



Climate and Health Capacity Survey



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From September 2020 to January 2021, the Association of State and Territorial Health Officials (ASTHO), in collaboration with the University of Washington’s Center for Health and the Global Environment and with support from CDC, surveyed State and Territorial health agency (STHA) staff in order to collect information regarding health agency efforts to address climate change and extreme weather. The survey focused on activities related to planning for and responding to climate change and extreme weather events. Participants were asked to complete this survey while responding to the COVID-19 pandemic. Questions were asked regarding the impact of COVID-19 on their climate-related work.

KEY TAKEAWAYS

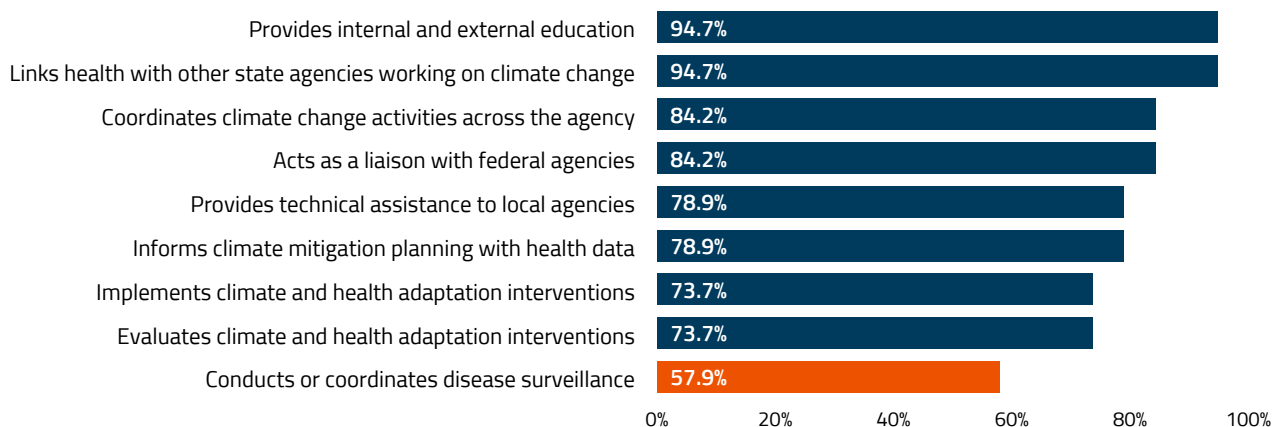
- 1] Overall, departmental capacity to address climate change as a public health issue is low..... 3
- 2] Incorporating climate change information into emergency management plans was the most frequently reported activity..... 3
- 3] Early warning systems are most likely to be in place for vector-borne and zoonotic diseases, extreme heat and poor air quality events, and safe drinking water disruptions. 5
- 4] Most jurisdictions use a variety of strategies to communicate with the public about climate change and health. 5
- 5] Most participating agencies do not regularly evaluate their capacity to address climate change and health..... 6
- 6] In both assessment and response, participating agencies indicated that food-borne diseases and vector-borne/zoonotic diseases were their areas of highest capacity. 6
- 7] Infectious diseases, both vector- and non-vector-borne, are the areas of highest concerns for the majority of agencies, followed by extreme heat events, river/lake flooding, and safe drinking water disruptions..... 7
- 8] Six (15.4%) jurisdictions include preventing and preparing for the public health consequences of climate change among their health agencies’ current top five priorities..... 7
- 9] Twenty-one (53.8%) of participating agencies have a crosscutting, multi-agency initiative to address climate change (e.g. Health in All Policies, Task Force, Climate Change Commission, Resilience Initiative, U.S. Mayors’ Climate Protection agreement or climate registries) within their state or territory..... 8
- 10] Most participants expressed the concern that COVID-19 has impacted their agencies’ abilities to conduct climate program work “a great deal” (52.5%). 9

Climate and Health Programs

Of the 39 jurisdictions who participated in the survey, 27 STHAs reported conducting at least some climate and health related activities. Nineteen (48.7%) participating jurisdictions have a climate and health program (CHP), defined as having one staff person designated to spend at least part of their time on climate and health programming. Fifteen (78.9%) of these CHPs began between 2009 and 2013, and the youngest program began in 2019.

