



# “Benefit Sharing” Terms of Reference

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The purpose of these terms of reference is to define and explain how the National Space Society proposes that the concept of “benefit sharing” should be understood with regard to space development. It is recognized that this term is in usage by others, and that usage may have different implications than are discussed in this document.

1. Benefit sharing shall be based on the idea that space is the province of all humanity, meaning that it should be open to all, which is not the same as owned in common. An alternative formulation is that all nations shall have equal right of access to space for use and exploration, which does not mean that all nations will necessarily share all the benefits of space equally. Benefit sharing shall not be based on the “common heritage of mankind” principle.
2. Benefit sharing shall be defined in such a fashion as to recognize that over time independent communities will come to exist in space with some form of sovereignty, that such entities will chart their own destiny, and must not be exploited as “colonial” states under a benefit sharing scheme. Such space communities must be allowed access to exploit local resources for the health and growth of the community. Such development will benefit space developers, investors, and space settlers. Disputes involving the distribution of benefits should favor the space communities rather than the Earth-bound stakeholders, but reasonable property rights and returns on investment should be expected and honored in any legal dispute. Considerations for the protection of heritage sites shall be appropriate.
3. A foundational principle of benefit sharing is that the seizure of vast space resources with minimal effort, i.e., via mere declaration, the planting of a marker, etc. would subvert the intent of the Outer Space Treaty (OST). The exploitation of space

resources shall not be used as a form of national appropriation of large celestial bodies or regions of outer space.

4. Benefit sharing is recognized as having varying levels of effort required to secure those benefits. These include:
  - a. Benefits from space that are widely distributed essentially for free, such as GPS, weather predictions, etc.
  - b. Benefits from space that are made available for a competitive market-based price, such as data services, video broadcasts, etc. so as to be generally affordable to a large percentage of the population.
  - c. Benefits from space which are side-effects, but of great value. Space infrastructure and services often have benefits that all, or essentially all, of humanity will enjoy. Such projects should be enabled and encouraged. For example, if Space Solar Power (SSP) averted climate change, every human would benefit even if the builders of the SSP system became trillionaires. A similar argument can be made for asteroid mining.
  - d. Benefits that stem from research and development in the space field. Such R&D enables innovation, spurs economic growth, and increases understanding of the universe. This area includes basic and applied research as well as scientific discovery. The sharing of scientific data, in accordance with current international practice, serves to disseminate knowledge across the human community. Cooperation and partnerships between nations in these areas should be encouraged with the goal of developing each nation's scientific and technological capacity. However, private, non-governmental actors shall never be compelled to give up rights to proprietary R&D.
5. The reservation of space resources must be ensured for "late comers" so that the most currently developed and wealthy nations/companies do not completely dominate the usage of space resources. In this case, the exploitation of reserved resources requires investment by the late comers for the benefits to be achieved, but such late comers are assured of a fair chance at developing space resources and will be doing so once many of the risks of development have been substantially mitigated by the earlier nations' public and private investments and operational knowledge, including the building of market demand for such space resources.
6. Benefit sharing shall not be based on the involuntary transfer or sharing of Intellectual Property since such sharing would severely impact investment and economic development.
7. Benefit sharing shall be based on a recognition that commercial or private non-governmental investment in space projects is highly risky, and highly risky projects must offer commensurately large financial returns to attract sufficient capital for research, development, construction, and operation. Benefit sharing that substantially decreases such investment returns shall not be adopted. Likewise,

investment in space projects by governmental entities supported by taxpayers must also achieve a commensurately large benefit for such government and its citizens. The sharing of benefits from such publicly funded projects should therefore be at the discretion of the funding entity.

8. Benefit sharing should require action on the part of those receiving the benefits, i.e. hard work, investment, purchasing, etc. and not simply be a hand-out or transfer of money [tax]. This is similar to existing UN Remote Sensing Principles<sup>i</sup>. Principle V says “*shall make available to other States opportunities for participation therein.*” and Principle XIII says “*make available opportunities for participation and enhance the mutual benefits to be derived therefrom.*” In other words, nations should encourage and promote collaboration with other nations regarding space activities—but as with any collaboration there is work to be done on both sides of the relationship. This term does not preclude the use of space infrastructure for humanitarian reasons, like disaster relief, where no return is expected, nor the voluntary offering of the free use of space infrastructure as discussed in section 4a.
9. Space resource utilization has the potential to address both Earth-based and cislunar needs as well as enabling development and settlement throughout space. This will be especially so in a space economy that is free, emphasizes shared benefits, and encourages entrepreneurial activities. Therefore, we would endorse a space-based economy that is subject to the obligations established in the Outer Space Treaty of 1967. Said economy would adhere to the principle that sovereign nations and their citizens would retain the rights and privileges of using space resources without interference in compliance with the treaty. Such a situation abrogates the need for any new global governance body claiming authority over space activities and resources, which would be in conflict with treaty requirements and which we would oppose.

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<sup>i</sup> <https://www.unoosa.org/oosa/en/ourwork/spacelaw/principles/remote-sensing-principles.html>

**About the National Space Society (NSS):** NSS is an independent non-profit educational membership organization dedicated to the creation of a spacefaring civilization. NSS is widely acknowledged as the preeminent citizen's voice on space, with over 50 chapters in the United States and around the world. The Society publishes *Ad Astra* magazine, an award-winning periodical chronicling the most important developments in space. To learn more, visit [space.nss.org](http://space.nss.org).