

We need an Action for Climate Empowerment Strategic Plan for the United States

Frank Niepold, NOAA Climate Education Senior Program Manager and Coordinator, CLEAN Co-Chair, UNFCCC ACE reporting lead for the United States

CLEAN Network Weekly telecon: January 28, 2020

The Educational Challenge as seen in 1990

The Educational Challenge Governmental policies or programs need the strong support and actions of everyone in order to be successful.

To date, many individuals do not have a good understanding of the complex issues, problems, and potential impacts of global change, or they are confused by the conflicting, alarmist information presented by the media.

Also, unlike what has been happening in the research community, there has not been a large infusion of public funds for a coordinated, integrated, and interdisciplinary education effort.

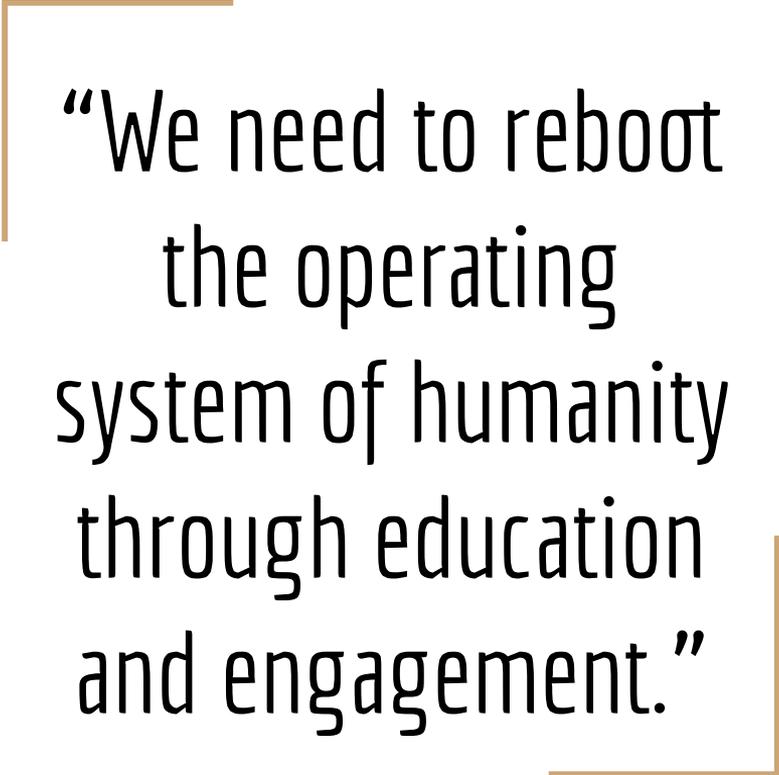
As a result, many informational activities that have occurred have been disjointed, and based more on emotion than fact. (Spranger, 1990)

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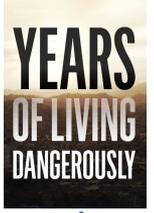
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“We need to reboot
the operating
system of humanity
through education
and engagement.”



Second Nature



CLIMATE GENERATION
A WILL STEGER LEGACY



U.S. Global Change Research Program
National Climate Assessment

NNOCCI National Network for Ocean and Climate Change Interpretation



empowered by THE WILD CENTER



GEORGE MASON UNIVERSITY
CENTER for CLIMATE CHANGE COMMUNICATION



CLIMETIME
CLIMATE SCIENCE LEARNING



Tools for a thriving future



Sharing What Works



GRID ALTERNATIVES



GLOBAL CLIMATE CHANGE
Vital Signs of the Planet



DETROITERS WORKING FOR ENVIRONMENTAL JUSTICE



AMS



U.S. Climate Resilience Toolkit

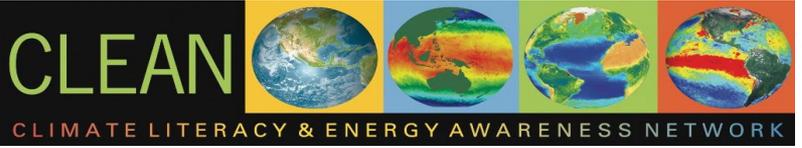


Climate.gov
science & information for a climate-smart nation

PROJECT DRAWDOWN

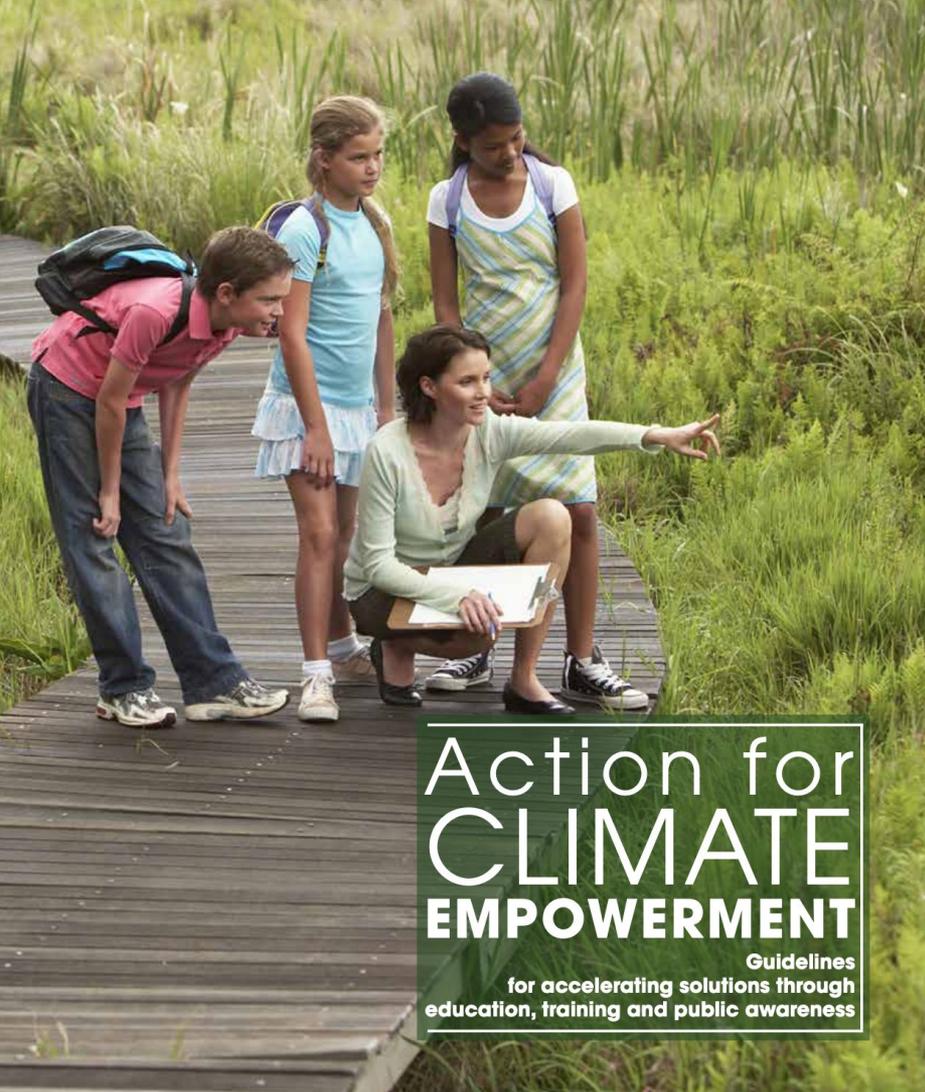


New England Aquarium



YOUNG VOICES FOR THE PLANET
SPEAKING OUT. CREATING SOLUTIONS. LEADING THE CHANGE.