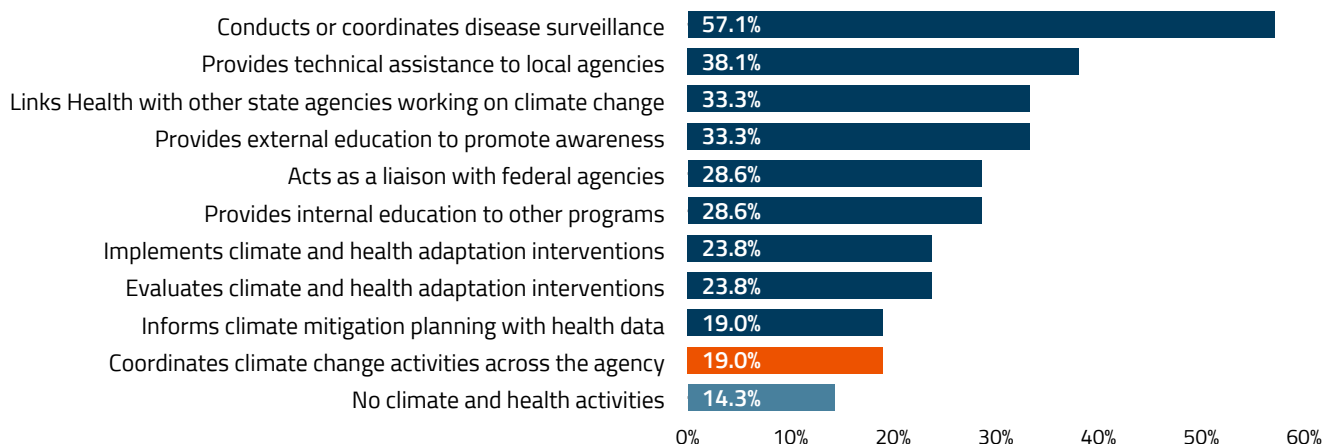
STHA CHPs differ by jurisdiction and may include a broad range of activities. The most common activities include providing education about climate and health-related activities to programmatic peers within their agency, building linkages with other state government agencies working on climate change, and conducting external climate and health education and awareness raising. Eighteen (94.7%) agencies conducted all three of those activities as part of their CHP.

CLIMATE AND HEALTH PROGRAM ACTIVITIES (N=19)



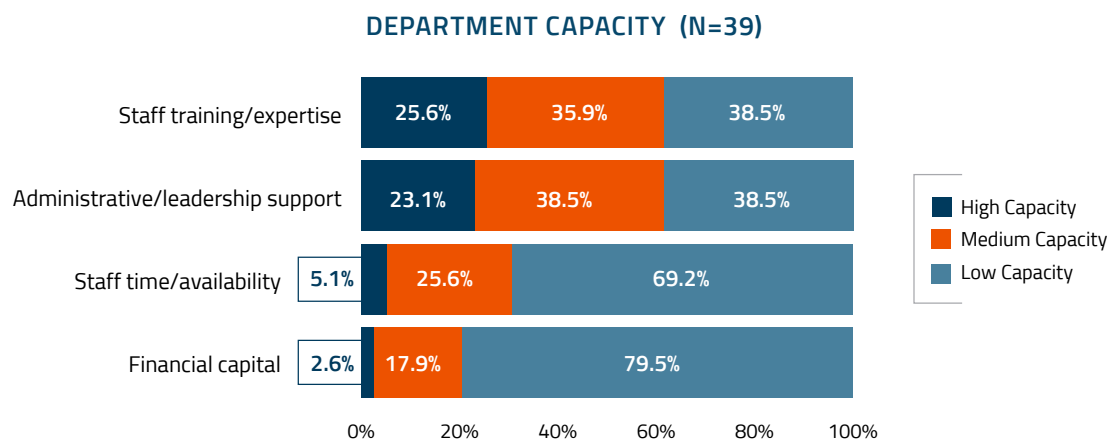
Among the 21 STHAs that do not currently have a CHP, 7.5% are actively planning to begin one, and another 7.5% had one formerly. It is important to note that agencies without a formal CHP still implement climate and health-related activities. In fact, 12 STHAs (57%) without a formal program, reported conducting or coordinating climate-related activities, with the most frequent being surveillance of climate sensitive diseases.'

