



Lunar
Policy
Platform

31st October 2023

Lunar Policy Priorities

*For safe and sustainable
lunar development*

A Report of the Lunar Policy Platform

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INTRODUCTION

1. The Lunar Policy Platform

Since the beginning of time, humans have always looked up at the Moon. After millions of years spent watching, in 1969 we managed to set foot on it. For a while we conducted invaluable science, and then we left. Fifty years later, we are preparing to return to the Moon, *this time to stay*. With over a hundred lunar missions planned by 2030,¹ the ability to ensure the safe and sustainable development of the Moon is rapidly becoming one of the top priorities within contemporary space law and policy.

While pioneering missions like Chang-e 5, Chandrayaan 3, and Artemis 1 are paving the way for the next technological breakthroughs, law and policy are starting to catch up. States involved in international lunar projects such as the Artemis Program and the International Lunar Research Station (ILRS) have started to develop guiding principles and policies for their lunar missions.² In parallel, non-governmental actors from the space community have also been reflecting on legal and policy issues raised by the upcoming series of commercial missions and the future establishment of permanent bases.³

One key thread connecting these actors and initiatives is the shared recognition that policies and standards will be a key enabler of safety and sustainability.⁴ However, until today, there was no entity supporting their development in a professional, cooperative, and multi-stakeholder fashion. For this reason, in 2022 the Open Lunar Foundation⁵ asked the present author to develop and coordinate a new initiative for the establishment of a global, non-governmental and professional organization focused on providing trusted lunar policy services to all interested stakeholders.

¹ *Lunar Policy Handbook*, pp. 42 – 51 (2023, available online).

² Respectively resulting in the *Artemis Accords* (2020) and the *ILRS Guide for Partnerships* (2021) (both available online).

³ See footnote 6 for a detailed list.

⁴ For example, NASA's *Lunar Landing and Operations Policy Analysis* (2022, available online) recommends the development of mechanisms for consultation and coordination to deconflict operations on the Moon, as well as the adoption of standardized measures among lunar actors. Similarly, the *ILRS Guide for Partnerships* indicates strategy development and coordination as the first domains to be covered for international cooperation in the exploration and use of the Moon.

⁵ Open Lunar is the world's first organization solely dedicated to promoting stewardship for peaceful and cooperative lunar development by promoting and catalyzing selected projects and initiatives. More information on Open Lunar can be found [online on its website](#).

After a thorough investigation of existing and previous initiatives in the field,⁶ in January 2023 this author designed a new entity called Lunar Policy Platform (LPP) to promote the safe and sustainable development of the Moon through policy.⁷ To realize this vision, the LPP connects with all stakeholders to identify common ground on priorities, policies, and standards. To be both inclusive and effective, the LPP follows an innovative asynchronous and multi-layer process centered on bilateral, focused, and confidential meetings with all space actors. The Platform then aggregates the discovered findings in concise yet comprehensive Reports outlining convergencies and divergencies amongst the interviewed actors.

Through this original method of work, the LPP is able to produce unique systemic assessments reconciling the existing diversity of views, interests, and efforts for the benefit of the lunar community. Stakeholders can then use these assessments for a variety of purposes, such as facilitating consensus in established fora or feeding parallel discussions about lunar policies and operations. At its core, the LPP aims to complement existing nongovernmental initiatives, provide inputs to governmental discussions, and contribute to intergovernmental processes, especially within the UN Committee on the Peaceful Uses of Outer Space (COPUOS).

2. The Lunar Policy Priorities Report

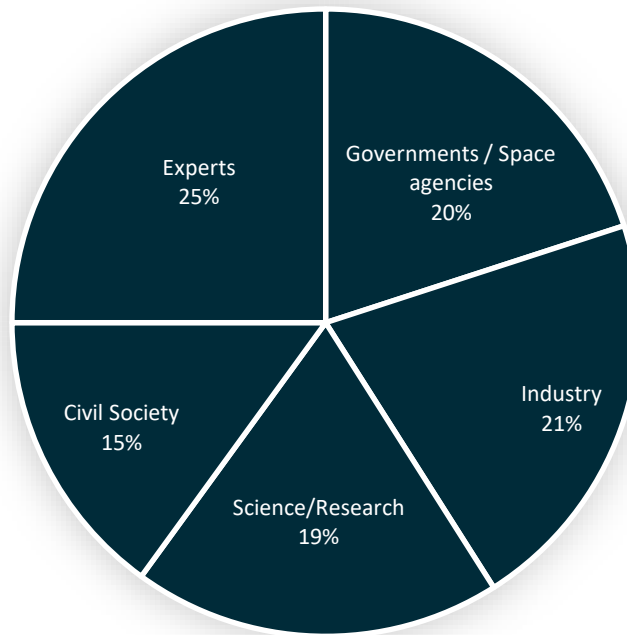
The primary objective of this Report is to provide a systemic understanding of priority areas to be addressed for safe and sustainable lunar development. The Report presents ten priority areas, discusses three points of divergence and three points of convergence among actors, and finally concludes by suggesting a new approach called *holistic prioritization*. The Report is further complemented by a separate Annex outlining LPP's workplan and proposal for a *Lunar Policy Decalogue* to enable and accompany the safe and sustainable development of the Moon in the years to come.

