



SUMMARY

Governance of Global Moon Exploration and Settlement

Episode 4: Best Practices for Sustainable Lunar Activities – The way forward

Speakers:

- Niklas Hedman – *Chief Committee, Policy and Legal Affairs Section, Office for Outer Space Affairs United Nations Office, Vienna*
- George A. Danos – *Chairman of the Local Organizing Committee (LOC) of the 1st Online Global Moon Village Workshop & Symposium, CEO of Cyprus Space Exploration Organisation (CSEO)*
- Steven Freeland – *Professor of International Law, Western Sydney University, Australia*
- Mark J. Sundahl – *Director, Global Space Law Center, Cleveland State University*
- Giuseppe Reibaldi – *President, Moon Village Association*

Giuseppe Reibaldi - Introduction/Strategy for implementation

The Moon Village Association (MVA) is an NGO registered in Vienna in 2017 to foster the Moon Village concept implementation. MVA is a member of IAF and Observer in the UN COPUOS, and it counts over 200 individual members from 47 countries and 26 institutional members. It is a forum to advance peace and cooperation in the Moon exploration and settlements, involving industry, governments, space agencies, international organizations, and the public. It is a catalyst stimulating a virtuous cycle of investments for the development of the lunar ecosystem. The association aims to promote peace and cooperation in lunar exploration, especially today, with the increasing number of actors interested in conducting lunar missions, which will probably be directed towards the same area, the South Pole. As there is not an actual common level playing field, it is felt that the creation of these practices is useful for three reasons:

1. confidence building
2. responsabilization of actors
3. inclusiveness of different actors

An updated version of the Best Practices was elaborated based on the comments received during the consultation periods. This set of practices will establish a common level playing field for future lunar activities, not be legally binding, and will evolve as circumstances develop following the adaptive governance principle. To implement this strategy, MVA is taking two steps.

- Step 1: Ensure that the Best Practices have the support of major stakeholders to de-risk, as soon as possible, all future lunar missions.
- Step 2: Incorporate the Best Practices initiative into relevant UN COPUOS multilateral discussions.

Mark Sundhal - MVA Best Practices for Sustainable Lunar Activities, updated version following consultation

The Best Practices count 13 principles. The first principle states the main objective: implementing the moon village concept, global and peaceful, to cooperate with the whole international community in lunar exploration. It also affirms that the practices are not legally binding (1). Principle 2 concerns international law and encourages space actors to comply with it, particularly the Outer Space Treaty (2). Benefit sharing is also one of the cornerstones of existing space law, but it is a vague obligation, and it is not clear what form it should take. The MVA Best Practices try to give a shape to this principle, affirming that particular attention should be given to the needs of developing countries and countries with incipient space programs. It encourages cooperation in education and training, access to and exchange of information, and cooperative venture between private and public entities (3). Then, as an international community, we should facilitate the establishment and expansion of lunar activities, gradually, with the idea of adaptive governance: rules will evolve as activities evolve, starting from the basis provided by space law and international law (4). The following principle concerns the possibility of causing harm and encourages space actors to avoid making adverse changes to the environment, mitigate the creation of lunar debris, avoid causing interference with the existing lunar activities, and avoid adverse changes to sites of historical and scientific significance (5). Moreover, mention is made to the long-term guidelines on the sustainability of outer space activities, and states are encouraged to promote capacity building programs in this domain (6). A relevant point is the reference to private activities, as the best practices clarify that all kinds of activities, including purely commercial ones, will be promoted (7). Concerning space resources, it is encouraged to comply with international law, particularly with Art.II of the Outer Space Treaty, recognizing that such activities do not constitute appropriation of celestial bodies (8). It also underlined the necessity of registering lunar ventures to guarantee the due regard principle's applicability. Therefore, the registration should include information on where activities are located and their nature and should happen through the existing mechanism disposed by UNOOSA (9). Sharing information is also critical to facilitate international cooperation. The establishment of an international publicly available database is proposed, including scientific data obtained from lunar activities and best practices (10). Space actors are also encouraged to support the development of soft and hard law (11). Disputes should be resolved through consultation with the affected parties and, if necessary, with alternative dispute resolution like arbitration or mediation (12). Finally, actors are invited to continue evolving these best practices and further their development (13).

