Emergency Financial Assistance - Other	
Service Category Definition – Part A	1
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Houston EMA/HSDA Ryan White Part A Service Definition Emergency Financial Assistance – Other (Revised April 2020)		
HRSA Service Category Title:	Emergency Financial Assistance	
Local Service Category Title:	Emergency Financial Assistance - Other	
Service Category Code (RWGA use only):		
Amount Available (RWGA use only):		
Budget Type (RWGA use only):	Hybrid	
Budget Requirements or Restrictions:	Direct cash payments to clients are not permitted. It is expected that all other sources of funding in the community for emergency financial assistance will be effectively used and that any allocation of RWHAP funds for these purposes will be as the payer of last resort, and for limited amounts, uses, and periods of time. Continuous provision of an allowable service to a client must not be funded through EFA. The agency must set priorities, delineate and monitor what part of the overall allocation for emergency assistance is obligated for each subcategory. Careful monitoring of expenditures within a subcategory of "emergency assistance" is necessary to assure that planned amounts for specific services are being implemented, and to determine when reallocations may be necessary. At least 75% of the total amount of the budget must be solely allocated to the actual cost of disbursements. Maximum allowable unit cost for provision of food vouchers or and/or utility assistance to an eligible client = \$xx.00/unit	
HRSA Service Category Definition (do <u>not</u> change or alter):	Emergency Financial Assistance - Provides limited one-time or short-term payments to assist the RWHAP client with an emergent need for paying for essential utilities, housing, food (including groceries, and food vouchers), transportation, and medication. Emergency financial assistance can occur as a direct payment to an agency or through a voucher program.	
Local Service Category Definition: Target Population (age,	Emergency Financial Assistance is provided with limited frequency and for a limited period of time, with specified frequency and duration of assistance. Emergent need must be documented each time funds are used. Emergency essential living needs include food, telephone, and utilities (i.e. electricity, water, gas and all required fees) for eligible PLWH. PLWH living within the Houston Eligible Metropolitan Area	
gender, geographic, race, ethnicity, etc.):	(EMA).	

Services to be Provided:	 Emergency Financial Assistance provides funding through: Short-term payments to agencies Establishment of voucher programs Service to be provided include: Food Vouchers Utilities (gas, water, basic telephone service and electricity The agency must adhere to the following guidelines in providing these services: Assistance must be in the form of vouchers made payable individual clients or family members. Limitations on the provision of emergency assistance to eligible individuals/households should be delineated and 	
	consistently applied to all clients.	
	• Allowable support services with an \$800/year/client cap.	
Service Unit Definition(s):	A unit of service is defined as provision of food vouchers or and/or	
(HIV Services use only)	utility assistance to an eligible client.	
Financial Eligibility:	Refer to the RWPC's approved <i>Financial Eligibility for Houston EMA Services</i> .	
Client Eligibility:	PLWHA residing in the Houston EMA (prior approval required for non-EMA clients).	
Agency Requirements:	Agency must be dually awarded as HOWPA sub-recipient work closely with other service providers to minimize duplication of services and ensure that assistance is given only when no reasonable alternatives are available. It is expected that all other sources of funding in the community for emergency assistance will be effectively used and that any allocation of EFA funding for these purposes will be the payer of last resort, and for limited amounts, limited use, and limited periods of time. Additionally, agency must document ability to refer clients for food, transportation, and other needs from other service providers when client need is justified.	
Staff Requirements:	None.	
Special Requirements:	Agency must: Comply with the Houston EMA/HSDA Standards of Care and Emergency Financial Assistance service category program policies.	

FY 2022 RWPC "How to Best Meet the Need" Decision Process

Step in Process: Council		Date: 06/10/2021	
D lational	4 1 X7 XI	TC	
Recommendations:	Approved: Y: No:		ed with changes list
	Approved With Changes:	changes b	elow:
1.			
2.			
3.			
Step in Process: St	eering Committee		Date: 06/03/2021
Recommendations:	Approved: Y: No:	If approve	ed with changes list
	Approved With Changes:	changes b	elow:
1.			
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Step in Process: Quality Improvement Committee		Date: 05/18/2021	
Recommendations:	Approved: Y: No:	If approve	ed with changes list
	Approved With Changes:	changes b	-
3.		1	
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3.			
Step in Process: HTBMTN Workgroup #3		Date: 04/21/2021	
Recommendations:	Financial Eligibility:		
1.			
2.			
3.			



