

SPACE TENURE: THE POLICIES OF SUSTAINED LUNAR PRESENCE

October 2020



Challenge and Opportunity

For the first time in history, the US has an official policy to develop a sustained presence beyond Earth orbit, with “increasing numbers of Americans living and working in space.”⁽¹⁾ Outer space has been declared its own military domain⁽²⁾, and cislunar space has been identified as a strategic landscape for prestige, logistics, and commercial activity. It is also a new vantage point from which to monitor and respond to developments in near-Earth orbit, where critical planetary infrastructure operates-- from environmental and geopolitical remote sensing to network and communications infrastructure.

Compared with the urgent crises we are facing on Earth, lunar development, embodied in NASA’s flagship Artemis program, may seem a marginal concern. But the potential implications are staggering, and the actions we take now are seeding geopolitical dynamics and norms of behaviour with implications for America’s economic, military and ideological leadership on Earth and in space.

The Need for Leadership

Despite the importance, we are in a stalemate situation with respect to institutional development for outer space. The predominant tools in use today are tit-for-tat responses and independent actions of States. The UN Committee on the Peaceful Uses of Outer Space (COPUOS) is largely deadlocked while capabilities and actors continue to proliferate. We need leadership, new fora, and new institutions that can respond to the coming activity.

The US has shown significant policy leadership in this domain in 2020, including introduction of the Artemis Accords⁽³⁾; but, it has also been criticized for lack of international consultation and public engagement. The perception (rightly or wrongly) of a “unilateral” approach has raised questions of intention and the possibility of destabilizing traditional alliances: China and Russia are reportedly discussing their own agreement, and European countries worry they may be forced to choose between partnering with the two major space powers. If the current space regime fractures, it is bad for all.

A strong leadership role in the policy domain characterized by open discussions around norms, policies, and standards, is critical to retaining open competition and the rule of law in outer space, protecting stability and seeding new economies. A uniting vision for sustained presence in outer space will require a sustained investment in more than hardware, but also in dialog and diplomacy, bringing others along with us.

Recommendations

Sustained presence in outer space requires a categorical shift in thinking, going beyond “exploration” to think instead about tenure: policies rooted in experience, lessons learned from historic engagements with frontiers, and long term thinking, in order to construct strong foundations and longevity of presence. A mentality of space tenure will center policies around infrastructure, coordination, markets, and resource management.

¹ “A New Era for Deep Space Exploration and Development,” U.S. National Space Council, July 23, 2020.

² “Spacepower: Space Capstone Publication,” U.S. Space Force, August 20, 2020.

³ “Artemis Accords: Principles for a Safe, Peaceful, and Prosperous Future,” NASA, May 15, 2020.

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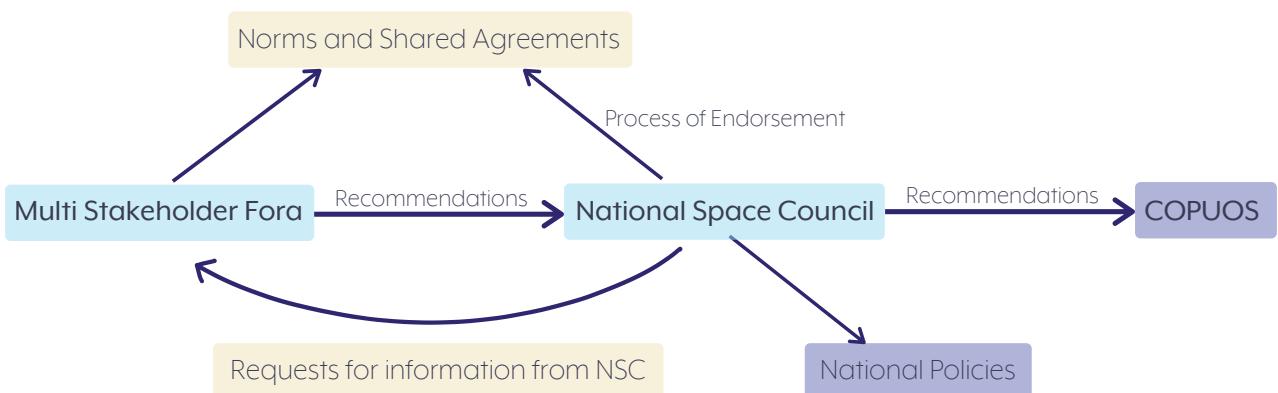
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An Intentional Policy Ecosystem

Create an ecosystem for tenure space policy that clarifies the links between multi-stakeholder fora, national policy making, and COPUOS. Though some issues require universal agreement and consensus, many do not, while others can be prototyped through bottom up coordination. Following a principle of subsidiarity, start with fora for actors and other direct stakeholders closest to the implementation, promoting policy topics to national and international fora as necessary in a virtuous cycle.



