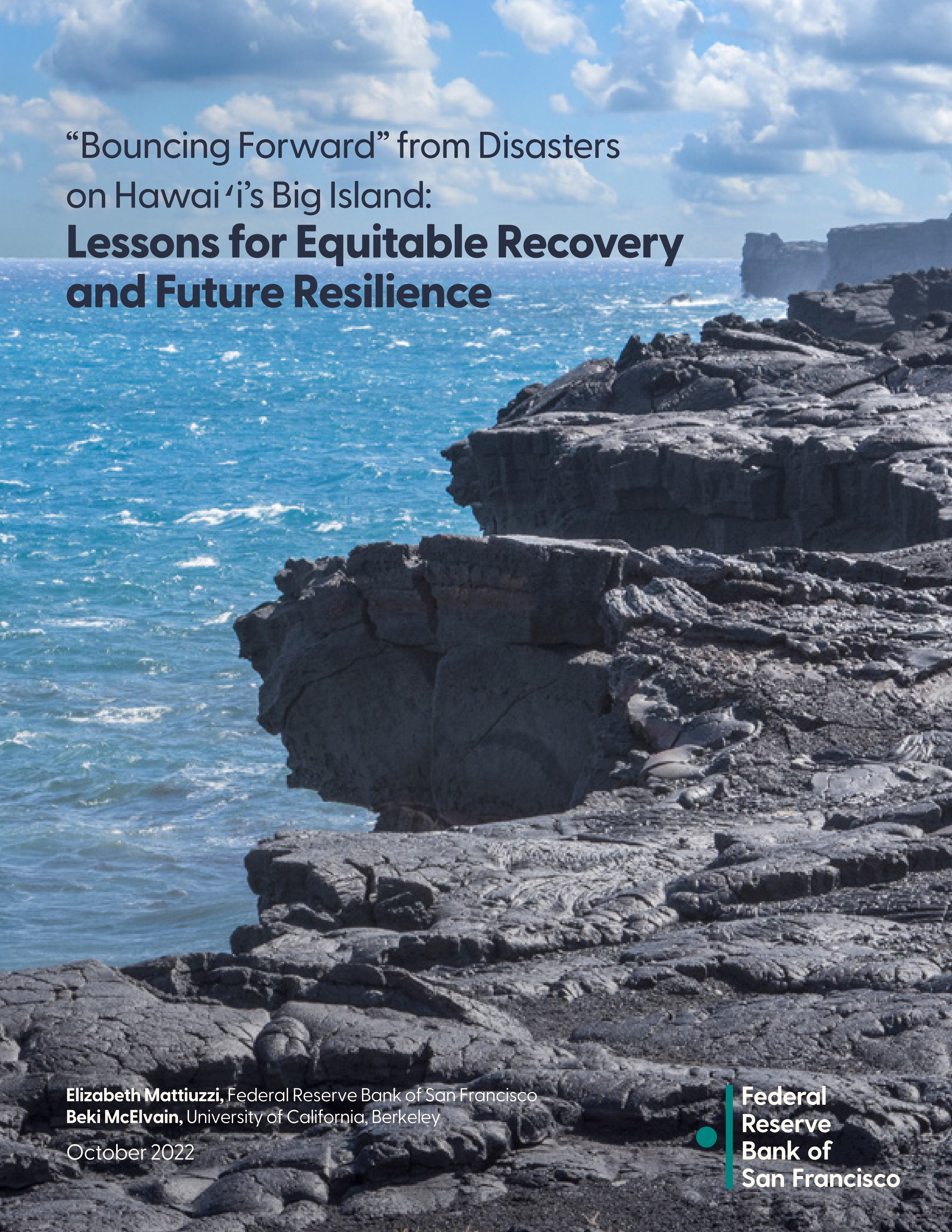

“Bouncing Forward” from Disasters on Hawai‘i’s Big Island:

Lessons for Equitable Recovery and Future Resilience

Elizabeth Mattiuzzi, Federal Reserve Bank of San Francisco
Beki McElvain, University of California, Berkeley

October 2022

Federal Reserve Bank of San Francisco

About the Authors

Elizabeth Mattiuzzi is a senior researcher in Community Development at the Federal Reserve Bank of San Francisco. Her research focuses on regional housing affordability, climate and disaster resilience, and economic opportunity for low- and moderate-income communities and communities of color. She holds a PhD in City and Regional Planning from UC Berkeley.

