



## India Joins Artemis Accords

**For Prelims:** [Artemis Accords](#) , [International Space Station](#), [Outer Space Treaty of 1967](#), [United Nations, Space Launch System](#), [Chandrayaan-3 mission](#), [Gaganyaan](#)

**For Mains:** Missions under the Artemis Program

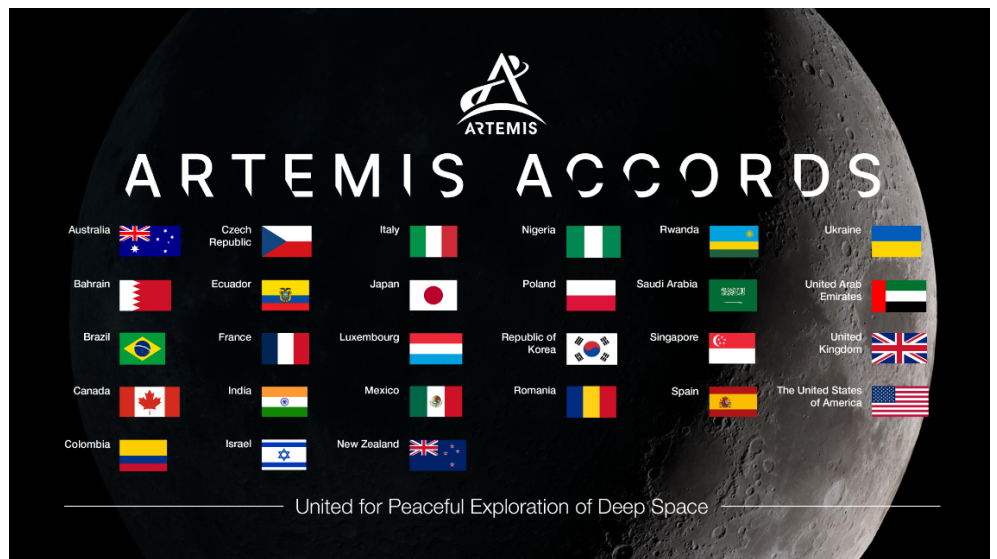
### Why in News?

Recently, India's Prime Minister announced **India's decision to join the [Artemis Accords](#)** during the visit to the United States.

- [National Aeronautics and Space Administration \(NASA\)](#) and [Indian Space Research Organisation \(ISRO\)](#) **will collaborate** to send Indian astronauts, trained at the Johnson Space Center in Houston, Texas, to the [International Space Station \(ISS\)](#) in 2024.

### What are Artemis Accords?

- **About:**
  - **Artemis Accords** are established by the **U.S. State Department and NASA with seven other founding members: Australia, Canada, Italy, Japan, Luxembourg, the United Arab Emirates, and the United Kingdom** in 2020 for setting common principles to govern civil exploration and use of outer space, the moon, Mars, comets, and asteroids, for peaceful purposes.
  - It builds upon the foundation of the [Outer Space Treaty of 1967](#).
    - The Outer Space Treaty, a **multilateral pact under the [United Nations](#)**, serves as the foundation for international space law.
    - The treaty emphasizes space as a **shared resource for humanity, prohibits national appropriation, and encourages the peaceful use of space.**
- **Signatory Countries:** [//](#)



- India became the **27<sup>th</sup> country to sign the nonbinding Artemis Accords.**

- **Commitments under the Accords:**

- **Peaceful Purposes:** The signatories will implement memorandum of understanding (MOUs) between governments or agencies to **conduct space activities for peaceful purposes in accordance with international law.**
- **Common Infrastructure:** Signatories recognize the importance of common exploration infrastructure to enhance scientific discovery and commercial utilization.
- **Registration and Data Sharing:** Relevant space objects are registered, and scientific data is openly shared in a timely manner. **Private sectors are exempt unless acting on behalf of a signatory.**
- **Preservation of Heritage:** Signatories are **expected to preserve historic landing sites**, artifacts, and evidence of activity on celestial bodies.
- **Utilization of Space Resources:** Utilization of space resources should **support safe and sustainable activities and not interfere with other signatories' activities.** Information on location and nature must be shared to prevent interference.
- **Mitigation of Debris:** Signatories plan for the **safe disposal of spacecraft** and limit the generation of harmful debris.

## What are the Main Missions under the Artemis Program?

- **Artemis-I: Unmanned Mission to the Moon**

- The Artemis program began with the launch of the **spacecraft named "Orion"** on the [Space Launch System \(SLS\)](#) from NASA's Kennedy Space Center on **November 16, 2022.**
- The **SLS, a super heavy-lift launch vehicle**, carried Orion on a single mission directly to the moon.

- **Artemis-II: Crewed Lunar Flyby Mission:**

- Scheduled for 2024, **Artemis-II will mark the first crewed mission under the Artemis program.**
- **Four astronauts will be aboard the SLS** as it performs multiple maneuvers on an expanding orbit around Earth.
  - The mission will also **involve a lunar flyby and return to Earth.**

- **Artemis-III: Human Return to the Moon:**

- Set for 2025, **Artemis-III will mark a significant milestone in human space exploration** as astronauts return to the moon.
- This mission will go beyond the lunar flyby of Artemis-II, allowing astronauts to **land on the lunar surface and study the moon more extensively.**
- Also, the **establishment of a Lunar Gateway station is planned for 2029.** This station will serve as a docking point for astronauts and facilitate scientific research and experiments.

## What are the Benefits and Challenges for India Related to the Accord?

- **Benefits:**
  - India's participation in the **Artemis Accords facilitates access to advanced training, technological advancements, and scientific opportunities.**
  - India can leverage the Artemis programme to advance its own lunar exploration goals, such as the **Chandrayaan-3 mission.**
  - Collaborating with NASA would enhance **India's capabilities for the Gaganyaan human mission and future ambitious space missions.**
  - Also, India's **cost-effective missions and innovative approach will benefit the Artemis program,** promoting mutual advancements in space exploration.
- **Challenges:**
  - The **possibility of being seen as aligning with the U.S. against other major space powers,** such as **China and Russia,** who have their own plans for lunar exploration.
  - The **uncertainty over the legal status and implications of the Artemis Accords,** especially regarding the **provision that allows for unregulated mining on the moon and other celestial bodies.**
  - The need to balance its commitments under the Artemis Accords with its obligations under **other existing or emerging multilateral frameworks or treaties on outer space.**

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### Prelims

**Q. What is the purpose of the US Space Agency's Themis Mission, which was recently in the news? (2008)**

- (a) To study the possibility of life on Mars
- (b) To study the satellites of Saturn
- (c) To study the colourful display of high latitude skies
- (d) To build a space laboratory to study the stellar explosions

**Ans: (c)**

**Q. Consider the following statements: (2016)**

**The Mangalyaan launched by ISRO**

1. is also called the Mars Orbiter Mission
2. made India the second country to have a spacecraft orbit the Mars after USA
3. made India the only country to be successful in making its spacecraft orbit the Mars in its very first attempt

**Which of the statements given above is/are correct?**

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

**Ans: (c)**

### Mains

**Q.1** What is India's plan to have its own space station and how will it benefit our space programme? **(2019)**

**Q.2** Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socio-economic development? **(2016)**

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