

16th August 2024

DRDO Successfully Tests Long-Range Glide Bomb 'GAURAV' From Su-30 MK-1

The Defence Research and Development Organisation (DRDO) has carried out a successful maiden flight test of Long Range Glide Bomb (LRGB), GAURAV from the Su-30 MK-1 platform of the Indian Air Force.



Key points

- ❖ The test was conducted off the coast of Odisha. GAURAV is an air-launched one thousand-kilogram class glide bomb capable of hitting targets at long distances.
- ❖ It has been designed and developed indigenously by the Research Centre Imarat, Hyderabad.
- ❖ During the flight test, the glide bomb hit the target erected at Long Wheeler's island with pinpoint accuracy.

Defence Research and Development Organisation

- ❖ Government of India formed the DRDO in 1958 by combining three organizations:
 - The directorate of Technical Development
 - The Technical Development

➤ Defence Science Organization

- ❖ Project Indigo in 1960, was the first project of DRDO which was discontinued without any success.

Major Projects of DRDO

Integrated Guided Missile Development Programme

- ❖ It was a missile development programme conducted in early 1980s and 2007 for the development of a comprehensive range of missiles.
- ❖ Missiles under IGMDP include the Agni missile, Prithvi ballistic missile, Akash missile, Trishul missile, and Nag Missile

Pinaka: Multi-Barrel Rocket Launcher

- ❖ Pinaka is a multiple rocket launcher produced and developed by the DRDO for the Indian Army. The enhanced version has a range of 60 km and can fire 12 highly explosive rockets in 44 seconds.

BrahMos Missile

- ❖ BrahMos is a medium-range ramjet supersonic cruise missile that can be launched from air, water and land.
- ❖ It is developed by BrahMos Aerospace, which is a joint-venture between the India's DRDO and Russia's NPO Mashinostroyeniya.

Arjun MBT Mk 1A Tanks

- ❖ The Arjun Mk 1A main battle tank (MBT) was designed and developed by DRDO. It was an upgrade of the Arjun Mk 1 MBT

Rustom UAV

- ❖ Rustom is a medium-altitude long-endurance unmanned air vehicle (UAV) developed by DRDO for carrying out intelligence, surveillance, reconnaissance, target Acquisition/tracking and image exploitation.

First Dengue Vaccine Phase 3 Clinical Trial in India with Indigenous Dengue Vaccine, DengiAll

The Indian Council of Medical Research (ICMR) and Panacea Biotec have announced the initiation of the first-ever Phase 3 clinical trial for a dengue vaccine in India.



Key Points

- ❖ This landmark trial will evaluate the efficacy of India's indigenous tetravalent dengue vaccine, DengiAll, developed by Panacea Biotec.
- ❖ The first participant in this trial was Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences (PGIMS), Rohtak.

- ❖ Currently, there is no antiviral treatment or licensed vaccine against dengue in India. The development of an effective vaccine is complex due to the need to achieve good efficacy for all four serotypes. In India, all four serotypes of Dengue virus are known to circulate or co-circulate in many regions.
- ❖ The tetravalent dengue vaccine strain (TV003/TV005), originally developed by the National Institutes of Health (NIH), USA, has shown promising results in preclinical and clinical trials worldwide.
- ❖ In collaboration with ICMR, Panacea Biotec will conduct the Phase 3 clinical trial across 19 sites in 18 States and Union Territories of India, involving more than 10,335 healthy adult participants.

Background:

- ❖ Dengue is a major public health concern in India, ranking among the top 30 countries with the highest incidence of the disease. The global incidence of dengue has been steadily increasing over the past two decades, with more than 129 countries reporting dengue viral disease by the end of 2023, according to the World Health Organization (WHO). In India, approximately 75-80% of infections

are asymptomatic, yet these individuals can still transmit the infection through the bite of Aedes mosquitoes. Among the 20-25% of cases where symptoms are clinically apparent, children are at a significantly higher risk of hospitalization and mortality.

Dengue or backbone fever

- ❖ Tropical viral disease spread by female Aedes aegypti and other related species. Once infected mosquito remains infective for life.
- ❖ **Pathogen:** Flavivirus or Toga virus with single-stranded RNA.
- ❖ Incubation period: 3 - 8 days.
- ❖ **Transmission:** By the bite of Aedes aegypti.

Symptoms:

- ❖ In classical dengue
 - High fever, headache, severe pain in joints, nausea, vomiting, and rashes on chest and upper limbs.
- ❖ In hemorrhagic dengue
 - All symptoms of classical dengue and bleeding through skin, gums, gastro-intestinal tract.

Treatment

- ❖ Prevention by elimination of mosquitoes.
- ❖ Can be detected by tourniquet test.

India Celebrates First National Space Day On August 23

India became the fourth country to land on the moon and the first to reach its southern polar region on August 23 last year. To honour this landmark achievement, Prime Minister Narendra Modi announced August 23 as “National Space Day.”



Key Point

- ❖ India is celebrating its maiden National Space Day on August 23 with the theme “Touching Lives while Touching the Moon: India’s Space Saga.”
- ❖ Preceding Space Day, a myriad of events will unfold, highlighting India’s remarkable achievements in space, profound benefits to society, and boundless opportunities for people from all walks of life to engage with the Indian space program.
- ❖ These celebrations will culminate in the main event in New Delhi on August 22-23. A distinguished scientist of ISRO and Director of the U R Rao Satellite Centre in Bengaluru.