CLIMATE AND HEALTH ACTIVITIES OUTSIDE OF CLIMATE AND HEALTH PROGRAMS (N=21)



WORKFORCE

Overall, departmental capacity to address climate change as a public health issue is low. More than 60% of respondents indicated low capacity for both staff availability and financial capital. Almost 40% of respondents reported having low capacity in staff training and administrative support, as well.



Eighteen (46.2%) participating agencies have staff time specifically funded for climate and health work. Five more (12.8%) are planning to have funded staff time within five years; only four (10.3%) plan to hire climate and health-specific personnel within the next year.

The number of full-time equivalents funded for climate and health work in each agency ranges from 0.5-7, with an average number of 2.15 (n=17). Most of these staff have specific training in climate change and health (77.8%, n=18); and most of these staff are funded through federal grants (77.8%, n=18). Eleven percent are funded through state/territorial grants; and an additional 11.1% are funded through a combination of streams.

Climate and Health Activities

Participants, regardless of formal program status, were provided with a list of program activities related to climate and health and asked to indicate whether they had already undertaken the activity or were planning to do so within the next year (and have the means to do so). This includes any activities that the agency has participated in, not necessarily in a leadership role. The following figure shows the distribution of their responses.

Most jurisdictions have or plan to conduct most of the activities listed. **Incorporating climate change information into emergency management plans was the most frequently reported activity.** Hiring climate and health-specific personnel and ensuring that laboratory services can adjust to accommodate changes in climate-sensitive conditions are less frequent activities. In this context, a climate-sensitive condition is a one that would be expected to change in incidence or distribution because of climate change. Examples might include vector-borne diseases, allergic disease related to pollen exposure, or adverse health consequences related to property loss and displacement associated with and extreme weather events.

STATUS OF CLIMATE AND HEALTH ACTIVITIES (N=39)

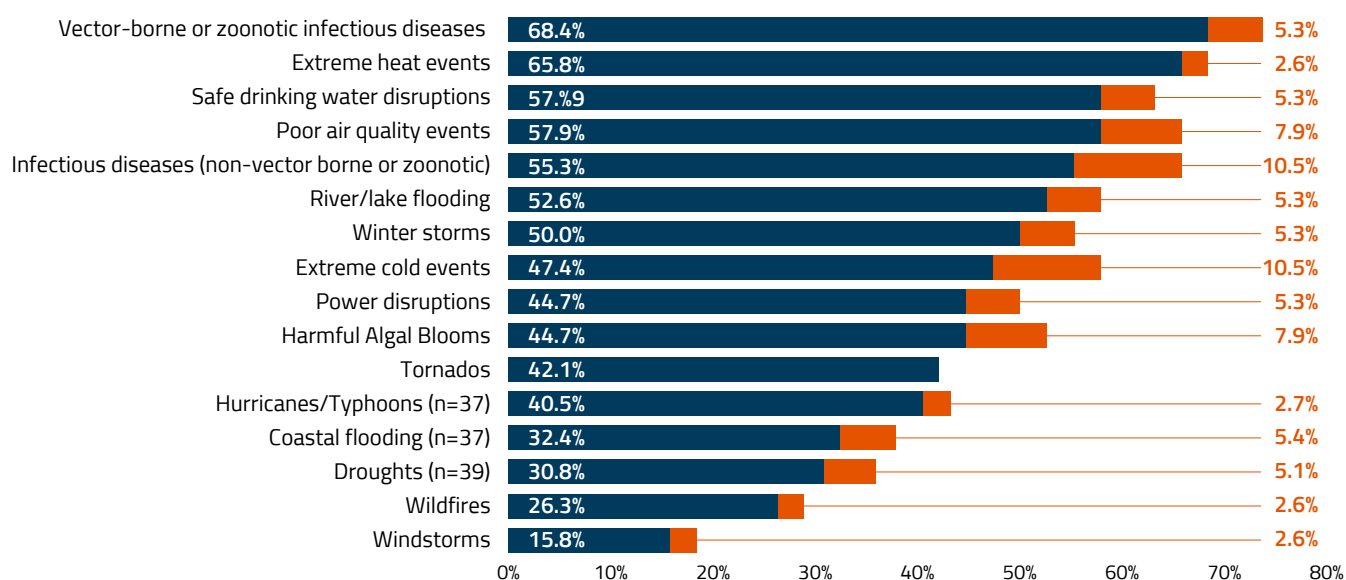
	Already undertaken this activity	Planning to undertake this activity
Adjust laboratory services for changes in climate-sensitive conditions	10.3%	5.1%
Hire personnel with responsibilities specific to climate and health	38.5%	10.3%
Budget for climate and health activities, programs or services	41.0%	12.8%
Incorporate climate change into your strategic plan	35.9%	20.5%
Incorporate climate change into your agency's policies	33.3%	25.6%
Examine associations between weather and health outcomes in surveillance activities	53.8%	7.7%
Conduct a climate change and health vulnerability assessment	53.8%	7.7%
Implement adaptation actions tailored to vulnerable populations	38.5%	25.6%
Provide technical support to other S/T agencies	51.3%	12.8%
Conduct surveillance for climate-sensitive conditions, exposures and/or health impacts	53.8%	10.3%
Provide education/training on climate change and health risks for the public	53.8%	12.8%
Track climate-sensitive population vulnerability or risk factors	53.8%	15.4%
Provide education on climate change and health risks	56.4%	15.4%
Incorporate climate change into emergency preparedness plans	59%	15.4%