Beki McElvain is a PhD candidate in the Department of City & Regional Planning at UC Berkeley. Her research is focused on development finance, disaster governance, and state and institutional political economies as they relate to planning in precarious places.

Acknowledgments

We thank the individuals who gave their time to be interviewed for this report. We would also like to thank Jon Ford, Bina Shrimali, Laura Choi, Crystal Ejanda, and Laurel Gourd at the Federal Reserve Bank of San Francisco and Taz George, Jessica Farr, and Matt Lambert at the Federal Reserve Board of Governors for their guidance and comments on this report.

Disclaimer

Suggested Citation

Mattiuzzi, Elizabeth, and Beki McElvain. 2022. "'Bouncing Forward' from Disasters on Hawai ʻi's Big Island: Lessons for Equitable Recovery and Future Resilience." Federal Reserve Bank of San Francisco Community Development Research Brief 2022-05. doi: 10.24148/cdrb2022-05.

Executive Summary

Recovery planning and implementation on the island of Hawai ʻi following a federally declared disaster provides an example of equitable, forward-looking disaster preparation and resilience. Community development professionals in other geographies can learn from the way planners and nonprofits used a regional equity approach to improving household and community resilience, broke down silos to have flexible funding from multiple sources ready for future disasters, and worked to build community through “resilience hubs” that provide disaster-related and ongoing services that help promote economic participation. These efforts also provide lessons for potential future Community Reinvestment Act (CRA) activity that helps prepare communities for disasters.

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Background

In 2018, the "Big Island" of Hawaiʻi in the state of Hawaiʻi experienced a major earthquake and volcanic eruption. Lava flows from the Kīlauea volcano destroyed over 700 homes and displaced over 2,000 people in the Puna District during a three-month period.[1] In the years following the immediate disaster recovery, a community-engaged planning process led by the County of Hawaiʻi focused on improving disaster preparation and resilience in low- and moderate-income (LMI) communities and communities of color, who have historically faced barriers to participation in the economy. Recovery work in Puna continued and evolved alongside the COVID-19 pandemic response and included innovative efforts to make Hawaiʻi Island residents more resilient to future disasters.

Pre-disaster conditions in the Puna District on Hawaiʻi Island where the eruption occurred included underlying challenges as well as strengths. Puna has a high poverty rate and a limited housing supply; many homes are off the municipal utility grid, and some lack basic amenities.[2] The Kīlauea eruption disrupted economic activity island-wide, and the loss of homes put further pressure on the island's housing supply.[3] Seventeen percent of residents on the island work in the tourism industry, which was impacted by the eruption and by the pandemic, further complicating recovery.[4] Residents' limited access to public transportation, health-care facilities, cell phone reception, and internet service created barriers to full economic participation.[5] At the same time, generations of Puna residents have lived in a rural area near an active volcano with such values as self-reliance, acceptance of changes in the environment, and taking care of one's neighbors. These values and the relationships between people on Hawaiʻi Island have been assets at the center of recovery efforts undertaken by the county, nonprofit and philanthropic organizations, and community members. "Hawaiʻi is about relationships and people taking care of each other and taking care of our environment… Our strengths come in our ability to work together, and there has been an incredible amount of people working together," noted Diane Chadwick of the Hawaiʻi Community Foundation.

Research Questions, Methods, and Report Roadmap

The San Francisco Fed's mission is to promote a healthy, inclusive, sustainable economy and to support the nation's financial and payment systems. Disasters disrupt local economies through their impacts on workers, businesses, and communities. We became aware of volcano recovery efforts in Puna through our Community Development team's outreach and engagement work. This research brief asks:

1. How does a disaster recovery effort with a stated resilience focus operationalize the idea of making people more resilient for a future disaster—and did this include aiming to make people better off than they were prior to the disaster?
2. To what extent did these efforts focus on regional equity issues, such as access to jobs and cost of living?
3. How well did the concept of "resilience"—as typically applied in broader policy context—resonate and/or apply in the local context on Hawai ʻi Island?

