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Asset Accounts

(Application: Land and Timber)

SEEA Training Seminar for ESCAP

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Statistics Canada

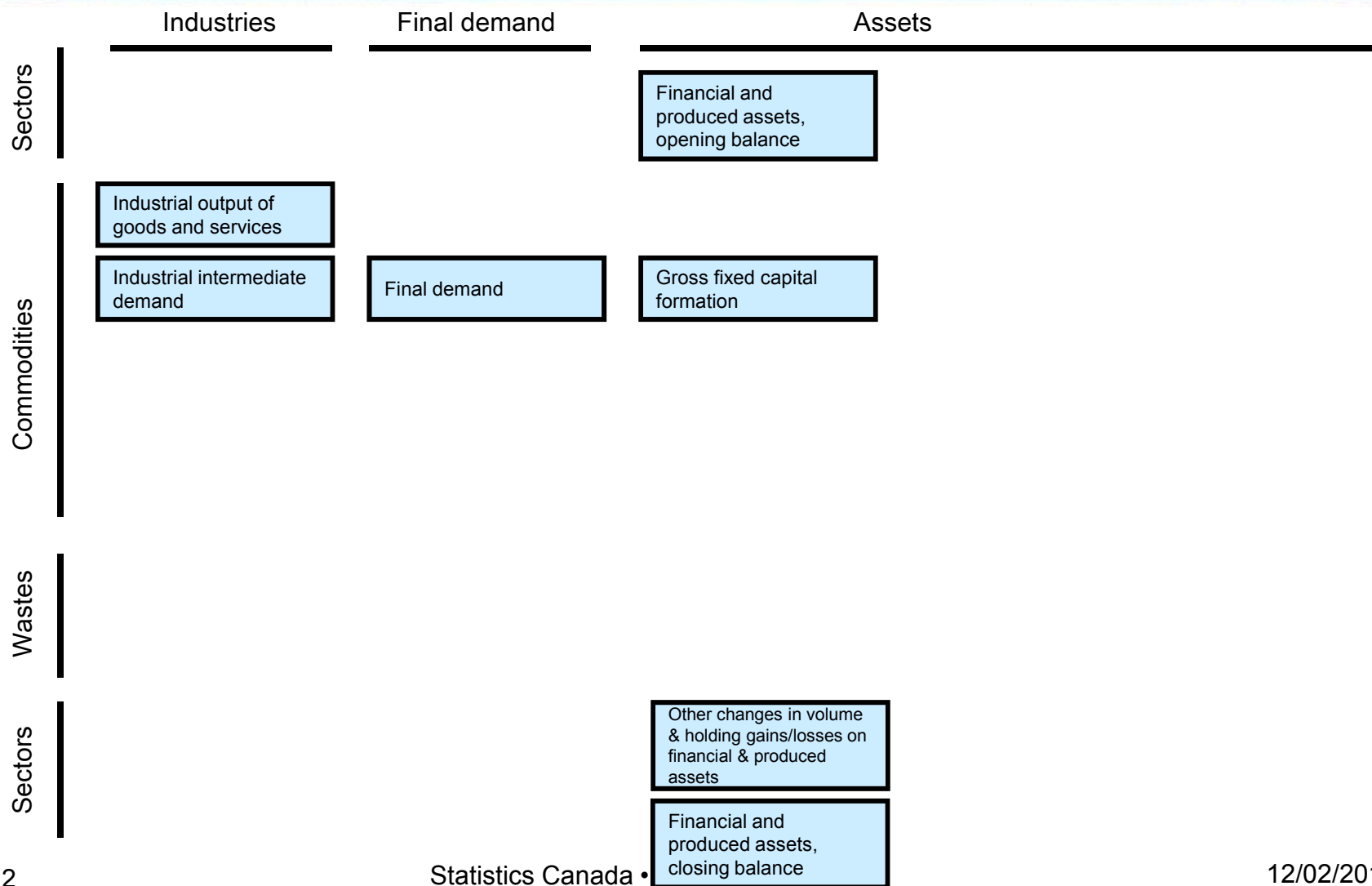


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SNA view



SEEA view

	Industries	Final demand	Assets		
Sectors			Financial and produced assets, opening balance	Natural resource assets, opening balance	Natural resource assets, opening balance
Commodities	Industrial output of goods and services				
	Industrial intermediate demand Environmental protection expenditures	Final demand Environmental protection expenditures	Gross fixed capital formation Capital expenditures for environmental protection		
	Resource production by industries Resource use by industries	Resource production by households/gov't Resource use by households/gov't			
Wastes	Waste consumption by industries Waste output by industries	Waste consumption by households/gov't Waste output by households/gov't			
Sectors			Other changes in volume & holding gains/losses on financial & produced assets	Changes in and holding gains/losses on natural resource assets	Changes in natural resource assets
