



# Understanding Climate Impacts on U.S. Artisan and Maker Entrepreneurs

Research and Solutions Report



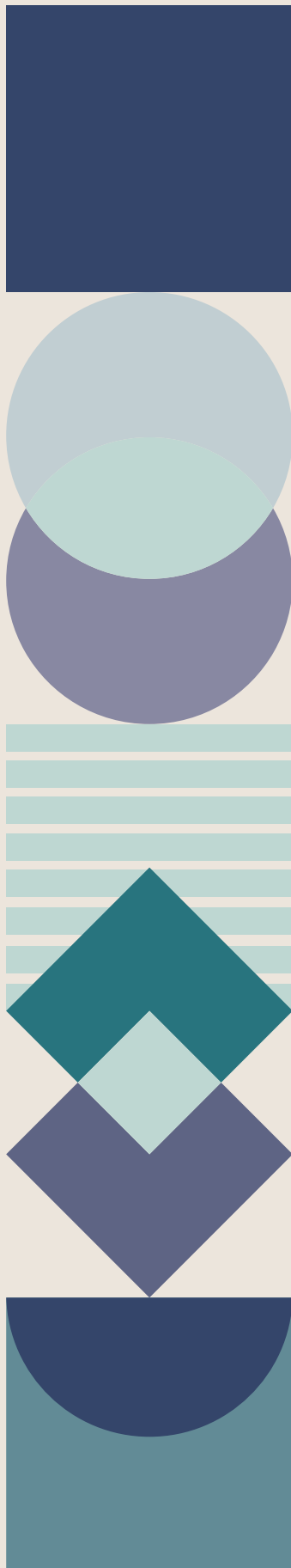
Made possible through the generous support of **Etsy**

# Contents

<b>Background</b>	<b>05</b>
<b>Executive Summary</b>	<b>06</b>
Introduction: Encompassing Artisans in Climate Discourse	08
Research Methodology	10
Literature Review	10
Artisan Survey	10
Artisan Discussions & Feedback	11
Gullah Geechee Basketweavers Case Study	11
Expert and Partner Organization Consultations	11
<b>Part I: American Craft Makers and Climate Related Disasters</b>	<b>13</b>
Artisan Susceptibility and Risks to Climate Change	14
Overlap of Work and Home Spaces	14
Competing Interests for Financial, Physical and Time Investments to Address Climate Impacts	14
Climate Justice and Disproportionate Impacts	14
Extreme Weather Events and Impacts on Makers	15
Climate Change and Extreme Weather	15
Extreme Weather Experienced by Artisans	15
Heat Events: Droughts, Wildfires and Extreme Heat	17
Storms and Related Events: Rainfall, Hurricanes and Flooding	19
Artisan Loss and Damage by Extreme Weather	21
Artisan Perceptions of Climate Impacts and Extreme Weather	22
The Climate Information Gap Faced by Artisans	23
Costs of Climate Vulnerability	24
The Changing Sweetgrass: A Case Study of the Gullah Weavers	25
Key Takeaways: Weaving a Complete Picture of Climate Impacts on Artisans	29
<b>Part II: Addressing the Climate Crisis for U.S. Artisans</b>	<b>31</b>
Resilience & Preparedness	31
Financial Measures: Preparedness Funding and Insurance	33
Disaster Recovery: Financial Resources and the Strings Attached	34
Small Business Association Disaster Loans	35
FEMA Individual Assistance	35
Obstacles to Accessing Financial Support	35
Other Forms of Financial Support	38

# Contents

Artisan Opportunities for Enacting Change	39
<b>Part III: Insights &amp; Recommendations</b>	<b>41</b>
Key Insights	41
Who is impacted?	41
How are they impacted?	41
Informed Recommendations	42
Target disaster resources to under-resourced communities that face limited access to recovery aid despite the disproportionate burden of disaster costs	42
Support the development of localized and tailored resources and information guides for artisans and maker-entrepreneurs to prepare and respond to climate change	43
Improve access to disaster recovery aid and channels of support for small, home-based businesses	43
Mitigate the cost of disaster recovery aid by establishing climate resilience funds that are directly accessible to small businesses before disaster strikes	43
Microinsurance for Artisans	44
<b>References</b>	<b>46</b>
<b>Data Tables</b>	<b>51</b>



## Introduction

Nest, a nonprofit 501(c)(3) organization, champions the responsible growth and creative engagement of the artisan and maker economy to promote greater gender equity and economic inclusion worldwide. Through programs that support artisans' well-being both locally and globally, Nest brings radical transparency and opportunities to the informal handworker sector. Nest advocates for prioritizing gender equity in investments in the global handcraft sector, ensuring women's well-being is central to these efforts. Committed to fostering a vibrant and inclusive makers movement, Nest provides essential resources and market opportunities to maker entrepreneurs facing barriers. Furthermore, Nest's scope has expanded to include other forms of handwork, such as waste picking, to spotlight and uplift underrepresented workers in the informal economy. Learn more at [buildanest.org](https://buildanest.org)

Etsy is the global marketplace for unique and creative goods that connects makers, artisans, and creative entrepreneurs to millions of buyers looking for something special. Etsy has long been committed to providing economic opportunities for makers, helping them reach tens of millions of buyers looking for unique and special items, and building a small business from the ground up. Etsy provides an extensive array of tools and services designed to assist creative entrepreneurs in initiating, running, and expanding their businesses. Etsy's impact work is grounded in its mission to Keep Commerce Human, and Etsy is committed to driving positive economic, social and ecological impact, including through initiatives like the Uplift Makers Program, run in partnership with Nest. Learn more at [etsy.com](https://etsy.com)



# Background

Climate change is one of our most pressing global challenges, affecting ecosystems, economies, and communities across the United States and worldwide. As the impacts of climate change escalate, it is increasingly crucial to understand the ramifications on all people and places.

Together, our two organizations set out to better understand both the impacts of climate change on US makers and the unique challenges that climate change presents for creative entrepreneurs. This exploration will allow gaps in policy or programmatic intervention to be defined and, once defined, allow for solutions to be explored by our two organizations but also by multilateral partners.

This report aims to catalyze action, promote dialogue, and drive policy changes that prioritize the needs of US artisans and makers. By integrating research, practical recommendations, and the voices of artisans themselves, this report serves as a foundation for collaborative efforts to build a resilient and sustainable future for this vital community.

While climate change and natural disasters are felt globally, this report is focused on the United States. A global report will be released by Nest in 2024.



## Executive Summary

Natural disasters, exacerbated by climate change, are becoming more intense, more widespread, and more damaging. According to the National Centers for Environmental Information (NOAA), the annual cost of natural disaster damages in the US has increased nearly 40% from 2013–2023 compared with the decade prior. Small artisan and maker businesses are particularly vulnerable to this negative trend. Nest has witnessed the tangible devastation wrought by these disasters among those in the Artisan Guild, hearing stories of members in our community dealing with flooded studios in New York after Hurricane Ida in 2021 and supporting makers who have lost their small businesses due to wildfires in Maui in 2023. These disasters and their impacts make one thing clear: climate change is no longer an abstract concept but a stark reality that's making its presence felt across the United States.

This report, presented through a collaborative

effort between Nest and the invaluable support of Etsy, is a comprehensive exploration of the profound impact of climate change, particularly climate-induced disasters, on the artisan and maker community. It delves deep into the heart of this issue, weaving together rigorous research, practical recommendations, and, most crucially, the voices of the artisans themselves. Our goal is not just to inform but to ignite action, foster informed dialogue, and advocate for vital policy changes that prioritize the unique needs of artisans and makers in the United States. This study unfolds through an exhaustive research process. It encompasses an in-depth literature review, a survey of 76 U.S. artisans, a compelling case study on Gullah Geechee basketweavers, and extensive consultations with experts and partner organizations. Through these efforts, Nest has identified the extraordinary vulnerabilities and opportunities that define the maker community's response to the formidable challenge of climate change.



Artisans often face substantial financial barriers to disaster resilience recovery, with the median cost of damages from climate-induced disasters among surveyed artisans being \$3,000 (range: \$0 - \$1.2 million), which poses a significant threat to the continuity of their creative enterprises. Marginalized communities, including people of color and those with lower socioeconomic status, are disproportionately affected by climate change, and these disparities are mirrored within the artisan community, where many are forced to take on debt or deplete personal savings to cover recovery costs. Artisans who work from home-based studios experience a dual vulnerability, with damage to their living spaces and workspaces during extreme weather events, often lacking access to dedicated resources for recovery. Furthermore, limited access to insurance payouts and government assistance programs, hindered by bureaucratic complexities and eligibility criteria, leaves artisans underserved in times of need. Due to their limited financial resources, many artisans find investing in climate adaptation measures challenging, making preparedness and recovery efforts an ongoing challenge.

The research findings underscore the importance of addressing artisans' high disaster recovery costs, particularly focusing on supporting marginalized communities to sustain their creative enterprises. Informed by insights revealed through this study, we recommend actionable steps to support the maker community as they address climate impacts on their creative businesses: it is crucial to tailor assistance for artisans working from home, simplify access to insurance and government aid, especially for under-resourced communities that face barriers to recovery, and establish climate resilience funds to support artisans and mitigate the post-disaster costs of climate change. Preservation of threatened cultural traditions, such as the Gullah Geechee Weavers case, should be accompanied by government support. Ensuring access to affordable raw materials and education programs, especially for marginalized groups, completes the necessary approach for artisans to adapt effectively to climate change challenges.

# Introduction: Encompassing Artisans in Climate Discourse

The National Centers for Environmental Information (NCEI) found that “[i]n 2022, the U.S. experienced 18 weather and climate disasters each incurring losses that exceeded \$1 billion” (NCEI, 2023). Temperature levels are on the upswing, there are noticeable shifts in patterns of snowfall and rainfall, and relative sea levels in coastal areas of the United States have risen by 10-12 inches from 1920-2020 (EPA, 2023). Additionally, the frequency of extreme climate events, such as hurricanes, extreme rain, wildfires, and unprecedented high temperatures, is on the rise (EPA, 2023). Etsy and Nest have witnessed firsthand the tangible impacts climate disasters have imposed on artisans and makers. Members of our maker communities have shared innumerable stories of how climate change has changed their personal and professional lives. From flooded studios and damaged inventory in New York after Hurricane Ida to the mental strain of recovery from extreme winter storms in Texas and the loss of their small businesses and homes due to the raging wildfires in California and Maui. These disasters and their impacts make clear that climate change is no longer an abstract concept but a stark reality, making its presence felt across the United States, presenting specific challenges, but also opportunities, for the creative sector.

Despite the global priority placed on understanding climate change’s social and economic effects, artisans and makers are often overlooked in formal research and support efforts, even though their distinct needs require a unique approach to building resilience and response. Artisans and makers often operate on a very small scale and are often home-based.

“

The storm delayed a lot of projects and cancelled income for other projects that were already in motion. It was difficult to emotionally reset after these events and it took me a while to be able to work again.

-Beadwork artist based in Austin, Texas

”

In fact, the 2022 Etsy Seller Census reported that “98% of US makers run their businesses from their homes” (Etsy Seller Census, 2022)<sup>1</sup>. In addition to working from home, 46% of makers use income from their crafting to cover household finances such as rent, food, and other bills (Etsy, 2023). The home-based nature of this employment, combined with its informality, makes this sector particularly vulnerable to the disruptions caused by climate change.

This report seeks to provide a comprehensive understanding of the impacts of climate change on artisans and makers in the United States while bridging the gap between research and application by providing practical insights, guidelines, and resources that can support the



community in navigating resilience initiatives in the face of climate change. In the first section of the report, *American Craft Makers and the Impacts of Climate Change*, we dive deeply into Nest and EDF’s primary research as well as a literature review to illustrate and understand the situation US-based artisans face today. We build on this information in the second part of this report, *Addressing the Climate Crisis for US Artisans*, by looking at how artisans are supported by their communities and stakeholders. We additionally detail the gaps and challenges in the current landscape for building makers’ climate resilience, preparedness, and response to extreme weather events. Finally, in Part III: *Insights and Recommendations*, we synthesize the information into actionable conclusions and recommendations that the sector can take as a whole to support and advocate for artisans as they face an uncertain future with climate change.

This report accompanies [two guidebooks for makers](#), which include actionable steps for US makers to build resilience and respond to climate disasters. Although separate documents, the guidebooks and research report aim to complement each other. This report pairs with guidance to accessing existing resources for resilience and recovery by applying research findings to inform recommended solutions, programs, and policies that can be built to create a more climate-resilient maker economy.

“

Climate change poses unique challenges for makers. Most of these craftworkers run their business out of their home, there’s this duplication of destruction: damage to one means damage to the other.

-Sinduri Soundararajan,  
Environmental Defense Fund (EDF)  
Climate Corps fellow who worked with  
Nest and Etsy on this report

”

<sup>1</sup>The 2022 Etsy Seller Census report has yet to be published, however the data analysis has been approved for public sharing. The Etsy Seller Census contains survey and data analysis conducted by Ipsos, a leading Research and Public Opinion firm, in partnership with Etsy. The survey randomly selects Etsy Sellers with an active shop in all of our core markets with the exception of Australia –United States, United Kingdom, Germany, France, Canada and India to take part in a 25 minute online survey from November 9th 2022 - November 23rd 2022. The total global sample size was 8,118. Results were weighted to represent Etsy’s global footprint and seller population parameters. The margin of error for the global survey is +/- 1.5%, but may vary per question.

# Research Methodology

The complexity of the current climate situation necessitates a thoughtful approach to researching the experiences and needs of artisans and makers in the United States. To carefully and comprehensively approach research surrounding these topics, the investigative team implemented a multi-pronged strategy to collect the necessary information, utilizing both quantitative and qualitative methodologies while simultaneously incorporating previous studies and publicly reported data from other organizations. This strategy consisted of data collection and analysis of:

- (a) a comprehensive review of existing literature on this topic,
- (b) a survey of 76 artisans to gather data on their experiences, financial impacts, and climate resilience efforts,
- (c) individual discussions and feedback with Nest makers on their climate experiences,
- (d) a case study of climate impacts on the Gullah Geechee basketweavers in the Southern United States to understand the real-life effects of climate change on maker communities, and
- (e) consultations with experts and partner organizations.

Informed by this research process, we developed a comprehensive framework of recommendations and insights to address the challenges and opportunities faced by artisans in the context of climate change. Together, the findings and recommendations from these efforts are presented in this report.

## LITERATURE REVIEW

In order to assess the current landscape of scholarship pertaining to this research, we explore existing literature in the main content areas related to this topic, including but not limited to: the impacts of climate change on artisans and the informal sector, climate resilience for artists and homeowners, and disaster financing mechanisms. For this literature review, we rely on published, peer-reviewed articles and publications from government agencies and nonprofit/community organizations operating in the artisan support and disaster recovery space to provide context to the relevant literature. The absence of research articles specifically on the impacts of climate change on the U.S artisan and maker community indicates a gap in the scholarship that we seek to fill through the creation of this report.

## ARTISAN SURVEY

In 2022, Nest began to strategically uncover the impacts of climate change on artisans by designing a survey for artisans in the United States enrolled in Nest's [Makers United](#) program (the organization's US-based program) or who were recipients of [Etsy's Emergency Relief Fund](#) (grant resources for Etsy sellers who faced a climate disaster). The survey sought to gather information on:

- Past experiences with climate change and acute climate disasters
- The financial impacts and recovery from these disasters
- Climate resilience efforts already utilized by makers
- A maker's perceptions of climate change

The survey was distributed digitally, and makers were compensated for completing the survey. In total, 76 makers completed the survey. It is worth noting that the experiences and reporting from the makers may have been different due to their personal experiences with climate disasters and recovery. All Etsy sellers who completed the survey had previously experienced an acute climate disaster, and financial damages resulted from that disaster. However, the artisans in Makers United may or may not have experienced a disaster and similarly, may or may not have encountered damages of significant monetary value. The sample size and response rate allow for an initial snapshot of the impacts of climate change on a select group of artisans and makers and, when coupled with information from other sources, paint a picture of the challenges and opportunities faced by the sector as a whole. The full quantitative results of this survey are included in data tables in this report on pages 50-54.