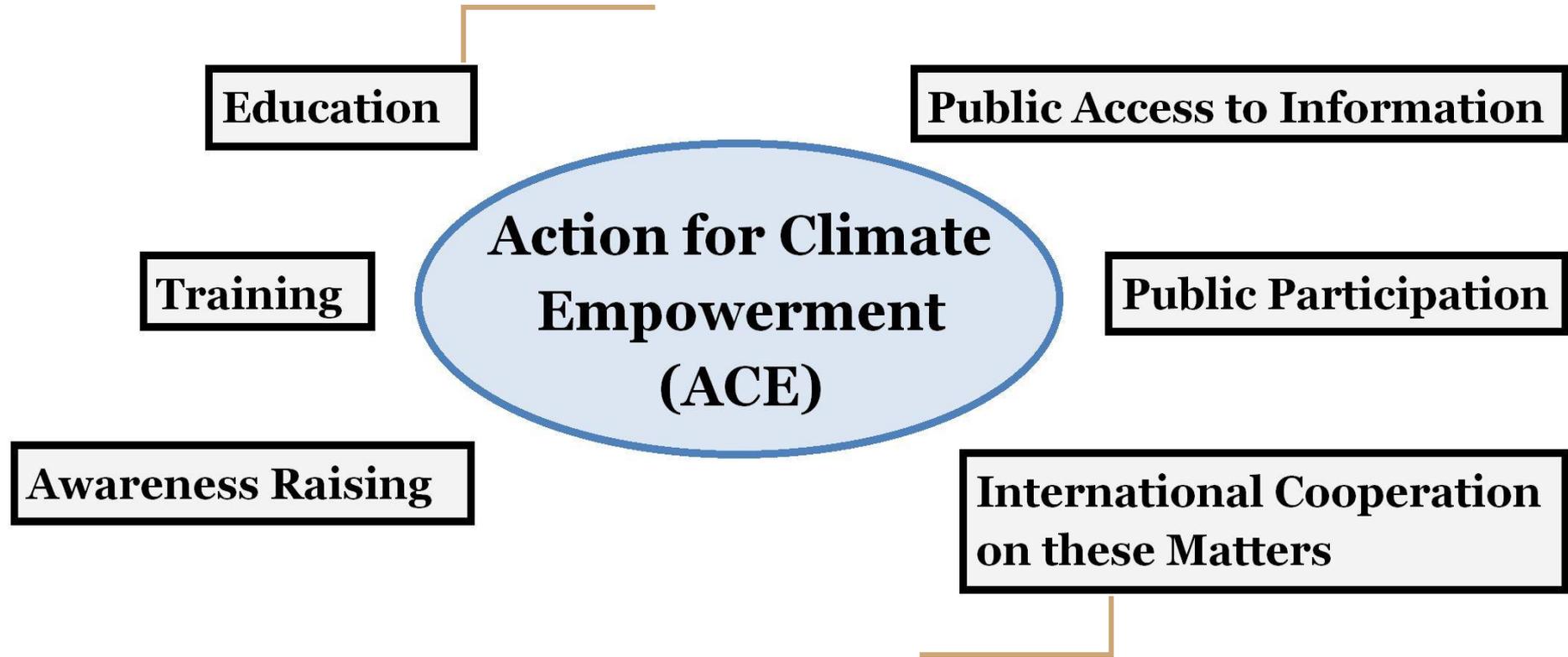
GLOBAL CLIMATE ACTION SUMMIT



Action for
**CLIMATE
EMPOWERMENT**

Guidelines
for accelerating solutions through
education, training and public awareness

Developing a strategy for Action for Climate Empowerment for the United States



EDUCATION, TRAINING AND PUBLIC AWARENESS

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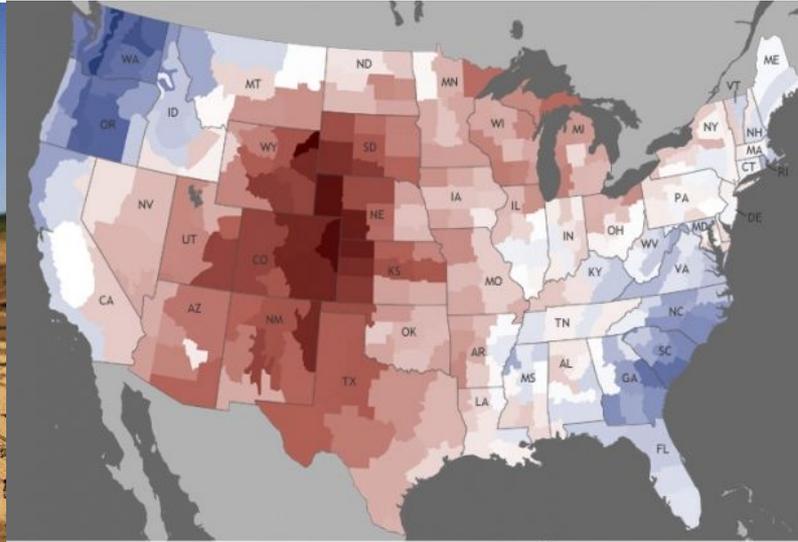
International ACE review for the 2014 CAR: Highlights

- Numerous federal, NGO, and individual efforts have supported sustained and robust educational and communications initiatives to **develop a climate-literate citizenry and skilled workforce.**
- **When citizens have knowledge of the causes, likelihood, and severity of climate impacts, as well as of the range, cost, and efficacy of options to adapt to impacts, they are more prepared to effectively address the risks and opportunities of climate change.**
- Furthermore, since 2010, more Americans than ever before **experienced the impacts of climate change first-hand in the form of extreme events**, such as prolonged droughts and stronger and more frequent wildfires, resulting in **increased public interest and an opportunity for engagement** on climate literacy issues.



Highlights

- **Climate change communication faces many challenges**, and federal agencies, civil society, and individuals have invested in numerous initiatives to establish a climate-literate citizenry. In the U.S. National Research Council report *America's Climate Choices*, the authors find that **“climate change is difficult to communicate by its very nature.”**
- However, **“education and communication are among the most powerful tools the nation has to bring hidden hazards to public attention, understanding, and action”** (NRC 2011).



Highlights

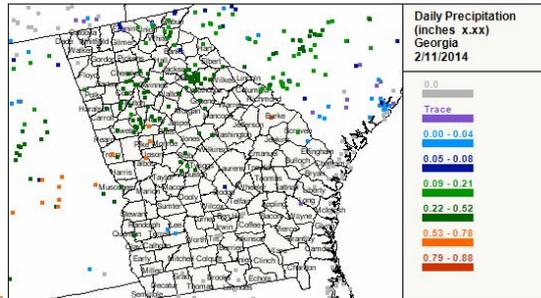
- **U.S. federal agencies**—including USAID; the Departments of Agriculture, Commerce, Energy, the Interior, and Transportation; EPA; the National Aeronautics and Space Administration; National Oceanic and Atmospheric Administration; and the National Science Foundation, Smithsonian Institution— **work on a wide range of climate change education, training, and outreach programs.** (See Table 9.1 of the [2014 CAR report](#))
- A USGCRP Communication and Education Interagency Working Group was formed in 2008 to coordinate these efforts and develop an integrated national approach to climate change. Since 2017, these working groups have stopped meeting.



