



Statistics Canada

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Land Accounts in Canada

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Statistics Norway, Oslo

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Land accounts in Canada OVERVIEW

- Context
- Strategic direction
- Latest release
 - Human Activity and the Environment 2015
- Policy uses
- Future releases

Land accounts in Canada

CONTEXT

Environment Accounts and Statistics Program

1. Framework for Environmental Statistics (FES) is based on the concept of **natural capital** (2012)
2. Funding provided to work on Ecosystem Accounts (2014)
 - Land Accounts: land cover change table
 - Water Accounts: renewable water flows
3. StatCan's contribution to international initiatives
 - Promotes spatial and temporal consistency
 - Helps develop the understanding of the interactions between the environment and the economy

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CONTEXT

Spatial analysis in the R&D section of the Environment Accounts and Statistics Program

- Extensive use of geographical information systems
- Development of spatial data for the environmental and ecosystem accounting programs
- Integration of biophysical and socioeconomic data
 - Administrative geographies
 - Environmental geographies
- Analysis and dissemination of integrated data



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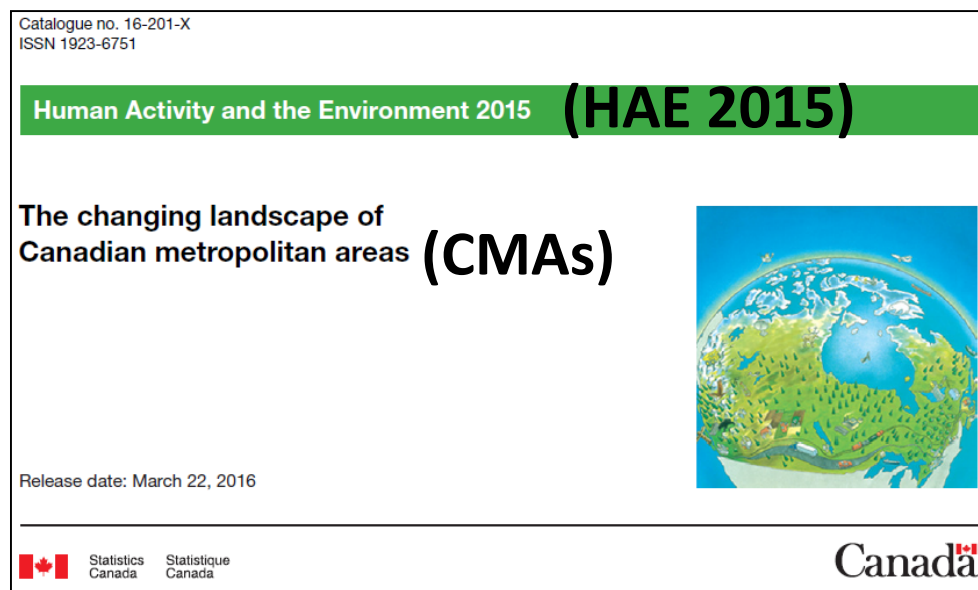
STRATEGIC DIRECTION

***To produce LCLU data for Canada;
first for metropolitan areas, then
gradually moving to smaller cities
and natural spaces.***

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LATEST RELEASE

- Focuses the analysis on large cities including their surrounding areas
- Uses remotely-sensed data and GIS
- Upmost care put into building the most solid foundation
- Data are integrated, coherent, and re-usable



