



CURRENT AFFAIRS



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ARTEMIS ACCORD

This article covers "Daily Current Affairs" and the topic details "Artemis Accord". The topic "Artemis Accord" has relevance in the Science and Technology section of the UPSC CSE exam.

Relevance:

For Prelims:

What is the Artemis Accord?

What is the Artemis Programme?

For Mains:

GS 3: Science and Technology

Principles of the Artemis Accords?

Benefits for India in joining Artemis Accords?

Why in the news

In a decision that will bring the two countries' space programmes closer than ever before, India on Thursday signed on to the three-year-old Artemis Accords, a US-led alliance seeking to facilitate international collaboration in planetary exploration and research

What is the Artemis Accord?

The Artemis Accords are a set of principles and guidelines established by NASA, the United States space agency, for international cooperation in lunar exploration and space exploration missions. These accords aim to create a framework for responsible and sustainable exploration of the Moon, with the ultimate goal of establishing a long-term presence on the lunar surface.

Artemis Programme of NASA:

The Artemis program, initiated by NASA, has set ambitious goals for human space exploration, specifically targeting a manned mission to the moon by 2024. One of the notable objectives of the program is to achieve a historic milestone by sending the first woman and the first person of color to the lunar surface.

The primary purpose of the Artemis program is not only to advance scientific knowledge but also to generate economic advantages and stimulate technological innovations. By returning to the moon, NASA aims to unlock new discoveries, conduct in-depth research, and develop sustainable exploration capabilities that could potentially benefit various industries on Earth.

Principles of the Artemis Accords include:

- **Peaceful Purposes:** The accords affirm that cooperative activities in space should be for peaceful purposes, in line with the Outer Space Treaty and international law.

- **Transparency:** Signatory nations commit to sharing information about their national space policies and exploration plans in accordance with their respective rules and regulations, promoting openness and collaboration.
 - **Interoperability:** The accords emphasize the importance of interoperability among participating nations to ensure safe and efficient space exploration operations.
 - **Emergency Assistance:** Signatories pledge to provide necessary assistance to personnel in distress in outer space, acknowledging their obligations under the Agreement on the Rescue of Astronauts and the Return of Objects Launched into Outer Space.
 - **Registration of Space Objects:** The accords underscore the significance of appropriate registration of space objects to mitigate the risks of interference and promote responsible space activities, aligning with the obligations of the Registration Convention.
 - **Release of Scientific Data:** Participating countries commit to sharing scientific data with the global community in a timely and transparent manner, fostering international collaboration and advancing scientific knowledge.
 - **Protecting Heritage:** The accords recognize the importance of preserving historically significant human or robotic landing sites, artifacts, spacecraft, and other elements of exploration that hold cultural and historical value.
 - **Space Resources:** Utilizing space resources in a manner compliant with the Outer Space Treaty and beneficial to humanity is considered crucial for sustainable space operations, recognizing the potential of resource utilization.
 - **Deconfliction of Activities:** Signatories are required to provide notifications of their space activities, including the location and nature of operations, and coordinate with relevant actors to prevent harmful interference. These coordinated areas are referred to as "safety zones."
 - **Orbital Debris and Spacecraft Disposal:** The accords emphasize the importance of mitigating orbital debris and safely disposing of spacecraft to maintain a safe space environment and promote sustainable operations.
- These principles form the foundation for international cooperation and responsible space exploration among the signatory nations of the Artemis Accords.

Benefits for India in joining Artemis Accords:

- **Technological Advancements:** By participating in the Artemis program, India can access advanced technologies and expertise in space exploration. Collaboration with other member nations can facilitate knowledge-sharing and foster technological advancements in areas such as spacecraft design, propulsion systems, lunar surface operations, and resource utilization.
- **Scientific Discoveries:** Joining the Artemis Accords provides India with opportunities to contribute to scientific research and discoveries on the moon and beyond. Participation in lunar missions can enable Indian scientists and researchers to conduct experiments, collect data, and analyze samples, leading to new insights into lunar geology, resource potential, and the origin of the moon.
- **Economic Opportunities:** The Artemis program offers potential economic benefits for India. As space exploration evolves, there is growing interest in space tourism, resource extraction, and commercial activities. India's involvement in lunar missions can open doors for Indian industries to participate in space-related ventures, including the development of advanced technologies, manufacturing of space hardware, and provision of satellite services.
- **International Collaboration:** Joining the Artemis Accords allows India to strengthen its ties with other spacefaring nations and participate in international collaborations. This collaboration can enhance India's standing in the global space community, promote diplomatic relations, and foster partnerships in space research, technology transfer, and joint missions.
- **Capacity Building:** Participation in the Artemis program can significantly contribute to building India's space capabilities and expertise. Collaborating with other nations can provide opportunities for Indian scientists, engineers, and astronauts to gain valuable experience, share best practices, and develop skills in areas such as mission planning, spacecraft operations, and space medicine.
- **Inspiration and Education:** India's involvement in the Artemis program can inspire and motivate the country's youth to pursue careers in science, technology, engineering, and mathematics (STEM) fields. The achievements and discoveries made through the program can serve as a catalyst for scientific curiosity, innovation, and the development of a skilled workforce in India's space sector.

By joining the Artemis Accords, India can position itself as a key player in the global space exploration landscape, contributing to scientific knowledge, technological advancements, and economic growth. It offers an opportunity for India to collaborate, learn, and contribute to the collective efforts of humanity in expanding our understanding of the universe and pushing the boundaries of space exploration.

Source:

<https://indianexpress.com/article/world/coming-artemis-accords-isro-nasa-mission-8680033/>

Q.1 Which of the following statements about the Artemis Accords is correct?

- (a) The Artemis Accords are legally binding agreements among nations for the peaceful use of outer space.
- (b) The Artemis Accords aim to land humans on Mars by 2024.
- (c) The Artemis Accords were established by NASA in collaboration with seven other founding member nations.
- (d) The Artemis Accords prioritize national competition and discourage international cooperation in space exploration.

Answer: (c)

Q.2 Which agency is leading the Artemis program for lunar exploration?

- (a) National Aeronautics and Space Administration (NASA)
- (b) European Space Agency (ESA)
- (c) Roscosmos (Russian space agency)
- (d) China National Space Administration (CNSA)

Answer: (a)

Q.3 Discuss the potential benefits and challenges of India's collaboration with the Artemis program for lunar exploration.

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