fed to the grid either of 33 kV/11 kV three phase lines or of 440/220 Volt three/single phase line depending on the capacity of the system installed at institution/commercial establishment or residential complex and the regulatory framework specified for respective States.
- The concept of rooftop solar is based on the scale of the PV(photovoltaic) plant rather than the fact whether it is situated on a roof/terrace or not. Hence, the definition of RTS also includes small solar plants on the ground.

Scheme for Conservation, Development and Sustainable Management of Medicinal Plants



- The outreach and acceptability of AYUSH systems, both nationally as well as globally, are dependent on uninterrupted availability of quality medicinal plants based raw material
- More than 90% of the species used in trade continue to be sourced from the wild of which about 2/3 rd are harvested by destructive means.
- Development and cultivation of medicinal plants has been hence been covered as a component under the Centrally Sponsored Scheme of National AYUSH Mission.

Strategies

- To adopt an end-to-end approach covering production, post harvest management, processing and marketing. This will be achieved by promoting cultivation of medicinal plants in identified clusters within selected districts of states having potential for medicinal plants cultivation and to promote such cultivation following Good Agricultural and Collection Practices (GACPs) through synergistic linkage with production and supply of quality planting material, processing, quality testing, certification, warehousing and marketing for meeting the demands of the AYUSH industry and for exports of value added items.
- To promote medicinal plants as a crop alternative to the farmers and through increased coverage of medicinal plants and with linkages for processing, marketing and testing, offer remunerative prices to the growers/farmers.
- This will also reduce pressure on forests on account of wild collection.

- To adopt communication through print and electronic media as a strong component of its strategy to promote integration of medicinal plants farming in the agriculture/ horticulture systems with emphasis on quality and standardization through appropriate pre and post harvest linkages.
- To promote and support collective efforts at cultivation and processing in clusters through Self Help Groups, growers cooperatives/associations, producer companies and such other organizations with strong linkages to manufacturers/traders and R&D institutions.

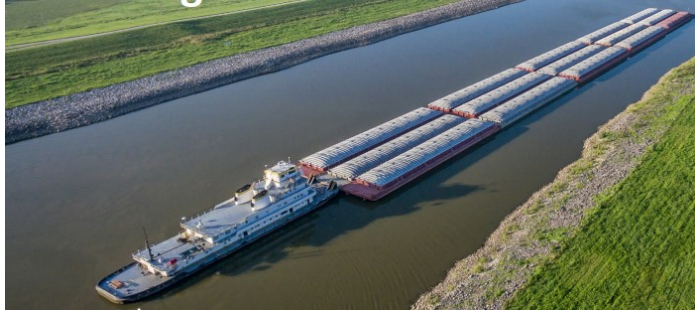
City Innovation Exchange (CiX) Launched for Fostering Innovation in Urban Ecosystem



Ministry of Housing
and Urban Affairs
Government of India

- The City Innovation Exchange (CiX) will connect cities to innovators across the national ecosystem to design innovative solutions for their pressing challenges.
- The platform will ease the discovery, design & validation of solutions through a robust, transparent and user centric process that will reduce barriers for innovators and cities to discover fitting solutions.
- Built on the concept of 'open innovation', the platform will help in the flow of ideas 'outside in and inside out', enhancing the skills and capacity required to deliver smart urban governance.
- Through interaction with the Academia and Businesses/ Startups, the platform will benefit cities in the transfer of ideas from 'labs' to real environment.
- Similarly, by helping urban governments interact with citizens, the platform will ensure adoption of tested solutions that will be impactful and sustainable.
- The platform in due time will help our cities in adopting solutions that will enhance the quality of life for its residents and significantly improve the Ease of Doing Business.
- The Platform has more than 400 start-ups, 100 smart cities, more than 150 challenges statements and over 215 solutions at the time of launch.
- This initiative is among the ongoing efforts of the Government to realise Prime Minister's vision of New and AtmaNirbhar Bharat, by making cities more self-reliant and enabled to meet the needs of and provide services to their citizens.
- Designed on the philosophy of 'everyone is an innovator', the platform will bring together Citizen Organisations-Academia- Businesses- Government to co-create for the future of Urban India in a transparent and sustainable manner. The Smart Cities Mission will partner and effectively collaborate with Startup India, Atal Innovation Mission, AGNli and other initiatives in the Indian Innovation ecosystem.

