Data Policy

Earth observation data policy is the set of public decisions and guidelines about:

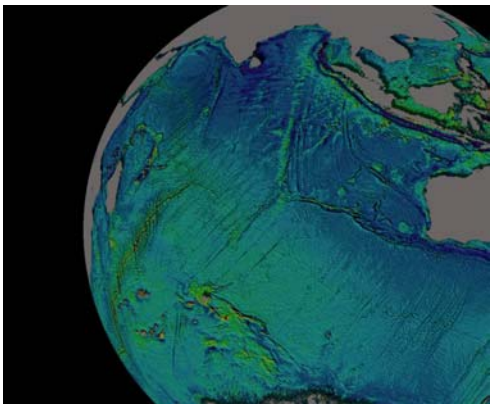
- what data will be produced or purchased;
- how it will be managed and by whom;
- who will have access to it (availability, confidentiality);
- how the costs of data will be paid;
- the price charged to users;
- who makes these decisions and through what processes.

Data policy in Canada varies according to the satellite. Traditionally, access to data from science focused missions has been free of charge and relatively straightforward. By contrast, data from Canada's RADARSAT is only available at a cost, and federal government users pay different rates from other users.

Another way to distinguish different pricing for different data deliveries, now typical, is to distinguish between basic framework data (very inexpensive and available to all) from more specialized information tailored and provided by the private sector for specific applications or paying clients. There will likely be a moving line between framework and tailored data, as the knowledge base evolves.

Data policy has a dramatic impact on data usage, and consequently on the integration of EO information into applications, products and services. In this way data policy shapes the potential promise of space programs in EO. Peter Weiss's *Borders in Cyberspace,* a comparative North American-European study on the impact of government information policies, concluded in 2002 that:

- A direct association exists between pricing and its effects on public access and commercialisation of government agency information. Current pricing problems are having a deleterious effect on the affordability of spatial data in Canada, France, and the United Kingdom;
- A direct association exists between the application of intellectual property rights and the degree of public access and commercialisation of government agency information. The greater the restrictions on access, the less successful dissemination programs will be;



Geosat Gravity Anomaly Canadian dataset (free access) Courtesy of Sharon Spitzak

- Reducing prices and relaxing intellectual property restrictions on government datasets are significant factors improving opportunities for access and commercialization for stakeholders in the geographic information community.

"Most Canadian government agencies charge a fee for geospatial data. […] The cost-recovery policy originates from the concept of "Crown copyright," in which the government has copyrights to work it produces, including intellectual property. The situation stems, in part, from the perspective that government needs to maintain control of its products to protect information integrity and cultural nationalism, and, recently, to generate revenue. Treasury Board directs government departments to " ... identify the full costs of providing goods, services, property, and limited rights and privileges to external users; identify the market value of property; determine appropriate user charges; and impose them in accordance with the principles of [the] policy." [Similarly,] many provincial government agencies used the sale of geospatial data to "cost justify" new geospatial data collection."

[I]n the United States […] geospatial data collected by any U.S. federal agency must be available to the public […] free or, for large volumes, at the cost of filling a user request."[1]

[1] Allan Levinsohn, Canadian Geospatial Data Policy Stifles Productivity, GeoWorld 1999, http://www.geoplace.com/gw/1999/0699/699can.asp

Key players:

- The Canadian Council on Geomatics is chaired by the ADM of Natural Resources Canada's Earth Sciences Sector and includes representation from all provinces and territories;
- NRCan's GeoConnections (www.geoconnections.ca) is Canada's main portal for public access to geospatial data. It has a Policy Advisory Network Node http://www.geoconnections.org/CGDI.cfm/fuseaction/policy.home/pgm_id/4/gcs.cfm
- Environment Canada is developing a Canadian Information System for the Environment (http://www.cise-scie.ca). While organising the provision of information, it addresses data policy issues.
- UN agencies and other multilateral bodies that set international standards for data.
- The international Group on Earth Observations encourages national members to respect agreed-upon data protocols, to facilitate interoperability and data exchange. http://earthobservations.org/
- RADARSAT International (RSI), the company that sells RADARSAT data and a host of other data and satellite products to commercial users around the world, and Macdonald Dettweiler Associates (MDA), which wholly owns RSI, as well as RADARSAT-2. MDA will take over CSA's RADARSAT-1 operations at RADARSAT-2 launch http://www.rsi.ca;
- The Canadian Space Agency, which can influence MDA and RSI www.space.gc.ca.

