Exploring Environmental, Social, and Governance (ESG) Standards for Space Exploration

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Abstract: The number of satellites orbiting earth are in the thousands now. Commercial launches are increasing, and civilians are venturing into the outer reaches of the atmosphere. As the space industry continues to grow and evolve, so too will the demand on resources, the disparities amongst socio-economic groups, and space company governance standards. Outside of just ensuring that space operations are compliant with government regulations, export controls, and international sanctions, companies should also keep in mind the impact their operations will have on society and the environment. Those looking to expand their operations into outer space should remain mindful of both the opportunities and challenges that they could encounter along the way. From commercial launches promoting civilian space travel—like the recent launches from Blue Origin, Virgin Galactic, and Space X-to regulatory and policy shifts, the commercial landscape beyond the Earth's atmosphere is evolving. But practices will also have to become sustainable. Through a review and analysis of space industry trends, international government regulations, and empirical data, this research explores how Environmental, Social, and Governance (ESG) reporting and investing will manifest within a fast-changing space industry. Institutions, regulators, investors, and employees are increasingly relying on ESG. Those working in the space industry will be no exception. Companies (or investors) that are already engaging or plan to engage in space operations should consider 1) environmental standards and objectives when tackling space debris and space mining, 2) social standards and objectives when considering how such practices may impact access and opportunities for different socioeconomic groups to the benefits of space exploration, and 3) how decisionmaking and governing boards will function ethically, equitably, and sustainably as we chart new paths and encounter novel challenges in outer space.

Keywords: climate, environment, ESG, law, outer space, regulation **Conference Title:** ICSL 2022: International Conference on Space Law

Conference Location: New York, United States

Conference Dates: August 08-09, 2022