American Meteorological Society Climate Studies Diversity Project, funded by NSF, partnered with NASA, NOAA and other federal agencies with NGOs.

Highlights

- **Efforts by industry, states, local governments, universities, schools, and NGOs** are essential **complements** to the **federal programs** that educate industry and the public regarding climate change.
- The **combined efforts** of the U.S. federal, state, and local governments and private entities are **ensuring that the American public is able to understand and address climate change, in terms of both stabilizing and reducing emissions of GHGs, and also increasing capacity to adapt to the consequences of climate change.**



CoCoRaHS - Community Collaborative Rain, Hail & Snow Network, sponsored by federal (NOAA, NSF, USDA), state and local

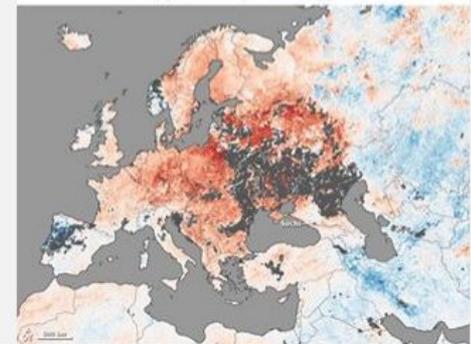
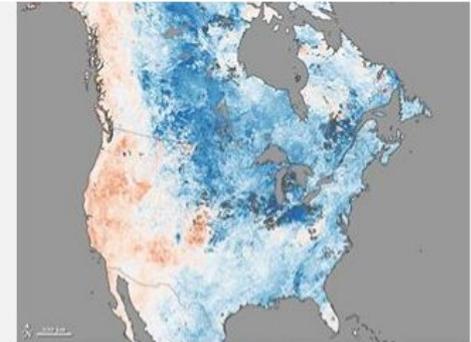
National Efforts to Engage Americans on Climate Change

- The nation's educators and communicators have been working with federal Web portals— e.g.,
 - 3rd and 4th National Climate Assessment
 - NOAA's Climate.gov,
 - NASA's Climate Portal,
 - ~~EPA's Climate Change Portal, and the~~
 - NGOs like
 - Climate Nexus,
 - Climate Access, and
 - Climate Central and Climate Matters
- As extreme events continue to increase, these sorts of combined efforts will be needed to better serve the **public's need for timely and trusted scientifically based information about how such extreme events may change in frequency or intensity in the future, and what people can to prepare for and become more resilient to their impacts.**

NASA Climate Change shared NASA's Earth Observatory's photo.
January 10

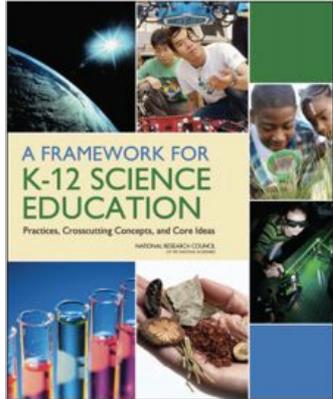
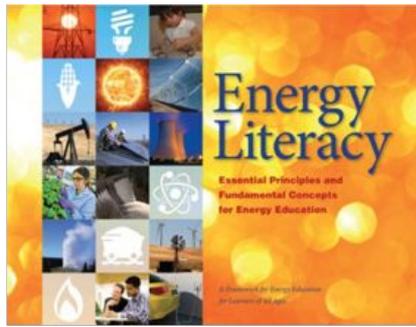
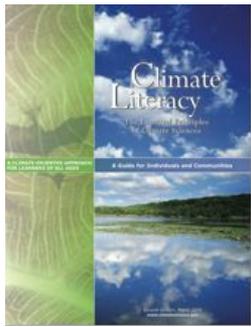
What Goes Around Comes Around

While North Americans contended with a blast of Arctic air, Europeans found themselves wondering where winter went. Read more at <http://earthobservatory.nasa.gov/IOTD/view.php?id=82786&src=fb>



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206 6 4



One of the most significant advances in K–12 climate change educational efforts is the Next-Generation Science Standards (NGSS) for teaching science in the United States (NAS et al. 2013).

These new standards include an emphasis on anthropogenic or “human-caused” effects in both middle and high school science standards.

In the next four years, significant work in educator professional development and curricular design is planned to support this critical advancement in the nation’s climate education.

States across the nation have **begun** to adopt NGSS, which will improve overall climate literacy among all Americans, and build in the next generation a firm foundation of knowledge and discourse as the nation faces decisions on how to best deal with a changing climate. (**Over 70% to date**)

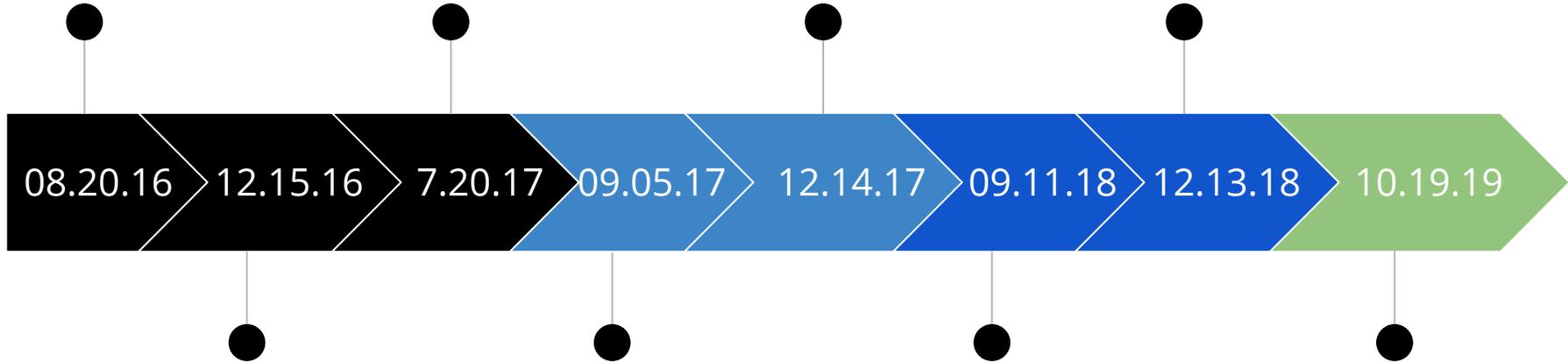


ESIP Summer Meeting
2016: Climate Literacy
Collective Impact-Develop
a Strategy

Climate Change
Education
Effective Practices
Interviews

2017 AGU Fall Meeting workshop,
New Orleans: Building Strategies for
Cities to Address Climate Change
With Climate Literacy Cross-Sector
Collaboration

2018 AGU Fall Meeting workshop in
Washington D.C. Sustaining Cities
Climate Action Social Innovations
Through Education, Civic Engagement
and Workforce Development