⁶ In addition to primary sources of international space law like the [Outer Space Treaty \(1967\)](#) and the [Moon Agreement \(1975\)](#), as well as political agreements like the [Artemis Accords](#) and relevant pieces of national space legislation, the author thoroughly reviewed the [Lunar Landing and Operations Policy Analysis](#) and the [ILRS Guide for Partnerships](#) as reference documents respectively for the Artemis and ILRS programs. Further, the author investigated the following documents produced by major stakeholders active in the field of lunar policy: the [Astra Carta \(2023\)](#), the [Lunar Policy Handbook \(2023\)](#), the [Washington Compact \(2023\)](#), the [Recommended Framework and Key Elements for Peaceful Sustainable Lunar Activities \(2023\)](#), the [EAGLE Report \(2021\)](#), the [Vancouver Recommendations on Space Mining \(2020\)](#), and the [Building Blocks for the Development of an International Framework on Space Resource Activities \(2019\)](#), all available online.

⁷ Throughout the year 2023, the LPP conducted its activities as an independent initiative supported by Open Lunar. Following the positive reception of the initiative, the LPP will be formally established as a global, non-profit, non-governmental organization during the year 2024.

Methodologically, this Report condenses the results of three months of consultations featuring the participation of 40 stakeholders from 5 different groups: governments and space agencies, lunar companies, scientific and research institutes, civil society organizations, and high-profile experts. All LPP consultations were conducted personally by the LPP Director, either in person or online, between May to July 2023.

Consulted Stakeholders



In preparation to the meetings, all stakeholders were asked two open questions and invited to rank six policy tools in order of importance for their organization,⁸ through the LPP Questionnaire showed in the following page. To ensure a rigorous recording of the answers provided, all responses were filled in a google form that was shared with the interviewees for review and confirmation of accuracy.⁹ In August 2023, the Director aggregated the discovered findings to develop the findings presented in the next Section.

⁸ Experts consulted on an individual basis were provided with the same questionnaire, duly modified to make reference to their expert views.

⁹ Due to the open nature of the questions and the variety of stakeholders consulted, the responses varied broadly. Some provided a few bullet points, whereas others ventured in more complex elaborations. Notably, a few actors were not able to respond due to the lack of a defined position within their organization. Substantively, responses touched upon both macro-areas such as transparency and special topics such as landing.

LPP Questionnaire

1) In the view of your organization, which policy areas should be addressed as a matter of priority to ensure safe and sustainable lunar activities?

2) Which are the main issues that your organization sees in these policy areas? And which do you think your organization is well positioned to address?

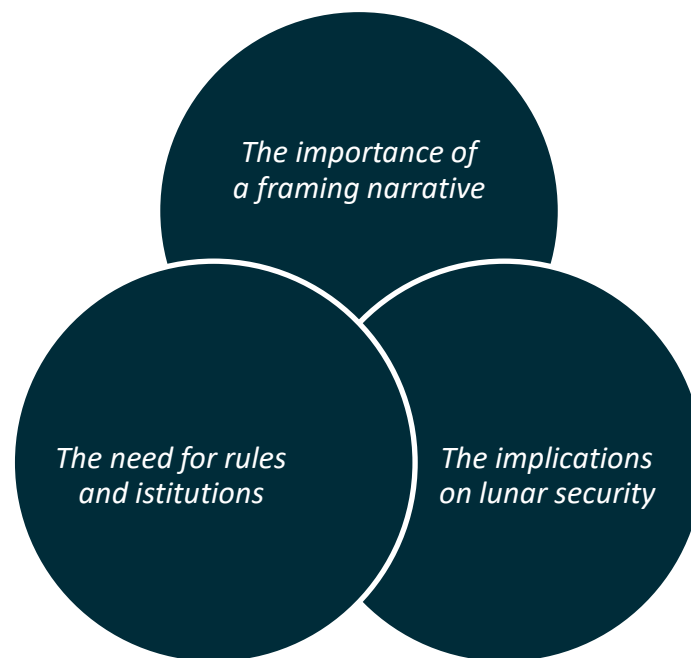
Please rank the following tools in order of importance for your organization:

A	<i>Streamlined procedures for sharing information on lunar activities (specifically on their nature, conduct, location, duration, and results)</i>
B	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
C	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>
D	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>
E	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
F	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>

LUNAR POLICY PRIORITIES

Beginning with three preliminary considerations, this Section presents ten priority areas for safe and sustainable lunar activities, and discusses a diversity of views about policy tools across the five stakeholder groups interviewed during the consultations.

