



Lessons for Human Services: Perspectives of Program Participants on Extreme Weather and Environmental Hazards

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KEY POINTS

Human services programs work to strengthen low-income families and individuals by fostering their economic security and mobility, family stability, and health and wellbeing. The effects of extreme weather and other hazards can make meeting these goals substantially more difficult for both programs and the participants they serve. This study is intended to inform human services programs and staff in responding to the needs of program participants as they and their families grapple with these risks.

This brief summarizes results of interviews and focus groups with participants in human services programs about how they view extreme weather and other environmental hazards and their effects on families and communities. Participants discussed acute hazards such as flooding, as well as more chronic problems such as widespread trash, heat, poor air and water quality, and lead. Key findings are:

- Human services participants were well aware of the effects of extreme weather and environmental risks, and their unequal vulnerability to them. They were particularly concerned about effects on children.
 - Program participants generally had little knowledge of resources from human services programs, partner agencies, or other organizations that might help them address the hazards they face. They perceived high barriers to accessing what was available. Some reported giving up before gaining access.
 - In general, participants did not distinguish services under the U.S. Department of Health and Human Services (HHS) from those provided by other governmental or non-governmental programs. Many discussed services (e.g., affordable housing, food assistance, and local trash pickup) as though they were provided by a single entity.
 - Participants made recommendations for human services programs such as increasing in-person assistance and centralizing resources in a variety of formats to allow them to learn more and to access assistance more readily.
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BACKGROUND

People with low incomes—including those participating in human services programs—are often the first to experience extreme weather and other environmental hazards.¹ These exposures are also often more severe for them and their communities than for people in better economic conditions. They typically have less protection from acute disasters like floods and hurricanes, and chronic hazards like heat, and air and water pollution. Low-income people in general are more vulnerable than those at higher income to financial shocks, economic instability, and dislocation attributable to extreme weather and other hazards.² They can experience interruptions to work and benefits, damage to homes and other property, increased costs for energy and other essential needs, family and community upheaval, and increased risks to health and wellbeing.

Human services programs work to protect and advance economic security and mobility, and the stability and wellbeing of low-income families and individuals. They do so through income supports; disaster relief; workforce development; child care and early childhood education; family, elder, and youth programs; and nutrition assistance, among other efforts. The effects of extreme weather and other hazards can make it more difficult for programs to accomplish their key goals. Mitigation approaches might include educating staff and participants on strategies to lessen risk; helping to make opportunities such as weatherization, utility assistance, and employment more available; and collaborating with other agencies and organizations that specialize in adaptation and building resilience to extreme weather and other environmental risks.

We conducted this exploratory study to hear from participants in human services programs themselves about the hazards they and their communities experience and what they thought would be most useful to address them moving forward. The study contributes to the otherwise limited research on perspectives of participants in human services and other public benefits programs about environmental and extreme weather hazards that they and their communities experience. The study does not attempt to identify the participants' perceptions of the causes of environmental hazards and extreme weather events.

The study sought the perspectives of participants in human services programs, including those funded by HHS, about:

- (1) the environmental and extreme weather exposures they and their communities face³
- (2) how they view these exposures
- (3) resources they can access or are aware of to mitigate or adapt to the hazards they face
- (4) their suggestions of additional resources and strategies useful to address these issues.

¹ See, among others, Kathleen Tierney (2014), *The Social Roots of Risk: Producing Disasters, Promoting Resilience*. Redwood City: Stanford University Press. <https://doi.org/10.1515/9780804791403>; and Lara Cushing, Rachel Morello-Frosch, Madeline Wander, and Manuel Pastor (2015), "The Haves, the Have-Nots, and the Health of Everyone: The Relationship between Social Inequality and Environmental Quality." *American Journal of Public Health* 36(1):193-209.

² U.S. Department of the Treasury (2023), *The Impact of Climate Change on American Household Finances*. https://home.treasury.gov/system/files/136/Climate_Change_Household_Finances.pdf

³ The study did not attempt to identify the scale of the extreme weather events or environmental hazards cited or the participants' perceptions of the scale.

