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# Review Essay

## Integration as Adaptation: Advancing Research and Practice for Inclusive Climate Receiving Communities

Hannah M. Teicher  Patrick Marchman

### ABSTRACT

**Problem, research strategy, and findings:** Despite early focus on the Global South, it has become clear that the Global North will be transformed through climate-related internal relocation as well. In North America, highly visible disasters have already caused populations to relocate, but historically, larger scale migration has occurred in response to longer term climatic shifts. As relocation to destinations spanning small towns to metropolitan gateways accelerates, planning can play a central role in shaping how these places accommodate newcomers and prepare for longer term urban restructuring. To lay the groundwork for this emerging area of research and practice, we draw from adjacent areas of planning. We examine current research on immigrant integration and amenity migration, recent media coverage of climate destinations, research on shifts in physical livability, and the emerging body of work on receiving communities. Limitations to our study include a focus on recent research and confining the geographical scope to North America. Based on our review, we found that migration is only adaptation when newcomers are effectively integrated into receiving communities. This can occur through reconciling social inclusion with economic development, meeting the distinct needs of newcomers that may also exacerbate the needs of current residents, and pursuing long-term planning for deconcentration.

**Takeaway for practice:** As climate-related migration becomes part of adaptation practice, planners should focus on reconciling social inclusion and economic development and engaging newcomers and existing residents in participatory processes to develop physical and social resilience.

**Keywords:** adaptation, climate, migration, receiving communities, social resilience

A few short years ago, place-branding puff pieces could plausibly make the claim that an array of climate havens would offer places to escape future environmental impacts (Brodwin, 2017; Pierre-Louis, 2019). In reality, extreme weather events have already been resulting in resettlement, with more than 540,000 Americans permanently displaced in 2022 alone (Habeshian, 2023). After the failed U.S. federal government response to Hurricane Maria in 2017, more than 150,000 Puerto Ricans relocated to states across the northeastern and southern United States (Hinojosa, 2018). In the aftermath of Hurricane Katrina, thousands of Black residents of New Orleans (LA) dispersed around the country: Towns from Texas to Colorado became de facto receiving communities (Weber & Peek, 2012).

However, disaster-related displacement has only been the most visible aspect of migration. Historically, larger migrations have occurred in response to longer term climatic shifts (Gutmann & Field, 2010; Kaczan &

Orgill-Meyer, 2020; Mullins & Bharadwaj, 2021). In the United States, projections indicate that due to sea level rise alone, more than 13 million people may move by 2100, entailing shifts of millions of people between urban areas (Hauer, 2017; Hauer et al., 2020). Expanding beyond flooding to drought, heat, and wildfire, one in three people in the United States will regularly experience extreme conditions by 2050 (Batibeniz et al., 2020), which could precipitate further migration.

Under current conditions, marginalized households have been forced to relocate due to the convergence of climate impacts, neglected infrastructure, and economic disinvestment, whereas more affluent homeowners and real estate investors have voluntarily relocated to, or invested in, locations that appear to be relatively safe (Anguelovski et al., 2016; Hardy et al., 2017; Hoffman et al., 2020; Renaud et al., 2011; Warner et al., 2013). These underlying inequities have been reinforced through insurance and investment decisions (Climate Alpha, 2022; Marino, 2018; Urban Land Institute, 2022).

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This process of voluntary and involuntary relocation will grow as people increasingly move away from climate disasters and chronic stressors to more livable conditions (Balachandran et al., 2022; Hauer, 2017; Hauer et al., 2020; Kaczan & Orgill-Meyer, 2020).

More livable areas will span shrinking Rust Belt cities to rural destinations and metropolitan gateways (Onaran, 2023; Phillips, 2020; Roderick et al., 2021; Singer, 2008; Vail, 2021), places that will nevertheless face challenges of their own in terms of their physical and social climate (Brammeier, 2021; De Socio, 2021). And these places may vary dramatically in how they take in newcomers. With these shifting internal migration patterns, restructuring between cities may intensify, reconfiguring existing urban hierarchies in the long term (Castells-Quintana et al., 2021; Maxim & Grubert, 2021). Large coastal cities may literally lose ground, whereas inland cities may grow and assume greater prominence. Human mobility has always shaped urbanization patterns. However, climate-related mobility is distinct in its spatial and temporal reach. Projections indicate that it will accelerate for the foreseeable future, and every place will be affected whether it loses or gains population (Aerts, 2017; Hauer, 2017). In addition, disruptions to urban infrastructure and the need to reconfigure power, water, and waste systems pose an inextricably linked compound challenge (Helmrich & Chester, 2022).

So far, some climate migrants have fared better after relocating, but this has largely been accidental rather than a result of planning (Graif, 2016; Koslov et al., 2021; Weber & Peek, 2012). As climate-related relocation accelerates, the time is ripe for the planning field to offer experience from planning for adaptation, immigration, and equity to help shape proactive planning processes and outcomes for receiving communities (American Society of Adaptation Professionals, 2021; Bronen, 2021; Marandi & Main, 2022; Van Berkel et al., 2022). Across the whole range of potential receiving communities, physical livability is only a foundation. Socioeconomic conditions, especially local levels of inequality, are also an important defining factor (Kaufman, 2021; Mar, 2021). Beyond that, these destinations would need to have the capacity to address mounting adaptation needs and to provide services for integrating newcomers. These are areas where the planning field can make a significant contribution.

Although climate-related relocation does pose unique challenges, there is always a risk of treating climate-related urban problems as exceptional. To avoid this, we analyze two adjacent areas of relocation research, welcoming cities for immigrants and rural destinations for amenity migrants. These overlap both geographically and substantively with climate-related

relocation. Within these discussions, we take note of other contemporary relocation dynamics, including the pandemic-enabled uptick in remote work and increasing housing market pressures, both of which have contributed to deconcentration (Florida & Ozimek, 2021; Hanifa, 2021; Ramani & Bloom, 2021; Teicher et al., 2021). We then review a body of work related to climate migrant-receiving communities in three parts. First, we examine recent popular media narratives concerning climate havens to compare against issues analyzed in academic literature. Then, to understand the potential future scale of migration, we examine literature on zones of habitability and related migration projections. Next, we review academic literature that explicitly engages with substantive questions of how receiving communities have been planning to accommodate an influx of newcomers.

In the third section, we synthesize insights from this work on immigrant integration, amenity migration, and receiving communities. For migration to serve as effective adaptation, newcomers must be effectively integrated into communities. Supporting this, we present three guiding insights for planning research and practice: reconcile economic development and social inclusion, address the distinct needs of newcomers and enhanced needs of current residents, and plan for deconcentration and a shifting urban hierarchy. Within this framework, we offer strategies for translating these insights into practice and questions to guide future research and practice.

## Literature Review Methods

There is an extensive literature on climate migration, climate refugees, and managed retreat in North America. However, an initial review revealed that relocation typically has been analyzed as a process of moving away from a place, rather than an analysis of the places where newcomers would resettle. Where relocation was discussed, it was only briefly included as a coda. Thus, we focused on the small but growing recent literature that takes receiving communities as an explicit object of analysis. We searched for literature iteratively in Google Scholar, beginning with the keywords *climate haven*, *receiving city climate*, and *receiving community climate*. The keyword *climate destination* generally returned results on tourism, so we excluded those. After scanning this literature, we included articles that addressed substantive questions about housing, infrastructure, and governance relevant to planning for newcomers ( $n = 15$ ). From this initial review, we identified key literature cited. We also sought to determine the emerging and future significance of receiving communities based on predicted scales of relocation. For this, we examined literature on changing zones of habitability and

demographic migration analysis under various climate scenarios ( $n = 22$ ).

The concept of receiving communities we discuss here is distinct from whole-community relocation, which has arisen most often in an Indigenous context. Indigenous communities have consistently grappled with structural barriers that confound their desired relocation plans, an issue that has been treated extensively elsewhere and that deserves separate consideration (Bronen & Chapin, 2013; Jessee, 2020; Keene, 2017).

The literature explicitly engaging receiving communities was relatively limited, so we sought to gather insights from analogs. We selected the contemporary analogs of immigrant-welcoming communities ( $n = 21$ ) and amenity destinations ( $n = 11$ ) for outdoor lifestyles for two main reasons. First, these phenomena have already been extensively analyzed, so they offer the opportunity to gather substantial insight. Second, they involve geographies and socio-spatial politics that will substantively intersect with climate migration, rendering them more than analogs but also precursors. Historical analogs would also yield rich insights, as has already been documented (McLeman et al., 2014; McLeman & Hunter, 2010). Lessons from post-disaster reconstruction could also be relevant; however, that research addresses reactive responses to acute events more than long-term planning for population shifts (Balachandran et al., 2022; Bronen et al., 2018; de Sherbinin et al., 2011). For welcoming communities and amenity migration we used a similar iterative search process, with keywords including *immigrant welcoming*, *new immigrant destinations*, *amenity migration*, and *internal migration*. Both receiving communities and welcoming communities have garnered attention from policymakers and planners, so we examined reports and policy documents related to these two topics as well.

The limited scholarship on receiving communities emerged after 2019 (Ghosh & Orchiston, 2022), so including media as an additional data source contributed a more robust overview of issues in receiving communities. Through a Google news search of the terms *climate haven* and *climate refuge*, we developed a sample of 33 news articles spanning the years 2017 to 2022. Through several rounds of inductive coding in qualitative data analysis software (MAXQDA/VERBI, 2022), we surfaced themes and condensed them into major categories related to characteristics, critiques, and risks of climate havens. These provided useful working categories as we iteratively reviewed and synthesized the academic literature. Reviewing the literature on welcoming communities, amenity migration, and receiving communities in conjunction, we

developed a framework of three major cross-cutting themes to categorize strategies and questions for research and practice.

### Learning from Immigrant Integration

A decade ago, researchers began looking to the displacement commonly forced by infrastructural development or large-scale disasters to glean lessons for climate-related resettlement (Bronen et al., 2018; de Sherbinin et al., 2011). We adopted a similar approach by learning from resettlement experiences outside the climate realm. Instead of focusing on the immediate aftermath of climate-forced displacement, we learned from adjacent areas of research to inform longer term planning for receiving communities.

The geography of immigration to the United States has far exceeded the emerging geography of climate migration. A typology of immigrant gateways covering the 20th and early 21st centuries spanned conspicuous major-continuous gateways such as New York City (NY) and Chicago (IL) to emerging gateways such as Atlanta (GA) and Nashville (TN), which have only attracted significant numbers of immigrants since the 1990s (Singer, 2015).

A decade-old local welcoming movement centered in these emerging gateways, or new immigrant destinations, offers a counterpoint to the recent surge in anti-immigrant ideologies and policies. Organized through the national network Welcoming America, welcoming cities have committed to supporting integration through institutionalizing inclusion and building a sense of community for newcomers and residents (Huang & Liu, 2018; McDaniel et al., 2019). These cities may serve as useful analogs to cities positioning themselves as destinations for climate migrants. In evolving policy discussions, these have also been more than analogs as welcoming initiatives and climate refuge initiatives have begun to overlap (Corvus & Sylvia, 2021; Marandi & Main, 2022).

### Managing the Tensions of Economic Development and Social Inclusion

Cities have been motivated to pursue welcoming initiatives by the sometimes competing values of economic development and social inclusion, particularly in the case of shrinking cities (Huang & Liu, 2018). Interviews with stakeholders across nine Rust Belt welcoming cities demonstrated that for the business community, an urban growth agenda has been a central motivation. Though nonprofit organizations may have been motivated by social justice to pursue refugee resettlement, they have also invoked economic benefits to gain support from business interests (Pottie-Sherman, 2018,

2020). A regression analysis of 48 welcoming cities and 2,831 unaffiliated cities showed a strong correlation between cities in need of economic development and participation in the Welcoming America network. Fiscal capacity, diversity, liberal politics, and central city location also positively correlated with welcoming initiatives (Huang & Liu, 2018). In growing cities, boosters have also framed immigrants as a boon to economic development based on their links to global markets (City of Chicago, 2012; Harwood & Lee, 2015). This focus on economic development has been at least partially explained by the devolution of immigration governance to the local level (Ozay, 2020; Pottie-Sherman, 2018; Schmidtke, 2019).

