

Roadblocks to quality education in a time of climate change

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Caveats on terminology

- “Education” refers to K12 education *in this presentation*
 - Adult education, non-formal education, informal education, public awareness raising, technical training, etc. are all critical dimensions of learning for climate action
- “Education for Sustainable Development” (ESD) refers to UNESCO’s desired vision of education

Is the education sector standing up to the task?

- No
 - Lack of (adult) leadership in the global education community

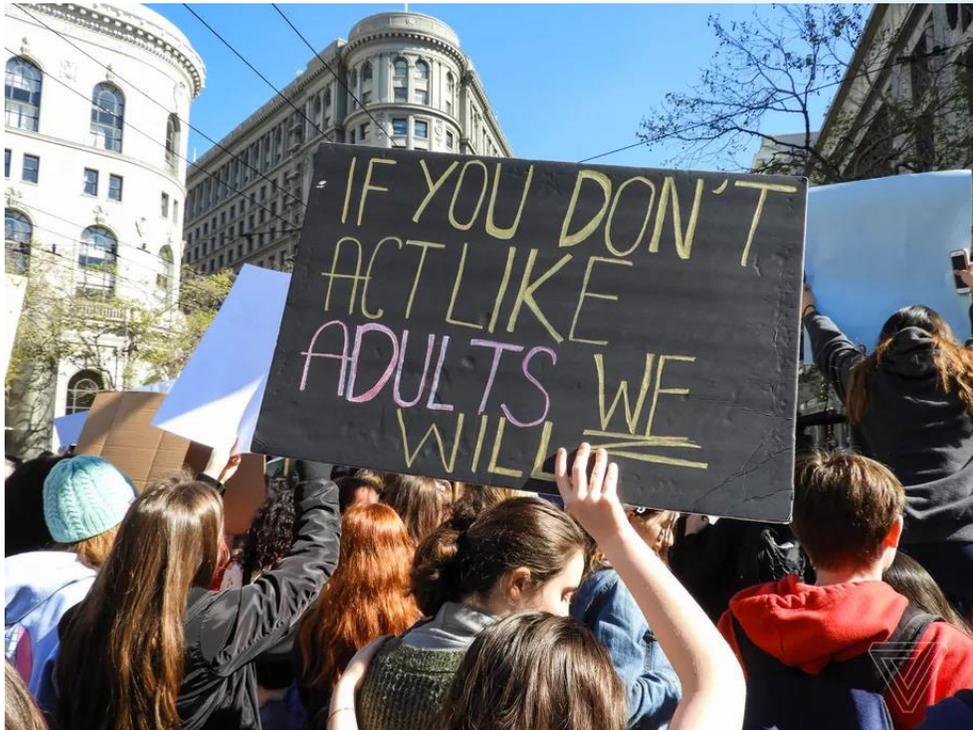


Photo credit: <https://www.theverge.com/2019/3/15/18266559/students-strike-for-climate-across-the-united-states>

	Population (2018)	MtCO2 emissions (2018)	ACE focal points (as of January 31, 2020)
China	1,392,730,000	10,065	
India	1,352,617,330	2,654	
United States	327,167,430	5,416	
Indonesia	267,663,430	615	X
Pakistan	212,215,030	224	
Total	3,552,393,220	18,974	
% of total	46.8%	51.9%	

Is the education sector standing up to the task?

- No
 - Lack of understanding of the transformative potential of education, and how to leverage education entry points

Education in Nationally Determined Contributions:

1. General, awareness raising activity to ensure the success of a non-education sector's climate action strategy
2. A positive outcome from the success of another sector's contribution
3. Collateral damage
4. Context-setting development need

<https://www.brookings.edu/research/girls-education-in-climate-strategies/>

What's holding back the education sector?



