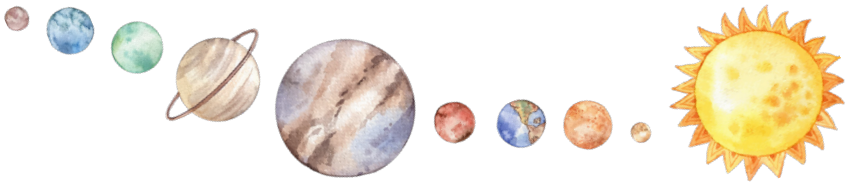
PLOUGHSHARES
REPORT

CONSULTING CANADIANS ON A FRAMEWORK FOR FUTURE SPACE EXPLORATION:

RESPONSE FROM PROJECT PLOUGHSHARES

MARCH 2021



The following response to the Canadian consultation on a framework for future space exploration is submitted by Project Ploughshares, a Canadian peace research institute with a focus on disarmament efforts and international security. Project Ploughshares has been engaged in space security and international policy governance for almost 20 years and leads the Space Security Index project.

We believe that the current Space Strategy for Canada can serve as an essential foundation for the framework for future Canadian space exploration activities. Particularly noteworthy is the emphasis on maximizing benefits for Canadians and prioritizing niche technical contributions such as artificial intelligence, robotics, and biomedicine.

However, this strategy does not include the fundamental values that should guide our participation in space activities, including exploration. This absence is concerning, given the role that Canada has historically played in shaping the global governance of outer space. To maximize the benefits of space today and in the future, we urge Canada to develop a framework that not only ensures that Canadians benefit from space, but that space – and the international community – benefit from a Canada that offers diplomatic and normative leadership.

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At a minimum, any such framework should reinforce a commitment to the status of outer space – including the Moon and other celestial bodies – as a shared commons, and promote the core principles of the Outer Space Treaty (OST) as the cornerstone of governance in outer space. It should also prioritize the development of legal and ethical multilateral channels to address the legal and ethical challenges posed by new developments in human exploration and use of outer space.

Specifically, we urge the Canadian government to prioritize the following principles:

- **Peaceful uses:** The promotion of peace was a key driver in the creation of the OST and must be upheld in the future. Efforts should be made to ensure that all exploration activities are peaceful and that the Moon and other celestial bodies are used exclusively for peaceful purposes and do not become the sites of military rivalry by Canada or its international partners.

- **Accessibility:** As a shared commons, outer space must remain freely accessible to the entire international community for legal activities, including exploration. The locations of exploration activities should remain accessible for the purposes of science and to promote international trust and transparency. The data from such activities should also be accessible to the global community.

- **Diversity and inclusiveness:** Efforts should be made to ensure that the benefits of space exploration are shared with all humankind. Efforts should be made to expand the diversity and reach of the Canadian space sector to make more room for women, people of colour, and other traditionally marginalized communities.

  Canada should also commit to expanding global participation in space exploration and to the development of a global framework that makes possible the global sharing of the benefits of such activity – including possible material benefits such as mineral resources. Such sharing would not be limited to those with the ability to physically access such benefits in space.

- **Sustainability:** All space exploration activities should be designed and implemented so that the physical environment is preserved for future generations to access, make use of, study, and enjoy.

The following strategies should be adopted to implement these principles:

- **Diplomacy:** Canada should lead in the development of additional multilateral governance mechanisms to ensure that future exploration activities adhere to the spirit and principles of the OST. Strong diplomacy is needed to identify and promote shared values and common interests that can serve as the basis of international norms and agreements.

- **Clear and ambitious national standards:** Canada should adopt clear and ambitious national standards for government, academic, and private sector activities related to space exploration. Such standards would have the added benefit of contributing

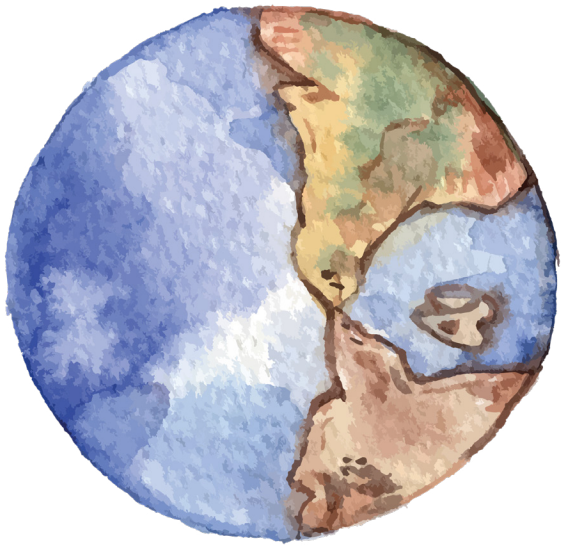
to the emergence of international norms of behaviour, while also attracting international talent and investment.

- **Technical cooperation and assistance:** Technical cooperation is necessary for space exploration activities, but should also be pursued to enhance international cooperation with diverse actors and international participation in space exploration.

  Canada can contribute to such cooperation by pursuing international technical standards for space exploration. In this way, Canada will ensure long-term sustainability and contribute to the interoperability across states that is necessary for safety and resilience.

- **Transparency and confidence-building measures:** The government of Canada should incorporate such measures in all its activities in outer space. Examples of transparency measures can be found in the recommendations published by the Group of Governmental Experts in 2013.

- **Education and capacity-building:** Better integration of the study of space into the Canadian education system, from K-12, as well as at the post-secondary and graduate levels, is necessary if Canada is to reap the benefits of space and imbue space activities with Canadian values and expertise. In addition to scientific and technical training, attention should be paid to the development of legal, governance, and policy expertise that will encourage the building of Canadian capacity to engage in space exploration.



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140 Westmount Road North
Waterloo ON N2L 3G6
Canada
www.ploughshares.ca
519-888-6541
plough@ploughshares.ca

Project Ploughshares is a Canadian peace research institute with a focus on disarmament efforts and international security, specifically related to the arms trade, emerging military and security technologies, nuclear weapons, and outer space.