REPORT

December 2017

An Early Assessment of Hurricane Harvey's Impact on Vulnerable Texans in the Gulf Coast Region

THEIR VOICES AND PRIORITIES TO INFORM REBUILDING EFFORTS

Prepared by:

Liz Hamel, Bryan Wu, and Mollyann Brodie Kaiser Family Foundation

and

Shao-Chee Sim and Elena Marks Episcopal Health Foundation

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Executive Summary

In late August 2017, Hurricane Harvey pummeled the Texas Gulf Coast, dropping record amounts of rainfall and causing damage with estimates ranging as high as \$190 million.¹ In an effort to understand the needs and circumstances of vulnerable Texans affected by the hurricane, the Kaiser Family Foundation and the Episcopal Health Foundation partnered to conduct a representative survey of adults living in 24 counties along the Texas coast that were particularly hard-hit. The survey – which was conducted between two to three months after Harvey made landfall – allows for examination of the views and experiences of residents in these counties overall, as well as in four distinct geographic regions: Harris County (the county where Houston is located and the largest in terms of population); the counties surrounding Harris that are part of the same Regional Council of Governments ("Outside Harris"); the three counties (Orange, Jefferson, and Hardin) that make up the "Golden Triangle" area east of Houston where the cities of Beaumont, Orange, and Port Arthur are located; and several counties to the southwest of Houston that make up the coastal area including Corpus Christi and Rockport ("Coastal"). In addition to the survey, the partners conducted three focus groups in Houston and two in Beaumont with low- and middle-income residents who were affected by the storm.

Key findings from the survey include:

Two-thirds of residents of the 24 hard-hit Texas counties surveyed report being affected by Hurricane Harvey in terms of damage to their homes or vehicles, employment disruption, or income loss. Four in ten sustained damage to their home, nearly half experienced an interruption or loss of employment or some other loss of income, and one in five had a vehicle that was damaged. One in nine remain displaced from their homes at the time of the survey.

Effects of the hurricane were unevenly distributed by geography and demographics. Black and Hispanic residents, those with lower incomes, and those living in the Golden Triangle and Coastal areas were more likely to be affected by property damage or income loss than other residents.

Health and mental health issues affected a smaller share of the population, but some residents report struggling to get needed health care, and focus groups suggest some may have unmet mental health needs. One in six affected residents say someone in their household has a health condition that is new or worse as a result of Harvey, and nearly two in ten feel that their own mental health is worse because of the storm. Among those with a new or worsened health condition, six in ten say they have skipped or postponed needed medical or dental care, cut back on prescriptions, or had problems getting mental health care since the storm.

About half of those who have applied for disaster assistance from FEMA or the SBA say their application is still pending or has been denied, and many of those who were denied say they were not told the reason for the denial and were not given information on how to resubmit their application. About a quarter of those whose homes were damaged say they had any flood insurance. Four in ten of those who were affected say they expect none of their financial losses to be covered by insurance or other assistance.

The financial situations of most people affected by Harvey are tenuous. About half of affected residents say they have no savings whatsoever, and another quarter say that if they lost their job or other source of income, their savings would be exhausted in less than 6 months.

Nearly half of affected residents say they are not getting the help they need to recover from the hurricane. Particular areas that stand out where residents say they need more help include applying for disaster assistance and repairing damage to their homes.

Local, county, and state governments receive high marks from residents for their response to Hurricane Harvey so far. Residents are more mixed in their views of how the U.S. Congress has responded, **and responses tilt negative when it comes to President Trump's response.** Four in ten affected residents are not confident relief funds will benefit those most in need.

For the community overall, including for affected residents, the top priorities seen for the recovery focus on basic needs, including financial assistance and housing. Top priorities are getting financial assistance to those who need it, rebuilding destroyed homes, and making more affordable permanent and temporary housing available.

Conclusion

Overall, the survey and focus group results provide an early snapshot of the biggest challenges facing vulnerable Texas Gulf Coast residents three months after Hurricane Harvey cut its wide swath across the region. With about half of affected individuals saying they are not getting the help they need to recover from the storm, residents prioritize basic needs like repairing damaged homes, help finding temporary and permanent shelter, and financial assistance to help affected individuals get back on their feet. The results also suggest that there is ongoing confusion about the different ways to get financial assistance, and that many affected residents could benefit from navigators or other resources to help with the application process. Finally, these results demonstrate that lower-income individuals, Black and Hispanic residents, and those living in the Golden Triangle area were particularly hard-hit by the effects of Harvey and continue to lag in the recovery, suggesting that organizations focused on recovery should keep a focus on these communities as they move forward from short-term to long-term recovery efforts.

