

COUNTRY PROFILE

CANADA

CLIMATE: **LOW** CARBON: **ACUTE**

THE MONITOR ASSESSMENT

The Climate Vulnerability Monitor provides a comprehensive national-level assessment of vulnerabilities and impact specifically related to contemporary climate change and carbon intensiveness. This 2012 Monitor assessment was commissioned by the Climate Vulnerable Forum and has been independently developed by DARA. It is grounded in leading and up-to-date scientific studies, research and data assimilated on the basis of an externally reviewed methodology. The assessment spans 34 indicators of impact/vulnerability: 22 for climate change ("Climate") and 12 for carbon intensiveness ("Carbon"). Estimates in human, economic and environmental terms are for 2010 and 2030. Vulnerability at country-level and by indicator is comparative to the 184 countries included in the assessment.

→ For the full report, data & additional info: www.daraint.org/cvm2 - cvm@daraint.org - +34 915310372

ECONOMIC NATIONAL LOSS TOTALS: CANADA

ADDITIONAL ECONOMIC COSTS (NEGATIVE NUMBERS SHOW POSITIVE EFFECTS) - YEARLY AVERAGE

	LOSSES PER YEAR	2010 NIL		LOSSES PER YEAR	2010 1.4%GDP
		2030 NIL			2030 2.7%GDP

HUMAN NATIONAL LOSS TOTALS: CANADA

ADDITIONAL HUMAN IMPACTS (NEGATIVE NUMBERS SHOW POSITIVE EFFECTS) - YEARLY AVERAGE

	ADDITIONAL MORTALITY-YEARLY AVERAGE	2010 4,500		ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE	2010 1,250,000	2030 1,700,000
		2030 6,500			2010 95,000	2030 150,000

FULL COUNTRY ASSESSMENT: CANADA

	VULNERABILITY LEVEL		ADDITIONAL ECONOMIC COSTS (MILLION USD PPP)		ADDITIONAL MORTALITY		ADDITIONAL AFFECTED POPULATION (1000s)		OTHER VALUE 1*		OTHER VALUE 2*	
	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030
ENVIRONMENTAL DISASTERS												
DROUGHT			25	45								
FLOODS AND LANDSLIDES			30	100	1	5	8	20				
STORMS			1	5								
WILDFIRES			1	1								
TOTAL			57	151	1	5	8	20				
HABITAT CHANGE												
BIODIVERSITY	-	+	2,250	4,000					-60,000	-100,000	10	30
DESERTIFICATION			-5	-10					-35	-70		
HEATING AND COOLING			-550	-1,500					-6,750	-15,000	-1,250	-2,250
LABOUR PRODUCTIVITY			300	950					7	7		
PERMAFROST			1,750	3,500			350	700				
SEA-LEVEL RISE			1,500	3,500			0	1	700	3,000		
WATER			-2,500	-7,250					-1	-1		
TOTAL			2,745	3,190			350	700				
HEALTH IMPACT												
DIARRHEAL INFECTIONS					0	0	0	0				
HEAT AND COLD ILLNESSES					75	200						
HUNGER												
MALARIA AND VECTOR-BORNE							0	0				
MENINGITIS												
TOTAL					75	200	0	0				
INDUSTRY STRESS												
AGRICULTURE			35	80								
FISHERIES			-45	-100								
FORESTRY			150	500								
HYDRO ENERGY			-350	-800								
TOURISM			-100	-200								
TRANSPORT												
TOTAL			-310	-520								
CLIMATE TOTAL			2,491	2,821	76	205	359	720				
ENVIRONMENTAL DISASTERS												
OIL SANDS	-	+	7,250	20,000					150,000	300,000		
OIL SPILLS			20	35					80	85		
TOTAL			7270	20035								
HABITAT CHANGE												
BIODIVERSITY			10,000	30,000					55	250		
CORROSION			5	5								
WATER			150	200					4,250	3,500		
TOTAL			10155	30205								
HEALTH IMPACT												
AIR POLLUTION	-	-			2,500	3,250	45	80				
INDOOR SMOKE					1,500	2,250	15	25				
OCCUPATIONAL HAZARDS					300	400	35	40				
SKIN CANCER					300	700	1	3				
TOTAL					4600	6600	96	148				
INDUSTRY STRESS												
AGRICULTURE	-	+	650	1,250								
FISHERIES			150	400								
FORESTRY			350	500								
TOTAL			1150	2150								
CARBON TOTAL			18,575	52,390	4,600	6,600	96	148				

VULNERABILITY LEVELS:

- Acute+ (Red +)
- Acute- (Red -)
- Severe+ (Orange +)
- Severe- (Orange -)
- High+ (Yellow +)
- High- (Yellow -)
- Moderate (Green)
- Low (Dark Green)

+ = Upper tier of vulnerability level
 - = Lower tier of vulnerability level

- Environmental disasters
- Habitat change
- Health impact
- Industry stress
- CLIMATE = Impact/Vulnerability to Climate Change
- CARBON = Impact/Vulnerability to Carbon Intensiveness

BIODIVERSITY OTHER VALUE 1: Contraction of biological zones (km²) (cumulative); OTHER VALUE 2: Decline in biological richness
DESERTIFICATION OTHER VALUE 1: Additional land degraded (km²) (cumulative)
HEATING & COOLING OTHER VALUE 1: Change in energy load (GWh)
LABOUR PRODUCTIVITY OTHER VALUE 1: Share of workforce particularly affected (%)
SEA-LEVEL RISE OTHER VALUE 1: Net loss of land (km²) (cumulative)
WATER OTHER VALUE 1: Loss in water runoff 2030 (km³)

OIL SANDS OTHER VALUE 1: Tonnes toxic waste ('000s)
OIL SPILLS OTHER VALUE 1: Gallons oil spill ('000s)
BIODIVERSITY OTHER VALUE 1: Decline in biological richness
WATER OTHER VALUE 1: Volume of water to treat (millions m³)