

PRACTICAL LAW
ARBITRATION BLOG



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The international legal framework for space mining is becoming less of an alien concept

The first mission of NASA's Artemis Program, Artemis 1, is scheduled to launch at 12.07am EST on Monday 14 November. The Artemis Program seeks, among other things, to re-establish a human presence on the moon for the first time since the Apollo 17 mission in 1972, as well as to establish sustainable exploration of the moon with both commercial and international partners by 2028. We may be at the beginning of what has been called the “lunar gold rush”, where natural resources in outer space will be explored **and** extracted. This, however, poses a legal dilemma. Who will have the property rights to these natural resources? Without an answer to that question, it will be difficult to assert legal rights over the assets derived from space. Once that question is answered, it will pave the way for a new field of disputes ideally suited for resolution by international *arbitration*.

The “constitution” for outer space activity

The valuable rare-earth metals that will be harvested as a result of the Artemis Program will be used to make modern day technology products, such as mobile phones and electric car batteries.

However, the foundational international treaty governing outer space activities was signed over 50 years ago. *The Outer Space Treaty 1967*, which has been ratified by 110 countries, is sometimes thought of as the “constitution” for outer space activity.



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At article I, the Outer Space Treaty establishes that the exploration of outer space “shall be carried out for the benefit and in the interests of all countries” and “shall be the province of all mankind”. It follows that “*outer space* [...] shall be free for exploration and use by all States” but, pursuant to article II of the treaty, “the moon and other celestial bodies” are “not subject to national appropriation by claim of sovereignty, by means of occupation, or by any other means.”

Four other treaties were established in the 1960s and 1970s, the most notable in this context being the [Moon Agreement 1979](#). In article 11, the Moon Agreement set out, in less equivocal terms than those found in article 1 of the Outer Space Treaty, a prohibition on the moon’s resources becoming the property of any state, non-governmental agency or natural or legal person. It may be for this reason that the Moon Agreement has only been ratified by 18 countries and by none of the major space-faring nations.

The Artemis Accords and the “Building Blocks”: a giant leap for the codification of space property rights?

The Artemis Accords are a series of [bilateral agreements](#) between the US government and other world governments participating in the Artemis Program. They do not constitute binding or authoritative international law, but they do set out a legal framework which reinforces and builds upon the Outer Space Treaty.

Notably, the Artemis Accords state that “the extraction of space resources does not inherently constitute national appropriation under article II of the Outer Space Treaty”. In other words, the Artemis Accords allows for the possibility that resources could be extracted from space without violating the Outer Space Treaty’s prohibition against national appropriation.

The Artemis Accords align with the recommendations of the “Building Blocks for the Development of an International Framework on Space Resource Activities” adopted by the Hague International Space Resources Governance Working Group in 2019. In section 8.1, the Building Blocks provide that the international framework envisaged thereunder should ensure that rights over extracted space resources, as well as products derived from them, can lawfully be acquired through domestic legislation, bilateral agreements and multilateral agreements. According to the Commentary on the Building Blocks, the key legal basis for section 8.1 is the freedom for all states to “use” space granted by article I of the Outer Space Treaty. At the same time, however, section 8.3 of the Building Blocks reiterates the principle of non-appropriation under article II of the Outer Space Treaty.

Domestic legal regimes seek to take their own small steps

In recent years, consistent with the Building Blocks, several states, most notably the US, have taken steps to enable private companies to acquire domestic legal rights to resources derived from space.

In 2015, the US introduced the US Commercial Space Launch Competitiveness Act, which provides that “[any] asteroid resources obtained in outer space are the property of the entity that obtained such resources”. This position was reinforced by the issue of Executive Order 13914

in April 2020, which explicitly asserts the rights of Americans to “engage in commercial exploration, recovery, and use of resources in outer space”.

In Europe, Luxembourg enacted analogous legislation, the Law on the Exploration and Use of Space Resources, in 2017. The Law takes as its opening premise that “[space] resources are capable of being appropriated”. Japan and the Emirates have also subsequently enacted similar measures.

Notwithstanding the remaining uncertainty on the issue of space property rights in international law, companies are already gearing up to be a part of the “lunar gold rush”, and domestic legal regimes are seeking to accommodate that desire. The black hole in the regulatory landscape appears to be getting smaller.

Resolving space disputes

Just as international arbitration is well placed for the resolution of cross-border disputes, so it is for disputes which cross the galaxy. International arbitration offer a neutral alternative to domestic courts and results in an *award* that is enforceable in over 150 countries under the *New York Convention*. Arbitration also allows rules to be specifically tailored to suit the specificities of space disputes, for example by allowing companies to choose expert decision-makers equipped to deal with technically complex disputes, as well as protecting the confidentiality of sensitive proprietary information. To arbitration and beyond!