2016 AGU Fall Meeting
workshop: Increasing Our
Capacity to Address Climate
Change Through Collective
Impact

Climate Education and
Opportunities Collective
Impact Summit in
Sundance Utah

Accelerating Climate
Action: A Workshop for
Community and Education
Leaders in San Francisco

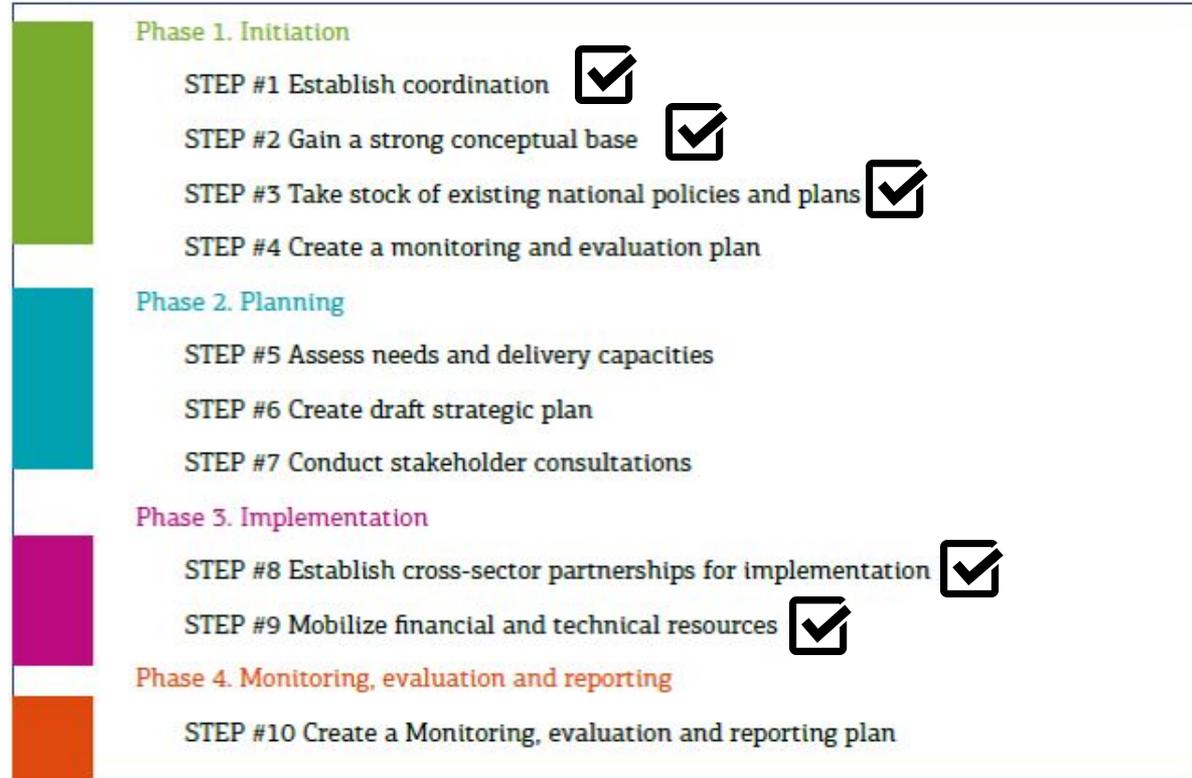
Drawdown Learn: Leveraging
Education and Public
Engagement for Climate Action
in the U.S.

Steps of developing a national ACE strategy

Based on the analysis of the ACE Guidelines, the climate change related education, training, public awareness, public access to information, and public participation efforts in the United States have advance part of the ACE defined states.

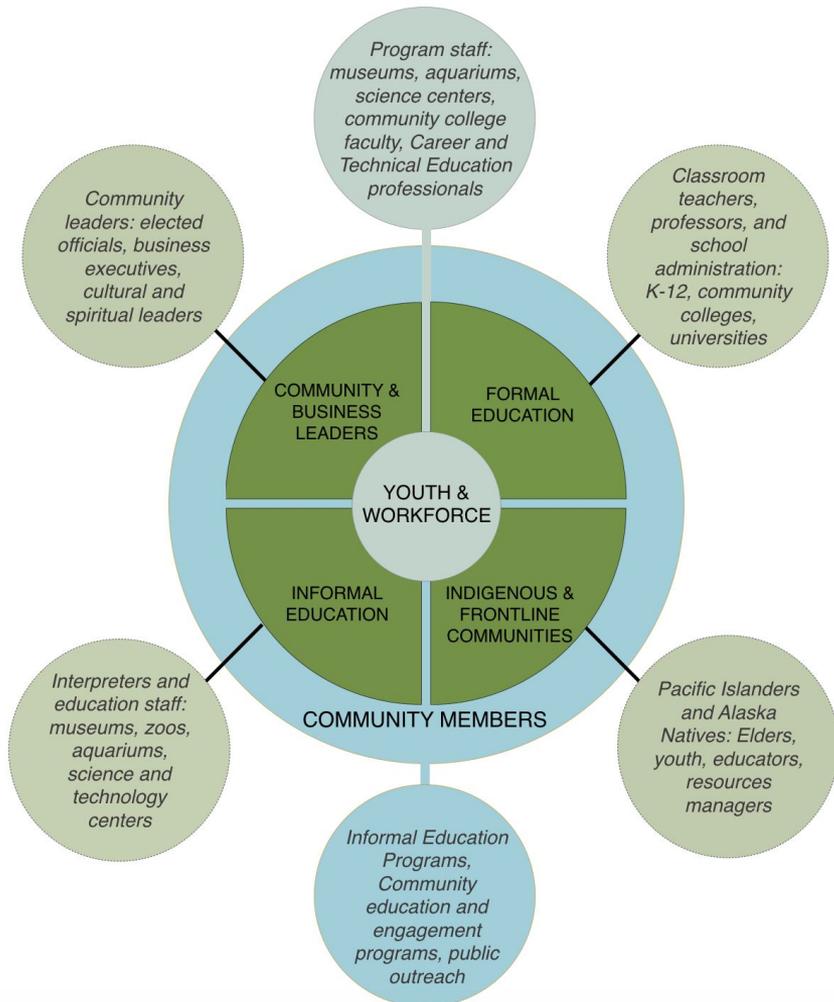
Additionally, numerous initiatives and partnerships internationally have enhanced cooperation on these matters.

Using the ACE Guidelines, we can develop an initial strategy within a year.



2017 Climate Education and Opportunities Collective Impact Summit

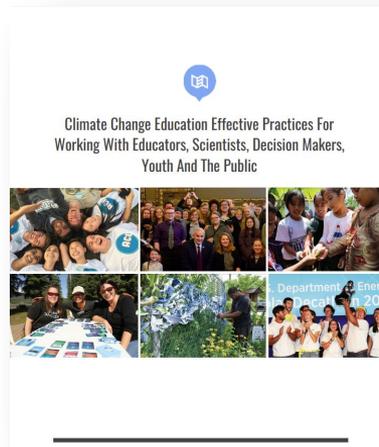




Priority Audiences for Climate Change Education

The Climate Change Education community recognizes that achieving its vision requires engaging a diverse range of communities.

Together, this communities projects are using a variety of innovative strategies to reach key stakeholders, collaborators, and audiences.



