

BRAZIL'S SPACE ACTIVITIES ACT AND THE EXPLORATION OF SPACE RESOURCES. V. de Oliveira¹ and M. de Zwart², ¹Adelaide University (250 North Terrace, Adelaide SA 5005, Australia, vinicius.deoliveira@adelaide.edu.au), ²Adelaide University (250 North Terrace, Adelaide SA 5005, Australia, melissa.dezwart@adelaide.edu.au).

Brazil is one of the world's leading mining powers, consistently ranking among the top five alongside China, India, and the United States. The country stands out in iron ore reserves and production and possesses the second-largest reserves of rare minerals in the world. In the domain of space affairs, Brazil is an active participant in the international space community and has consistently sought to employ outer space governance as a means of addressing inequalities within international fora. At the same time, it has worked to consolidate its position as an emerging regional power in the Latin American region while frequently presenting itself as an advocate for the interests of developing countries.

Within this context, the enactment of the first comprehensive space law in the region, Brazil's Space Activities Act (Law 14,946/24), represents a strategically coherent policy decision. Although the legislation is not specifically directed toward the exploration of space resources, it provides a definition of such resources and expressly permits their exploration through a licensing regime administered by the national space agency. As a result, Brazil joins a small group of states, alongside the United States, Japan, the United Arab Emirates, and Luxembourg, becoming the fifth country in the world to authorise such activities through national legislation.

In contrast to the other members of this group, however, Brazil's Space Activities Act's limited space resources provisions do not establish a specific regime for space resource exploration, nor does it identify ownership or equivalent rights in extracted resources for those involved in this activity. Furthermore, Law 14,946/24 is also unclear whether it allows only the exploration of such resources, that is, the scientific and exploratory investigations, or also their exploitation, which includes commercial extraction and processing of resources.

To clarify the procedural, substantive, and institutional framework through which such activities are to be conducted under Brazilian law, this paper undertakes a systematic interpretation of Brazil's broader domestic legal order. In doing so, it examines the justificatory materials accompanying the development of Brazil's Space Activities Act, the provisions contained within the legislation itself, as well as the broader Brazilian legal regime governing the exploration and exploitation of other natural resources

on Earth. A detailed assessment of these elements reveals a consistent interpretative convergence between exploration and exploitation under Law 14,946/24.

The paper demonstrates that economic exploitation constituted both the catalyst and the primary rationale behind the development of Bill 1006/22, which ultimately resulted in the enactment of Law 14,946/24. Within the provisions of the law itself, further support for the permissibility of the commercial exploitation of space resources may be found in Article 11 and in Chapter VI. Moreover, an examination of Brazil's broader national legal framework indicates that the term 'exploitation' is rarely used. Instead, an examination of regulatory statutes governing commercial activities shows that the term "exploration" often encompasses economic exploration, including at a constitutional level, unless clearly distinguished otherwise.

This interpretative convergence is further shaped by the international legal framework binding upon Brazil. Among the current international treaty regime, Brazil operates within the framework of the Outer Space Treaty (OST), which does not expressly prohibit the appropriation of extracted space resources. While the OST clearly governs the status of celestial bodies, which, according to Article II, are not subject to appropriation, it remains silent on the resources contained within them. Also, by not being a party to the Moon Agreement, Brazil is not bound by any requirement to establish an international exploitation regime prior to resource exploitation, as set out in Article 11. Moreover, by acceding to the Artemis framework, Brazil has implicitly endorsed the interpretation that resource exploitation can be lawful under the current treaty regime.

Taken together, these domestic and international elements demonstrate that Brazil regards the exploitation of space resources as lawful and that the term 'exploration' in its Space Activities Act must be interpreted broadly so as to encompass commercial activity. Having established that Brazil authorises the activity in principle, the paper focuses on the manner in which, in its view, such activity ought to be conducted in order to comply with international law, that is, the parameters by which Brazil considers such activity lawful.

An examination of Brazil's positions in international fora, undertaken to identify the parameters within which the country considers the commercial exploration of

space resources to be lawful, indicates that Brazil regards such activities as permissible provided they comply with the requirements of the Outer Space Treaty. These requirements include the principle of the 'common benefit' articulated in Article I of the Treaty, which provides that the exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development.

This principle encompasses non-discrimination, equality of access, due regard for the interests of other states, and, above all, the prohibition of national appropriation. Accordingly, and of particular importance to Brazil, the benefits derived from outer space activities should not be confined to the most technologically advanced nations but should also extend to countries with more limited technological and economic capacities.

To secure this outcome, Brazil emphasises the importance of multilateral discussions conducted through inclusive processes and consultations within the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), with the aim of avoiding exclusive or 'club-based' decision-making. In Brazil's view, such a framework should build upon the progress achieved by the Working Group on Legal Aspects of Space Resource Activities and draw upon existing governance regimes for the management of limited resources in international areas, such as Antarctica, the ocean floor, and Earth orbit, with clear terms of equity, rules on access to technology, be on the open market, at a fair and reasonable price, or through joint ventures with industrialised states, in order to facilitate the equitable sharing of benefits arising from the commercial exploration of space resources.

Overall, Brazil's international position coherently supports the identified interpretative convergence between exploration and exploitation under Brazil's Space Activities Act. Taken together, Brazil is clear in not opposing the commercial exploration of space resources. To be lawful, however, the benefits derived from such exploration must not be restricted to the most technologically advanced nations and must extend to countries with more limited technological and economic capabilities. Brazil thus has the principle of 'common benefit' as a foundational element of its position on this topic.