When cities have pursued immigration for economic development, this has raised the question of whether the welcoming strategies do attract newcomers and, if so, what impact this has. Comparison of the Global Detroit (MI) program with a synthetic control illustrated that welcoming did lead to more immigration than would have occurred in the absence of the policy. Immigration was slightly skewed toward high-skilled immigrants and could therefore be an effective mechanism for increasing human capital (Huang, 2022). However, a survey of 353 immigrants spanning London (Ontario), a Canadian Rust Belt city, and four comparative cities in Ontario, found that affordable housing and job opportunities were more important factors in attracting economic immigrants than explicit welcoming policies (Cleave & Arku, 2020). In Rust Belt cities, immigration has at times changed the demographic trajectory. An analysis of all core-based statistical areas in the United States found that in 50 metropolitan areas that were shrinking as of 2000, an influx of immigration reversed the trend in nine metro areas and moderated it in the rest (Austin & Hitch, 2020; Bagchi-Sen et al., 2020). Foreign-born residents have often been younger and more employable than lost population, allowing shrinking cities to regain some competitive advantage. But this also suggests that for shrinking cities, economic health may depend on an increasing flow of immigrants (Bagchi-Sen et al., 2020).

Instrumental approaches to immigration centered on economic development risk, creating conditional welcoming, in which newcomers are only desirable to the extent that they rescue a community (Allain et al., 2020; Pottie-Sherman & Graham, 2021; Schemschat, 2021). Discourse analysis of an immigration networking event revealed that welcoming was contingent on maintaining the power dynamic between White hosts and immigrants of color (Allain et al., 2020). However, there have been some exceptions to conditional welcoming. An in-depth case study of Nashville, where Welcoming America began, and a wider review of Welcoming America policy revealed increasing reliance

on a two-way learning process between the host community and newcomers to foster integration across economic, political, social, and cultural sectors (McDaniel et al., 2019; Rodriguez et al., 2018). In Welcome Dayton (OH), community conversations between newcomers and residents demonstrated that this type of reciprocal integration has been more successful (Housel et al., 2018). This has had material benefits, too: Social services intended for immigrants have had positive spillover effects, benefiting other marginalized local populations (Bose, 2018; Ozay, 2020).

### ***Land Use Planning for Inclusive Communities***

Immigrant integration has typically focused on economic development and social services (City of Chicago, 2012; Huang & Liu, 2018), but there can be an important role for local land use planning as well (Harwood, 2022; Harwood & Lee, 2015). Revising zoning and development codes to support diverse forms of residential development and more expansive, informal uses of public space has helped to effectively integrate newcomers who have different patterns of social life (Burayidi & Wiles, 2015; Harwood, 2022). Local spatial practices such as building more porous neighborhoods and constructing new spaces for encounters and economic cooperation between residents and newcomers have fostered a more humane, inclusive Rust Belt cosmopolitanism in some neighborhoods in Buffalo (NY; Ozay, 2020). However, adaptive reuse of buildings and vacant spaces can also cause tension between newcomers and long-time residents. Residents have opposed mosque-centered development in Hamtramck (MI) and unfamiliar urban agriculture in Rock Island (IL; see Ismail, 2021; Pottie-Sherman, 2020). This emerging attention to local spatial politics could offer a promising way to address the complex process of integrating specific newcomers into existing communities. However, interviews in 30 welcoming cities revealed a surprising disconnect between planning departments and immigrant affairs staff. Land use planning and governance would require more deliberate engagement between these siloed departments to overcome dominant planning norms and achieve immigrant integration (Harwood, 2022).

### **Learning from Amenity Migration**

In studies of migration within the United States, a longstanding debate over the relative influence of environmental and economic factors has been inconclusive. Unsurprisingly, jobs have held more weight for a younger demographic, whereas environmental amenities have had more pull for retirees (Adamo & de Sherbinin, 2014; Rajbhandari & Partridge, 2018). Even where amenity-led migration is a better explanation,

regional economies may grow in high-amenity areas, suggesting entangled effects. Previous trends have been complicated during the COVID-19 pandemic, with significant numbers of high-income households moving out of dense, high-cost areas to less-populous areas (Haslag & Weagley, 2022; Liu & Su, 2021; Ramani & Bloom, 2021; Teicher et al., 2021). Analysis of 3,400 moving survey responses during the pandemic showed that higher income workers were moving to smaller cities and towns for lifestyle reasons (Haslag & Weagley, 2022). This reflects a shift that had already begun in 2017, with population growth in suburban/exurban and rural counties outpacing growth in urban counties. Data from the 2021 census population estimates indicate that 68% of large urban counties lost population and 81% of exurban counties gained population (Benzow, 2022). The sustained nature of this trend so far indicates that agglomeration economies may be of diminishing value to high-skilled workers; this may have knock-on effects, reducing employment opportunities in cities for lower skilled workers as well (Haslag & Weagley, 2022).

### **Managing Development Pressure**

Flocking to areas with warmer winters, North American snowbirds have been the classic amenity migrants, but this is no longer the case. Increasingly, amenity migrants have extended beyond retirees to remote workers seeking lifestyle changes and outdoor enthusiasts who prefer rural locales. Both have tended to concentrate in areas with cooler summers, escaping increasing heat along with the high prices of dense urban cores (Hjerpe et al., 2022; McLeman & Hunter, 2010). As rural communities have become destinations, they too have begun to experience more big-city problems. In 25 western American gateway communities, interviews with 31 public officials supplemented by 333 survey responses revealed that they are grappling with unaffordable housing, congestion, inequality, sprawl, and conflicts between newcomers and residents (Stoker et al., 2021). Several other studies employing a variety of methods across diverse locations have supported these findings. A review of Colorado resort towns, a spatial regression analysis of rural counties across the American West, and a regression analysis of rural recreation counties scattered across the United States revealed increasing unaffordability and tensions between diverse demographics (Hjerpe et al., 2022; Laitos & Ruckriegle, 2013; Ulrich-Schad, 2018). Given the relatively lower planning capacity of rural destinations, addressing these issues proactively may require intervention from higher levels of government, increased jurisdictional alignment, and planning at a regional scale (Chipeniuk, 2004; Hjerpe et al., 2022; Stoker et al., 2021). Many of the land use tools conducive to managing rural growth are like

those for managing urban growth; these include community land trusts, inclusionary zoning, and affordable housing requirements for new developments (Laitos & Ruckriegle, 2013). Some are more targeted to rural areas such as zoning for ecological buffers, land easements, and impact fees on new development to fund infrastructure and services. Good land use policy could become an amenity in its own right, shaping more sustainable, livable places (Hjerpe et al., 2022).

Urbanizing rural areas will also face challenges due to current infrastructural conditions. Uneven access to broadband internet in rural areas undermines remote education and employment opportunities (Ali, 2020). More fundamental, some rural areas have still struggled to provide adequate water and sanitation infrastructure. Smaller communities have tended to experience a higher rate of water leaks because there are more miles of pipe per customer, and they have a smaller revenue base to fund repairs and maintenance (American Society of Civil Engineers, 2021). Michigan, which is frequently named as a potential climate refuge, is the only state without a uniform septic code (The Alabama Center for Rural Enterprise & The Columbia Law School Human Rights Clinic, 2019); in rural counties where on-site systems fail, sewage has polluted lakes and waterways. Recent federal investments in water and wastewater infrastructure may begin to remedy these existing inequities (U.S. Department of Agriculture, 2021) but may not adequately address population growth and climate resilience.

The attraction of rural destinations close to natural amenities and protected land provides some explanation for burgeoning rural development, but like any form of migration, amenity migration has not been environmentally determined. Processes of investment and disinvestment parallel to those evident in urban gentrification (Smith, 2011) have been at work in rural spaces as well. With global agricultural restructuring, residential development has become more profitable than agricultural uses, contributing to rural destinations that cater to elites (Burow et al., 2019; Farrell, 2020; Nelson & Hines, 2018). Protected land has become a commodity, used to market rural areas for outdoor recreation and lifestyles (Hjerpe et al., 2020). Amenity migration and economic restructuring of rural land have become mutually reinforcing processes; this rural gentrification has exacerbated inequities in places marked by population loss, the withdrawal of community services, and infrastructure deficits.

### **Engaging Newcomers and Existing Residents**

Though physical planning is important to channeling amenity-led development, community engagement has

also been key to tempering the effects of amenity migration. Divisions between newcomers and long-term residents have been common due to socioeconomic and cultural differences as well as clashing perspectives on the desirability of development. In 18 rural recreation counties, regression analysis of residents' views of development illuminated that development issues were more controversial in recreational counties than in non-recreational counties, and residents were more likely to favor development when there was trust among community members. This pointed to the benefit of increasing opportunities for locals and newcomers to regularly interact (Ulrich-Schad & Qin, 2018). It has been more common for newcomers to develop community bonds among themselves, but this bonding social capital has also provided a foundation for bridging social capital across the divide between newcomers and long-term residents (Whitaker, 2010). Planning interventions such as encouraging resident participation and building partnerships through education and health programming have helped build a sense of community, increased reciprocity and trust, and bridged social capital (Halstead et al., 2022).

## Learning from the Emerging Field of Receiving Communities

### Popular Narratives of Receiving Communities

In the last several years, receiving communities have taken on a life of their own in popular media. Early narratives using the labels *climate haven* or *climate refuge* highlighted lists of places to escape climate change and find cool relief (Brodwin, 2017; Pierre-Louis, 2019). Those messages have continued to appear, but journalists have tempered them with increasing complexity and contradictions. Some have drawn attention to the conflicts in accommodating newcomers (Alexander, 2021; Brentjens, 2021). Others have highlighted infrastructural and financial interdependencies between so-called havens and other locations that will be severely affected (Mar, 2021). Still others have argued that the notion of a climate haven is patently unfounded because significant climate impacts are likely in those destinations as well (Brammeier, 2021; De Socio, 2021). Places that until recently appeared to enjoy climatic advantages have been called into question. In the previously temperate Pacific Northwest, wildfire smoke compounded a suffocating heat dome in the summer of 2021 (Dickinson, 2021). In the Great Lakes region, which has benefited from access to abundant freshwater, distance from coasts, and moderate temperatures, extreme precipitation has overwhelmed obsolete wastewater treatment plants (Schneider, 2021). In Buffalo and elsewhere, the

available older housing stock has been challenging to retrofit for energy efficiency (Mar, 2021).

Shrinking cities with excess infrastructure have been touted as ideal destinations for climate migration (Sacks & Acevedo, 2020); however, their aging infrastructure has been overburdened in changing conditions and may fail to cope with an influx of population and development (Dillon, 2021).

The issues stemming from COVID-19–related migration are likely a harbinger of issues that will arise from climate-related relocation. COVID-19 made apparent (and exacerbated) existing inequities in jobs, education, and housing (De Socio, 2021; Dillon, 2021; McCallum, 2022). Where COVID-19 offered professionals the privilege of a wholesale lifestyle change through relocation to rural communities, people already living in those communities faced increasing housing pressures. Similar trends have emerged in early tales of climate relocation from Vermont to Buffalo (McCallum, 2022; Rossi, 2019). Similarly, in Duluth (MI), which its mayor pronounced a climate haven, the small size of the city and recent influx have made affordable, quality housing difficult to come by (Kraker, 2022).

In these destination cities, affluent migrants moving for amenities have experienced some resistance from locals. But the real challenges to social integration have been for newcomers from historically marginalized groups. Communities that offer the physical aspects of a climate haven may in fact fail to serve as a welcoming destination for diverse populations, raising the question of whom they are a haven for (Dillon, 2021; Rossi, 2019). Physical conditions may “buffer” some areas “from the worst effects of climate change” (Brann et al., 2020, p. 3), but identifying potential havens based on maps of physical climate impacts is only a starting point. Effective havens would require adequate access to health care, employment, education, and other essential services (Kaufman, 2021; Mar, 2021).