			Financial and produced assets, closing balance	Natural resource assets, closing balance	Natural resource assets, closing balance

Accounting structure

- **Structure:** conforms with a balance sheet structure - opening stocks, closing stocks and annual variations

Table 5.8

Physical asset account for mineral and energy resources

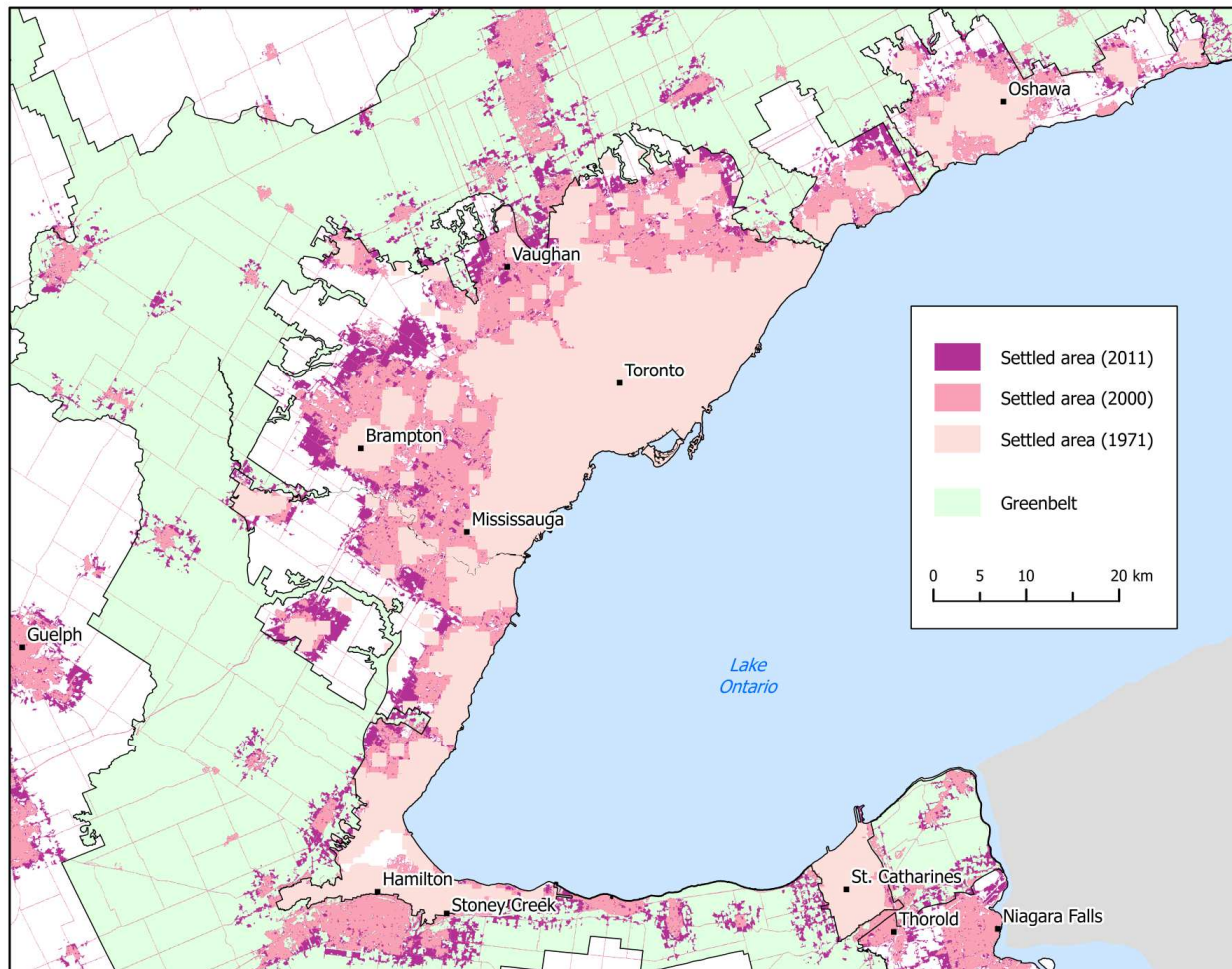
	Type of mineral and energy resource				
	(Class A: Commercially recoverable resources)				
	Oil resources (thousands of barrels)	Natural gas resources (cubic metres)	Coal and peat resources (thousands of tonnes)	Non-metallic minerals (tonnes)	Metallic minerals (thousands of tonnes)
Opening stock of mineral and energy resources	800	1 200	600	150	60
Additions to stock					
Discoveries					20
Upward reappraisals		200		40	
Reclassifications					
<i>Total additions to stock</i>		200		40	20
Reductions in stock					
Extractions	40	50	60	10	4
Catastrophic losses					
Downward reappraisals			60		
Reclassifications					
<i>Total reductions in stock</i>	40	50	120	10	4
Closing stock of mineral and energy resources	760	1 350	480	180	76

