

FIVE PRINCIPLES OF

Global Statistical and Geospatial Framework

REGIONAL WEBINAR SERIES

PRINCIPLE

1

**“Use of fundamental geospatial
infrastructure and geocoding”**

Case Study: Canada

ERIC LOUBIER, DIRECTOR GENERAL
CANADA CENTRE FOR MAPPING AND EARTH OBSERVATION



NACIONES UNIDAS

CEPAL

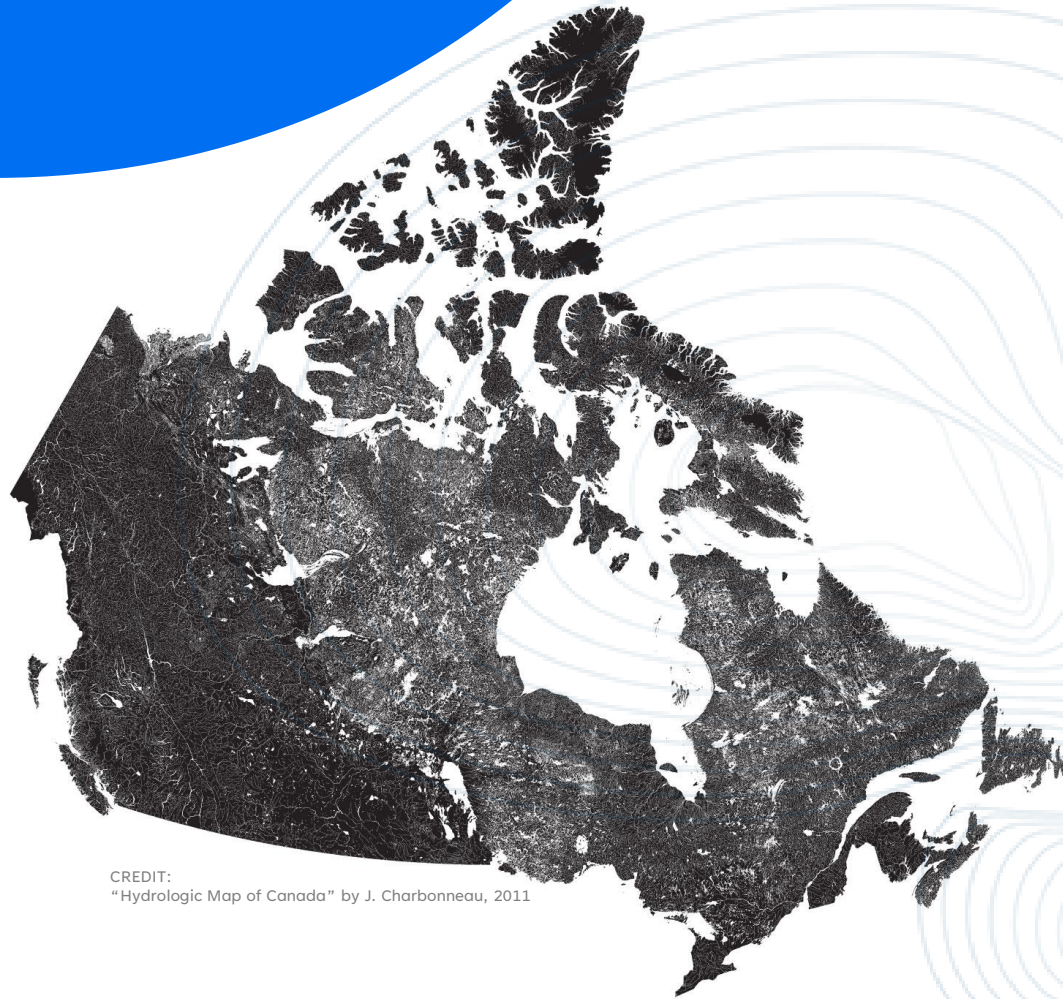


UN-GGIM:Americas

REGIONAL COMMITTEE OF UNITED NATIONS
ON GLOBAL GEOSPATIAL INFORMATION
MANAGEMENT FOR THE AMERICAS

GSGF Principle 1:

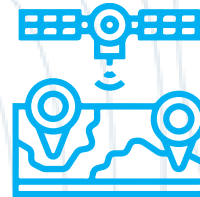
Case Study: Canada



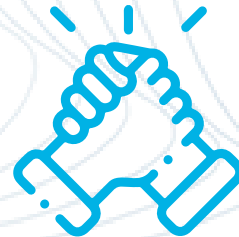
CREDIT:
"Hydrologic Map of Canada" by J. Charbonneau, 2011



Canada's fundamental
geospatial infrastructure



Our evolving national
mapping paradigm



Collaborative approaches
to integrated information

Canada's SDI

The Canadian Geospatial Data Infrastructure (CGDI)

The CGDI is an information ecosystem of data, standards, policies, applications, and governance that facilitate the **access, use, integration, and preservation of spatial data**.

GeoConnections is a national program that leads the CGDI in the use of **standards-based technologies** and **operational policies** for **data sharing and integration**.

