

POLICY COHERENCE IN CLIMATE CHANGE AND K-12 EDUCATION POLICY: A NATIONAL OVERVIEW

The Challenge: Previously, there was no comparative research examining how the Canadian formal education sector is taking up the challenge of climate change, or what kinds of educational solutions are included in climate policies. SEPN examined the depth of engagement with climate change in education policy across all 13 provinces and territories in Canada by analyzing the content of 13 climate policies and 90 education policies.

Main Findings: SEPN found that while climate policies often reference the education sector's role in combating climate change, education policies have not taken up the challenge. Education policies demonstrate (1) shallow engagement with climate change, (2) an overwhelming focus on energy efficiency upgrades in schools, and (3) a lack of holistic responses to climate change.

Take Action: Ministries of education must further address climate change in educational policy. Policy responses to climate change should be comprehensive and holistic. Policymakers should refer to whole school approaches to encourage sustainability uptake in governance, curriculum, research, and community outreach, in addition to operations.

For full results see: Bieler, A., Haluza-DeLay, R., Dale, A., & McKenzie, M. (2018). A national overview of climate change education policy: Policy coherence between subnational climate and education policies in Canada (K-12). *Journal of Education for Sustainable Development*, 11(2), 63-85.

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Climate Change in Education Policy vs. Education in Climate Policy

SEPN collected (1) the most recent publicly available **climate policies** (typically Climate Action Plans) from all 13 provinces and territories and (2) 90 sustainability-specific **education policies** from all 13 ministries of education (including sustainability focused curriculum resources, curriculum frameworks, and subject curriculum frameworks).

By the Numbers: The Climate Education Engagement Scale (CEES)

SEPN developed the **Climate Education Engagement Scale (CEES)** to evaluate engagement with climate education in policy texts, which enabled both sets of policy documents to be directly compared. The CEES scoring criteria were:

- | | | | | | | | |
|----------|------------------------------|----------|---|----------|--|----------|--|
| 0 | No mention of climate change | 1 | Climate education mentioned, limited detail | 2 | General discussion of climate education, some detail | 3 | Specific climate education targets set |
|----------|------------------------------|----------|---|----------|--|----------|--|

Education in Climate Policy

- All 13 provincial and territorial jurisdictions included education as an important response to climate change but only 6 (or 46%) had specific climate education targets.
- The overall focus of educational strategies for climate change action was on improving school energy efficiency.

Climate Change in Education Policy

- References to climate change were shallow and scarce.
- Only 46% of the education policies mentioned climate change.
- Only 2 of 13 jurisdictions had specific objectives related to climate change. Both focused on improving school energy efficiency.
- The most detailed discussions of climate change were within sustainability-focused curriculum resources and subject-specific curriculum guides.
- The Northern Territories' climate plans included a strong focus on Indigenous knowledge.

CEES Scores

- Only British Columbia and Manitoba received CEES scores of 3/3 for both climate policies and education policies; this was due to the inclusion of energy efficiency objectives in both cases.

	CLIMATE POLICY		EDUCATION POLICY	
	CEES	Policy Date	CEES	Policy Date
BC	3	2008	3	2007-2013
MB	3	2015	3	1996-2013
ON	3	2015	2	2005-2013
QC	3	2013	1	2001/n.d.
NL	3	2011	0	2001-2009
NU	3	2011	0	2007
PE	2	2008	1	2001-2009
AB	2	2015	0	1985-2014
NS	2	2009	0	1998-2001
NT	2	2008	0	n.d.
YU	2	2009	0	2009
SK	1	2010	1	2010
NB	1	2014	0	2001-2008

Thematic Analysis: How is Education being Taken Up in Provincial and Territorial Climate Policy?

SEPN conducted a thematic analysis of climate policies to see how they referred to the educational sector in relation to climate change. Climate policies (1) included both formal and non-formal educational strategies; (2) identified a wide range of potential audiences including students, consumers, and drivers; and (3) had a wide range of thematic foci including energy efficiency and job training. Most educational strategies in climate plans were adult-oriented although some of the strategies in the climate policies did relate to K-12 education.

SEPN identified seven education-related themes: (1) curriculum reform (8/13 policies); (2) the role of post-secondary education in conducting research, fostering innovation, and providing basic instruction (7 policies); (3) infrastructure upgrades to reduce emissions (6 policies); (4) the role of Technical and Vocational Education and Training as a form of education (6 policies); (5) consumer education regarding energy use (5 policies); (6) integration of Indigenous knowledge into climate education (5 policies); and (7) the role of driver education (4 policies).

Education-Related Theme	BC	AB	SK	MB	ON	QU	NB	PE	NS	NL	YU	NT	NU	All
Curriculum reform	✓			✓		✓		✓	✓		✓	✓	✓	8
Role of post-secondary	✓	✓	✓	✓	✓			✓					✓	7
Efficient school infrastructure	✓			✓	✓	✓					✓	✓		6
Technical / Vocational education	✓	✓		✓	✓	✓					✓			6
Consumer education	✓	✓	✓	✓			✓							5
Indigenous knowledge integration				✓	✓	✓						✓	✓	5
Driver education				✓	✓		✓	✓						4

Take Action

Both climate policies and educational policies at the provincial and territorial levels need to better engage with climate change education for Canadian students to be informed and adaptable in responding to climate change.

Recommendation #1: Ministries of education must improve climate change responses within educational policy

- ✗ **Challenge:** While climate policies often referenced the significance of the education sector in combating climate change, education policies have not taken up the challenge. SEPN found shallow engagement with climate change in education policy and, in particular, curriculum guidelines were lacking.
- ✓ **Action:** Policy makers within the education system must align their educational policies with targets and strategies laid out in climate policy.

Recommendation #2: Climate responses within the educational system should include whole school sustainability approaches

- ✗ **Challenge:** SEPN found an overwhelming focus on school energy efficiency in climate policies.
- ✓ **Action:** Responses to climate change need to go beyond emissions. Whole school sustainability approaches include sustainability within governance, curriculum, research, and community engagement, in addition to operations.

SHALLOW ENGAGEMENT WITH CLIMATE CHANGE IN POLICY

- ✗ Overwhelming focus on school energy efficiency
- ✗ Curriculum guidelines do not foster development of engaged, adaptable citizens



HOLISTICALLY ADDRESS CLIMATE CHANGE IN POLICY

- ✓ Adapt vulnerable school infrastructure to climate impacts
- ✓ Develop specific educator professional development initiatives
- ✓ Integrate climate science into STEM & arts and humanities learning outcomes
- ✓ Implement climate change pedagogy
- ✓ Incorporate intersections of climate change and disaster risk reduction education
- ✓ Develop focus on climate justice including Indigenous knowledge systems

PARTNER ORGANIZATIONS

Association for the Advancement of Sustainability in Higher Education
Canadian Centre for Policy Alternatives
David Suzuki Foundation
Learning for a Sustainable Future
Sierra Youth Coalition

CONTRIBUTING ORGANIZATIONS

Assembly of First Nations
Canadian Federation of Students
Global Youth Education Network
Métis National Council
Sustainability Solutions Group

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