To begin to answer these questions, we conducted seven semi-structured interviews with nine representatives from the public, philanthropic, nonprofit, and community development finance sectors.[6] [7] We sought out interviewees representing different sectors who were involved in the planning and/or implementation phase of recovery from the eruption and the pandemic.[8] We identified interviewees based on our team's engagement work and the recommendations of other interviewees.[9] We also reviewed the county's Kīlauea Recovery and Resilience Plan (KRRP) and related plans generated in the years following the Kīlauea eruption.[10] Further research could approach similar questions through a comparison with other localities that have developed or implemented a plan for disaster recovery and resilience.

This report first examines how planners on Hawai ʻi Island grounded the KRRP and its use of the idea of resilience in local perspectives and culture. Next, we discuss the recovery and resilience plan's use of an equity lens to approach island-wide recovery that improves residents' baseline conditions. We then describe how a related tourism plan proposes an approach to improving economic equity for residents. The following two sections look closely at the philanthropic, nonprofit, and community development finance response to the Kīlauea eruption and the COVID-19 pandemic, as well as how they relate to implementation of the KRRP's goals; this includes the development of resilience hubs that aim to improve disaster preparedness and baseline conditions for residents and the development of flexible recovery funding. We conclude with a discussion of findings relative to our research questions and considerations for community development policy and practice, based on the experience of disaster recovery on Hawai ʻi Island.

Proactive Disaster Recovery and the Community Reinvestment Act (CRA)

The Kīlauea and pandemic recovery efforts' forward-looking focus and emphasis on addressing residents' day-to-day economic stability are broadly applicable to the work of community development practitioners, and relate to the Community Reinvestment Act (CRA) and ongoing efforts to modernize the CRA regulations.[11] For example, regarding disaster recovery, under the current CRA regulations banks can receive consideration for activities that help to revitalize and stabilize designated disaster areas. The proposal to amend the CRA regulations that is under consideration would build on the current approach and would also grant consideration for activities that help communities prepare for disasters, if those activities are consistent with a government plan, program, or initiative.[12] The agencies note that this consistency "provides a mechanism to ensure that activities…support articulated community revitalization goals" and local needs.[13] If adopted, the rule provides an opportunity for community development professionals to increase engagement in local disaster preparation planning processes, as well as disaster preparation and resilience investment opportunities.

Existing CRA guidance encompasses activities that benefit low- and moderate-income (LMI) areas in general and specific disaster recovery efforts.[14] If adopted, the agencies' proposal would additionally define "*disaster preparedness* and climate resiliency activities as activities that assist individuals and communities to prepare for, adapt to, and withstand natural disasters, weather-related disasters, or climate-related risks," including "activities that help low- or moderate-income individuals and communities *proactively prepare for or mitigate the effect of disasters* and climate-related risks, for example, earthquakes, severe storms, droughts, flooding, and forest fires."[15] Examples of proactive disaster preparation include, but are not limited to, "financial products and services that help residents, small businesses, and small farms in targeted geographies prepare for and withstand the impact of future disasters" and "retrofitting affordable housing to withstand future disasters."[16] Community leaders' efforts on Hawai ʻi Island provide an example of planning, implementation, and funding of forward-looking disaster recovery and preparation that aims to make communities more resilient for future disasters, and an updated CRA framework may provide stronger support for these efforts.

Recovery and Resilience Planning on Hawaiʻi Island Focused on Local Perspectives

The development of the KRRP involved a strong emphasis on incorporating local perspectives and local culture. The County of Hawaiʻi's planning process engaged about 3,600 people through interviews, focus groups, and workshops in homes and schools.[17] Planners noted that after some initial larger meetings, a shift to smaller conversations was particularly helpful to developing relationships with and gathering input from residents. To give residents ownership over implementation of the KRRP, the County of Hawaiʻi and its partners developed communities of practice to help smaller nonprofit organizations apply for grants and to help build trust between different groups, such as residents, nonprofits, and private-sector representatives from the tourism industry.

