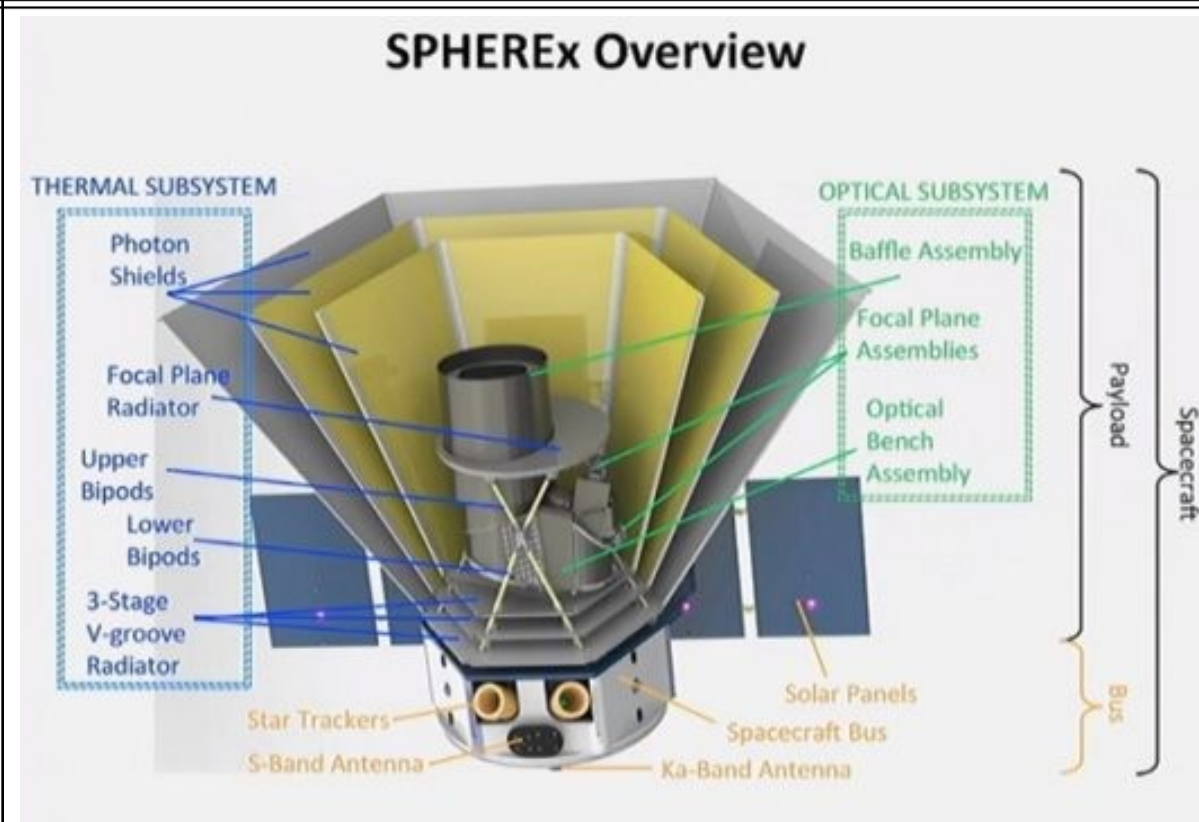




4 Mar 2025

National and International News

SPHEREx	<p>Why in news?</p> <ul style="list-style-type: none"> • NASA is set to launch the SPHEREx space telescope on March 4 aboard a SpaceX Falcon 9 rocket from California. • The megaphone-shaped observatory will explore the aftermath of the Big Bang and search the Milky Way for water, essential for life. <p>Key Points:</p> <ul style="list-style-type: none"> • SPHEREx stands for Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer. • Launched By: NASA (National Aeronautics and Space Administration). • Aim of SPHEREx: <ul style="list-style-type: none"> ○ Study Cosmic Inflation: Investigate the rapid expansion of the universe after the Big Bang. ○ Map Galaxies: Survey over 450 million galaxies to understand their distribution and evolution. ○ Search for Water and Organic Molecules: Identify reservoirs of water and life-essential molecules in the Milky Way. ○ Create a 3D Cosmic Map: Develop a detailed map of the universe in 102 color bands. • Significance: <ul style="list-style-type: none"> ○ Insight into Cosmic Inflation: Helps scientists understand the universe's exponential expansion after the Big Bang. ○ Search for Life's Building Blocks: Detects water and organic molecules in star-forming regions and planetary systems. ○ Foundation for Future Missions: Provides data to guide upcoming space exploration projects. ○ Global Collaboration: Involves international partners like the Korea Astronomy and Space Science Institute.
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<p>Cities Coalition for Circularity (C-3)</p>	<p>Why in news?</p> <ul style="list-style-type: none"> India launched the Cities Coalition for Circularity (C-3), a global alliance focused on city-to-city collaboration, knowledge sharing, and private sector partnerships to promote sustainable urban development. <p>Key Points:</p> <ul style="list-style-type: none"> It is a multi-nation alliance for city-to-city collaboration, knowledge-sharing, and private sector partnerships. It is a critical platform for policymakers, industry leaders, researchers, and development partners to discuss and implement sustainable solutions for waste management and resource efficiency as economies in the Asia-Pacific region Role – It will act as a catalyst for resource efficiency and a low-carbon economy, strengthening collaboration between policymakers, industry leaders, and researchers to build a sustainable future.
<p>Production-Linked Incentive (PLI) scheme</p>	<p>Why in news?</p> <ul style="list-style-type: none"> In a bid to boost industrial growth, the government has substantially raised budget allocations for key sectors under the PLI Scheme for 2025-26, reinforcing its commitment to strengthening domestic manufacturing. <p>Key Points:</p>