"Hot" issues:

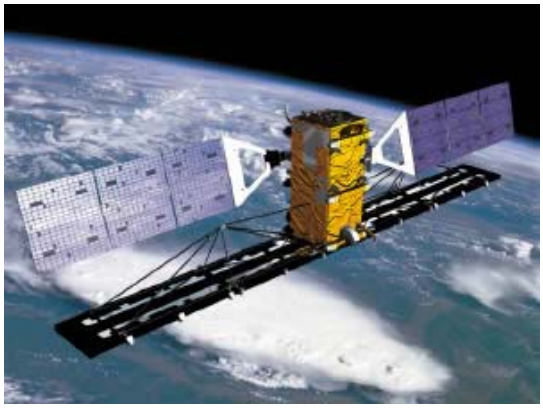
- Access control. Parliament is currently considering a bill to regulate how control of Canadian satellite data will be managed.
- Standards and thresholds for accessibility vs. confidentiality of data and derived information, especially from multi-purpose military/civilian or public/private missions.
- Affordability and accessibility of EO information.
- Space-based earth information as publicly financed infrastructure (like highways) vs. space-based data as a self-financing commercial product. Determining what information is to be in the public domain, updated and regularly available as 'framework' or meta-data and information.
- Timely, inclusive, and strategic development of Canadian data policy itself.

Issues for the CSA:

- As a public agency with a mandate to promote and facilitate Canadian activity in the space sector, CSA has various partner and client groups. A data policy that serves the objectives of one group may not serve other groups equally well. By what process will CSA arrive at a position on data policy to serve Canadian objectives best?

- A quantity of EO data is to be supplied to Canada as a result of the negotiated partnership for Radarsat 2. How is this 'data credit' to be allocated among various potential Canadian users? Who will have a voice in these decisions?

- Integration / harmonisation of data policies is underway in a number of initiatives, vertically and horizontally within Canada, horizontally among countries that produce space data and information, and with multilateral agencies who supply or use space-derived earth information. What specific goals does the CSA want to achieve in these efforts?



Courtesy CSA

Related themes:

- Data policy provides incentives, disincentives, facilitation and enablement for the use of space EO, particularly in the following specific themes:
  - International development
  - Industry & industrial development
  - Universities/ Academia & R&D
  - Engaging EO users

- Data policy can help or hinder in any of the topic-driven themes. It determines different stakeholders' access to relevant, timely, high quality information for addressing issues and achieving goals. It affects whether stakeholders in the theme have EO information that is shared, equitably available, complements other relevant information, and effective.

- Data policy sets a framework for any of the collaborative initiatives, making coordination and harmonisation of joint activities easier or harder. Generally, data policies among partner agencies in a venture should be consistent, or 'harmonized' - i.e. differences should be clear, purposeful, and if possible complementary. This aids interaction among partner programs, and provides a more user-friendly 'one-window' or 'common approach' for EO users.

- Data policy may relate in different ways to the technology themes. Canadian policy decisions about what EO data are needed – what missions are to be served - can lead Canada's development and use of particular space technologies. On the other hand, when a space technologies is developed to fit a particular technological or industrial niche, data policy may be used as a tool to help market and pay for it.

References:

Basic information:
STOJAK, Dr. M.L., *Review and Analysis of Earth Observation Satellite Data and Policies in Support of Operational and Research Use and Related Commercialization Policies around the World*, 2002, pp. 93

Latest update:
www.freedata.ca
GeoConnections http://www.geoconnections.org/CGDI.cfm

A closer look:
HARRIS, Raymond, *Earth Observation Data Pricing Policy*, ISPRS Highlights Vol. 5 No. 4, 2000

WEISS, Peter, *Borders in Cyberspace: Conflicting Public Sector Information Policies and their Economic Impact*, Summary Report, NWS Strategic Planning and Policy Office, February 2002
http://www.nws.noaa.gov/iao/site/iao_intlDataPolicy.htm

Data policies of other geo-data providers and users in Canada. See KPMG's 2001 *Canadian Geospatial Data Policy Study*, and P. Nicholson's 2001 *Proposed Canadian Government Action Plan,* both downloadable at http://www.geoconnections.org/CGDI.cfm/fuseaction/keyDocs.home/gcs.cfm.

Other countries' policies, e.g. Australia http://www.osdm.gov.au/osdm/policy.html .

CISE Task Force guidelines for environmental information, in their 2001 *Final Report,* p 12.

See also GeoBase, a federal, provincial and territorial government initiative overseen by the Canadian Council on Geomatics (CCOG). It is undertaken to ensure the provision of, and access to, a common, up-to-date and maintained base of quality geospatial data for all of Canada. Through the GeoBase portal, users with an interest in the field of geomatics have access to quality geospatial information at no cost and with unrestricted use. http://www.geobase.ca . See *A Policy Framework and Implementation Scenario 2002*, at http://www.geoconnections.org/CGDI.cfm/fuseaction/policy.keyDocs/pgm_id/4/gcs.cfm-