Available @ <http://ccepalliance.org/collective-impact-summit/>



check out Baltimore dept of sustainability for some great model programs

Guy: Michigan Sea Grant may have resources to assist you. Our network has a nascent but vigorous effort underway to reach new stakeholders in education, resources & resilience! Jan Merrill

John Anderson
I can make a connection w/ colleagues at Detroit Zoo, who are linked by the UNICEF network.

Guy

At Detroiters Working for Enviro Justice we are soon releasing DETROIT'S CLIMATE ACTION PLAN.

⊗ The most impactful types of support for us are ideas, tools, personal contacts, etc. that will help build the probabilities of success for the city.

Eg. Our new sustainability Director is crafting a plan this fall and any resources that we can mobilize to simplify his work, connect Detroit to successful models: of course money!

⊗ Also, support w/ content to reach public of all ages

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Center for NAREE environmental issues
frees
naree.org/efc

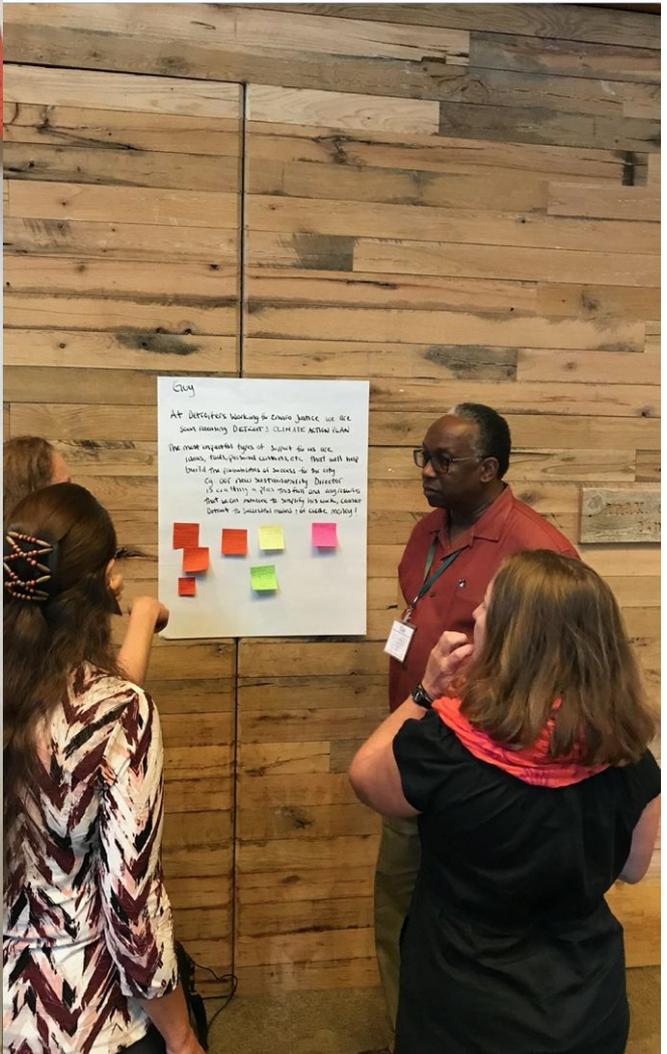
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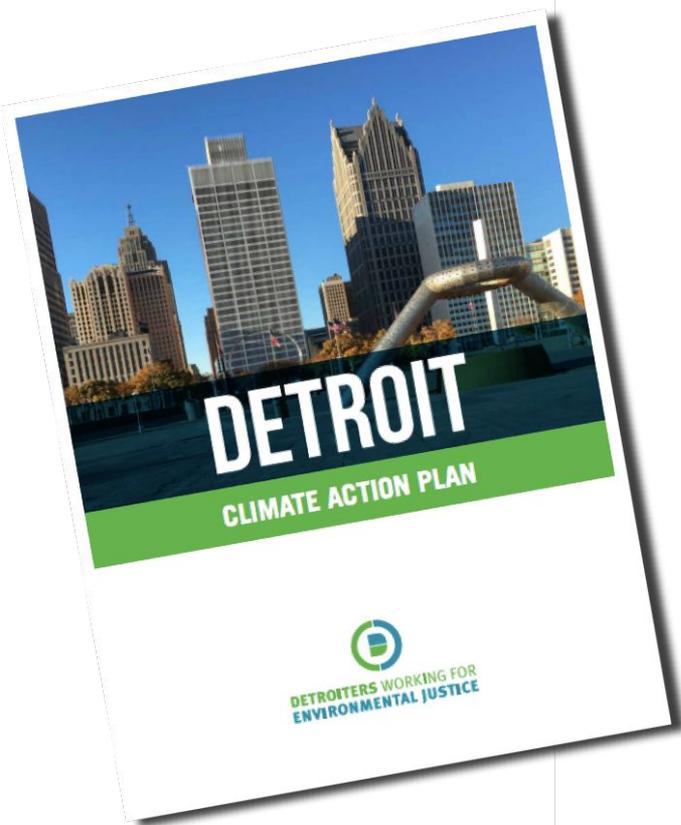
Mary-Louise
Climate Change
in your city

ACE Alliance for Climate Education
- online climate education resource w/ vetted climate jobs training
www.acealliance.org
- we are looking for more cities to join
more info on ACE

sundance
Hologic Education meeting
tools for your workplace
training for first responders
beginner level classes

are part of similar communities in Philly and would like to share resources. Contacted by Patrick Doherty





BUSINESSES & INSTITUTIONS

GOAL

4

Increase awareness of career options in sustainable development. (mitigation and adaptation)

Summary of Goal

The primary purpose of this goal is two-fold: educating/engaging the community about sustainability and career pathways in sustainability, and creating opportunities in these career pathways. This will be achieved through outreach (e.g., lunch 'n' learns, forums, green career day, formal education on these topics in the school system) and career training partnerships and feeder programs.

Near-Term Action Steps

Create a collaborative "societal" marketing campaign that includes:

- Investing in public education with youth education, library programs.

Indicators for Success

1. More students pursuing sustainability career pathways (5% annually).
2. More partnerships established between the coalition and schools and training centers (5% annually).
3. Increased number of sustainable living and green career events (5% annually).

Appropriate Methods for Assessment

1. Reports from colleges and technical training schools.
2. Survey partners.

Challenges to Advance Climate Actions

Low Priority

Few issues facing our society are more urgent than reducing our vulnerability to climate impacts and preparing for the staggering transitions to a low-carbon economy.

Making the Case

Making the case for climate action is one of the leading challenges that cities face in undertaking ambitious urban climate action. (C40 Benefits, 2015)

Possible Capabilities

U.S. city and state schools, higher education, and free choice learning institutions can become better prepared or focused on building societal capacity and social will to support climate actions.

GLOBAL CLIMATE ACTION SUMMIT

EDUCATION

The GCAS education workshop was a forum for community, business, and education leaders to showcase and explore models that build social will and capacities needed to assist communities and businesses in reaching the net zero emissions by 2050 needed to achieve the Paris Agreement's aspiration for a 1.5 degree world.

Participants worked together to develop options for integrating climate change education, community engagement, and workforce development activities into local climate action plans with the goal of accelerating and supporting place-based climate solutions.



