

EARTH OBSERVATION SYMPOSIUM (B1)
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RADARSAT CONSTELLATION AN EVOLUTION IN THE CANADIAN CONTRIBUTIONS TO
DISASTER MANAGEMENT

Abstract

The Canadian Space Agency (CSA) has long been interested in the use of satellites for disaster management. RADARSAT-1 has been successfully used for over a decade to map flooding in Canada's Red River Basin and in many other places around the world. It is routinely used for oil spill monitoring and flood water and damage assessment. Canada, a founding member of the International Charter Space and Major Disasters now regularly contributes both RADARSAT-1 and RADARSAT-2 data to activations around the world. These activities however have been limited to disaster response. Disaster mitigation and warning will require frequent coherent change map and faster revisit time. The RADARSAT-Constellation, which will allow production of those maps every four days as well as daily observation on most of the world from 2015, will be an important contribution to the international fleet of EO satellites for disaster management.

The CSA has accepted the responsibility to coordinate the CEOS actions plan in response of the GEO workplan on disaster. The long term objectives of the CEOS action plan is a contribution to the GEO targets for 2015, which consists in fulfilling the Hyogo Framework for Action, in the improvement of dissemination of data and information at all levels, and in the development of a multi-hazard, end-to-end approach. To achieve this, CEOS will endeavour to coordinate satellite observations to support disaster mitigation, warning, response and recovery on a global basis for major disasters. This work involves developing a multi-year plan based on a thorough gap analysis that is being led by CEOS's System Engineering Office at NASA under the leadership of the CEOS Disaster SBA Team. The output of this analysis will include specific recommendations for critical measurements to be provided by CEOS in the future. Three specific projects address these end-to-end demonstrations: the Caribbean Satellite Disaster Pilot, the African Flood and Health Pilot and the Geohazard Supersite Initiative. CSA is making strong contributions to all three projects by providing coordination support, RADARSAT-1 2 data, and in the case of the Caribbean pilot, value-added support for the development of a coastal decision support tool. This paper will provide an update of the RADARSAT Constellation Mission as well as the applications of the Mission to disaster management in the context of CEOS/GEO.