Competing
priorities



Lack of
radical vision



Problem of
definition
and scope



Poor monitoring
and accountability



Lack of support
for teachers



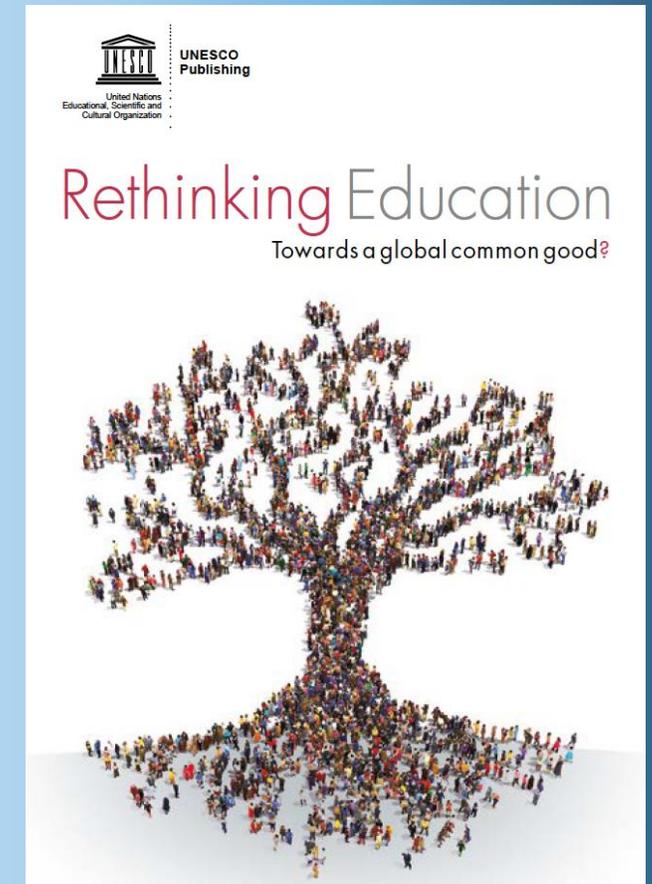
Roadblock #1

- Ecoliteracy is low on the to-do list when basic literacy is still an unmet global goal
 - Especially the case for countries struggling to deliver basic education services
- This means ESD is framed as complementary/additional to, rather than fundamental/integrated throughout the curriculum



Roadblock #2

- The global education community lacks a radical vision for education
 - The UN Decade of Education for Sustainable Development (2005-2014) failed to reorient education away from neoliberalism toward sustainability





Roadblock #2

- The global education community lacks a radical vision for education
 - The learning crisis...

For each \$1 invested in an additional year of schooling...



<https://report.educationcommission.org/report/>





Roadblock #2

- The global education community lacks a radical vision for education
 - Education efforts focused on “greening” schools or in disaster risk reduction

What is a green school?

Green schools strive to achieve success in three pillars. Over 60 organizations in the United States and abroad use these pillars to describe their work on green schools, including the U.S. Department of Education’s Green Ribbon Schools award program.



Reduce environmental impacts & costs



Improve occupants' health & performance



Increase sustainability literacy



**Safer, Stronger, Smarter:
A Guide to Improving School
Natural Hazard Safety**

FEMA P-1000 / June 2017





Roadblock #3

- ESD has a problem of definition and scope
 - Current iterations of ESD are at odds with transformational learning
 - The narrow focus on climate science diverts attention to climate justice

Normative ESD	Transformative ESD
Focused on measurable cognitive learning: environmental/climate literacy (knowledge about climate science, etc.)	Focused on socioemotional learning: sustainability competencies (knowledge, values, attitudes, affect & skills like systems thinking)
Individualistic, one-directional, transmissive, disciplinary pedagogy	Collective, interactive, transformative, transdisciplinary pedagogy
Teaches what to think	Teaches how to think
Learner as receiver of knowledge	Teacher-Learner as agent of change
Centered on low-impact actions (recycling, etc.)	Centered on disruption of status quo & root causes
Aimed at mass-producing workers for the global economy	Aimed at sparking a shift in consciousness & systems-level change



Roadblock #4

- Monitoring and accountability mechanisms are oriented toward passive progress in education

SDG Target	SDG Indicator
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	
4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development , including, among others, through education for sustainable development and sustainable lifestyles , human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development	4.7.1 Extent to which (i) global citizenship education and (ii) education for sustainable development , including gender equality and human rights, are mainstreamed at all levels in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
	4.7.4 Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability
	4.7.5 Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience

