

## Political Feasibility of Lunar Base Mission Scenarios

Trygve Magelssen<sup>1</sup> and Eligar Sadeh<sup>2</sup>

Department of Space Studies  
University of North Dakota  
Grand Forks, ND 58202-9008

[trygve@space.edu](mailto:trygve@space.edu)

[sadeh@space.edu](mailto:sadeh@space.edu)

This paper evaluates the influence of political variables affecting the feasibility of lunar base mission scenarios. Lunar base scenario types identified for investigation encompass lunar science, In-Situ Resource Utilization (ISRU), power generation base for use on Earth or in space, military base, developmental test-bed for advancing technologies for future space exploration, lunar base used as a way-point, transfer station to other planetary bodies, and lunar settlement or colony. The future realization of these lunar base types is assessed on the basis of how political variables enable or constrain the particular scenario under consideration.

The political variables assessed include national and international policy interests, economic issues concerning investment and profit prospects, cultural factors unique to national groups and organizational entities, administrative and bureaucratic aspects of organizational management, and public issues of political support. Realization of the scenarios is assessed according to how feasibility is affected by the political variables. To this end, a mission scenario feasibility index is developed from a determination of the criticality factor for each political variable. Criticality is defined as the level of influence of each variable on the particular scenario. The feasibility index identifies variable criticality involved in each scenario type and ascertains how those variables differentiate in levels of influence depending upon the projected lunar base development (i.e., how the variables enable or constrain the outcome).

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<sup>1</sup>Graduate Research Assistant, Department of Space Studies, University of North Dakota.

<sup>2</sup>Assistant Professor, Department of Space Studies, University of North Dakota.