> ***Planners and nonprofits involved in volcano and pandemic recovery worked to bridge the gap between definitions of resilience that are about stasis or resisting nature and local values by employing a more transformative definition of resilience as improving people's lives in harmony with nature, according to interviewees.***

County officials worked to design the planning process to be broadly accessible, including from the perspective of Native Hawaiian culture, which is part of the broader culture for all residents of the state of Hawaiʻi. For example, planners framed the goals of disaster recovery and resilience planning around *pono*, a term from the Hawaiian language that evokes restoration, balance, and sustainability between people and with the environment.[18] Other philanthropic and nonprofit organizations involved in volcano and pandemic recovery work also use culturally relevant terms from the Hawaiian language that are familiar to a broad local audience.

Considering local values helped bridge local understandings of resilience with definitions used in state, federal, and philanthropic funding applications.[19] Planners and nonprofits involved in volcano and pandemic recovery worked to bridge the gap between definitions of resilience that are about stasis or resisting nature and local values by employing a more transformative definition of resilience as improving people's lives in harmony with nature, according to interviewees. Institutional definitions of resilience tend to borrow from engineering, with a primary lens on an individual's ability to withstand a shock, while community development practitioners more often focus on community resilience, including the overall health of social and public infrastructure systems, in addition to that of individuals.[20] In a 2018 survey, Keenan finds that a majority of planners conceptualize resilience in terms of bouncing back to a previous state, rather than as an opportunity to envision multiple possibilities for the future.[21] In a study of fire recovery in California, Mendez (2020) finds that disaster response and recovery can exacerbate existing inequalities if it does not consider the particular needs of vulnerable communities. The fact that the term *resilience* has multiple dimensions can create flexibility for bringing people together, as planners on Hawai ʻi Island did.[22]

County planners also helped translate between local priorities and consultant expertise when developing the KRRP. Local governments, especially in places with smaller populations, often lack the resources or the specific technical expertise to engage in disaster planning on their own. Bringing in technical assistance for planning from consultants is a common and often necessary approach, but it also brings challenges. Plans developed with consultants can sometimes have a cookie-cutter feel, with solutions borrowed from other geographies. Planners on Hawai ʻi Island took an active role in bridging the gap between expertise from consultants and local perspectives in a way that helped build local capacity. Bob Agres from the County of Hawai ʻi noted that their team optimized the partnership by "using only the things [the consultants] had really good technical expertise in, rather than letting them do the work for us…to get the best use of resources."

Disaster Recovery and Resilience Planning on Hawai ʻi Island Involved a Regional Equity Approach

The County of Hawai ʻi developed the KRRP as part of a broader recovery effort between 2018 and 2020.[23] Planners used an equity lens to study the ongoing factors that contribute to disaster risk for residents of the island, particularly LMI communities and the Native Hawaiian population. Longstanding inequities contribute to Native Hawaiians' making up a disproportionate share of the state's LMI population.[24] Meerow, Pajouhesh, and Miller (2019) outline three main components of equitable resilience planning that improve on pre-disaster conditions for LMI communities and communities of color: "equitable distribution of goods, services, and opportunities"; "acknowledgment and respect of different groups"; and "equitable participation in decision-making processes."[25]

LMI communities often face higher disaster-related risks than the general population due to such factors as disproportionate health burdens, housing instability, and having fewer resources (for example, savings and more limited access to transportation).[26] Additionally, housing that is more affordable at lower income levels is often susceptible to higher risk from hazards due to location, structural issues, and other factors that contribute to vulnerability in the event of a disaster.[27] [28] Longstanding racial and economic inequities contribute to these risk/vulnerability factors and add to challenges with recovery.[29] National community development organizations have been on the front lines of disaster recovery in recent years, working alongside community groups across the United States to incorporate equity and resilience for future disasters into post-disaster relief and planning efforts.[30] [31]

The recovery plan includes equity-oriented goals and actions around improving baseline conditions, particularly for Puna District residents, with regard to economic self-sufficiency, access to social and health services, and basic infrastructure improvements.

Although immediate recovery efforts focused on the Puna area where the eruption occurred, funding and planning for future disaster resilience encompassed the entire island of Hawai ʻi . As the sole municipal government on the island, the County of Hawai ʻi functions like a regional government for multiple smaller communities under its jurisdiction. Additionally, federal disaster declarations are made at the county level, enabling federal disaster relief funding to be used for countywide efforts, in addition to work in Puna. Residents of Hawai ʻi Island live, work, and study across different parts of the island.