Now LPG can be transported through Inland Waterways



- Inland Waterways Authority of India will provide support for:
 - Facilitating with adequate fairway.
 - Handling of LPG cargo on IWAI terminals/ Multimodal Terminals at Haldia, Sahibganj and Varanasi as per notified provisions and rates on request of MOL.
- Providing Lease Available Depth (LAD) information on fortnightly/ monthly basis.
 - MOL Group is the world's largest gas carrier company and will invest for construction and operation of dedicated LPG barges under Make-in-India initiative of the Government of India.
 - Aegis Group proposed investments for setting up storage terminals, dedicated pipelines between jetty to the terminal and necessary infrastructure at jetty for evacuation of products from barges.
 - Presently, 60% of the LPG is moved through road to the various locations with a cost of Rs. 5 to 6 per metric tonne per kilometre, which the oil companies are interested in reducing.
 - LPG is a clean cargo with zero leakages and spillage as the products are handled by pipelines in a fully closed loop with utmost safety precautions being regulated by PNGRB and PESO.
 - LPG cargo needs less berthing time compared to any other bulk cargo. Besides there is no requirement of conveyors, etc., installed on berths/ jetties.
 - Handling LPG by inland waterways will help reduce the carbon footprints, lowering the overall logistics cost, which in India stands approx. 13 to 14% of GDP, compared to global average of 8% and contributing to Government social schemes like "UJJAWLA" for LPG supply.

Maha Mrityunjay Temple in Nagaon, Assam



- The Pran Pratishtha Mahotsav of the world's largest 126-feet-tall Shivalinga at Nagaon, Assam will culminate today and Union Home Minister Amit Shah has arrived in Assam on Thursday to join the Puja of Pran Prathishta Mahotsav and the Yagna of Maha Mrityunjay Temple.
- The Maha Mrityunjay Temple situated in Nagaon, Assam is the world's largest Shivalinga with a height of 126-feet.

- The Puja Pran Prathishta Mahotsav of Maha Mrityunjay Temple started on February 22 and will end on February 25.
- The temple will be open for all the devotees from February 26.
- The construction of the temple started in 2003 with the help of Acharya Bhrigu Giri Maharaj. Bhrigu Giri Maharaj chose this place after performing meditation
- According to the Maharaj, in ancient times, demon guru Shukracharya performed Yagna at the site of the temple.
- Around 250 priests from Tamil Nadu have come to the temple to perform the Pran Prathishta Yagna.
- 108 Yagna kundas have been set up and all the arrangements have been made so that all the priests can perform the grand Yagna.

India, Ireland hold consultations on UN Security Council issues



- India and Ireland held bilateral consultations on the UN Security Council issues yesterday via video conference. Both sides congratulated each other on their election to the UNSC and briefed each other on their UNSC priorities.
- The Irish delegation was led by Gerard Keown, UN Director and Head of UN Security Council Task Team, Department of Foreign Affairs and Trade and also included Ireland's Ambassador to India along with their Permanent Mission to UN officials.
- Both sides discussed a wide range of issues on the UNSC agenda and agreed to work closely together during their innings at the UNSC in 2021-2022.

FATF decides to keep Pakistan on its Grey List till June this year



- Global money laundering watchdog the Financial Action Task Force (FATF) yesterday decided to keep Pakistan on its terrorism financing Grey list.
- In an online press briefing from Paris, FATF President Marcus Pleyer said, Islamabad had made progress, but was yet to complete its action plan to overcome deficiencies in its combating of money laundering and terrorism financing.

- FATF said, Islamabad should demonstrate effective implementation of targeted financial sanctions against all the designated terrorists. It said, Pakistan must demonstrate in taking action against UN-designated terrorists and their associates
- FATF also said, Pakistan courts must give effective, decisive and proportionate punishment to those involved in terrorism. It also said, Pakistan must have an effective system to deal with terror financing.
- Once Pakistan completes three unfulfilled tasks, the FATF will verify and take decision on Islamabad's present status in June plenary.
- The deadline given to Pakistan has already expired and it asked the country to address tasks as quickly as possible.
- The FATF is an inter-governmental body set up in 1989 to combat money laundering, terror financing and other related threats to the international financial system. Currently, it has 39 members.
- Pakistan has been on the Grey list since June 2018.
- In its plenary held in October last year, the FATF had kept Pakistan on the Grey list citing its failure to fulfill six out of 27 obligations of the global money laundering and terrorist financing watchdog

