

# WATERLOO DECLARATION

Securing the peaceful use  
of space for future generations

*Civil society representatives, academics, lawyers, members of the private sector and military, and government and intergovernmental representatives from Canada, the United States, China, India, and Europe met at a roundtable convened by Project Ploughshares and the Global Issues Project (an initiative of Canadian Pugwash and Science for Peace) in Waterloo, Ontario, Canada, May 23-25, 2012, to discuss pressing threats to the secure and sustainable use of outer space.*



## Preface

Satellites and other space assets provide a wide range of services and benefits on which we are increasingly dependent, including: communication; weather forecasting; resource and disaster management; search and rescue response; navigational assistance; surveillance for verification of arms control measures and international peace operations; and the overall advancement of science, technology, education, and entertainment.

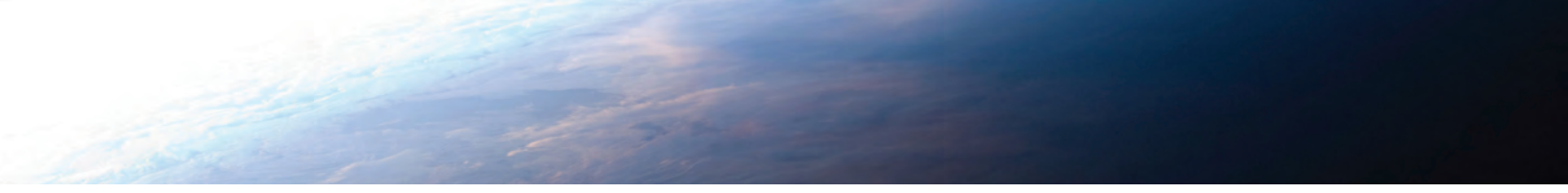
The operational integrity of space assets is increasingly threatened by the risk of collision with other satellites or pieces of orbital debris. In the first six decades of the space era, sufficient debris has been created to threaten sustainable human access to and use of valuable orbits around the earth. In addition, natural hazards such as space weather and asteroids threaten space assets.

Precursor technologies have been designed but not deployed to provide space-based assets with military offensive applications. Some space-based assets also have multiuse capabilities that could be used to disrupt or destroy opponents' space assets. Earth-based military systems, such as ballistic missile defence systems, purpose-built direct-ascent anti-satellite weapons, and jammers can be used to disable or destroy opponents' space assets during conflict. The further deliberate destruction of satellites would add to the already substantial debris in outer space, making significant space orbits unusable for current purposes.

Valuable space resources such as orbital slots and spectrum allocations also are limited and filling up, presenting problems of fair distribution, particularly from the viewpoint of nations with emerging space programs in the global south who want access to outer space for their societies' economic and social development.

The Outer Space Treaty (1967) banned deployment of weapons of mass destruction, particularly nuclear weapons, in outer space, but is silent on other weapons. The need for further measures to safeguard outer space as a non-weaponized environment has been affirmed annually by the United Nations General Assembly in its Resolutions on Prevention of an Arms Race in Outer Space (PAROS).

Unfortunately, various international policy and rules-setting initiatives—from non-legally binding norms to legally binding treaties—have been proposed but effectively stymied, primarily because there is no consensus on the nature of the needed policy instrument and on the most pressing issues to be addressed. Some states also object to any restriction on their full freedom to use space assets for national security reasons, even as offensive weapons.



If the secure access to and use of outer space is to be sustained, current space activities must not compromise those of future generations. The international community must find new ways to further cooperation on space activities and adhere to agreed-upon best practices for responsible space operations. The scientific advances and knowledge acquired in creating and servicing the International Space Station illustrate the benefits to be gained by such efforts.

A UN Group of Governmental Experts (GGE), has commenced its work in 2012 and will report in 2013 on possible international transparency and confidence-building measures in outer space activities.

## Declarations

The principle that outer space is a peaceful global commons should be universally upheld to ensure that outer space can be enjoyed and used by present and future generations. In agreement with the Outer Space Treaty, we hold outer space to be “the province of all mankind [humanity].” It must be preserved as a realm free from offensive weapons, military attack, and violent conflict. We call on governments and interested non-governmental and civil society organizations to affirm the following declarations:

1. All nations, but particularly the current major spacefaring nations, should unilaterally declare their commitment, going forward, not to be the first to test, deploy, or use offensive weapons or any weapons systems in outer space, and not to use space- or ground-based capabilities—whether exclusively military or multi-use in nature—to disable, damage, or destroy space assets.
2. International negotiations should be pursued without delay to supplement existing space law and create a comprehensive outer space regime that will reinforce cooperative approaches to ensure the secure and sustainable use of outer space.
3. The principle of fair and equitable access to outer space resources, including orbital slots and radio frequencies, should be included in the international outer space regime to ensure that all nations have secure and sustainable access to outer space and the benefits derivable from space assets.
4. Nations with space programs and assets should pursue multilateral sharing of knowledge, data, expertise, and financial and other resources for mutual benefit and promotion of transparency in space activities.
5. In keeping with the commitments in Declaration 1, nations with ballistic missiles and missile defence systems should unilaterally commit not to test, deploy, or use such capabilities against space assets.
6. Comprehensive measures are required to mitigate the creation of new debris; build on existing cooperation for tracking debris and manoeuvring space assets to avoid collisions; and address the technical, financial, legal, and policy challenges of debris removal. Attention should be focused on innovation to develop safe debris removal technologies, particularly for removal of large pieces of orbital debris that pose the most immediate threat in high-use orbits.
7. All UN member states and civil society should work with the UN Group of Governmental Experts (2012–2013) on outer space transparency and confidence-building measures to achieve a greater understanding of the threats and challenges to the secure and sustainable use of space and develop options to meet these challenges.
8. All governments and concerned non-governmental and civil society organizations should build public awareness about outer space issues so that there is widespread support for preserving outer space as a global commons for peaceful use and the benefit of all humanity. Non-governmental and civil society organizations should engage in national and multilateral policy forums that set norms for the secure and sustainable use of outer space. □