Critics also question the political effects of the climate haven concept. It potentially undermines climate action by suggesting there is a place to escape (Brentjens, 2021; De Socio, 2021). This is like early critiques of adaptation that condemned planners' resignation to escalating emissions (Howard, 2009). Now that adaptation is more widely accepted as prudent, some adaptation experts are working to position migration as yet another productive form of adaptation (American Society of Adaptation Professionals, 2021; Black et al., 2011; Gemenne & Blocher, 2017). But migration is only effective adaptation when people can live as well after migration as they had before (Vinke et al., 2020). Table 1 distills the suite of critiques leveled in popular media. These are useful because they shape the converse, the qualities of effective receiving communities. We conceptualize this in Figure 1, emphasizing that relative

**Table 1. Risks of climate havens raised in a sample of popular media, 2017–2022.**

| Categories       | Risks  | Representative quotes  |
|------------------|--|--|
| Climate politics | <ul style="list-style-type: none"> <li>Undermines climate action by suggesting an escape route</li> </ul>  | <p>“While climate sanctuaries have given hope to people with the means to move, some people have pushed back against the concept. The term may be misleading as no place is immune to climate change” (Brentjens, 2021).</p> <p>“It could encourage people with means to simply pick up their unsustainable lifestyles and plant them somewhere else” (De Socio, 2021).</p>  |
| Livability       | <ul style="list-style-type: none"> <li>Climate impacts likely in destinations</li> <li>Interdependencies between havens and other heavily affected locations</li> </ul>  | <p>“Ultimately, we’ll all realize that there is no such thing as a climate-safe place, only places with different climate-related impacts, unfolding on different timescales, to differently-equipped people, interconnected in ways we can’t begin to fathom” (Alexander, 2021).</p> <p>“You can’t call the Great Lakes a climate refuge if the people already here are the ones seeking refuge” (Brammeier, 2021).</p>   |
| Adaptation       | <ul style="list-style-type: none"> <li>Aging infrastructure insufficient for increased population and resilience</li> </ul>  | <p>“Surging storms are overwhelming obsolete wastewater treatment plants and stormwater drainage networks, causing beach closures and unsightly, dangerous algae blooms” (Schneider, 2021).</p> <p>“For a lot of our villages, you probably cannot add a single dwelling unit because you don’t have the wastewater capacity to support it” (Dillon, 2021).</p>  |
| Integration      | <ul style="list-style-type: none"> <li>Inadequate social services</li> <li>Increasing pressure on housing supply and affordability</li> <li>Potential for conflicts between newcomers and existing residents</li> <li>Unwelcoming for diverse populations</li> </ul> | <p>“The state [Vermont] risks becoming like resort communities populated by wealthy residents and the lower-income service workers who cater to them” (McCallum, 2022).</p> <p>“Vermont is one of the whitest states in the country, and this past summer a Black man in Hartford was flagged down by locals and told he wasn’t wanted here” (Dillon, 2021).</p> <p>“When my family relocated to Duluth, Minnesota, the most valuable advice we received came from Karen Diver, the former tribal leader of the Fond du Lac Band of Lake Superior Chippewa, the original caretakers of the place we now call home. “Don’t let your climate solution result in our spiritual and cultural genocide” (Alexander, 2021).</p> <p>“In addition to economic changes, new people moving to climate sanctuaries ‘might start to try changing the cities to reflect the cities they fled’” (Brentjens, 2021).</p> <p>“New Kingston is loudly advocating for bike lanes, and Old Kingston just wants its sewers fixed” (De Socio, 2021).</p> <p>“Yet a surge of new residents flush with cash from selling homes in pricier markets could exacerbate the state’s housing shortage and make it more difficult to solve environmental problems such as greenhouse gas emissions and water pollution” (McCallum, 2022).</p> |

physical livability and relative equity are only a foundation for climate destinations. The capacity to serve as an effective receiving community would require adaptation encompassing the physical infrastructure of power, water, and transportation systems and the social infrastructure of community networks and organizations. It would also depend on social services dedicated to integrating newcomers. Finally, individual receiving communities might accomplish this on their own, but their effectiveness would be enhanced through coordination with other communities and higher levels of government.

The concerns raised in popular media have been like those in academic literature, partially due to feedback between them. Researchers have been

interviewed frequently in popular media, influencing narratives and practice. At the same time, researchers have turned to media accounts as evidence of climate-related relocation. In some cases, the narratives created by researchers have played a role in how cities have positioned themselves. After presenting to the City of Duluth on their prospects as a climate haven, Jesse Keenan’s proposal for climate-proof Duluth garnered media attention and galvanized the mayor to explore the prospect further (Keenan, 2019; Pierre-Louis, 2019; Rossi, 2019). This mutually reinforcing relationship points to the need for empirical research as climate-related resettlement grows. Some cities in the Rust Belt and upper Midwest such as Minneapolis/St. Paul (MN), Detroit, Cleveland (OH), and Toledo (OH) have received



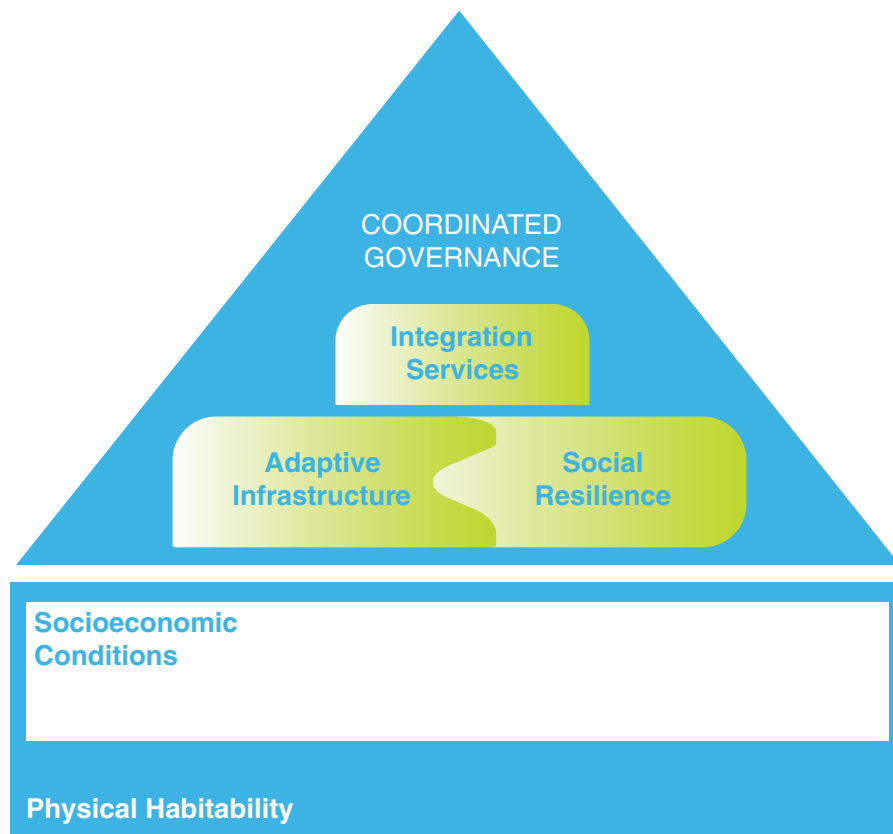


Figure 1. Qualities of effective receiving communities. Receiving communities may first be determined by physical habitability, but that is only a precondition. Socioeconomic factors such as inequality and segregation are also foundational. To serve as an effective destination, communities would need to build adaptation capacity encompassing physical infrastructure and social resilience, as well as social services to integrate newcomers. Although communities might act alone, their efforts would be more effective when coordinated with other sending and receiving communities and higher levels of government. Taken together, these capacities transcend the simplistic climate haven label.

little attention, pointing to the need for a more systematic assessment of the cities that could serve as effective climate destinations.

### **Physical Livability and Climate Migration Dynamics Across Scales**

With insufficient data for empirical research, modeling has so far offered a key method for analyzing migration. One assessment of the livability of the planet under climate change projected that the average human would experience greater temperature changes in the next 50 years than in the previous 6,000. In general terms, northern regions across the globe will become markedly more suitable for human habitation. If populations migrate to stay within the historically comfortable temperature range, the numbers of migrants could reach into the billions (Xu et al., 2020).

However, there is no average human, and this type of assessment has significant limitations. Model-based projections are based on past behavior in relation to weather even though future weather will fall outside this range (Rajbhandari & Partridge, 2018). More

important, physical risks have not simply translated into numbers of migrants because mobility is influenced by a complex set of determinants such as place-based characteristics, historical and cultural contexts, socioeconomic status, demographics, and decision-making behavior from the household to community scale (Horton et al., 2021; McLeman, 2018a; Piguet, 2022). Much of this modeling has lacked the theoretical frameworks and attention to power that would help explain migration in light of political economic processes such as shrinkage and gentrification (Piguet, 2022; Rajbhandari & Partridge, 2018). Though the loss of habitability has spurred migration, migration has also decreased habitability for those left behind by shrinking the employment base and capacity to deliver services (Horton et al., 2021). Similar patterns have been visible in processes of urban shrinkage in North America; as the tax base, services, and infrastructure have declined in the wake of population loss, numerous legacy cities have struggled to maintain livability for their residents (Hughes, 2020).

In migration debates, the role of tipping points has become an increasingly pressing question. Thresholds

of interest have included the shift from incremental to abrupt migration and the reversal of recent migration patterns (McLeman, 2018a; Winkler & Rouleau, 2021). In locations where natural amenities have been a major draw, extreme heat and wildfire have turned those features into vulnerabilities, reducing in-migration and increasing out-migration (Winkler & Rouleau, 2021). Since World War II, migration to the southern and western United States has been a consistent trend enabled by the widespread adoption of affordable air conditioning (Gutmann & Field, 2010). Though internal migration has slowed in the last several decades, migration to the Sun Belt has shown no signs of reversing (Molloy et al., 2011; Rajbhandari & Partridge, 2018; Winkler & Rouleau, 2021). Many households have continued to relocate to the American Southwest due to job opportunities and more affordable housing despite severe drought conditions. In 2021, 10 of the 15 counties with the highest population growth had experienced more than 5 years of severe drought since 2012 (Sandhovel, 2022). Much migration has recently been to climate risk hot spots rather than *away* from them (Piguet, 2022). However, linked environment–migration tipping points could reverse this, shifting urbanization northward and eastward (Maxim & Grubert, 2021; Partridge et al., 2017; Vail, 2021; Winkler & Rouleau, 2021). Economic damage from decreases in agricultural yields, changes in energy expenditures, and coastal inundation could underpin a transfer of value northward and westward and exacerbate inequality (Hsiang et al., 2017). With increased energy costs, technological management of living conditions such as air conditioning and flood control could become less widely available, spurring additional relocation (Adamo & de Sherbinin, 2014; Gutmann & Field, 2010).

Disasters have been the most visible driver of migration, but, crucial for the discussion of long-term planning here, larger migrations have occurred in response to longer term climatic shifts and technological enablers of development (Gutmann & Field, 2010; Mullins & Bharadwaj, 2021). In a global sample, increasing rainfall and temperatures have already increased urbanization, and those urban areas have been spreading out (Castells-Quintana et al., 2021). In addition, most migration at this point has been local or intraregional, not international (Blake et al., 2021; McLeman & Hunter, 2010). Within the United States, deconcentration and a northward and eastward shift could undermine the dominant role of large coastal cities, exacerbate inequalities between cities, and exert additional pressure on agricultural land (Corvus & Sylvia, 2021; Forsyth & Peiser, 2021; Hauer, 2017; Maxim & Grubert, 2021). As migration escalates, both empirical analysis and modeling that incorporate observable trends will reduce uncertainty in projections, making

them more useful for planning. Incorporating these projections into long-range planning will be especially important where communities are already experiencing stresses related to water and population growth (Hauer, 2017; McLeman, 2018a).

### **Recent Receiving Communities Research**

As recently as 2019, researchers had rarely discussed host communities explicitly, but in the last several years, climate-related relocation has accelerated so that it is possible to learn more directly from this phenomenon (Ghosh & Orchiston, 2022). The receiving communities we discuss here are existing communities across an urban–suburban–rural continuum that will host an array of newcomers, both voluntary and involuntary. These communities go far beyond large immigrant gateways to legacy cities, many of which have become new immigrant destinations. They also include rural areas, those that are sought out for their amenities, and those that have undergone decades of disinvestment (McDaniel et al., 2019; Roderick et al., 2021; Singer, 2008, 2015; Vail, 2021). A recent typology of sending and receiving cities made the distinction between *de facto* recipient cities, which have accommodated people displaced by disasters, and explicit climate destinations that have branded themselves as desirable places to relocate (Marandi & Main, 2021).

We have built on this distinction between *de facto* and explicit destinations, proposing that existing characteristics of growth and shrinkage are likely to play a significant role in how places position themselves. This draws from arguments in urban theory that pro-growth coalitions in post-industrial cities seek to regain competitiveness through opportunistic economic development strategies (Pottie-Sherman, 2020; Smith, 2011; Wilson & Wouters, 2003). It also contributes to more recent analyses of climate gentrification in which developers profit from building resilience to climate impacts while displacing low-income communities (Hodson & Marvin, 2010; Keenan et al., 2018), laying the groundwork for empirical investigations into receiving communities. Figure 2 illustrates that in addition to this variable of growth and shrinkage, the relative position on an urban–rural continuum will be useful in differentiating approaches to accommodating climate migrants. The matrix positions four types of receiving communities: the rural and inland gateways, which are more likely to be *de facto* receiving communities; and the rural interiors and legacy cities, which are more likely to be explicit destinations. These should be analyzed empirically to determine how and why these different types of communities accommodate newcomers.