The recovery plan includes equity-oriented goals and actions around improving baseline conditions, particularly for Puna District residents, with regard to economic self-sufficiency, access to social and health services, and basic infrastructure improvements.[32] The plan also aims to improve community disaster preparedness and reduce risk by changing land-use designations to discourage development in high volcanic activity areas and creating a tax incentive for property owners to undertake earthquake and hurricane retrofits.[33]

Recovery Planning Focused on Strengthening Long-Term Equity in the Local Economy

County officials on the Big Island developed the KRRP concurrently with the county's General Plan, its Multi-Hazard Mitigation Plan, and its Tourism Strategic Plan. The recovery and resilience plan's goals—developed collaboratively with input from community members; public-, private-, and nonprofit-sector stakeholders; and experts in planning, tourism, and community economic development—informed these other plans, notably the tourism plan.

> *According to the county's Tourism Strategic Plan, community feedback reflected a desire to shift tourism to be "more pono"—that is, "respectful of people, cultural practices, sacred and historical sites, natural resource protection, and raising up future generations to carry on the community legacy while providing economic opportunities."*

The tourism planning process took on a new urgency and an expedited planning time frame due to the impacts of the COVID-19 pandemic on the economy of Hawai'i Island. The tourism industry, which was hit hard by the pandemic, is an important source of jobs in the state and for the Native Hawaiian population.[34] However, many jobs in the industry do not provide a living wage. The state of Hawai'i has the highest overall cost of living in the nation (considering such factors as groceries, utilities, housing, and transportation) and the second-highest housing costs in the nation (taken alone).[35] [36] Because tourism planning was occurring during the COVID-19 pandemic, when the tourism industry was hit hard and many low-wage workers were laid off, the process included discussions on how to make the industry more sustainable for residents in the long term.

According to the county's Tourism Strategic Plan, community feedback reflected a desire to shift tourism to be "more *pono*"—that is, "respectful of people, cultural practices, sacred and historical sites, natural resource protection, and raising up future generations to carry on the community legacy while providing economic opportunities."[37] County planners we interviewed noted that communities of practice that grew out of outreach for the planning process included both community and tourism industry members, which helped create working relationships and trust between the two groups. The tourism plan recommends supporting baseline community and economic resilience through "natural and cultural resources management, …a network of resilience hubs, strengthening food security and resilience [and] agriculture development, youth development and entrepreneurship, and medical services."[38] These goals are consistent with the recovery and resilience plan.

"Resilience Hubs" Aim to Improve Baseline Conditions and Preparedness for Future Disasters

In addition to describing the immediate recovery work that occurred following the eruption, the KRRP identifies areas where there is potential to improve preparedness for future disasters and to build the social and economic resilience of residents on the island. County officials noted that the intention of the plan is to help people "bounce forward" by improving socioeconomic conditions for LMI communities, rather than simply returning to the pre-eruption normal. Although interviewees noted that many people on the island are still recovering from multiple disasters, including the eruption and the COVID-19 pandemic, the goal of the plan is to identify activities—proposed and ongoing—that, if funded, could strengthen local service networks, and capacity, and improve conditions for residents. The plan, which was published in 2020, at the height of the pandemic, highlights activities that grew out of both the volcano recovery and the pandemic recovery.

The recovery plan envisions a network of coordinated "resilience hubs" or physical locations with different programming and focus areas. The network of hubs would expand on existing efforts to provide services to meet people's day-to-day needs, as well as improve residents' resilience for future disasters, including through building social capital and becoming more economically self-sufficient.[39] [40] The plan calls for new hubs to be built or existing facilities renovated on sites owned/operated by community-serving entities, such as schools, faith-based organizations, and nonprofits. The plan also calls out resilience hubs that were already serving the needs of the community on Hawai ʻi Island during the pandemic.