1. Three Preliminary Considerations



A) *The importance of a framing narrative*

Several stakeholders noted that while there is agreement on the importance of the Moon for science and deep space exploration, there is no framing narrative around the benefits and modalities of lunar activities.

These actors were concerned that without this element it will be more difficult to get public support for the development of infrastructure and services at the scale and with the level of interoperability needed for long-term sustainability.

B) *The need for rules and institutions*

Operationalising the rules of international space law in the context of lunar activities, and especially the foundational principles of the Outer Space Treaty (OST), is a delicate and multi-faceted endeavour. Answering questions such as how to extract and use lunar resources with due regard to the corresponding interests of others, or how to conduct lunar activities free from harmful interference while also preserving free access to all areas of the Moon, will

require an unprecedented balancing of key provisions such as Articles I, II and IX OST. Different actors will (and already) have different views about it, which in turn significantly impacts everyone's ability to plan their activities with a reasonable degree of predictability.

Several stakeholders, and especially companies, raised the need to complement fundamental principles and bodies of international space law with dedicated rules and institutions able to provide clear and widely accepted answers in a timely manner.

C) The implications on lunar security

Few stakeholders were concerned by the growing interrelations between sustainability, safety, and security. These actors underlined the vital importance of preserving the Moon as a *non-threatening* environment, i.e. free from potential security threats that may be posed by the mere presence of foreign military entities, even under the terms of Article IV (2) OST.¹⁰

Although this Report does not address lunar security *per se*, it has been written with a mindful understanding of the security implications of policy areas like transparency or coordination, and strives for harmonious approaches in the consideration of these and other issues.

¹⁰ Which allows for the use of military personnel, equipment, or facilities which may be necessary for peaceful exploration or scientific research. See *Outer Space Treaty*, *supra* note 6.

2. Five Macro-Areas



A) Transparency

All consulted stakeholders noted the importance of transparency as a key enabler of safety and sustainability, and underlined the essential role of information sharing in building trust and enabling coordination.

Several stakeholders emphasized the importance of Article XI OST as a viable legal basis to share information about the nature, conduct, location, and results of space activities. From 2024, the implementation of Article XI OST will be notably considered by the Working Group on the Status and Application of the Five UN Treaties in the Legal Subcommittee of COPUOS.

Critical issues discussed include what information to share, how to share it, and when. Due to the multi-faceted nature of lunar activities, many actors highlighted the need for enhanced information sharing, including its organized display through publicly available, dynamic, international databases. Due to the increasing involvement of commercial actors in lunar missions, transparency measures should be developed with due regard to their intellectual property rights under applicable national legislation.

B) Coordination and non-interference

Due to the hazardousness of the lunar environment and the concentration of several missions in a few proximate locations, several stakeholders listed coordination as a key priority area to ensure the safety of lunar activities.

The key challenge in this area is how to coordinate between non-partner States, as well as between public and private actors of different nations. For example, while Artemis Signatories might coordinate amongst them through the use of area-based measures called safety zones, coordination with non-Artemis States and/or private actors still relies on bilateral channels.

To prevent harmful interference, many actors suggested a global, proactive approach to lunar coordination via new regimes or institutions developed by COPUOS. However, the same

actors doubt it could be possible to reach any concrete result in the coming years, due to the time required to build consensus and the considerable size of the Committee's agenda. Therefore, they noted a useful role for multi-stakeholder, neutral, expert bodies facilitating informal exchanges of views to identify common ground and test potential solutions.

C) Inclusion and accessibility

Many actors noted the key importance of paying due regard to the interests of emerging spacefaring countries, future generations, and indigenous communities both in the planning and conduct of lunar activities.

A present challenge is how to maximise opportunities for cooperation between spacefaring and emerging spacefaring countries notwithstanding existing legal and policy restrictions on partnerships for data sharing and technology transfer. A future challenge will be ensuring free access to all areas of the Moon and especially those hosting large scale operations, in compliance with relevant international obligations. Few stakeholders suggested the potential establishment of mobility corridors or transit rights as initial ideas for further discussion.¹¹

While States are already addressing this area under their own cooperation frameworks, several stakeholders noted that inputs from non-governmental platforms and civil society on optimised policies for inclusion and accessibility would be well received.

D) Infrastructure and interoperability

Several stakeholders indicated the development of fundamental infrastructure as a critical area to be addressed for the sustainability of lunar activities, although only a few of them defined it as an urgent priority.

Stakeholders discussing this area noted the vital role of interoperability to foster both efficiency and sustainability for essential services like docking, landing, life support, search and rescue, power, and communications, even though only a few of them defined it as a top priority due to the early stages of lunar activities.