Among the twenty-four respondents who have already created a climate change and health vulnerability assessment, or who plan to do so within the next year, sixteen (66.7%) had their agency lead the initiative. Five (20.8%) had their assessments led by an academic partner. A Governor's task force or other statewide body, and the Department of Environmental Protection led the assessment in one jurisdiction each (4.2%, respectively).

Early Warning Systems

Participants were asked to indicate whether their agencies use or rely on an early warning system to trigger response actions to certain climate-sensitive hazards, or if they plan to within the next year. Early warning systems are most likely to be in place for vector-borne and zoonotic diseases, extreme heat and poor air quality events, and safe drinking water disruptions. Coastal flooding, droughts, wildfires, and windstorms are the hazards least likely to have an early warning system in place. Non-vector borne diseases and extreme cold events are the hazards with the fastest growing frequency of warning systems, with 10.5% of respondents, respectively, planning to have warning systems in place for these hazards within the next year.

PRESENCE OF EARLY WARNING SYSTEMS (N=38)



Communication Strategies

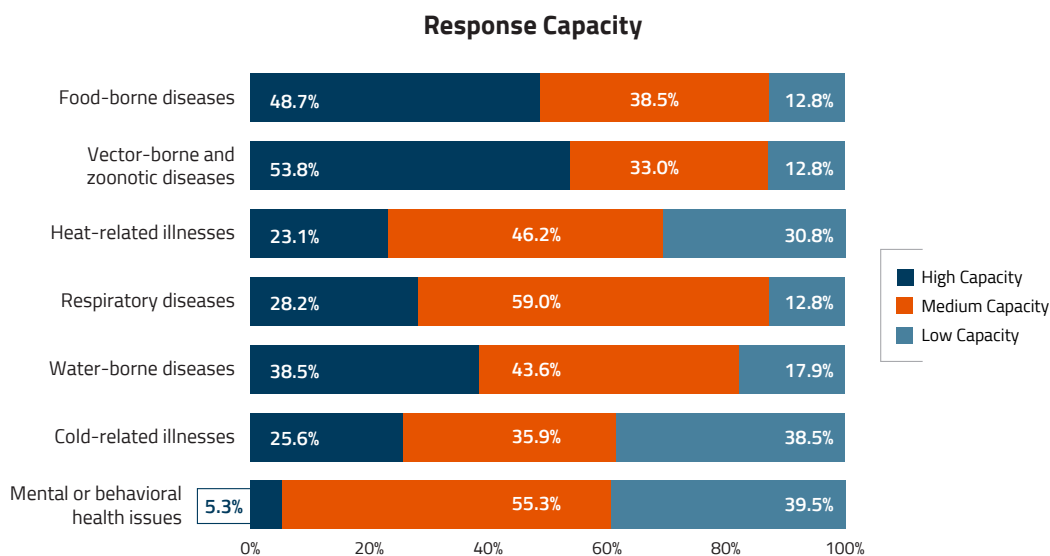
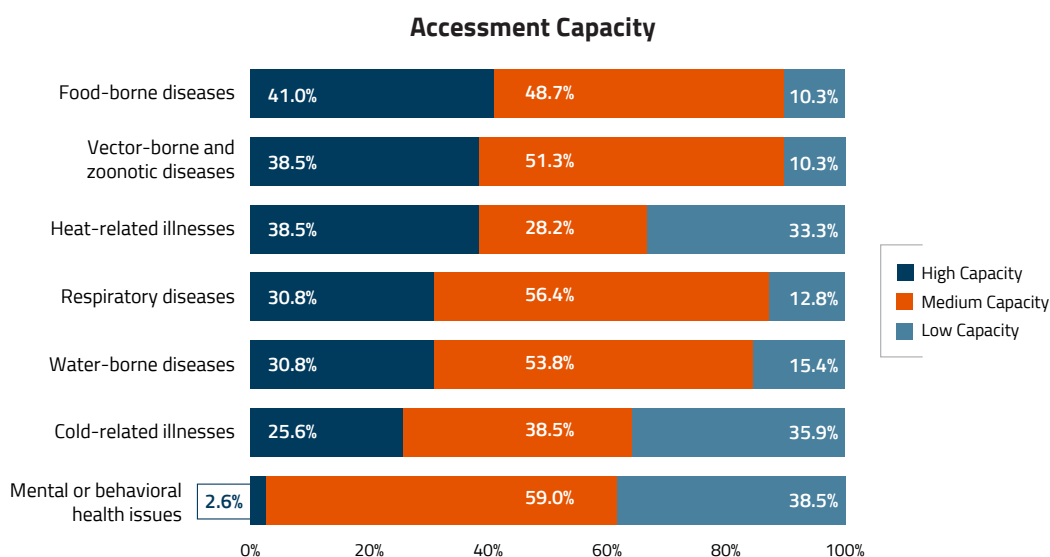
Most jurisdictions use a variety of strategies to communicate with the public about climate change and health. The most common strategies are social media (60.5%), community meetings (47.4%), and news media (e.g., radio, TV, newspaper) appearances (44.7%). Other strategies listed by participants include newsletters, presentations, national and state meetings, statewide public health events (e.g., conferences), and digital ads. Approximately 7 STHAs indicated that they do not use any communications strategies with the public as it relates to climate change (18.4% of 38).

Capacity and Priorities

An agency’s capacity to address climate change and health depends on staff training/expertise, staff time and availability, financial capital, and administrative and leadership support. Participants were asked to assess their health department’s current level of ability to conduct assessment of various climate-sensitive conditions. **Most participating agencies do not regularly evaluate their capacity to address climate change and health (38.5%, n=39), 33.3% evaluate their capacity less than once a year, and 28.2% evaluate once a year or more.**

In both assessment and response, participating agencies indicated that food-borne diseases and vector-borne/zoonotic diseases were their areas of highest capacity, and mental and behavioral health issues their area of lowest capacity.

ASSESSMENT AND RESPONSE CAPACITY BY HAZARD CONDITION (N=39)



Health Impact Concerns

Participants were asked to indicate their agencies' levels of concern about the health impacts of climate-related hazards over the next ten years. Infectious diseases, both vector- and non-vector-borne, are the areas of highest concerns for the majority of agencies, followed by extreme heat events, river/lake flooding, and safe drinking water disruptions. For the following figure, rows that do not add up to 100% indicate a number of agencies that are not affected by the specific hazard. For example, as a jurisdiction without coastlines would not be affected by coastal flooding.