National Space Council (NSC):

Recommendations:

- Designate a focus area for the NSC on tenure policies, and expand the NSC User Advisory Group to include representation from civil society as well as commercial actors.
- The NSC should use Requests for Information (RFIs) regarding important policy issues (see below) to solicit input from diverse sources and multi-stakeholder fora prior to finalizing positions. Benefits include leveraging broad expertise, increased stake-holding and agency.
- To increase regulatory clarity for private operators and implement obligations for authorization and continuing supervision under Article VI of the OST, the NSC should clarify domains where operators are permitted to coordinate with private agreements; while advocating for harmonization of same among member States at COPUOS.
- Commit to an open consultative process for developing the contents of the Artemis Accords, with particular attention to input from the international community and relevant domain experts in civil society.

Multi Stakeholder Fora (MSF):

Multi Stakeholder Fora (MSF) that can respond to active needs for practical coordination and shared agreements between actors; as well as organically source expertise from civil society at large.

Recommendations:

- Endorse, and support the development of, independent, international open fora, where all actors — state and private — can come to the table as peers.
- Formalize a process for input from MSF, such as the RFI process above.
- Provide funding for active civil servant participation in MSF fora (time and travel).
- Adopt a review process in the NSC to respond to outputs from these fora, including processes for endorsing independent norms and shared agreements developed in the MSF, sponsoring relevant issues through the national legislation process, or channeling issues to COPUOS as necessary. These needn't be mutually exclusive.

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UN Committee on the Peaceful Uses of Outer Space:

Recommendation:

Advocate for the following agenda items at COPUOS, drawing recommendations from national lawmakers as well as interdisciplinary multi-stakeholder fora:

- Extension of the Registration regime to include cislunar activities (orbital and surface).
- Specifications and requirements regarding notification and coordination of space activities including site selection and consent amongst actors.
- Agreement regarding specific lunar resources to be treated as scarce

First Steps: Key Policy Areas

Open RFIs should be issued by the NSC for the following tenure space policy areas, all of which have near term relevance, lacunae under existing law, and implications for US leadership and security of access.

1. Landing sites and operations: site selection and associated requirements and expectations for notification and coordination, accounting for operator needs and State obligations to free access under the OST.
2. Resource management policies with an emphasis on scarce resources: orbital slots, disposal and salvage; area-based resources such as the antipode radio quiet region, water and mineral deposits, peaks of eternal light; and global goods such as the exosphere.
3. Launch licensing and registration: considerations from operators, scholars and civil society regarding information to be provided as part of a lunar registration regime including desires, challenges, uses, timeliness and frequency.
4. Domains of Private Law: seek input on activities where States may recognize and defer to private contracts and coordination mechanisms under domestic law.
5. Open standards and interfaces: standards relevant to market dynamics and ecosystem growth, open space situational awareness in support of transparency and confidence building; development of open positioning technology and standards for the cislunar domain.

Adopt guiding principles

Tenure policies require grounding in explicit principles to guide decisions that will inevitably require tradeoffs. Such principles could include:

- Learning and adaptation: policies that include mechanisms for learning, adaptation or even sunset clauses will enable greater movement and innovation.
- Plurality and diversity: an entire planetary body will be host to many kinds of activities and actors. Design for this, and seek solutions that leave room for differing but complementary approaches.
- Subsidiarity: moving social coordination to the most local level appropriate. Distinguishing between domains where we do and do not need universal agreements.
- Commitment to transparency and openness to support consistency, participation, coordination and capacity building.

Quality over quantity

Consider extending the planned human landing to 2028 enabling deeper international partnership and development of coordination frameworks. Recognize that a slow down will increase reliance on, and first mover advantage of, private actors (even with respect to governments), increasing the importance of identifying and establishing basic norms and expectations, to retain international coherence and to ensure market development over monopolies.



About the Author

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