



# Mapping the Landscape of K–12 Climate Change Education Policy in the United States

## Executive Summary

May 2022



Thank you to the Woka Foundation for their generous support of this report.



“Education is the most powerful element in preparing societies for the global challenges that climate change brings.”<sup>1</sup>

## Executive Summary

This study explored the status of climate change education policy in the United States by analyzing the extent and type of climate change inclusion in 802 publicly available education policies from state departments or boards of education.

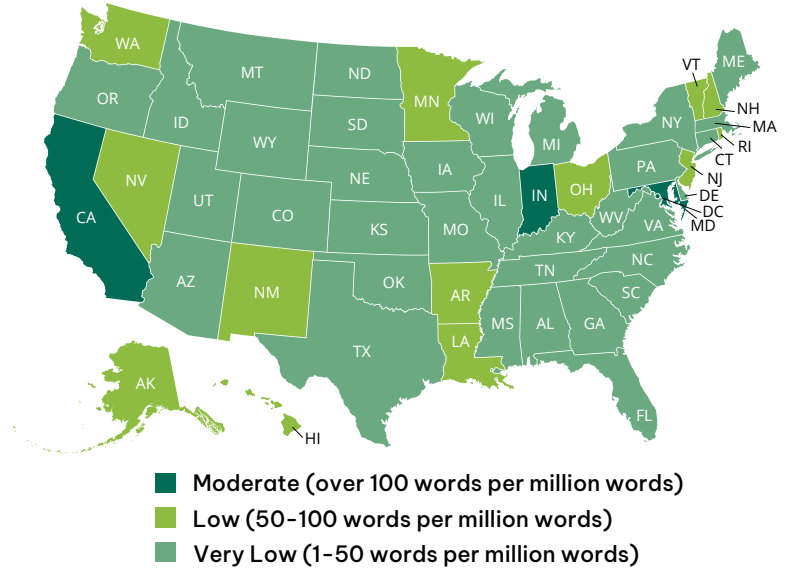
Using a whole institution approach, researchers collected and reviewed policies from each of four domains: (1) institutional governance (e.g., strategic plans), (2) teaching and learning (e.g., state standards), (3) facilities and operations (e.g., operations plans), and (4) community partnerships (e.g., community engagement plans). This study also evaluated how holistic the approach to climate change education was by looking at inclusion of three learning dimensions: 1) cognitive (e.g., teaching the science of the greenhouse effect), (2) socio-emotional (e.g., addressing social and emotional issues such as grief and denial), and (3) action-oriented (e.g., focusing on collective justice-oriented climate action).

The study builds on prior climate change education research and underscores the importance of including climate change in education policy in all areas of institutional activity to further climate change action through education.

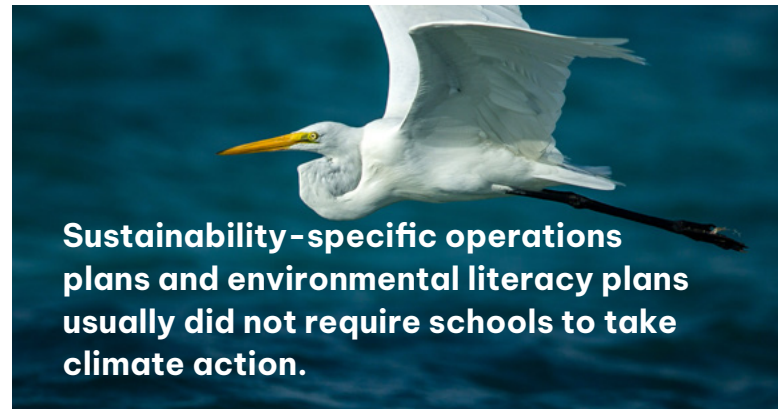
Read the full report at [mecce.ca](http://mecce.ca) and [naaee.org](http://naaee.org).

## Key Findings

- 1 All states had policies that mentioned climate change at least once; extent of inclusion was usually very low.



