

BEST PRACTICES FOR SUSTAINABLE LUNAR ACTIVITIES

INTRODUCTION

The Moon Village Association (“MVA”) was created to foster the implementation of the “Moon Village” concept – a vision of peaceful international cooperation of both governmental and non-governmental actors in the exploration, utilization, and settlement of the Moon.

The MVA has drafted the *Best Practices for Sustainable Lunar Activities* (“Best Practices”) with the of defining the common level playing field for future lunar missions. this is important since the next years will see an increasing number of stakeholders, both public and private, going to the Moon, increasing the probability of an incident. The Best Practices are aimed to reduce this risk, create confidence, and increase peaceful cooperation.

The Best Practices are not legally binding rules, but are instead an evolving set of voluntary standards jointly developed by all space actors. This initiative is not intended to displace other multilateral initiatives, such as the planned General Exchange of Views on Space Resources that is on the agenda of the COPUOS Legal Subcommittee. The development of the Best Practices is intended to proceed in parallel with other initiatives as a supplemental forum for constructive multilateral discussions.

The MVA released the Best Practices on March 4, 2020 and opened a six-month period of public consultation. All stakeholders, including government agencies, industry, academia, and members of the general public were invited to submit their comments. The MVA also hosted a series of webinars during the consultation period to raise awareness of the initiative and provide a forum for public discussion. After the close of the public consultation period, the Best Practices were revised in light of the comments received and are presented here. A commentary on the development of the Best Practices will be issued in 2021.

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Objectives

- i. The Best Practices for Sustainable Lunar Activities (the “**Best Practices**”) are intended to facilitate the implementation of the “Moon Village” concept of settling the Moon, a vision of peaceful global cooperation in lunar exploration and settlement.
- ii. The Best Practices are intended for all entities, whether governmental or non-governmental (“**space actors**”), conducting or intending to conduct activities on the Moon or in cislunar space (“**lunar activities**”).
- iii. The Best Practices are not legally binding, but are intended as voluntary standards of conduct for the long-term sustainability of lunar activities for the benefit of all countries and humankind.
- iv. The Best Practices are intended to evolve incrementally in step with technological and economic development.

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International Law

Space actors are encouraged to conduct lunar activities in accordance with applicable international law, including, but not limited to, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the “**Outer Space Treaty**”).

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Sharing Benefits

Space actors are encouraged to conduct lunar activities in a manner that takes into account the interests of other space actors and benefits all countries, irrespective of their degree of economic or scientific development, and humankind in general. Particular attention should be given to the needs of developing countries and countries with incipient space programs.

Space actors involved in lunar activities are encouraged to provide for benefit-sharing, for example, through facilitating and fostering:

- i. The development of space science and technology and its applications;
- ii. Cooperation in education and training;
- iii. Access to and the exchange of information;
- iv. Interoperability; and
- v. Cooperative ventures.

Benefits should be made available without discrimination on terms mutually agreed by all concerned.

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Governance

The international community of space actors are encouraged to incrementally develop a system of governance to facilitate the establishment and expansion of lunar activities through the cooperation of both governmental and private entities. Existing international law will, by default, serve as the initial system of governance, including, but not limited to, the following principles:

- i. The Moon should be used exclusively for peaceful purposes.
- ii. The Moon should be free for exploration and use by all space actors, who should enjoy free access to all areas and freedom of scientific investigation.
- iii. All space actors should be guided by the principles of cooperation and mutual assistance and should conduct all of their lunar activities with due regard to the corresponding interests of all other space actors.
- iv. In the event of distress, all space actors should offer assistance to rescue other space actors, recover space objects, and return such actors and objects to their launching authority pursuant to the Agreement on the

Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space.

- v. All harmful interference with the lunar activities of other space actors should be avoided. If a space actor has reason to believe that planned lunar activities would potentially cause harmful interference with the lunar activities of other space actors, it should undertake appropriate consultations before proceeding with such activities.
- vi. States should bear international responsibility for the lunar activities of its nationals and should bear liability to pay compensation for damage caused by its space objects, as set forth in the Convention on International Liability for Damage Caused by Space Objects.
- vii. All lunar activities should be authorized and continually supervised by the appropriate state in order to ensure compliance with international law.

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Avoiding Harm

Space actors are encouraged to take measures to the extent possible:

- i. To avoid causing adverse changes to the lunar environment or cislunar space, including the harmful contamination of the Moon in contravention of planetary protection policies;
- ii. To mitigate the creation of lunar orbital debris;
- iii. To avoid causing harmful interference with existing or planned lunar activities; and
- iv. To avoid causing adverse changes to internationally endorsed sites of significant scientific or historical interest.

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Long-Term Sustainability

Space actors are encouraged to conduct lunar activities in line with the *United Nations Guidelines for the Long-term Sustainability of Outer Space Activities* and promote the development of technology to facilitate the long-term sustainability of lunar activities. With the understanding that capacity-building is a critical component of long-term sustainability, space actors are encouraged to promote capacity-building programs, particularly those programs involving youth and women.

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Private Activity

Space actors are encouraged to promote the development of private lunar activities, including purely commercial activities, such as space tourism and resource extraction, as well as non-commercial private activities, such as private settlements or science experiments carried out

by private entities. To support the development of the commercial sector, governmental actors are encouraged to cooperate with private entities to the extent practicable through public-private partnerships or other methods.

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Space Resources

Space actors are encouraged to conduct all space resource extraction and utilization activities in compliance with Article II of the Outer Space Treaty with the understanding that space resource activity does not inherently constitute national appropriation of celestial bodies. Space actors should also support the development of both hard and soft laws that provide guidance and legal certainty regarding safety standards, priority rights, and non-interference, among other issues, to actors involved in space resource activity. In time, it may be beneficial to create a process to limit space resource activity as to location and duration in order to ensure equitable and responsible use of limited resources.

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Registration of Lunar Activities

Space actors are encouraged to register all space objects involved in lunar activities in accordance with the Convention on Registration of Objects Launched into Outer Space. The ability of space actors to exercise due regard and avoid harmful interference will be greatly enhanced by registrations that provide updated information about (i) the general location of the space object on the Moon or in cislunar space, (ii) the nature of the activity in which the space object is involved, and (iii) the duration of the activity. In time, a dedicated registry for lunar activities should be considered.

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Sharing Information

Space actors are encouraged to share information to facilitate international cooperation among governmental agencies, private entities, and the general public in the expansion of lunar activities.

To facilitate the sharing of information, the establishment of an international publicly available database should be considered for making the following information publicly available:

- i. Scientific information obtained from lunar activities; and
- ii. Best practices with respect to lunar activities.

This information should be shared to the extent feasible subject to legal limitations such as export controls, the protection of intellectual property and other proprietary information, and national security.

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Other Initiatives

Space actors are encouraged to support the development of both hard and soft law to facilitate the establishment and expansion of lunar activities, including, but not limited to, initiatives regarding interoperability, engineering standards, safety practices, finance, and environmental protection.

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Dispute Resolution

Space actors are encouraged to resolve disputes through consultation with the affected parties and, if necessary, through alternative dispute resolution, such as mediation or arbitration. States are also encouraged to promote the enforcement of arbitration agreements and arbitral awards under the *Convention on the Recognition and Enforcement of Foreign Arbitral Awards*.

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Implementation and Further Development of Best Practices

Space actors are encouraged to foster cooperation regarding the implementation of these Best Practices to the extent possible, as well as their review and further development.