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CANADIAN SPACE AGENCY ACTIVITIES RELATED TO CLIMATE CHANGE

Abstract

Every single day, Canadian and international satellites are meeting the needs of multiple users in Canada and around the world, offering valuable information that can change our lives for the better here on Earth, and empowering Canadians to innovate and take on the real, tangible challenges we face in our day-to-day lives like climate change. Earth Observations from space play a critical role in advancing climate science and knowledge and the delivery of climate services and products.

The Canadian Space Agency (CSA), through its Sun-Earth System Sciences (SESS) Program which includes Solar-Terrestrial Sciences, Atmospheric Sciences and Earth System Sciences, is pursuing multiple satellite Earth Observation missions and climate change scientific activities in collaboration with partner organizations to inform climate action and resilience. In particular, Canada plays a critical role in areas such as flood prediction and support, wildfire monitoring, and measurements of air quality and atmospheric composition.

This presentation will provide an overview of the CSA's satellite capabilities, whether in orbit, at the development stage or proposed for future implementation that offer climate solutions, with emphasis on monitoring Polar Regions. The value of the long-term datasets generated from operational space assets monitoring the atmosphere will also be highlighted.