METHODS

This qualitative study used a community-based participatory research approach—the team designed the study in consultation with a three-person community advisory board (CAB). The study’s CAB members had lived experience participating in human services programs, have themselves experienced extreme weather or environmental risks, and are also people of color. The CAB provided input and consultation at several key stages, including study design, interpretation of study results, and dissemination planning.

Community Advisory Board Members

Caroline Ano. Los Angeles, CA

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The research team conducted 45-minute virtual interviews and 90-minute in-person focus groups with 41 people who have participated in a range of human services programs. They included parents and other caregivers, older adults, and young adults. We spoke with people participating in programs funded by the HHS Administration for Children and Families, as well as participants with Community Action Agencies, Temporary Assistance for Needy Families (TANF), the Supplemental Nutrition Assistance Program (SNAP), and other public-benefit programs such as Medicaid and workforce development. We sought participation from adults (18 and over) comfortable speaking English and living in different regions of the country to reflect a mix of environmental contexts and extreme weather exposures. We conducted interviews with four frontline staff at one community organization who had also previously been program participants. The interviews and focus groups were conducted in April through August 2024.

The research team coded the transcribed data deductively according to the study questions and established themes, as well as inductively to identify emerging topics and themes. The CAB reviewed the findings and discussed case-specific and cross-cutting themes, gaps, and findings of particular interest or importance with the research team and suggested final products and dissemination approaches. The project concluded in September 2024. The Appendix offers more detail on the methods and sample.

There are a number of limitations to the study associated with its exploratory nature and relatively small sample size. The modest convenience sample limits generalizability of findings to specific geography, population, or program characteristics. The sample size also precludes systematic analyses of findings related to specific programs or population sub-groups.

Of the 41 respondents who participated in the study, 23 did so through virtual interviews and 18 through in-person focus groups. Interview respondents lived in a range of locations across the country, representing both urban and rural areas (see Table A-1 in the Appendix). The research team convened in-person focus groups with program participants in Washington, DC, and Seattle, Washington, hosted by local community action agencies. The majority of study respondents identified as Black or African American, with the rest identifying as Hispanic, Native American, White, mixed race, and Asian (see Table A-2 in the Appendix). Participants were disproportionately older and female. About half of participants reported a household income under \$20,000, and about two-thirds were caregivers for others.

FINDINGS

Participants identified several top extreme weather and environmental vulnerabilities for their families and communities, with a particular focus on hazards that most affected children. These included area trash and dumping, flooding, heat, and related risks. They expressed concern that low-income people were especially

exposed to these threats. Many indicated they did not know which agencies or organizations, if any, could help them with the environmental and extreme weather-related problems they faced. Participants indicated that government programs such as disaster assistance, public economic support programs, or sanitation services generally did not provide adequate support or protections. The participants we spoke with offered considerations for federal, state, and local human services programs and others to help them reduce their vulnerability and mitigate the effects of the risks they, their families, and communities faced.

Respondents identified several ways extreme weather and environmental hazards affected their families and communities.

The top issues participants identified were trash and garbage (including illegal dumping from outside the neighborhood), as well as flooding, often in conjunction.⁴ For example, many participants in different regions across the country described the common problem of trash spreading around their community after significant rain or flooding. Other key exposures were air pollution and poor air quality, water pollution, heat and seasonal temperature extremes, and lead. Other concerns—*noted but less frequently discussed*—included vermin infestation (e.g., rats and cockroaches), and wildfires and wildfire smoke that worsen existing health issues such as asthma and other respiratory conditions. Further, some cited as a problem the high cost of energy and clean water, which can exacerbate environmental risks and, research shows, lead lower income households to cut back spending on other necessities such as food.⁵

Trash and garbage. Trash and garbage in participants' neighborhoods were the most commonly cited environmental problem. Trash and garbage—often dumped by others from outside the community—was much more than an inconvenience. It was viewed not just as unsightly and disrespectful, but also pervasive and dangerous, especially for children. Respondents in both rural and urban areas identified the dumping of trash and garbage as a major problem with negative effects on residents' physical and mental health and child and family wellbeing more broadly. In particular, respondents mentioned dangerous objects such as broken glass, other sharp items, food waste, and illegal

