

Canadian Statement
Agenda Item 7 – Matters relating to remote sensing of the Earth by satellite, including applications for developing countries and monitoring of the Earth’s environment.
delivered by: CSA

Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Fifty-seventh Session, Vienna, February 3-14, 2020

Madame Chair,

Canada is among a large number of countries that make extensive use of Earth observation satellites. Remote sensing is an essential technology for monitoring a country of Canada’s size and it has provided numerous benefits to Canadians, including but not limited to, serving the Arctic and the great Canadian north, taking action on climate change, improving health and reducing health inequities, maximizing the use of agricultural lands, monitoring and protecting our ecosystems, and supporting first responders and search and rescue teams.

For these reasons, earth observation has been, and continues to be, a priority for Canada, as evidenced by our continued development of a radar satellite program. Canada has a long radar satellite history starting with the launch of RADARSAT-1 in 1995, followed by RADARSAT-2 in 2007, and the recent launch of the RADARSAT Constellation Mission, RCM, in June 2019.

Madame Chair, distinguished delegates,

RCM is a world-leading mission that has employed three identical satellites flying in formation, which will increase revisit, and introduce a more robust, flexible system. RCM will primarily be used for maritime surveillance, disaster management and ecosystem monitoring.

RCM will provide multiple passes per day in Canada's far north, and several passes per day over the Northwest Passage. The increase in revisit frequency introduces a range of applications that are based on the regular collection of data and creation of composite images that highlight changes over time. Such applications are particularly useful for monitoring climate change, land-use evolution, coastal change, urban subsidence and even human impacts on local environments. Each RCM satellite is also equipped with integrated Automatic Identification System (AIS) sensors, enabling innovative “ship detection” imaging.

Madame Chair, distinguished delegates,

While the primary objective of RCM is meeting the operational needs of the Government of Canada, the approach to RCM data management seeks to maximize the socio-economic benefits of Canada’s investment in this mission by making data available to the broadest extent possible. This approach aligns with the spirit of Canada’s Directive on Open Government and aims to

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promote the development of innovative products and services derived from its radar data. This approach, must, of course, be balanced with the appropriate national regulatory framework to ensure national security.

To this end, RCM has been licensed under Canada’s Remote Sensing Space Systems Act, or the RSSSA. Under the RSSSA, Canada provides licenses to Canadian entities, both governmental and commercial, operating remote sensing space systems or foreign companies that operate remote sensing space systems in Canada. Through this licensing framework, Canada takes the necessary steps to ensure that remote sensing is carried out in a responsible manner. The Act is therefore key to balancing Canada’s commercial and security interests. Most importantly, the Remote Sensing Space Systems Act affords the Government of Canada a level of oversight into how remote sensing data is utilized and to whom it is distributed.

Madame Chair,

Most of the world recognizes that sustainable development includes developing policy instruments to maintain the Earth’s environment, including limiting greenhouse gases and atmospheric pollutants that lead to climate change and other adverse effects. Canadian satellites and science instruments continue to play important roles in climate science. Launched in 1999 and still operating, the Canadian MOPITT instrument, operating on NASA’s Terra satellite, celebrated its 20th anniversary of continuous operations, measuring pollution in the lower atmosphere. In parallel, since its launch in 2003, Canada’s SCISAT satellite continues to provide key measurements of the chemical constituents in the upper atmosphere. Historical and current measurements from MOPITT, SCISAT and other space-based instruments help scientists assess the practical impacts of climate policy as well as compliance to agreements and targets. For example, SCISAT data helps to measure and demonstrate the rebuilding of the ozone layer following agreements to ban ozone-depleting chemicals. These technologies are only a few examples of the way space-based remote sensing can help humanity with the biggest sustainable development challenges of our time.

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Finally, Madame Chair,

The launch of RCM, as well as the ongoing success of the climate-focussed missions such as MOPITT, and SCISAT coincide nicely with the work of the Committee on the Space2030 agenda and the broader work of the UN on the 2030 Agenda and its Sustainable Development Goals. Remote sensing data will have a significant role to play in supporting and tracking progress of the SDGs and Canada is proud to support this work and leverage its space assets to increase the socio-economic benefits to humankind.

Thank you for your kind attention.