

Promoting Space Sustainability

Global Expert Group on Sustainable Lunar Activities (GEGSLA)

The Moon Village Association

30 June 2021

Implementation of the Guidelines for the Long-term Sustainability (LTS) of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space

Operational Case Studies

I. Short description of the outer space activity

In this case study, we outline how the, The Moon Village Association (MVA) has taken the lead in advancing initiatives for peaceful cooperation in the Moon exploration and settlement.

In 2019, the Moon Village Association (MVA) took the initiative to address critical issues with the goal of de-risking future lunar missions and increasing global cooperation for lunar exploration and settlement. The initial work of the MVA resulted in the publication of the first edition of its Best Practices for Sustainable Lunar Activities on 5 March 2020 for public consultation. The MVA hosted several public webinars, as well as informal discussions with experts from space agencies from all continents. These consultations resulted in the publication of the second edition of the Best Practices on 19 October 2020. This document was intended as an input for further elaboration.

The positive feedback received on the Best Practices initiative from several space agencies encouraged the MVA to continue its endeavours in fostering a global discussion on sustainable lunar activities. Therefore, the MVA decided to promote the development of a neutral forum for multi-stakeholder discussions on lunar exploration: *The Global Expert Group on Sustainable Lunar Activities (GEGSLA)*.

With this objective, in 2021 the MVA decided to promote a neutral forum for multi-stakeholder discussions on safe and sustainable lunar missions: *The Global Expert Group on Sustainable Lunar Activities (GEGSLA)*. The group has been formed with the objective of begin a new era of sustainable space exploration. The initiative has been developed by taking into consideration the multitude of lunar mission's takin place in the future by both space agencies and commercial stakeholders. The aim of the group seeks to address the lack of coordination mechanisms for lunar activities. The mission of the group is to individuate the present and future challenges of space lunar missions, especially in light of the increased global interest in specific areas like the lunar south pole. Within this objective, the Group will promote and advocate towards the the sustainable and peaceful uses of space and lunar activities.

The Group is composed of a Secretariat, 38 members, and more than 150+ observers from major stakeholders in lunar activities. The meetings of GEGSLA are held under the Chatham House Rule, where participants are free to use the information received, but neither the identity nor the speakers' affiliation may be revealed. According to the Group's neutral feature, members and observers are participating on a personal

basis, and statements and declarations expressed during discussions do not represent the organizations' position. The primary goal of GEGSLA meetings is to stimulate informal discussions to prepare documents to be brought to the attention of UNCOPUOS for further discussion and deliberation.

The Secretariat liaise with the members/observers of the Group, maintain a dedicated website and social media, organize meetings, lead discussions, and prepare documents. The Chair, the Vice-Chairs, or Executive Secretary represent the Group in external events.

The group is actively working on defining “Recommended Framework and Key Elements for Safe, Peaceful and Sustainable Lunar Activities”. This document is the main deliverable of the GEGSLA, and it will evolve following the principle of adaptive governance based on the experience gained by the actual lunar activities being implemented. The goal is to present this document to the UNCOPUOS as an input for further elaboration.

The group has started its work with the 1st Kick-off Meeting on the 25th of February 2021. The main goal of GEGSLA is to draft, the above indicated document, to be submitted to the United Nations Committee on the Peaceful Use of Outer Space (UNCOPUOS) in 2023, where the MVA has permanent observer status.

1. Principles and Key elements will be elaborated within the group’ plenaries, and each meeting will focus on developing only one topic.
2. Technical guidelines will be drafted by the following subgroups:
 - Sub-Group 1: Information Sharing
 - Sub-Group 2: Safe Operations/Lunar Environmental Protection
 - Sub-Group 3: Compatibility/Interoperability
 - Sub-Group 4: Responsible Governance

The drafting of the document has the following phases:

- Content Definition Phase : from the Kick-off to the 3rd Meeting
- Drafting Phase: from the 4th to 14th Meeting (including Plenary and Subgroups meetings)
- Finalization Phase : from the 15th to 23rd Meeting (including Plenary and Subgroups meetings)

Applications for becoming sponsors and observers are still open: <https://moonvillageassociation.org>

II. Connection with the LTS Guidelines

In relation to the Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space, GEGSLA contributes with Guideline C. International cooperation, capacity-building and awareness, specifically with Guideline C.1, on Promote and facilitate international cooperation in support of the long-term sustainability of outer space activities.

