



As the wildfire and hurricane seasons of 2020 have shown us, where communities can live and flourish is shifting. Places in the United States are increasingly inhospitable, and as a result, people are being forced to move - which will only be accelerated over time. Projections show that sea-level rise will displace as many as 13 million Americans; extreme heat will impact 100 million Americans; 28 million people across the country will face large-scale wildfires.¹ Extreme weather events are impacting places that have not flooded or burned in recent memory. As a result, communities don't often have the resources, data, and policy tools at their disposal to help them predict and address the risks of future disasters. Instead, many communities continue to allow development in risk-prone floodplains, coastal areas, and forests, compounding the potential impact of damage.

Nonetheless, as extreme weather risks become more apparent, many US communities are working to adapt and reduce their risk.² Some communities have the resources to alter the environment further – building levees or defining the urban interface with forest fires. In other communities, there is only so much we can do to control the natural elements.³ Increasingly, there is simply no way to engineer a solution. We must move out of harm's way. This is not a simple prospect. People's social networks, personal identities, and livelihoods are attached to their neighborhoods. Yet, increasingly, it seems obvious that we run the risk of mass climate gentrification or driving haphazard, internal "climate migration" without careful action.⁴

Rather than avoid this difficult truth, we propose taking a hard look at the practical steps decision-makers can take when considering how to help people move out of harm's way. Recent experience offers several lessons we can build on to incorporate resettlement into more planning processes and programs. From our work with cities and states across the US, we find ten key principles to guide program design as cities manage climate resettlement. If we start now, buyout and resettlement can be a proactive adaptation strategy, not just a reaction to a recent event.⁵

¹ [Climate Change Will Force a New American Migration](#), in ProPublica by Abrahm Lustgarten, September 15, 2020

² With Climate Change No Longer in the Future, Adaptation Speeds Up, in the New York Times, by Jeffrey Ball, September 21, 2018

³ The Fight to Tame a Swelling River With Dams That May Be Outmatched by Climate Change, in the New York Times, by Tyler J. Kelley, March 21, 2019

⁴ America's First Climate Refugees, in The Guardian, by Suzanne Goldenberg, May 13, 2013

⁵ Charlotte Shows How to Beat Flooding in Bloomberg Businessweek, by Christopher Flavelle, September 19, 2018

THE TEN PRINCIPLES:

1. **COMMUNICATE THE PRACTICAL IMPLICATIONS OF CLIMATE RISK TO EMPOWER LOCAL DECISION-MAKING.**

Communicating risk in terms that people can understand and relate to is a critical first step in engaging the issue of resettlement. Using language like the 1 in a 100-year storm does not help people understand what this means for them on a day-to-day basis. Conversations with communities should be grounded in climate science but delivered at the rate that people can absorb. Too much technical language and data or doom and gloom can paralyze decision-making. The discussion should be focused on current and future risks with clarity on the time horizon communities will face them over, acknowledging that projections may shift. Many resettlement programs come out of past disasters, but the future risk might come from a different type of hazard. In addition to climate data, real estate market indicators need to be examined. This will establish if the market is avoiding pricing in climate events or if businesses are already relocating out of an area. The combination of climate and market indicators will help communities understand not only hazard risks but also economic risk.



EXAMPLE:

Financial District-Seaport
Climate Resilient Master Plan
Community Open House

As a part of the Financial District-Seaport Climate Resilience Master Plan, the New York City Economic Development Corporation (EDC) with support from HR&A took an innovative approach to a public forum event through an immersive, museum-like experience that paired education on climate risks with feedback-gathering on potential solutions. The event was designed as an “Open House,” where community members could drop in and engage through accessible narrative, hands-on participation, and strong facilitation to create a meaningful understanding of the climate risks and potential solutions.