HAE 2015: The changing landscape of CMAs

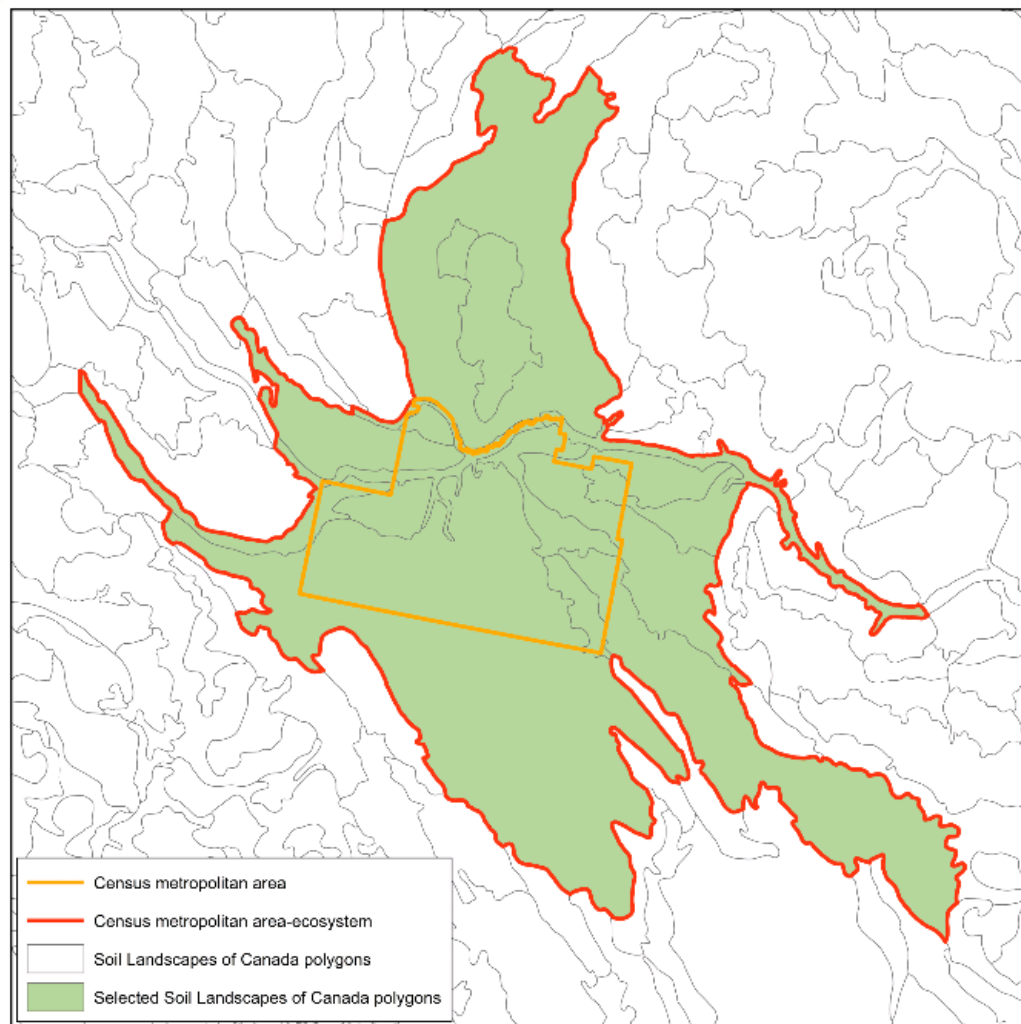
GEOGRAPHY

Study area

- Canadian metropolitan areas (CMAs)
- Based on a Census geography
- Administrative boundaries

