

Breaking Ground

TRUST STEWARDSHIP COMMITTEE RESPONSE SHEET FOR DOORR RECOMMENDATIONS

This document consolidates the response by the Trust Stewardship Committee (TSC) of the Breaking Ground Trust (BGT) to the recommendations made by the Deliberation on Our Resource Rights (DOORR) process. Read the DOORR Recommendations here: <https://breakingground.space/recommendations>

The trust stewardship committee is composed of trustees who are chosen according to their field of expertise and serve as individuals. Their main goal is to ensure that the trust respects and fulfills its purpose by making decisions aligned with it.

Types of responses:

Yes implement in its fullest practicable format, this is central to our role as BGT

Long term yes, short term not realistic for the trust right now

Principally support, however it may not be possible to implement, but will seek opportunities to do this

Something to advocate for but it's not our place to act upon it

Don't support this in principle or in practice, it's outside our mandate or position set.

Trust Stewardship Committee



RECOMMENDATIONS

Recommendation	Description	TSC Response
<p>BGT should create a risk assessment model which would define all the risks linked to lunar resources operations.</p>	<p>There is a need to define all types of risks involved in lunar resources activities whether they are economic, environmental, legal, cultural or sociological. There is also a need for clarity regarding what is considered an acceptable risk compared to an unacceptable risk.</p>	<p>Long term yes, short term not realistic for the trust right now</p> <p><u>Comment:</u> We may be able to do individual risk assessments for specific purchases, and/or contribute to dialog on the topic, but a general risk model is likely outside the scope of BGT.</p>
<p>BGT should require a notification mechanism if someone enters a certain perimeter around its sample.</p>	<p>Demonstrating notification systems in action will help operators understand deconfliction practices. BGT should require a notification if someone enters a certain perimeter around BGT's regolith (example: notification, operational or safety zones)</p>	<p>Principally support, however it may not be possible to implement, but will seek opportunities to do this</p> <p><u>Comment:</u> This will be a key aspect of how organizations cooperate and don't step on each other. However it's a big topic and would require a lot of dialog and consultation. BGT could facilitate discussions with relevant stakeholders and policy makers to produce recommendations on how such mechanisms could work, as well as potential negative externalities/unintended consequences.</p>

Recommendation	Description	TSC Response
<p>BGT should make its regolith purchase process public and its purchase agreements available and accessible to all.</p>	<p>BGT should set the precedent for transparency and information sharing including about how the regolith has been purchased and on what terms. This is a practical illustration of the open-source and replicable model principles listed in BGT’s trust agreement. Making this information public will exhibit how regolith purchases can be made in accordance with international law in order to encourage stakeholders to follow BGT’s work and know what is and isn’t possible.</p>	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> Fully supported. This is something we can integrate into purchase agreements, acknowledging that sellers want to redact certain information for reasons of propriety.</p>
<p>BGT should define what information drawn from the regolith samples is considered a common good and make it public and available to all.</p>	<p>Not all data and information needs to be shared. BGT should offer a definition of what information and data should be considered public and what information and data may remain confidential.</p>	<p>Principally support, however it may not be possible to implement, but will seek opportunities to do this</p> <p><u>Comment:</u> The role BGT plays could be to catalyze the emergence of such standards, for example by facilitating workshop(s). BGT can make informed suggestions about data that might make sense to typically be shared as a common good, while acknowledging that it may also vary by circumstances.</p>

Recommendation	Description	TSC Response
<p>BGT should define a model which allows for commercialization and public availability of scientific data to coexist.</p>	<p>BGT should demonstrate the line between commercial data sharing (private) and scientific data sharing (public). For example, BGT could use a similar approach as Planet Labs PBC, where within an initial window one can pay for early access to the data, and then after a certain amount of time, all data is added to a public repository.</p>	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> this is a central goal of BGT. This is expected to vary according to samples and circumstances, but BGT will pursue “proofs of concepts” that provide frameworks for how government (public good) and private missions can work together.</p>
<p>BGT should position itself as a facilitator that is able to include the private sector in the redistribution process of information and regolith samples.</p>	<p>Some companies want to engage in benefit sharing processes but there is a need for a third independent party to play that role in a transparent way.</p>	<p>Something to advocate for but it's not our place to act upon it</p> <p><u>Comment:</u> BGT sees itself as precedent setters rather than the ‘go to’ organization to handle the redistribution process. BGT will engage with companies as we trial different benefit sharing processes, and then share our experiences with the wider community to inform best practice and policy development. Over time, the body of knowledge within BGT can also enable it to provide direct support to organizations.</p>

