
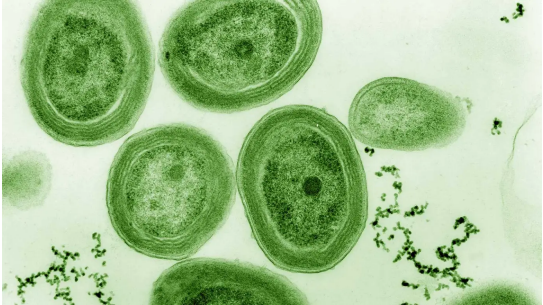




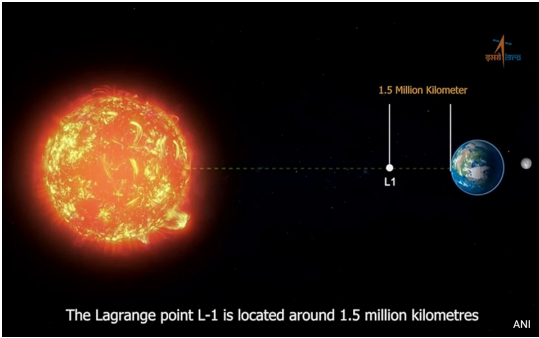
08 January 2024

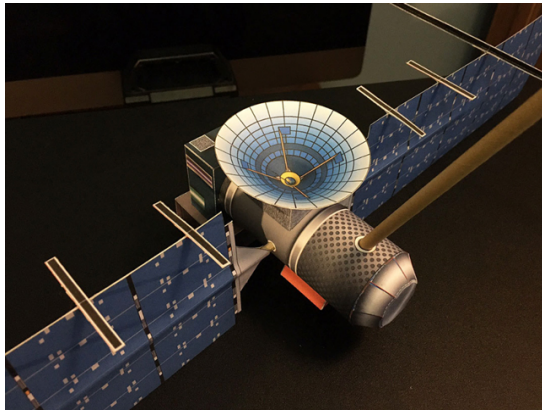
National and International News

<p>Indian Landslide Susceptibility Map</p> 	<p>Context</p> <ul style="list-style-type: none"> ● IIT-Delhi team makes first hi-res landslide risk map for India ● The 'Indian Landslide Susceptibility Map' is the first of its kind by virtue of being on a national scale in the country. ● The map and the researchers' study will be published in the journal Catena in its February 2024 issue. <p>Key points</p> <ul style="list-style-type: none"> ● Landslides are a unique and deadly problem. They are less widespread and harder to track and study with satellites. ● Landslides happen in localised areas and affect only about 1-2% of the country. ● The map acknowledged some well-known regions of high landslide susceptibility, like parts of the foothills of the Himalaya, the Assam-Meghalaya region, and the Western Ghats. ● It also revealed some previously unknown places with high risk, such as some areas of the Eastern Ghats, just north of Andhra Pradesh and Odisha.
<p>Oldest evidence of photosynthesis</p> 	<p>Context</p> <ul style="list-style-type: none"> ● A paper published in the journal Nature revealed that the oldest evidence of photosynthetic structures reported to date has been identified inside a collection of 1.75-billion-year-old microfossils. ● The discovery helps to shed light on the evolution of oxygenic photosynthesis. <p>Key points</p> <ul style="list-style-type: none"> ● Oxygenic photosynthesis is unique to cyanobacteria and related organelles within eukaryotes. ● It is in which sunlight catalyses the conversion of water and carbon dioxide into glucose and oxygen.
<p>Centre notifies revised rules for</p>	<p>Context</p>



Daily Current Affairs Encyclopedia

<p>quality control of pharma products</p>	<ul style="list-style-type: none"> The Union Health Ministry notified revised rules under Schedule M of the Drugs and Cosmetics Rules, 1945. It aimed at ensuring robust quality control for pharma and biopharmaceutical products. <p>Key points</p> <ul style="list-style-type: none"> Schedule M prescribes the Good Manufacturing Practices (GMP) for pharmaceutical products and the revised Schedule M has been notified as rules to ensure that GMP is adhered to and requirements of premises, plant, and equipment for pharmaceutical products are met. The GMP is the mandatory standard that builds and brings quality into a product by way of control of materials, methods, machines, processes, personnel, facility/environment and so on. GMP was first incorporated in Schedule M of the Drugs and Cosmetics Rules, 1945 in 1988 and was last amended in June 2005. With the amendment, the words ‘Good Manufacturing Practices’ (GMP) have been replaced with ‘Good Manufacturing Practices and Requirements of Premises, Plant and Equipment for Pharmaceutical Products’.
<p>Aditya-L1</p> 	<p>Context</p> <ul style="list-style-type: none"> The Indian Space Research Organisation (ISRO) has placed the Aditya-L1 spacecraft in a halo orbit around the Lagrangian point (L1). India’s maiden solar mission, Aditya-L1, reached the L1 point, 127 days after it was launched on September 2, 2023. <p>Key points</p> <ul style="list-style-type: none"> Aditya-L1 is the first space based observatory class Indian solar mission to study the Sun from a substantial distance of 1.5 million kilometers. It will take approximately 125 days to reach the L1 point. The mission aims to provide valuable insights into the solar corona, photosphere, chromosphere, and solar wind. The primary objective of Aditya-L1 is to gain a deeper understanding of the Sun’s behavior, including its radiation, heat, particle flow, and magnetic fields, and how they impact Earth.
<p>Europa Clipper</p>	<p>Context</p>