With the trash, there's no telling what you'll find. We're an impoverished neighborhood, we have a fence around our house, whatever trash [there is] flows that way. Anything from beer cans, glass, trash, the kids will be the ones to pick it up first.
John, VA

It's the wild-wild west in that homes are just unauthorized junk yards because you pay per bag for trash [here] so when you're significantly in poverty or transportation deficient in a rural area [and therefore can't remove the trash], it's a [disaster]. There aren't even words to describe the environmental impacts to groundwater, pollution, runoff. *Lyn, VT*

dumping of waste from manufacturing and construction. They also cited household trash inconsistently picked up by garbage collectors, inadequate availability of public trash receptacles, and challenges for residents transporting trash to the dump—especially those without access to a personal vehicle. Multiple participants lived in jurisdictions that require payment for household trash removal (“pay per bag”) or the

⁴ The word “garbage” typically denotes organic matter, “trash” denotes inorganic matter, and “junk” typically denotes large-sized trash. Participants often appeared to use the words trash and garbage interchangeably. We use specific terms to the extent they reflect our understanding of their comments and use both—or “trash”—when we cannot clearly delineate between them or the difference is not important.

⁵ JM Doremus, Jacqz, I., and Johnston, S. 2022. “Sweating the energy bill: Extreme weather, poor households, and the energy spending gap.” *Journal of Environmental Economics and Management*. Vol. 112, March 2022. <https://www.sciencedirect.com/science/article/abs/pii/S0095069622000018>

capacity to haul it oneself to a dump. Both requirements were seen as difficult for families with limited income or lacking a reliable vehicle. Trash and illegal dumping may be commonly viewed as a local concern affecting specific neighborhoods or communities. However, the prevalence of the issue across the communities in this study, and some limited research, as well as anecdotal evidence, indicate that it may be a substantial problem—if an under-appreciated one—for low-income individuals, families, and communities more broadly.⁶

Flooding. Flooding was the second most-discussed issue and often linked to trash and garbage. For example, heavy rains wash trash throughout neighborhoods or into bodies of water, or unearth larger pieces of junk previously dumped or discarded. Participants in rural areas also cited flooding as a problem for water quality, with farm runoff soaking pollutants into groundwater (and therefore into well water for drinking), as well as washing into nearby lakes and streams. Participants in more densely populated areas cited floods and heavy rains circulating pollutants from industrial facilities into water systems. Heavy rains, chronic and nuisance flooding, and major flooding from extreme weather events sometimes prevented families from being able to go to work or school. One participant said her children’s school was by a river and periodically closed due to flooding. Flooding was cited as harming food production in rural areas, and also preventing food and other products from being delivered to stores. Backed-up storm drains also worsened flooding. A few participants described

In the area I’m in there’s lots of flooding – my road will get closed off because of flooding. My mom lives next door, sometimes I have to call out of work because she can’t get out on the road because it’s flooded so she [also] has to get off work ... My son had to miss school because the bus driver couldn’t get in because of flooding.
Lucy, VA

having mold in their homes because they were located in flood-prone areas, particularly challenging for households who cannot afford mold remediation.

Air pollution and air quality. Participants cited air pollution and other air quality problems due to local traffic and proximity to transportation routes, industrial activity, burning of trash, and wildfire smoke. Some respondents noted aggravation of respiratory conditions and asthma due to poor air quality, and the need to keep children, in particular, indoors on days with especially poor air quality.

Smog always happens in the mornings, especially closer to the winter. It’s a very icky feeling. You’re breathing direct carbon monoxide, which is bad for your health.
Panda, CA

Water pollution and water quality. Water quality was a substantial source of concern, often intertwined with other problems such as trash, flooding, pollution and contaminant runoff, lead, and heat. One interviewee was most concerned about water contamination from lead pipes. Others believed that the quality of tap water or well water was unsafe, judging from the look, taste, or smell. One participant noted that many rural households rely on well water, which may not always be suitable for drinking and can be polluted by flooding. Others noted that trash and polluted runoff contaminated nearby water bodies, especially in coastal areas. Agricultural runoff from farms (such as applied nitrogen and other pesticides and fertilizers) were cited as a risk to water resources. One mother in Vermont stated that high temperatures resulted in bacteria growth that made the local river near her home unsafe for swimming during heat waves. Her family did not have air conditioning and she