[United Nations, 2012, System of Environmental-Economic Accounting: Central Framework, New York.](#)

Land Assets

- The Land Accounts provide information on the cover and the use of Canada's land
- Respond to questions like:
 - What is the distribution and quality of the land?
 - How is land used and what are the trends in this use?
 - How quickly is rural land being converted to urban land?
 - What share of urban land is occupying prime agricultural land?
- At the moment, only agricultural and built-up land are valued and included in the country's National Wealth Account
 - In future we hope to develop methods and estimates for other land types, such as parkland and recreational land

Land use change



Note(s): The settled area boundary inside the greenbelt is derived from a special tabulation of data from the 1971 Census of Population. The greenbelt boundary is defined by the Government of Ontario's *Greenbelt Act, 2005*.

Source(s): David Suzuki Foundation, 2013, *Nature on the Edge: Natural Capital and Ontario's Growing Golden Horseshoe*, www.davidsuzuki.org/publications/downloads/2012/DSF_whitebelt_2013_web_edited_version.pdf (accessed August 13, 2013). Ontario Ministry of Municipal Affairs and Housing, 2013, *The Greenbelt Act, 2005*, www.mah.gov.on.ca/Page195.aspx (accessed June 27, 2013). Statistics Canada, Environment Accounts and Statistics Division, 2013, special tabulation of data from the 1971 Census of Population. Agriculture and Agri-Food Canada, 2009, *Land Cover for Agricultural Regions of Canada (circa 2000)*, version 12, <http://data.gc.ca/data/en/dataset/f5ded3b0-a5b4-4599-95d6-d853a825792b> (accessed October 9, 2012). Agriculture and Agri-Food Canada, 2012, *2011 AAFC Crop Type Map of Canada*, [ftp://ftp.agr.gc.ca/pub/outgoing/aesb-eos-gg/Crop_Inventory/2011/](http://ftp.agr.gc.ca/pub/outgoing/aesb-eos-gg/Crop_Inventory/2011/) (accessed October 9, 2012). Agriculture and Agri-Food Canada, 2001 and 2011 landcover 30 metres.