PUBLIC COMMENT – AS OF 04-15-20

From: Steven Vargas

This is something I was thinking an emergency response fund could address and help alleviate.

I hope to be proven wrong, but I don't think HOPWA's STRUMA or TBRA programs would be able to assist in such cases.

Back in in 2006-2008, the Ryan White Program did fund temporary stays in motels for those returning to society from incarceration. This made it easier to assist with accessing medical care and more stable housing. At the time, PC members thought HOPWA would be able to do something similar and supplant those funds and recreate something similar.

I see similar functions for such funds for:

1. PWH returning from incarceration,

2. PWH needing temporary stay away from home due to something like COVID, whether the PWH needs isolating or need to be somewhere away from home where someone in their home has COVID or something similar

3. PWH needing a temporary stay if home is unlivable due to a fire or other disaster (hurricane, tornado, flood, infestation)

I have worked at two Houston ASOs and both have had to fund such stays for PWH during my tenure with them. Sometimes the agency had to use general funds to do so to address the need in a timely and useful fashion.

Coronavirus Eviction Rules Don't Always Help People in Motels

Stateline Article April 15, 2020



A man stands outside of his Reno, Nevada, motel room before the pandemic. Many families and individuals living in extended-stay motels are facing eviction during the pandemic. John Locher/The Associated Press

For the past few months, Stefanie Craft, her five kids and two pets, a cat and a dog, have been camped out in the Economy Inn and Suites in North Charleston, South Carolina. It wasn't her first choice: Black mold crawling up the walls of their rental house forced her hand.

Still, it's home, for now, so they're riding out the pandemic in one room with a "sink-sized kitchen."

Now Craft, 44, who says she has always paid her \$325 weekly motel rent on time, is facing eviction. She lost her job supervising a local car wash when the coronavirus shuttered her city. A local church paid her rent this week, she said, but she's terrified about what will happen next. The motel's manager could not be reached for comment about Craft's case.

"I have no clue what I'm going to do," Craft told *Stateline* in a telephone interview. "We have nowhere to go. That's why we're here."

Most renters are protected from eviction by coronavirus emergency orders. But the new rules don't always apply to people who are paying for motel rooms, a major loophole that could affect thousands of families.

The federal eviction moratorium is limited and applies to only certain rentals, such as landlords who have federally backed mortgages. And some states adopted laws before the pandemic that don't consider motel dwellers tenants — and therefore don't apply rental protections to them should they lose their jobs.

"The question is, for families who are paying to stay in a motel, are they considered tenants? And if so, under what conditions? And if you have protection, do the motel owners know?" said Barbara Duffield, executive director of SchoolHouse Connection, a Washington, D.C.-based nonprofit that focuses on the early care and education of homeless children and young adults.

Assessing Social Equity in Disasters

Natural hazard impacts and resources allocated for risk reduction and disaster recovery are often inequitably distributed. New research is developing and applying methods to measure these inequities.



New Orleans, La., houses surrounded by debris and floodwater from Hurricane Katrina in 2005. Credit: Jerry Grayson/Helifi lms Australia PTY Ltd/Getty Images

By $\underline{\text{Eric Tate}}$ and Christopher Emrich ${m O}$ 23 February 2021

Disasters stemming from hazards like floods, wildfires, and disease often garner attention because of their extreme conditions and heavy societal impacts. Although the nature of the damage may vary, major disasters are alike in that socially vulnerable populations <u>often experience the worst</u> <u>repercussions (https://eos.org/articles/communities-of-color-are-more-vulnerable-towildfires)</u>. For example, we saw this following Hurricanes Katrina and Harvey, each of which generated widespread physical damage and outsized impacts to low-income and minority survivors.

Social vulnerability researchers seek to understand the impediments and capacities of people and communities to prepare for, respond to, and recover from extreme natural hazards. A major tool in this work is social vulnerability modeling, the use of which is expanding in large part because of <u>growing</u> <u>awareness (https://www.cnn.com/2020/08/30/opinions/hurricane-laura-hurricane-katrina-15-anniversary-climate-justice-russell/index.html) of the social equity implications of <u>disasters (https://www.npr.org/2019/03/05/688786177/how-federal-disaster-money-favors-the-rich)</u>.</u>

This modeling applies knowledge garnered from disaster case studies describing how chronic marginalization translates to disproportionate adverse outcomes to identify the most vulnerable population groups. Such populations often include those living in poverty, the very old and young, minoritized ethnic and racial groups, renters, and recent immigrants [*National Academies of Sciences, Engineering, and Medicine* (https://www.nap.edu/catalog/25381/framing-the-challenge-of-urban-flooding-in-the-united-states), 2019]. Social vulnerability modelers select demographic variables representing these groups and combine them to construct spatial indicators and indexes that enable comparisons of social vulnerability across places.