> ***The network of resilience hubs would expand on existing efforts to provide services to meet people's day-to-day needs, as well as improve residents' resilience for future disasters, including through building social capital and becoming more economically self-sufficient.***

Interviewees estimated that there were around 20 resilience hubs in operation during the pandemic using different funding sources, including federal CARES Act funds channeled through the County of Hawai ʻi. A brick-and-mortar presence helped build trust with the community and reach people in areas with limited cell/internet reception, according to interviewees. The resilience hubs provided a place where people could access WiFi and meet with navigators from nonprofits who could help them access other services. Financial workshops that took place at the resilience hubs also provided residents with an opportunity to meet others going through the same issues. Community navigators helped people learn about programs, such as rental and homeowner assistance, and helped them file taxes so they could receive federal stimulus payments and child tax credits. Door-to-door outreach by locals helped people learn about resources they could access, including programs available at the resilience hubs.

Vibrant Hawai ʻi (VH), one of the operators of resilience hubs noted in the plan, is a grassroots nonprofit that received CARES Act funds to support local pandemic response in over 30 communities on the island of Hawaiʻi.[41] During the pandemic, VH hubs provided safe spaces for students and their families with access to WiFi, laptops, school supplies, and health and mental well-being resources, restaurant-prepared meals, and food boxes. Sourcing the meals and food boxes from local restaurants and farms that primarily serve the visitor industry helped keep money flowing in the local economy during the pandemic. Over an initial 16-week period, VH assisted over 41,000 households and over 108,000 individuals, 38 percent of whom were under the age of 18. Within an 18-month period, the community-led network of VH hubs served over 178,000 individuals with access to technology, food, Mental Health First Aid and Trauma-Informed Care training, Hands-Only CPR/AED training, digital literacy workshops, and help connecting to SNAP (Supplemental Nutrition Assistance Program), rent and utility assistance, and other social-service supports.[42] [43] Through these efforts, VH channeled over $3.5 million into the local economy, while also increasing workforce development and capacity. According to VH's Janice Ikeda, the now formalized network of 38 hubs have not only committed to respond to immediate needs in times of disaster, but are implementing the FEMA THIRA (Threat and Hazard Identification and Risk Assessment) process to identify threats, hazards, and risks in their community, as well as invest in the human, social, cultural, and built capital needed to realize true resilience.[44]

The county's recovery and resilience plan points to additional potential strategies for different resilience hubs to strengthen residents' ability to participate in the economy going forward. These include programming around food production and agriculture; social, health, and medical services; youth development, mentoring, and "college-ready" and internship programs; education and entrepreneurship opportunities; and workforce training. Diane Chadwick of the Hawaiʻi Community Foundation (HCF) noted that there have been two additional rounds of funding to grow the resilience hub network. Seventeen of the 38 resilience hubs around the island are developing community emergency-response plans, including asset and vulnerability mapping to identify where people are who have needs and where resources are, such as for power/charging and food distribution. "There's a lot of work on our island to be prepared for these events with locations and coordination—people are ready and know whom to call, who has the resources and knows how to get food out into the community," said Chadwick.

Recovery Funding Has Prioritized Flexibility, Strengthening Communities, and Reducing Disaster Risk

Flexible grantmaking

Flexibility in designing community development grants and lending played a critical role in deploying funding quickly to meet immediate volcano and pandemic relief needs. It also helped promote implementation of the KRRP's goals for equitable long-term disaster recovery and resilience. One model for this flexibility is "adaptive funding/financing."[45] In the case of Kīlauea and pandemic recovery, adaptive funding/financing encompassed the ideas of 1) having a funding pool set up in advance with agreements on where the funding is coming from, 2) having multiple options prepared in advance for how loans could be structured to enable tailoring to specific post-disaster needs, and 3) having technical assistance and coaching available to both the organizations deploying grants or loans and the organizations or individuals receiving it.

County officials noted that it is unusual for grantmakers to fund staffing support, but that these flexible resources helped maintain the stability of services that support residents on the island.

In the immediate aftermath of the eruption, the HCF provided flexible funding to support nonprofit staffing so that those nonprofits could pivot to disaster response without compromising their ongoing services for LMI populations. County officials noted that it is unusual for grantmakers to fund staffing support, but that these flexible resources helped maintain the stability of services that support residents on the island. HCF also funded the deployment of database software that nonprofits providing relief could access to easily perform case management across different organizations providing various services for residents.