Land cover change matrix

Table 5.14
Land cover change matrix (hectares)

Land cover	Increases (positive numbers) and decreases (negative numbers) from other land covers											Net change (increase-decrease)	Closing area	
	Opening area	Artificial surfaces	Crops	Grassland	Tree-covered area	Mangroves	Shrub-covered area	Regularly flooded areas	Sparse natural vegetated areas	Terrestrial barren land	Permanent snow, glaciers and inland water bodies			Coastal water and intertidal areas
Artificial surfaces	12 292.5		147.0	27.0		9.0							183.0	12 475.5
Crops	445 431.0	-147.0		4 677.0	3 118.5		1 560.0	1.5					9 210.0	454 641.0
Grassland	106 180.5	-27.0	-4 677.0				69.0						-4 635.0	101 545.5
Tree-covered area	338 514.0		-3 118.5										-3 118.5	335 395.5
Mangroves	214.5	-9.0										-1.5	-10.5	204.0
Shrub-covered area	66 475.5		-1 560.0	-69.0									-1 629.0	64 846.5
Regularly flooded areas	73.5		-1.5										-1.5	72.0
Sparse natural vegetated areas	1 966.5													1 966.5
Terrestrial barren land														
Permanent snow, glaciers and inland water bodies	12 949.5													12 949.5
Coastal water and intertidal areas	19 351.5						1.5						1.5	19 353.0

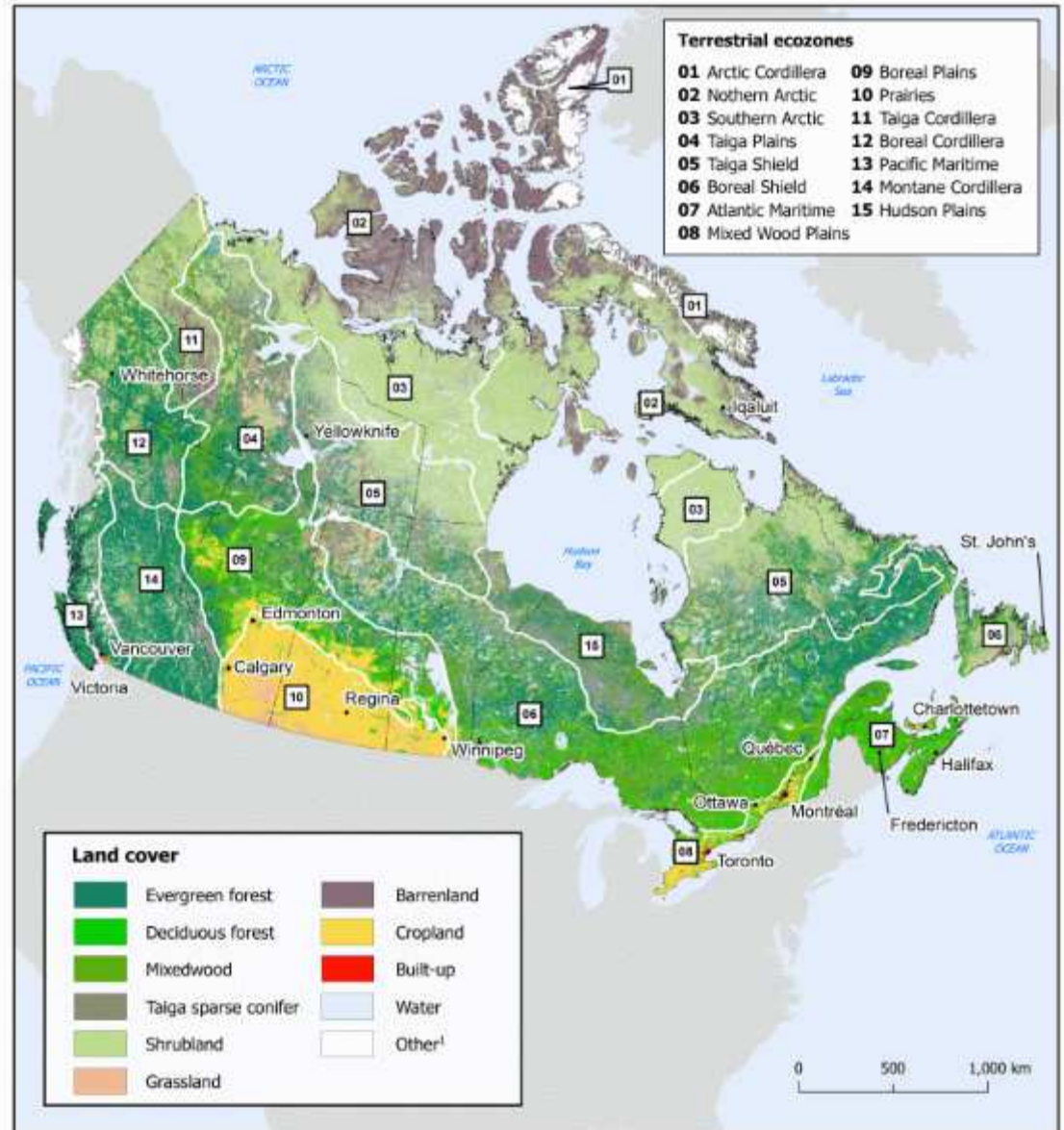
Note: Including herbaceous crops, woody crops and multiple or layered crops.