Mapping Social Vulnerability

Figure 1a is a typical map of social vulnerability across the United States at the census tract level based on the Social Vulnerability Index (SoVI) algorithm of <u>Cutter et al. (https://onlinelibrary.wiley.com/doi/abs/10.1111/1540-6237.8402002)</u> [2003]. Spatial representation of the index depicts high social vulnerability regionally in the Southwest, upper Great Plains, eastern Oklahoma, southern Texas, and southern Appalachia, among other places. With such a map, users can focus attention on select places and identify population characteristics associated with elevated vulnerabilities.

Before and After the Disaster



(https://eos.org/wpcontent/uploads/2021/02/EOS_MAR21.pdf) • Natural Hazards Have Unnatural Impacts-What More Can Science Do? (https://eos.org /features/natural-hazards-have-unnatural-impacts-whatmore-can-science-do)

 <u>Where Do People Fit into a Global Hazard</u> <u>Model? (https://eos.org/features/where-do-people-fitinto-a-global-hazard-model)</u>

 <u>Assessing Social Equity in Disasters</u> (https://eos.org/science-updates/assessing-social-equity-indisasters)

 <u>Building Resilience in Rural America</u> (https://eos.org/opinions/building-resilience-in-ruralamerica)

 <u>Human Activity Makes India's Coastlines</u> <u>More Vulnerable (https://eos.org/articles/human-activity-makes-indias-coastlines-more-vulnerable)</u>

 Long-Term Drought Harms Mental Health in Rural Communities (https://eos.org/articles/long-termdrought-harms-mental-health-in-rural-communities)

 <u>Women Are Still Not Heard in the Climate</u> <u>Policy Conversation (https://eos.org/articles/women-</u> <u>are-still-not-heard-in-the-climate-policy-conversation)</u>

 <u>Building Equity into Hazards Research</u> (https://eos.org/agu-news/building-equity-into-hazardsresearch)



(https://eos.org/wp-content/uploads/2021/02/new-social-vulnerability-map-united-states.png)

Fig. 1. (a) Social vulnerability across the United States at the census tract scale is mapped here following the Social Vulnerability Index (SoVI). Red and pink hues indicate high social vulnerability. (b) This bivariate map depicts social vulnerability (blue hues) and annualized per capita hazard losses (pink hues) for U.S. counties from 2010 to 2019. Click image for larger version.

Many current indexes in the United States and abroad are direct or conceptual offshoots of SoVI, which has been widely replicated [e.g., <u>de Loyola Hummell et al. (https://link.springer.com/article/10.1007/s13753-016-0090-9</u>), 2016]. The U.S. Centers for Disease Control and Prevention (CDC) <u>has also developed (https://www.atsdr.cdc.gov/placeandhealth/svi/index.html)</u> a commonly used social vulnerability index intended to help local officials identify communities that may need support before, during, and after disasters.

The first modeling and mapping efforts, starting around the mid-2000s, largely focused on describing spatial distributions of social vulnerability at varying geographic scales. Over time, research in this area came to emphasize spatial comparisons between social vulnerability and physical hazards [*Wood et al.* (https://doi.org/10.1007/s11069-009-9376-1), 2010], modeling population dynamics following disasters [*Myers et al.* (https://link.springer.com/article/10.1007%2Fs1111-008-0072-y), 2008], and quantifying the robustness of social vulnerability measures [*Tate* (https://doi.org/10.1007/s11069-012-0152-2), 2012].

More recent work is beginning to dissolve barriers between social vulnerability and environmental justice scholarship [*Chakraborty et al.* (https://doi.org/10.2105/AJPH.2018.304846), 2019], which has traditionally focused on root causes of exposure to pollution hazards. Another prominent new research direction involves deeper interrogation of social vulnerability drivers in specific hazard contexts and disaster phases (e.g., before, during, after). Such work has revealed that interactions among drivers are important, but existing case studies are ill suited to guiding development of new indicators [*Rufat et al.* (https://doi.org/10.1016/j.ijdrr.2015.09.013), 2015].