### **ARTISAN DISCUSSIONS + FEEDBACK**

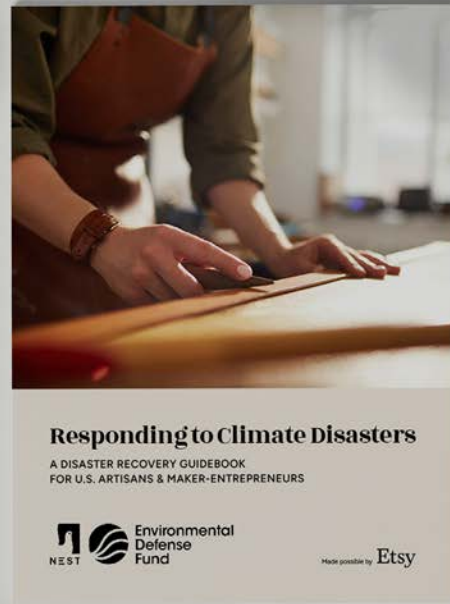
The voices of makers are particularly important for inclusion in climate research. Nest utilized multiple points of discussion and feedback to solicit the perspectives of American artisans in this work. Nest held discussions with two makers to hear about their individual experiences with climate related disasters; one based in Birmingham, Alabama, and one based in Hawaii. These semi-structured interviews allowed for emergent insights to be uncovered by two leaders in the artisan sector. Furthermore, maker feedback and experiences were solicited from four makers following the creation of the guidebooks, in order to best target the provided resources for the needs of makers.

### **GULLAH GEECHEE BASKETWEAVERS CASE STUDY**

In addition to the quantitative results from the survey, Nest completed an in-depth case study of artisan basketweavers in the Gullah Geechee community in the Southern United States to highlight a real-life example of the impacts of climate change on well-established maker communities. A semi-structured focus group of half a dozen basketweavers was held in South Carolina, facilitated by Elder Carlie Towne from the Gullah Geechee Angel Network. The weavers were asked to reflect on their previous experiences with disasters, particularly as they relate to flooding, and their perspectives on the future of climate change in their community. The findings from this case study humanize the current situation and decisions faced by makers in the United States, including the pivotal financial and land issues that impact their livelihoods.

### **EXPERT AND PARTNER ORGANIZATION CONSULTATIONS**

While the inclusion of makers and home-based workers in discussions around climate change is just beginning, experts have been focused on the topic for decades. To best integrate and utilize existing information, Nest consulted with experts from federal agencies and organizations to hear about their experiences and efforts related to home-based artisans. Through this process, the project team consulted with representatives from Etsy, the Federal Emergency Management Agency (FEMA), Small Business Administration (SBA), Craft Emergency Relief Fund (CERF+), Survivor Benefit Program (SBP), The University of Kentucky, the National Coalition for Arts Preparedness and Emergency Response (NCAPER), and the Heritage Emergency National Task Force (HENTF).



This report accompanies two guidebooks for makers, which include actionable steps for US makers to build resilience and respond to climate disasters. Although separate documents, the guidebooks and research report aim to complement each other. Access the climate guides by clicking the image above.

These efforts were combined with a review of existing literature and resources, which provided background and more widespread information to support a more comprehensive framework of recommendations and insights. Information from all sources was systematically analyzed and synthesized to provide insights and recommendations for this report.

# Part I: American Craft Makers and Climate Related Disasters

Handcraft and maker entrepreneurship are widespread in the United States, making their inclusion in climate change efforts a matter of great urgency. A report from the National League of Cities, Etsy, Recast City, and The Urban Manufacturing Alliance revealed that maker-entrepreneurs are abundant in the United States at a scale that can be challenging to define; the National Endowment for the Arts (NEA) reports over 5 million individuals employed in arts and cultural industries (NEA, 2019) whereas the Global Entrepreneurship Monitor estimates 31 million entrepreneurs in the U.S. (Apollo Technical, 2023). The estimated value of the handcraft market in North America was \$242.4 billion in 2019 (Research and Markets, 2023). In 2022, sellers on Etsy.com made a substantial impact on the U.S. economy, contributing close to \$13.5 billion (Etsy, 2023). By leveraging their creativity to create handcrafted products, these sellers effectively generated the equivalent of nearly 3.4 million jobs within the independent worker economy and generated around \$3.6 billion in income (Etsy, 2023). Handcrafters and makers are not just creators of beautiful and unique items; they are economic drivers, job creators, and sources of income. Their presence and contributions are crucial to a diverse and dynamic economy, reflecting the significance of their role in our society.

In nationwide consumer survey conducted for Nest's 2022 'The State of the Handworker Economy' report, Nest found that 75% of consumers would purchase handmade products over machine-made goods and in 2021, Etsy hosted 5.3 million creative entrepreneurs in 99.9% of U.S. counties that responded

to this demand for artisan and craftwork (Robbins et al., 2017). The rise in handcraft and maker entrepreneurship and consumer interest in artisanal craftsmanship reinforce the importance of understanding the maker community's unique challenges and needs that arise in the face of climate change.

This report seeks to provide a comprehensive understanding of the impacts of climate change on artisans and makers in the United States. In this first section of the report, *American Craft Makers and the Impacts of Climate Change*, we dive deeply into Nest primary research as well as a literature review to illustrate and understand the situation U.S.-based artisans face today.

## ARTISAN SUSCEPTIBILITY AND RISKS TO CLIMATE CHANGE

### *Overlap of Work and Home Spaces*

While studies regarding the impact of climate change on artisans are severely limited, several factors suggest that artisans and handworkers are particularly vulnerable populations when it comes to climate change precisely because they are home-based. Unlike traditional businesses, most (70%) of artisan workspaces are located in the home (Nest, 2022). Recall the Etsy research mentioned above, reinforcing Nest's findings by stating that 97% of Etsy sellers work from home (Robbins et al., 2017). This means that any infrastructural damage from extreme weather events or sea level rise, as well as health challenges resulting from air pollution and high temperatures, are doubly destructive by affecting artisans' personal well-being and their businesses simultaneously. The overlap in work and home spaces can also be challenging: homeworkers are often excluded from valuable resources dedicated exclusively to either homes or small businesses, but not both.

### *Competing Interests for Financial, Physical, and Time Investments to Address Climate Impacts*

Other commonalities across the artisan economy make craft workers particularly vulnerable to the impacts of climate change. For example, Nest found that 40% of artisans rely on supplemental income sources to support their crafting income (Nest, 2022) and Etsy's findings were starker: 97% stated they both worked from home and craft income was supplemental. Artisans working on their entrepreneurial pursuits and supplemental jobs suggest that these makers are limited in the time they have available to build their resilience to

climate change. Similarly, accessing resources becomes more challenging when juggling numerous work schedules and childcare needs. The difficulties in accessing resources are well documented in research; **however, understanding how these conditions hinder makers' ability to become proactive to climate disasters rather than reactive is not as widely known.**

For instance, most artisan respondents in Nest and Etsy's joint climate disaster survey of makers revealed they had not taken steps to reduce their risk or protect themselves from climate disasters. The most significant barrier to climate adaptation for makers, according to 57% of our respondents, is a lack of financial capital. This information from the survey and preexisting knowledge of unequal pay amongst artisans suggests that the economic inequity amongst the maker community may prevent makers from effectively adapting to climate change. Moreover, many artisans, such as basket weavers, wood carvers, natural textile and fiber artists, and ceramicists, rely on natural resources to produce their craft, which may become scarcer, more expensive, or otherwise more difficult to obtain due to the effects of climate change (Chambwera et al., 2011). Further discussion on adaptations and solutions, including the barriers to access and implementation of climate resilience efforts can be found in *Part II: Addressing the Climate Crisis for U.S. Artisans*.

### *Climate Justice and Disproportionate Impacts*

Further adding to the challenges makers face, the intersectionality between socioeconomic factors and the severity of climate change disproportionately impacts the sector. Marginalized communities, such as people of color and those of low socioeconomic status, are more impacted by climate change, with

lower resiliency and ability to adapt to its effects than other groups (EPA, 2021). The urgency of equitable climate adaptation is demonstrated through Nest research, which found that 87% of artisans in Makers United identify as female, and 52% are people of color (Nest, 2022). In addition, economic inequality persists within the artisan community, with the annual revenue of Black, Indigenous, and People of Color (BIPOC) makers averaging only \$37,391 to white makers' \$77,239 (Nest, 2022). The stark discrepancies in revenue reflect, in part, the documented unequal access to resources and time allotment needed for artisans' craft (Nest, 2022). These challenges, coupled with climate-related impacts that can strike without warning, create a host of hurdles for artisans to overcome.

The expanding artisan and maker community in the United States faces a multitude of challenges stemming from climate change, including vulnerability due to home-based workspaces, limited knowledge, resources and time for climate adaptation, dependence on climate-sensitive natural resources, and the disproportionate impact of climate change on marginalized communities within the sector. Addressing these interconnected issues is imperative to ensure the resilience and sustainability of this vital economic and cultural ecosystem in the face of climate-related threats.

## **EXTREME WEATHER EVENTS AND IMPACTS ON MAKERS**

### *Climate Change and Extreme Weather*

While climate change is a long-term process defined by cumulatively worsening trends, its impacts can be broadly split into short-term (though often recurrent) acute events and long-term trends. The former includes extreme

weather events such as hurricanes, droughts, floods, landslides, and wildfires. The latter consists of increasing mean temperatures, rising sea levels, and less predictable seasonality. Both categories pose active harm to artisans.

The driving factor behind climate change, atmospheric greenhouse gas levels, have increased steadily over the past decades due to human activity, warming the planet and altering the water cycle. Arid regions are experiencing greater evaporation, and many wet and rainy areas are experiencing more extreme rainfall events (IPCC, 2021; Dore, 2005). Climate change is causing an increase in both types of extremes— those from too little water and those from too much water – most notably, “the rise in vulnerability to drought, lengthening wildfire seasons in the Western states, and the potential for hefty rainfall becoming more common in the eastern states” (Smith, 2023).

### *Extreme Weather Experienced by Artisans*

Although the full extent of the impacts of climate change on artisans is complex and includes a wide range of unknown short and long-term outcomes, it is clear that they are already experiencing the acute effects of extreme weather events. The majority, over 75%, of respondents noted that they had experienced an extreme weather event in the five years preceding the survey. However, it's important to note that the proportion of respondents reporting disaster experiences may be somewhat skewed due to the survey's self-selection bias. Those directly encountering climate-related issues are more likely to participate in a survey, potentially inflating the reported numbers. Nevertheless, even when considering a more widespread survey of makers over a similar time frame, which pointed to approximately 21% of U.S. makers having experienced a disaster (Nest, 2023),

## Types of Climate Events Experienced by Artisans in the Past 5 Years

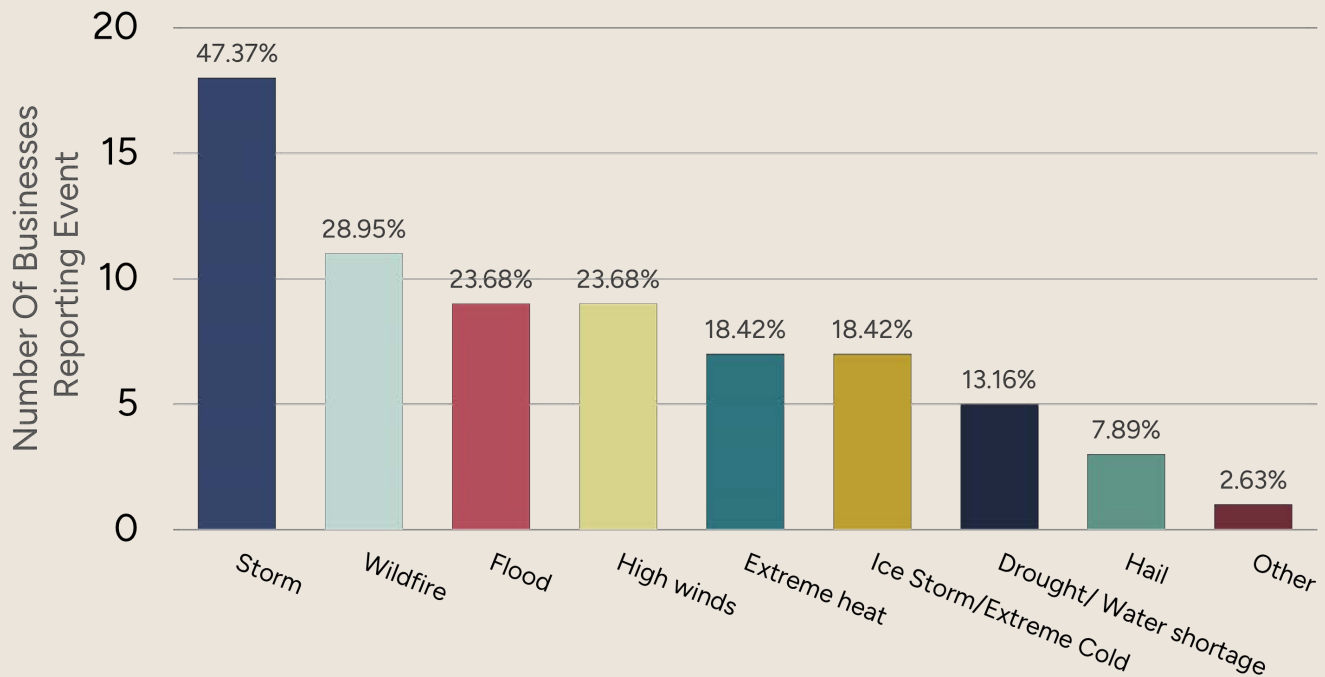


Figure 1

it is evident that climate change is taking a toll on the artisan community. As climate change continues to worsen year-over-year (NOAA, 2022), these findings underscore the urgent need to address climate change and its consequences to safeguard the well-being and livelihoods of artisans.

For artisans who have experienced an extreme weather event, the type of disaster experienced is highly regionally specific, depending on the city and state of the respondent. The most frequently reported response experienced by the survey respondents was broadly storms (n = 18, 47%), followed by wildfires (n = 11, 28%), and high winds or floods (n = 9, 23%). Other extreme weather events reported included extreme heat (n = 7, 18%), ice storms or extreme cold (n = 7, 18%), drought or water shortages (n = 5, 13%), and hail (n = 3, 7%). As the makers'

experiences depend on the type of extreme weather event, the most significant event types will be later detailed and supported with additional information (figure 1).

No matter their previous experience, the interplay of climate-induced weather events and crafting weighs heavily on the minds of artisans, as evidenced by the fact that 81% of artisan respondents believe extreme weather events are more frequent and severe. This trend is upheld regardless of previous disaster experience, with no statistically significant difference found between those who have experienced a climate event and those who have not. Moreover, of this population of makers, 81% worry about extreme weather and the ramifications climate change may have on their businesses (figure 2).