Shrinking cities, with their housing vacancies and excess infrastructure, could potentially benefit from

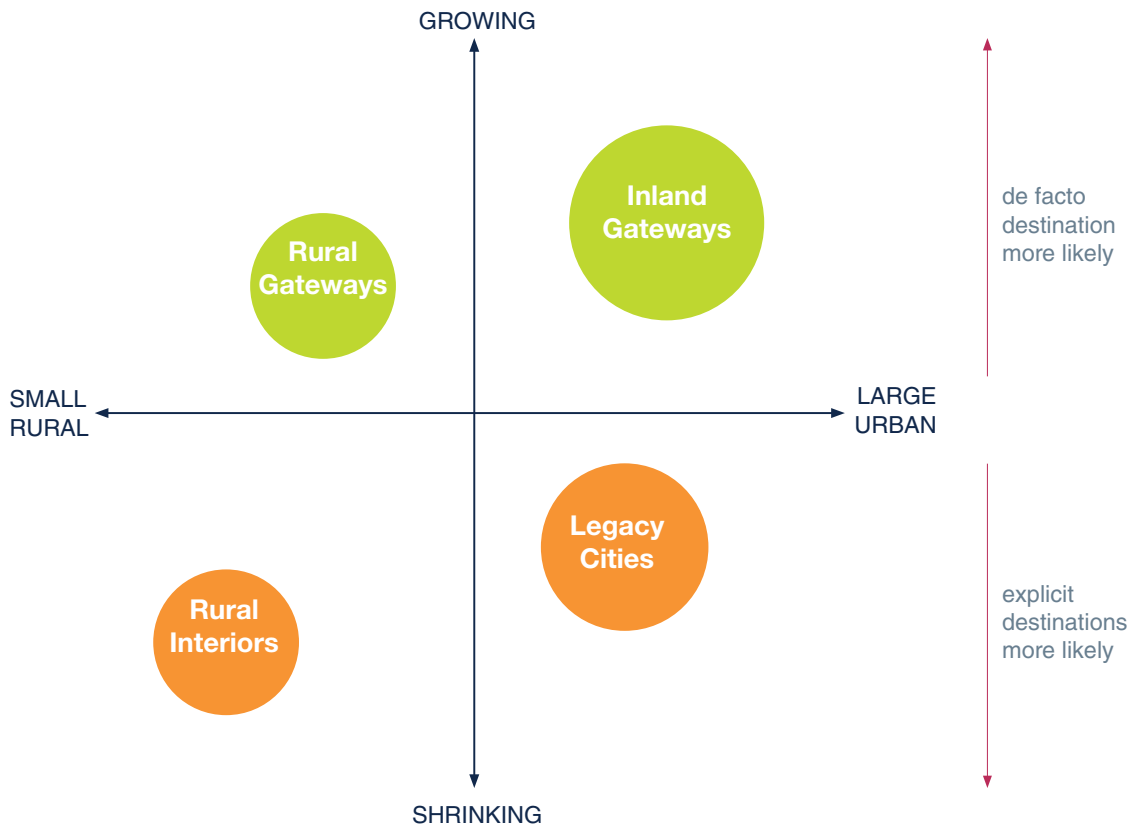


Figure 2. Types of receiving communities. Receiving communities will extend across an urban–suburban–rural continuum. Large inland metropolitan areas that have typically served as immigrant gateways and rural destinations popular for their natural amenities will likely continue to attract newcomers, becoming *de facto* recipient cities. Legacy cities that have become new immigrant destinations and disinvested rural interiors are more likely to become explicit climate destinations as they pursue an economic growth opportunity. Augmenting the deconcentration in progress, this emerging resettlement pattern may disrupt existing urban hierarchies that favor large coastal cities.

climate migration (Phillips, 2020). However, places such as Buffalo, which have attracted attention as climate refuges, also suffer from entrenched segregation and inequality, which has contributed to tensions between newcomers and existing residents (Austin & Hitch, 2020; Brann et al., 2020; Knight et al., 2018; Silverman et al., 2013). In disinvested rural regions, promoting communities as desirable destinations for newcomers could cause similar conflicts (Vail, 2021). Land use planning is one tool with the capacity to shape more equitable resettlement for legacy urban and rural communities facing climate gentrification (Butler et al., 2021; Hughes, 2020). With tools ranging from land acquisition to negotiated zoning, land use planning with robust consultation can provide a proactive institutional framework to reduce the potential for maladaptation (Gemene & Blocher, 2017; Juhola et al., 2016; Matthews & Potts, 2018; Warner et al., 2013).

Climate migration will likely exacerbate the existing housing affordability crisis (Butler et al., 2021; Li & Spidalieri, 2021). Land use planning mechanisms that are just emerging to promote affordable housing in the context of managed retreat could translate to receiving

zones as well. For example, municipalities can identify relatively safer locations for additional housing in their long-term visioning plans as Norfolk (VA) proposed, concentrating upzoning in less flood-prone areas (City of Norfolk, 2016). Transfers of development rights have typically occurred within municipalities but could be expanded to allow transfers between sending and receiving areas in a region, as King County (WA) has done. Municipalities can also seek opportunities to annex adjacent higher ground, following the example of Princeville (NC) and Hamilton (WA; see Adaptation Clearinghouse, n.d.; Li & Spidalieri, 2021). At state and federal levels, tax deductions for renters in designated receiving zones could also support affordable housing (Onaran, 2023).

Towns that are growing because of climate-induced migration may enlist many of the practices that cities do, such as inclusionary zoning and density-oriented development. However, there are some distinct considerations for smaller towns; these include accommodating increased complexity in local governance, evaluating infrastructure sizing and interdependencies as community size and structure changes, and,

in some cases, providing new infrastructure such as broadband access (Ali, 2020; Maxim & Grubert, 2021; Vail, 2021).

Participatory planning also has a key role in improving receptivity. Planners can prioritize inclusive engagement and knowledge co-production with new digital mapping tools and participatory workshops to develop ways to address risks to existing communities (Van Berkel et al., 2022). Increasing social resilience can also be a path to integrating newcomers. Neighborhood planning groups can work with cities to undertake asset and vulnerability assessments, a process that can build social networks that also “provide entry points for welcoming climate migrants” (Brann et al., 2020, p. 7). Municipal planners can support community-based organizations that already have the relationships and trust to work effectively with marginalized residents (Butler et al., 2021; Marandi & Main, 2022). Creating spaces that allow communities to maintain social cohesion while also interacting with others is important for both residents and newcomers and allows hybrid cultures to emerge. For example, a small food business incubator operated by a nonprofit in Buffalo has provided micro-loans and training while creating a destination for a wide mix of would-be entrepreneurs and clients (Ozay, 2020).

Much migration will continue to be ad hoc rather than planned, spurring discussions about how to coordinate such incremental resettlement. When resettlement occurs in a dispersed, piecemeal manner it could create similar problems to urban sprawl, including strained infrastructure, encroachment on agricultural and wilderness land, housing pressures, distance from jobs, lost social connections, and a lack of services (Corvus & Sylvia, 2021; Forsyth & Peiser, 2021; Tacy et al., 2020). In response, comprehensively planned new settlements could reduce social dislocation and sprawl. However, that comprehensive resettlement approach may be more feasible for shorter moves at a neighborhood scale; it is not apparent how longer moves for socioeconomically diverse populations would be accomplished (Forsyth & Peiser, 2021). Even for the more likely scenario of incremental relocation, intervention at the federal level could encompass everything from housing tax credits to coordination between agencies as well as binational coordination with Canada (American Society of Adaptation Professionals, 2021).

At the highest level of coordination, federal agencies or city networks could bridge sending and receiving communities, managing the entire trajectory of migration (American Society of Adaptation Professionals, 2021; Bronen, 2021; Li & Spidalieri, 2021; Marandi & Main, 2022; Maxim & Grubert, 2021; U.S. Government Accountability Office, 2020). Community-based organizations are already developing connections

between sending and receiving areas, indicating some demand for such bridging efforts (Fassler, 2021). Coordination could also occur through forms of networked governance that have already become influential in other climate domains, including transnational urban networks, national intercity networks, and regional climate collaboratives (Marandi & Main, 2022; Roderick et al., 2021). These networks can provide peer learning about land use tools, engagement strategies, and promising practices to breach silos between resilience, housing, and economic development (Butler et al., 2021; Marandi & Main, 2022). However, many of the cities that are likely destinations do not currently participate in high-profile city networks or regional collaboratives. In the meantime, local governments can act by planning for the long term, increasing community participation, and developing community land trusts (Brann et al., 2020; Butler et al., 2021; Corvus & Sylvia, 2021; Li & Spidalieri, 2021) while also pursuing opportunities for collaboration.

### **Synthesizing Immigrant Integration, Amenity Migration, and Receiving Community Perspectives Beyond Migration To Integrating Newcomers**

Migration has already been identified as a form of adaptation (Black et al., 2011; Gemenne & Blocher, 2017; Schraven et al., 2021; Vinke et al., 2020). This has received more attention for cases in the Global South (Afifi et al., 2016; Rana & Ilina, 2021; Sobczak-Szelc & Fekih, 2020), though it has been applied to historical examples in North America (McLeman et al., 2014; McLeman & Smit, 2006; Pottie-Sherman & Graham, 2021) and is also emerging in policy discussions (American Society of Adaptation Professionals, 2021; Marandi & Main, 2022). When considering migration as adaptation, we have built on the contention that migration should only be considered effective adaptation if people can live as well after migration as before. Crucially, “in situations in which migrants fall into poverty traps or experience cultural loss, the adaptation label should not be used as a smoke screen to hide governance failures that led to human suffering” (Vinke et al., 2020, p. 631). It is not migration itself but effective integration that serves as adaptation. As the receiving communities discussion quickly evolves, the opportunity is ripe to translate effective integration from concept to practice. From the scholarship on immigrant integration, amenity migration, and receiving communities that we have reviewed here, we draw three key insights in support of this agenda.

### ***Insights for Integrating Newcomers in Inclusive Receiving Communities***

First, although economic development is a likely impetus for receiving communities, planners should proceed with caution attending to the need for two-way integration, social and financial support, and coalition building across the social and business sectors (Allain et al., 2020; Brann et al., 2020; Huang & Liu, 2018; Knight et al., 2018; Pottie-Sherman & Graham, 2021; Schemschat, 2021; Vail, 2021). Migrants are often arriving in traumatic circumstances, whether having just fled a disaster or chronic climate stress. Treating them as an economic salve would create an unfair additional burden on newcomers and inappropriate expectations for existing residents (Pottie-Sherman, 2018). Two-way, mutual integration with existing residents actively engaged in a reciprocal process would help to meet immediate social needs while laying the groundwork to build a positive vision for future adaptive development (Housel et al., 2018; McDaniel, 2018; Tacy et al., 2020; Ulrich-Schad & Qin, 2018; Van Berkel et al., 2022). Municipal planners can spearhead welcoming programs that provide a platform for community organizations to connect while also providing political cover for unlikely allies to join the conversation (McDaniel et al., 2019). Building this type of bridging social capital can be an important component of newcomers integrating into their destination (Gelderblom, 2018; Halstead et al., 2022; Whitaker, 2010), just as social resilience is so crucial in the face of disasters (Aldrich, 2012; Klinenberg, 2015; Solnit, 2009). Through community engagement, planners can identify mutual needs of newly arrived and existing communities and use these to shape social service, educational, and employment programs (Halstead et al., 2022; Ozay, 2020). Improving municipal service delivery to meet existing needs can help to develop bridging social capital as both communities realize mutual benefits (Bose, 2018; Brann et al., 2020). Small business incubators can also be an accessible way to begin to foster economic self-sufficiency among newcomers and encounters between diverse populations (Ozay, 2020).

Second, even where migrants do contribute to local growth, incoming population does not provide a 1:1 demographic replacement in the case of communities that have experienced population loss (Bagchi-Sen et al., 2020). As a result, social, educational, and employment services will be necessary to meet the distinct needs of newcomers. In addition, the influx will increase pressure on existing low-income or marginalized residents, exacerbating their needs (Huang, 2022; Knight et al., 2018; Marandi & Main, 2021). For many lower capacity cities, it can be difficult to dedicate resources to adaptation, so integrating it as a co-benefit to reducing racial and economic inequality has made it more

feasible. For example, the City of Cleveland has framed addressing climate change and environmental justice as two complementary parts of a larger revitalization agenda, building coalitions between the two movements (Hughes, 2020). A similar approach could make planning for migrant reception more feasible as well.