LEVEL OF CONCERN BY HAZARD (N=39)

	High concern	Medium concern	Low concern
Non-vector infectious diseases	69.2%	28.2%	2.6%
Extreme heat events	64.1%	17.9%	15.4%
Vector-borne or zoonotic diseases	64.1%	33.3%	2.6%
River/Lake flooding	53.8%	25.6%	17.9%
Safe drinking water disruptions	51.3%	33.3%	15.4%
Poor air quality events	48.7%	33.3%	15.4%
Coastal flooding	46.2%	12.8%	5.1%
Harmful Algal Blooms	36.8%	44.7%	15.8%
Hurricanes/Typhoons	35.9%	7.7%	15.4%
Wildfires	35.9%	15.4%	33.3%
Power disruptions	35.9%	46.2%	15.4%
Droughts	33.3%	33.3%	28.2%
Winter storms	33.3%	38.5%	17.9%
Tornados	25.6%	28.2%	28.2%
Windstorms	17.9%	33.3%	35.9%
Extreme cold events	7.7%	56.4%	23.1%

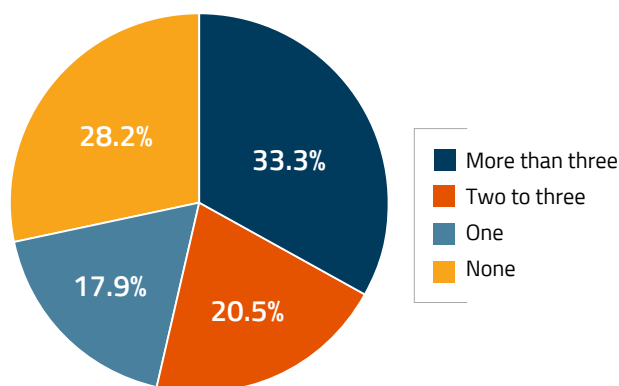
Priorities and Planning

Ten (25.6%) participating health agencies have engaged in planning or programmatic activity to address the mental health impacts of climate change. Six (15.4%) jurisdictions include preventing and preparing for the public health consequences of climate change among their health agencies' current top five priorities.

Partnerships and Collaboration

Twenty-one (53.8%) of participating agencies have a crosscutting, multi-agency initiative to address climate change (e.g. Health in All Policies, Task Force, Climate Change Commission, Resilience Initiative, U.S. Mayors' Climate Protection agreement or climate registries) within their state or territory. Eleven of these initiatives are situated within the Governor's Office, and two are located in the health agency. The remainder are situated within Departments of Environment or Natural Resources, Climate Change and Sustainable Development Council, Disaster Resiliency Work Group, State Climate Change Commission, and a University. Nineteen respondents (90.5%, N=21) are themselves, or have a representative from their agency involved with this cross-cutting initiative.

ONGOING NONPROFIT PARTNERSHIPS (N=39)

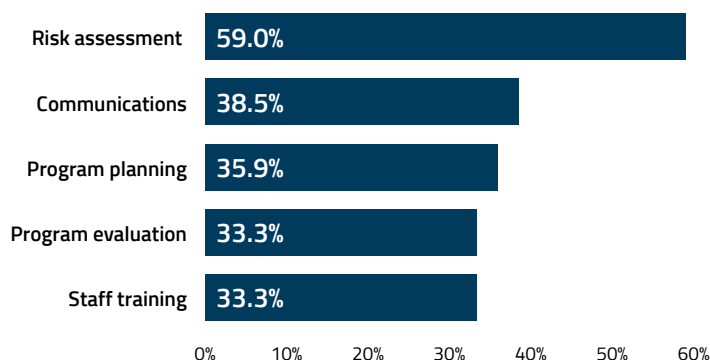


The majority of participating agencies have at least one ongoing partnership with a non-governmental/community organization that includes climate change adaptation activities. Over a third of agencies have more than three of this kind of partnership.

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Many participating agencies work with academic partners on climate change and health in a number of areas. The figure below shows the frequency of collaboration with academic partners in five topic areas. Risk assessment is the most common area of collaboration (59.0%).

TOPICS OF ACADEMIC COLLABORATION (N=39)



ASTHO Support

Thirty survey participants (76.8%, n=39) have read the ASTHO position statement on climate change. Of these, 28 (93.3%) agree that the ASTHO position statement adequately addresses climate-related impacts and the needs of State and Territorial health agencies.