2. **INCLUDE RESETTLEMENT IN COMMUNITY PLANNING PROCESSES.**

Too often, resettlement is considered a third-rail solution and excluded from discussion in adaptation planning processes. Including resettlement as a viable adaptation strategy among many, helps communities weigh the decision and determine when it is appropriate for them. This process creates opportunities for households and businesses to directly engage in conversations about their relocation options to make informed decisions at the household and business level.



IMAGE SOURCE

EXAMPLE:

Isle de Jean Charles, LA: Resettlement Project

The island community of Isle de Jean Charles in southern Louisiana faces severe risks from the combined threats of coastal flooding, sea-level rise, and land loss. The island's residents, predominantly native people, have sought a way to preserve their community and reduce their risk. With support from the US Department of Housing and Urban Development through the National Disaster Resilience Competition, the State of Louisiana and the Isle de Jean Charles community have been involved in a multi-year, intensive community planning process to design a new community and a comprehensive resettlement program to help the community move to a new, safer location. With support from CSRS, the community and state government have developed a master plan for a new, inland community that will be the focal point for reuniting the families that have called the island home. The new community offers better access to employment and services and reestablishing the residents' culture and cohesion. Now in the construction phase, nearly half the households have chosen to voluntarily resettle out of harm's way. Thanks to a rigorous, phased, and adaptable planning process that offered various opportunities for resettlement, the difficult but necessary option of resettlement is becoming a reality. ([Source](#))

3. ENABLE HOUSEHOLDS TO DECIDE WHEN THEY ARE READY FOR RESETTLEMENT.

It's important to incentivize households to opt-in, but also embrace uneven adoption supporting those who remain along with those who resettle. The tradeoffs will be different for each household, and they will come to different conclusions accordingly about whether to relocate or stay in place. The challenges of relocating vary by age, household size, and numerous other factors. A resettlement plan must support those who do not immediately resettle and minimize the degree to which households feel compelled to resettle because government support for their community is being withdrawn.

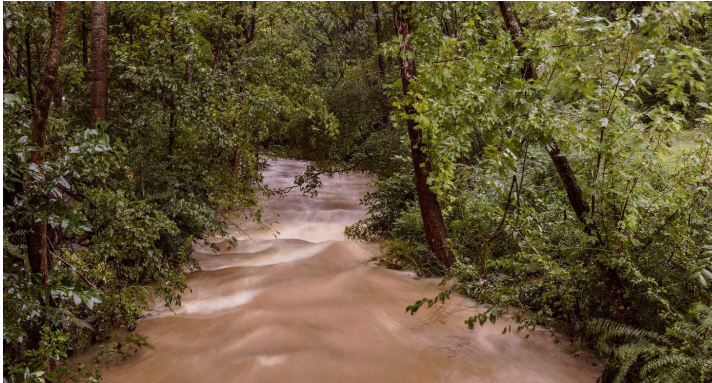


IMAGE SOURCE

EXAMPLE:

Charlotte-Mecklenburg County,
North Carolina: Quick Buy
Program

Charlotte-Mecklenburg developed a voluntary floodplain buyout program that allows residents to enroll and participate when they are ready. Using a combination of federal and local funds, the program can move quickly to purchase flooded homes and ensure that funding is available when households opt-in. To date, the program has purchased over 400 flood-prone homes, supporting over 700 families and businesses to relocate, and avoided over \$25 million in losses. This program was developed as a proactive, long-term strategy to reduce risk rather than as a reaction to a major flood event. The acquired land is put into service as part of the natural floodplain, and the program continually improves building codes and floodplain maps to ensure the new development is not located in the floodplain. ([Source](#))

4. DESIGN FLEXIBLE PROGRAMS THAT MEET PEOPLE'S ACTUAL NEEDS.

Programs that support relocation need to define broad eligibility terms with less restrictive documentation requirements to ensure that those in need are able to access assistance. The program should allow for flexibility in how funding is used, expanding eligible uses beyond housing to allow households to apply funding to education and businesses. Although the allocation and design of buyout programs are under federal and state jurisdictions, local governments administer 94% of property buyout programs.⁶ Local governments need to build their capacity to disburse funds in real-time, which may require leveraging local resources to bridge a funding gap until FEMA funding reaches.