SDG Target	SDG Indicator
Goal 12. Ensure sustainable consumption and production patterns	
12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature	12.8.1 Extent to which (i) global citizenship education and (ii) education for sustainable development (including climate change education) are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment
Goal 13. Take urgent action to combat climate change and its impacts	
13.3 Improve education, awareness-raising, and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning	13.3.1 Number of countries that have integrated mitigation, adaptation, impact reduction and early warning into primary, secondary, and tertiary curricula
	13.3.2 Number of countries that have communicated the strengthening of institutional, systemic, and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions



Roadblock #4

- Monitoring and accountability mechanisms are oriented toward passive progress in education

Out of 160 NDCs...

68% reference the term “education,” yet only 26% do so in reference to school children

Only 3 mention girls, 1 mentions girls’ education, and 0 formally recognizes the contributions that an investment in girls’ education could make toward their climate strategy

The top 20 carbon emitting countries in the world are least focused on the education of children

Countries with a youth bulge are more likely to attend to intergenerational dimensions of climate change and climate action, like education



Roadblock #5

- Teachers lack the systemic support to become change agents for sustainability
 - 86% of teachers think climate change should be taught in classrooms, yet only 42% actually do so
 - ~50% of teachers devote about 2 hours/year to climate change
 - >25% of teachers “give equal time” to perspectives that raise doubt about climate change
 - 31% of teachers send “explicitly contradictory messages” about the causes of climate change

(Kamenetz, 2019; Plutzer, Hannah, et al., 2016; Plutzer, McCaffrey, et al., 2016)

So, what next?



Build consensus on a set of principles for radical, transformative visions of education

Identify the entry point(s) for coordinated action

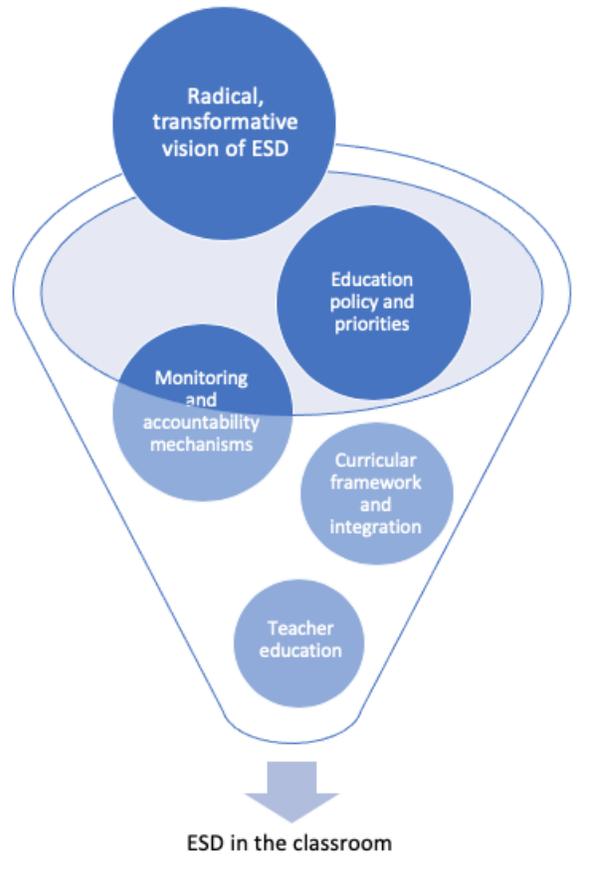
Synthesize clear guidance and how-to's for decisionmakers

Build consensus on a set of principles for radical, transformative visions of education