Thirty-three participants indicated that they would be interested in capacity-building assistance from ASTHO to address the public health impacts of climate change for their agency. They were asked to rate their priority areas of concerns on a scale of one to ten, with one being the area of highest priority. The average ranking of each potential area for capacity-building assistance is listed in the table below.

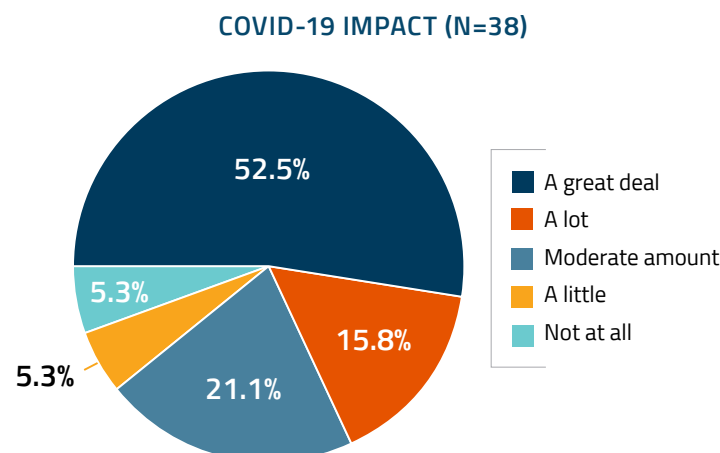
Capacity development assistance categories	Average level of priority
Direct funding	1.80
Webinars on relevant climate and health issues	4.80
Training on communicating climate change and health	5.20
Training on integrating health equity into statewide climate policy and planning	5.33
Training to conduct climate adaptation plans	5.70

COVID-19 Impact

Most participants expressed the concern that COVID-19 has impacted their agencies' abilities to conduct climate program work "a great deal" (52.5%).

To the same effect, only six respondents (16.2%, N=37) feel that they are currently working on climate-related program activities at pre-COVID-19 capacity. Most participating jurisdictions (73.3%, N=37) are concerned that COVID-19 will impact their climate change activities in through the next 1-5 years.

When asked how they thought COVID-19 might impact their climate change activities in that time, 24 of the 25 respondents expressed concern that the COVID-19 pandemic has pulled staff, funding, and attention away from climate and health projects.



Conclusion and Recommendations

Based on the survey results it is clear the majority of STHAs are performing climate and health activities. Yet, they indicate low departmental capacity including insufficient staff and funding. It appears that many STHAs have attempted to bolster capacity through partnerships with other State and Territorial agencies, and or non-governmental organizations, and academic institutions.

COVID-19 has interrupted ongoing work and may continue to do so. And very few agencies report plans to hire climate SMEs over the next year. While unforeseen public health emergencies, like COVID-19, can divert planned investments in core environmental public health programs, STHAs may consider partnerships like those described above to bridge the needs gap.

Based on the results of the survey there are opportunities for increased investments in:

- Building early warning systems for coastal flooding, droughts, wildfires, and windstorms
- Building capacity to address the mental health impacts of climate change and extreme weather events
- Program evaluation

ASTHO will continue to engage STHAs to help them address their needs and challenges related to the public health impacts of climate change and related extreme weather events. Some activities that ASTHO currently offers STHAs include a peer-based Climate Change Collaborative for sharing of best practices and networking; a peer-to-peer fellowship program that links CDC BRACE funded states with currently unfunded states; training opportunities; and a direct line of communication between STHAs and CDC, and other federal partners, as well as NGO partners.

Furthermore, ASTHO made the following recommendations in the Climate and Extreme Weather Events Health Policy Statement.

- Ensure sufficient and sustained federal funding, technical assistance, and training.
- Support efforts to conduct climate adaptation and vulnerability assessments and planning activities.
- Expand state and territorial health agency monitoring and surveillance capacity.
- Incorporate assessment and evaluation strategies.
- Build public awareness, messaging, and education—including effective risk communication—to increase the public's will and support for climate and health programs.
- Promote environmental stewardship.
- Strengthen cross-sector partnerships.