ISRO To Launch Amazonia-1, 18 Co-Passenger Satellites From PSLV-C51



- Primary satellite Amazonia-1 of Brazil and 18 co-passenger satellites onboard the Polar Satellite Launch Vehicle (PSLV-C51) are scheduled to be launched from Satish Dhawan Space Centre (SDSC) Sriharikota Range (SHAR) on February 28, the Indian Space Research Organisation (ISRO) said
- ISRO also confirmed that the launch rehearsal of PSLV-C51
- PSLV-C51/Amazonia-1 is the first dedicated commercial mission of NewSpace India Limited (NSIL), a Government of India company under the Department of Space
- The NSIL is undertaking this mission under a commercial arrangement with Spaceflight Inc. USA.
- Amazonia-1 is the optical earth observation satellite of the National Institute for Space Research (INPE).
- This satellite would further strengthen the existing structure by providing remote sensing data to users for monitoring deforestation in the Amazon region and analysis of diversified agriculture across the Brazilian territory.
- The 18 co-passenger satellites include four from IN-SPACE (three UNITYsats from the consortium of three Indian academic institutes and One Satish Dhawan Sat from Space Kidz India) and 14 from NSIL.

Necklace Nebula



- The official Instagram handle of NASA Hubble has shared a picture of 'Necklace Nebula'
- The Necklace Nebula is located around 15,000 light-years away.
- It's the glowing aftermath of an exploded star, consisting of a bright ring that measures about 12 trillion miles across, dotted with dense, bright knots of gas that resemble diamonds in a necklace
- It was discovered in 2005 from the Isaac Newton Telescope Photometric H-alpha Survey (IPHAS), a ground-based H-alpha planetary nebula study of the North Galactic Plane.
- The Necklace Nebula is the exploded aftermath of a giant star that came too close to its Sun-like binary companion.
- The two stars that produced the Necklace Nebula are in a relatively small orbit about each other.
- They have a period of 1.2 days and a separation on the order of 5 times the radius of the Sun.
- The bloated companion star spun so fast that a large part of its gaseous envelope expanded into space. Due to centrifugal force, most of the gas escaped along the star's equator, producing a ring.
- The embedded bright knots are dense gas clumps in the ring

Papua New Guinea's 'father of the nation' Michael Somare dies aged 84



- Known as the “father of the nation”, Somare led the Pacific archipelago to independence from Australia in 1975 and served four times as prime minister.
- Prior to independence, Somare was the chief minister of the Australian-administered territory of Papua New Guinea. He most recently served as the country's leader briefly in 2011.
- PNG is a mountainous and sprawling nation rich in resources and minerals, including oil and gas and gold and copper.
- Linguistically diverse, it is one of the largest island economies in the South Pacific, although it has faced economic hardship and internal conflict, most notably during the decade-long civil war in the region of Bougainville that claimed as many as 20,000 lives before ending in 1998.

World's highest rail bridge arch on Chenab in Jammu and Kashmir nears completion



- Being constructed to withstand an earthquake of 8 magnitude, this railway bridge is part of the Udhampur-Srinagar-Baramulla rail project. Slated to complete by March 2021 which is 359 metres above the Chenab riverbed, stands 35 metres taller than the iconic Eiffel Tower in Paris.
- The total length of this bridge is about 1.3 kilometres. The main arch of this bridge is 485 m (1,591 ft) in diameter. The height of its tallest pillar is 133.7 meters (about 439 feet).
- There are a total of 17 pillars in this bridge. The total length of this railway project from Udhampur to Baramulla is about 326 kilometres.
- This bridge can also tolerate wind running at 266 km/h. The steel used in building this bridge can also withstand high-intensity blasts.
- Trains can run at a maximum speed of 100 kilometres per hour on this bridge.
- The bridge will prove to be a key link in the 111-km stretch between Katra and Banihal which is part of the Udhampur-Srinagar-Baramulla section of the Kashmir Railway project.
- The Jammu-Udhampur-Srinagar-Baramulla Rail Line will give a massive boost to the transportation sector in Jammu & Kashmir.
- The construction which began in 2004 was halted in 2008-09 owing to the safety of rail passengers due to frequent high-velocity winds in the area.
- India's Defence Research Development Organisation (DRDO) is closely working with the Konkan Railways on this project.
- The arch bridge is a part of an ambitious railway project connecting Kashmir to the rest of India

Ghana first country to receive COVAX vaccines



- Ghana has become the first country to receive coronavirus vaccines through the Covax vaccine-sharing initiative
- The Covax scheme aims to reduce the divide between rich countries and poorer nations unable to buy doses.
- The programme is planning to deliver about two billion vaccine doses globally by the end of the year.