IMAGE SOURCE

EXAMPLE:

Houston, TX: Houston Resilient Strategy

Recognizing the slow and complex federal buyout process, the City of Houston is establishing a community buy-in/buyout property swap program to provide resources for expedited buyouts and relocation opportunities. In addition, the City is exploring a voluntary pilot program that supports residents to relocate to new, refurbished, or relocated homes with lower flooding risk in the same communities, in turn reducing risk and preserving social ties. ([Source](#))

⁶ <https://advances.sciencemag.org/content/5/10/eaax8995>

5. **EQUAL IS NOT THE SAME AS EQUITABLE.**

Just as climate risks have disproportionate impacts on people with fewer resources, recovery and resilience efforts can recreate, rather than redress, these inequities if not designed to advance equity. Resettlement programs that rely on payouts based on property value or a similar calculation give the appearance of being ‘fair’ but exacerbate existing inequity and cause greater harm to households. Payouts should be calculated on the higher of the two costs: the home’s pre-storm market value or the cost to repair the damage to the home. The buyout is just one form of assistance for households in a resettlement process and should be paired with relocation assistance and housing support in the new location as needed.



[IMAGE SOURCE](#)

EXAMPLE:

New Orleans, LA: Road Home Program

Following Hurricane Katrina, the Road Home program funded homeowner repairs and buyouts. Homeowners received compensation based on the pre-storm property value of their homes. This meant that homeowners in predominantly black neighborhoods with lower housing values were compensated at lower rates even though their costs to rebuild were the same as homes of similar sizes in predominantly white neighborhoods with high values. This formula caused homeowners in the Lower Ninth Ward - a predominantly Black neighborhood - to face average shortfalls of over \$75,000, while the predominantly white Lakeview faced shortfalls of \$44,000. In the three years following, more than 35,000 Black homeowners continued to be disproportionately affected.⁷

⁷ According to a 2008 analysis of the Road Home program by PolicyLink.

6. SUPPORT THE RESETTLEMENT PROCESS FROM BEGINNING TO END.

A comprehensive resettlement program will have both “from” and “to” options for participants, helping them find a new home or business location that not only reduces their risk but meets their other needs. This would include support with determining where the household or business will move, how their risk and economic prospects will be affected, and potentially support the move itself. Since low-income households and communities of color disproportionately experience climate impacts, it is essential that the resettlement process does not exacerbate a household’s economic prospects further but improve it. Local governments must provide case management support and wraparound services to support households to prosper as they move out of harm’s way. This will ensure that the resettlement program is successful beyond reducing exposure to climate risks and supporting household livelihoods.



IMAGE SOURCE

EXAMPLE:

Norfolk, VA: St. Paul’s Area People First Strategy

The St. Paul’s Area is low-lying and home to the region’s highest public housing concentration, which regularly floods. The City of Norfolk, in partnership with St. Paul Area residents, developed People First to support existing residents return, and those that relocate are supported and move to neighborhoods that afford them access to opportunity. People First builds on existing community assets to address current family challenges and empower residents through individualized supportive services. The City committed \$3.5 million annually to the strategy, enabling a case manager to be assigned to every family member to support job training and education, housing, and health and wellness services. ([Source](#))

7. BUILD PARTNERSHIPS TO SUPPORT THE RESETTLEMENT PROCESS.

Strategic partnerships will be critical for cities, particularly small and medium-sized cities with limited capacity, in their ability to plan for relocation, provide resources and solutions, collect data and evaluate outcomes, and shape policies. Coordination and partnership among localities and service providers will support the inclusion and integration of new households and expand access to opportunities.