**Only 17% of the education policies (136/802) mentioned climate change at least once.**



**Sustainability-specific operations plans and environmental literacy plans usually did not require schools to take climate action.**

- 2 When looking across policy types, climate change content was most commonly included in sustainability-specific operations plans and environmental literacy plans; although many environmental literacy plans are dated.

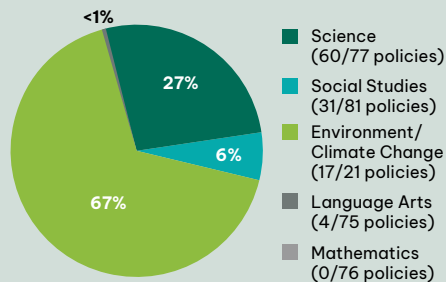
**90% of the references to climate change were found in teaching and learning-related policies.**



③ When looking at the domain of policy document types, climate change content was most commonly found in teaching and learning policies (i.e., environmental literacy plans, state standards, curriculum frameworks, or teaching and learning plans).

④ Within state standards and curriculum frameworks, climate change content was found most often in environment/climate change and science subjects, rarely in social studies or language arts, and never in mathematics.\*

**Percentage of References to Climate Change in State Education Standards and Curriculum Frameworks by Subject**



\*Environment/climate change includes up to two “elective” subjects specifically related to climate change, environmental, or sustainability education. Total number of standardized references = 801.

\*Please note that these findings do not reflect the latest revisions to state standards in several states.

⑤ State standards and curriculum frameworks that used or were influenced by the Next Generation Science Standards were more likely to include climate change content.

⑥ The majority of state standards and curriculum frameworks did not include holistic approaches to climate change education; when climate change content was included, it tended to focus on cognitive learning and on the ends (i.e., outcomes) not the means (i.e., process) of education.

**STATE STANDARDS**

**74%**

had a cognitive focus on climate change

**10%**

had a social-emotional focus on climate change

**7%**

had an action focus on climate change

⑦ Discussions of energy were often in relation to fossil fuel, and there was little mention of key topics and initiatives such as climate action, justice, mitigation, or adaptation, Indigenous knowledge, or the United Nations in the policies analyzed.



**Mentions of “climate action” often referred to state climate action plans, and “climate action” was not mentioned in any curriculum-related policies.**

⑧ State political affiliation, presence of a climate change plan, and whether a state had made a broader commitment to climate change correlated with to what extent climate change content was included in the policies.



**States with overall climate plans were more than twice as likely to include climate change content in their education policies.**

## Recommendations

- ① Increase the quality and quantity of climate change content across all education policies, including addressing all institutional domains and holistic learning dimensions and in all subjects.
- ② Update and increase the number of statewide environmental literacy plans.
- ③ Include a stronger focus on climate justice, climate action, and Indigenous knowledge in all education policies.
- ④ Include a focus on both climate change mitigation and adaptation in all education policies.
- ⑤ Provide policy support, such as funding, professional development, and staffing to help advance enactment of climate change education policy.

“Once we start to act, hope is everywhere. So instead of looking for hope—look for action. Then the hope will come.”<sup>2</sup>



## Conclusions

Local school districts have the capacity to reach student populations at scale, and state departments and boards of education are uniquely positioned to set policies calibrated to support climate change education that support this effort.

Concerned scientists, Indigenous peoples, youth, and the general public are calling for urgent climate action. This concern is echoed in the 2022 Intergovernmental Panel on Climate Change report, which states, “any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a livable and sustainable future for all.”<sup>3</sup> Education has a critical role to play and the time to listen and act is now.

### References

<sup>1</sup> UNESCO. (2017). Changing minds, not the climate: The role of education. <https://www.gcedclearinghouse.org/sites/default/files/resources/190248eng.pdf>

<sup>2</sup> Thunberg, G. [@GretaThunberg]. (2018, October 21). When we start to act hope is everywhere. So instead of looking for hope - look for action. Then the hope will come. #nytonpakko #climatestrike #ActOnClimate [Tweet]. Twitter. <https://twitter.com/gretathunberg/status/1054048784844505098?lang=en>

<sup>3</sup> IPCC. (2022). Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Lösckke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press. SPM.D.5.3.A

