

**Canadian Statement**  
**Agenda Item 11 – Space and Climate Change**  
**Delivered by: Sarah Pacey-Parker, Canadian Space Agency**

Committee on the Peaceful Uses of Outer Space  
Sixty Sixth session, Vienna, May 31 – June 9, 2023

Mr. Chair, distinguished delegates,

In the last decade, Canada has invested heavily in its Earth Observation satellite fleets to provide data on oceans, ice, land environments and the atmosphere, which has made a significant contribution to the global monitoring and assessment of climate change. The data generated by these systems is helping scientists and decision-makers around the world, to better understand our planet, its resources, and how to manage them more efficiently to ensure the sustainability of our environment and a better future for the next generations.

Mr. Chair, distinguished delegates,

Scheduled to launch in 2029, the WildFireSat mission will increase Canada's ability to monitor wildfires as the Government of Canada is committed to providing timely access to WildFireSat science data products acquired over Canada publicly, within 1 day of acquisition. Climate change is causing more extreme weather conditions and increased droughts, with the amount of forest burned by wildfires projected to double by 2050. With eighty-eight (88) percent of Canada's four (4) million square kilometers being forested lands, Canada is home to some of the largest and most intense wildfires in the world. Every year, Canada sees about 7,500 wildfires burn over 2.5 million hectares of forest. On May 10 of this year, Canada had already reported 944 fires, 117% of the current 10-year average of 806. The WildFireSat mission will use infrared sensors to measure energy coming from wildfires to support research on the behaviour of wildfires and the emission of carbon, aerosols and other particles. This information is vital to observe essential characteristics of wildfires such as fire intensity and rate of spread. In addition, it will improve Canada's ability to anticipate wildfires at risk of becoming uncontrollable and will allow first responders to address these fires first, thereby reducing economic and environmental losses.

Canada also announced its contribution to the Atmosphere Observing System (AOS) mission led by the U.S. (NASA), along with Japan (JAXA), France (CNES) and Germany (DLR). AOS is an international multi-satellite mission with instruments that will measure aerosols and clouds, and how they drive extreme weather and climate change. Canada's

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contribution, the High-altitude Aerosols, Water vapour and Clouds (HAWC) mission, consists of two Canadian instruments on a Canadian satellite and a third instrument on a NASA satellite. The HAWC mission will provide critical data to monitor disasters, such as volcanic eruptions, wildfires and extreme precipitation while improving Canada’s ability to predict near-term weather events, long-term climatic conditions and air quality. The mission is planned for launch in 2031.

Mr. Chair,

Earth observation is a fundamental element in the fight against climate change. The scientific data generated by space-based instruments offers a considerable advantage in addressing global challenges. Canada is committed to working with its partners to monitor climate change to support a more sustainable and safe future for all.

Thank you for your kind attention.