A present challenge is the lack of holistic planning for the development of both fundamental infrastructure and interoperability standards. In this regard, some stakeholders suggested to consider an "airport approach"¹² enabling scalability and avoiding unnecessary duplications.

¹¹ Drawing from relevant analogies under the [Convention on International Civil Aviation](#), the [United Nations Convention on the Law of the Sea](#) and the [Antarctic Treaty System](#).

¹² Adopting an "airport approach" means to designate specific areas for landing and taking off, and subsequently develop surrounding infrastructure for associated services such as storage, surface transportation, and maintenance.

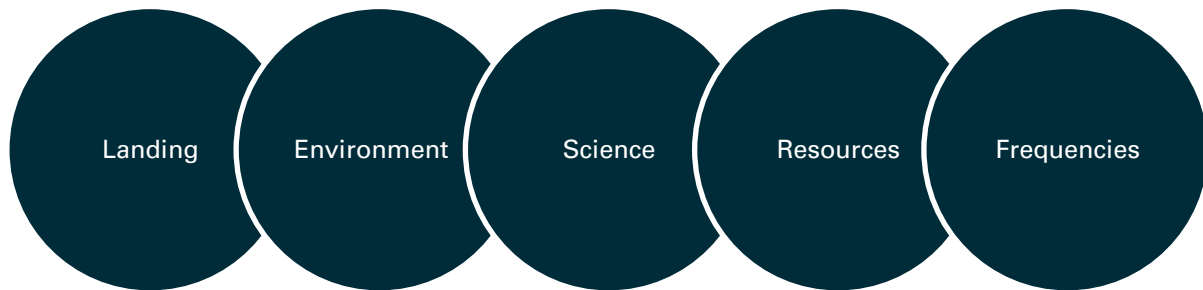
E) Frameworks and governance

The key importance of legal frameworks and governance systems has been noted throughout LPP meetings, revealing three fundamental needs: (1) clarity on how to implement the provisions of international space law in the context of lunar activities, (2) mechanisms to manage special locations and preserve unique heritage sites, and (3) shared procedures for liability allocation and dispute settlement.

The greatest majority of interviewed actors expressed concerns for the lack of uniformity in the current interpretation of international space law, and noted the need for common ground enabling more focused discussions on governance issues. Several scientific entities expressed the desire for governance mechanisms to preserve the pristine conditions of the lunar far side for planetary defence and radioastronomy. On the other hand, many commercial actors proposed the creation of dispute resolution mechanisms for reducing uncertainty and enabling investments.

The main challenge in this area is how to achieve consensus in COPUOS. While diplomacy unfolds, actors agreed it would be beneficial to consider these aspects in informal contexts to exchange views and test solutions.

3. Five Special Areas



A) Landing

Landing was a highly discussed topic throughout LPP meetings. Stakeholders addressing this area indicated studies, equipment, and procedures for safe lunar landing as a top priority to be addressed at the present day.

There are two foundational challenges in this area: (1) studying the consequences of landing, particularly in terms of plume ejection and dust distribution, and (2) mapping targeted sites to identify possible overlaps and risks of accidents.

A subsequent one would be (3) developing mitigation strategies to reduce harmful impacts on the lunar environment as well as on other activities, both via possible area-based measures and infrastructure like landing pads.

B) Environment

Almost all stakeholders noted the vital importance of the lunar environment, both in itself and due to its influence on other areas, especially on coordination, science, and sustainability.

The first challenge in this area is proactively understanding the consequences of planned activities on the lunar environment through dedicated impact assessments. The following would be evaluating how to mitigate any potential hazards identified, especially in terms of debris creation and irreversible alterations to the pristine conditions of special locations.

In this regard, several actors urged the establishment of Lunar Debris Mitigation Guidelines fostering the safe and sustainable disposal of both orbital and surface objects on the Moon.

C) Science

Several actors indicated science as the main driver for lunar activities, and considered the protection of lunar scientific investigation as a top priority.

The core challenge is how to maintain and foster opportunities for special scientific studies offered by the unique pristine conditions of the Moon, while still allowing for the feasible conduct of commercial and other activities.

A variety of stakeholders suggested integrating scientific objectives in commercial missions, and preserving certain unique areas for scientific investigation, taking into account the views of scientists and lunar operators alike. For others, regulation may need to be developed in advance of certain activities, to ensure compliance with their international obligations.

D) Space resources

Many stakeholders listed the use and governance of space resources among the most important areas, although only a few indicated these topics as an urgent priority due to their medium-term horizon in the timeline of lunar development.

Top three challenges in this area are (1) the need for an accurate taxonomy of lunar resources, (2) the current lack of legal certainty about ownership and utilization rights, and (3) potential risks of irresponsible behaviours by first-comers.