Need to develop an environmental geography

- The CMA-ecosystem combines CMA boundaries with an environmental geography



HAE 2015: The changing landscape of CMAs

ATLAS – CONTENTS

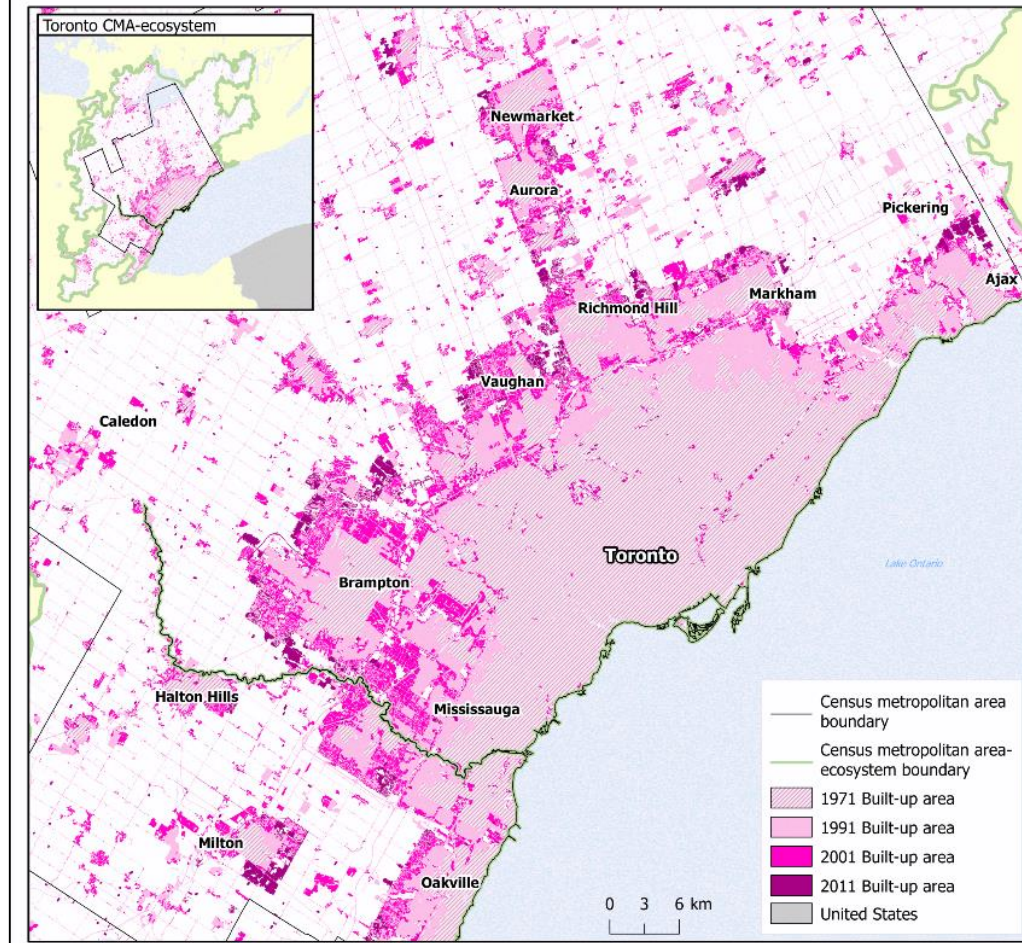
Each CMA has a dedicated 7 page section that contains:

- **Summary highlights**
- **A map of built-up area**, by CMA and CMA-E, 1971, 1991, 2001, 2011
- **Charts**
 - Land cover and land use, CMA-E, 1971, 1991, 2001 and 2011
 - Natural and semi-natural land lost to settled area, by selected land class, 1971 to 2011
- **Data tables**
 - Population and dwellings, total and settled area, CMA and CMA-E, 1971, 1991, 2001 and 2011
 - Land cover and land use, CMA and CMA-E, 1971, 1991, 2001 and 2011
 - Ecosystem Asset Account, by CMA-E, 1971 to 2011
- **Links** to relevant StatCan summary tables, maps and data series

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ATLAS – BUILT-UP AREA

Built-up area, Toronto census metropolitan area (CMA) and census metropolitan area-ecosystem (CMA-E), 1971, 1991, 2001 and 2011