Finally, the climate migration literature points to the likelihood of ongoing population deconcentration, an eastward and northward shift, and increasing inequities between sending and receiving areas. This underlines the need for deliberate planning, capacity building, and investment across scales (Castells-Quintana et al., 2021; Forsyth & Peiser, 2021; Hauer, 2017; Maxim & Grubert, 2021). Migration theories are largely predicated on receiving communities in urban environments, so it will be important to expand to exurban and rural destinations (Burow et al., 2019). This will require conceptualizing integration as adaptation across a continuously urbanized landscape and reassessing existing inequities between sending and receiving locations. Table 2 pairs these three insights with strategies for planners to begin translating them into practice.

### ***Practices for Integrating Newcomers in Inclusive Receiving Communities***

Integration as adaptation suggests both integrating newcomers into receiving communities and integrating physical and social resilience in support of that process. Across the urban–rural continuum where migrants will arrive, planners will need to accommodate this accelerating population change while also reconfiguring physical and social infrastructure to meet growing demand for other aspects of adaptation from flood management to power grid resilience.

In the legacy cities, so far posited as climate destinations, neither the housing stock nor the transportation infrastructure are meeting current needs, let alone providing adequate capacity to meet the demands of a growing population. Sweeping gestures at vacant housing and lots overlook the fact that in many post-industrial cities, large-scale vacancy is only common on one side of a prominent racial dividing line (Austin & Hitch, 2020; Knight et al., 2018; Silverman et al., 2013). Foregrounding vacancy as opportunity puts existing marginalized residents on the front lines of absorbing newcomers. This compounds the ways in which marginalized communities already bear the brunt of climate impacts due to historic displacement to risk-prone land and ongoing cycles of underinvestment (Anguelovski et al., 2016; Hardy et al., 2017; Hoffman et al., 2020). Incorporating newcomers in low-income neighborhoods facing gentrification could compromise efforts to improve housing affordability (Brann et al., 2020). In effect, this would extend the geography of climate

**Table 2. Planning strategies for receiving communities.**

| Insights  | Strategies  |
|---|---|
| Reconcile economic development and social inclusion <sup>a</sup>                          | <ul style="list-style-type: none"> <li>• Foster two-way integration through community conversations</li> <li>• Build bridging social capital through formal and informal events</li> <li>• Mobilize participatory planning to engage existing residents in planning for newcomers</li> <li>• Develop economic incubators to facilitate small businesses, encounters, and exchange</li> <li>• Build coalitions across planning and development communities that leverage existing stakeholder interests</li> </ul>                 |
| Address distinct needs of newcomers plus enhanced needs of current residents <sup>b</sup> | <ul style="list-style-type: none"> <li>• Diversify local spatial practices through urban design and zoning codes</li> <li>• Implement mixed-use, culturally relevant urban and suburban retrofit</li> <li>• Reinvest in transportation to provide more equitable access to education and employment</li> <li>• Provide resettlement grants</li> <li>• Direct resources and capacity to existing community-based organizations through public and philanthropic funds</li> <li>• Preserve and create affordable housing</li> </ul> |
| Plan for deconcentration plus shifting urban hierarchy <sup>c</sup>                       | <ul style="list-style-type: none"> <li>• Revise land use plans to redirect development to receiving areas</li> <li>• Plan for and facilitate decentralized and adaptive infrastructure systems</li> <li>• Enhance existing governance networks to bridge sending and receiving communities and build capacity across receiving communities</li> </ul>   |

Sources: a. Halstead et al., 2022; Housel et al., 2018; Ozay, 2020; Pottie-Sherman, 2020; Ulrich-Schad, 2018; Ulrich-Schad and Qin, 2018; Whitaker, 2010; Van Berkel et al., 2022. b. Beske and Dixon, 2018; Brann et al., 2020; Dunham-Jones and Williamson, 2011; Harwood, 2022; Li and Spidalieri, 2021. c. American Society of Adaptation Professionals, 2021; Bronen, 2021; Helmrich and Chester, 2022; Hjerpe et al., 2022; Marandi and Main, 2022; Maxim and Grubert, 2021; Onaran, 2023; Stoker et al., 2021.

gentrification from relatively resilient nearby neighborhoods to distant and previously overlooked cities that investors now perceive to be at lower risk of physical climate impacts. These select cities could become increasingly unaffordable to the point that receiving communities would become exclusive enclaves (Burow et al., 2019; Farrell, 2020; Hjerpe et al., 2022; Hodson & Marvin, 2010).

Planners will face a growing demand for new models of infrastructural services where centralized, networked systems are experiencing increasing disruptions due to climate instability (Andrews, 2020; Hauer, 2017; Helmrich & Chester, 2022; Maxim & Grubert, 2021; McLeman, 2018b). Available housing will need to be retrofitted to provide passive energy efficiency and decentralized resilience through systems such as rooftop solar (Mar, 2021). Rather than subsidizing rebuilding in risk-prone areas, the U.S. Federal Emergency Management Agency and U.S. Department of Housing and Urban Development could subsidize this type of localized infrastructure in receiving zones (Onaran, 2023). Inequitable transit systems will also need to be upgraded to provide access to education and employment for newcomers (Spieler, 2020). In this process, it will be important for planners to remain sufficiently critical of the specific racial and socioeconomic characteristics of vacancies and seemingly excess infrastructural

capacity at lot, block, and neighborhood scales while addressing the physical aspects of resilience.

In the suburbs, a similar logic of integrated adaptation applies. With the pandemic shift to working from home and household relocations driven by affordability, the need for suburban retrofit to incorporate a mix of service, education, and employment opportunities into the single-use fabric has become more apparent (Beske & Dixon, 2018; Dunham-Jones & Williamson, 2011; Williamson & Dunham-Jones, 2021). This would maximize the use of already developed space, improve livability as residents could meet more of their needs close to home, and reduce emissions by reducing transportation demand (Teicher et al., 2021). In the context of climate migration, planners can develop plans and codes to facilitate an inclusive mix of housing types and uses to create a suburban fabric that supports the varied community lives of newcomers (Burayidi & Wiles, 2015; Harwood, 2022; Harwood & Lee, 2015). In rural areas, planning capacity will need to be enhanced, potentially through operating at a regional scale or through interjurisdictional networks (Hjerpe et al., 2022; Maxim & Grubert, 2021; Stoker et al., 2021).

One of the concerns with enlisting the planning field in climate migration is that this could in some cases entail a top-down approach to relocating populations (Climigration Network, 2021). However, planning

**Table 3. An agenda for receiving communities research and practice.**

| Insights   | Questions   | Representative studies   |
|--|---|--|
| Reconcile economic development and social inclusion                          | <ul style="list-style-type: none"> <li>• In cities that explicitly position themselves as climate havens through place-branding or economic development strategies, how does this affect the magnitude of relocation, the demographics of newcomers, and the efficacy of integration efforts?</li> <li>• How do patterns of combined voluntary and involuntary migration compare in explicit and de facto destinations?</li> <li>• What is the role of corporations in climate-related relocation? How are they responding to the intersection of climate risks and changing employment markets? Is there discernible investment in perceived climate havens?</li> </ul>  | <ul style="list-style-type: none"> <li>• Comparative case studies of explicit and de facto receiving communities of the same type (i.e., legacy cities) to distinguish the impact of place-branding</li> <li>• Survey newcomers in explicit and de facto destinations for demographic data and whether relocation was voluntary; conduct spatial analysis of their resettlement patterns compared with existing racial and socioeconomic residential patterns</li> <li>• Analyze data on corporate relocations and natural hazard frequency to determine whether there are any correlations. If so, analyze labor and investment impacts where corporations have relocated and conduct case studies of select corporations to analyze decision making</li> </ul>                         |
| Address distinct needs of newcomers plus enhanced needs of current residents | <ul style="list-style-type: none"> <li>• How can tensions between host communities and newcomers be addressed, especially where there are significant racial and socioeconomic differences?</li> <li>• How can migrants be integrated in an equitable way that benefits them as well as disadvantaged communities in the destination? What are the impacts of newcomers in neighborhoods already undergoing different types of change?</li> <li>• Which cities are more and less successful at integrating newcomers and why?</li> </ul>  | <ul style="list-style-type: none"> <li>• Case studies of resettlement organizations in the locations with the largest number of climate migrants</li> <li>• Surveys of community-based anti-displacement organizations; triangulate with spatial analysis of resettlement patterns</li> <li>• From academic and gray literature, determine metrics of success for integrating newcomers and conduct a systematic survey across types of receiving communities</li> </ul>   |
| Plan for deconcentration plus shifting urban hierarchy                       | <ul style="list-style-type: none"> <li>• Among the cities that might qualify as climate havens based on physical characteristics, how are social, economic and governance factors shaping their ability to effectively integrate climate migrants?</li> <li>• What is the relative magnitude of voluntary and involuntary climate-related migration in North America? Are there locations where they are intersecting to a significant extent?</li> <li>• How will climate-related migration interact with the urban deconcentration and restructuring already underway?</li> <li>• Although most migration may occur within national borders, is there an increasing propensity for migration from the United States to Canada considering a northward shift in habitable zones? If so, is this more likely to occur in urban megaregions with existing social and economic ties?</li> </ul> | <ul style="list-style-type: none"> <li>• Conduct systematic review of potential climate havens based on physical characteristics and compare with results of successful newcomer integration; do case studies of most and least successful destinations</li> <li>• Analyze census data on disaster displacement in conjunction with relocation data from major moving companies to determine magnitude and confluence</li> <li>• Develop metrics for climate migration to disentangle from other migration and conduct longitudinal analysis of locations with recent influxes of climate migration</li> <li>• Determine U.S./Canada megaregions with strong social and economic ties; analyze origin and destination of U.S. immigrants to Canada and reasons for relocation</li> </ul> |

for receiving communities can take multiple forms that are responsive to community needs, synthesizing bottom-up approaches with higher level coordination. Some organizations in the field emphasize community-led processes while still noting the importance of connecting this to migration policy at larger scales

(Anthropocene Alliance, 2021; Butler et al., 2021; Climigration Network, 2021). In this vein, the Mayors Migration Council has already been facilitating connections between urban immigration and climate agendas but highlighting the need for more support from higher levels of government (Roderick et al., 2021).

Planners can replicate and coordinate solutions that are developed in this bottom-up manner through decentralized networks while also working to influence state and federal policy (Bronen, 2021; Marandi & Main, 2022; Maxim & Grubert, 2021). The city networks common to the climate planning and immigration planning spheres such as Welcoming America, the Climate Mayors, and C40 bridge community-based organizations and the public and private sectors while providing a framework and narrative for local action (Herrmann, 2017; Johnson et al., 2015; Lacroix, 2021; McDaniel et al., 2019). Planners can contribute strategically by facilitating community-led or co-produced processes at the local scale within a destination city or region while also connecting to more comprehensive approaches that consider the larger landscape of receiving areas.

### The Opportunity for Proactive Planning for Receiving Communities

At this early stage of explicit dialogue about receiving communities, there is a meaningful opportunity to shape research and practice. In some exceptional cases, whole communities may relocate to less vulnerable areas. But most relocation will involve households or groups moving to a wide array of established communities, ranging from large inland metropolitan gateways to rural destinations. Those who move may in some cases be moving by choice, but in many they will be moving under the duress of chronic climate stresses or acute weather events. Significant numbers of both voluntary and involuntary migrants may arrive in the same receiving zones, where they will encounter and shape existing processes of gentrification and widening inequality. At the same time, dramatic restructuring between urban areas may create a shifting landscape that could redirect opportunity toward places where it has been slim, with the potential to benefit both current residents and new arrivals.

Given this prospect, migration can be an important type of adaptation but only to the extent that migration ends in equitable integration in the receiving community. For planning scholars and practitioners, this means examining how to reconcile social inclusion with economic development, how to address the distinct needs of arriving communities that may also exacerbate needs of current residents, and how to prepare for long-term deconcentration. This offers a framework for future research and practice to tackle major questions, raised in Table 3, concerning how communities can navigate integrating newcomers. Cognizant of the burgeoning model-based research on migration and multiplying narratives in media and policy circles, we encourage

more systematic, empirical case study research on the interplay of actual migrants in actual receiving areas at the community and urban scales.

