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India Signs the Artemis Accords

TH Anand Rao

Senior Fellow, Centre for Air Power Studies

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In a significant development during the recent visit of the Indian Prime Minister to the US, India signed the Artemis Accords on June 21, 2023. India is now the 27th signatory nation to the treaty. Other signatories to the Artemis Accords include major space powers like France, Japan, Israel, Brazil, the UAE, the United Kingdom, Canada, and Australia. It is noteworthy that Russia and China have not accepted these accords and have embarked on a joint moon mission.¹

The Artemis Accords were drafted and introduced by the US in 2020, together with seven other founding member nations, to foster safe and sustainable exploration of the Moon and other celestial bodies like Mars and beyond. These are a set of non-legally binding principles, statements, and best practices that have been derived from the Outer Space Treaty of 1967. They are aimed at international cooperation in space exploration and allowing all nations to benefit from the scientific data obtained in space, even those without space programs. The immediate objectives seem to be towards achieving a collaborative approach towards the Artemis Moon missions. For the US, international cooperation through partnerships with other space-capable nations and private companies is vital to the success of the Artemis programme. The benefits will be mutual for the countries that have signed the accords. This would allow participating states to have access to space exploration missions and the benefits accrued, most importantly for exploiting resources on the Moon when having their own solo moon missions would have been beyond reach.

The Artemis Accords will be followed by the signatory countries for all civil space activities that are to happen on celestial bodies like the Moon, Mars, and asteroids for mineral exploration, sample return, commercial activities, scientific research, human missions, including inhabitation, protection on historic landing sites, and deconfliction of activities. These rules will also apply to the control of activities in the orbital regions of the Moon and Mars, the occupation of Lagrange points in cislunar space, and transit between celestial bodies. The core of the accords consists of guidelines to prevent conflict on the Moon and Mars, which may arise with multiple Moon Missions being planned by countries like China, Russia, the US, India, Japan, and the European consortium. Safety of operation and m more importantly, prevention of conflict while protecting state interests on the Moon seem to be of immediate concern of the US.

The other provisions of the Artemis Accords include the underlying principle of peaceful purposes for all activities undertaken on the Moon and a reminder that the resources and real estate in space are not subject to national appropriation. To further these goals the Artemis Accords encourage members to have transparency in their activities and adopt international standards while striving to support interoperability with partner states. The Artemis Accords also urge members to commit to taking reasonable steps towards ensuring the provisions of the liability convention,

registration convention, and rescue agreement. In effect, the provisions of the basic space treaties have been extended to activities on the Moon and beyond. To prevent skirmishes and harmful interference between operators on the Moon, the accords have provided for the delineation of operating areas on the principle of a first-come, first-served basis where a safety zone is to be established.² This is a contentious provision that will see many debates.

The success of the Artemis Moon mission in the US may have been the trigger for the emergence of the Artemis Accords, but these accords are not the first and only means of regulating activity on the Moon. The 'Moon Treaty' or 'Moon Agreement' was adopted by the United Nations General Assembly in 1979 in 'Resolution 34/68.' However, this has not been ratified by either of the major space powers, like the US, Russia, or China. The reasons for the non-acceptance of the Moon Treaty are similar to those that prevailed for the Artemis Accords. Knowing well that Russia and China would not come on board, the US chose to forge an alliance of like-minded states with the Artemis Accords, which clearly favour American interests. The catalyst is clearly the Artemis Moon programme, whose success rests on partnerships with states that have a shared vision for the exploration of the Moon and Mars and the exploitation of their resources.

Meanwhile, Russia and China have embarked on a joint Moon mission. In June 2021, Russia and China announced plans for a joint International Lunar Research Station (ILRS), which is to be an inhabited research station at the south pole of the Moon. However, the war in Ukraine proved to have been a setback and seemed to have impacted their plans. China has opened its Moon missions to international participation. Sweden, France, and the European Agency have committed to experiments on the Chinese Chang'e missions to the Moon.³ Japan has also been active in Moon missions. They recently made a failed attempt at landing a rover on the Moon. Japan is now undertaking a joint venture with India to develop a spacecraft for the Lunar Polar Exploration Mission (LUPEX).⁴ Japan has also been the first to send a sample return mission to the asteroid 'Ryugu'. The mission spacecraft 'Hayabusa2' was launched in 2014, and it returned to Earth in 2020.⁵ India has also been active in the Moon missions with its Chandrayaan missions.

The US has been aggressively campaigning and rallying support for the Artemis Accords and getting partners on board. India's decision to join the Artemis Accords has been under consideration ever since its introduction. For India, it was a difficult choice as it goes against India's traditional approach of being non-aligned. But there were not many options. Being neutral or going with the Russia-China missions would mean an unpredictable delay. There is a need for swift action, especially when more and more space-faring states are vying for a share of resources on the Moon. Joining the Artemis Accords is seen as in the best interest of India's space ambitions. It is only

hoped that due diligence was done before signing on the dotted line. The Artemis Accords have farreaching implications that would unfold with human inhabitation of the Moon and Mars. Being an agreement that is not under the UN umbrella, India has taken a bold step by favouring a rule-based approach in outer space. As commercial and state-sponsored activity begins on the Moon and Mars, the inadequacy of the Artemis Accords will unfold. India needs to move ahead with cautious optimism in this new era of global competition in space.

Notes:

¹ "The Republic of India Signs the Artemis Accords", *US Department of State*, June 24, 2023, https://www.state.gov/the-republic-of-india-signs-the-artemis-accords/#:~:text=In%20a%20ceremony%20held%20at,sustainable%20and%20transparent%20space%20activity. Accessed June 24, 2023.

² "The Artemis Accords", *NASA*, October 13, 2020, https://www.nasa.gov/specials/artemis-accords/img/Artemis-Accords-signed-13Oct2020.pdf. Accessed June 24, 2023.

³ Jeffrey Kluger, "China Wants New Partners for Its Moon Missions as Its Relationship With Russia Cools", *Time*, September 30, 2022, https://time.com/6218389/china-russia-moon-missions. Accessed June 25, 2023.

⁴ "Lunar Polar Exploration Mission (LUPEX)", *JAXA SDGs*, March 31, 2023, https://sdgs.jaxa.jp/en/article/detail/13.html. Accessed June 25, 2023.

⁵ Keith Cooper, "Asteroid Ryugu contains material older than the planets, among the most primitive ever studied on Earth", *Space*, June 10, 2022, https://www.space.com/asteroid-ryugu-sample-older-than-planets. Accessed June 25, 2023