Niklas Hedman - Space Governance and COPUOS

This presentation looks at how MVA, as a permanent observer to COPUOS, can move on and interact with the official consideration under the agenda item on space resources in the legal subcommittee. COPUOS is a political body with treaty making powers. The committee was founded as an ad hoc body in 1958, and in 1959 it was established by Resolution 1472 (XIV), receiving permanent status under General Assembly. This body has created the legal regime of outer space through the elaboration of five treaties and five principles, and other residual instruments non legally binding, including:

- Space Debris Mitigation Guidelines (2007)
- Safety framework for nuclear power sources (NPS) (2009)
- Guidelines for the long-term sustainability of outer space activities (2019)
- Set of GA resolutions on launching state, registration practice, national space legislation.

Today COPOUS is a very diverse community, including today 95 States Member, and it works by consensus. Its mandate is pretty broad and includes reviewing international cooperation, studying space-related activities that could be undertaken under United Nations auspices, encouraging and assisting with

national space research programs, and studying legal problems which may arise from the exploration of outer space. The agenda is also broad and diverse, with items dealing with a different range of space activities. From 2017 there has been as the item in the agenda the conversation on potential legal models for exploration, exploitation, and utilization of space resources. Until now, the discussion on the Legal subcommittee on space resources has been in plenary, and there has been no specific documentation on the table to stimulate a constructive dialogue among the members. The committee has received a working paper from the Netherlands and Luxembourg submitting the Building Blocks that stems from the Hague International Space Resource Governance Working Group. This document will provide the basis for discussion in the form of consultations next year and is now available in all languages. Other initiatives include the Artemis Accords, which should be submitted to the United Nations for dissemination and provided as a formal document available in all the UN languages. MVA should also make available the Best practices for discussion in the Legal Subcommittee, or, as a permanent observer, can do so in a conference room paper in English only. So it would probably be in the interest of Moon Village Association to seek support from a state member or a group of state members that could sponsor the best practices to be put on the LSC table in a document that would have the same value as the above mentioned document.

Furthermore, before the UNISPACE+50 event in 2018, COPUOS worked over four years in defining its governance projection and how it is pursuing the following cross-cutting areas: space governance, capacity building, resiliency, interoperability, space for sustainable development. Concerning governance of the Moon and other celestial bodies, it will be essential to look at different regimes like air, sea, frequencies/GSO, deep sea bed, antarctic treaty system, cybersecurity, and safety. In fostering space multilateralism, giving a projection will be necessary for the consideration of some features, including the planetary environment in the exploration and innovation, and utilization of space resources, the space environment, and the terrestrial environment, with issues concerning planetary defense, space weather, dark and quiet skies. Multilateralism is fundamental, and it is what we have to foster through the work of the committee and the two subcommittees.

George Danos - 1st Online Global Moon Village Workshop & Symposium

The first online global moon village workshop and symposium will take place on 9-10 November 2020 and hosted by CSEO from Nicosia in Cyprus. The event will have significant keynote speakers. During the Best Practice for Sustainable Lunar Activities session, there will be the announcement of the leading space agencies supporting the MVA initiative and the countries supporting it.

We expect a high attendance at the symposium, and the registration can be done at the following website: <https://mva2020.cseo.org.cy/>

Q/A moderated by Steven Freeland

- **Question 1:** What is the biggest challenge in achieving MVA Best Practices' goal, which is international cooperation in a sustainable way, maintaining safety and security, in a way that will allow off-Earth activities in a peaceful and not conflicting way?

Mark Sundhal: we need to understand as an international community that we need ground rules and precautionary measures before starting this new era of lunar activities. Raising this awareness and generating a sense of urgency is our more significant challenge.

Niklas Hedman: the most challenging issue is to get to the multilateral approach, to take these steps that are already taken by the national government to the multilateral intergovernmental context, and to see what we can together do to outline a path forward, a governance regime.

