

Ethical & Cultural Considerations for Space Resource Utilization

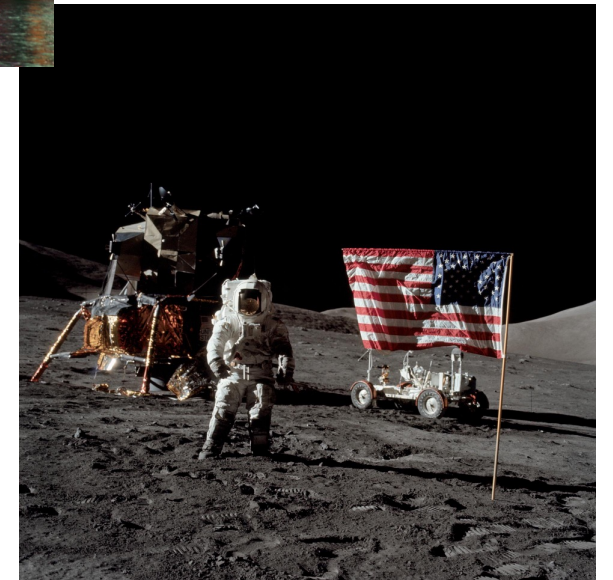
Presented by Bailey C. Hopkins



"The exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind." - Article I, The Outer Space Treaty



The Moon Already Belongs to All of Us





4207 m | 13 Telescopes | Central to Native Hawaiian Creation Stories



Questions for Lunch

1. How do we engage all people before extraction begins, not after?
2. Are there lunar regions, like Apollo landing sites or visually iconic craters, that we collectively agree to leave alone?
3. What would it look like for excavation to be done in a way that the global public, not just spacefaring nations, sees as legitimate?



Legal vs. Ethical

Legal

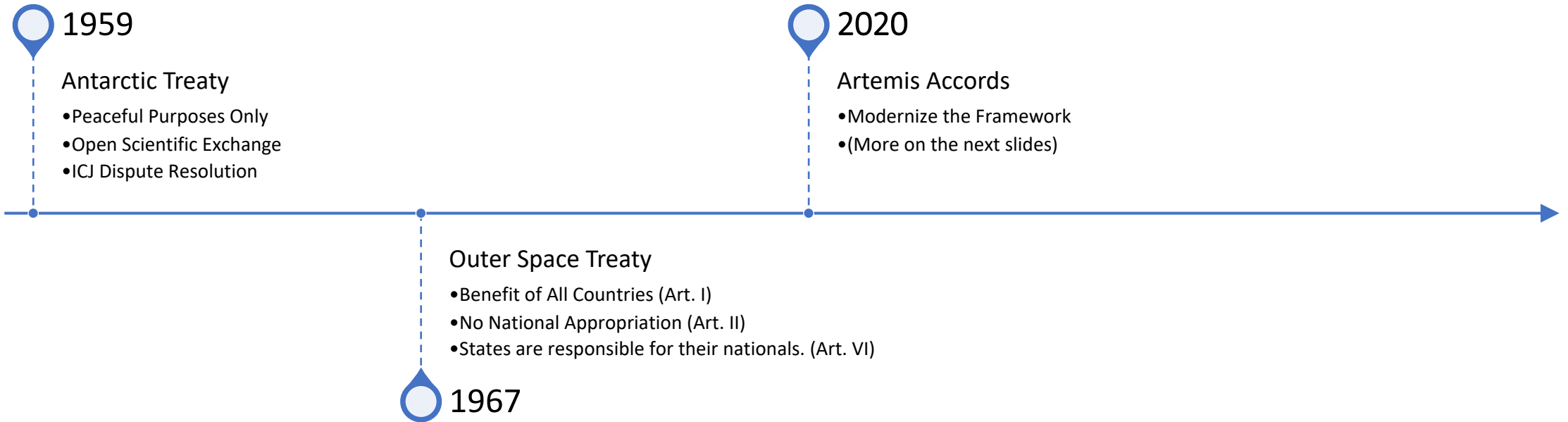
- Codified in treaties and law
- Defined, enforceable
- Asks: What's permitted?

Ethical

- Cultural, moral, equity considerations
- Broader than codified rules
- Asks: What serves all people?

Legal compliance is the floor, not the ceiling.