Recently, our water that comes from our faucet isn’t always clear. They say it’s clear, but who drinks dark water? We have to boil water sometimes. Our water bill is so high, why do we need to boil water?
Lisa, VA

⁶ See, for example, J. Jones. 2022. “Cities With the Worst Littering Problem.” KSJBAM. <https://www.ksjbam.com/2022/02/04/cities-with-the-worst-littering-problem/>. There appears to be little peer-reviewed research to date on this topic looking across geographies.

described the local river as their only way to cool down during hot months. Several of the people we spoke with mentioned boil orders for drinking water because it was unsafe. One participant said she needed to drink only bottled water on a regular basis. Others said they could not afford bottled water.

Extreme heat. Extreme heat was described as a key issue because of associated health impacts such as dehydration and aggravation of existing health conditions. Extreme heat drove up the costs of energy bills for air conditioning for those that had it. Many participants also discussed how—despite high temperatures—they avoided using air conditioning because the air conditioning units in their residences were old, poorly maintained, didn't work properly, or broke frequently. Further, heat required children and other people particularly vulnerable to its effects to stay inside, reducing their quality of life.

Additional environmental concerns included lead pipes and their impact on water quality and health, as noted above, and lead paint in residences and its impact on indoor safety and health for young children. Participants also highlighted housing and neighborhood sanitation problems such as rats or cockroaches, which were often discussed in conjunction with the trash and dumping that attract the vermin. High temperatures and more active precipitation patterns were also associated with more mosquitos and other insects. Finally, participants observed that households in rural areas have less access to services that could alleviate some problems, such as public sewage and water, transportation, and publicly provided sanitation services or convenient trash disposal.

Some hazards were seen as particularly risky for children, with potential long-term effects.

When asked about implications for children, parents and caregivers indicated they were deeply concerned about their wellbeing. Children were understood to be particularly susceptible to extreme weather and

Flooding, it's been raining so much. Sometimes it does affect my son—he goes out in the rain, but when it floods, all the trash rises. It floats down. You never know what's in the water that kids can touch or [when they] play in the puddle. Kris, D.C.

environmental hazards due to their small size and physical and emotional vulnerability, as well as their curiosity and ignorance about risks.

Participants indicated concern about children of all ages, but in particular those in early and middle childhood. Some parents also expressed sorrow about the future they felt hazards were creating for their children and others.

Trash and garbage were described as a common safety and health issue for children who touch it or are otherwise exposed. Participants described this as a particular concern for children between the ages of about 3 and 7, who are no longer small enough to be held by adults or under the close eye of caregivers but are often too young to understand they should not play in or near trash or garbage outdoors.

Flooding exacerbated these exposures. Rain and flood waters circulated trash around residences and neighborhoods, hid hazards, and surfaced new ones for children, especially due to the combination of unsafe substances in the environment and heavy rains or floodwaters. In addition, some participants reported that recent extreme rainfall and severe flooding made children afraid and caused concern for their caregivers.

I have epilepsy and the kids have eczema. With my epilepsy, I can't get too hot. That's one my doctor told me, "don't get too hot." With the sun beaming, it's very frustrating. I can't afford to put trees behind the house. It's beaming right on me. Margaret, VT

With the flooding, my kids are scared, they thought we were going to get washed away – that sticks with you. Evelyn, VT

Participants were aware that poor air quality from a number of sources could have long-lasting effects for kids. Those located in the western United States noted air quality problems from wildfire smoke, forcing parents and caregivers to keep children indoors. Poor air quality resulting from burning trash was highlighted in rural areas.

Participants also understood that extreme heat poses particular risks to children. Children are more vulnerable to heat due to their physiology,⁷ and some interviewees mentioned related concerns about children's physical health due to extreme heat. Many participants also said that high temperatures limit children's ability to play and socialize outside.

Caregivers said they felt they must increasingly keep children indoors, which they saw as detrimental to their emotional, social, psychological, and physical development and wellbeing.