Photo credit: James Callahan

Education for Community Climate Action Case Studies



Empowering Communities through Workforce Development

GRID Alternatives
Oakland, CA

GRID Alternatives is a United States-based nonprofit solar installer that provides solar power to low-income communities and tribes in the US as well as energy access to rural and urban communities in Nicaragua, Mexico, and Nepal. In keeping with their mission to increase diversity, equity, and inclusion in the field of renewable energy, the organization has robust and differentiated workforce development programs focusing on women, veterans, tribal and low-income communities. GRID helps create communities that are both environmentally and economically sustainable, addressing economic inequality and underemployment while mitigating further degradation to the climate.



Education to Support Informed Decision Making by Key Influential Community Leaders

Climate Education Partners

Climate Education Partners is a member of the Climate Change Education Program Alliance, a group of climate education projects that were formed 8 years ago to develop new resources and new ways to inspire diverse audiences to make informed decisions regarding climate change. Climate Education Partners (CEP) is composed of an interdisciplinary team of experts that have worked together integrating climate science, science education, behavioral psychology, strategic communication and real-world experiences to develop a suite of resources and processes to support informed decision making by key influential community leaders. The National Science Foundation supported Climate Education Partners by providing \$6 million dollars across 8 years to develop a strategic plan for comprehensive education of community leaders and implement a suite of activities to engage the influential decision makers in the San Diego region.

CEP has been working to share science about the changing climate with Key Influentials (KIs)—leaders in the community who include elected officials, tribal leaders, academics, and representatives from local businesses, nonprofits, ethnic and cultural communities, faith-based groups, and social entrepreneurs. The project seeks to provide valid scientific information that

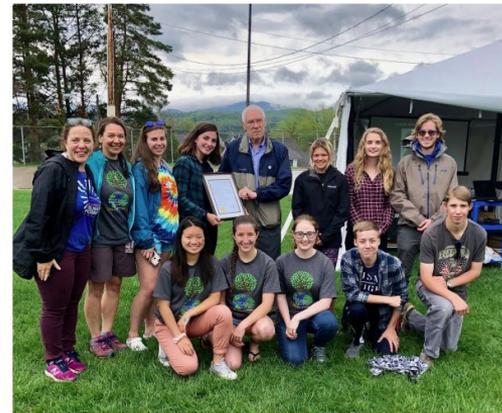


Photo: Youth Climate Summit students from the Lake Placid Environmental Club alongside Mayor Clyde Randall after signing the New York State Climate Smart Communities Pledge. The newly formed Climate Task Force will officially include youth involvement as the Lake Placid community looks to reduce its carbon footprint.

Youth at the Helm of Building Community Climate Empowerment

The Wild Center's Youth Climate Program is a global initiative that convenes, engages, and empowers young people to act on climate change related activities in their schools and communities through Youth Climate Summits. Each Youth Climate Summit is a one or two day event that brings youth together to learn about climate change science, impacts, and solutions. Through speakers, workshops, and activities, the Summit culminates with student participants writing a Climate Action Plan that can be implemented in their schools, communities, and regions. Students gain the knowledge, confidence, and skills necessary to communicate with decision-makers. The solutions-focused education they receive at the Summit inspires them to begin a collaborative and productive dialogue with their respective civic and government leaders

Case studies are continuing to be developed by NOAA Climate Program Office and the CLEAN Network to highlight options to integrate into climate change education, community engagement, and workforce development activities in local climate actions.

Available @ <http://ccepalliance.org/accelerating-climate-action-workshop/>

Education Supporting Community Climate Action Case Studies



Comprehensive Workforce Development for Social and Environmental Justice

Solar One's Green Workforce Training Program and Green Design Lab Program

Solar One delivers environmental education programming to New Yorkers of all ages through five distinct programs aimed at different audiences. The organization was founded in 2004 to manage Stuyvesant Cove Park- an all native plant park located on the banks of the East River in Manhattan, but has since grown into a multifaceted renewable and energy efficiency education operation. In addition to their workforce development programs, Solar One has installed over 2 megawatts of photovoltaics on low income housing in New York City, become a central coordinator of citywide and regional climate and energy discussions, set in motion the construction of a state of the art environmental education center, and continued to manage and improve the park that was their birthplace. Solar One is supporting NYC's climate action plan by implementing high impact actions that accelerate near-term greenhouse gas (GHG) reductions.

“Increasing the sustainability of New York City’s systems is of critical and growing importance. Solar One’s Solar Schools and Career and Technical Education Programs bring our solar program to life for school communities in an engaging way, connecting the benefit of resilient infrastructure with the value of career preparation. Green jobs have earned a place on the radar of our youth, and we are thrilled that Solar One strongly supports student learning and leadership in this workforce development!”

Meredith McDermott, Director of Sustainability, NYC Department of Education

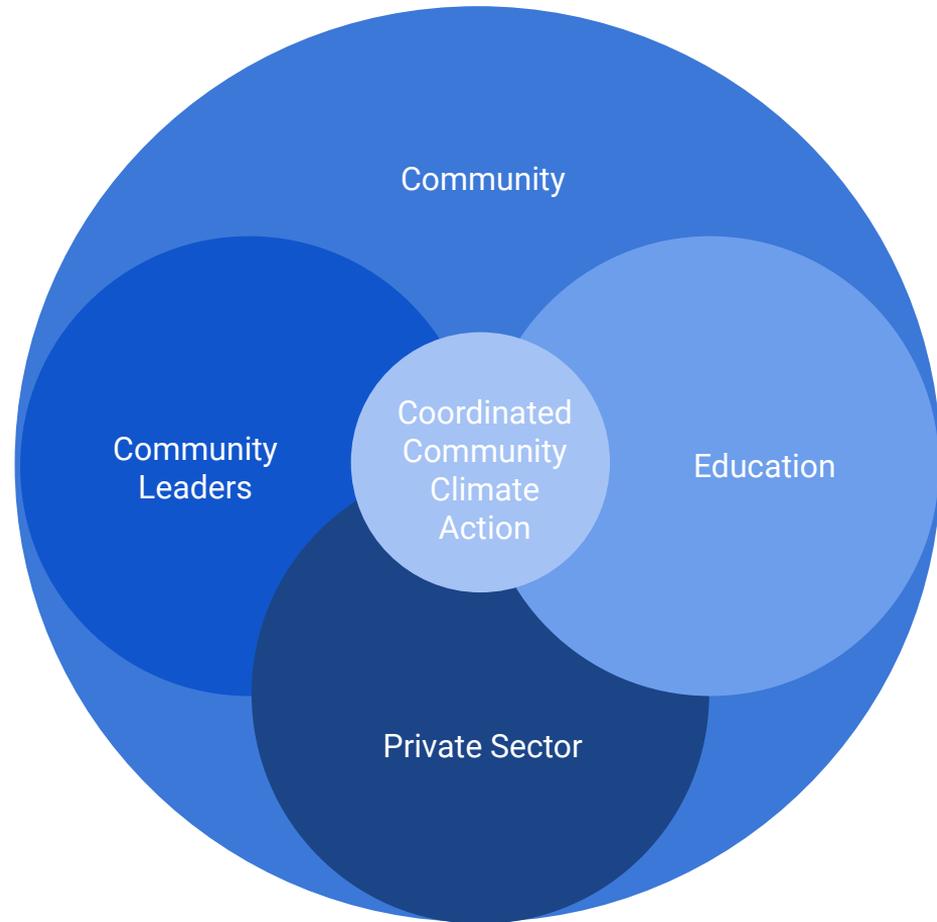
Phases of developing a national ACE strategy

As a result of extensive work of the educational communities, meetings, workshops and the summit the climate change education community has advanced and expanded collaborations between community, business, and education leaders to showcase and explore models that build social will and capacities needed to assist communities and businesses in reaching the net zero emissions by 2050 needed to achieve the Paris Agreement's aspiration for a 1.5 degree world.