## Level of Agreement: I worry about the effects of climate change or extreme weather events on my business

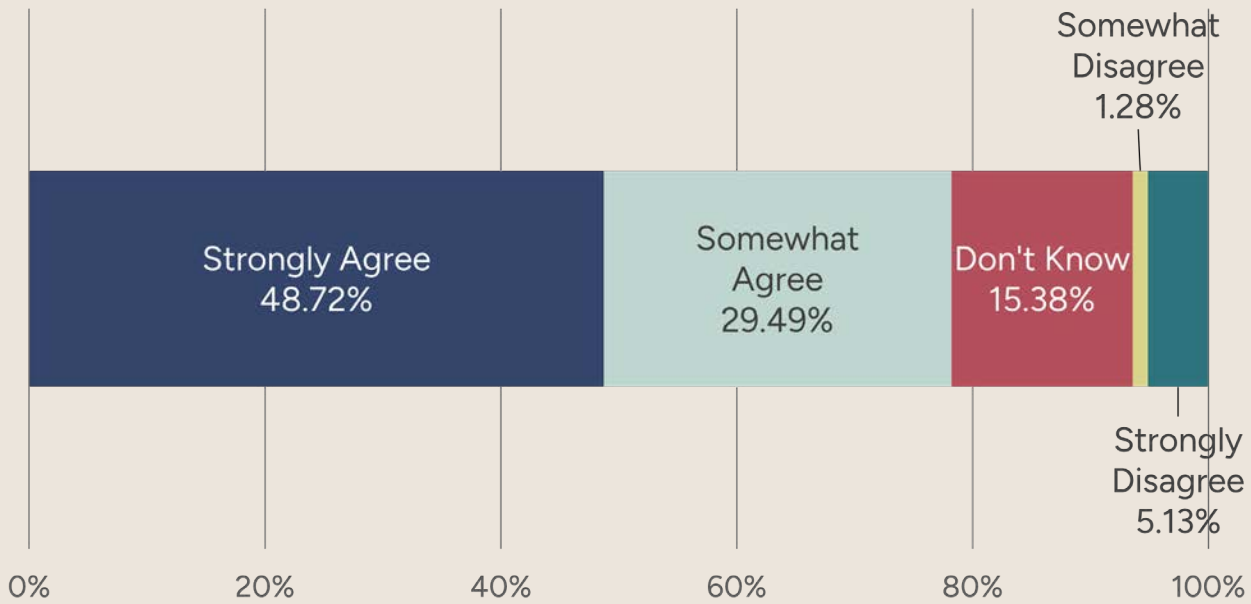


Figure 2: Most American Craft Entrepreneurs Worry About the Impacts of Climate Change

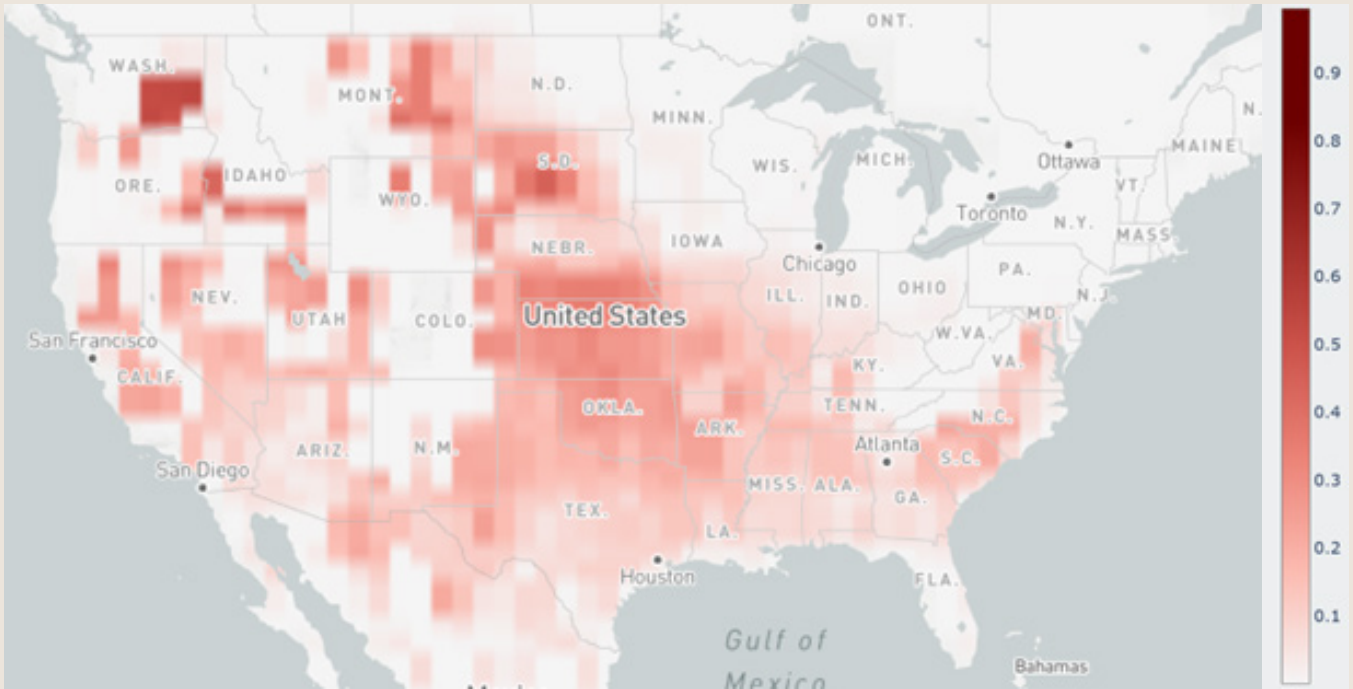
### Heat Events: Droughts, Wildfires, and Extreme Heat

Of those artisans surveyed, 61% reported acute heat-related events, including droughts, wildfires, and extreme heat. These makers were predominantly located in California. The median cost of these types of disasters was reported to be \$175,000 greater than the median cost of damages overall, making it the most costly category of disaster experienced. The most frequently reported types of damages were to materials (33%) and the workplace (28%), and oftentimes wildfires are cited as causing a total loss of home and business. What's more, impacts on American artisans from weather events tied to extreme heat are only expected to increase as atmospheric temperatures rise. For example, Resilience, a climate-analytics platform spun

out of the University of Cambridge's Centre for Risk Studies – which Etsy worked with in 2023 – has assessed current (baseline of 1980-2020) and future (2040-2050) climate-hazard exposure across the U.S. Looking at projections that assume current global policies are maintained, extreme heat waves, where the maximum daily temperature exceeds 35 degrees Celsius and 3 degrees above the summer mean for at least 15 days, are predicted to occur with more frequency across all U.S. states (figure 3), providing enabling conditions for wildfires and droughts. These increasing pressures, that artisan businesses face, require us to consider the scope of potential impacts and solutions needed, based on the specific type of extreme-weather events experienced (figure 3). The increasing pressures artisan

## U.S. Exposure to Heat Waves: Baseline (1980-2020)

Maximum daily temperature exceeding 35°C and 3°C above summer mean for 15 days



## U.S. Exposure to Heat Waves: Current Policy Scenario (2040-2050)

Maximum daily temperature exceeding 35°C and 3°C above summer mean for 15 days

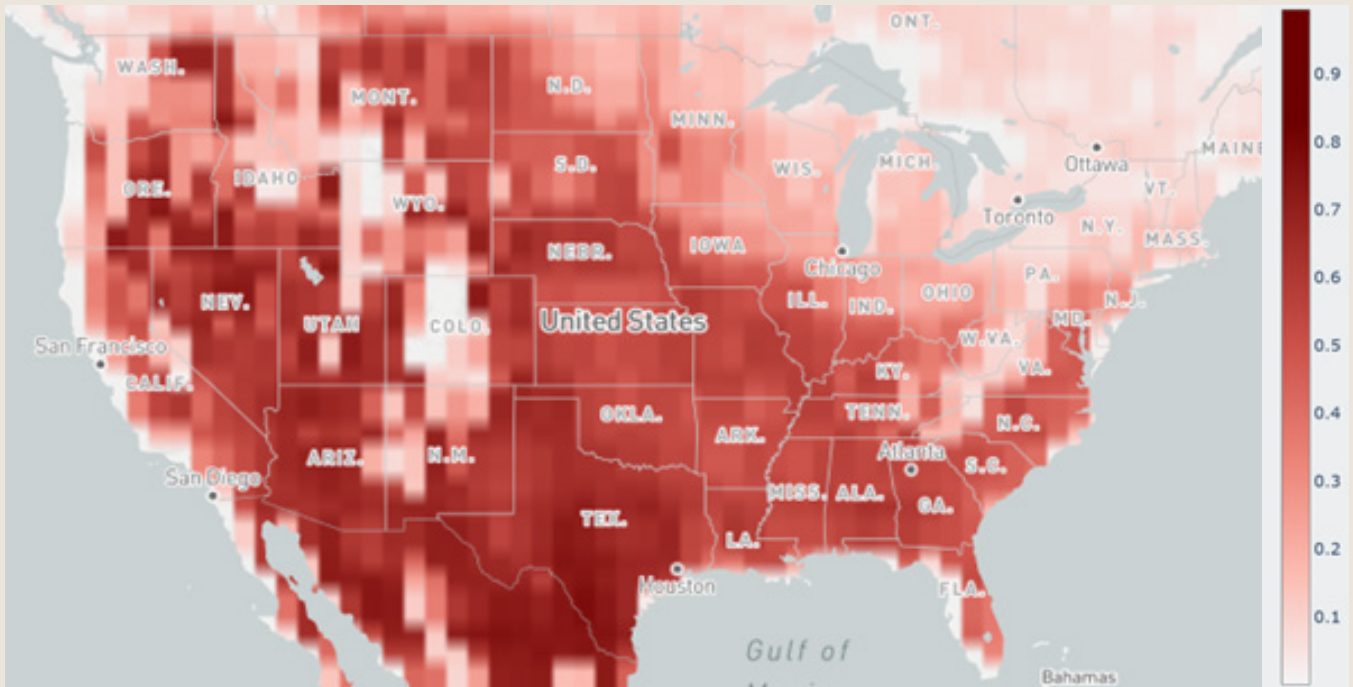


Figure 3

businesses face require us to consider the scope of potential impacts and solutions needed based on the specific type of extreme weather events experienced.

The impacts faced by makers can be illustrated when looking at the case of droughts. Droughts can decimate agricultural yields and diminish natural resources, potentially affecting the raw materials needed for artisan businesses. In the United States specifically, from 2000 to 2019, droughts affected 84% of the country's land area, affecting artisans' and handworkers' ability to source cost-effective raw materials (National Centers for Environmental Information, 2020). Similarly, limited water access caused by droughts can increase the prices of materials artisans need to purchase for their products or limit the amount of water available for crafting processes. For example, dying fabric and processing leatherware are water-intensive (Caniato et al., 2012). These stresses to the production process may force makers to increase their prices, decreasing sales in turn.

Secondary effects of dry periods include increased incidence of wildfires, which can cause direct infrastructure damage to artisan communities, homes, and workspaces, as well as decreased air quality due to the dispersion of particulate matter (Schulte et al., 2016). Wildfire season has grown longer in Oregon and Washington, with large wildfires becoming more frequent and destructive in California (SciLine, 2020). As one artisan aptly shared, "[m]y home and entire town (Magalia, CA) was destroyed in the Northern California Camp Fire. All of my equipment, office equipment, and raw materials were in the home." Not only did this maker need to navigate the emotional devastation of losing their home, which was also where they conducted their business, but they were losing revenue from the damage

done to their home and loss of supplies.

Displacements are particularly hard on artisans, who often work out of their homes and have less access to government resources to help recoup losses after disasters. Obstacles to governmental assistance stem from the complexities associated with navigating bureaucracy. Government assistance programs often involve an application process, which can be daunting and time-consuming for artisans who may need more resources or knowledge to navigate such systems effectively. Managing the emotional strain of experiencing a climate event, losing income, and assessing how to save your business is no small feat.

### *Storms and Related Events: Rainfall, Hurricanes, and Flooding*

Similar but opposite to droughts, extreme rainfall events, hurricanes, and flooding can also cause damage to personal, community, and business-related infrastructure. Of those artisans surveyed, 95% reported that they were impacted by flooding, storms, hurricanes, or high winds, making it the most frequently reported category of disasters experienced. These makers were predominantly located in New York and Texas. The median cost of these types of disasters was reported to be \$ 3,500, and the most frequently reported types of damages were to the workplace (27%) and materials (24%).

The impacts of extreme rainfall and hurricanes are particularly pronounced in low-income and historically black communities, which are often located in areas more vulnerable to flooding, outfitted with outdated infrastructure less resistant to high winds, and slower to receive government aid and repairs after storms. Given that Nest's (2022) State of Handworker Economy report found that upwards of 93%

of maker businesses are minority-led in some U.S. cities, this environmental injustice poses a significant threat to the artisan community. With over a third of artisan climate survey respondents living in hurricane-prone states, the likelihood of experiencing severe storms and high winds could threaten these individuals.

“

I live in Wilmington, North Carolina and evacuated for Hurricane Florence. I took clothes for a few weeks, important paperwork and most of my jewelry making supplies, tools and packaging. I drove 4 hours west to Charlotte to stay with a friend of the family who generously opened up his home to me, where I could work at my jewelry business from the entryway in his home. A week later when the storm cleared and roads reopened, I drove back to Wilmington to find that it had rained inside of my home, through the ceiling and terrace door, inside the walls, flooding the carpeting, and causing mold to grow. I had to throw away many of my jewelry show materials that were damaged, and emergency-move the rest of my supplies, clothes etc. that were not damaged into storage .and since the apartment was now mold ridden, I could no longer stay there. Throughout all of this, for the past month, while trying to keep my business afloat, without the ability to do much marketing or prepare for the Holidays as I normally would, I've also had to battle with the rental company who refused to make any repairs to the apartment and yet wouldn't release me from the lease, still demanded that I continue to pay rent. So far, I've had to make the 4 hour drive each way between Charlotte and Wilmington 6 times to secure my belongings, deal with the rental company and seek resources to help me, my car and my business stay afloat. My car also now needs many repairs I cannot afford. Unfortunately FEMA wouldn't help me with housing assistance, nor would my renters insurance company so I am still at my friends house in Charlotte until I can recover financially from all of this.

-Black Etsy Seller

”

## Damages Experienced by Artisan Businesses Because of a Climate Disaster

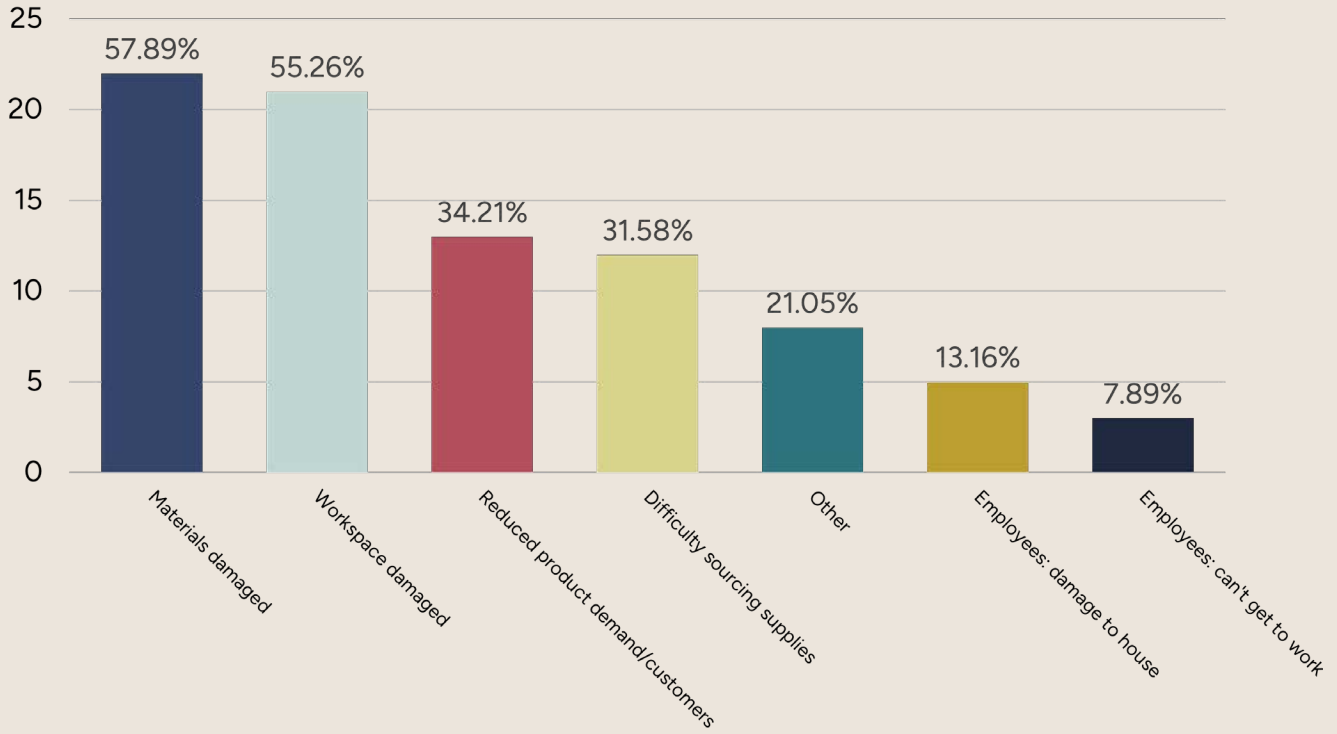


Figure 4

### Artisan Loss and Damage by Extreme Weather

Climate-related disasters pose various challenges to artisans, and our survey data sheds light on the most prevalent damages experienced by this creative community. Among the various damages reported, three are particularly common and impactful: damaged materials, workspace, and reduced product demand. One of the most striking findings is that 58% of artisans reported experiencing damages specifically to their crafting materials in the aftermath of a disaster (figure 4). This statistic underscores the vulnerability of artisans' raw materials, including wood, textiles, or other essential craft components. Damages to these materials not only disrupt the creative process but also result in the loss of valuable inventory, directly affecting the availability of

products for sale.