- Ghana, which has a population of over 30m, was chosen as the first recipient of the free vaccines after promising quick distribution and meeting the criteria set by Covax.
- The vaccines delivered to Accra were produced by the Serum Institute of India and developed by AstraZeneca and Oxford University.
- The vaccine has been approved by the World Health Organization (WHO) and its roll-out in Ghana is not part of a trial.
- The doses being sent to lower-income countries such as Ghana are funded by donations. As well as procuring and delivering the vaccines, Covax partners are supporting local authorities in areas such as training people to administer the jabs and helping provide an adequate cold-chain storage and delivery system.

The world's largest cricket stadium



- The 130,000-seat arena at Motera in the Prime Minister's home state of Gujarat, which was inaugurated Wednesday by President Ramnath Kovind, will be known as Narendra Modi Cricket Stadium and be a part of the Sardar Vallabhbhai Patel Sports Enclave.
- Known earlier as Sardar Patel Stadium, or Motera stadium, before the massive redevelopment,
- A built-in clubhouse with 55 rooms further adds to the stadium's glory.
- The clubhouse features both indoor & outdoor games, restaurants, an Olympic size swimming pool, gym as well as a 3D projector theatre.
- It is the first time that the field of an Indian cricket stadium has been fitted with LED lights. No other stadium has this feature.
- There are three entry points to the stadium which has been spread across 63 acres of land in total.

Centre for Science and Environment (CSE)



- Centre for Science and Environment (CSE) is a public interest research and advocacy organisation based in New Delhi.
- CSE researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.
- CSE is a not-for-profit public interest research and advocacy organisation based in New Delhi, India. Established in 1980, CSE works as a think tank on environment-development issues in India, poor planning, climate shifts devastating India's Sundarbans and advocates for policy changes and better implementation of the already existing policies.

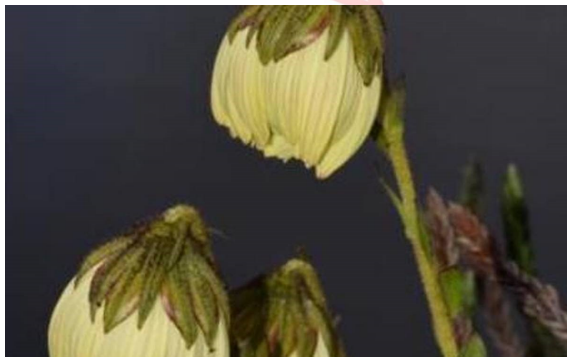
- The director of the Centre is Sunita Narain. Under her leadership, Centre for Science and Environment exposed the high level of pesticides present in American brands of soft drinks such as Coke and Pepsi.
- In 2018 the CSE was awarded Indira Gandhi Prize for Peace, Disarmament and Development

Lower Bhavani Project



- Prime Minister to lay foundation stone for renovation of Lower Bhavani Project system
- The canal is a valley-side contour canal, fed by Bhavanisagar Dam and irrigates 2.07 lakh hectares of land.
- The main canal feeds Thadapalli and Arakkankottai channels which irrigate the cultivable lands.
- The canal was the brainchild M.A Eswaran, member of the legislative assembly of the Erode constituency in the early 1950s.
- Bhavanisagar Dam or Lower Bhavani Dam, is located in Erode district, Tamil Nadu, India.
- It is constructed on the Bhavani River. It is known as south Asia's largest earthen dam and is the second largest in the world.
- The dam is situated some 16 km (9.9 mi) west of Sathyamangalam, and is 15 km (9.3 mi) from Punjai Puliampatti, 42 km (26 mi) from Gobichettipalayam and 36 km (22 mi) north-east of Mettupalayam.
- The Lower Bhavani Project was the first major irrigation project initiated in India after independence in 1948

