



## India's Leap of Faith in Space: The Artemis Accords



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India's signing of the Artemis Accords has come as a surprise to many in the strategic community. This move will have far-reaching implications, which will become apparent once multiple entities land on the Moon and later on Mars. This alignment with the US-led initiative to rally allies towards a common vision for Moon and Mars exploration can be seen as India's preference to join a Western alliance in space rather than the China–Russia lunar exploration mission. It is also a follow-on to an earlier Quad statement to extend cooperation into space. With India joining the accords, all Quad members are on board.

The Artemis Accords were introduced by the US in 2020 as a strategy to reduce the potential for conflict in Moon exploration as space-faring states and private entities have stepped up their activities towards moon missions and, specifically, mineral exploration of the Moon and celestial bodies. India is the 27<sup>th</sup> nation to accede to the Artemis Accords. In many ways, the Artemis Accords have sown the seeds of disharmony while claiming to be a collaborative agreement towards achieving shared goals in space exploration.

These Accords are a set of principles, guidelines, and best practices that are to be followed for the safe exploration of the Moon and, eventually, other celestial bodies like Mars and asteroids. These principles are also an affirmation of the importance of the Outer Space Treaty of 1967. It must be noted that this is a non-binding treaty designed to guide civil space exploration by like-minded nations in the absence of consensus on the existing Moon Treaty, which was adopted by the United Nations (UN) in 1979.

The Artemis Accords may seem to be the right step towards a joint collaborative effort towards exploring the celestial bodies in space. However, many countries, including India, had deep concerns about entering into an agreement that was not a UN mandate. It is being seen as an attempt by the US to adopt backdoor policies for space governance when it is certain that Russia and China would vote against any such resolution in the UN. Importantly, the Moon Treaty of 1979 attempted to prevent national appropriation and commercial exploitation of resources on the Moon, and the Artemis Accords are, in some ways, attempting to achieve exactly the opposite.

### **What Goes Against the Artemis Accords**

The Artemis Accords have been poorly drafted, which leads to misinterpretations of the clauses contained in the articles. There is much left to the imagination, and one needs to read the fine print if it exists at all. In the present state, the text of the accords would not stand legal scrutiny. Though the accords have received an overwhelming response for advancing cooperation in space, there are some contentious issues, which are discussed below.<sup>1</sup>

- The principles stated in the Artemis Accords are intended for civil space activities. However, there is no means of ensuring military exclusion. The dual-use nature of space technology and space missions leaves room for covert military activity.
- Implementation of independent national policies, missions, and commercial activity on the Moon, Mars, and other celestial bodies, including in cislunar space, will have to abide by the Artemis Accords even if they are not constituents of the Artemis programme. This is to ensure safety and interoperability in operations. However, the other major operators in these areas will be Russia and China, which will not follow the Artemis principles.
- For the above missions, states are expected to maintain transparency through the dissemination of information on space exploration plans. While transparency is desirable, it has to be backed with some means of verification and punitive action. The non-binding nature of the accords makes transparency a difficult proposition.
- The section on peaceful purposes affirms that states party to the accords will conduct their activities for peaceful purposes. There is a need for more clarity in this regard, as the resources extracted from celestial bodies may be used for harmful purposes.

- In the section on interoperability, a member state is required to adhere to interoperability standards for equipment used on the Moon. It would be a de-facto submission to the equipment standards set by the US, and states will be constrained to procure only such systems that meet interoperability standards. This will severely constrain the domestic industry.
- Historical landing sites used in the US Apollo programme of the 1960s-70s have been given protected status and are to be treated as heritage sites by signatories to the accords. In a way, this amounts to a national appropriation of real estate on the Moon. A similar appropriation of land could also happen on Mars in the future.
- A major provision of the Artemis Accords, which has attracted much criticism, is for 'deconfliction of space activities.' This provision requires states to notify a 'safety zone' in areas where they are operating, to prevent harmful interference. There are no limitations in terms of duration for these safety zones. Furthermore, a safety zone, once established, can remain indefinitely until such time as a state or commercial entity is operating in that area. This section of the accords, therefore, clearly benefits the early birds in space exploration.
- The Artemis Accords have been drafted with a focus on activities to be conducted in support of the Artemis Program (Moon Mission), which is led by the United States and partnered with its allies. It would be unrealistic to expect all space-faring nations to join this treaty. As such, China and Russia have embarked on separate missions for Moon exploration.
- The Artemis Accords heavily favour US interests on the Moon and Mars. While India may gain short-term benefits, it will antagonise its long-standing relationship with Russia while distancing itself further from China.
- International law would not apply in all cases of arbitration for conflicting activities and disagreements on celestial bodies. It is also doubtful if any UN body or the International Court of Justice would have any jurisdiction to resolve cases of encroachment or harmful interference.
- Any future governance framework for human habitation on the Moon and Mars would be influenced by the practices established by the pioneering countries that will operate there. The provisions of the Artemis Accords may ultimately get adopted as a UN treaty, albeit under a different title.

## Why did India Decide to Join the Artemis Accords?

It is suspected that there was some trade-off as an incentive for India to accede to the Artemis Accords. However, there seems to be more reason for the decision. India's space programme has reached a turning point where all the traditional milestones have been achieved for India to be labelled a space power. What remains to be done can only be done through collaborations due to the gap in technology and financial considerations. Through the Artemis programme, which would be accessible by signing the Artemis Accords, India will have access to the exclusive technologies required for a successful interplanetary mission. Moreover, the nascent Indian space industry and start-ups will get an opportunity to participate in and benefit from the space exploration market.

Moreover, for India, there is no better alternative to consider. The International Lunar Research Station (ILRS), a joint venture of China and Russia, is impacted by the ongoing conflict in Ukraine and is suffering delays. China has invited international participation in its Moon programme, but considering India's relations with China, it would be unrealistic to think that India would join hands with China in space. Japan and India are collaborating on a joint Lunar Polar Exploration Programme (LUPEX). However, the objectives of this joint venture are limited. On the other hand, joining the Artemis Accords enables an opportunity for participation in the Artemis programme, which brings the promise of assured access to the Moon and its resources within this decade, if all goes well.

## Conclusion

In the absence of a global consensus on the Artemis Accords, they are likely to create more confusion than bring a rule-based order to the Moon and Mars. Treaties of this nature need to be under the UN umbrella with binding provisions, lest they give rise to situations that may result from misinterpretation. The US may have implemented a treaty through the Artemis Accords as a short route, but to be effective, there has to be acceptance of interoperability standards among the key space-faring nations and a fine-tuning of the terms of the accords through consultations. The contentious issues in the treaty need to be addressed, and there need to be serious efforts to get Russia and China on board the Artemis Accords, as they are the other two key players in space exploration. Broader global acceptance is essential, although, for the US, it is a matter of getting more signatory nations on board with the lure of giving opportunities through the Artemis programme. For most states aspiring for a place on the Moon, it is a tough choice between missing out on the opportunity to fast-track their Moon ambitions or being the early bird by accepting the

terms of the Artemis Accords and sharing the glory that comes with such missions. Owing to India's stature, its decision to join the Artemis Accords lends credibility to the US-led effort to streamline space exploration. It will make other states favourably consider joining the Accords if they have not yet. Despite the benefits of joining the Artemis Accords, India's decision to accede to such an agreement is premature.

*(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])*

## Notes:

<sup>1</sup> The Artemis Accords, NASA, <https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf>, accessed June 30,2023