What is in the air [from the chemical plants], how is it going to affect my children? As we know from science, you're fine one day but then after 20 years you have mesothelioma. It smells like sulfur, you don't know what you're breathing.
Shimmer, LA

The lead in pipes—that's my biggest [concern], pipes. You might not see the effects now—but the effects could be dire. People are all afraid of what's to come. *JJ, OH*

Some participants identified lead in paint as a problem because smaller children can pick off or chew on paint and expose themselves to toxins. Caregivers also flagged lead pipes in older homes as a health concern for children but indicated that there was often little they could do, given their low incomes and the quality of the housing they could afford. Young children, including infants, were also understood to be particularly vulnerable to a variety of other toxins.

Finally, many respondents expressed a sense of loss for the children in their families and communities. A few compared their children's circumstances to their own growing up and believed their children would have more to be afraid of. Some saw children's opportunities as substantially limited by the changes they identified in the prevalence of environmental and weather hazards.

I'm thinking of the fear issue... my kids will have a fear of Mother Nature and somehow that bothers me. It's humans' fault, it's the fault of the generation before us...It makes you wonder and feel sad. *Lyn, VT*

Participants understood that low-income people in particular are exposed to hazards.

Human services participants we spoke with appeared to be highly aware of the effects of extreme weather and environmental risks on the day-to-day experiences and quality of life of low-income people. They were also aware of their unequal exposure to these threats compared to people with higher incomes.⁸ Participants noted that they and the people in their neighborhoods are often more exposed to environmental problems such as industrial pollution and toxic waste. Even when they had information and the desire to address specific risks, many indicated it was difficult to take action because of a lack of time or the finances needed to make changes. Many noted that the circumstances they faced, such as pervasive trash and illegal dumping, flooding, dirty water, lead, and dirty air, were not as prevalent in wealthier neighborhoods.

⁷D. Uibel, Sharma, R., Piontkowski, R., Sheffield, PE, and Clougherty, JE. 2022. "Association of ambient extreme heat with pediatric morbidity: a scoping review." *International Journal of Biometeorology*. Volume 66, pages 1683–1698, (2022).
<https://link.springer.com/article/10.1007/s00484-022-02310-5>

⁸ These perceptions are supported by research, among others, Kathleen Tierney (2014), *The Social Roots of Risk: Producing Disasters, Promoting Resilience*. Redwood City: Stanford University Press. <https://doi.org/10.1515/9780804791403>; and Lara Cushing, Rachel Morello-Frosch, Madeline Wander, and Manuel Pastor (2015), "The Haves, the Have-Nots, and the Health of Everyone: The Relationship between Social Inequality and Environmental Quality." *American Journal of Public Health* 36(1):193-209.

[The kids] have poor living conditions—the housing isn't that great, the neighborhood isn't that great. They're not having the best of lives. They're more affected by these issues because they are listened to the least, and they don't have good representation. JJ, OH

Participants described people living in poor housing conditions as particularly vulnerable, with limited resources to weatherize or otherwise maintain or improve their homes in ways that could better protect them from exposure to severe weather, poor air quality and pollution, and high temperatures. Other interviewees talked about the excessive trash in their neighborhoods as a function of lower concern for low-income communities by the government and housing providers. Many participants also noted that low-income households are less likely to have the ability to move away from hazards, such as flood-prone areas or neighborhoods near polluting or industrial sites or with high levels of illegal dumping and trash.

Overall, participants identified low-income young children, older people, and people with disabilities or serious health conditions as particularly susceptible to environmental and extreme weather risks. Like young children, older people are more susceptible to the effects of heat than younger adults. Medications can also increase heat sensitivity.⁹ In addition, older people and people with disabilities or health conditions may have limited mobility and access to resources during disasters or other events such as extreme heat that can require them to evacuate or temporarily relocate. Participants also

Poverty is so prevalent. I don't care about flooding because I'm hungry. Environmental issues are pushed aside. Lucy, VA

When you're living day to day—sometimes, you can't think of the future because you only have today. So even if you want to help and do things differently, you just can't. Bey, VT

noted that people with mental health conditions or substance use disorders were more vulnerable to many life stressors, including extreme weather threats such as storms and flooding that may cause relocation and other upheavals.