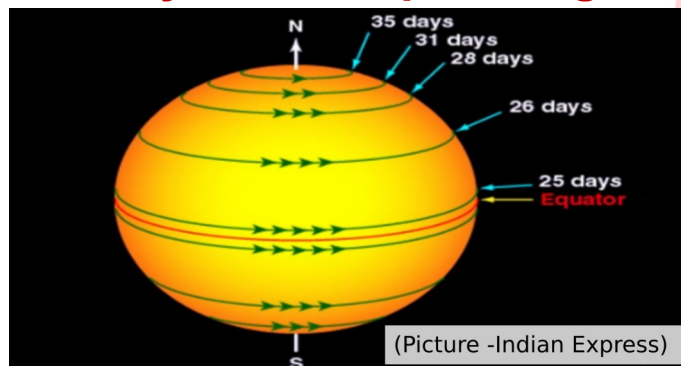
Cremanthodium Indicum



- group of scientists of three institutes have discovered a new species of alpine plant in the Tawang district of Arunachal Pradesh.
- The details were published in Biodiversitas: Journal of Biological Diversity.
- About the New Alpine Plant Species The new species of plant belongs to the family of Himalayan sunflower
- This species of plant generally flowers from July to August.
- It is endemic to the Penga-Teng Tso Lake of Tawang district.
- As per the IUCN Guideline, this alpine plant species has been listed as critically endangered.

- Arunachal Pradesh has also been termed as 'Orchid Paradise of India' because of the maximum concentration of orchid species (about 40% of the country) in the State.
- As per the official website of IUCN, it will be supporting the State of Arunachal Pradesh in assessing their unique and diverse Orchid species with an initial short-term objective of completing Red List assessments for all orchids in the State of Arunachal Pradesh (over 600 species).
- The results of these assessments will be showcased at the national and global events such as the Conference of the Parties 15 of Convention on Biological Diversity (CBD) as well as IUCN's World Conservation Congress 2020, rescheduled in 2021, in Marseille, France due to COVID-19.

Scientists design rotation profile of the Sun based on century-old sunspot images



- Sunspots are small and dark but cooler areas on the solar surface having strong magnetic forces.
- The solar rotation profile is based on the fact that the bigger sunspots rotate at a slower rate in comparison to the smaller ones.
- Researchers at ARIES, in collaboration with their counterparts at Max Planck Institute for Solar System Research, Germany and Southwest Research Institute, US, studied several thousand digitised images of sunspot images retrieved from older photographs and films.
- The images were generated by the Kodaikanal Solar Observatory (KoSO) between 1923 and 2011.
- Run by the Indian Institute of Astrophysics, Bengaluru, KoSO has a repository of about 4 lakh images of the Sun recorded since 1904.
- All of them have been digitised in the recent years.
- Unlike Earth — a solid mass of body having uniform rotation, the Sun has differential rates of rotation.
- This means, the solar equator rotates faster than its poles.
- The scientists have attempted to precisely track sunspots at various latitudes of the Sun in order to understand the rotational behaviours at different latitudes.
- sunspots and solar cycles have helped scientists understand the Sun's behaviour from the past.
- These continue to remain observable characters to predict the Sun's future.
- The Kodaikanal Solar Observatory is a solar observatory owned and operated by Indian Institute of Astrophysics

- The Kodaikanal Solar Observatory is a solar observatory owned and operated by Indian Institute of Astrophysics
- It is located on the southern tip of the Palni Hills 4 km from Kodaikanal town, Dindigul district, Tamilnadu state, South India. The Kodaikanal Solar Observatory is a solar observatory owned and operated by Indian Institute of Astrophysics.
- It is located on the southern tip of the Palni Hills 4 km from Kodaikanal town, Dindigul district, Tamilnadu state

Ancient Buddhist monastery found in Jharkhand



- The Archaeological Survey of India (ASI) has unearthed a Buddhist monastery, believed to be at least 900 years old, buried under a mound in a village situated in a hilly area of Hazaribagh district of Jharkhand
- the findings were significant since the monastery is on the old route to Varanasi, 10 km from Sarnath, where the Buddha gave his first sermon.
- They said the presence of statues of deity Tara shows possible proliferation of Vajrayana form of Buddhism in this region.
- Four statues of deity Tara in Varad Mudra [gesture of hand showing dispensing of boons] and six statues of the Buddha in Bhumisparsha Mudra gesture of hand showing five fingers of right hand towards the earth symbolising the Buddha's enlightenment.
- So it is a significant finding as deity Tara's statues means this was an important centre of Vajrayana sect of Buddhism."
- Vajrayana is a form of Tantric Buddhism, which flourished in India from 6th to 11th century
- The ASI has not yet done scientific dating of the structures, but it represents Pala period based on earlier findings
- This is a significant finding in terms of spread of Buddhism in Jharkhand. However, it is also a matter of research