Advances in geostatistical analyses have enabled researchers to characterize interactions more accurately among social vulnerability and hazard outcomes. Figure 1b depicts social vulnerability and annualized per capita hazard losses for U.S. counties from 2010 to 2019, facilitating visualization of the spatial coincidence of pre-event susceptibilities and hazard impacts. Places ranked high in both dimensions may be priority locations for management interventions. Further, such analysis provides invaluable comparisons between places as well as information summarizing state and regional conditions.



(https://eos.org/wp-content/uploads/2021/02/compoundsocial-vulnerability-indicators-counties.png)

Fig. 2. Differences in population percentages between counties experiencing annual per capita losses above or below the national average from 2010 to 2019 for individual and compound social vulnerability indicators (race and poverty). Click image for larger version.

In Figure 2, we take the analysis of interactions a step further, dividing counties into two categories: those experiencing annual per capita losses above or below the national average from 2010 to 2019. The differences among individual race, ethnicity, and poverty variables between the two county groups are small. But expressing race together with poverty (poverty attenuated by race) produces quite different results: Counties with high hazard losses have higher percentages of both impoverished Black populations and impoverished white populations than counties with low hazard losses. These county differences are most pronounced for impoverished Black populations.

Our current work focuses on social vulnerability to floods using geostatistical modeling and mapping. The research directions are twofold. The first is to develop hazard-specific indicators of social vulnerability to aid in mitigation planning [*Tate et al.* (<u>https://doi.org/10.1007/s11069-020-04470-2</u>), 2021]. Because natural hazards differ in their innate characteristics (e.g., rate of onset, spatial extent), causal processes (e.g., urbanization, meteorology), and programmatic responses by government, manifestations of social vulnerability vary across hazards.

The second is to assess the degree to which socially vulnerable populations benefit from the leading disaster recovery programs [*Emrich et al.* (https://doi.org/10.1080/17477891.2019.1675578), 2020], such as the Federal Emergency Management Agency's (FEMA) Individual Assistance (https://www.fema.gov/individual-disaster-assistance) program and the U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) <u>Disaster Recovery (https://www.hudexchange.info/programs/cdbg-dr/)</u> program. Both research directions posit social vulnerability indicators as potential measures of social equity.

Social Vulnerability as a Measure of Equity

Given their focus on social marginalization and economic barriers, social vulnerability indicators are attracting growing scientific interest as measures of inequity resulting from disasters. Indeed, social vulnerability and inequity are related concepts. Social vulnerability research explores the differential susceptibilities and capacities of disaster-affected populations,

whereas social equity analyses tend to focus on population disparities in the allocation of resources for hazard mitigation and disaster recovery. Interventions with an equity focus emphasize full and equal resource access for all people with unmet disaster needs.

Yet newer studies of inequity in disaster programs have documented troubling disparities in income, race, and home ownership among those who <u>participate in flood buyout programs (https://eos.org/articles/equity-concerns-raised-in-federal-flood-property-buyouts)</u>, are <u>eligible for postdisaster loans (https://www.eenews.net/stories/1063477407</u>)</u>, receive short-term recovery assistance [*Drakes et al.* (<u>https://doi.org/10.1016/j.ijdrr.2020.102010</u>)</u>, 2021], and have <u>access to mental health services (https://www.texastribune.org/2020/08</u> /<u>25/texas-natural-disasters--mental-health/</u>)</u>. For example, a recent analysis of federal flood buyouts found racial privilege to be infused at multiple program stages and geographic scales, resulting in resources that disproportionately benefit whiter and more urban counties and neighborhoods [*Elliott et al.* (<u>https://doi.org/10.1177/2378023120905439</u>), 2020].

Social equity has been far less integrated into the considerations of public agencies for hazard and disaster management. But this situation may be beginning to shift.

Investments in disaster risk reduction are largely prioritized on the basis of hazard modeling, historical impacts, and economic risk. Social equity, meanwhile, has been far less integrated into the considerations of public agencies for hazard and disaster management. But this situation may be beginning to shift. Following the adage of "what gets measured gets managed," social equity metrics are increasingly being inserted into disaster management.