In addition to material damages, 55% of makers reported damages to their workspace. For artisans, their workspace is not merely a physical location but a creative sanctuary where their craft comes to life. Damage to this space can significantly hinder their ability to work, potentially leading to delays in production and a reduced capacity to meet customer demands.

Moreover, reduced product demand and customer base were identified as another major challenge, with 34% of makers reporting this issue. Climate disasters can disrupt the normal flow of commerce and consumer behavior, leading to a decrease in the demand for handmade goods. As a result, artisans may find it challenging to sustain their businesses

## Artisan Leaders' Worries Related to Climate Change

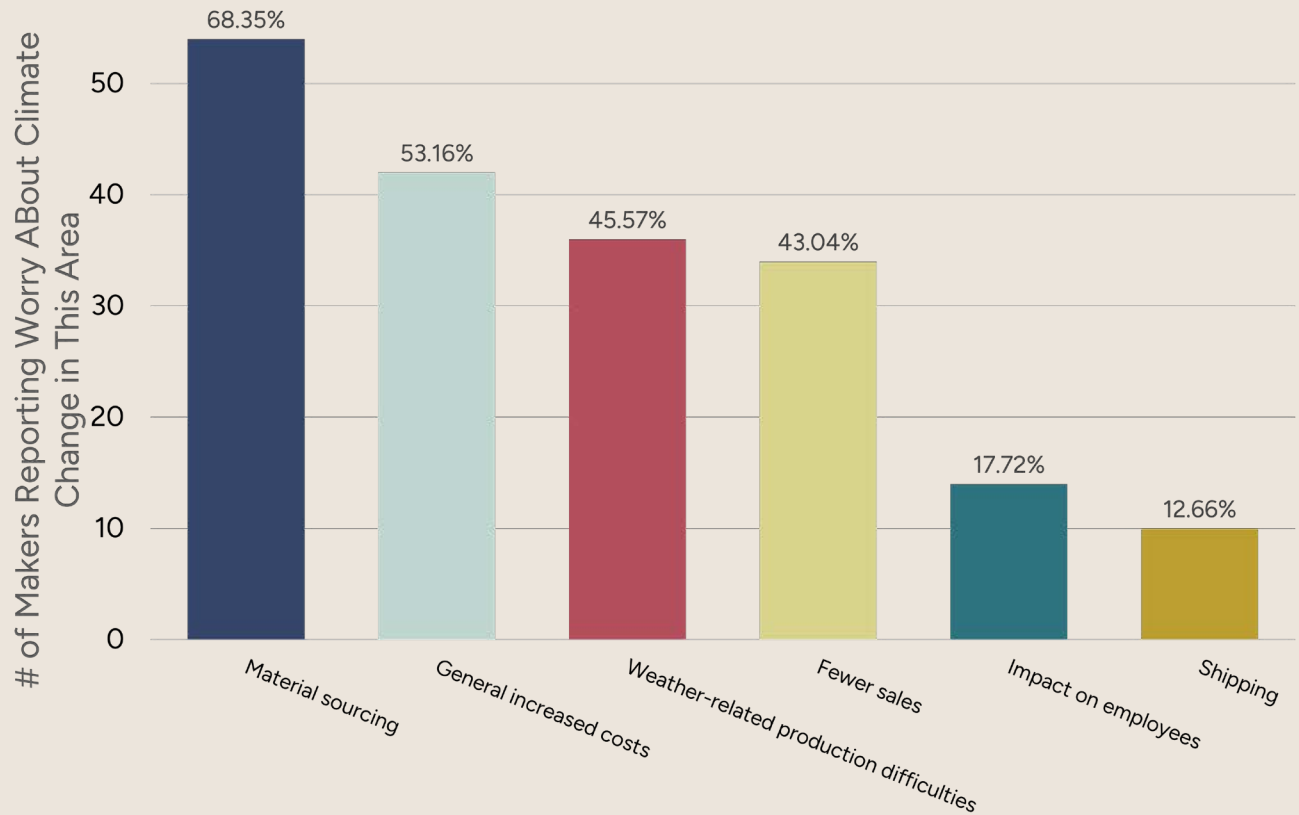


Figure 5

and maintain their livelihoods which can cause significant downstream issues that affect the sustainability of artisans' businesses. For example, one maker stated that the largest impact of the disaster they had experienced in Illinois included a "huge loss of revenue at multiple outdoor art fairs due to flooding, high winds, and storms." Another based in Texas stated that while there were limited physical damages, an extreme storm had, "canceled a major market I usually do well at," which resulted in a loss of revenue.

### *Artisan Perceptions of Climate Impacts and Extreme Weather*

Looking ahead, the concerns of artisans extend to the future effects of climate change on materials sourcing, as indicated by 68% of survey respondents (figure 5). This heightened apprehension about securing the necessary materials for their craft underscores the long-term impact of climate change on artisanal production and its potential to disrupt their creative processes further.

## THE CLIMATE INFORMATION GAP FACED BY ARTISANS

As the impacts of climate change on artisan businesses increase in severity and frequency, effectively communicating knowledge pertaining to disaster preparedness and resilience measures is paramount. Our survey found that 63% of Nest’s Makers United respondents have not received information on climate change from *anyone*, evidencing the gap in availability. While numerous governmental agencies, private organizations, and nonprofits encourage climate resilience through education and resource provision, the information often targets corporations or takes on a national perspective, leaving a notable gap in resources tailored to the unique needs of artisans and craft workers. It is also disparate and does not gather into singular sources, making the information often piecemeal and incomplete, leaving gaps in thorough understanding.

### % of Makers Who Have Implemented Any Climate Resilience Measure for Their Home or Business

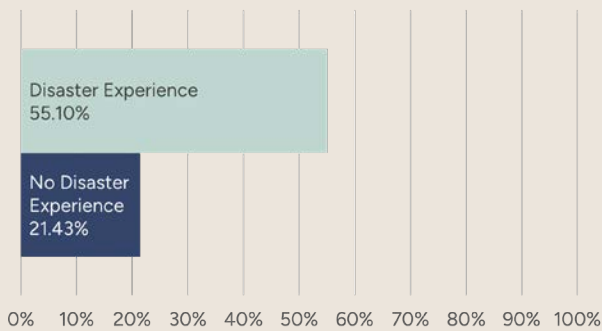


Figure 6

The 34% disparity between engagement in climate resilience between makers with no disaster experience who have implemented a resilience measure (21%) and those who

have encountered climate-related disasters who have implemented a resilience measure (55%,  $p$ -value = 0.026, figure 6) underscores the tangible impact of firsthand disaster experiences in motivating individuals to invest in protective measures. This reveals the pivotal role of such incidents in shaping climate resiliency efforts and suggests that targeted education and resource campaigns initiated at makers’ post-disaster events could increase artisan adaptation efforts, particularly for makers who have not yet felt the impacts of climate disaster.

Challenges surrounding insurance also provide an important example of the information gap experienced by makers. Part II of this report details the current disaster financing systems for makers, but we highlight two situations here. Despite a high proportion of artisans holding property insurance, only around 10% of makers have successfully received an insurance payout post-disaster (see page 34 for more information on insurance and climate financing). This could be for multiple reasons ranging from not having the needed disaster coverage to the complexities of the claim process creating a barrier to receiving support. All these reasons, however, point to insufficient information on insurance, both before and after a disaster, making its way to artisans. This lack of information is seen with flood insurance, specifically, with 10% of artisan survey respondents stating they could not receive coverage due to ineligibility. For example, they say that they work or live in a rented space and do not qualify, or that they are unable to procure flood insurance despite their home’s location in a floodplain. Again, this is likely a lack of information, since flood insurance is available for renters (contents-only policies) and those in a floodplain are often the ones required to have flood insurance. Barriers to flood insurance by makers suggest a knowledge gap may prevent

access to this vital resource.

One thing is clear about the climate information gap: the misunderstandings are not due to a lack of education or the intention of makers. All of the makers surveyed have engaged in some type of post-secondary education, such as vocational or technical degrees, or college-level training. In fact, over half of the makers surveyed had either a university or graduate-level degree. Coupled with the fact that 81% of makers understand that weather patterns are changing and becoming more severe, and the vast majority of surveyed makers are worried about the effects of climate change, the lack of specific knowledge on resilience, adaptations, and disaster support can be postulated to be due to inadequacy of available information resources.

### **COSTS OF CLIMATE VULNERABILITY**

Disasters can have a profound financial impact on artisans, encompassing a wide spectrum of costs, from repairing and replacing damaged inventory to the potential disruption of revenue streams when disasters interrupt sales. Moreover, makers may experience business disruptions not only due to their damages but also due to damage incurred by their suppliers, customers, or the inability of employees to work. Our survey data offers valuable insights into the financial implications of climate-related disasters for artisans.

Besides the physical challenges posed by damages caused by climate-related disasters, the costs associated with repair and recovery are often barriers to creative entrepreneurs' business viability. The estimated cost of the damages experienced by survey respondents varied widely, from zero dollars up to an enormous \$1.2 million, with a median cost of \$3,000 and average cost of \$46,074. With just

“

The help dries up around the time the media leaves, navigating the aftermath with no income, and after losing everything becomes very difficult. If you are homeless, you cannot reopen for a long time.

-Maker based in San Antonio, Texas

”

over half of makers reporting a total household income below \$50,000 per year and 58% reporting another source of income besides their craft work, these costs can be prohibitive to creative businesses. Isolating those in Nest's Makers United program alone, the median cost of damages from extreme weather events accounted for 7% of the median annual craft revenue; a difference that often determines profitability or loss for businesses in this sector. Over one-third of the artisans surveyed reported that they did not have enough money to cover immediate expenses following a disaster (Figure 6), further evidencing the financial hardship disaster recovery can place on makers.





## THE CHANGING SWEETGRASS: A CASE STUDY OF THE GULLAH WEAVERS

Known for their exquisite natural fiber basket weaving, The Gullah Geechee have lived in a coastal corridor from Jacksonville, South Carolina, to Jacksonville, Florida, for centuries. However, they are now facing a dire threat as one of the most vulnerable populations to climate change in the United States due to persistent flooding and rising sea levels (Newsome, 2022).

The Gullah Geechee nation are descendants of enslaved West Africans brought to the coastal areas of the southeast United States. Following the Civil War, the formerly enslaved people sold harvests from farming and fishing and used the funds they raised to buy land. They developed their African Creole language—Gullah—and this name began to refer to them as a people. The land this community inhabits reaches from Jacksonville, North Carolina, down to Jacksonville, Florida, and includes many barrier islands and roughly 30 miles inland.

In addition to a long history as farmers and

fisher-people, the Gullahs have a rich craft history of basket weaving. They are renowned for their weaving heritage and the elaborate designs that have been passed down through generations. Over the years, Gullah artisans have crafted beautiful baskets using materials such as sweetgrass, pine needles, bulrush, and palmetto palm. This tradition has endured, with Gullah weavers emphasizing imparting their skills to future generations and preserving their craft. Creating these distinctive baskets is an integral part of the cultural fabric of the Low Country region in South Carolina and the nearby barrier islands.

The Gullah have recently been struggling with encroaching development and impacts from climate change, such as increasing flood risk and land loss from sea level rise. These forces threaten their way of life and their ability to stay on their land. In the mid-twentieth century, tourists and more affluent households began encroaching on their land, building luxury vacation spots, homes, and related commercial establishments. Newcomers to the area often built in hazardous locations

along the shore, constructed seawalls that led to the disappearance of beaches, and built jetties that accelerated beach erosion (Duara, 2016). Increased storm damage and negative environmental impacts have destroyed coastal ecosystems that once provided flood and storm protection to the Gullah. Higher temperatures and more frequent heat waves also impact ecosystems and people. The Gullah/Geechee Sea Island Coalition is one local group working to preserve their history and culture in the face of climate change. Some Gullah climate leaders also explore nature-based solutions to provide climate resilience and protect their historic lands (Kapetaneas et al., 2021).

During the focus group held by Nest, the participants expressed that the climate impact of most concern to the women was flooding. While they noted that temperatures were more extreme and variable—worse heat and more snow—the conversation’s main focus was chronic flooding. They said many causes of increased flooding for the Gullah were not just climate change but significant new developments within Charleston given the city’s growth. This massive amount of new building, the women felt, pushed floodwaters onto their land to keep the new infrastructure dry.

They also noted that flooding comes from upstream, not just the coast. The women stressed that in addition to severe floods, such as flooding from a hurricane, they were also experiencing lots of small-scale flooding events. Flooding creates challenges with day-to-day living, such as certain roads becoming impassable due to floodwaters. Sometimes, it would be so bad the women had stories of cars floating away and fire department rescues. They now knew that specific routes would be impassable in periods of heavy rain.



The women were asked how residents cope financially with flood damage. The response from every participant was stories of financial struggle. One woman discussed how many people could not rebuild after Hurricane Hugo because they had no financial resources. They discussed feeling that government and charitable agencies do not direct resources to them. In fact, many expressed their community was never told about federal resources available for climate disasters by government officials or local organizations.

Experiences with COVID-19 made weavers more convinced federal programs were not adequately helping communities like theirs. Many participants had stories of “getting the runaround” from federal employees, of not being told about help until it was too late to

apply, of waiting so long and never getting help, of hours of paperwork amounting to little returns. One woman discussed being shuffled between FEMA and the Small Businesses Administration (SBA) after Hurricane Matthew and not getting assistance. She called the experience a “nightmare.”

Research and news stories have also documented that the Gullahs have often struggled with receiving federal disaster assistance due to practices of ‘heirs’ property.’ Heirs’ property refers to land handed down informally, meaning without will designation or estate planning, through generations. When authorized in a federal disaster declaration, the Federal Emergency Management Agency (FEMA) can make small grants available to households with damages or other costs from disasters. These grants, however, often require documentation that those with heirs’ property do not possess (Kousky et al., 2023), locking them out of this assistance. The requirement for formal title documentation has been a post-disaster challenge for the Gullah, but also white households in Appalachia, Hispanic households in colonial communities in the southwest and Puerto Rico, and some Native American households throughout the country. In response, in the fall of 2021, FEMA expanded the types of documents that would satisfy occupancy and ownership requirements of disaster aid grants. However, more research is needed to ascertain whether the efficacy of this policy change is sufficient to open access for these groups.