Several actors discussing this area recognized the leading role played by the COPUOS Working Group on the Legal Aspects of Space Resource Activities. Further to that, many noted the need to complement legal discussions by (1) quantifying and cataloguing lunar resources, and (2) drafting uniform reporting standards for commercial prospecting missions.

E) Frequencies

Various stakeholders listed the allocation of lunar frequencies as a key area to be addressed within the framework of the International Telecommunication Union (ITU).

Historically, communications for lunar missions have been executed using existing deep space network (DSN) in the bands allocated to space research. Since the ITU table of frequency allocations only features regions on the surface of the Earth, point-to-point communications on the lunar surface would be conducted under Radio Regulation 4.4, i.e. in derogation of the frequency table and with reduced protection against harmful interference.

Every four years, ITU Members meet at dedicated World Radiocommunication Conferences to update the Radio Regulations and discuss new issues. It is in this context that a national administration could request studies for determining spectrum requirements for the Moon and consider the development of related instruments, including a dedicated frequency table.

4. Stakeholders' Views

At the end of all LPP meetings, stakeholders were invited to rank six policy tools in order of importance for their organization.¹³ This sub-section presents the result of that investigation, and identifies three points of divergence and three points of convergence.

For each stakeholder group there is a mention of their highest topic of interest, followed by the aggregate result of the individual ranking collected.

A) Space agencies

The primary interest of this group is how to address key lunar policy issues in COPUOS notwithstanding its packed agenda and geopolitical difficulties, building upon its success as a consensus-based multilateral forum.

1	<i>Streamlined procedures for sharing information on lunar activities (and specifically on their nature, conduct, location, duration, and results)</i>
2	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
3	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
4	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>
5	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>
6	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>

¹³ See Introduction, Section 2.

B) Industry

The primary interest of this group is increasing predictability and certainty on the rights and obligations of operators, as well as on domestic licensing procedures and authorities.

1	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>
2	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
3	<i>Streamlined procedures for sharing information on lunar activities (and specifically on their nature, conduct, location, duration, and results)</i>
4	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
5	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>
6	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>

C) Science and research

The primary interest of this group is how to constructively balance the interests of science with all the others.

1	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
2	<i>Streamlined procedures for sharing information on lunar activities (and specifically on their nature, conduct, location, duration, and results)</i>
3	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
4	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>
5	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>
6	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>

D) Civil society

The primary interest of this group is how to increase current levels of international cooperation and inclusion as key enablers of sustainability.

1	<i>Streamlined procedures for sharing information on lunar activities (and specifically on their nature, conduct, location, duration, and results)</i>
2	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
3	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
4	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>
5	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>
6	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>

E) Expert individuals

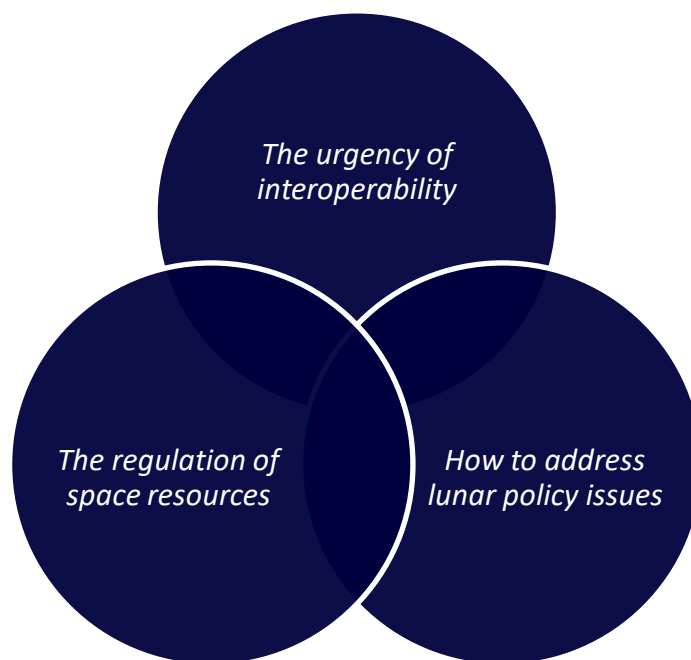
The primary interest of this group is how to develop a shared narrative to bring actors together around the benefits and modalities of lunar activities.

1	<i>Streamlined procedures for sharing information on lunar activities (and specifically on their nature, conduct, location, duration, and results)</i>
2	<i>International norms of behaviour for landing and proximity operations (and specifically on mitigating potentially harmful interference)</i>
3	<i>Minimum measures for environmental and heritage protection (e.g. through dedicated impact assessments)</i>
4	<i>Common policies on how to share the benefits of lunar activities (e.g. through scientific data sharing or capacity building)</i>
5	<i>Industry guidelines to report on lunar resources prospecting missions (standards, parameters, and methods for identifying mineable reserves)</i>
6	<i>Technical standards for interoperable systems and infrastructure (e.g. on human life support systems, docking, landing, communications)</i>

5. Divergence and Convergence

Based upon the different responses provided, it has been possible to identify three points of divergence and three points of convergence among the consulted stakeholders.