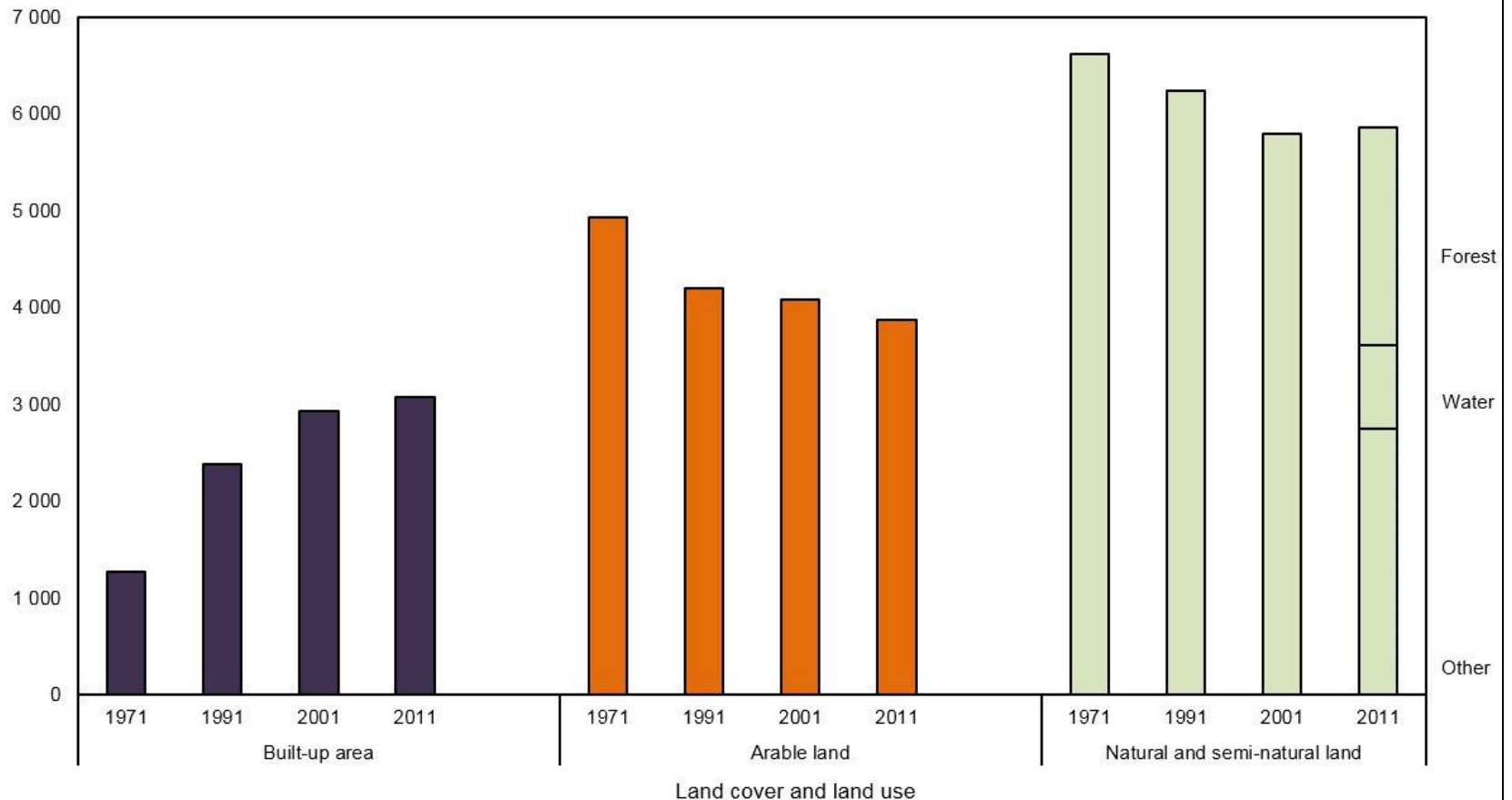


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ATLAS – LAND COVER AND LAND USE

Land cover and land use, Toronto census metropolitan area-ecosystem (CMA-E), 1971, 1991, 2001 and 2011