George Danos: MVA is discussing with space agencies, but the next step is to involve industry in the discussions ensuring that industry support the best practices and help their implementation

- **Question 2:** Mark made a point of encouraging private enterprises, commercial activities. How will those activities be regulated to avoid a fragmentation of standards, different measures applying to different entities depending on the jurisdiction? How to create a standardized environment to be sure everyone is complying with regulations?

Mark Sundhal: While there are multilateral discussions that go forward, we will likely see an evolution of domestic law. The challenge is to make sure that these domestic laws are consistent and follow the same principles, and here is where the best practices can be helpful: to provide a platform for discussion and agreement on the way to move forward.

- **Question 3:** Space resources are just one of the sections of the Moon Village Association Best Practices. Is it possible that this broader discussion fits in with the agenda item on exploration, exploitation, and space resource utilization? Or is it possible that the agenda item itself will be expanded to consider all these more broad discussions?

Niklas Hedman: The instruments we see on the table are already broader than the item. However, I think anyone is focused on this debate to happen under that agenda item, so it will be there in one way or another. But in the LSC, we also discuss the status and the application of the treaties where we have a constant dialog on space activities and how states implement their obligations and rights under the treaties, so there are also possibilities to discuss certain aspects of this in that context.

- **Question 4:** Given that this is an evolving process, and the ultimate goal is to get in the multilateral process, how can the public and the industry be involved in the Moon Village Association initiative?

Mark Sundhal: Join MVA and become an active participant, as the association is open to the general public. And keep in mind that MVA's best practices are a product on the table available for discussion.

- **Question 5:** Perhaps it is time for the COPUOS to expand the nature of those who are observers or have some form of membership a bit like ITU to engage the industry more directly and formally, creating a broader and more inclusive discussion?

Niklas Hedman: The first point goes to the history of COPUOS. It is a political intergovernmental body under the general assembly, and private entities do not have a seat at the table. It is the existing rule under the UN system. What is interesting in ITU is the sector membership, where they have a private industry involved. Even if they have no right to make decisions, as it is only for governmental members, they are in the room and have opportunities to discuss and liaise with other partners to foster dialogue between governmental entities and the private sector. I am looking with some interest at how COPUOS in the future will deal with this and how space will be able to have these actors in the room. Members can bring private sector people in their delegation, but the regulation on their participation is pretty strict.

- **Question 6:** Is there anything specifically that is a point of distinction between the MVA Best Practices and the Artemis Accords?

Mark Sundhal: One clear element in the Artemis Accords, which are otherwise consistent with the MVA best practices, is the idea of unilaterally declared safety zones, which has been misconstrued unfairly by some commentators as keep-out zones. And it is not the intention of the safety zones, which is purely informational. This goal is something that the best practices also promote. We want to share the information to ensure non-interference with ongoing activities and other actors' safety.

Giuseppe Reibaldi: Instead of comparing the two tools, as they are different in nature, it would be better to clarify their distinct role. The Artemis Accords are an implementation agreement between the US and its allies in implementing the Artemis Program. The Best Practices are meant to apply to all countries because they are not a mechanism of implementation of a program. Are instead aiming at defining a common level playing field for all actors, which is a significant difference.

- **Question 7:** One thing emphasized is the sharing of benefits, one of the most contentious principles of space law. Being this principle undefined, how MVA, given the controversial political status, implement this system?

Mark Sundhal: It is very challenging, and it is contentious. There are entirely different views on how this principle should be interpreted and implemented, and we need to find a middle point somehow. We received many suggestions and comments during the consultation period, and we can set up some limitations. There is an obligation to benefit all, even those who are sharing the benefits. Most people agree that the sharing of revenue would make it impossible for businesses to survive, so the business model must be sustainable. But also taxation in the industry is something that ordinarily happens. So, striking the right balance is where we have to work.

George Danos: The position of Cyprus is of historical friendship in commerce and cooperation. As we see with the environment, the scarcity of resources, and population growth, we have to cooperate internationally to avoid challenging problems. It is not a question of saving money. At one point, it will be a question of survival for our species because the resources we are going to bring are going to be crucial to sustaining our life here on our planet.