The participants noted that most Gullahs are also uninsured against flooding. In the United States, standard homeowners insurance does not cover flood damage. You must buy a separate flood policy, which can be prohibitively expensive for Gullah weavers. One woman noted: “In my community, I can

say, the older people here, most of them have insurance—homeowners insurance. I doubt that it is flood insurance.” When asked about flood insurance, many women just shook their heads. The women intertwined stories of climate impact with levels of encroaching development—both were related stresses to them. They discussed how new infrastructure development accelerated flooding, drove up land values, and priced people out of their ancestral land.

The weavers also discussed the combined impacts on the sweet grass they use to make their baskets. The women addressed the loss of natural areas where they had previously harvested sweet grass as more development occurred. They also discussed how parking lots create hotter areas that can kill nearby sweet grass. And the changing climate was also hurting the grass. “There is definitely a change in the quality of sweet grass,” one woman noted. “It is dying before it gets its full growing season.” They also noted changes in the broader ecosystem. They noticed new plants that did not grow near the sweet grass. They reported increased marshy areas and heat and humidity (heat index). Changes in land composition and heat index combined meant the women had to travel farther to get their sweet grass. They said it can take hours of driving to find what they need.

Not one woman remembers anyone ever coming to their community to talk to them about climate change. But they all see it. They feel they will adapt and will figure it out. They think they have to find a way. But they are all apprehensive about their traditions being destroyed. Several women noted that economic changes and gentrification were threatening their way of life and worsening climate change. They all felt they needed more resources, including more education for their



community, because “the government is not coming fast enough.”

The case study of the Gullah Geechee Weavers serves as a poignant illustration of the profound impact of climate change on artisan communities. Their story highlights how climate-related challenges, such as chronic flooding, encroaching development, and shifts in natural resources, are intertwined with preserving their cultural traditions and economic livelihoods. The Gullah artisans’ experience underscores the urgent need for accessible resources, education, and support for artisan communities facing climate change-related threats. It also emphasizes the importance of recognizing the intersectionality

of climate change impacts, socioeconomic disparities, and historical injustices that often converge to create complex challenges for marginalized artisan populations. As we strive to address the unique needs of artisans and makers in the face of climate change, the Gullah case study reminds us of the imperative to act swiftly and equitably to safeguard makers’ heritage, resilience, and economic well-being.

## KEY TAKEAWAYS: WEAVING A COMPLETE PICTURE OF CLIMATE IMPACTS ON ARTISANS

### Prohibitive Costs of Recovery

Damage costs reported by survey participants ranged extensively, up to a substantial \$1.2 million, with a median cost of \$3,000 and an average cost of \$46,074.

### Intersectionality and Socioeconomic Disparities

Marginalized communities, including people of color and those with lower socioeconomic status, are disproportionately affected by climate change. Within the artisan community, these disparities are evident, with more BIPOC artisans needing to take abnormal financial action, like taking on debt or spending personal savings, to cover recovery costs. Economic inequality, compounded by climate impacts, hinders artisans' capacity to adapt effectively.

### Overlap of Work and Home Spaces

The majority of artisans work from home-based studios, making them particularly susceptible to climate impacts. Damage to both their personal living spaces and workspaces during extreme weather events can have a devastating dual effect. The overlap between work and home spaces often results in artisans being excluded from dedicated resources for either residential or small business recovery. Further, many makers rent, rather than own, their residence, which can complicate the ability to implement resilience efforts.

### Limited Access to Insurance and Government Assistance

The majority of artisans who experienced a climate disaster have never received an insurance payout to support recovery. Access to government assistance programs is hindered by bureaucratic complexities and eligibility criteria, leaving them underserved in times of need.

## KEY TAKEAWAYS: WEAVING A COMPLETE PICTURE OF CLIMATE IMPACTS ON ARTISANS

### Resource Constraints

Artisans, particularly those engaged in handcraft and maker entrepreneurship, often operate with limited financial resources. Many rely on supplemental income sources to support their craft, which leaves them with constrained budgets for climate adaptation measures. This lack of financial capital is a significant barrier to their ability to prepare for and recover from climate-related disasters.

### Climate Impact on Cultural Traditions

The Gullah Geechee Weavers case study illustrates how climate change can threaten the preservation of cultural traditions, intertwining climate-related challenges with economic livelihoods and heritage. The lack of government outreach and support exacerbates their struggle to adapt.

### Sourcing and Quality of Raw Materials

Many artisans rely on natural resources to create their craft, and climate change can disrupt the availability and affordability of these materials. Scarcer or more expensive resources can significantly impact artisans' production costs and, consequently, their businesses.

### Knowledge of Climate Change

Artisans may face significant information gaps in disaster preparedness, insurance understanding, and awareness of available post-disaster support options. These gaps, often exacerbated by disparities among marginalized communities, highlight the need for more accessible and tailored education and resources to ensure the resilience and well-being of the artisan community in the face of climate change.

# Part II: Addressing the Climate Crisis for U.S. Artisans

As made clear in Part I of this report, climate change is exerting its influence through increasingly severe and frequent natural hazards, causing the vulnerability of artisanal businesses to become more pronounced. In this section, we build on these findings by examining strategies and resources available for makers and creative entrepreneurs to respond and address such climate impacts and the obstacles of accessing or engaging in such resilience and recovery measures.

## RESILIENCE + PREPAREDNESS

There are many proactive measures that artisan businesses can engage in to minimize the impact of climate risks, build resilience to climate-induced disasters, and ultimately safeguard their creative business and legacy of craft for long-term sustainability. To fully understand resilience and preparedness measures, the distinction between short-term events (which can be considered climate disasters) and long-term trends (rising temperatures, atmospheric changes, sea level rise, etc.) is crucial. As we confront the evolving threats of the climate crisis, policies and initiatives to support artisans must consider their unique vulnerabilities, whether caused by acute disasters or chronic impacts. By acknowledging and addressing these challenges, we can work towards a more resilient and sustainable future for the artisan community, ensuring that their invaluable contributions to the culture and the economy endure in the face of a changing climate.

The degradation in raw materials needed for artisan production exemplifies the pressures caused by the chronic effects of climate change.

Naturally-sourced materials are all sensitive to the increasing average temperatures, changes to weather patterns, agricultural adjustments, and seasonal variations caused by the long-term climate impacts of climate change. The changes in sweetgrass seen by the Gullah Geechee weavers are reflected in raw materials globally. One leader of an artisan business in India that exports women's clothing to the United States explained the effects well, "In 2020 we started working with shepherds of Churu on indigenous wool. However, that year saw the hottest summer with temperatures reaching 50 degrees Celsius. This resulted in loss of livestock & directly impacted the nomadic shepherd community thereby impacting the wool collection for making woolen products."

Climate change's effects are not uniform; they manifest diversely based on geographic location. Local climate data emphasizes that hazards are specific to regions, underlining the need for localized resilience resources. Hazard identification tools like [Risk Factor](#), [Insurance Institute for Business & Home Safety \(IBHS\)](#), [Neighborhoods at Risk](#), and [National Centers for Environmental Information \(NORA\)](#) can serve as valuable aids for artisans and maker-entrepreneurs to understand local risks that they might expect due to climate change.

Given the regional specificity of climate-induced natural hazards, effective climate resilience/preparedness communication presents strategies tailored to specific types of disasters. Recognizing the unmet need for maker-specific resilience resources, organizations such as the [National Coalition for Arts Preparedness \(NCAPER\)](#),

[Craft Emergency Relief Fund \(CERF+\)](#), and we at Nest with support from Etsy have worked to create specialized [disaster recovery and response guidebooks](#) and tools for artists, craft workers, and maker entrepreneurs. Still, the growing urgency to address climate change and consequent demand for resilient solutions within the artisan community necessitate further development and investment into such resources.

Despite the information gaps, makers can still take discrete steps to build climate resilience. Our data underscores the necessity of financial support, education, and tailored resources to enable artisans to overcome the barriers to climate-related adaptation. Cognizant of the barriers to climate resilience, it is important to call attention to the resources available to artisans who can access them. Broadly speaking, resilience and preparedness can be grouped into two categories: physical and financial measures that may be taken or supported by makers and industry stakeholders.

### *Physical Measures: Home and Workspace Resilience*

Home hardening can mitigate the costs of climate disasters to artisans by strengthening the physical resilience of a workspace, home, and studio. Artisans might prepare for natural hazards and disaster costs by preparing emergency kits or power/water sources, elevating appliances to avoid flood damage, strategizing supply chain management to prepare for climate-induced disruptions, or even relocating their workspace to less disaster-prone areas. Those who operate home-based businesses in regions prone to hurricanes or wildfires may consider strengthening their property according to the Fortified Home™ or Wildfire Prepared Home™ program standard (construction methods designed to protect

### **Makers Who Have Implemented a Climate Resilience Measure to Protect Their Home or Business**

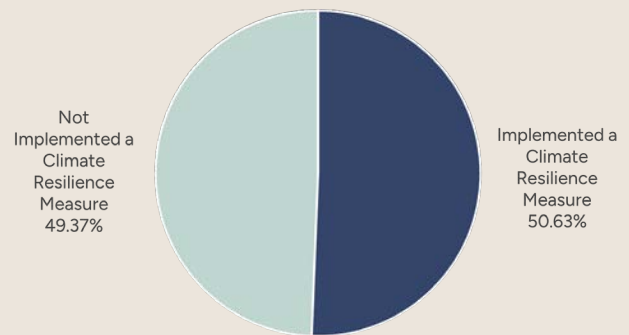


Figure 7

homes against hurricane winds and wildfire risk).

Approximately half of the surveyed participants (51%) of survey respondents among the Nest and Etsy maker community indicated that they have taken measures to protect their home or business from climate change, underscoring a proactive stance in addressing potential climate-related challenges (figure 7). In terms of protection measures, specific actions include weatherization (14%), installation of renewable energy technologies (10%), enhancing energy and water efficiency (23%), and other safeguards (16%). Innovative physical measures taken by the makers were tailored to the specific context of the enterprise, and included a wide range of protections. These efforts demonstrate a diverse set of strategies adopted to bolster resilience and mitigate potential environmental risks. As the frequency of disasters and consequent losses escalate in the face of climate change, such measures towards climate resiliency require more attention and investment; a business-as-usual approach may lead to more extreme disaster risk and recovery costs.



### Innovative physical resilience efforts reported by makers:

- Fire mitigation strategies: clearing flammable materials around house/workspace
- Creation of emergency plans and kits including first aid kits and gathering important documentation
- Installation of backup power sources: generators, solar panels, backup lights, etc.
- Installation of backup water sources: water catchment, installation of emergency water filtration systems, storage of drinkable water
- Relocation of workplace and materials to less disaster-prone areas: moving from flood plains, relocating storage, etc.
- Structural changes: raising foundations, eliminating basements, creating water run-off systems in flood-prone areas
- Purchasing backup communications devices: GPS, satellite phones, backup chargers, radios, etc.
- Improvements to air quality: installation or air conditioning, monitoring, or filtration systems
- Switching materials & materials sources to more resilient suppliers, and coming up with alternative ways to source materials in case of disruption

### *Financial Measures: Preparedness Funding and Insurance*

Almost half of (49%) of makers surveyed by Nest reported not having implemented any protective measures for their home or business, and over a quarter (27%) stated that they have not implemented any actions to reduce their environmental footprint. While barriers to targeted education and information may contribute to limited participation in resilience measures, many makers may face financial barriers to engaging in climate resilience.

Addressing growing climate risks comes with a price tag. According to data from the Mitigation Saves Study conducted by the National Institute of Building Sciences (NIBS), the expenses associated with retrofitting or enhancing an existing residential property can vary significantly, spanning from \$4,000 to

\$80,000 (NIBS, 2019). Flood insurance can cost an average of \$700 annually (FEMA, Fact Sheet: Myths and Facts About Flood Insurance 2019). While climate resilience measures are necessary to avoid even higher costs in the case of a disaster and safeguard creative businesses for long-term sustainability, the immediate costs of risk management pose a challenge to artisan and maker entrepreneurs; dedicating resources and funds to disaster preparation may feel like a luxury investment to artisans and small businesses who are already operating on thin margins.

As artisan businesses and maker entrepreneurs are pushed to set an increasing share of their cash flows to disaster preparedness measures, they may look to sources of financial support to fund their resilience efforts. However, limited federal funding sources are currently available for small businesses to access for

pre-disaster hazard mitigation efforts. While the SBA offers expanded disaster loans for mitigation – low-interest loans for homeowners and small businesses to support mitigation efforts against future disasters – these funds can only be accessed by companies that a declared disaster has already impacted, leaving many unable to apply. Through this program, though, small businesses can apply to increase their SBA disaster loans by up to 20% to make building upgrades for mitigation efforts. Another program, the U.S Chamber of Commerce’s Small Business Readiness for Resilience Program, developed in collaboration with Allstate and FedEx, provides informational guidance for small businesses in preparing for disaster and then offers quick-turn relief funding of \$5,000 for those prepared businesses after a federal disaster declaration is made in their region. While these programs are an essential start and valuable resource for artisan and maker-entrepreneurs, both allow access to funding only *after* a disaster.

Insurance often provides the best financial protection post-disaster, but only for those artisans who were previously enrolled in insurance schemes ahead of time, and typically only to cover the costs of repairs, not resilience upgrades. The survey data reveals significant disparities in property insurance coverage among artisans in the United States. While a notable portion (34%) has home insurance, only a small fraction (4%) have business coverage. Nearly half (48%) have insurance for both home and business, but a concerning 14% have no property insurance. When asking artisans about their reasons for not implementing any climate-related adaptation, 57% stated they did not have the necessary financial resources. Other commonly cited reasons include not knowing what actions to take (24%), or that it is not possible in their current workspace or home because of temporary rental agreements

(12%). An additional 6% stated that they don’t have time, while another 13% of respondents do not believe they are currently at risk for climate disasters. Furthermore, the data shows that insurance payout rates for those who experienced disasters are low, with only 10% receiving payouts, leaving the majority (86%) without the financial support they need during times of crisis.

For artisans who have access to purchase policies, homeowners, renters, business, or flood insurance can play a vital role in post-disaster recovery. Insurance policies can provide capital and needed liquidity, but many small firms are uninsured. The above findings underscore the need for increased awareness and education about property insurance and more accessible and affordable options for artisans, especially those with limited financial resources, to enhance their disaster preparedness and financial security.

## **DISASTER RECOVERY: FINANCIAL RESOURCES AND THE STRINGS ATTACHED**

Investing in resilience *before* a disaster is the only way to reduce costs that arise in the face of a disaster. Relying on post-disaster funding to support artisan and maker resilience measures is not sufficient to support maker entrepreneurs and small businesses across the nation – continuing to do so will only increase the financial aid required to address disaster recovery efforts, especially in the face of increasingly severe and frequent natural hazards due to climate change.

However, supporting American craft entrepreneurs is not reserved for only building resilience measures. As shown by the findings from Part I, makers’ ability to financially recover post-disaster is critical to the long-term viability

of artisan businesses and the preservation of cultural heritage craft techniques. Artisan businesses could turn to several different sources of funding and financing to cover their losses, including redirecting revenue or drawing on reserves, insurance, or loans.

