## 21st IAA SYMPOSIUM ON VISIONS AND STRATEGIES FOR THE FUTURE (D4) Contribution of Moon Village to Solving Global Societal Issues (2)

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## THE CONTRIBUTION OF MOON VILLAGE TO SOLVING GLOBAL SOCIETAL ISSUES: A RESEARCH

## Abstract

The concept of a Moon Village has gained significant attention in recent years as a potential international collaboration to explore the Moon and establish a sustainable human presence. Moon Village concept was first introduced by the European Space Agency (ESA) in 2015 and has since been embraced by several space agencies worldwide, including NASA, the China National Space Administration, and the Russian space agency, Roscosmos. While the primary goal of Moon Village is to create a permanent human settlement on the Moon, it also has the potential to contribute to solving global societal issues. This research aims to investigate the potential contributions of the Moon Village concept to addressing global societal issues, including climate change, resource depletion, and healthcare. The study will employ a qualitative research methodology, including a review of literature and interviews with space experts and policymakers. First, the research will explore the potential of Moon Village to contribute to mitigating climate change. Moon Village could provide a platform for the development and deployment of advanced technologies, such as solar power, which can significantly reduce carbon emissions on Earth. Additionally, Moon Village could offer a unique perspective on Earth and the impact of climate change, which can inspire policymakers and the general public to take more aggressive action to address climate change. Second, the research will examine the potential of the Moon Village to address resource depletion on Earth. The Moon is abundant in rare earth elements, helium-3, and other minerals that are essential to modern technology. The establishment of a permanent human presence on the Moon could enable the development of mining and processing techniques that can be applied to these minerals, reducing the dependence on Earth's finite resources. Third, the research will investigate the potential of the Moon Village to contribute to healthcare. The Moon Village could provide a platform for the development of medical technologies and treatments that are impossible to develop on Earth due to gravity and other environmental constraints. Additionally, the unique environment of the Moon, including low gravity and high radiation, can provide insights into the impact of these factors on human health, which can inform the development of treatments for various diseases. In conclusion, this research aims to demonstrate the potential contributions of the Moon Village concept to addressing global societal issues. The findings of this study can inform policymakers and the general public about the importance of international collaboration in space exploration and the potential benefits of a permanent human presence on the Moon.