Neelakurinji becomes a 'threatened species

Neelakurinji (*Strobilanthes kunthiana*), the purplish flowering shrub, which blooms once in 12 years, has been included on the IUCN (International Union for Conservation of Nature) official Red List of threatened species.



Key Points

- ❖ This is the first-ever Global Red List assessment for this flagship species of the montane grasslands of southwest India.
- ❖ The latest global assessment confirms its threatened status in the Vulnerable (Criteria A2c) category of the IUCN.
- ❖ The mass blooming of the flower is a huge tourist attraction. The blooming was reported recently, though not in a vast spread, at Peerumade in Idukki.
- ❖ Neelakurinji is threatened mainly due to its fragile habitat in the montane high altitude grasslands that has been under pressure of conversion for tea and softwood plantations, and urbanisation.

- ❖ The actual area of occupancy of Neelakurinji is 220 sq km and extent of occurrence is 25,510 sq km. The species has 34 subpopulations within 14 ecoregions of the high-altitude mountain ranges of southwest India.

Strobilanthes kunthiana is an endemic shrub of three-meter heights, seen only in the high-altitude shola grassland ecosystems of five mountain landscapes of southwest India at an elevation of 1,340–2,600 m. Known for their massive blooming, they impart purplish-blue colours to the mountain grasslands and are popularly known as Neelakurinji (Blue *Strobilanthes*) blooms. They are semelparous with showy synchronous blooming and fruiting at every 12 years at the end of the life cycle, which has been reported since 1832.

North India's largest floating solar project commissioned in MP's Omkareshwar

One of the first solar plants, which is a part of India's biggest and one of the world's largest 600MW floating solar power park over Omkareshwar dam, with a 90 MW capacity, has been commissioned.



Key Points

- ❖ It is a **India's largest floating solar project** in central and north India.
- ❖ In the first phase, a total of **278 MW** capacity floating solar power plants over Omkareshwar dam is being built. Of this 278 MW, NHDC has to develop a plant with 88 MW capacity, AMP Energy will develop a 100 MW plant, and 90 MW was allotted to SJVN, a Schedule A, CPSU under the Ministry of Power.
- ❖ SJVN's 90 MW plant was completed and commissioned on August 8.
- ❖ The 600 MW floating power plant is being built in two phases. The first phase comprises a 278 MW plant, and the remaining will be developed in the second phase.
- ❖ The project, once fully completed, will cover around a 12 square kilometer area over the Omkareshwar dam, said sources. The plant is expected to produce around 23 percent power against its installed capacity, which is higher for solar power stations as, on average, they produce 21% energy against their installed capacity.

Short News

- ❖ Union Minister for Jal Shakti, Shri C.R. Paatil, launched the Version 2.0 of the 'FloodWatch India' mobile application developed by the Central Water Commission (CWC), in New Delhi
- ❖ After the Indian men's hockey team won the bronze medal at the Paris Olympics, Hockey India Secretary General Bholu Nath Singh announced that PR Sreejesh will become the Junior India Hockey team's head coach.
- ❖ Archaeologists at Göbekli Tepe, an ancient site in Turkey, have discovered the world's oldest calendar,
- ❖ Governor and Chancellor Shri Mangubhai Patel has appointed Prof. Smita Sahasrabuddhe as the Vice Chancellor of Raja Mansingh Tomar Music and Arts University, Gwalior.
- ❖ NHPC Limited has announced the appointment of Shri Raj Kumar Chaudhary as its new Chairman & Managing Director.
- ❖ The European Space Agency's JUICE (JUperiter ICy moons Explorer) mission is set to attempt a groundbreaking Lunar-Earth flyby on August 19 and 20, 2024.
- ❖ The "Women and Men in India 2023" report, released by the Ministry of Statistics and Programme Implementation, projects that India's sex ratio will improve from 943 women per 1,000 men in 2011 to 952 women per 1,000 men by 2036.

- ❖ Odisha Naval Tata Hockey High-Performance Centre won the women's title in the Hockey India Junior Men and Women Academy Championship by defeating Roundglass Punjab Hockey Club Academy 5-3 in a penalty shootout.
- ❖ Indian airline Vistara (Tata SIA Airlines Limited) as the Best Airline in India / South Asia 2024.
- ❖ Ministry of Home Affairs (MoHA) has constituted 5-member committee headed by Ravi Gandhi, Additional Director General (ADG), Border Security Force (BSF) and Eastern Command of the Indian Army(IA) to monitor the current situation on Indo-Bangladesh Border (IBB).

Important Daily Current Affairs Question

1. The indigenous Dengue vaccine "DengiAll" was developed by which of the following organisations?

- (a) Serum institute of India
- (b) Panacea Biotec
- (c) Bharat biotech
- (d) Zydus cadila

Answer – (b)



2. North India's largest floating solar project commissioned at which of the following location?

- (a) Omkareshwar dam
- (b) Sardar sarovar dam
- (c) Hirakud dam
- (d) Bhakra Nagal dam

Answer – (a)