In general, participants described difficulties in meeting the most pressing day-to-day needs of low-income families and individuals— such as food, rent, utilities, and transportation costs—which could crowd out their ability to prioritize concerns about environmental and extreme weather risks. All participants described hazards that affected their lives. However, the effort to meet other basic daily needs limited their ability to focus on mitigating environmental issues.

Respondents experienced barriers to getting assistance.

Participants overall reflected limited knowledge of governmental or other resources addressing the extreme weather and environmental concerns they described. When we asked them if they were aware of any governmental or nongovernmental (e.g., nonprofit, civic, faith-based) programs, activities, or organizations working to address these problems, private and municipal trash services were the main entities mentioned. Participants expressed generally low satisfaction with the quality and consistency of these services, and in some cases, respondents reported that services did not exist at all for those who could not pay.

⁹ SAMHSA. 2023. *Tips for People Who Take Medication: Coping with Hot Weather*. United States Substance Abuse and Mental Health Administration. <https://store.samhsa.gov/product/tips-people-who-take-medication-coping-hot-weather/pep23-01-01-001>

Many participants did mention local, regional, and national organizations and agencies that provide more general community-based resources, supports, and services such as food assistance or workforce programs. However, they did not know whether these organizations were addressing environmental concerns and issues related to extreme weather specifically. There were exceptions, however, with a few participants citing local entities working to educate residents about environmental risks in their communities, though knowledge about them was limited.

I keep getting pamphlets in my mailbox about exhaust and the air pollution, but I don't know who is doing that. *Shimmer, LA*

Many participants described the resources and supports that are available through various human services programs as fractured and indicated that people do not have a clear sense of what specific opportunities or supports are available across different programs and offices. Most participants did not clearly distinguish between the different programs in which they participated, and instead discussed “government” or other community programs generally. Most participants said that it is very difficult to keep track of and navigate what is available. This included information such as the availability of resources after a disaster or to assist in addressing extreme weather and other environmental exposures. It was notable that no participants

mentioned availability or use of 211, the national network of human services and health hotlines run by local nonprofit United Way organizations.

With the flooding...there's a lot of things you can't use Food Stamps for, even paper plates. We were bathing on the steps outside with rain water because there was no water. Even though there's natural disasters, they're not like “Here, we're going to give you a stipend”. *Evelyn, VT*

Some participants said that better targeted and more easily available assistance could help low-income people prepare for and recover from the hazards they are exposed to. They noted the need to make weatherization and other improvements to their homes to make them safer and more secure. They also described the need for more flexible immediate funding that could be used for necessities during emergencies. For example, one participant described a catastrophic flood that took out her family's power and water for weeks. The financial assistance she had access to, in this case SNAP, did not allow for purchase of some necessities such as paper plates, which were

useful because she was unable to wash dishes. Many low-income families rely particularly on SNAP, given the limited reach of TANF and the fact that funds from the Federal Emergency Management Agency are often not immediately or widely available after an emergency, even for those who qualify for them.¹⁰

Participants also noted the value of supports to assist people to move away from high-risk areas and assistance to reduce their energy bills and make their homes more resilient to storms and other hazards.

Finally, participants expressed a general desire to increase their understanding about how environmental and extreme-weather threats affect an array of aspects of their lives, including their families' health and well-being. They were especially interested in whether any of the human services programs and activities in which they already participate could help provide this information, improving the ease and efficiency with which they could gain access to essential resources. Critically,

I think a lot of people don't really know or understand how things are interrelated. I think it's an issue of getting people to look at things from a different lens and understand that the environment can affect almost everything we do. *Zoey, D.C.*

¹⁰ FEMA. 2020. “National Advisory Council Report to the FEMA Administrator.” Federal Emergency Management Agency. https://www.fema.gov/sites/default/files/documents/fema_nac-report_11-2020.pdf. Also, Aditi Shrivastava and Gina Azito Thompson. 2022. “TANF Cash Assistance Should Reach Millions More Families to Lessen Hardship.” Washington, DC: Center on Budget and Policy Priorities. <https://www.cbpp.org/research/family-income-support/cash-assistance-should-reach-millions-more-families>

participants wished for information about concrete resources that could help them, especially to benefit their children. For example, multiple participants said they would like to learn more about how extreme heat can affect children’s development and behavior, and ways that both caregivers and program providers could mitigate this threat.