#### *Small Business Association Disaster Loans*

If uninsured, artisan businesses can turn to post-disaster credit. While they could seek a loan from a private lender, the Small Business Administration (SBA), a federal agency that works to assist and protect the interests of small businesses, provides post-disaster credit from their Disaster Loans program. These loans tend to have lower interest rates and are designed to help businesses and homeowners recover from declared disasters. Artisan and maker businesses of all sizes, as well as homeowners, renters, and home-based businesses, are eligible to apply for and use disaster loans as long as they are located within declared disaster areas. Various disaster loans with varying limits are available for home/personal property, business property, and economic injury assistance; depending on need and workspace type, artisans and makers can apply for a specific program or combination of loan types to fund their recovery efforts. Economic injury loans are intended to cover working capital to help meet ordinary and necessary financial operating expenses that cannot be met due to the disaster. For a home-based business, these expenses may include insurance, utilities, rent, etc., some of which may be blended with expenses for the personal use of a home. In this case, IRS home office tax deduction rules provide detailed guidance.

Loans, however, are only available to those who meet SBA criteria and the two leading reasons for denials are lack of repayment ability and lack of credit history (United States

Government Accountability Office, 2020). An examination of SBA disaster loans found that loan denials were more likely in low- to moderate-income communities and borrowers in these communities also face slightly longer processing times (You et al. 2022).

#### *FEMA Individual Assistance*

The Federal Emergency Management Agency (FEMA) is a government agency that aims to coordinate aid and respond to national disasters when local resources are insufficient. FEMA distributes aid through various grant funding programs for pre- and post-emergency or disaster-related projects. FEMA Individual Assistance Grants are typically made available after a major disaster or emergency declaration, which the President of the United States issues. FEMA's Individuals and Households Program (IHP) primarily focuses on providing immediate relief, temporary housing, home repairs, and other essential needs to uninsured or underinsured people. While FEMA offers up to \$36,000 for each eligible household, the average grant payment is typically only a few thousand dollars; grant-based assistance provided through this agency is not intended to compensate for all losses that artisans and makers-entrepreneurs may face due to a disaster but instead to help individuals meet their basic needs and supplement other disaster recovery efforts.

#### *Obstacles to Accessing Financial Support*

Despite the availability of recovery funds through these federal programs and private insurance, makers appear to underutilize federal support programs, as only 10% report receiving funding from FEMA, SBA, or private lenders. Artisans and makers may face limited access or engagement with such programs due to ambiguity or information deficiency regarding

the loan process, lack of financial flexibility to access disaster loans, physical obstacles to accessing application requirements, and systemic barriers to support.

Studies on small business recovery efforts following Hurricane Katrina (Runyan, 2006) shed light on an inevitable feature of increasingly frequent and severe disaster impacts and responses due to climate change. Small business owners in the Gulf Coast reported challenges they faced following the storm and while attempting recovery; the largest losses incurred from Hurricane Katrina were inventory and equipment, requiring capital via insurance or disaster relief to finance new inventory. However, many small business owners lost all of their records in the flooding or destruction of their buildings - posing a challenge to the requirements of three years of financial statements and income tax returns to access loans from the Small Business Administration. Artisans without access to their workspace or necessary records for application on filing requirements due to disaster-induced physical destruction or very recent establishment of their creative business are put at an immediate disadvantage in their physical and economic recovery efforts.

90% of makers report personal savings (Nest, 2021) as their primary source of funding; the process of applying for a loan through the Small Business Administration, especially given the stressful circumstances that a climate-related disaster poses, may be daunting for artisans and makers with little to no prior experience with the Small Business Administration or other business loans. Small business owners have previously conveyed (Runyan, 2006) the challenges posed by the disaster loan process such as the lengthy and (perceived) intrusive application and the idea that they (the business owner) would be taking on a large debt to



“

We lost both our home and glassblowing studio in the Camp Fire. The studio building itself is covered by insurance, but the glass blowing tools, supplies, and equipment are not. This includes glass, glass color, glass hand tools, torches, safety gear, 2 crucibles/furnaces, and annealer (cooling oven). We estimate about \$50,000 in replacement costs, once we can rebuild the studio.

-Home based artist in Paradise, California

”

finance operations or repairs.

Even if artisans have access to their financial records and the capacity to apply for loans, disaster relief efforts focusing on lending after a loss have limited reach for artisans' businesses, with the lack of financial flexibility to be approved for available disaster loans. Small businesses in moderate-income communities also have a decreased likelihood of approval for an SBA disaster loan, some of which may be due to failing to meet debt-to-income and credit score requirements (You et al. 2022). A study by the Harvard Business Review on the effects of Hurricane Harvey on local businesses found that almost 90% of surveyed businesses

reported losing revenue because of Harvey due to property damage losses, employee disruptions, lower customer demand, and/or supply chain issues (Collier & Ragin, 2022). While SBA disaster loans are intended to assist businesses with such financial disruptions and disaster-induced damages, many businesses had not maintained the financial flexibility to fund recovery with loans from the Small Business Administration – only one-third of surveyed firms who applied for a disaster loan were approved. In the worst-flooded areas, “the storm increased delinquent balances by 86% compared to their pre-Harvey levels.”

Small businesses may hesitate to pursue or avoid involvement with federal agencies like FEMA due to a lack of information, the tendency to look to other sources for recovery (such as personal funds or credit), and the prioritization of generating income in other ways in order to avoid the costs and bureaucratic hurdles of seeking government assistance (Furlong & Scheberle, 1998). Earthquake Recovery: Gaps between Norms of Disaster Agencies and Expectations of Small Businesses. Such obstacles can be exacerbated by and contribute to trends of disinvestment in marginalized communities.

The burdens of the financial strain felt by creative entrepreneurs post-disaster are not equitably distributed among makers. 67% of makers reported taking at least one abnormal financial action to help recover from extreme weather events, such as using personal savings, taking on personal debt, falling behind on payments, or decreasing personal expenses. Notably, there are distinct racial disparities in the financial actions taken. Makers who are Black, Indigenous, or Persons of Color (BIPOC) were significantly more likely to resort to financial actions compared to their white counterparts, with a difference of 23% ( $\chi^2 =$

### % of Makers Who Needed to Take Individual Financial Actions Post-Disaster

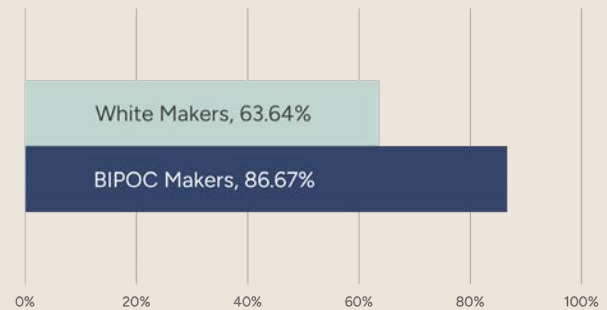


Figure 8: BIPOC makers are statistically significantly more likely than White makers to report needing financial action, such as taking on debt, falling behind on payments, utilizing personal savings, or decreasing personal costs.

4.40,  $p = 0.036$ , figure 8). This suggests that makers who are BIPOC face a disproportionate burden when it comes to individual financial actions following climate-related disasters. The difference in financial coping mechanisms between BIPOC and white makers might be due to barriers to obtaining insurance or federal assistance. Nonetheless, these disparities shed light on the differential access to resources and knowledge about financial preparedness and recovery strategies. It implies that there may be gaps in education and access to information related to disaster preparedness and recovery within the maker community, particularly among BIPOC makers.

Findings regarding the disparate paths to recovery from the artisan survey are echoed in broader research on this topic. Literature studying the demand for disaster assistance following Hurricane Katrina, for example, revealed that non-white business owners were no less likely to apply for disaster loans with the Small Business Association (SBA) but were significantly less likely to receive the funding. Home-based workers, on the other hand, were

less likely to apply for funds due to inadequate information on the complex process and the lack of eligibility for other formalized avenues of funding and compensation (Josephson and Marshall, 2016). Among disaster-affected small businesses that turned to external funding sources (insurance, non-government loans, and federal disaster relief funds) to cover their business losses in 2022, firms owned by people of color were more likely than white-owned firms to say that they recovered none of the revenue losses through some type of disaster funding (Funderburk & Misera, 2022). A 2018 study by researchers at Rice University and the University of Pittsburgh found that the dispersal of government aid in the aftermath of natural disasters fails to proportionally support minorities and low-income communities affected by natural disasters; “the more FEMA aid a county receives, the more unequal wealth becomes between more and less advantaged residents, holding all else constant, including local hazard damages” (Howell & Elliott, 2019). In a study on the gap in perceptions of small business owners and government officials on the effectiveness of public support and disaster recovery assistance, one official provided potential reasoning for this trend. “FEMA refrains from going out there [into low-income neighborhoods] partly because they’re afraid of the higher crime rates, but also because the richer neighborhoods demand the attention. [Lower-income small business owners] don’t know where to go for assistance or even what assistance is out there” (Furlong & Scheberle, 1998). Given the disproportionate impact of climate change and disasters on marginalized communities, such disparities and biases in recovery distribution have consequential impacts on the recovery capacity of artisans and makers-entrepreneurs of color and/or from low-income backgrounds.

### *Other Forms of Financial Support*

Given these obstacles and a growing need for disaster assistance in the face of increasingly severe and frequent climate-induced natural hazards, some nonprofit, philanthropic, and other non-governmental entities have worked to fill a gap in the provision of financial support during disaster recovery to the maker community. It appears that makers have turned to such groups to provide recovery funding, with 66% stating they received funding from either Etsy’s disaster relief grant or another charitable group. This reliance on charitable assistance indicates that makers may seek alternative avenues for support due to the challenges they face with insurance and federal programs.

CERF+, the Craft Emergency Relief Fund, for example, is a nonprofit organization focused on safeguarding artists’ livelihoods by working to establish a safety net to support creative careers. CERF+ offers Emergency Relief Funding that provides up to \$3,000 to artists who have experienced disaster or other career-threatening emergencies. As of 2023, CERF+ has distributed over one million dollars in grant funding to 640 artists across the country and frequently responds to disasters in real time by connecting with local partners on the ground to offer resources to artists impacted by natural hazards. Etsy has worked to support its maker community through a similar emergency relief fund with expanded eligibility requirements, created in partnership with CERF+, that awards grants to Etsy sellers who have experienced a federally declared natural disaster, have been an active seller for at least one year, and their accounts with Etsy are in good standing.

Philanthropic foundations are similarly important in providing emergency assistance to artists in times of need. Organizations such

as the Adolph & Esther Gottlieb Foundation, The Haven Foundation, Pinellas Community Foundation, the Haven Foundation, and the New York Foundation for the Arts assist artists in the face of disaster or other unexpected extreme hardships. Recipients for these funding opportunities are often selected through grant applications and eligibility criteria such as age, U.S. residence or citizenship, and income as confirmed by tax filing documentation. Certain sources of financial recovery are available for and target the recovery of specific groups within the artisan/maker community; many post-disaster grant programs include eligibility requirements that are geographically bound, targeted toward specific types of artist mediums, or aim to support makers of marginalized identities.

In addition, new insurance tools are being developed that could provide more affordable or flexible financial protection to artisans. One is parametric microinsurance. This type of insurance pays a pre-defined, small amount for a much lower cost. Payment is tied to an observable event measure and can be made rapidly. Instead of a long process of loss adjustment and negotiation over fair payments, these policies transfer the total amount as soon as the predetermined “trigger” is reached. For example, microinsurance is [available in Puerto Rico](#) which pays several thousand dollars within days of a hurricane, and the funds can be used for any need of the policyholder. Other models involve a Community Development Finance Institution or a community organization purchasing insurance to support the recovery of their borrowers, members, or those served by the organization. Such a model could also potentially be developed for a group of artisans (You et al. 2022).

While traditional avenues such as recovery funding from the Federal Emergency

Management Agency, Small Business Administration, and private insurance are vital, funding from philanthropic foundations, nonprofit organizations, microinsurance setups, and other non-government entities can offer unique benefits for artisans and makers seeking disaster recovery support. These organizations often streamline an application process, providing a more straightforward path to accessing recovery aid that is less subject to bureaucratic hurdles. Still, such organizations may be limited, relative to federal agencies and private insurance companies, with respect to reach, institutional resources, and funding streams for consistent distribution. As we navigate the intricate landscape of disaster recovery, it becomes clear that additional funding sources are essential - in particular, creative solutions such as microinsurance models or emergency grant opportunities with broad eligibility requirements to include artisans and maker-entrepreneurs who might struggle to access recovery assistance due to the obstacles posted in the previous section.

## ARTISAN OPPORTUNITIES FOR ENACTING CHANGE

While artisans may be particularly vulnerable to the impacts of climate change and barriers to disaster recovery/resilience, it is important to note they are also essential facilitators of adaptation and show extreme resiliency. One craft leader in Birmingham, Alabama believes it will be creative entrepreneurs who help identify innovative ways to address business issues in the wake of a disaster, and more effective ways to help prepare small, craft businesses for the unthinkable. She knows makers are creative -- they take raw materials and transition them into art or craft -- similarly, makers are able to make beauty out of “chaos” and think about the future in new ways. The observation is also backed by research, which shows that

“

For too long, the climate fight has been limited to scientists and policy experts. While we need their skills, we also need so much more. When I survey the field, it's clear that what we desperately need is more artists.

– Mary Heglar, Climate Journalist, 2021

”

when underserved individuals, such as women, people of color, and individuals of lower socio-economic status, are given the necessary access to capital and other resources, they can enact meaningful climate mitigation practices. For example, female entrepreneurs are more likely to pursue green networking opportunities than their male counterparts, finding like-minded business leaders to share adaptation and environmentally sustainable strategies. (Braun, 2009). Most makers surveyed by Nest have already embraced actions to minimize environmental footprints, with 73% affirming their commitment to initiatives geared toward environmental sustainability. In fact, Nest's collaboration with the Gullah Geechee basket weaving community identified that they have successfully adapted to the challenges posed by the decrease in the local availability of sweetgrass by widening the area from which they source this vital material.

Artisan and crafting work can also help individual

and community recovery after disasters, providing an additional source of income when extreme weather or economic downturns stress formal business endeavors. For instance, after the 1997 Red River Valley flood in the upper Midwest, women's paid and unpaid labor was vital during family and neighborhood recoveries (Enarson, 2001). These findings suggest that improving access to necessary tools, such as those discussed in detail later, can empower artisan communities to boost their resilience to climate change's impacts on their families and livelihoods.

“

The focus of my business is on environmental awareness and every decision I make is based on best practices for people and [the] planet. My art prints are made with sustainable paper + non-petroleum volatile organic compounds [VOC] free inks. My production costs are higher because of this but it's worth it for me.

– Makers United Artisan

”



# Part III: Insights & Recommendations

Unique vulnerabilities and work conditions faced by the maker community cause artisan businesses to often act reactively rather than proactively in addressing climate change impacts due to several key challenges. These include a lack of resources, limited knowledge, time constraints, and inadequate supportive policies. Many artisans have not implemented protective measures for their homes or businesses, and a significant portion has yet to take action to reduce their environmental footprint. This lack of engagement in climate resiliency efforts highlights the need for targeted education and support initiatives to promote preparedness within the artisan community. Additionally, resource constraints, including financial limitations, make it difficult for many artisans to invest in climate-adaptive measures. Extreme weather events can lead to substantial economic losses, affecting product quality and sales channels.

In this section, we summarize these and other key insights gleaned from Parts I and II on artisan impacts and responses to climate change/ climate-induced disasters. Informed by these findings, we provide actionable conclusions and recommendations that stakeholders in the artisan support and recovery/resilience sector, as well as policy makers and funders, can take as a whole together to advocate for artisans as they face an uncertain future due to climate change.

## KEY INSIGHTS

The findings revealed in this report shed light on who among the artisan community is impacted by climate change and how. These

insights hold several critical implications for addressing climate impacts on artisans in the United States.

