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Contribution of Moon Village to Solving Global Societal Issues (2)

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THE ROLE OF LUNAR EXPLORATION AND UTILIZATION FOR THE EARTH ENVIRONMENT

**Abstract**

This paper underscores the critical role of Lunar Exploration and Utilization as a pivotal step for humanity, fostering collaboration and peace among all stakeholders involved. Traditionally, the Earth and Moon environments have been considered in isolation. However, this study posits that there exists an intimate and significant connection between the two, especially in the context of Lunar Exploration and Utilization. With climate change posing a relentless threat to humanity, our research aims to evaluate how Lunar Exploration and Utilization could contribute to mitigating this existential risk. Through a partnership between the Moon Village Association and the Human Spaceflight Program, this paper initiates a comprehensive assessment of the interplay between the Moon and Earth environments. It further investigates the prospective benefits that Lunar Exploration and Utilization might offer in this regard. The culmination of these efforts was marked by a pioneering virtual panel seminar webinar, titled "Climate Action and Lunar Exploration," held on April 22, 2024, Earth Day. This event featured presentations from experts across various disciplines, providing diverse perspectives on the subject. This paper synthesizes the insights garnered from the webinar and proposes a strategic direction forward, highlighting the indispensable role of lunar activities in addressing Earth's environmental challenges. The paper underscores the critical role of Lunar Exploration and Utilization as a pivotal step for humanity, with the potential for fostering collaboration and peace among all stakeholders involved.