Participants suggested considerations for human services programs to help participants, families, and communities manage extreme weather and environmental risks.

If I could get online [to] one webpage that had everything really easy: “Hey, are you in a disaster, you have lead? Do you need these things? Click here.” They could send you what you need. But there’s nothing like that. You don’t know who to call locally. We were floundering around [after the flood], and a lot of our local offices were closed—maybe there’s more resources than I know but I don’t know how to access them. Evelyn, VT

Participants suggested approaches for government and nonprofit human services programs and community partners to help address the extreme weather and environmental challenges they identified. As participants generally did not distinguish services provided by different types of agencies, they did not specify whether these resources should be provided by human services agencies, by partner organizations, or by others such as disaster assistance. Their comments, however, underlined the value of human services collaborations with other entities, many of which may not be well-attuned to the specific needs of low-income people, but can serve the broad human services goals of supporting participants’ economic security and family stability and wellbeing. These partnerships could allow for more efficient identification of existing useful resources and the development of new resources tailored to the needs of participants and their families and communities.

Resources for different populations and contexts. The majority of participants described a need for basic “101” introductory materials in different formats to help program participants to 1) understand what environmental and extreme weather risks are and how they can affect them, their families, and communities; 2) take action to lessen their exposures; and 3) find resources to help them. Most of the people we spoke with emphasized the need for tailored materials and supports for different populations. They stressed the importance of considering different literacy levels, life stages, and cultural backgrounds.

Overall, most participants had limited knowledge about the resources and services already available through human services programs or other sources. Participants recommended more robust and expansive communication about what is *already* available, including through strategies to reach different populations across different formats and media platforms. This includes print materials such as 1-pagers, tipsheets, flyers, infographics, and brochures; social media (TikTok, Facebook, Instagram); and videos available on the web, among other approaches.

Some also noted that learning opportunities can be tailored for children and young adults to connect with their other interests, and that young people often draw in and educate their parents and other elders. One young adult participating in a study focus group described a transformational program she participated in as a high schooler through her local Community Action Agency that paired environmental education and community clean-up activities with construction and art training. Through the program, she and other teens collected

What would be more helpful is an actual tipsheet, of “here’s how you can do something, here’s what you can do.” People have enough on their minds that doing research is not a priority. But to give them a tipsheet like, “don’t take your kids out during this type of day or make sure you’re pouring water from water bottles”—things like that. Mia, NM

construction and lumber waste from their neighborhood and worked with an artist to learn construction skills and build a large public art installation with the collected materials. She said the program was deeply influential in spurring her to learn more about local environmental issues.

Traditional print media were seen as better for many older adults and people with higher literacy levels, while some respondents strongly preferred information on social media, video, and podcasts, which they also saw as appealing to younger adults. A few participants emphasized the need for information for people with different types of disabilities, stressing the importance of accessibility for those with auditory or visual disabilities, as well as cognitive and functional disabilities.

Web-based human services-environmental hazard resource hub. Numerous participants also identified the benefit of a web-based “one-stop shop” platform or similar digital resource hub. It could aggregate information and expedite online access to resources most important for human services participants dealing with a range of threats, with regularly updated links, phone numbers for responsive in-person assistance navigating available resources, and referrals. Participants said such a resource would be valuable during and after disasters like flooding, wildfires, or hurricanes. It could also help them address day-to-day environmental issues like trash and dumping, mold in homes, or resources to access air conditioners or fans during heat waves. They recommended that the resource hub be available online as well through a smart device application.

Individualized support. Many participants recommended greater access to individualized supports to help address the environmental and extreme weather-related challenges in their lives. This included supports such as accessible one-on-one navigators or case workers with knowledge of both environmental and extreme-weather issues, *and* human services resources. Navigators could provide connections to help such as emergency cash assistance, food assistance, assistance with relocation, as well as guidance on flexible uses of available resources, among other identified needs. Many participants said that current phone-based communication methods for specific programs are inadequate. They described hours waiting on hold, which led many people in need to give up. Most participants highlighted the importance of talking with “a real person,” especially when recovering from a disaster or other emergency event. Some participants also noted the desire to see human services staff in their communities in person, both to share information about how their programs can help participants with environmental and extreme weather-related problems, and so that providers can learn more from participants about their experiences and needs.