### *Who is impacted?*

- Approximately 81% of artisans express concern regarding severe weather conditions and the potential impact of climate change on their business outcomes.
- 49% of artisans reported not having implemented protective climate adaptation measures for their homes or businesses.
- Half of the makers report a total household income below \$50,000 per year, and 58% report needing another source of income besides their craftwork.
- Marginalized communities, including people of color and those with lower socioeconomic status, are disproportionately affected by climate change; Makers who identified as BIPOC are more likely than makers who identify as white (a difference of 23%) to report insufficient disaster recovery resources and thus needing to take costly actions, such as taking on debt, falling behind on payments, utilizing personal savings, or decreasing personal costs.

### *How are they impacted?*

- The estimated average cost of disaster damages experienced by survey respondents was \$46,074, with a median cost of \$3,000.
- Many artisans rely on natural resources to create their craft, and climate change can disrupt the availability and affordability of these materials. Scarcer or more expensive

resources can significantly impact artisans' production costs and, consequently, their businesses.

- The majority of artisans work from home-based studios, making them particularly susceptible to climate impacts. Damage to both their personal living spaces and workspaces during extreme weather events can have a devastating dual effect. The overlap between work and home spaces often results in artisans being excluded from dedicated resources for either residential or small business recovery. Further, many makers rent, rather than own, their residence, which can complicate the ability to implement resilience efforts.
- The disaster cost most commonly experienced was damage to materials, as almost 58% of respondents report damages to their materials from climate-related events.
- The majority of artisans who experienced a climate disaster have never received an insurance payout to support recovery. Access to government assistance programs is hindered by bureaucratic complexities and eligibility criteria, leaving them underserved in times of need.
- 63% of respondents from Nest's climate survey indicated that they lack awareness or previous guidance regarding climate impacts, resilience, and related resources and advice for their businesses. This highlights a considerable knowledge gap within the artisan community.
- Artisans, particularly those engaged in handcraft and maker entrepreneurship, often operate with limited financial resources. Many rely on supplemental income sources to support their craft, which leaves them with constrained budgets for climate adaptation measures. This lack of financial capital is a significant barrier to their ability to prepare for and recover from

climate-related disasters.

## INFORMED RECOMMENDATIONS

The unique vulnerabilities and conditions faced by the maker community cause artisan businesses and the organizations/ agencies that support them to often act reactively rather than proactively in addressing climate change. Such challenges call for education, financial support, accessible resources, and inclusive policies to help artisans transition from reactive to proactive in facing climate disasters.

*Target disaster resources to under-resourced communities that face limited access to recovery aid despite the disproportionate burden of disaster costs*

There currently exist obstacles to accessing many types of financial resources for artisans recovering from a climate disaster, including federal programs and insurance. These challenges can be exacerbated by and contribute to trends of disinvestment in marginalized communities. Given the disproportionate impact of climate change and disasters on marginalized communities, disparities and biases in recovery distribution have consequential impacts on artisans and makers-entrepreneurs of color and/or low-income backgrounds. Upwards of 93% of maker businesses are minority-led in some U.S. cities; this environmental injustice thus poses a major threat to the artisan community and their capacity for recovery (Nest 2022). Intentionally allocating disaster resources to under-resourced communities that face a disproportionate burden of disaster costs and limited access to recovery aid is a critical step to advancing equitable climate solutions for the maker community and beyond.

*Support the development of localized and tailored resources and information guides for artisans and maker-entrepreneurs to prepare and respond to climate change*

Although this study identified a range of educational tools and technical standards for disaster resilience/recovery, such resources most often are directed to or promoted across larger corporations or take on a national perspective. This has left a notable gap in resources tailored to the unique needs of artisans and craft workers. The targeted distribution of disaster resilience information and resources to small artisan businesses is critical to ensure climate resilience is built among the maker community proactively, rather than in reaction to climate disasters and devastation. The creation of Nest's Maker Guides, as well as resources developed by partners at CERF+ or NCAPER (National Coalition For Arts' Preparedness and Emergency Response) were motivated to address unmet needs for maker-specific resilience resources. Still, the growing urgency to address climate change and consequent demand for resilient solutions within the artisan community necessitate further development and investment into localized and tailored resources and information guides for this community to prepare and respond to climate change.

*Improve access to disaster recovery aid and channels of support for small, home-based businesses*

Research into available disaster assistance options through the Federal Emergency Management Agency and Small Business Administration revealed that programs offered by these agencies predominantly cater to homeowners and traditional businesses – leaving small, home-based businesses at a

disadvantage. Home-based businesses that have faced damage to their studio or workspace may be deemed ineligible for FEMA Individual Assistance, as FEMA typically considers businesses as ineligible under IA programs. Artisan tools and equipment are often left uncovered by FEMA aid following a disaster, despite being critical to the livelihood and well-being of a maker. The growing presence of makers and small businesses that operate out of home-based studios or workspaces indicates the need to address obstacles for such businesses. The inability for individuals to apply to access assistance through FEMA Individual Assistance and business disaster loans/assistance limits the recovery capacity for home-based businesses. It necessitates improved access to disaster recovery aid and channels of support for small, home-based businesses.

*Mitigate the cost of disaster recovery aid by establishing climate resilience funds that are directly accessible to small businesses before disaster strikes*

Although maker-entrepreneurs may recognize the need and urgency to prepare for a future of increased climate disasters, dedicating resources and funds to disaster preparation may feel like a luxury investment to small businesses. Despite the potentially higher cost of reactive repairs following a disaster, proactive home hardening and loss reduction measures pose a barrier to climate resilience. Existing federal resilience and hazard mitigation funding programs, such as those offered by the Small Business Administration and the U.S. Chamber of Commerce, typically provide access to financial aid only after a disaster has struck. In recognition of these challenges, a forward-looking and cost-effective solution lies in establishing climate resilience funds that are directly accessible to small businesses



before a disaster occurs. Proactively investing in resilience can significantly reduce the long-term costs associated with disaster recovery aid (to small businesses and governmental loan/grant-based assistance programs). Thus, the establishment of climate-resiliency funds that are directly accessible can aid the business continuity of artisans and small businesses, strengthen local economic stability, and lessen the need for disaster recovery funds in an inevitable future of increased climate hazards.

#### *Microinsurance for Artisans*

New approaches to insurance are being explored to help fill existing gaps in disaster recovery, particularly in the face of escalating climate extremes. Some of these may be useful for artisans and makers. One example is parametric microinsurance. Parametric insurance refers to insurance policies that rapidly pay a set

amount based on an observable measure of the disaster, such as wind speed in a certain location. This avoids the need for a time-consuming and sometimes contentious process of loss adjustment between the policyholder and their insurer. The funds are quite flexible and can be used for any unmet disaster need. Microinsurance refers to low-coverage, low-premium insurance policies that are designed to protect low-income households from financial shocks. In the United States, the only currently operating microinsurance market is in Puerto Rico, but the model has been used globally to help provide affordable and accessible financial protection to many vulnerable populations. A microinsurance for U.S. artisans could give them fast and flexible dollars for recovery after a triggering climate disaster.

## CLOSING STATEMENT BY REBECCA VAN BERGEN, NEST FOUNDER AND EXECUTIVE DIRECTOR

This report underscores the most pressing challenges that the United States artisan and maker communities confront as we navigate the escalating impacts of climate change and climate-induced disasters. As the founder of Nest, I am extremely grateful for the experts and stakeholders who have collaborated with us to express the lived experiences of artisan communities across the U.S. Nest and our partners are committed to addressing these challenges head-on and leveraging our findings to drive positive change for artisans and makers across the nation.

Our study unearths critical insights that necessitate immediate action. The justified concerns of artisans regarding severe weather conditions and other climate impacts on their craft work, which is often home-based, underscore the anxiety that permeates the artisan community. Equally concerning is the fact that nearly half of our respondents have yet to implement essential protective climate adaptation measures. This revelation emphasizes the urgency of targeted education and support for initiatives that bolster preparedness and resilience within these communities.

Financial limitations, which form a formidable barrier to climate adaptation efforts, threaten the very existence of these creative enterprises. Moreover, marginalized communities, including people of color and those with limited financial resources, bear a disproportionate burden from climate change's adverse effects, echoing disparities within the artisan community. This inequity underscores the importance of directing disaster recovery resources toward under-resourced communities.

The dearth of engagement in climate resiliency efforts and the paucity of supportive policies underscore the critical need to improve access to disaster recovery aid and support channels for small, home-based businesses. Government support and inclusive policies are indispensable in ensuring the resilience of artisan enterprises in the face of climate challenges.

In response to these insights, we have crafted a set of actionable recommendations. These proposals, informed by the unique perspective of our organization, prioritize targeted disaster resources, localized and tailored climate resilience resources, improved access to disaster recovery aid, and the establishment of climate resilience funds that would be easily accessible to small businesses. Furthermore, inspired by innovative insurance models, we advocate for the introduction of microinsurance for artisans, offering rapid and flexible financial assistance following climate-induced disasters.

As the founder of this organization, I am resolute in our mission to champion the artisans and makers who are navigating a world where climate-induced disasters are a constant and undeniable threat. We firmly believe that by taking proactive steps and implementing the recommended measures, we can empower artisans not only to endure but to thrive in a future where climate-induced disasters are an ever-present reality.

This is not just a call to safeguard creative businesses; it is a call to preserve traditions, strengthen communities, and build a more resilient, equitable, and sustainable future for all. Together, we can create meaningful change and secure a brighter future for the entire artisan and maker community.

# References

- American Association for the Advancement of Science. (2021, July 26). Wildfire trends in the United States. SciLine. <https://www.sciline.org/wildfires/trends/#useful-resources>
- Battisto, J., Choi, L., Kramer Mills, C., Mattiuzzi, E., Ryder Perlmeter, E., & Storey, S. (2018). 2017 Small Business Credit Survey: Report on disaster-affected firms. Federal Reserve Banks of Dallas, New York, Richmond, and San Francisco.
- Braun, P. (2009). Going green: Women entrepreneurs and the environment. *International Journal of Gender and Entrepreneurship*, 2(3), 245–259. <https://doi.org/10.1108/17566261011079233>
- Bothwell, C. (2023, August 22). The artist's safety net. CERF+. <https://cerfplus.org/>
- Caniato, F., Caridi, M., Crippa, L., & Moretto, A. (2012). Environmental Sustainability in Fashion Supply Chains: An exploratory case based research. *International Journal of Production Economics*, 135(2), 659–670. <https://doi.org/10.1016/j.ijpe.2011.06.001>
- Chakraborty, J., Collins, T. W., & Grineski, S. E. (2019). Exploring the environmental justice implications of Hurricane Harvey flooding in Greater Houston, Texas. *American Journal of Public Health*, 109(2), 244–250. <https://doi.org/10.2105/ajph.2018.304846>
- Chambwera, M., MacGregor, J., & Baker, A. (2011). The informal economy. International Institute for Environment and Development.
- Collier, B., Lawrence, P., Ragin, M.A., & You, X. (2021). Financing severe climate risk: evidence from businesses during Hurricane Harvey. Available at SSRN. <https://doi.org/10.2139/ssrn.3741812>
- Collier, B., & Ragin, M. (2022, August 16). As climate risk grows, so will costs for small businesses. *As Climate Risk Grows, So Will Costs for Small Businesses*. <https://hbr.org/2022/08/as-climate-risk-grows-so-will-costs-for-small-businesses>
- Dodman, D., Sverdlik, A., Agarwal, S., Kadungure, A., Kothiwai, K., Machededze, R., & Verma, S. (2023). Climate change and informal workers: Towards an agenda for research and Practice. *Urban Climate*, 48, 101401. <https://doi.org/10.1016/j.uclim.2022.101401>
- Dore, M. H. I. (2005). Climate change and changes in global precipitation patterns: What do we know? *Environment International*, 31(8), 1167–1181. <https://doi.org/10.1016/j.envint.2005.03.004>
- Duara, N. (2016, November 4). The gullah people have survived on the Carolina sea islands for centuries. now development is taking a toll. *Los Angeles Times* <https://www.latimes.com/Nation/La-Na-Hurricane-Matthew-Geechee-Snap-Story.Html>. Retrieved July 2023,.
- Enarson, E. (2001). What women do: Gendered labor in the Red River Valley Flood. *Environmental Hazards*, 3(1), 1–18. <https://doi.org/10.3763/ehaz.2001.0301>
- Environmental Protection Agency. (2022a, August 2). Climate Change Indicators: Lyme Disease. EPA. <https://www.epa.gov/climate-indicators/climate-change-indicators-lyme-disease>

# References

- Environmental Protection Agency. (2022b, December 12). Heat Islands and Equity. EPA. <https://www.epa.gov/heatislands/heat-islands-and-equity>
- EPA. (2023a, September 29). Climate change indicators in the United States | US EPA. United States Environmental Protection Agency . <https://www.epa.gov/climate-indicators>
- Environmental Protection Agency. (2023b, May 1). Heat Island Effect. EPA. <https://www.epa.gov/heatislands>
- EPA. 2021. Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts. U.S. Environmental Protection Agency, EPA 430-R-21-003.
- EPG industries. (2021, February 12). The risk of heat damage to cargo. EPG Industries. <https://epgindustries.com/the-risk-of-heat-damage-to-cargo/>
- Etsy. (2023a, February 23). 10-K Annual Report . SEC Filings Details. <https://investors.etsy.com/financials/sec-filings/sec-filings-details/default.aspx?FilingId=16426014>
- First Street Foundation. (n.d.). Find your property's climate risks - homepage. Risk Factor. <https://riskfactor.com/>
- Funderburk, B., & Misera, L. (2022, November 15). The impact of natural disasters on small businesses. Fed Small Business. <https://www.fedsmallbusiness.org/analysis/2022/the-impact-of-natural-disasters-on-small-businesses>
- Furlong, S. R., & Scheberle, D. (1998). Earthquake Recovery: Gaps between Norms of Disaster Agencies and Expectations of Small Businesses. The American Review of Public Administration, 28(4), 367-389. <https://doi.org/10.1177/027507409802800403>
- Gaul, G. M. (2017, May 23). How rising seas and coastal storms drowned the U.S. Flood Insurance Program. Yale Environment 360. <https://e360.yale.edu/features/how-rising-seas-and-coastal-storms-drowned-us-flood-insurance-program>
- Guerrero, V., & Richards, J. (2015). Female entrepreneur and negotiation self-efficacy: A study on negotiation skill building among women entrepreneurs. Journal of Entrepreneurship Education, 18(2), 17–28.
- Headwaters Economics . (n.d.). Neighborhoods at Risk. <https://nar.headwaterseconomics.org/>
- Hiti, M., C. Kramer, A. Sarkar (2022). How do Natural Disasters Affect U.S. Small Business Owners? Liberty Street Economics. Federal Reserve Bank of New York. September 6.
- HOUSEHOLDS: Models for Inclusive Disaster Insurance. New York; Environmental Defense Fund. <http://www.edf.org/sites/default/files/2023-06/Addressing-Financial-Recovery-Gaps-for-South-Carolina-Households.pdf>
- Itd, R. and M. (2023, January). North America Handicrafts Market: Industry trends, share, size, growth, opportunity and forecast 2023-2028. Research and Markets - Market Research Reports - Welcome. <https://www.researchandmarkets.com/reports/5769415/north-america-handicrafts-market-industry>