Key to Accelerating Climate Actions

Effective climate change education, civic engagement, and workforce development are critical for communities to reach their climate action goals. These events confirmed that education can support community leaders by **building social will, making solutions visible** and **create the capacities needed to support communities** so they can seize the opportunities of a post-carbon and climate resilient future.

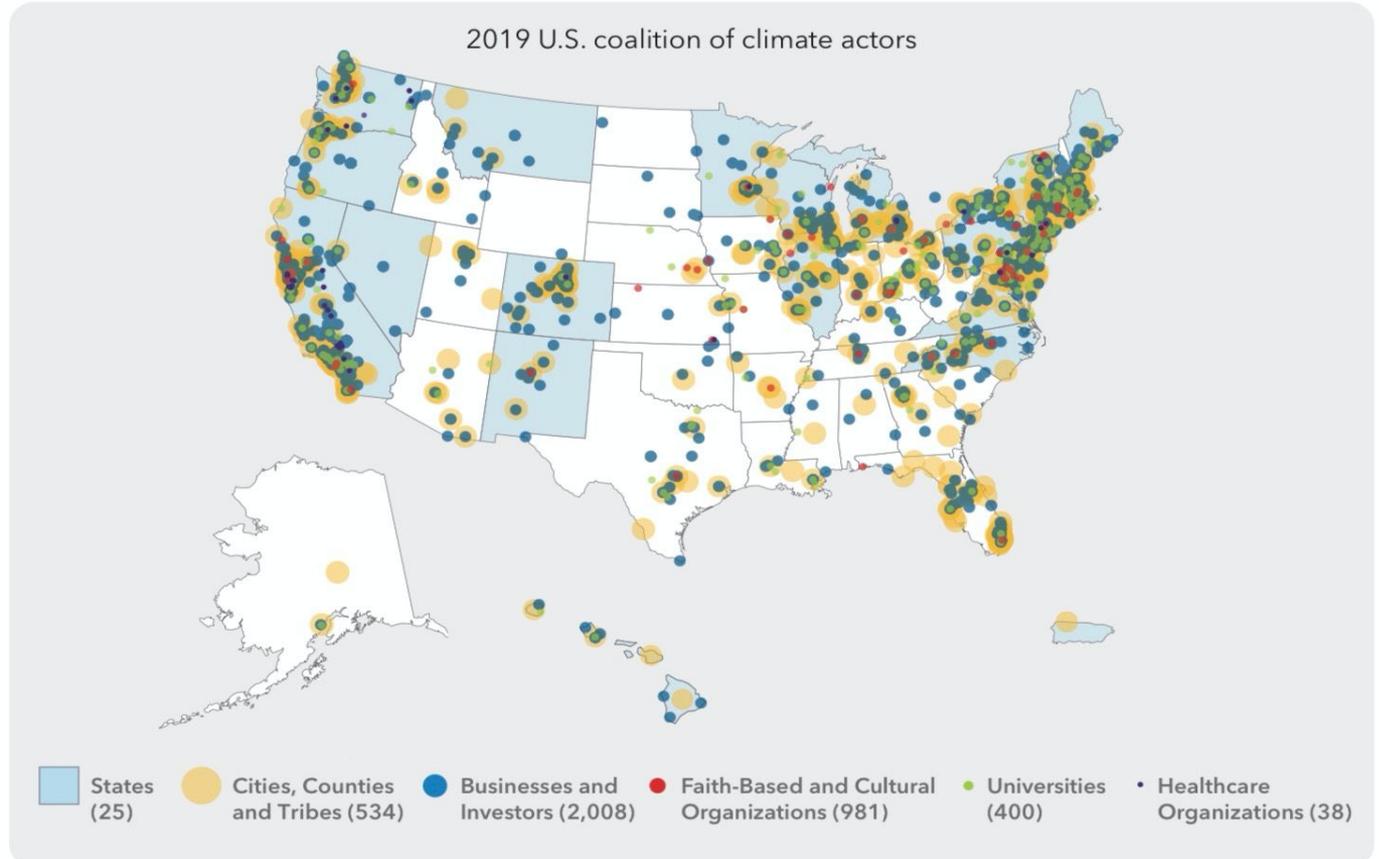


ACCELERATING AMERICA'S PLEDGE

GOING ALL-IN TO BUILD A
PROSPEROUS, LOW-CARBON
ECONOMY FOR THE UNITED STATES



Figure ES-3 | Actors Supporting the Paris Agreement



Benefits of Developing a National ACE Strategy

- Offers the US an opportunity to take stock systematically of existing activities, identify gaps and prioritize actions, establish targets and milestones, and identify key indicators to track and measure progress.
- Creates policy instruments and measures to ensure an integrated, coherent approach to implementing ACE.
- Improves policy coherence and facilitates cross-sectoral collaboration for ACE action
- Provides avenues for financing due to ACE activities are duly aligned with national policy, including annual/multi-year budgets and planning.



