Canada Responds to Haiti Earthquake

By Maj. Ed Batchelor, Canadian Army

The major earthquake that struck Haiti on Jan. 12, 2010, triggered a number of responses amongst the National System for Geospatial Intelligence and its partners.

Canada contributed significantly to the effort with its National Geospatial Intelligence Support Team, part of Canada's Directorate Geospatial Intelligence, or D Geo Int, generating 43 geospatial intelligence products in the first week of the crisis. Primarily situational awareness products, damage assessments and route studies, half of them were produced within 48 hours of the 7.2 magnitude earthquake, greatly informing the decision making of senior military leadership.

Following the disaster, National Geospatial-Intelligence Agency realized that more current and accurate foundation data of Haiti was needed. In response, the agency requested D Geo Int's help to mitigate the shortfall.

Canada is a lead nation in the Multinational Geospatial Coproduction Program, a 28-nation consortium producing high-resolution vector data on areas where quality foundation data is lacking. Canada had signed up to produce MGCP foundation data for Haiti and had completed 90 percent of the MGCP data cells over Haiti when the earthquake struck. A data cell is a one degree by one degree area of the Earth's surface and contains 16 1:50,000 meter Topographic Line Maps, or TLMs.

Graphic Courtesy of Canadian Department of National Defence

In response to NGA's request, the Canadian Forces Mapping and Charting Establishment, a D Geo Int line unit, quickly reallocated resources towards the completion of the Haiti data cells. Within 10 days of the disaster, the Canadians were completing two cells per day.

The MGCP exemplifies the utility of coproduced foundation data and its application toward generating graphics to support relief efforts. MGCP-derived graphics, or MDGs, are similar to TLMs, but can be produced and delivered more rapidly to warfighters or first responders. Each TLM can take months or even a year to produce. MDGs may not meet 100 percent of military specifications, but they do give the "boots on the ground" a map to meet their mission requirements.

Canada used the MGCP foundation data to produce a series of six 1:50,000 scale TLMs and nine 1:50,000 MDGs. The Canadians printed 6,000 copies of each product, with 3,000 copies going to NGA, 50 to the U.S. Southern Command via NGA, and 1,500 forwarded to various other forces deployed to Haiti in response to the earthquake. Additionally, the MGCP foundation data was used as the basis for numerous other geospatial intelligence products generated throughout the NSG. These products were essential to those planning and executing response, recovery and relief operations in Haiti.

Canada is a member of the Allied System for Geospatial-Intelligence, an NSG partner that represents the strong GEOINT relationship between Australia, Canada, New Zealand, the United Kingdom and the United States.

Owing to its preparedness and versatility, Canada proved a major GEOINT contributor to the positive overall NSG relief efforts in Haiti. Additionally, Canada's efforts reinforce the value of the MGCP and Unified GEOINT Operations.

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