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#### REFERENCES

- Adamo, S. B., & de Sherbinin, A. M. (2014). Migration and environmental change in North America (USA and Canada). In E. Piguet & F. Laczo (Eds.), *People on the move in a changing climate* (pp. 135–153). Springer Science + Business Media.
- Adaptation Clearinghouse. (n.d). *Annexing higher ground and preparing receiving areas in Hamilton, Washington*. Georgetown Climate Center. <https://www.adaptationclearinghouse.org/resources/annexing-higher-ground-and-preparing-receiving-areas-in-hamilton-washington.html>
- Aerts, J. C. J. H. (2017). Climate-induced migration: Impacts beyond the coast. *Nature Climate Change*, 7(5), 315–316. <https://doi.org/10.1038/nclimate3279>
- Afifi, T., Milan, A., Etzold, B., Schraven, B., Rademacher-Schulz, C., Sakdapolrak, P., Reif, A., van der Geest, K., & Warner, K. (2016). Human mobility in response to rainfall variability: Opportunities for migration as a successful adaptation strategy in eight case studies. *Migration and Development*, 5(2), 254–274. <https://doi.org/10.1080/21632324.2015.1022974>
- The Alabama Center for Rural Enterprise (ACRE), & The Columbia Law School Human Rights Clinic. (2019). *Flushed and forgotten: Sanitation and wastewater in rural communities in the United States*. <https://www.humanrightscolumbia.org/sites/default/files/Flushed%20and%20Forgotten%20-%20FINAL%20%281%29.pdf>
- Aldrich, D. P. (2012). Social capital in post disaster recovery: Towards a resilient and compassionate East Asian community. In *Economic and welfare impacts of disasters in East Asia and policy responses* (pp. 157–178). ERIA Research Project Report 2011-8.
- Alexander, J. B. (Dir.). (2021, July 20). Seeking your climate refuge? Consider this. CNN. <https://www.cnn.com/2021/07/20/opinions/climate-change-migration-alexander/index.html>
- Ali, C. (2020). The politics of good enough: Rural broadband and policy failure in the United States. *International Journal of Communication*, 14(2020), 5982–6004. <https://ijoc.org/index.php/ijoc/article/view/15203/3285>



- Allain, K. A., Crath, R., & Çalıřkan, G. (2020). Speaking welcome: A discursive analysis of an immigrant mentorship event in Atlantic Canada. *Ethnicities*, 20(6), 1197–1217. <https://doi.org/10.1177/1468796819833398>
- American Society of Adaptation Professionals. (2021). *Climate and demographic change in the Great Lakes region: A narrative literature review of opportunities and opportunity barriers*. American Society of Adaptation Professionals. <https://adaptationprofessionals.org/wp-content/uploads/2021/03/Literature-Review.pdf>
- American Society of Civil Engineers. (2021). *2021 Infrastructure report card: Drinking water*. American Society of Civil Engineers. <https://infrastructurereportcard.org/cat-item/drinking-water-infrastructure/>
- Andrews, C. J. (2020). Toward a research agenda on climate-related migration. *Journal of Industrial Ecology*, 24(2), 331–341. <https://doi.org/10.1111/jiec.13005>
- Anguelovski, I., Shi, L., Chu, E., Gallagher, D., Goh, K., Lamb, Z., Reeve, K., & Teicher, H. (2016). Equity impacts of urban land use planning for climate adaptation: Critical perspectives from the Global North and South. *Journal of Planning Education and Research*, 36(3), 333–348. <https://doi.org/10.1177/0739456X16645166>
- Anthropocene Alliance. (2021). *The great American climate migration: A roundtable discussion by grassroots leaders*. Anthropocene Alliance.
- Austin, J., & Hitch, A. (2020). *A vital Midwest: The path to prosperity*. The Chicago Council on Global Affairs.
- Bagchi-Sen, S., Franklin, R. S., Rogerson, P., & Seymour, E. (2020). Urban inequality and the demographic transformation of shrinking cities: The role of the foreign born. *Applied Geography*, 116(March 2020), 102168. <https://doi.org/10.1016/j.apgeog.2020.102168>
- Balachandran, B., Olshansky, R. B., & Johnson, L. A. (2022). Planning for disaster-induced relocation of communities. *Journal of the American Planning Association*, 88(3), 288–304. <https://doi.org/10.1080/01944363.2021.1978855>
- Batibeniz, F., Ashfaq, M., Diffenbaugh, N. S., Key, K., Evans, K. J., Turuncoglu, U. U., & Onol, B. (2020). Doubling of U.S. population exposure to climate extremes by 2050. *Earth's Future*, 8(4), e2019. <https://doi.org/10.1029/2019EF001421>
- Benzow, A. (2022, March 31). Exodus from urban counties hit a record in 2021. *Economic Innovation Group*. <https://eig.org/exodus-from-urban-counties-hit-a-record-in-2021/>
- Beske, J., & Dixon, D. (Eds.). (2018). *Suburban remix: Creating the next generation of urban places*. Island Press.
- Black, R., Bennett, S. R. G., Thomas, S. M., & Beddington, J. R. (2011). Migration as adaptation. *Nature*, 478(7370), 447–449. <https://doi.org/10.1038/478477a>
- Blake, J. S., Clark-Ginsberg, A., & Balagna, J. (2021). *Addressing climate migration: A review of national policy approaches*. Rand Corporation.
- Bose, P. S. (2018). Welcome and hope, fear, and loathing: The politics of refugee resettlement in Vermont. *Peace and Conflict: Journal of Peace Psychology*, 24(3), 320–329. <https://doi.org/10.1037/pac0000302>
- Brammeier, J. (2021, September 16). The Great Lakes region is not a “climate refuge.” *Bloomberg CityLab*. <https://www.bloomberg.com/news/articles/2021-09-16/the-great-lakes-region-is-not-a-climate-refuge>
- Brann, M., Chambers, R., & Destephano, P. (2020). *Buffalo: Where community resilience is climate resilience* (pp. 3–11). The University of Chicago Harris Public Policy, The Aspen Institute Energy and Environment Program. [https://www.aspeninstitute.org/wp-content/uploads/2020/06/IPSS-Report-2020\\_FINAL.pdf](https://www.aspeninstitute.org/wp-content/uploads/2020/06/IPSS-Report-2020_FINAL.pdf)
- Brentjens, E. (2021, August 9). 10 cities that could grow as climate change worsens. *LeafScore*. <https://www.leafscore.com/blog/10-cities-that-could-grow-as-climate-change-worsens/>
- Brodwin, E. (2017, September 24). The best US cities to live in to escape the worst effects of climate change. *Business Insider*. <https://www.businessinsider.com/best-us-cities-escape-climate-change-2017-9>
- Bronen, R. (2021). Rights, resilience and community-led relocation: Creating a national governance framework. *Harbinger*, 45, 25–45.
- Bronen, R., & Chapin, F. S. (2013). Adaptive governance and institutional strategies for climate-induced community relocations in Alaska. *Proceedings of the National Academy of Sciences of the United States of America*, 110(23), 9320–9325. <https://doi.org/10.1073/pnas.1210508110>
- Bronen, R., Maldonado, J. K., Marino, E., & Hardison, P. (2018). Climate change and displacement: Challenges and needs to address an imminent reality. In M. A. Cernea and J. K. Maldonado (Eds.), *Challenging the prevailing paradigm of displacement and resettlement: Risks, impoverishment, legacy, solutions* (pp. 252–272). Routledge.
- Burayidi, M. A., & Wiles, A. (2015). Majority-minority cities: What can they teach us about the future of planning practice? In M. A. Burayidi (Ed.), *Cities and the politics of difference: Multiculturalism and diversity in urban planning* (pp. 193–213). University of Toronto Press.
- Burow, P. B., McConnell, K., & Farrell, J. (2019). Social scientific research on the American West: Current debates, novel methods, and new directions. *Environmental Research Letters*, 14(12), 125012. <https://doi.org/10.1088/1748-9326/ab4030>
- Butler, W., Holmes, T., Jackson, A., Lange, Z., Melix, B., & Milordis, A. (2021). *Addressing climate driven displacement: Planning for sea level rise in Florida's coastal communities and affordable housing in inland communities in the face of climate gentrification*. The Leroy Collins Institute at Florida State University.
- Castells-Quintana, D., Krause, M., & McDermott, T. K. J. (2021). The urbanising force of global warming: The role of climate change in the spatial distribution of population. *Journal of Economic Geography*, 21(4), 531–556. <https://doi.org/10.1093/jeg/lbaa030>
- Chipeniuk, R. (2004). Planning for amenity migration in Canada. *Mountain Research and Development*, 24(4), 327–335. [https://doi.org/10.1659/0276-4741\(2004\)024\[0327:pfamic\]2.0.co;2](https://doi.org/10.1659/0276-4741(2004)024[0327:pfamic]2.0.co;2)
- City of Chicago (2012). *The Chicago New Americans Plan: Building a thriving and welcoming city*. City of Chicago.
- City of Norfolk (2016). *Norfolk vision 2100*. [https://www.norfolk.gov/DocumentCenter/View/27768/Vision-2100---FINAL?bidId=Cleave, E., & Arku, G. \(2020\). Immigrant attraction through place branding? Evidence of city-level effectiveness from Canada's London. \*Cities\*, 97\(February 2020\), 102502. <https://doi.org/10.1016/j.cities.2019.102502>](https://www.norfolk.gov/DocumentCenter/View/27768/Vision-2100---FINAL?bidId=Cleave, E., & Arku, G. (2020). Immigrant attraction through place branding? Evidence of city-level effectiveness from Canada's London. Cities, 97(February 2020), 102502. https://doi.org/10.1016/j.cities.2019.102502)
- Climate Alpha (2022). *Overview*. <https://climatealpha.ai/>
- Climigration Network (2021). *Lead with listening: A guidebook for community conversations on climate migration*. Climigration Network. <https://www.climigration.org/guidebook>
- Corvus, J., & Sylvia, M. (2021). *Identifying planning solutions for the Connecticut River migration system of New Hampshire and Vermont: Part III - Best practices, solutions and planning*. Antioch University New England.