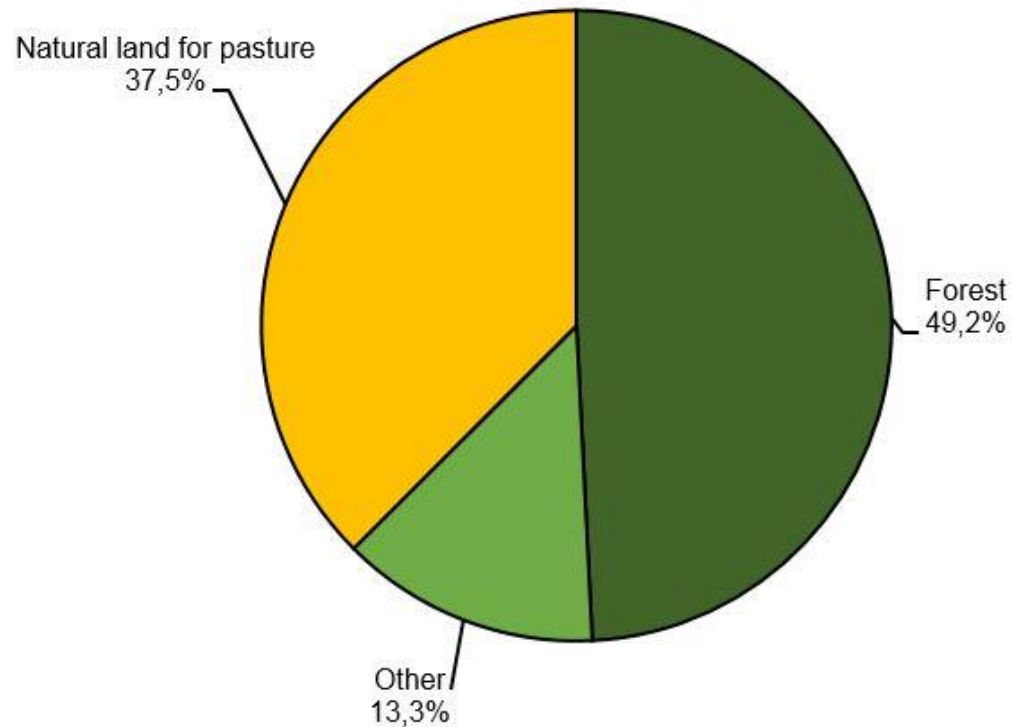
square kilometres



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ATLAS – NATURAL LAND LOST TO SETTLED AREA

Natural and semi-natural land lost to settled area, by selected land class, Toronto census metropolitan area-ecosystem (CMA-E), 1971 to 2011



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ATLAS – ECOSYSTEM ASSET ACCOUNT

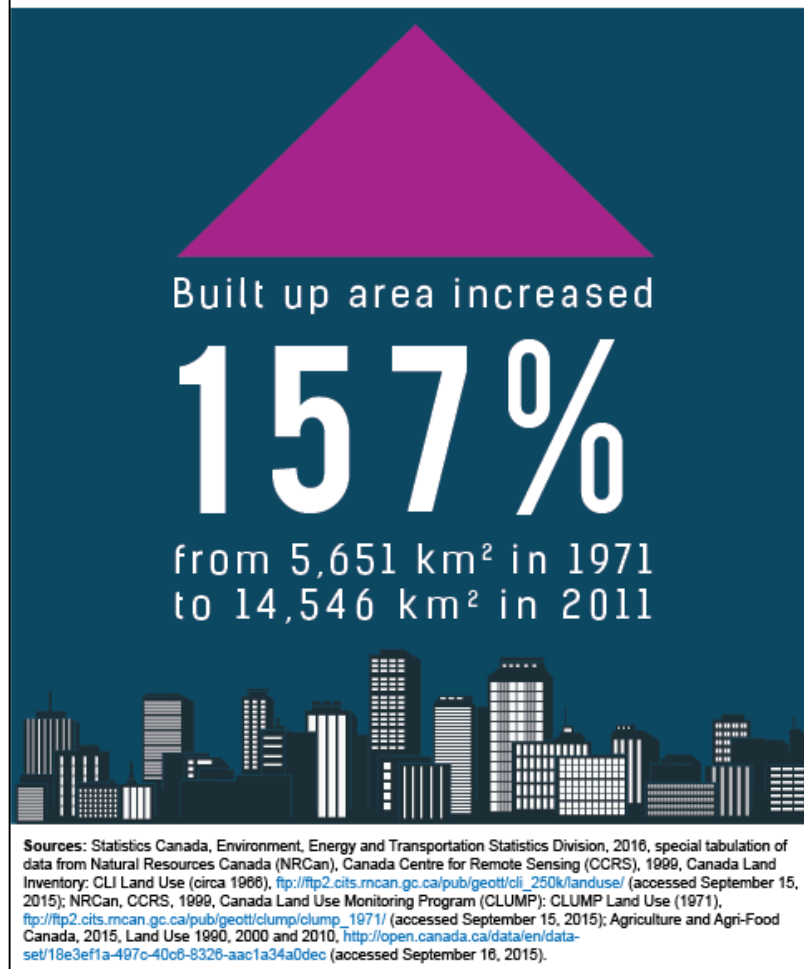
Ecosystem asset account, Toronto census metropolitan area-ecosystem , 1971 to 2011