Daily Current Affairs Encyclopedia


	<ul style="list-style-type: none"> • The PLI scheme was launched (in March, 2020) to boost India's domestic manufacturing base and enhance its global supply chain contribution. • Objective: Covering 14 sectors, the scheme aims to create significant employment opportunities and drive industrial capital expenditure (capex). • Under the PLI scheme, eligible companies receive financial incentives based on their incremental sales from products manufactured in India. • These incentives encourage companies to invest in upgrading their manufacturing capabilities, adopting modern technologies, and expanding their production capacities. • How is PLI different from other traditional subsidies? <ul style="list-style-type: none"> ○ Only limited sectors are eligible: The scheme has the potential to attract maximum investments and scale rapidly to provide the maximum returns in terms of incremental production, employment, and export. ○ Time-bound pre-committed levels of investment and productions: Hence, cannot be called a subsidy scheme. ○ Focus on supporting upcoming technologies: That can be commercialised at a large scale like advanced chemistry cell batteries, electronic and technology products.
<p>Species in news: Gangetic Dolphin</p>	<p>Why in news?</p> <ul style="list-style-type: none"> • A report by the Environment Ministry on World Wildlife Day stated that there are 6,324 Ganges river dolphins and three Indus river dolphins. • The survey, which began in 2021, covered 8,507 km and recorded 3,275 dolphins in the Ganga's main stem, 2,414 in its tributaries, 584 in the Brahmaputra's main stem, 412 in its tributaries, and 101 in the Beas river. <p>Key Points:</p> <ul style="list-style-type: none"> • It is a freshwater species and one of the few river dolphins found in the world. • It inhabits the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. • Common Names: Blind dolphin, Ganges dolphin, Ganges susu, hihu, side-swimming dolphin, South Asian River Dolphin • Scientific name: <i>Platanista gangetica</i> • The Gangetic Dolphin has been recognized as India's National Aquatic Animal. • Conservation status: <ul style="list-style-type: none"> ○ IUCN: Endangered ○ Wildlife (Protection) Act: Schedule-I ○ CITES: Appendix I



Deep dive
The first estimate of Gangetic dolphins in India has found 6,327 of them in the Ganga and its tributaries



6,324 Ganges river dolphins | **Three** Indus river dolphins

DISTRIBUTION

3,275 Ganga main stem	2,414 Ganga tributaries	584 Brahmaputra main stem
412 Brahmaputra tributaries	101 Beas river	

The survey started in 2021 and covered **8,507 km**

Uttar Pradesh has the most dolphins, followed by Bihar, West Bengal, and Assam

<p>Blue Ghost Mission</p>	<p>Why in news?</p> <ul style="list-style-type: none"> • Firefly Aerospace's Blue Ghost lunar lander has successfully touched down on the Moon's Mare Crisium region after a nerve-wracking powered descent. <p>Key Points:</p> <ul style="list-style-type: none"> • Blue Ghost, developed by Firefly Aerospace, is carrying 10 NASA payloads as part of the Commercial Lunar Payload Services (CLPS) program, which aims to stimulate lunar commerce through private-sector competition. • The Blue Ghost mission aims to enhance our understanding of the lunar environment. • The lander carries a vacuum to collect lunar soil samples and a drill capable of measuring temperatures up to 10 feet (3 meters) below the surface. • Objectives: <ul style="list-style-type: none"> ○ The lander will study heat flow from the Moon's interior, helping scientists understand its thermal evolution. ○ It will analyse plume-surface interactions to improve landing techniques by examining how lunar regolith reacts to the lander's engine plumes. ○ By collecting data on the Moon's magnetic and electric fields, researchers will gain insights into its geological history. ○ The lander will operate for approximately 14 Earth days, equivalent to one complete lunar day, conducting scientific investigations and technology demonstrations.
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<p>Transforming Relationship Utilizing Strategic Technology (TRUST) initiative</p>	<p>Why in news?</p> <ul style="list-style-type: none"> • A top US official's visit to India aims to operationalize cooperation in critical minerals and academic exchanges. • This visit follows Prime Minister Narendra Modi's trip to Washington , where India and the US launched the Transforming Relationship Utilizing Strategic Technology (TRUST) initiative. <p>Key Points:</p>
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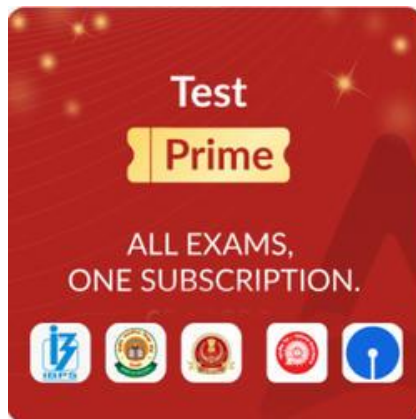


Daily Current Affairs Encyclopedia

- India and the United States launched the Transforming Relationship Utilizing Strategic Technology (TRUST) initiative to enhance bilateral cooperation in critical and strategic minerals, advanced materials, and pharmaceuticals.
- **Key Objectives:**
 - **Reducing Barriers to Technology Transfer** – Streamlining regulations to facilitate innovation and trade.
 - **Addressing Export Controls** – Ensuring smoother commercial exchange of strategic resources.
 - **Enhancing High-Tech Commerce** – Strengthening collaboration in cutting-edge sectors.

About Critical Minerals:

- A mineral is **critical when the risk of supply shortage and associated impact on the economy is (relatively) higher than other raw materials.**
- These minerals are essential for economic development and national security, and their lack of availability/ the concentration of extraction/ processing in a few geographical locations could potentially lead to supply chain vulnerabilities.
- **In July 2023, released a list of 30 critical minerals for India.**
 - These minerals are Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, PGE, Phosphorous, Potash, REE, Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium and Cadmium.



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