[United Nations, 2012, System of Environmental-Economic Accounting: Central Framework, New York.](#)

Land cover, by ecozone, 2011

Focus on forests

Next map



1. Combines Canada Centre for Remote Sensing (CCRS) land cover codes for wetlands, snow and ice.

Source(s): Natural Resources Canada, 2012, *Canada 250m Land Cover Time Series 2000-2011*, Earth Sciences Sector, Canada Centre for Remote Sensing, ftp://ftp.ccrs.nrcan.gc.ca/ad/Pouliot/LCTS/LCTS_V1/ (accessed May 8, 2013). Statistics Canada, Environment Accounts and Statistics Division, 2013, special tabulation.

Forest stock accounts: Area

Table 5.15

Physical asset account for forest and other wooded land (*hectares*)

	Type of forest and other wooded land				Total
	Primary forest	Other naturally regenerated forest	Planted forest	Other wooded land	
Opening stock of forest and other wooded land	20	100	150	130	400
Additions to stock					
Afforestation		2	5		7
Natural expansion		3			3
<i>Total additions to stock</i>		5	5		10
Reductions in stock					
Deforestation	2	10		5	17
Natural regression				3	3
<i>Total reductions in stock</i>	2	10	0	8	20
Closing stock of forest and other wooded land	18	95	155	122	390

[United Nations, 2012, System of Environmental-Economic Accounting: Central Framework, New York.](#)

Timber stock accounts: Volume

Table 5.19
Physical asset account for timber resources (*thousands of cubic metres over bark*)

	Type of timber resource		
	Cultivated timber resources	Natural timber resources	
		Available for wood supply	Not available for wood supply
Opening stock of timber resources	8 400	8 000	1 600
Additions to stock			
Natural growth	1 200	1 100	20
Reclassifications	50	150	
<i>Total additions to stock</i>	1 250	1 250	20
Reductions in stock			
Removals	1 300	1 000	
Felling residues	170	120	
Natural losses	30	30	20
Catastrophic losses			
Reclassifications	150		150
<i>Total reductions in stock</i>	1 650	1 150	170
Closing stock of timber resources	8 000	8 100	1 450
Supplementary information			
<i>Fellings</i>	1 250	1 050	

[United Nations, 2012, System of Environmental-Economic Accounting: Central Framework, New York.](#)

Questions?

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