Divergence



Divergence nr. 1: the urgency of interoperability

A few actors strongly believed there is an urgent need for global processes to establish interoperable standards for fundamental lunar infrastructure. However, several did not include interoperability amongst their short-term priorities, since lunar technologies are still in a demonstration phase.

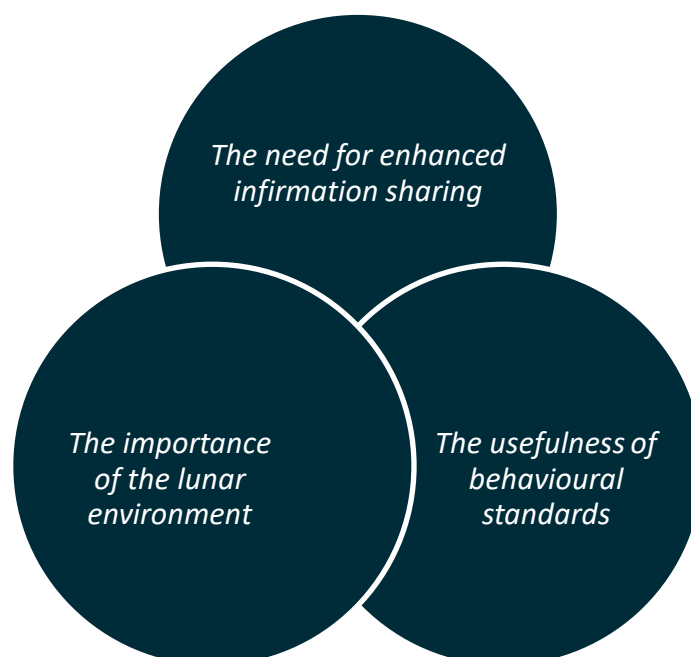
Divergence nr. 2: the regulation of space resources

Many actors considered the regulation of space resource activities as an important area. However, many more did not consider it as a priority and believed it should be addressed only after having solved more pressing issues like information sharing, landing, and environment.

Divergence nr. 3: how to address lunar policy issues

Almost every actor had different ideas on how to best address lunar policy issues. Opinions diverged as to the ability of COPUOS to provide effective solutions, the legitimacy of national or unilateral frameworks, the reliability of purely industry-led processes, and the role of non-governmental entities.

Convergence



Convergence nr. 1: the need for enhanced information sharing

All actors highlighted the importance of enhanced information sharing on the nature, conduct, location, and results of lunar activities. Information sharing consistently made it to the top 3 priorities of all groups, frequently as the number 1 and always as a key enabler of other tools.

Convergence nr. 2: the importance of the environment

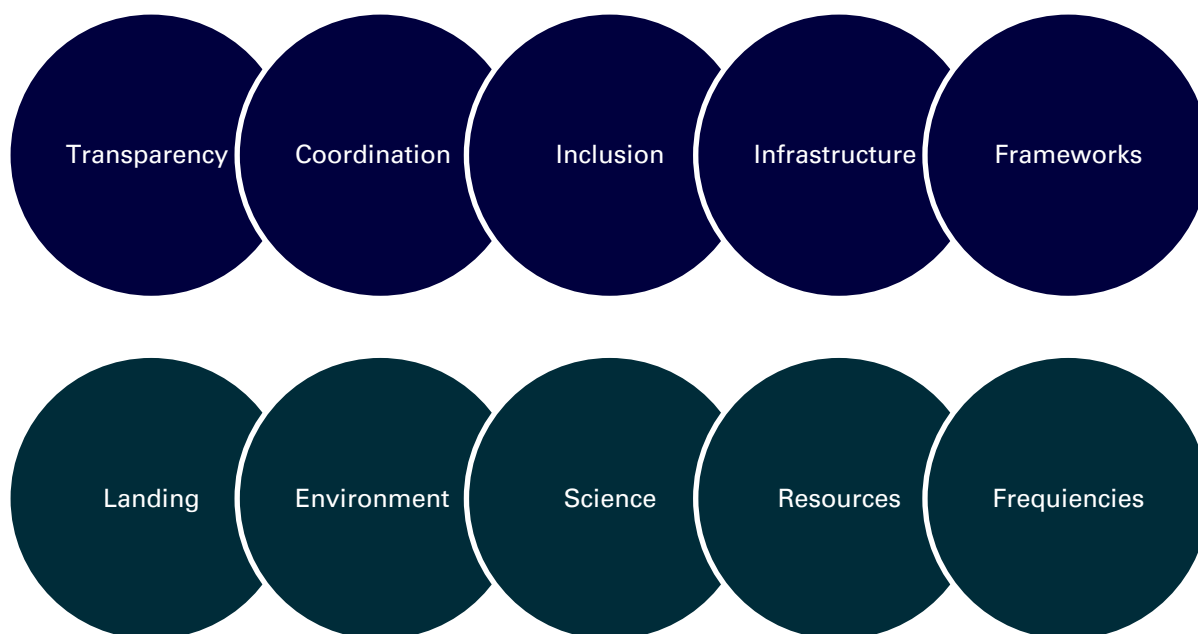
A second element of convergence was the importance to study the lunar environment to better understand which safety hazards it can pose to lunar activities, both in itself and as a result of indirect consequences started by high impact events such as landing.