In 2021, HCF launched the Puna Strong grant cycle to support community-driven, volunteer-based organizations in the eruption area.[46] Puna Strong used state recovery funds channeled through the county and philanthropic funds raised by HCF to support the goals of the KRRP, including building social capital and improving baseline economic conditions for residents to increase their resilience for future disasters. The partnership between the County of Hawaiʻi and the HCF helped "create capacity within existing nonprofit organizations to be able to respond no matter what the disaster," according to Michelle Kauhane of HCF.

Building on lessons learned during the Kīlauea recovery and 2018 flooding on the island of Kauaʻi, HCF has since developed county-level, island-wide Strong Funds for each of the four counties in the state of Hawaiʻi, including the Hawaiʻi Strong Fund, in order to be able to quickly deploy recovery funds from the counties and donors when needed, as well as build community on an ongoing basis.[47] "While we were responding to two disasters, we realized we needed to be ready to pull the trigger at any time—these didn't exist when Kīlauea and the Kauaʻi flooding happened," noted Kauhane. The county-level Strong Funds can flexibly support nonprofits that have an existing infrastructure and staff capacity for disaster recovery before federal aid arrives in the weeks and months following a disaster. HCF is working in close partnership with the counties, including with MOUs (memoranda of understanding) for some, so that county dollars can be deployed through the funds immediately following a disaster. The Strong Funds were already in place and flexible enough to adjust to a new set of issues when the COVID-19 pandemic hit.

Flexible emergency loans

Hawaiʻi Community Lending (HCL), a Native community development financial institution (CDFI)[48] that operates across the state, developed a model for flexible emergency loans during the Kīlauea eruption on Hawaiʻi Island that they rapidly replicated on Maui, Oʻahu, and Kauaʻi after federally designated disasters, including fires and flooding.[49] The emergency loan funds were deployed to low-income residents impacted by the disasters to help them build homes on or off their existing property. The unsecured loans were up to $50,000, had a 60 percent maximum debt-to-income ratio and a 4 percent fixed interest rate, and were risk-rated based on employment history, credit scores, and housing as a percentage of a borrower's monthly income. To date, the loans have been able to leverage other public and private funds to assist ten local families in moving from homelessness to homeownership, on average within six months, leaving borrowers with an average monthly housing cost of $358.

> ***The combination of grant dollars and patient capital supporting Hawaiʻi Community Lending's emergency loan helped keep low-income residents of Hawaiʻi, especially those with very little savings, from sliding into financial instability or losing their home following the twin disasters of the volcano and the pandemic.***

During the COVID-19 pandemic, the relationships built during the previous disasters helped HCL to quickly assemble another small-dollar loan fund, capitalized with grant funds from the counties of Hawaiʻi and Kauaʻi, to provide financial stability until people could collect unemployment or receive CARES Act funding. Recipients were required to complete financial counseling with a HUD-certified counselor to help determine the best way to use the funds to keep their families afloat. The forgivable loans were typically around $5,000, had no underwriting criteria, had interest-only payments for the first six months, and were risk-rated based on housing as a percentage of a borrower's monthly income. To date, HCL has had 5 percent losses, which is considered low in the CDFI industry for this type of loan. Funding from the Hawai ʻi Community Foundation (HCF), Hawai ʻi Pacific Health (HPH), and the Chan Zuckerberg Initiative family foundation helped keep the interest rate at zero for families, while HCF and HPH covered their costs with the equivalent of 6 percent interest. The emergency loan developed into the Ohana Line of Credit, which can be refinanced and the term extended up to five years or become part of a debt consolidation loan that HCL also offers. To date, 370 local households have received a small dollar loan through the fund (totaling over $1.46 million in capital), with 164 of those loans made in the first six months of the program.

The combination of grant dollars and patient capital supporting HCL's emergency loan helped keep low-income residents of Hawai ʻi, especially those with very little savings, from sliding into financial instability or losing their home following the twin disasters of the volcano and the pandemic. Jeff Gilbreath of HCL noted that the organization's emergency loans provided a lifeline to low-income residents who "on average have less than $500 in savings at the time of application. That's not even a month's rent, so we built this product for income-constrained, employed, or recently employed [residents] who don't have liquid assets to weather the storm." Gilbreath attributes the success of HCL's emergency loans to the financial counseling provided by its partner Hawaiian Community Assets, the flexibility of the funding, and the loan loss reserve provided by the public and philanthropic sectors. Financial counseling offered the opportunity for loan recipients "to connect with a person who's trained in trauma-informed care who lives in the community… Most of our team knows what it is to be in that situation and have had to dig themselves out," noted Gilbreath.