- **GEGSLA Support in regard to Guideline C.4 Raise awareness of space activities**

The meetings of the group meets are held on a monthly basis, and it’s composed of a Secretariat, 38 members, and more than 150+ observers from major stakeholders in lunar activities. In addition to the monthly meetings where members take part and observers participate as contributors of the activities of the group. The Group also will also organize public events to inform about the status of its activities.

In order to achieve its goals, the Group is actively working on the following goals:

- a) Leverage contributions from major stakeholders of the space community, including space agencies, private companies, academia, and international organizations.
 - b) Involve the public by promoting outreach efforts regarding the activities of the Group through the involvement of local actors at the global level.
 - c) Serve as a platform to exchange information and views within the space community on key issues for the peaceful and sustainable conduct of lunar activities.
 - d) Support complementary activities, within UNCOPUOS or other international fora, for the development of an international framework regulating space resources utilization.
- **GEGSLA Contribution to Guideline C.2, Share experience related to the long-term sustainability of outer space activities and develop new procedures, as appropriate, for information exchange**

The MVA has recently informed the UNCOPUOS 58th Session of the Scientific and Technical Subcommittee (STSC) and the 60th UNCOPUOS Legal Subcommittee (LSC) about the GEGSLA mission and work, and the committees have shown support in its activities. Members have shown support in GEGSLA in their statements at the UNCOPUOS sessions, by emphasizing how GEGSLA activities are complementary to other initiatives of both subcommittees of UNCOPUOS.

MVA has proposed and asked the support of Member States in this respect, that starting with the 65th session of the Committee on the Peaceful Uses of Outer Space in 2022, to include the topic of Sustainable Lunar Activities as a new permanent agenda item. This is because the issue includes interlinked complex technical and legal issues. The Group plans to complete the preliminary drafting of its deliverables in early 2022. MVA will provide these documents to the 59th Session of the STSC and 61st Session of the LSC as well as 65th UNCOPUOS through MVA, for further consideration and deliberation.

MVA will provide the final set of deliverables of GEGSLA, related to the Recommended Framework and Guidelines for specific activities implementation to UNCOPUOS and its subcommittees by the end of 2022 once the GEGSLA will complete all its activities. This could allow UNCOPUOS to start further discussion and deliberation using the deliverables of GEGSLA in 2023.

III. Lessons learned

- **Capacity Building between space faring space states and new space actors to increase awareness on the benefits of going to the moon:**

Members have actively expressed the importance of developing capacity-building initiatives to increase awareness of the benefits of going to the Moon. Considerations of group have expressed throughout GEGSLA meetings that it is essential to develop programs to increase involvement in expanding the needed technical and regulatory features for future Moon activities, by also fostering the involvement of non-space actors in the lunar economy. To this regard the Group has encourage participants to promote international cooperation initiatives between faring space states and new space actors.

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- **Balance between the development of the government and the commercial activities for the democratization of the moon activities:**

Members have also highlighted the importance of contributing to commercial activities by increasing cooperation to reduce costs for the democratization of Moon activities by expanding access to space technology. Within this context, recommendations have focused on providing a balanced framework of norms and standards to support the development of government and commercial activities in the Moon in accordance with international principles on sustainability. The balance has been important for GEGSLA members, as to ensure sustainability for industry-driven and government-driven lunar activities. Recommendations will take into account the high pressure the lunar industry is experiencing trying to find an economical and sustainable way to offer new services like transportation, telecommunication, navigation, etc.. Members have called the international community to understand the complexity of these missions and emphasized the strategic importance of providing policies that support also the industry on these matters.

- **Advance the work that have been made by the International Community:**

Major contribution of GEGSLA stakeholders bring emphasis on the importance of building the way forward based on the objectives that have been created by the international community, such as by The Hague International Space Resources Governance Working Group and The Artemis Accords. Emphasis was given on encouraging the development of a more detailed document that can be shared with governments, NGOs to promote more involvement, and funds for lunar activities, considering the limited number of actors involved. Deliberations have highlighted that in order to advance the efforts made by the international community an active collaboration is required to promote peaceful activities on the Moon, and responsible and sustainable management operations in present and future Lunar missions under development.