- center.org/wp-content/uploads/2021/09/CRV\_Planning-for-Migration.pdf
- de Sherbinin, A., Castro, M., Gemenne, F., Cernea, M. M., Adamo, S., Fearnside, P. M., Krieger, G., Lahmani, S., Oliver-Smith, A., Pankhurst, A., Scudder, T., Singer, B., Tan, Y., Wannier, G., Boncour, P., Ehrhart, C., Hugo, G., Pandey, B., & Shi, G. (2011). Preparing for resettlement associated with climate change. *Science (New York, N.Y.)*, 334(6055), 456–457. <https://doi.org/10.1126/science.1208821>
- De Socio, M. (2021, April 19). The problem with “climate havens.” *Bloomberg CityLab*. <https://www.bloomberg.com/news/articles/2021-04-19/there-s-no-such-thing-as-a-climate-haven>
- Dickinson, T. (2021, June 29). I moved to Portland because it seemed like a safe bet in the face of climate change. I was naive. *Rolling Stone*. <https://www.yahoo.com/video/moved-portland-because-seemed-safe-191312508.html>
- Dillon, J. (2021, April 21). Shelter from the climate storm? Experts say Vermont needs to prepare for “climigration.” *Vermont Public Radio*. <https://www.wbur.org/news/2021/04/21/climate-change-vermont-migration-population-influx>
- Dunham-Jones, E., & Williamson, J. (2011). *Retrofitting suburbia: Urban design solutions for redesigning suburbs* (1st ed.). Wiley.
- Farrell, J. (2020). Ultra-wealth through the eyes of the working poor. In *Billionaire wilderness: The ultra-wealthy and the remaking of the American West* (pp. 239–308). Princeton University Press.
- Fassler, E. (2021, June 29). Activists are sharing land in Vermont with people escaping climate disaster. *Vice*. <https://www.vice.com/en/article/wx5zb9/activists-are-buying-land-in-vermont-to-help-people-escape-climate-disaster>
- Florida, R., Ozimek, A. (2021, March 5). How remote work is reshaping America’s urban geography. *Creativeclass.com*. [https://creativeclass.com/wp-content/uploads/2021/04/remote\\_geography.pdf](https://creativeclass.com/wp-content/uploads/2021/04/remote_geography.pdf)
- Forsyth, A., & Peiser, R. (2021). Lessons from planned resettlement and new town experiences for avoiding climate sprawl. *Landscape and Urban Planning*, 205(January 2021), 103957. <https://doi.org/10.1016/j.landurbplan.2020.103957>
- Gelderblom, D. (2018). The limits to bridging social capital: Power, social context and the theory of Robert Putnam. *Sociological Review*, 66(6), 1309–1324. <https://doi.org/10.1177/0038026118765360>
- Gemenne, F., & Blocher, J. (2017). How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal. *The Geographical Journal*, 183(4), 336–347. <https://doi.org/10.1111/geoj.12205>
- Ghosh, R. C., & Orchiston, C. (2022). A systematic review of climate migration research: Gaps in existing literature. *SN Social Sciences*, 2(5), 1–22. <https://doi.org/10.1007/s43545-022-00341-8>
- Graif, C. (2016). (Un)natural disaster: Vulnerability, long-distance displacement, and the extended geography of neighborhood distress and attainment after Katrina. *Population and Environment*, 37(3), 288–318. <https://doi.org/10.1007/s11111-015-0243-6>
- Gutmann, M. P., & Field, V. (2010). Katrina in historical context: Environment and migration in the U.S. *Population and Environment*, 31(1–3), 3–19. <https://doi.org/10.1007/s11111-009-0088-y>
- Habeshian, S. (2023, January 6). Survey: 3.3 million U.S. adults displaced by natural disasters in past year. *Axios*. <https://www.axios.com/2023/01/06/adults-displaced-natural-disasters-survey>
- Halstead, J. M., Deller, S. C., & Leyden, K. M. (2022). Social capital and community development: Where do we go from here? *Community Development*, 53(1), 92–108. <https://doi.org/10.1080/15575330.2021.1943696>
- Hanifa, R. (2021). *This year, half as many metro areas are affordable to low-income homebuyers as last year*. *Housing Perspectives*. Joint Center for Housing Studies of Harvard University. <https://www.jchs.harvard.edu/blog/year-half-many-metro-areas-are-affordable-low-income-homebuyers-last-year>
- Hardy, R. D., Milligan, R. A., & Heynen, N. (2017). Racial coastal formation: The environmental injustice of colorblind adaptation planning for sea-level rise. *Geoforum*, 87(December 2017), 62–72. <https://doi.org/10.1016/j.geoforum.2017.10.005>
- Harwood, S. A. (2022). Welcoming immigrants. *Journal of the American Planning Association*, 88(3), 413–428. <https://doi.org/10.1080/01944363.2021.1999843>
- Harwood, S. A., & Lee, S. S. (2015). Immigrant-friendly community plans: Rustbelt efforts to attract and retain immigrants. In *Cities and the politics of difference: Multiculturalism and diversity in urban planning* (pp. 236–262). University of Toronto Press.
- Haslag, P. H., & Weagley, D. (2022). From L.A. to Boise: How migration has changed during the COVID-19 pandemic. *SSRN Electronic Journal*. Advance online publication. <https://doi.org/10.2139/ssrn.3808326>
- Hauer, M. E. (2017). Migration induced by sea-level rise could reshape the US population landscape. *Nature Climate Change*, 7(5), 321–325. <https://doi.org/10.1038/nclimate3271>
- Hauer, M. E., Fussell, E., Mueller, V., Burkett, M., Call, M., Abel, K., McLeman, R., & Wrathall, D. (2020). Sea-level rise and human migration. *Nature Reviews Earth & Environment*, 1(1), 28–39. <https://doi.org/10.1038/s43017-019-0002-9>
- Helmrich, A. M., & Chester, M. V. (2022). Reconciling complexity and deep uncertainty in infrastructure design for climate adaptation. *Sustainable and Resilient Infrastructure*, 7(2), 83–99. <https://doi.org/10.1080/23789689.2019.1708179>
- Herrmann, V. (2017). *The United States’ Climate Change Relocation Plan: What needs to happen now*. Atlantic Council.
- Hinojosa, J. (2018). Two sides of the coin of Puerto Rican migration: Depopulation in Puerto Rico and the redefinition of the diaspora. *Centro Journal*, 30(3), 230–253.
- Hjerpe, E., Armatas, C., & Haefele, M. (2022). Amenity-based development and protected areas in the American West. *Land Use Policy*, 116(May 2022), 106064. <https://doi.org/10.1016/j.landusepol.2022.106064>
- Hjerpe, E., Hussain, A., & Holmes, T. (2020). Amenity migration and public lands: Rise of the protected areas. *Environmental Management*, 66(1), 56–71. <https://doi.org/10.1007/s00267-020-01293-6>
- Hodson, M., & Marvin, S. (2010). Urbanism in the Anthropocene: Ecological urbanism or premium ecological enclaves? *City*, 14(3), 298–313. <https://doi.org/10.1080/13604813.2010.482277>
- Hoffman, J. S., Shandas, V., & Pendleton, N. (2020). The effects of historical housing policies on resident exposure to intra-urban heat: A study of 108 US urban areas. *Climate*, 8(1), 1–15. <https://doi.org/10.3390/cli8010012>
- Horton, R. M., de Sherbinin, A. M., Wrathall, D., & Oppenheimer, M. (2021). Assessing human habitability and

- migration. *Science (New York, N.Y.)*, 372(6548), 1279–1283. <https://doi.org/10.1126/science.abi8603>
- Housel, J., Saxen, C., & Wahlrab, T. (2018). Experiencing intentional recognition: Welcoming immigrants in Dayton, Ohio. *Urban Studies*, 55(2), 384–405. <https://doi.org/10.1177/0042098016653724>
- Howard, J. (2009). Climate change mitigation and adaptation in developed nations: A critical perspective on the adaptation turn in urban climate planning. In S. Davoudi, J. Crawford, & A. Mehmood (Eds.), *Planning for climate change: Strategies for mitigation and adaptation for spatial planners* (pp. 19–32). Routledge.
- Hsiang, S., Kopp, R., Jina, A., Rising, J., Delgado, M., Mohan, S., Rasmussen, D. J., Muir-Wood, R., Wilson, P., Oppenheimer, M., Larsen, K., & Houser, T. (2017). Estimating economic damage from climate change in the United States. *Science (New York, N.Y.)*, 356(6345), 1362–1369. <https://doi.org/10.1126/science.aal4369>
- Huang, X. (2022). Do local immigrant-welcoming efforts increase immigration? The Detroit experience. *Urban Affairs Review*, 58(5), 1340–1373. <https://doi.org/10.1177/10780874211025214>
- Huang, X., & Liu, C. Y. (2018). Welcoming cities: Immigration policy at the local government level. *Urban Affairs Review*, 54(1), 3–32. <https://doi.org/10.1177/1078087416678999>
- Hughes, S. (2020). Principles, drivers, and policy tools for just climate change adaptation in legacy cities. *Environmental Science and Policy*, 111(September 2020), 35–41. <https://doi.org/10.1016/j.envsci.2020.05.007>
- Ismail, A. (2021, September 11). The Mosque wars. *Slate*. <https://slate.com/human-interest/2021/09/september-11-new-mosques-islam-ground-zero.html>
- Jessee, N. (2020). Community resettlement in Louisiana: Learning from histories of horror and hope. In S. Laska (Ed.), *Louisiana's response to extreme weather: A coastal state's adaptation challenges and successes* (pp. 147–184). Springer.
- Johnson, C., Toly, N., & Schroeder, H. (Eds.). (2015). *The urban climate challenge: Rethinking the role of cities in the global climate regime*. Routledge.
- Juhola, S., Glaas, E., Linner, B. O., & Neset, T. S. (2016). Redefining maladaptation. *Environmental Science and Policy*, 55, Part 1(January 2016), 135–140. <https://doi.org/10.1016/j.envsci.2015.09.014>
- Kaczan, D. J., & Orgill-Meyer, J. (2020). The impact of climate change on migration: A synthesis of recent empirical insights. *Climatic Change*, 158(3–4), 281–300. <https://doi.org/10.1007/s10584-019-02560-0>
- Kaufman, L. (2021, May 4). What is a climate haven? *Medium*. <https://medium.com/climate-conscious/what-is-a-climate-haven-4f0efa2c7cbe>
- Keenan, J. M. (2019). Destination Duluth: Competitive economic development in the age of climigration. In *Global shifts: A changing climate, A changing world* (pp. 1–3). Perry World House University of Pennsylvania. <https://global.upenn.edu/perryworldhouse/2019-global-shifts-colloquium-report-and-thought-pieces>
- Keenan, J. M., Hill, T., & Gumber, A. (2018). Climate gentrification: From theory to empiricism. *Environmental Research Letters*, 13(5), 054001. Res. Lett. 13 (2018) 054001 <https://doi.org/10.1088/1748-9326/aabb32>
- Keene, E. (2017). Lessons from relocations past: Climate change, tribes, and the need for pragmatism in community relocation planning. *American Indian Law Review*, 42(1), 259–289. <https://digitalcommons.law.ou.edu/ailr/vol42/iss1/7>
- Klinenberg, E. (2015). *Heat wave: A social autopsy of disaster in Chicago* (2nd ed.). University of Chicago Press.
- Knight, J., Weaver, R., & Jones, P. (2018). Walkable and resurgent for whom? The uneven geographies of walkability in Buffalo, NY. *Applied Geography*, 92(March 2018), 1–11. <https://doi.org/10.1016/j.apgeog.2018.01.008>
- Koslov, L., Merdjanoff, A., Sulakshana, E., & Klinenberg, E. (2021). When rebuilding no longer means recovery: The stress of staying put after Hurricane Sandy. *Climatic Change*, 165(3–4), 59. <https://doi.org/10.1007/s10584-021-03069-1>
- Kraker, D. (2022, January 28). How much is climate a factor in where people are moving? *Marketplace*. <https://www.marketplace.org/2022/01/28/how-much-is-climate-a-factor-in-where-people-are-moving/>
- Lacroix, T. (2021). Migration-related city networks: A global overview. *Local Government Studies*, 48(6), 1027–1047. <https://doi.org/10.1080/03003930.2021.1938553>
- Laitos, J. G., & Ruckriegle, H. (2013). The problem of amenity migrants in North America and Europe. *British Journal of Canadian Studies*, 45(4), 849–914.
- Li, J., & Spidalieri, K. (2021). Home is where the safer ground is: The need to promote affordable housing laws and policies in receiving communities. *Journal of Environmental Studies and Sciences*, 11(4), 682–695. <https://doi.org/10.1007/s13412-021-00702-4>
- Liu, S., & Su, Y. (2021). The impact of the COVID-19 pandemic on the demand for density: Evidence from the U.S. housing market. *Economics Letters*, 207(October 2021), 110010. <https://doi.org/10.1016/j.econlet.2021.110010>
- Mar, T. (2021, November 4). Buffalo as a “climate refuge”? Let’s start planning for it, UB expert says. *UB Now*. <https://www.buffalo.edu/ubnow/stories/2021/11/rajkovich-climate-refuge.html>
- Marandi, A., & Main, K. L. (2021). Vulnerable city, recipient city, or climate destination? Towards a typology of domestic climate migration impacts in US cities. *Journal of Environmental Studies and Sciences*, 11(3), 465–480. <https://doi.org/10.1007/s13412-021-00712-2>
- Marandi, A., & Main, K. L. (2022). *The next American migration: What cities should know about climate change and populations on the move*. The National League of Cities; Buy-In Community Planning, Inc. <https://www.nlc.org/resource/the-next-american-migration-what-cities-should-know-about-climate-change-and-populations-on-the-move/>
- Marino, E. (2018). Adaptation privilege and voluntary buyouts: Perspectives on ethnocentrism in sea level rise relocation and retreat policies in the US. *Global Environmental Change*, 49(March 2018), 10–13. <https://doi.org/10.1016/j.gloenvcha.2018.01.002>
- Matthews, T., & Potts, R. (2018). Planning for climigration: A framework for effective action. *Climatic Change*, 148(4), 607–621. <https://doi.org/10.1007/s10584-018-2205-3>
- Maxim, A., & Grubert, E. (2021). Effects of climate migration on town-to-city transitions in the United States: Proactive investments in civil infrastructure for resilience and sustainability. *Environmental Research: Infrastructure and Sustainability*, 1(3), 031001. <https://doi.org/10.1088/2634-4505/ac33ef>
- MAXQDA 2022 (Version 22.4.1) [Computer software]. <https://www.maxqda.com/products/maxqda-standard/> (Verbi 2022)
- McCallum, K. (2022, January 12). Fave little state: Climate migrants from around America are seeking refuge in Vermont.