Identify the entry point(s) for coordinated action

Tackling the 5 roadblocks



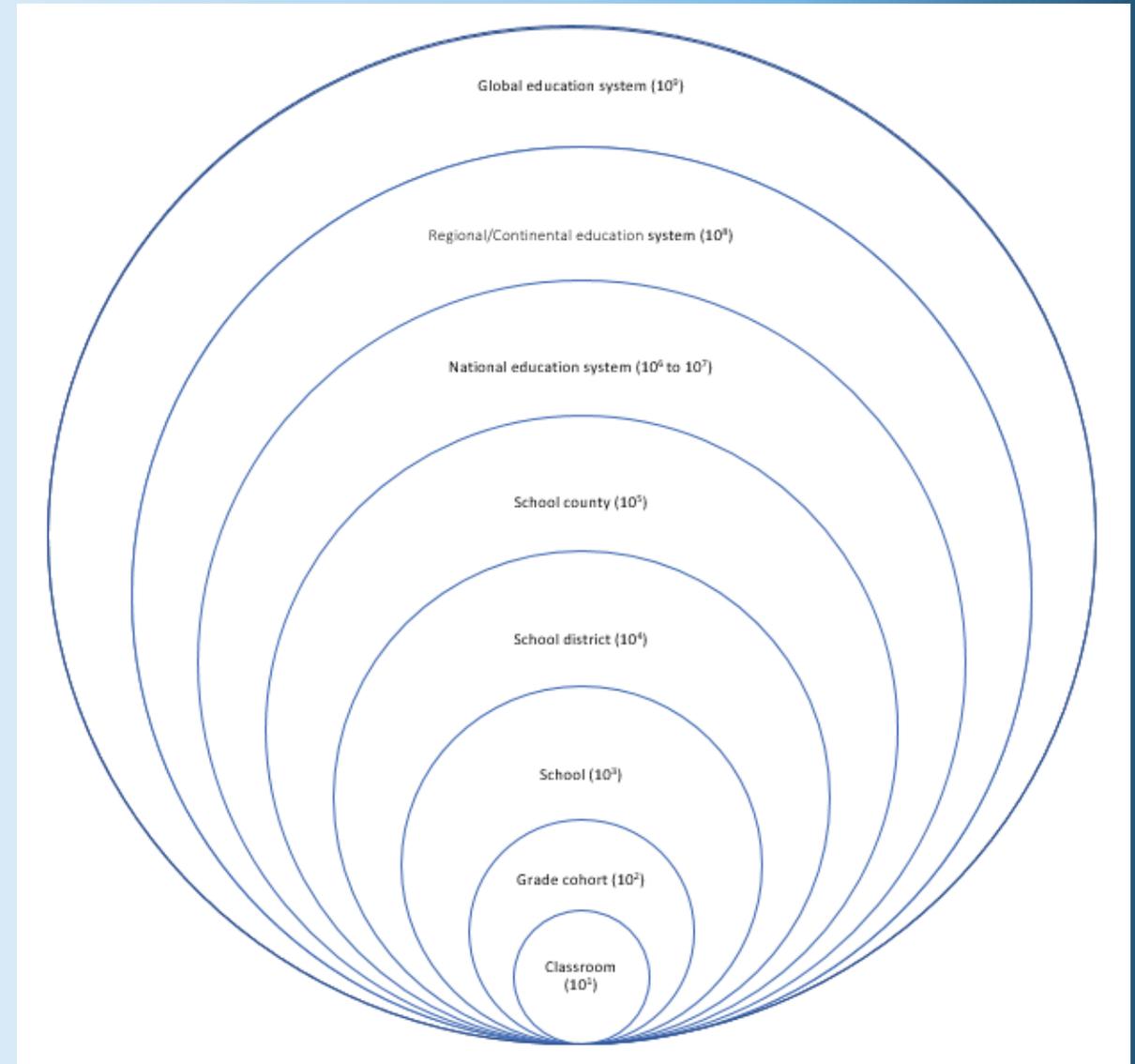
ESD for 2030 Framework



Identify the entry point(s) for coordinated action

Power of 10 framework of cross-scale optimization for interventions aimed at rapid sustainability transformation, applied to the education system

<https://eartharxiv.org/feaq5/>



Synthesize clear guidance and how-to's for decisionmakers

- Cross-sectoral coalitions for coordinated action
- Climate-responsive and climate-oriented education sector plans

Report link:

<https://www.brookings.edu/research/roadblocks-to-quality-education-in-a-time-of-climate-change/>

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