At the national level, FEMA has <u>developed options (https://www.fema.gov/news-release/20200220/fema-releases-affordability-framework-national-flood-insurance-program</u>) to increase the affordability of flood insurance [Federal Emergency Management Agency, 2018]. At the subnational scale, Puerto Rico has integrated social vulnerability into its CDBG Mitigation Action Plan, expanding its considerations of risk beyond only economic factors. At the local level, Harris County, Texas, has begun using social vulnerability indicators alongside traditional measures of flood risk to introduce equity into the prioritization of flood mitigation projects [*Harris County Flood Control District* (https://www.hcfcd.org/Portals/62/Resilience/Bond-Program/Prioritization-Framework/final_prioritization-framework-report_20190827.pdf?ver=2019-09-19-092535-743), 2019].

Unfortunately, many existing measures of disaster equity fall short. They may be unidimensional, using single indicators such as income in places where underlying vulnerability processes suggest that a multidimensional measure like racialized poverty (Figure 2) would be more valid. And criteria presumed to be objective and neutral for determining resource allocation, such as economic loss and cost-benefit ratios, prioritize asset value over social equity. For example, following the <u>2008 flooding</u> (<u>http://www.cedar-rapids.org/discover_cedar_rapids/flood_of_2008/2008_flood_facts.php</u>) in Cedar Rapids, Iowa, cost-benefit criteria supported new flood protections for the city's central business district on the east side of the Cedar River but not for vulnerable populations and workforce housing on the west side.

Furthermore, many equity measures are aspatial or ahistorical, even though the roots of marginalization may lie in systemic and spatially explicit processes that originated long ago like redlining and urban renewal. More research is thus needed to understand which measures are most suitable for which social equity analyses.

Challenges for Disaster Equity Analysis

Across studies that quantify, map, and analyze social vulnerability to natural hazards, modelers have faced recurrent measurement challenges, many of which also apply in measuring disaster equity (Table 1). The first is clearly establishing the purpose of an equity analysis by defining characteristics such as the end user and intended use, the type of hazard, and the disaster stage (i.e., mitigation, response, or recovery). Analyses using generalized indicators like the CDC Social Vulnerability Index may be appropriate for identifying broad areas of concern, whereas more detailed analyses are ideal for high-stakes decisions about budget allocations and project prioritization.

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Table 1. Major challenges in measuring social equity

Issue	Challenge for Equity Measures	Measurement Considerations
Analysis purpose	Aligning analysis with end use and users	Audience, intended intervention, hazard type, disaster phase
Equity mode	Assessing distributional versus procedural equity and individual versus compounding inequity	Measuring process equity, identifying appropriate compound metrics
Validity	Reflecting underlying processes of inequity	Connecting variable selection with vulnerability processes, choosing absolute versus relative impact measures
Scale	Linking spatial and temporal scales with underlying vulnerability processes	Data availability and acquisition costs
Robustness	Determining statistical reliability	Measurement error and sensitivity analysis

Selecting the relevant modes of equity for analysis is crucial. Is the primary interest to quantify disparities in the distribution of hazard impacts or procedural disparities in accessing resources? Is the focus on individual populations or on combinations of population characteristics? As social inequities often accrue to low-income households, analysts should consider assessing economic losses in both absolute and proportional terms.

Creating valid measures of equity requires not only statistical expertise but also a fundamental understanding of the underlying processes of social marginalization. This facilitates selection of optimal proxy indicators and their geographic scales. However, practical considerations like data availability and cost can lead to indicator selection that diverges from conceptual bases. For example, for disaster assistance received by households, an equity analysis should ideally be conducted at the household scale. Unfortunately, data describing some dimensions of inequity, like race, are rarely collected by disaster agencies, necessitating analysis using census data at larger geographic scales.

A major challenge is to develop statistically robust measures and best practices for assessing disaster equity that strengthen the foundation for policy interventions

The final major challenge is to develop statistically robust measures and best practices for assessing disaster equity that strengthen the foundation for policy interventions. Doing so may require expanding current approaches to include sensitivity analyses to assess how choices of parameters (e.g., input variables, geographic scale) in building social vulnerability indicators affect the statistical stability of resulting measures, and how these measures correlate with observed disaster impacts like dislocation, assistance eligibility, and recovery time.

The stakes for improving our understanding of relationships among hazards, vulnerability, and social equity are high, as climate disasters from flooding, drought, tropical cyclones, and wildfire have been increasing in their frequency and destruction. By definition, sustainable solutions that empower communities to resist, recover from, and adapt to these threats must be not only economically viable and environmentally sound but also socially equitable. Well-designed measures of disaster equity are an important tool for quantifying disaster disparities, which is the first step toward dismantling them.

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