- Seven Days VT. <https://www.sevendaysvt.com/vermont/fave-little-state-climate-migrants-from-around-america-are-seeking-refuge-in-vermont/Content?oid=34654969>
- McDaniel, P. N. (2018). Shared humanity, city branding, and municipal immigrant integration initiatives in the Southeastern United States. *Southeastern Geographer*, 58(3), 250–281. <https://doi.org/10.1353/sgo.2018.0028>
- McDaniel, P. N., Rodriguez, D. X., & Wang, Q. (2019). Immigrant integration and receptivity policy formation in welcoming cities. *Journal of Urban Affairs*, 41(8), 1142–1166. <https://doi.org/10.1080/07352166.2019.1572456>
- McLeman, R. A. (2018a). Migration and displacement risks due to mean sea-level rise. *Bulletin of the Atomic Scientists*, 74(3), 148–154. <https://doi.org/10.1080/00963402.2018.1461951>
- McLeman, R. A. (2018b). Thresholds in climate migration. *Population and Environment*, 39(4), 319–338. <https://doi.org/10.1007/s11111-017-0290-2>
- McLeman, R. A., Dupre, J., Berrang Ford, L., Ford, J., Gajewski, K., & Marchildon, G. (2014). What we learned from the Dust Bowl: Lessons in science, policy, and adaptation. *Population and Environment*, 35(4), 417–440. <https://doi.org/10.1007/s11111-013-0190-z>
- McLeman, R. A., & Hunter, L. M. (2010). Migration in the context of vulnerability and adaptation to climate change: Insights from analogues. *Wiley Interdisciplinary Reviews. Climate Change*, 1(3), 450–461. <https://doi.org/10.1002/wcc.51>
- McLeman, R. A., & Smit, B. (2006). Migration as an adaptation to climate change. *Climatic Change*, 76(1–2), 31–53. <https://doi.org/10.1007/s10584-005-9000-7>
- Molloy, R., Smith, C. L., & Wozniak, A. (2011). Internal migration in the United States. *Journal of Economic Perspectives*, 25(3), 173–196. <https://doi.org/10.1257/jep.25.3.173>
- Mullins, J., & Bharadwaj, P. (2021). Weather, climate, and migration in the United States. NBER Working Paper No. w28614, <https://ssrn.com/abstract=3814603>
- Nelson, P. B., & Hines, J. D. (2018). Rural gentrification and networks of capital accumulation: A case study of Jackson, Wyoming. *Environment and Planning A*, 50(7), 1473–1495. <https://doi.org/10.1177/0308518X18778595>
- Onaran, K. (2023). Enabling felocation. In *Urbanism for a difficult future: Practical responses to the climate crisis* (pp. 48–56). Routledge.
- Ozay, E. (2020). Rust Belt cosmopolitanism: Resettlement urbanism in Buffalo, New York. In P. H. Christensen (Ed.), *Buffalo at the crossroads: The past, present, and future of American Urbanism*. Cornell University Press. <https://doi.org/10.7591/cornell/9781501749766.001.0001>
- Partridge, B. M. D., Feng, B., & Rembert, M. (2017). Improving climate-change modeling of US migration. *The American Economic Review*, 107(5), 451–455. <https://doi.org/10.1257/aer.p20171054>
- Phillips, L. (2020). Go north, young man: The great climate migration and America's shrinking cities. *Sea Grant Law & Policy Journal*, 10(2), 74–96. [https://heinonline.org/HOL/Page?handle=hein.journals/sglum10&div=17&g\\_sent=1&casa\\_token=&collection=journals](https://heinonline.org/HOL/Page?handle=hein.journals/sglum10&div=17&g_sent=1&casa_token=&collection=journals)
- Pierre-Louis, K. (2019, April 15). Want to escape global warming? These cities promise cool relief. *New York Times*. <https://www.nytimes.com/2019/04/15/climate/climate-migration-duluth.html>
- Piguet, E. (2022). Linking climate change, environmental degradation, and migration: An update after 10 years. *WIREs Climate Change*, 13(21), e746. <https://doi.org/10.1002/wcc.746>
- Pottie-Sherman, Y. (2018). Austerity urbanism and the promise of immigrant- and refugee-centered urban revitalization in the US Rust Belt. *Urban Geography*, 39(3), 438–457. <https://doi.org/10.1080/02723638.2017.1342398>
- Pottie-Sherman, Y. (2020). Rust and reinvention: Im/migration and urban change in the American Rust Belt. *Geography Compass*, 14(3), 1–13. <https://doi.org/10.1111/gec3.12482>
- Pottie-Sherman, Y., & Graham, N. (2021). Live, work, and stay? Geographies of immigrant receptivity in Atlantic Canada's aspiring gateways. *Geographical Review*, 111(2), 287–307. <https://doi.org/10.1080/00167428.2020.1804301>
- Rajbhandari, I., & Partridge, M. (2018). State of the art and future challenges of interregional migration empirical research in North America. In B. Biagi, A. Faggian, I. Rajbhandari, & V. A. Venhorst (Eds.), *New frontiers in interregional migration research* (pp. 63–86). Springer. [https://doi.org/10.1007/978-3-319-75886-2\\_7](https://doi.org/10.1007/978-3-319-75886-2_7)
- Ramani, A., & Bloom, N. (2021). *The donut effect of Covid-19 on cities* (No. 28876). NBER.
- Rana, M. M. P., & Ilna, I. N. (2021). Climate change and migration impacts on cities: Lessons from Bangladesh. *Environmental Challenges*, 5(May), 100242. <https://doi.org/10.1016/j.envc.2021.100242>
- Renaud, F. G., Dun, O., Warner, K., & Bogardi, J. (2011). A decision framework for environmentally induced migration. *International Migration*, 49(suppl.1), e5–e29. <https://doi.org/10.1111/j.1468-2435.2010.00678.x>
- Roderick, W., Garg, S., Morel, L. M., Brick, K., & Powers, M. (2021). *Cities, climate and migration: The role of cities at the climate-migration nexus*. C40 and Mayors Migration Council.
- Rodriguez, D. X., McDaniel, P. N., & Ahebee, M. D. (2018). Welcoming America: A case study of municipal immigrant integration, receptivity, and community practice. *Journal of Community Practice*, 26(3), 348–357. <https://doi.org/10.1080/10705422.2018.1477081>
- Rossi, M. (2019, August). Some northern cities could be reborn as "climate havens." *Yale Climate Connections*. <https://yaleclimateconnections.org/2019/08/some-northern-cities-could-be-reborn-as-climate-havens/>
- Sacks, E., Acevedo, N. (2020, January 24). Move to Buffalo? With Earth warming, northern cities could become oases. *NBC News*. <https://www.nbcnews.com/science/environment/buffalo-oasis-scientists-say-warmer-earth-could-make-colder-cities-n1113711>
- Sandhovel, A. (2022, August 16). Less water, more people present a growing economic challenge for the driest counties in the United States. *Economic Innovation Group*. <https://eig.org/drought-conditions-snapshot/>
- Schemschat, N. (2021). Refugee arrival under conditions of urban decline: From territorial stigma and othering to collective place-making in diverse shrinking cities? *Sustainability*, 13(23), 13301. <https://doi.org/10.3390/su132313301>
- Schmidtke, O. (2019). The local governance of migration: Lessons from the immigration country. *Canada. Disp*, 55(3), 31–42. <https://doi.org/10.1080/02513625.2019.1670986>
- Schneider, K. (2021). Water could make Michigan a climate refuge. Are we prepared? *Great Lakes Now*. <https://www.greatlakesnow.org/2021/02/water-great-lakes-climate-refuge-prepared/>
- Schraven, B., Adaawen, S., & Janoth, J.-N. (2021). Migration as adaptation: Some considerations based on a literature review. In *The Palgrave handbook of climate resilient societies* (pp. 1249–1285). Palgrave Macmillan.

- Silverman, R. M., Yin, L., & Patterson, K. L. (2013). Dawn of the dead city: An exploratory analysis of vacant addresses in Buffalo, NY 2008-2010. *Journal of Urban Affairs*, 35(2), 131–152. <https://doi.org/10.1111/j.1467-9906.2012.00627.x>
- Singer, A. (2008). Twenty-first-century gateways: An introduction. In A. Singer, S. W. Hardwick, & C. B. Brettell (Eds.), *Twenty-first century gateways: Immigrant incorporation in suburban America* (pp. 3–30). Brookings Institution Press.
- Singer, A. (2015). *A typology of immigrant gateways, 2014*. Brookings Institution.
- Smith, N. (2011). Uneven development redux. *New Political Economy*, 16(2), 261–265. <https://doi.org/10.1080/13563467.2011.542804>
- Sobczak-Szelc, K., & Fekih, N. (2020). Migration as one of several adaptation strategies for environmental limitations in Tunisia: Evidence from El Faouar. *Comparative Migration Studies*, 8(1), 1–20. <https://doi.org/10.1186/s40878-019-0163-1>
- Solnit, R. (2009). *A paradise built in hell: The extraordinary communities that arise in disaster*. Penguin Books.
- Spieler, C. (2020, August 24). Racism has shaped public transit, and it's riddled with inequities. *Urban Edge*. Kinder Institute for Urban Research, Rice University. <https://kinder.rice.edu/urban-edge/racism-has-shaped-public-transit-and-its-riddled-inequities>
- Stoker, P., Rumore, D., Romaniello, L., & Levine, Z. (2021). Planning and development challenges in western gateway communities. *Journal of the American Planning Association*, 87(1), 21–33. <https://doi.org/10.1080/01944363.2020.1791728>
- Tacy, R., Hanson, S., & Poulin, J. (2020). *Climate migration in Vermont: Receiving areas, key demographics, potential impacts on natural and social resources*. Antioch University New England. [https://communityresilience-center.org/wp-content/uploads/2020/12/Climate\\_Migration\\_Report.pdf](https://communityresilience-center.org/wp-content/uploads/2020/12/Climate_Migration_Report.pdf)
- Teicher, H. M., Phillips, C. A., & Todd, D. (2021). Climate solutions to meet the suburban surge: Leveraging COVID-19 recovery to enhance suburban climate governance. *Climate Policy*, 21(10), 1318–1327. <https://doi.org/10.1080/14693062.2021.1949259>
- Ulrich-Schad, J. D. (2018). “We didn’t move here to move to Aspen”: Community making and community development in an emerging rural amenity destination. *Journal of Rural and Community Development*, 13(4), 43–66. <https://journals.brandu.ca/jrcd/article/view/1398/365>
- Ulrich-Schad, J. D., & Qin, H. (2018). Culture clash? Predictors of views on amenity-led development and community involvement in rural recreation counties. *Rural Sociology*, 83(1), 81–108. <https://doi.org/10.1111/ruso.12165>
- Urban Land Institute (2022). *Climate migration and real estate investment decision-making*. Urban Land Institute.
- U.S. Department of Agriculture (2021). *Water and waste disposal loan and grant program*. U.S. Department of Agriculture. [https://www.rd.usda.gov/sites/default/files/wep\\_newsrelease-chart070621.pdf](https://www.rd.usda.gov/sites/default/files/wep_newsrelease-chart070621.pdf)
- U.S. Government Accountability Office (2020). *Climate change: A climate migration pilot program could enhance the nation’s resilience and reduce federal fiscal exposure*. (GAO-20-488). U.S. Government Accountability Office.
- Vail, D. (2021). Prospects for a rim county renaissance: Pandemic as economic opportunity. *Maine Policy Review*, 30(2), 104–110. <https://doi.org/10.53558/vffs1496>
- Van Berkel, D., Kalafatis, S., Gibbons, B., Naud, M., & Lemos, M. C. (2022). Planning for climate migration in Great Lake legacy cities. *Earth’s Future*, 10(10), e2022. <https://doi.org/10.1029/2022EF002942>
- Vinke, K., Bergmann, J., Blocher, J., Upadhyay, H., & Hoffmann, R. (2020). Migration as adaptation? *Migration Studies*, 8(4), 626–634. <https://doi.org/10.1093/migration/mnaa029>
- Warner, K., Afifi, T., Kalin, W., Leckie, S., Ferris, B., Martin, S. F., & Wrathall, D. (2013). *Changing climate, moving people: Framing migration, displacement and planned relocation*. United Nations University Institute for Environment and Human Security (UNU-EHS).
- Weber, L., & Peek, L. (2012). *Displaced: Life in the Katrina diaspora*. University of Texas Press.
- Whitaker, E. A. (2010). Where everybody knows your name: The role of social capital in resettlement after an employee relocation. *Community, Work and Family*, 13(4), 429–445. <https://doi.org/10.1080/13668801003619415>
- Williamson, J., & Dunham-Jones, E. (2021). *Case studies in retrofitting suburbia: Urban design strategies for urgent challenges* (1st ed.). Wiley.
- Wilson, D., & Wouters, J. (2003). Spatiality and growth discourse: The restructuring of America’s Rust Belt cities. *Journal of Urban Affairs*, 25(2), 123–138. <https://doi.org/10.1111/1467-9906.t01-1-00002>
- Winkler, R. L., & Rouleau, M. D. (2021). Amenities or disamenities? Estimating the impacts of extreme heat and wildfire on domestic US migration. *Population and Environment*, 42(4), 622–648. <https://doi.org/10.1007/s11111-020-00364-4>
- Xu, C., Kohler, T. A., Lenton, T. M., Svenning, J. C., & Scheffer, M. (2020). Future of the human climate niche. *Proceedings of the National Academy of Sciences of the United States of America*, 117(21), 11350–11355. <https://doi.org/10.1073/pnas.1910114117>