	Total built-up area ¹		Arable ²	Natural and
	Settled	Roads		semi-natural ³
	square kilometres			
Opening stock 1971	850	418	4 930	6 615
Land lost to settled area	-961	-448
Balance of change ⁴	1 409	403	-102	-300
Closing stock 2011	2 260	821	3 867	5 866

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MEDIA HIGHLIGHT

Figure 2.1
Built-up area growth, census metropolitan areas of Canada, 1971 to 2011



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POLICY USES

- Informs public policy issues, for instance, the loss of the best agricultural land for urban land uses.
- Helps provide answers to local issues, such as urban sprawl.
- Contributes to the development of laws and policies aiming to frame spatial planning, namely metropolitan areas.

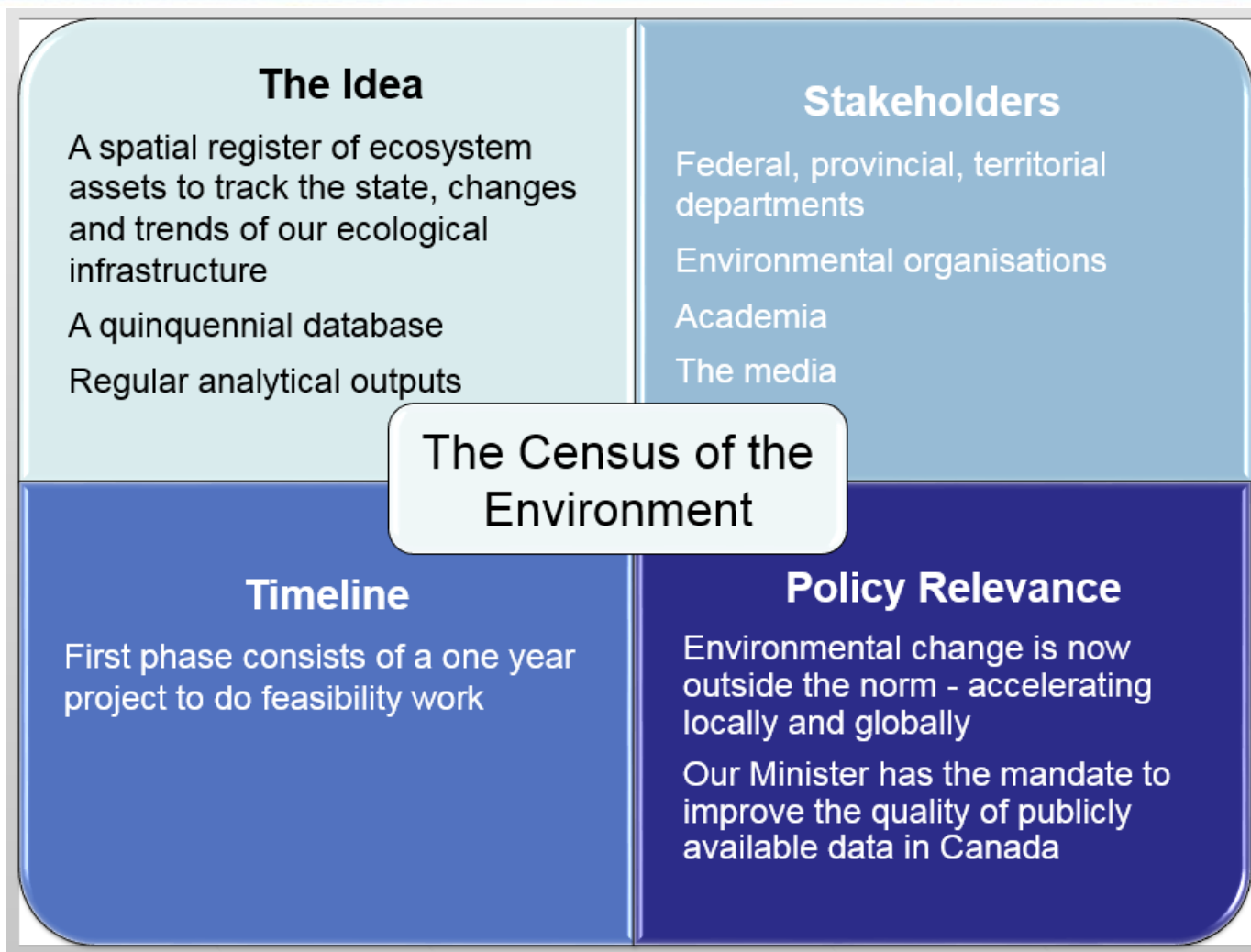


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FUTURE RELEASES

1. Land account statistics to be updated regularly (CANSIM)
 - Methodology to be extended incrementally to cover the entire country
 - First, expand LCLU table coverage to include more cities
 - Then infill to create a truly national account
 - Break down the natural and semi-natural class and produce time series (e.g. forests, grasslands, wetlands)
2. Land account spatial layers to be disseminated through StatCan website