CONCLUSION

This brief offers perspectives from a sample of human services participants about their personal experiences with environmental and extreme weather hazards, and about how their families and communities are affected by such exposures. It offers considerations for human services agencies and providers—state, local, federal, and community—that seek to better prepare and protect program participants and other low-income community members from these risks, thus better supporting their economic security and their families’ stability and wellbeing. With low-income communities facing environmental threats such as trash and illegal dumping, flooding, storms, heat, and polluted air and water, understanding how participants themselves see these problems—and potential remedies—can help human services programs and others better address the need for improved protection, response, and recovery.

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APPENDIX: STUDY SAMPLE AND METHODS

Forty-one respondents participated in the study, 23 through interviews and 18 through in-person focus groups. The sample was one of convenience. Interview respondents lived in a range of locations across the country, representing both urban and rural areas (Table A-1). The focus groups were conducted with local residents in Washington, DC, and Seattle, Washington. Interview participants received \$50 virtual Visa gift cards and focus group participants received \$75 virtual Visa gift cards. Respondents participated in a range of human services programs, as well as other public-benefit programs such as Medicaid and workforce development. They were recruited by means of flyers and other recruitment materials shared with human services program offices at the federal, state, and local levels, including Community Action Agencies. People who expressed interest in participating in the study completed a screening interview to verify their eligibility for the study (i.e. over 18, comfortable speaking English, recent participation in human services programs).¹¹

TABLE A-1

Interviews and Focus Groups

| | Number of participants | Location | Human Services and Other Benefits Programs |
|--------------|------------------------|--|--|
| Interviews | 23 | Washington, DC (7), Vermont (7), Virginia (4), California (2), New Mexico (1), Louisiana (1), Ohio (1) | TANF, SNAP (Food Stamps), WIC, Energy Assistance, Childcare assistance, Medicaid |
| Focus Groups | 18 | Washington, DC (1 group, 9 participants), Seattle, WA (1 group, 9 participants) | Foster grandparent program, Head Start, workforce programs |
| Total | 41 | | |

Note: Four interviewees were human services program staff at the time of the interview and currently or previously program participants.

The majority of study respondents identified as Black or African American, with a plurality of identifying as other populations of color (Table A-2). Participants were relatively old and disproportionately female. About half of participants reported a household income under \$20,000, and about two-thirds were caregivers for others.

TABLE A-2

Participant Characteristics (N=41)

| Race and Ethnicity | | Household Income | |
|--------------------|------|--------------------------------------|-------|
| Black | 66% | 0 to \$10,000 | 24.4% |
| White | 7.3% | \$10,001 to 20,000 | 29.3% |
| Hispanic | 7.3% | \$20,001 to 30,000 | 9.8% |
| Native American | 7.3% | \$30,001 to 40,000 | 4.9% |
| Asian | 2.4% | \$40,001 to 50,000 | 9.8% |
| Mixed race | 7.3% | \$50,001 to 75,000 | 9.8% |
| No response | 2.4% | More than \$75,000 | 2.4% |
| | | No Response | 9.8% |
| Age | | Caregiver—Number of People Cared For | |
| 18 to 24 | 7.3% | None | 31.7% |

¹¹ Recruitment was challenging and required more time for screening than anticipated, largely due to a high number of initial responses from people who ultimately were not eligible.

| | | | |
|-------------|-------|-------------|-------|
| 25 to 34 | 14.6% | 1 | 17.1% |
| 35 to 44 | 19.5% | 2 | 14.7% |
| 45 to 64 | 29.2% | 3 | 9.8% |
| 65 to 84 | 9.8% | 4 or more | 17.1% |
| No response | 19.5% | No response | 9.8% |
| Gender | | | |
| Female | 78% | | |
| Male | 19.5 | | |
| No response | 2.4% | | |

Finally, as described in the brief, the study also relied on guidance from three Community Advisory Board members at multiple stages of the project. CAB members were paid at a rate of \$50 per hour.

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