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ASSESSMENT OF THE DEFINITION OF SAFETY ZONES TO BE UTILIZED AS AN OPERATIONAL FRAMEWORK FOR LUNAR ENVIRONMENT.

Abstract

The definition of safety zones to be utilized as a legal framework to operate in the lunar environment is a complex and multifaceted issue that requires careful consideration of a wide range of factors. This study explores the key considerations that should be taken into account when defining safety zones for lunar operations, including the potential risks and hazards associated with lunar exploration, the need for international cooperation and coordination, and the potential legal and regulatory frameworks that may be required to implement safety zones. The lunar environment is a harsh and unpredictable environment that poses a range of risks and hazards to human exploration. These risks and hazards include radiation exposure, extreme temperatures, dust storms, and lunar gravity, which can have serious consequences for human health and safety. In order to mitigate these hazards, it is essential to establish safety zones that limit the extent of human activity and provide a safe environment for exploration. The research investigates the definition of safety zones that are used in terrestrial analogs as well as in existing complex international regulatory space frameworks to determine their impact on the success of the mission, given all the environmental constraints and risks involved. The study ultimately proposes a definition of safety zones that aims to promote sustainable lunar activities while ensuring mutual respect for the interests of all parties engaged in the exploration.