[IMAGE SOURCE](#)

EXAMPLE:

Puerto Rico: La Liga de Ciudades

In the aftermath of Hurricane Irma and Maria, which struck Puerto Rico in September 2017, the territory's 78 mayors led the recovery effort. Recognizing the essential role of mayors in the immediate response and ongoing recovery, Open Society Foundations and Mayor Mitch Landrieu, with support from HR&A Advisors, launched a Mayor Exchange program. The Exchange provided direct assistance by pairing Puerto Rico's mayors to US mainland counterparts and developed a nonpartisan coalition of Puerto Rican mayors. The coalition created a long-term partnership and developed a platform to facilitate inter-municipal technical assistance and open dialogue with other leaders in Puerto Rico and on the mainland, driving the post-disaster rebuilding process. ([Source](#))

8. INVEST IN YOUR RECEIVING COMMUNITIES.

Increasingly a few communities receive a large influx of new residents after a disaster, but they are unprepared to absorb, provide opportunities, and meaningfully welcome new residents. Resettlement planning needs to include funding support for these communities and strategies to build connections among newcomers and current residents. To do this, local governments need to promote narratives that connect residents through common goals and values. This framing can build connections among new residents and neighbors, changing the perception of the displaced population.



EXAMPLE:

Anchorage, AK: Welcoming Anchorage Roadmap and Climate Action Plan

Anchorage is experiencing an influx of migrants, particularly indigenous communities across rural Alaska, who are being forced to relocate due to climate change. Rising local temperatures have only further exacerbated the stresses on the city's capacity as a receiving city. Recognizing that building inclusivity is not only foundational to a city's prosperity, but also essential to a city's resilience against climate change, the City established a Welcoming Anchorage Roadmap and Climate Action Plan to prepare the city for receiving residents.

9. OUR RISKS AND ECONOMIES ARE REGIONAL, BUT OUR GOVERNMENTS ARE NOT.

Local efforts need to be a part of a larger regional or state strategy to truly address the challenges of climate risks and opportunities for moving out of harm's way. If and when people choose to move to reduce their risk, it will be a decision made in combination with all the other factors of moving - jobs, commutes, schools, housing prices, access to services, distance to friends and family, to name just a few. These variables cross city and county lines, so any program that offers resettlement solutions must be supported or even led by a regional or state-wide entity. Furthermore, local governments rarely have the capacity and resources to administer these programs. Regional or state program management will also facilitate coordination with federal programs and replicability.



EXAMPLE:

Louisiana's Strategic Adaptation for Future Environments (LA SAFE)

After receiving federal aid, Louisiana launched LA SAFE to create a regional approach to building holistic community resilience. LA SAFE led a community engagement effort across six parishes to gather information and ideas and harness residents' experience. This process resulted in local recommendations for each parish connected through a broader regional strategy, which fully integrates community input and cutting-edge data analysis. ([Source](#))

10. THE LAND STILL HAS VALUE AFTER PEOPLE LEAVE.

After homes and businesses move out of harm's way, the land they leave behind can provide ecological functions and absorb some of the climate shocks that make the area risky. The land can be restored as a floodplain, forest, or coastal wetlands. It can provide valuable wildlife habitat and host recreational uses and amenities. These additional benefits, often called co-benefits, should be captured in the overall calculation of the value a resettlement program can provide. Since local governments may lose or see reductions in traditional revenue sources such as property or sales taxes when homes and businesses move, it's critical that they be rewarded by replacing them with these services. Resettlement programs can be designed to enhance the local economy.⁸ Re-positioned property can improve cost-benefit calculations while potentially increasing other funding sources for resettlement.