Recommendation	Description	TSC Response
<p>BGT should work alongside private companies to experiment with potential models for return on investment if they agree to enter into a purchase agreement with BGT.</p>	<p>Private companies want to secure the right to sell their data and regolith samples and not just give them for free. The return on investment can have many forms and does not have to be exclusively financial, it can also be scientific for instance.</p>	<p>Principally support, however it may not be possible to implement, but will seek opportunities to do this</p> <p><u>Comment:</u> this may be outside the scope (scale) of BGT regolith purchases, but BGT will seek opportunities to do this in partnership with regolith providers and in consultation with the community. One possibility would be a benefits sharing clause for the organization the purchase was done with.</p>
<p>BGT should position itself as an independent actor holding titles to regolith samples and share and/or redistribute regolith samples using an application process open to all.</p>	<p>There is a need to create a shared sense of responsibility in order to protect the lunar regolith samples.</p> <p>In the words of the delegates: “Sharing samples is not an act of charity, it's a right that all states are entitled to”.</p>	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> demonstrating regolith data sharing as part of a regolith purchase is considered central to BGT’s efforts. BGT sees these efforts as precedent setting rather than seeking to act as the organization to handle all regolith redistributions.</p>

Recommendation	Description	TSC Response
<p>BGT should share regolith samples to those with the greatest justification for their use. The application and justification of use should be assessed by an independent, transparent and inclusive process using a case by case approach.</p>	<p>BGT should release samples only for approved applications in research, education, and public display. This will help screen all sample requests and allow for anyone to have access to the samples through an independent and transparent selection process.</p> <p>Model this process off of the NASA Apollo Samples Allocation.</p>	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> BGT considers this central to our work. BGT could also facilitate workshops/discussions with stakeholders on such an application process to help identify a method to trial. Both scientific and commercial purposes may be valid.</p>
<p>BGT should hold regolith samples using an “open research” management regime and loan them for scientific purposes.</p>	<p>Open research is a set of principles and practices whose aim is to make the outputs of research freely accessible and usable, in order to maximise the possibility of public benefit.</p> <p>Keeping samples for this purpose will ensure that the scientific aspect and value of the regolith held by BGT is respected while promoting research for the benefit of all.</p>	<p>Something to advocate for but it's not our place to act upon it</p> <p><u>Comment:</u> research is one of many valuable aspects of regolith samples and associated data. BGT does not feel it should prioritize scientific research over other potential uses, especially when considering all potential stakeholders in the future space economy; however, incorporating open research could be advocated for. Open research has value for commercial applications as well.</p>

PRINCIPLES FOR POLICY AND ACTION

Principle

TSC Responses

Adaptability

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: BGT seeks to ensure, for any of our regolith purchases, that the governance process we put into place can adapt.

Avoiding Historic Mistakes and Ongoing Injustices and Inequities

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: in adopting any governance regime, BGT will ask “where might we be reproducing historic injustices?”

Care, Intimacy and Relationship with Resources

Something to advocate for

Comment: BGT supports this as a broad sentiment but is unclear what it means to consider it in decision making

Cultural Value of the Moon

Something to advocate for

Comment: BGT supports giving meaningful weight to cultural value along with other forms of value, such as economic and scientific value.

Diplomacy and Cooperation

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: BGT considers this central to promoting good practice in resource governance. BGT will ask itself, “are we using diplomacy and are we doing what we can to facilitate cooperation” in its regolith management.

PRINCIPLES FOR POLICY AND ACTION CONTINUED

Principle	TSC Responses
Don't Stifle Innovation: Support Economic Sustainability of Actors	<p>Something to advocate for</p> <p><u>Comment:</u> BGT does not see economic sustainability as a “principle” of lunar exploration, but does see it as central to success, and important alongside other values.</p>
Equity and Inclusion	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> in adopting any governance regime, BGT will ask “are we doing what we can to facilitate equity and inclusion?”</p>
Mindfulness to Precedent Setting	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> in adopting any governance regime, BGT will ask “what precedents might we be setting?”</p>
Precautionary Principle	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p>
Preventing Monopolization	<p>Yes implement in its fullest practicable format, this is central to our role as BGT</p> <p><u>Comment:</u> BGT sees this as a significant risk for lunar activities. While BGT cannot prevent monopolization on its own, it is central to the work of the trust to seek a diversity of actors and work to minimize monopoly.</p>
Regulatory Balance	<p>Something to advocate for</p> <p><u>Comment:</u> Most of BGT’s work will be proofs of concept and individual demonstrations; however BGT will use these activities to inform policy recommendations which are attentive to this issue and strive for balance.</p>

Principle

TSC Responses

Representation and Application of Non Western Legal Concepts

Something to advocate for

Comment: BGT is mindful that there are legal traditions beyond Western ones, that have something useful to contribute to the discussion on effective regolith management. The trust will actively seek to consider a diversity of legal approaches and concepts, including western and non-western.

Stakeholdership and Representation

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: in adopting any governance regime, BGT will seek to grow stakeholdership and incorporate agency, including representation.

Supporting Lunar Environmental Sustainability

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: in adopting any governance regime, BGT is committed to advocating for lunar environmental sustainability.

Value of Independent Perspectives

Yes implement in its fullest practicable format, this is central to our role as BGT

Comment: in adopting any governance regime, BGT will seek independent perspectives.