NO SIDES
CLIMATE

THE GREEN NEW DEAL
SYSTEM CHANGE
NOT
CLIMATE
CHANGE

SAVE OUR
SAVED OUR FUTURE

im with HER

ACTION ON THE
CLIMATE

IT'S OUR
FUTURE

IF YOU DON'T
ACT LIKE
ADULTS
WE WILL

LIKE THE
OCEANS
WE RISE

HONOR
HE
ER

The ground may be white but MN's New Deal is green

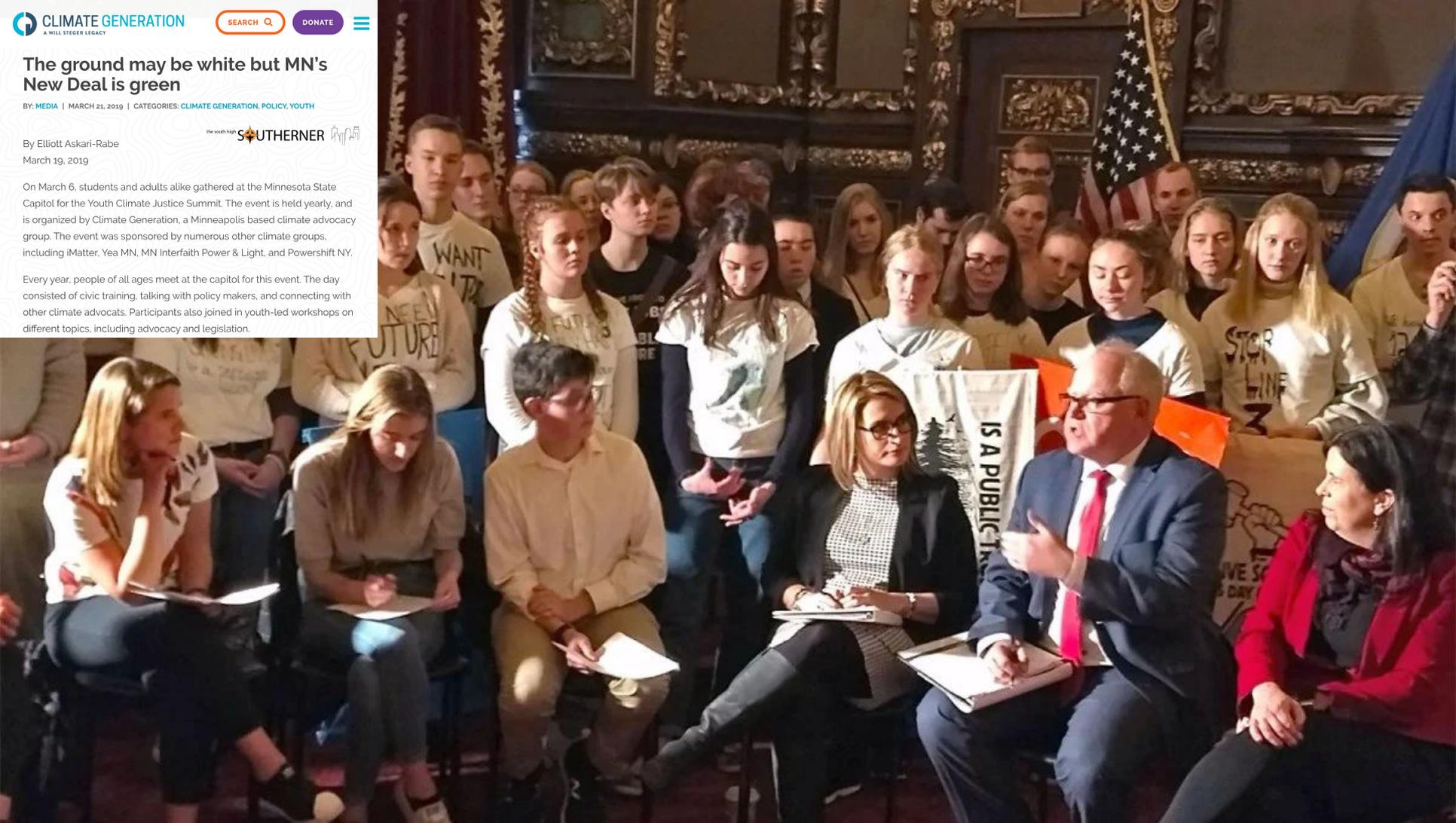
BY: MEDIA | MARCH 21, 2019 | CATEGORIES: CLIMATE GENERATION, POLICY, YOUTH

By Elliott Askari-Rabe
March 19, 2019



On March 6, students and adults alike gathered at the Minnesota State Capitol for the Youth Climate Justice Summit. The event is held yearly, and is organized by Climate Generation, a Minneapolis based climate advocacy group. The event was sponsored by numerous other climate groups, including iMatter, Yea MN, MN Interfaith Power & Light, and Powershift NY.

Every year, people of all ages meet at the capitol for this event. The day consisted of civic training, talking with policy makers, and connecting with other climate advocates. Participants also joined in youth-led workshops on different topics, including advocacy and legislation.



Process to Develop An Action for Climate Empowerment Strategy for the United State of America

To be clear our efforts here intend to be inclusive of all the communities inside the United States.

How best to include and name the work needs to reflect that there are hundreds of nations inside the nation of the United States of America.

Our shorthand title of "An Action for Climate Empowerment Strategy for the United State of America" does not reflect this point of view yet. Any thoughts on how to better word the working title would be very helpful going forward.

As we expand the process we need to ensure all key voices have an opportunity to contribute to the process.

We are developing a steering leadership team, the authorship for the sections, the review community and the coalition to ask to sign onto the strategy. Any thoughts of who to consider in these stages would be very helpful.

Process to Develop An Action for Climate Empowerment Strategy for the United State of America

We see the need for a strategy to align efforts to enhance learning, sharing and collaboration. We find there are communities of mature and effective Action for Climate Empowerment (ACE) related efforts that need to work together in common purpose.

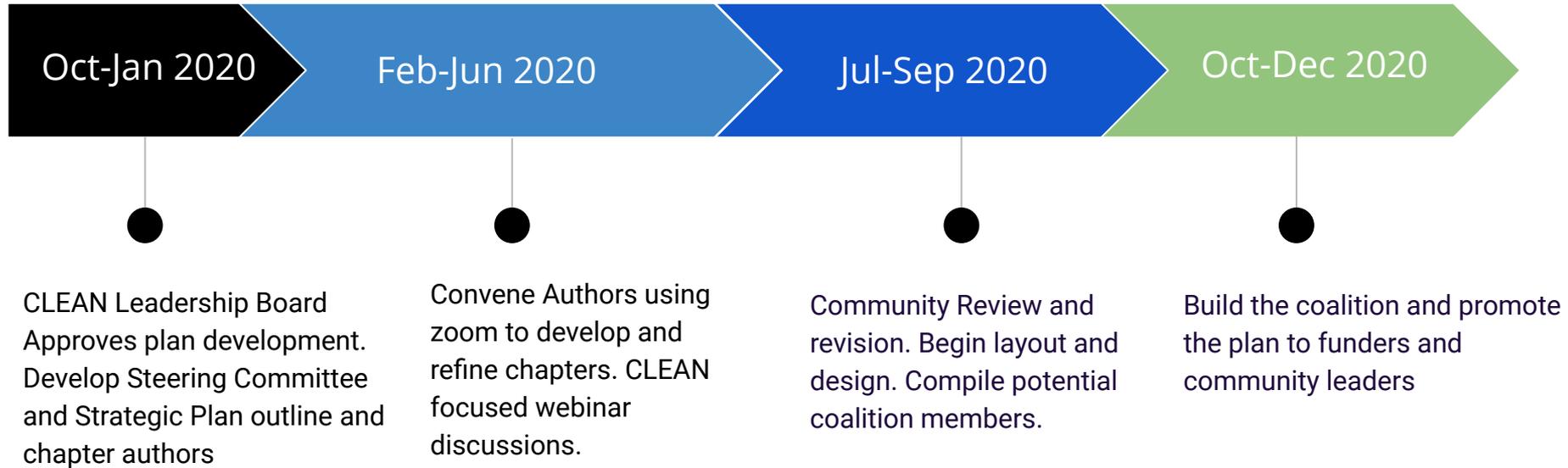
The challenges we face, we face together. We need to call for support to address these challenges needs to be faced together. We sense the needs for ACE related work will be key to accelerating climate actions across our communities. The time for a strategy has come and is needed now, but must be iterative.

We are coming together to design what ACE could do for the communities of the United States and tribal nations over the next 10 years. This decade will determine the climate future.

The actions across the United States will be key to which future humanity will live in for current and future generations.

Let's work together to make the difference we can with all the teachers, educators, students, learners, communicators, leaders, and members of our communities. This plan calls for engaging people in the work of our shared future.

Proposed Timeline





Organizations from around the country play crucial roles in empowering and educating their communities to work towards a more sustainable America.