# References

- Insurance Institute for Business & Home Safety (IBHS) . (2022, May 2). About Us. DISASTERSAFETY.ORG. <https://disastersafety.org/about/>
- Josephson, A., & Marshall, M. I. (2016). The demand for post-Katrina disaster aid: SBA disaster loans and small businesses in Mississippi. *Journal of Contingencies and Crisis Management*, 24(4), 264–274. <https://doi.org/10.1111/1468-5973.12122>
- Junia Howell, James R Elliott, Damages Done: The Longitudinal Impacts of Natural Hazards on Wealth Inequality in the United States, *Social Problems*, Volume 66, Issue 3, August 2019, Pages 448–467, <https://doi.org/10.1093/socpro/spy016>
- Kapetaneas, J., Smith, C., & Rollins, K. (2021, November 12). South Carolina sea islands families facing land loss from climate change, development. ABC News. Retrieved July 2023, from <https://abcnews.go.com/US/south-carolina-sea-islands-families-facing-land-loss/story?id=81114019>
- Kousky, C. and K. French (2022). *Inclusive Insurance for Climate-Related Disasters: A Roadmap for the United States*. Boston: Ceres.
- Kousky, C., French, K., & You, X. (2023). *Addressing Financial Recovery Gaps for South Carolina*. Environmental Defense Fund, May.
- Levy, B. S., & Roelofs, C. (2019). Impacts of climate change on workers' Health and Safety. *Oxford Research Encyclopedia of Global Public Health*. <https://doi.org/10.1093/acrefore/9780190632366.013.39>
- Mickelson, S. S.; Patton, N.; Gordon, A.; Rammler, D. (2020). *Fixing America's Broken Disaster Housing Recovery System Part 1: Barriers to a Complete and Equitable Recovery*; Disaster Housing Recovery Coalition, National Low Income Housing Coalition: Washington, D.C..
- National Coalition for Arts Preparedness and Emergency Response . (n.d.). Home: National coalition for arts' preparedness & emergency response. Current Headlines and Resources. <https://www.ncaper.org/>
- NASA. (2023, March 2). Global temperature. NASA. <https://climate.nasa.gov/vital-signs/global-temperature/>
- National Institute of Building Sciences . (2019). (rep.). *NATURAL HAZARD MITIGATION SAVES: 2019 REPORT*. Retrieved October 5, 2023, from <https://www.nibs.org/projects/natural-hazard-mitigation-saves-2019-report>
- NOAA National Centers for Environmental Information (NCEI) *U.S. Billion-Dollar Weather and Climate Disasters (2023)*. <https://www.ncei.noaa.gov/access/billions/summary-stats/US/2013-2022>
- NOAA National Centers for Environmental Information (NCEI). (2022, January). Annual 2022 global climate report. *Annual 2022 Global Climate Report | National Centers for Environmental Information (NCEI)*. [https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202213#:~:text=Despite%20the%20last%20two%20years,0.32%C2%B0F\)%%20since%201981](https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202213#:~:text=Despite%20the%20last%20two%20years,0.32%C2%B0F)%%20since%201981)
- NOAA National Centers for Environmental Information (NCEI). (2023, January 12). Annual 2022 National Climate Report. *Annual 2022 National Climate Report | National Centers for Environmental Information (NCEI)*. <https://www.ncei.noaa.gov/access/monitoring/monthly-report/national/202213>
- NCEI.Monitoring.Info@noaa.gov. (n.d.-b). Risk and Vulnerability. *Billion-Dollar Weather and Climate Disasters | National Centers for Environmental Information (NCEI)*. <https://www.ncei.noaa.gov/access/billions/risk>



# References

- Nest. (2023). Analysis for Impact: Using Data to Support Artisans Through Climate Change. [https://www.buildanest.org/wp-content/uploads/2023/08/2023\\_McGovernFoundation\\_InsightsForImpact.pdf](https://www.buildanest.org/wp-content/uploads/2023/08/2023_McGovernFoundation_InsightsForImpact.pdf)
- Nest, Environmental Defense Fund, and Etsy. (2023, October 3). Responding to Climate Disasters: A Disaster Recovery Guidebook for US Artisans & Maker-Entrepreneurs. Nest. <https://www.buildanest.org/climate-guides/>
- Nest. (2022). (rep.). The State of the Handworker Economy 2nd Edition: US Makers. Retrieved October 4, 2023, from <https://www.buildanest.org>
- NOAA. (2016, January 25). Climate change and extreme snow in the U.S. National Centers for Environmental Information (NCEI). <https://www.ncei.noaa.gov/news/climate-change-and-extreme-snow-us>
- O’Neill, M. S., Zanobetti, A., & Schwartz, J. (2005). Disparities by race in heat-related mortality in four US cities: The role of air conditioning prevalence. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 82(2), 191–197. <https://doi.org/10.1093/jurban/jti043>
- Pörtner, H.-O., D.C. Roberts, H. Adams, I. Adelekan, ... and Z. Zaiton Ibrahim, et al. (2022). Technical Summary. Climate Change Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp.37–118, doi:10.1017/9781009325844.002.
- Raincoat. (n.d.). The policy that gives you cash after a hurricane . Raincoat. <https://www.microseguropopular.com/home-en>
- Robbins, E., Meyer, I., Preuss, I., & Magdaleno, J. (2017, November 10). Discovering Your City’s Maker Economy . Washington, DC; National League of Cities.
- Runyan, R. C. (2006). Small business in the face of crisis: Identifying barriers to recovery from a natural disaster1. *Journal of Contingencies and Crisis Management*, 14(1), 12–26. <https://doi.org/10.1111/j.1468-5973.2006.00477.x>
- Schulte, P. A., Bhattacharya, A., Butler, C. R., Chun, H. K., Jaklitsch, B., Jacobs, T., Kiefer, M., Lincoln, J., Pendergrass, S., Shire, J., Watson, J., & Wagner, G. R. (2016). Advancing the framework for considering the effects of climate change on worker safety and health. *Journal of Occupational and Environmental Hygiene*, 13(11), 847–865. <https://doi.org/10.1080/15459624.2016.1179388>
- Smith, A. B., NCEI’s billion dollar disaster analysis doesn’t (AFAIK) break down costs for different sectors (government. (2023, January 10). 2022 U.S. billion-dollar weather and climate disasters in historical context. NOAA Climate.gov. <https://www.climate.gov/news-features/blogs/beyond-data/2022-us-billion-dollar-weather-and-climate-disasters-historical#:~:text=The%20number%20and%20cost%20of%20weather%20and%20climate%20disasters%20is,NOAA%20NCEI>
- United States Government Accountability Office. (2020, February 7). Disaster loan processing was timelier, but planning improvements and pilot program evaluation needed. <https://www.gao.gov/assets/gao-14760.pdf>
- U.S. Federal Emergency Management Agency . (2019, June 11). Fact Sheet: Myths and Facts About Flood Insurance. Fema.Gov. Retrieved October 5, 2023, from <https://www.fema.gov/press-release/20230425/fact-sheet-myths-and-facts-about-flood-insurance>

# References

United States Environmental Protection Agency . (2023, September 29). Climate change indicators in the United States | US EPA. Climate change indicators in the United States. <https://www.epa.gov/climate-indicators>

You, X., C. Kousky, H. Wiley, and J. Skees (2022). Linking Inclusive Finance with Inclusive Insurance in the United States through

Community Development Financial Institutions. New York: Environmental Defense Fund.

20 entrepreneur Statistics you need to know (2023). Apollo Technical LLC. (2023, September 22). <https://www.apollotechnical.com/entrepreneur-statistics/>

# Data Tables

<b>Business/Home Location</b>	<b>n</b>	<b>N</b>	<b>%</b>
Texas	14	76	18.42%
California	10	76	13.16%
Illinois	10	76	13.16%
Massachusetts	10	76	13.16%
North Carolina	8	76	10.53%
Alabama	6	76	7.89%
Missouri	3	76	3.95%
Arizona	2	76	2.63%
Louisiana	2	76	2.63%
Oklahoma	2	76	2.63%
New York	1	76	1.32%
Colorado	1	76	1.32%
Florida	1	76	1.32%
Hawaii	1	76	1.32%
Michigan	1	76	1.32%
Oregon	1	76	1.32%
South Carolina	1	76	1.32%
Washington	1	76	1.32%
Wisconsin	1	76	1.32%
<b>Craft Work as Primary Household Income</b>	<b>n</b>	<b>N</b>	<b>%</b>
Craft primary HH income	32	76	42.11%
Craft not primary HH income	44	76	57.89%
<b>Gender</b>	<b>n</b>	<b>N</b>	<b>%</b>
Female	69	76	90.79%
Male	6	76	7.89%
Non-binary	0	76	0.00%
Prefer to self-describe	2	76	2.63%
Prefer not to say	0	76	0.00%
<b>Education*</b>	<b>n</b>	<b>N</b>	<b>%</b>
Some high school	0	58	0.00%
High school diploma or GED	0	58	0.00%
Some college	11	58	18.97%
Trade/technical degree	4	58	6.90%
College degree	27	58	46.55%
Postgraduate courses or degree	4	58	6.90%
<b>Race/ethnicity</b>	<b>n</b>	<b>N</b>	<b>%</b>
African American or Black	13	78	16.67%
American Indian or Alaska Native	3	78	3.85%
Asian	4	78	5.13%
Caucasian or White	41	78	52.56%
Hispanic or Latinx	13	78	16.67%
Middle Eastern or North African	0	78	0.00%
Native Hawaiian or Other Pacific Islander	0	78	0.00%
Another race or ethnicity	4	78	5.13%

Maker Business Location	n	N	%		
From home only	53	79	67.09%		
From a location outside home only	4	79	5.06%		
Both	22	79	27.85%		
Annual Household Revenue	n	N	%		
\$200K and greater	3	76	3.95%		
\$125k-\$199999	8	76	10.53%		
\$100k - \$124,999	5	76	6.58%		
\$75k-99,999	13	76	17.11%		
\$50k-74,999	18	76	23.68%		
\$35k -49,999	4	76	5.26%		
\$25k-\$34,999	6	76	7.89%		
Less than \$25	12	76	15.79%		
Prefer to Not Say	7	76	9.21%		
Annual Household and Craft Revenue, Nest Participants Only	n	Avg	Median	min	max
Annual Household Revenue*	52	84231.19	70000	0	220000
Calculated Craft Revenue*	48	18415.21	15500	0	90000

Business Disaster Experienced in the Last 5 years	n	N	%
Yes	49	63	77.78%
No	14	63	22.22%
Type of Disaster Experienced	n	N	%
Flood	9	38	23.68%
Storm	18	38	47.37%
High winds	9	38	23.68%
Drought/ Water shortage	5	38	13.16%
Wildfire	11	38	28.95%
Extreme heat	7	38	18.42%
Hail	3	38	7.89%
Ice Storm/Extreme Cold	7	38	18.42%
Other	1	38	2.63%
Damages Experienced	n	N	%
Workspace damaged	21	38	55.26%
Materials damaged	22	38	57.89%
Employees: difficulty getting to work	3	38	7.89%
Employees: Own household or community damage	5	38	13.16%
Difficulty sourcing supplies	12	38	31.58%
Reduced product demand/customers	13	38	34.21%
Other	8	38	21.05%
No Damage	1	38	2.63%
Self or employees had to relocate due to extreme weather-related events	n	N	%
Yes	12	49	24.49%
No	37	49	75.51%

Estimated Costs of Damages from Disaster	n	Avg	Median	Min	Max
Estimated Cost of Damages- All Businesses	45	46074.44	3000	0	1200000
Estimated Costs of Damages - Etsy Only	18	109716.7	11000	500	1200000
Estimated Cost of Damages - Nest Only	27	3646.296	1000	0	25000
Ability to cover costs in the month post-disaster	n	N	%		
Could cover immediate costs	26	62	41.94%		
Did not have enough money to cover costs	22	62	35.48%		
Neutral	14	62	22.58%		
Property Insurance	n	N	%		
Home	27	79	34.18%		
Business	3	79	3.80%		
Both	38	79	48.10%		
None	11	79	13.92%		
Why No Property Insurance for Business	n	N	%		
Can't Afford It	20	36	55.56%		
Not at Risk	3	35	8.57%		
Don't Know How to Get It	4	35	11.43%		
Don't Think it is Worth It	3	35	8.57%		
Other Ways to Pay for Damages	1	35	2.86%		
I Don't Know	12	35	34.29%		
Other	15	35	42.86%		
Flood Insurance	n	N	%		
Home	14	79	17.72%		
Business	1	79	1.27%		
Both	11	79	13.92%		
None	37	79	46.84%		
I Don't Know	16	79	20.25%		
Why No Flood Insurance	n	N	%		
Can't Afford It	10	50	20.00%		
Not at Risk	33	50	66.00%		
Don't Know How to Get It	2	50	4.00%		
Don't Think it is Worth it	1	50	2.00%		
Other Ways to Pay for Damages	0	50	0.00%		
I Don't Know	1	50	2.00%		
Not Eligible	5	50	10.00%		
Other	4	50	8.00%		
Ever Obtained Insurance Payout Post-Disaster	n	N	%		
Yes	5	49	10.20%		
No	42	49	85.71%		
Don't know	2	49	4.08%		

Financial Resources Obtained (incl. Etsy Grant)				n	N	%											
FEMA Grant				1	29	3.45%											
SBA loan				1	29	3.45%											
Private Lender Loan				1	29	3.45%											
Charitable Group Assistance				19	29	65.52%											
Other				0	31	0.00%											
Financial Response Actions				n	N	%											
Use personal savings				21	49	42.86%											
Took on more credit card debt.				15	49	30.61%											
Decrease other expenditures				10	49	20.41%											
Fell behind on other payments, such as utilities or rent/mortgage.				5	49	10.20%											
None				2	49	4.08%											
Other				7	49	14.29%											
Any Financial Response Action after disaster							BIPOC			Not BIPOC			Diff.	P			
							n	N	%	n	N	%					
							33	49	67.35%	26	30	86.67%	21	33	63.64%	23.03%	0.036

Believe extreme weather events are more frequent/severe				n	N	%
Yes				63	78	80.77%
No				9	78	11.54%
Don't Know/ Neutral				6	78	7.69%
Worry about extreme weather/climate change on Business				n	N	%
Strongly Agree				38	78	48.72%
Somewhat Agree				23	78	29.49%
Neutral/Don't Know				12	78	15.38%
Somewhat Disagree				1	78	1.28%
Strongly Disagree				4	78	5.13%
Worry about the effects of climate change on my business across these areas				n	N	%
Material sourcing				54	79	68.35%
Shipping				10	79	12.66%
General increased costs				42	79	53.16%
Weather-related production difficulties				36	79	45.57%
Fewer sales				34	79	43.04%
Impact on employees				14	79	17.72%
Other (please specify)				6	79	7.59%

Reported Understanding of Climate Change*	n	N	%
Yes	27	44	61.36%
No	17	44	38.64%
Information Source for Climate Change*	n	N	%
A nonprofit	13	44	29.55%
The local government	8	44	18.18%
The national government	8	44	18.18%
A friend or family member	13	44	29.55%
Other	9	44	20.45%
No one has given me information about climate change	28	44	63.64%

Implemented Climate Resilience Measures Home or Business	No Disaster Experience			Disaster Experience			Diff	p			
	n	N	%	n	N	%					
Any protection	40	79	50.63%	3	14	21.43%	27	49	55.10%	33.67%	0.026
No protection	39	79	49.37%	11	14	78.57%	22	49	44.90%		
Actions to minimize environmental footprint*											
	n	N	%	n	N	%	n	N	%	Diff	p
Yes	32	44	72.73%	8	14	57.14%	24	30	80.00%	22.86%	0.113
No	12	44	27.27%								

Climate Resilience Measures Taken	n	N	%
Weatherization	11	79	13.92%
Raising the foundation of building	0	79	0.00%
Installing renewable energy technologies	8	79	10.13%
Installing energy/water efficiency	18	79	22.78%
None	47	79	59.49%
Other	13	79	16.46%
If no resilience measure taken, why haven't taken any action	n	N	%
believe will not experience a disaster	4	32	12.50%
do not currently have enough money	20	35	57.14%
Do not know which actions to take	8	33	24.24%
I do not have the time	2	32	6.25%
Other	9	34	26.47%



# Nest x Etsy

Climate Research and Solutions Report

## CONTACT

For questions or more info please contact [research@buildanest.org](mailto:research@buildanest.org)



**NEST**

building a new handworker economy  
[buildanest.org](http://buildanest.org)