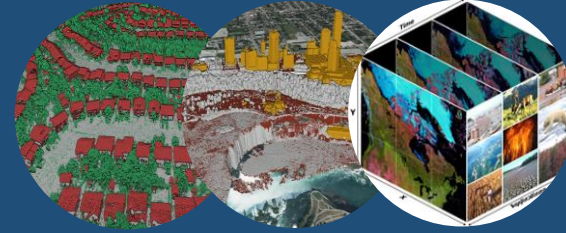


A Changing Paradigm



Traditional role

- Altruistic public good
- Broad administrative tool
- Updates completed over many years
- Cost recovery, static products, proprietary systems



Today's role

- Issue-driven mapping (flood, critical minerals)
- Monitoring and response
- Mapping on demand
- Open, dynamic, integrated data and systems

The era of GeoAI



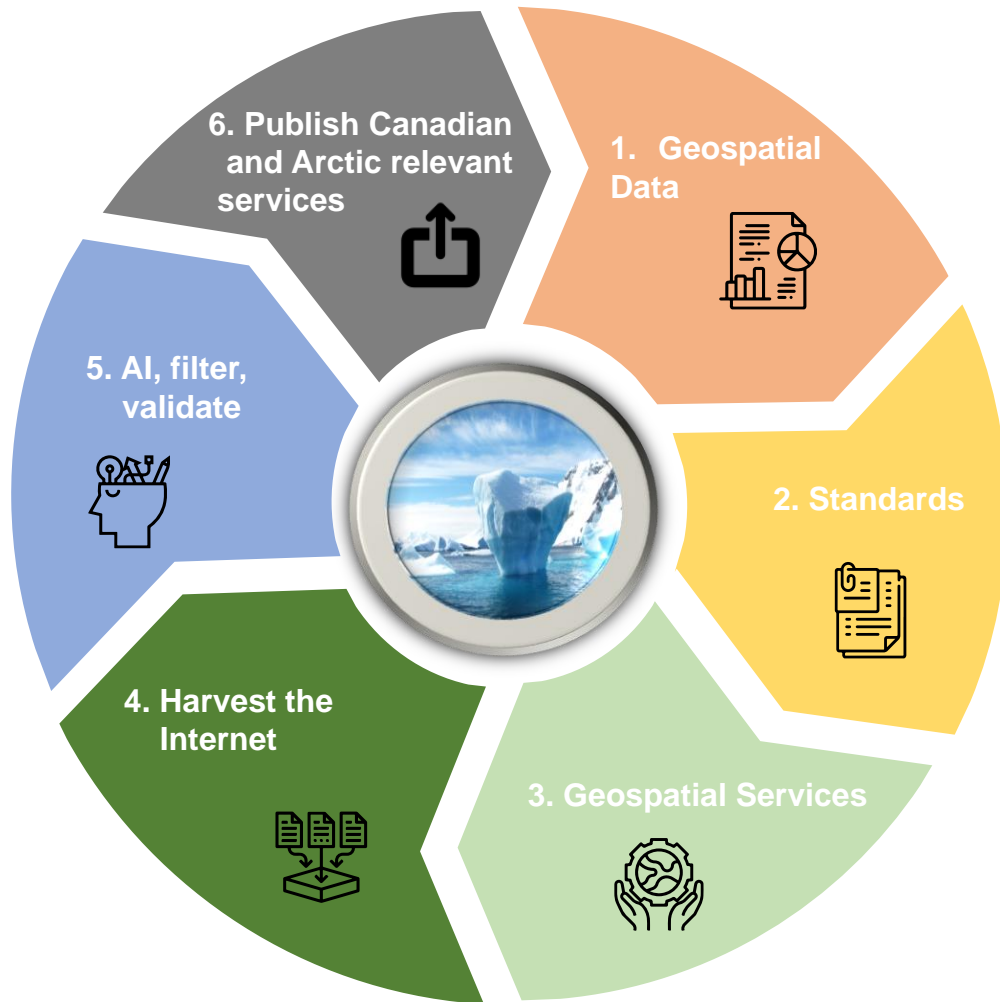
Nimble, rapid, efficient

- Significant investment in AI to support national foundational mapping
- Informs base data (hydro, roads, buildings)

Mapping what. when and where it matters

- Allows areas of interest to be imaged and mapped as needed, over time
- Will drive increased value-added analysis and mapping

Evergreen catalogues – a new paradigm



Traditional data catalogues

- Content expensive to maintain.
- Primarily manual metadata of data processes.

New Catalogues of geo-services

- Catalogue data services
- Geo-Services are harvested daily for content across Canada and Circumpolar Arctic. Fully automated and current information.
- AI routines can validate and categorized that content.

National Collaborations



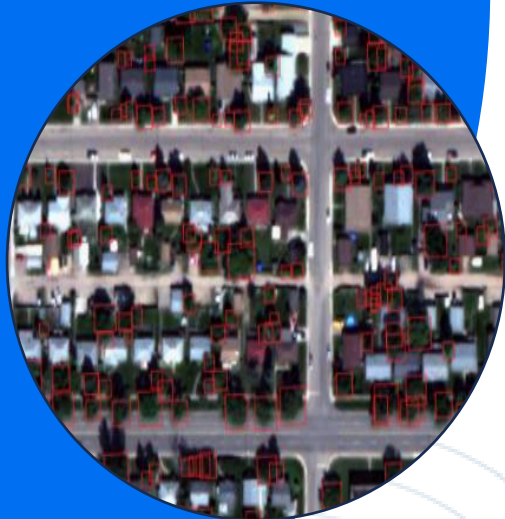
Urban growth



Vegetation Change



Photovoltaic Potential



Individual Tree Extraction



CGDI Partners and Stakeholders

- Key partners in Canada's national spatial data infrastructure eagerly participating
- Release of GeoAI Automatically Extracted Feature data series



Canada's mapping and statistical agencies

- Natural Resources Canada and Statistics Canada working together to renew core national base data, like roads and buildings, with GeoAI

QUESTIONS?

Eric Loubier (Eric.Loubier@rncan-nrcan.gc.ca)

Director General

Canada Centre for Mapping and Earth Observation

Thank you / Merci!

Access our GeoAI code and open-source tools:
<https://github.com/NRCan/geo-deep-learning>

Resources