Convergence nr. 3: the usefulness of behavioural standards

While ranking policy tools, stakeholders also commented on terminology. Different groups perceived procedures, norms, and guidelines in different ways, while they all converged on the usefulness of behavioural standards as neutral, concrete, and easier to adopt and adapt.

6. Holistic Prioritization

This Report identified ten policy areas, five general and five special, that actors believe should be addressed for safe and sustainable lunar development.



While all the ten identified areas are equally important and interconnected, individual actors have constrained capacity and different preferences. As a result, lunar policy issues are being addressed through a scattered approach. Different actors are considering different problems at different times, based on what is most relevant or interesting to them, with little sight of the bigger picture.

Acknowledging the need to address several areas at the same time, but also the fact that stakeholders have constrained capacity and different priorities, this Report suggests an approach that can be called *holistic prioritization*. The prerequisite of this approach is a community understanding of which policy areas need to be addressed and which actors have the interests and capabilities to do so. Through this community understanding, stakeholders can identify synergies and gaps to select which issues they want to address in an informed and cooperative manner.

Thanks to holistic prioritization, it would be possible to leverage the current diversity of interests and resources in lunar policy for addressing multiple areas in parallel, while keeping sight of the bigger picture. By providing the first community understanding of which policy areas need to be addressed and which actors have the interests and capabilities to do so, this Report has laid the first stone for holistic prioritization in lunar policy. What to build upon it will be for all interested stakeholders to decide.

7. Moving Forward

The *Lunar Policy Priorities Report* is intended to be a living document. It has been created for the benefit of all space stakeholders, and belongs to them. Anyone reading this document is warmly invited to share their feedback.

The latest version of this document has been open for feedback and support between September 1st to October 31st 2023, and has been unveiled in Paris on November 11th 2023, at the occasion of the 6th Paris Peace Forum (PPF) during a high-level Roundtable followed by a dedicated launch event.

From now on, the Report will be presented at various fora and events, from the UNCOPUOS meetings to the International Astronautical Congress, to collect feedback and identify opportunities for collaboration. Every year, the LPP will revisit the document to update the priority areas and refresh the stakeholder views, incorporating any new feedback received.

8. A Note on LPP Future Work

Based upon the analysis conducted in this Report, and driven by the desire to operationalise it, the following Annex presents LPP's Workplan for 2024 and onwards, outlining an initial proposal for a *Lunar Policy Decalogue*.

The Workplan is not part of this Report and is attached as a separate Annex for the benefit of all stakeholders that may be interested in contributing to the work of LPP in the future. The *Decalogue* presented there has been conceived by the LPP for further consideration by all stakeholders, to support focusing future conversations and identifying possible actions.

ANNEX – LPP Workplan

1. A Proposal for a Lunar Policy Decalogue

Adopting an holistic prioritization approach, this Annex presents a proposal developed by the LPP for a *Lunar Policy Decalogue* to provide solid policy foundations for safe and sustainable lunar development. The *LPP Decalogue* is presented here further consideration by all relevant stakeholders, to support focusing future conversations and identifying possible actions.

THE PROPOSED *LUNAR POLICY DECALOGUE* COMPRISES OF THE FOLLOWING TEN ELEMENTS:

I.	Lunar benefits and capacity building policies
II.	Lunar transparency standards
III.	Lunar landing and proximity studies and procedures
IV.	Lunar debris and disposal guidelines
V.	Lunar science and ethics charter
VI.	Lunar frequency allocation table
VII.	Lunar cooperation policies and coordination norms
VIII.	Lunar infrastructure plan and interoperability standards
IX.	Lunar resources catalogue, principles, and standards
X.	Lunar governance framework

Just as the ten priority areas identified in the Report, the ten deliverables proposed in the *LPP Decalogue* are all equally important. As such, the list presented above features them not in order of importance nor of development, but rather in an estimated sequence of completion. This sequence has been based upon the complexity of the different deliverables, and taking into account the progression of envisaged plans for lunar activities.

The *LPP Decalogue* has been designed to integrate with existing efforts and help direct them towards the establishment of foundational policies and standards that can support the safe and sustainable exploration and use of the Moon for the benefit of all humanity. The following paragraphs briefly describes the key features of the proposed deliverables, including which stakeholder groups might find them particularly interesting and support their development.