[IMAGE SOURCE](#)

EXAMPLE:

Grand Forks, ND: Buyouts and Levee Recreation

In 1997, floodwaters from the Red River and the Red Lake River caused extensive damage throughout Grand Forks, ND requiring the evacuation of 90% of residents, damaging 83% of homes, and creating almost \$1 billion in damages. In response, Grand Forks developed a multi-pronged approach to invest in flood control as a public amenity by developing a flood protection system that included both parkland and hard infrastructure. The buyouts and rebuilding programs that relocated homes and businesses in the downtown area catalyzed downtown development. The City complimented this downtown development by leveraging space from buyouts to preserve over 2,000 acres of open space along the river by integrating flood protection measures into the Greater Grand Forks Greenway. ([Source](#))

⁸ Must Floodplain Buyouts Decrease Tax Revenue? Published online by the University of Pennsylvania Wharton School of Business's Risk Center Lab, by Helen Wiley, July 5, 2018

A bonus principle which always applies:

DON'T WAIT FOR THE NEXT DISASTER, START PLANNING NOW.

Even though we don't know when the next disaster will arrive or what its impacts will be, we do know that it's coming. We also generally know what areas in our communities are most susceptible to which types of risks. Rather than wait and see what happens, it's critical that communities start planning now and consider proactive resettlement as a strategy to mitigate risk. Initiating conversations on resettlement before a disaster, without the pressure and distractions of post-disaster situations - where people are trying to rebuild their homes and lives - creates an opportunity to consider and implement resettlement more thoughtfully.

EXAMPLE:

Federal funding for resilience and risk mitigation

With the ever-increasing costs of disasters in recent years, the federal government has recognized that federal dollars are better spent on pre-disaster mitigation efforts than on post-disaster recovery. In fact, value of mitigation can be measured and has been shown that mitigation activities can save the nation \$6 in future disaster costs, for every \$1 spent on hazard mitigation.⁹ Starting with the National Disaster Resilience Competition launched in 2014 and now with Community Development Block Grant – Mitigation (CDBG-MIT) funding, the US Department of Housing and Urban Development is encouraging and requiring grantees to invest in risk reduction, including community resettlement. The Federal Emergency Management Administration (FEMA) has followed suit, recently launching a national funding competition called Building Resilient Infrastructure and Communities (BRIC) and greatly increasing its investment in Hazard Mitigation Assistance (HMA) in general. Buyouts and resettlement are strategies encouraged and likely to be funded by these agencies. Communities seeking to invest in risk reduction through community resettlement should pursue these funding sources. ([Source](#))

⁹ National Institute of Building Sciences, Natural Hazard Mitigation Saves: 2019 Report, <https://www.nibs.org/page/mitigationsaves>

ABOUT THE AUTHORS

This article was developed by CSRS and HR&A Advisors.



CSRS helps clients plan, design, fund and implement resilience projects so they can achieve their goals today with tomorrow in mind. For over 40 years, CSRS has served as a trusted advisor and facilitator committed to building stronger, smarter communities through project design, program management, and consulting. CSRS's inter-disciplinary team of architects, landscape architects, planners, civil engineers, environmental specialists deliver the right expertise for each client ensuring resources are used wisely, efficiently and effectively. CSRS believes in working smarter to deliver projects that positively impact communities.

CSRS strives to achieve industry leadership in each of its core services by leveraging innovation and expertise to improve communities. With a culture of creative thinking – and a technical grounding in engineering and architecture – CSRS provides a balance between big ideas and the technical ability to deliver a successful project every time, no matter how complex or challenging.



HR&A Advisors is a mission-driven public policy, economic development, and resilience consulting firm. From empowering local decision makers through capacity-building programs, to implementing resilience efforts in response to natural disasters, HR&A is an industry leader in strategic resilience thinking. Our interdisciplinary approach combines over 40 years of experience in organizational strategy, planning and community development, public-private partnerships, stakeholder and community engagement, and institutional change management. We focus on translating the ideas of communities and their advocates into meaningful systems change, by leveraging a deep understanding of government, knowledge of local and private economic forces, and analytical rigor to promote racial, economic, and environmental justice. Through risk assessments, community plans, large-scale public engagement strategies, and project implementation, we help government, civic, and business leaders promote more inclusive development and build more dynamic and resilient cities while leveraging diverse funding and partnership opportunities.



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