- Europa Clipper is a **robotic solar-powered spacecraft** built to conduct the first detailed investigations of **Jupiter's icy moon Europa**.
- The spacecraft will orbit Jupiter and make nearly **50 flybys of Europa** to determine whether there are places below Europa's surface that could support life.
- Europa Clipper will launch in **October 2024** on a SpaceX Falcon Heavy rocket from Kennedy Space Center in Florida.
- The spacecraft will fly by **Mars**, then back by **Earth**, using the gravity of each planet to increase its momentum.
- These so-called "**gravity assists**" will provide Europa Clipper with the velocity needed to reach Jupiter in 2030.

Goal:


- After it begins orbiting Jupiter, Europa Clipper will spend about a year altering its trajectory to prepare for its first Europa flyby.
- The spacecraft will then spend about three years soaring past Europa dozens of times and sending data back to Earth.
- Over the course of the mission, the spacecraft will investigate nearly the entire moon.

Europa Clipper Fast Facts

- With its solar arrays deployed, Europa Clipper **spans more than 100 feet (about 30 meters) – about the length of a basketball court**.
- The spacecraft has **24 engines**.
- Europa Clipper will orbit Jupiter and make nearly **50 flybys of Europa**.
- The spacecraft has 9 dedicated science instruments, plus gravity/radio science.
- At launch, Europa Clipper will weigh approximately **13,000 pounds (6,000 kilograms)**. **Nearly 6,000 pounds (2,750)** will be propellant.



Kerala Regional News

<p>Medical colleges to get emergency medicine and trauma care wings</p>	<p>Context:</p> <ul style="list-style-type: none"> • Emergency medicine and trauma care wings will be started in seven more medical colleges in the state • They will be launched at the medical colleges in Kollam, Konni, Alappuzha, Idukki, Ernakulam, Thrissur and Manjeri. • Each college will get one each post of associate professor and assistant professor and two senior resident posts.
<p>Kuttanad's paddy fields are undergoing a generational shift</p>	<p>Context:</p> <ul style="list-style-type: none"> • The farming sector in Kuttanad is experiencing a generational shift as nearly 1,500-2,000 farmers in Kuttanad shifted to Pournami last season. • After two decades of constant use, the paddy variety Uma (MO 16) is making way for Pournami (MO 23), developed by the Regional Rice Station (RRS) of the Kerala Agricultural University, Mankombu. • The seed is gaining popularity as it has a lower maturity period and weighs more than other varieties. • It is being cultivated on about 2,500-3,000 acres this pancha season. <p>Did you Know?</p> <ul style="list-style-type: none"> • Kuttanad is also called as the rice bowl of Kerala
<p>Kerala Award presented to V S Achuthanandan</p> 	<p>Context:</p> <ul style="list-style-type: none"> • The first Kerala Award instituted by Kerala State Karshaka Thozhilali Union (KSKTU) was given to veteran Communist leader and former CM V S Achuthanandan at a function held at Tagore Centenary Hall • This award recognizes Achuthanandan's lifelong dedication to the welfare of laborers and his significant contributions to the political and social landscape of Kerala.
<p>Kerala youth's novel device to ensure clean water in hinterland</p>	<p>Context:</p> <ul style="list-style-type: none"> • A 26-year-old Adarsh P Kumar has developed a cost-effective, solar-powered device that can be affixed to water pipelines and taps to distribute purified drinking water.



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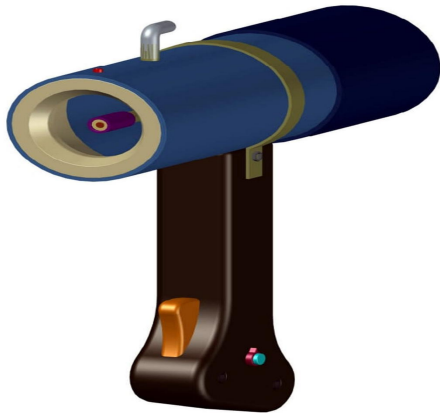


- He launched his startup, Hydronest, in August 2023 to supply drinking water to the hinterlands.

About:

- The startup has signed a memorandum of understanding (MoU) with Thiruvananthapuram-based Central government institution CSIR-NIIST (Council of Scientific and Industrial Research-National Institute for Interdisciplinary Science and Technology) to co-develop the device

Electrostatic sprayer developed by KAU scientists gets patent



Context:

- A novel electrostatic sprayer developed by a group of scientists from Kerala Agricultural University (KAU) has received a patent.

About:

- This electrostatic sprayer was developed by Dipak Suresh Khatawkar
- The sprayer charges pesticide droplets, attracting them directly to target surfaces like leaves and stems, minimizing drift and reducing overall chemical usage.

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