I. Lunar inclusion and capacity building policies

The *Lunar inclusion and capacity building policies* would present a range of policies for inclusive lunar activities and capacity building in lunar policy.

This deliverable could be of particular interest to emerging spacefaring nations, and could be developed with the support of a neutral facilitator in collaboration with all interested actors.

II. Lunar transparency standards

The *Lunar transparency standards* would be a set of voluntary practices on enhanced information sharing for lunar activities, helping stakeholders to develop consensus on what information to share, how to share it, and when.

Building upon the legacy of the Article XI Project, this deliverable of general interest could be developed with the support of a neutral facilitator in synergy with the UN Working Group on the Status and Application of the Five UN Treaties, and in collaboration with lunar operators.

III. Lunar landing and proximity studies and procedures

The *Lunar landing studies and proximity procedures* would investigate the consequences of landing and proximity operations, particularly in terms of plume ejection and dust distribution, and suggest procedures for safety.

This deliverable could be produced through *ad hoc* partnerships between lunar operators, research institutes, and relevant public actors, supported by neutral facilitators as needed.

IV. Lunar debris and disposal guidelines

The *Lunar debris and disposal guidelines* would be the first set of guidelines for the minimisation of debris and the safe disposal of objects on the Moon.

This deliverable could be of particular interest to high-level technical bodies such as the Inter-Agency Space Debris Coordination Committee (IADC), could be developed by them with the support of neutral facilitators, and could be further considered by COPUOS.

V. *Lunar science and ethics charter*

The *Lunar science and ethics charter* would provide a list of good practices for conducting lunar activities with due regard to prime scientific interests, particularly in special areas like the far side, and key ethical principles for heritage protection and responsible exploration.

This deliverable could be of particular interest to high-level scientific bodies such as COSPAR, could be developed by them with the support of neutral facilitators, and could be further considered by COPUOS.

VI. *Lunar frequency allocation table*

The *Lunar frequency allocation table* would be an international instrument to coordinate the allocation, allotment, and assignment of radio-frequency spectrum on the Moon, with due regard to its shielded zone on the far side.

This deliverable of general interest would need to be considered by ITU Member States, also based upon the outcome of the upcoming 2023 World Radiocommunication Conference.

VII. *Lunar cooperation policies and coordination norms*

The *Lunar cooperation policies and coordination norms* would be of a set of best practices on lunar cooperation and coordination, based upon the early years of lunar activities.

This deliverable could be produced by public and private actors involved in lunar activities, with the support of neutral facilitators as needed.

VIII. *Lunar infrastructure plan and interoperability standards*

The *Lunar infrastructure plan and interoperability standards* would be an ambitious reference document for the establishment of permanent lunar infrastructure and the development of related interoperability standards.

This deliverable could be of interest to the International Space Exploration Coordination Group (ISECG), as well as to lunar manufacturing companies and service providers, such as the recently established LOGIC Consortium, and could be developed with the support of technical bodies and neutral facilitators alike.

IX. *Lunar resources catalogue, principles, and standards*

The *Lunar resources catalogue, principles, and standards* would be three modular deliverables respectively addressing technical, legal, and operational aspects of lunar resource activities.

The Catalogue could be produced as a result of an International Lunar Resources Evaluation Campaign, with the support of technical bodies and neutral facilitators alike. The Principles are listed in the mandate of the Working Group on Space Resources for finalization by 2027.

Finally, the Standards could be developed building upon Lunar Ore Reserves Standards 101 with the support of standardization bodies, industry groups and neutral facilitators alike.¹⁴

X. *Lunar governance framework*

The *Lunar governance framework* would integrate the previous 9 elements of the Decalogue in a comprehensive framework governing the exploration and use of the Moon for the benefit of all humankind.

This deliverable would be of interest to all actors and could be considered by UNCOPUOS, in harmony with existing treaties and taking into account the views of all stakeholders.

2. Next Steps

The mission of the LPP is to enable the safe and sustainable development of the Moon through priorities, policies, and standards. To fulfil this mission, and following the proposed approach of holistic prioritization, from 2024 onwards the LPP will work to regularly update the *Lunar Policy Priorities Report* as well as evolve and realise the proposed *LPP Decalogue*.

All stakeholders interesting in working with the LPP are warmly invited to approach us to identify synergies and explore possible collaborations. Based upon the outcome of a new series of upcoming stakeholder consultations, in December 2023 the LPP will announce its focus area(s) for the year 2024.

¹⁴ Carlos Espejel et al., [Lunar Ore Reserve Standards 101](#) (2023, available online).

"The following organisations and expert individuals welcome the work undertaken by the Lunar Policy Platform and support the Lunar Policy Priorities Report as an important contribution to future approaches to lunar governance"

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