3. Evaluating possibility to repackaging our data through new technologies

A Census of the Environment?



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Thank you!

Links to more information:

- Ecosystem accounting: Thematic accounts
 - [Land cover and land use table \(CANSIM 153-0164\)](#)
- Spatial files (StatCan website, under [Geographic products](#))
- Methodological guide ([16-509-X](#))
- Analytical articles published in *Human Activity and the Environment* ([16-201-X](#))

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PRINCIPAL DATA SOURCES

Statistics Canada

- Census of Population (1971, 1991, 2001, 2011)
- Census of Agriculture (1971, 1991, 2001, 2011)

Agriculture and Agri-Food Canada

- Interpolated Census of Agriculture (1971, 1991, 2001, 2011)
- Crop Inventory (2011 data product)
- Land Use (1990, 2000 and 2010 data products)

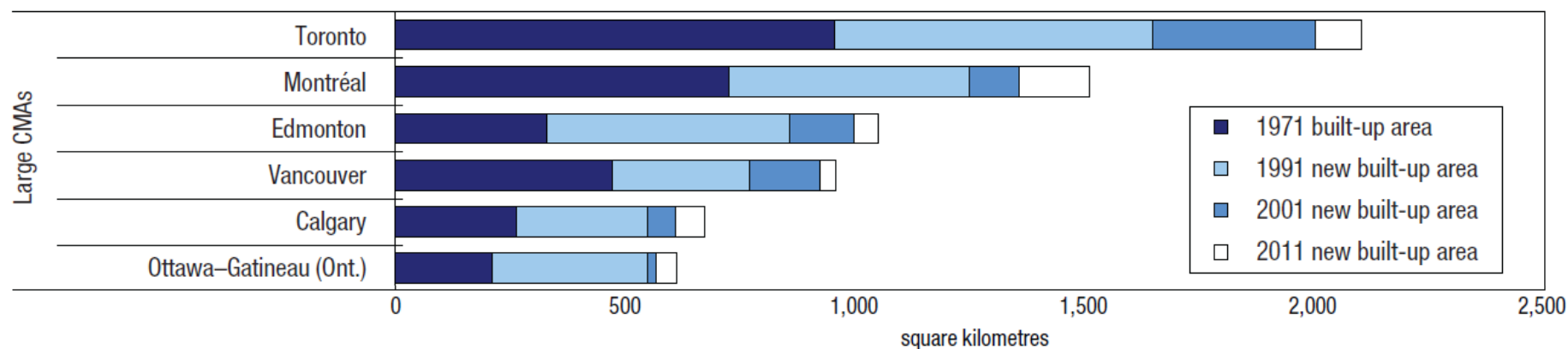
Natural Resources Canada

- Canada Land Inventory: Land Use (circa 1966)
- Canada Land Use Monitoring Program (1971)

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RESULTS AND ANALYSIS

Chart 2.4
Built-up area by census metropolitan area, 1971, 1991, 2001 and 2011



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RESULTS AND ANALYSIS

Chart 2.5
Population density by census metropolitan area, 2001 and 2011