Discussion

Building relationships among community members and institutions was core to recovery work addressing the Kīlauea eruption and the COVID-19 pandemic on Hawai ʻi Island. Disaster recovery efforts by the public and nonprofit sectors included a strong emphasis on preparing residents for future disasters. This involved specific disaster preparation and planning, as well as work on improving people's financial conditions and ability to participate in the workforce, which are key to household resilience. Recovery and resilience work also focused on strengthening community ties in recognition of the idea that social capital is key to disaster resilience. The aim of these efforts was to help residents "bounce forward" in a way that looks different from bouncing back to a previous state. Resilience hubs in different locations on the island are playing a central role in both disaster preparation and overall resilience. Efforts to improve resilience for households, the community, and the local economy have focused on the interconnectedness of the island as a regional economy and a housing market. Although the term *resilience* has multiple dimensions and possible applications, participants in recovery efforts worked to make the term their own. As one interviewee noted, "To me, resilience is about the actual on-the-ground people finding the efficacy to lead for themselves, to take action for themselves, and that has really grown out of all of these disasters."

Considerations for Policy and Practice

- Community participation in a planning process is one step toward community-engaged disaster preparation and resilience, although it does not solve longstanding equity issues on its own. The proposed CRA rulemaking would consider certain activities that are consistent with a government plan, program, or policy to qualify for CRA credit. The experience on Hawai ʻi Island with concurrent recovery from the Kilauea eruption and the COVID-19 pandemic suggests that maintaining a community-driven approach is an ongoing process.
- Resilience hubs can play a role in increasing community resilience before, during, and after a disaster. One component of the resilience hub model is to have community facilities provide backup power, such as solar plus battery storage, at their locations so that people can charge their phones, etc., during a disaster. The proposed CRA rulemaking considers utility-scale investments in solar projects that would benefit LMI census tracts as part of disaster preparedness and climate resiliency.[50]
- Private-sector capital can assist disaster recovery and preparation via grantmaking and patient capital that is blended in funds operated by CDFIs to reduce borrowing costs for individuals or nonprofits. If adopted, the proposed CRA rulemaking would streamline investment in these types of funds by considering all activities with Treasury Department–certified CDFIs to qualify for CRA credit.[51] The proposed rulemaking also sought feedback on whether to place greater emphasis on equity investments, long-term debt financing, donations, and services via CDFIs, low-income credit unions, and minority- and women-owned depository institutions, as opposed to other types of activities, such as placing short-term deposits in a minority- or women-owned depository institution.[52]
- Philanthropic and community development finance funding helped bridge the gap between the initial events (the eruption, the start of the pandemic) and the arrival of federal assistance for nonprofits and families on Hawai ʻi Island. Employing an adaptive

funding/financing model provided a level of flexibility for grants and loans that interviewees indicated had a positive impact.

The combined experience of the Kīlauea eruption and the pandemic, among other recent disasters in the state of Hawaiʻi, provided an opportunity for experimentation and breaking down silos to create more nimble disaster response and preparation and community development funding/financing models. Recovery and resilience work by public-sector, philanthropic, nonprofit, and community development finance organizations on Hawaiʻi Island focused on addressing barriers to full economic participation that communities already faced and that were compounded by multiple disasters, including the Kīlauea eruption and the COVID-19 pandemic. The KRRP identifies community strengths and vulnerabilities and areas that could benefit from more coordination and funding, and the county incorporated goals from the KRRP into other plans, including those for hazard mitigation and tourism. This ongoing work is targeted at Puna residents who were impacted by the volcano but extends to LMI residents throughout the island, particularly in the context of the pandemic. Although the experience on Hawaiʻi Island with proactive, forward-looking disaster preparation occurred in the wake of a disaster, any community could assess its risks and vulnerabilities and engage in disaster preparation and resilience work, and lessons from Hawaiʻi Island provide considerations for other jurisdictions.

> *"To me, resilience is about the actual on-the-ground people finding the efficacy to lead for themselves, to take action for themselves, and that has really grown out of all of these disasters."*

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