



07 November 2024

National and International News

<p><b>INDIA- VIETNAM JOINT MILITARY EXERCISE VINBAX</b></p>	<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>The <b>5th edition of the Vietnam-India Bilateral Army Exercise (VINBAX) 2024</b> commenced on November 4, 2024, at Ambala, Haryana.</li> </ul> <p><b>Key points:</b></p> <ul style="list-style-type: none"> <li>This edition marks a significant increase in scope with Bi-Service level participation for the first time by personnel of the Army and Air Force from both countries.</li> <li>The exercise will be held from November 4 to 23 at <b>Ambala and Chandimandir</b>.</li> <li>The aim of VINBAX is to enhance the joint military capability of both countries.</li> </ul>
<p><b>Europe's Proba-3 mission to arrive in India for launch aboard PSLV-XL by Isro</b></p>	<p><b>Context:</b></p> <ul style="list-style-type: none"> <li><b>Europe's Proba-3 mission</b>, comprising two satellites, is set to <b>arrive in India for its launch aboard ISRO's PSLV-XL</b> rocket in December 2024.</li> <li>The mission aims to <b>study the Sun's corona</b> by creating an artificial solar eclipse, allowing for continuous observation of this crucial region.</li> <li>This <b>collaboration between ESA and ISRO</b> marks a significant milestone in international space cooperation and showcases India's growing role in global space exploration.</li> </ul> <p><b>About:</b></p> <ul style="list-style-type: none"> <li><b>Proba-3</b> is a groundbreaking mission by the <b>European Space Agency (ESA)</b> aimed at demonstrating highly precise satellite formation flying.</li> <li>It comprises <b>two small satellites</b> that will separate and fly in tandem, creating an artificial solar eclipse to <b>study the Sun's faint corona</b>.</li> <li>This innovative approach allows for continuous observation of the corona, which is usually only visible during brief moments of total solar eclipses.</li> <li>The mission will also validate advanced technologies like relative GPS navigation and autonomous formation flying, paving the way for future complex space missions</li> </ul>
<p><b>IL-35-Mediated Immunotherapy</b></p>	<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>Researchers have discovered a specific <b>protein called</b></li> </ul>



	<p><b>IL-35 that can protect the immune system</b> by lowering particular immune cells that produce inflammatory chemicals.</p> <ul style="list-style-type: none"> <li>• This, in turn, <b>reduces pancreatic cell infiltration</b>, a key contributor in type 1 and autoimmune diabetes mellitus.</li> <li>• <b>IL-35 presents a novel treatment option for diabetes</b>, offering hope for the growing global diabetes epidemic, especially among children and adolescents in developing countries.</li> </ul> <p><b>IL-35:</b></p> <ul style="list-style-type: none"> <li>• <b>Interleukin-35 (IL-35)</b> is a recently discovered cytokine with potent immunosuppressive properties. It plays a crucial role in maintaining immune tolerance and preventing autoimmune diseases.</li> <li>• IL-35-mediated immunotherapy is an emerging field that aims to harness the power of this cytokine to treat various immune-related disorders.</li> </ul> <p><b>How it Works:</b></p> <ul style="list-style-type: none"> <li>• IL-35 promotes the generation and function of regulatory T cells (Tregs), a specialized subset of T cells that suppress immune responses.</li> <li>• It inhibits the activation and proliferation of inflammatory T cells.</li> <li>• It reduces the production of pro-inflammatory cytokines.</li> </ul> <p><b>Diabetes:</b></p> <ul style="list-style-type: none"> <li>• Approximately 1 in 10 adults worldwide have diabetes, and over 90% of them have type 2 diabetes.</li> <li>• There are <b>two main types of diabetes: type 1 and type 2</b>.</li> <li>• <b>Type 1 diabetes:</b> It is an autoimmune disease that causes the body to attack and destroy the insulin-producing cells in the pancreas.</li> <li>• <b>Type 2 diabetes:</b> It is the most common form of diabetes and is caused by a combination of genetic and environmental.</li> </ul> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• <b>World Diabetes Day</b> was established in 1991 by the International Diabetes Federation (IDF) with support from the World Health Organization (WHO).</li> <li>• It became an official United Nations Day in 2006.</li> </ul>
Aditya-L1	<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>• The <b>first significant results from the Visible Emission Line Coronagraph (VELC)</b> payload onboard <b>India's Aditya-L1 solar mission</b> have been unveiled.</li> <li>• The <b>VELC instrument successfully captured data</b> allowing scientists to estimate the precise onset time of a</li> </ul>



# Daily Current Affairs Encyclopedia

	<p>coronal mass ejection (CME) from the Sun.</p> <p><b>About:</b></p> <ul style="list-style-type: none"> <li>● <b>Aditya-L1 is India's first space-based mission to study the Sun.</b></li> <li>● It was launched by the Indian Space Research Organisation (ISRO) on September 2, 2023, and is positioned in a halo orbit around the Lagrange point 1 (L1) of the Sun-Earth system, approximately 1.5 million kilometers from Earth.</li> </ul> <p><b>Key Objectives:</b></p> <ul style="list-style-type: none"> <li>● <b>Study of the Sun's atmosphere:</b> Aditya-L1 carries seven payloads to observe the Sun's chromosphere and corona, focusing on solar activities and their impact on space weather.</li> <li>● <b>Real-time monitoring:</b> Its location at L1 provides continuous viewing of the Sun without any interruptions, enabling real-time monitoring of solar activities.</li> </ul>
<p><b>Global cleantech market to grow to \$2 trillion by 2035</b></p>	<p><b>Context:</b></p> <ul style="list-style-type: none"> <li>● The <b>global clean technology market</b> is set to experience significant growth, <b>reaching a value of \$2 trillion by 2035.</b></li> </ul> <p><b>Key points:</b></p> <ul style="list-style-type: none"> <li>● This surge is driven by increasing global focus on sustainability and the transition towards renewable energy sources.</li> <li>● Key clean technologies such as solar energy, wind power, electric vehicles, and battery storage are expected to play a major role in this growth.</li> <li>● This expansion presents substantial opportunities for businesses, investors, and policymakers alike, while also posing challenges related to supply chain management, technological advancements, and policy frameworks</li> </ul>

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