Bogotá Declaration and Moon Treaty

Bogotá Declaration:

- 8 Equatorial Nations
- Claimed sovereign rights over geostationary orbit
- Rejected, but put equity on the record

The Moon Treaty:

- "Common heritage of mankind"
- Equitable sharing of resources
- Not ratified by major spacefaring nations



Artemis Accords (2020)

- Section 9: First multilateral commitment to preserve space heritage
- Section 10: Permits resource extraction, active legal conversation
- 67 signatories, momentum growing



NASA Moon Base, May 26, 2026

"I think that the idea that there are areas of great interest on the lunar surface, we do want to get there and explore them, and we also obviously want to be very mindful of the Outer Space Treaty, so that we are respectful of other nations that are putting assets on the lunar surface, we would expect that to be reciprocal, but I think that's just one objective of many that the MoonFall drones intend to accomplish."

- Jared Isaacman, NASA Administrator, May 26, 2026



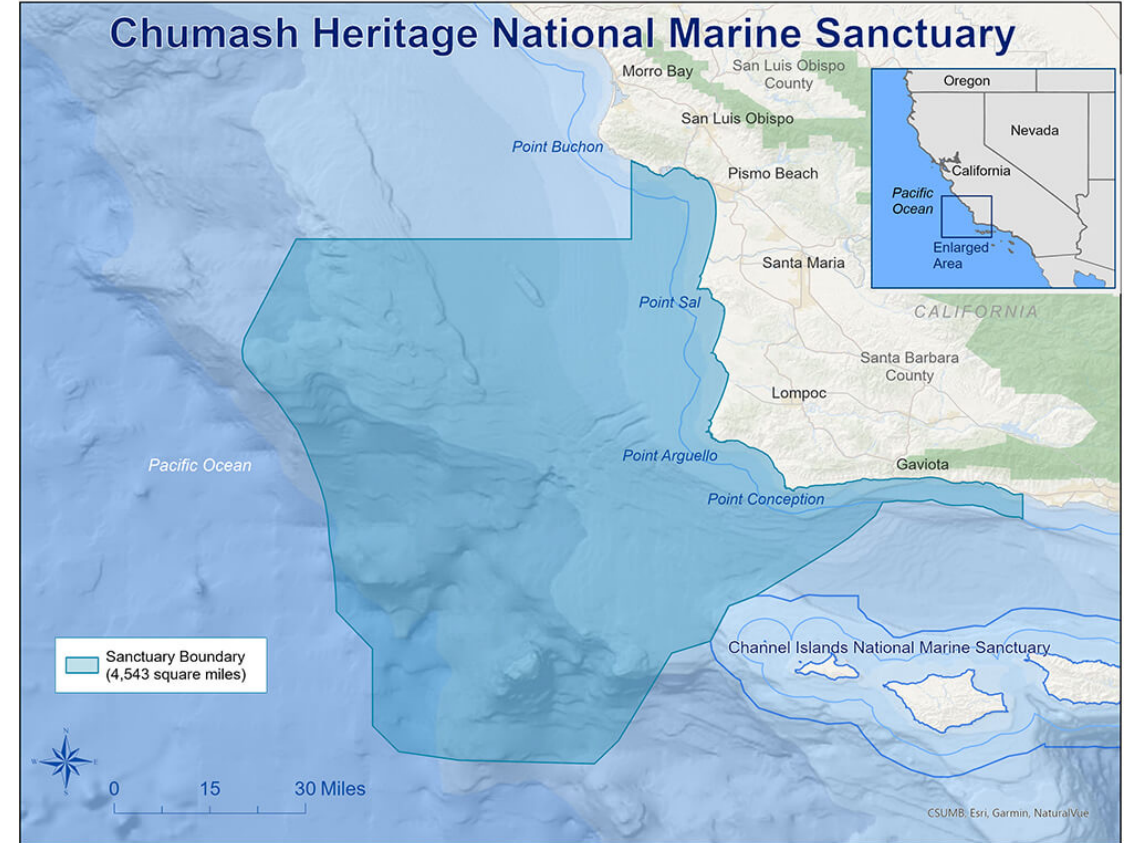
Parallels to Deep Sea Mining

Deep Sea Mining:

- UNCLOS: seabed as a common heritage of humankind
- International Seabed Authority manages mining
- No formal Indigenous role

Chumash Heritage NMS (2024)

- 116 miles
- Indigenous-proposed | Comanaged
- Mining prohibited



Three Places to Start

Two-Tiered Penalty System:

- Establish effective enforcement mechanisms, monetary fines, and international regulations.

Protected Cultural Sites:

- Formally designate cultural heritage sites on the Moon, Mars, and other celestial bodies that are free from resource extraction.
- Limit resource collection from areas that would have visible impacts on the lunar surface when viewed from Earth.

Community Involvement:

- Actively involve affected groups in the decision-making process.





Thank you!



Photo References

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