

## ABSTRAK

Pemanfaatan ruang angkasa awalnya hanya dilakukan oleh negara-negara untuk penjelajahan. Namun, akibat kemajuan teknologi, ruang angkasa mulai dimanfaatkan perusahaan swasta *Planetary Resources* untuk penambangan asteroid. Kemudian, Amerika Serikat mengesahkan *Commercial Space Launch Competitiveness Act (Space Act) of 2015* yang melegalkan penambangan asteroid oleh swasta, yang mana hal itu belum diatur oleh hukum internasional hingga saat ini. Berangkat dari persoalan tersebut, penelitian ini mengambil rumusan masalah mengenai: apakah *Space Act 2015* dapat menjadi dasar legitimasi bagi proyek penambangan asteroid *Planetary Resources*, serta bagaimana prospek pengaturan penambangan asteroid oleh hukum internasional di masa depan. Penelitian ini menggunakan metode penelitian yuridis-normatif dengan metode pendekatan perundang-undangan untuk mendapatkan data sekunder yang dikumpulkan melalui penelitian kepustakaan. Data yang terkumpul dianalisis menggunakan metode analisis kualitatif, kemudian disajikan secara deskriptif. Kesimpulan dari hasil penelitian ini adalah, pertama, *Space Act of 2015* dapat menjadi dasar legitimasi proyek penambangan asteroid yang dilakukan dalam batas teritorial AS, yang mana *Planetary Resources* termasuk di dalamnya. Namun, penambangan tersebut juga harus memberikan manfaat bagi seluruh umat manusia, sesuai prinsip *common heritage of mankind*. Kedua, pembaharuan hukum internasional tentang penambangan asteroid juga sangat dibutuhkan di masa mendatang karena ruang angkasa merupakan *province of all mankind*, bukan wilayah yurisdiksi negara mana pun. Substansi yang perlu diatur di antaranya, tentang alokasi risiko, konsultasi internasional, dan pembentukan organisasi otonom yang mengendalikan penambangan asteroid.

**Kata Kunci:** Penambangan Asteroid, *Space Act of 2015*, *Planetary Resources*.

## **ABSTRACT**

*Initially, the utilization of outer space was exclusively undertaken by nations for exploration purposes. However, technology advances have enabled private companies, such as Planetary Resources, to engage in asteroid mining activities. Subsequently, the United States enacted the Commercial Space Launch Competitiveness Act (Space Act) of 2015, which legalized asteroid mining by private entities—a domain not yet regulated by international law. Based on this issue, this study formulates the following research questions: Can the Space Act of 2015 serve as legitimate foundation for Planetary Resources's asteroid mining project, what are the prospects for asteroid mining regulation under international law in the future. This research applies juridical-normative research method, uses statute approach to obtain secondary data which collected through library research. The gathered data are analyzed qualitatively and presented descriptively. The findings of this study conclude that, first, the Space Act of 2015 can serve as legitimate foundation for asteroid mining projects carried out within US territorial boundaries, of which Planetary Resources is included. Nevertheless, such project must benefit all of humanity, in accordance to the principle of the common heritage of mankind. Second conclusion, future reforms in international law are essential to regulate asteroid mining by private sector, as outer space is considered the province of all mankind, not the jurisdiction of any single nation. Key aspects requiring regulation include risk allocation, international consultation and cooperation. Consequently, this study recommends for equitable and fair international cooperation and the modernization of space law.*

**Keywords:** *Asteroid Mining, Space Act of 2015, Planetary Resources.*