

Preparing Receiving Regions for a Just and Sustainable Climate Migration: Systems and Scenarios for New England

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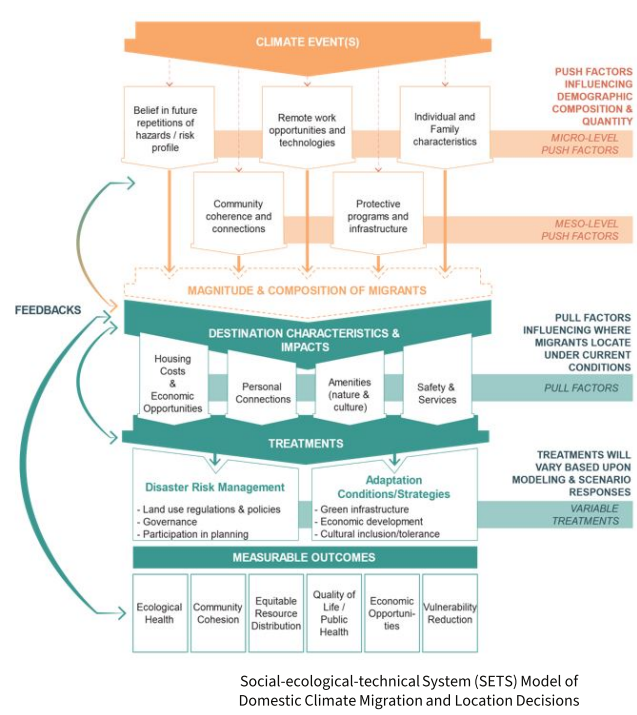
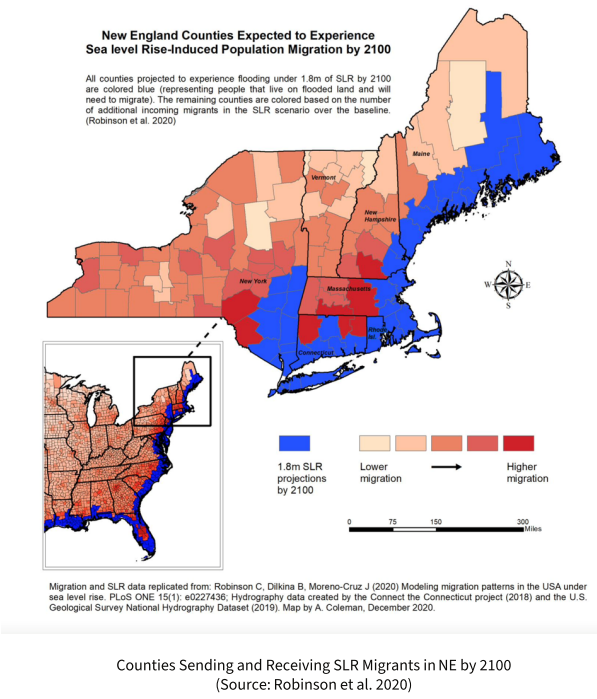
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BACKGROUND

PROJECT GOALS

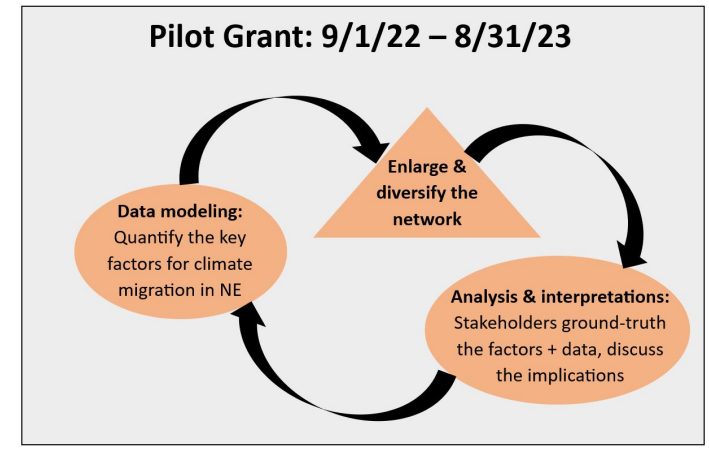


Research questions:

1. What factors will influence a community's level of in- or out-climate migration (CM), as applied to the U.S. Northeast?
2. What policies should receiving communities enact to prepare?

Long-term goals:

1. Better preparing receiving communities to welcome in-comers while supporting local/regional ecologies and social strengths
2. Implies longer time frame planning that provides housing while minimizing landscape fragmentation
3. Often working with smaller towns with low administrative capacity

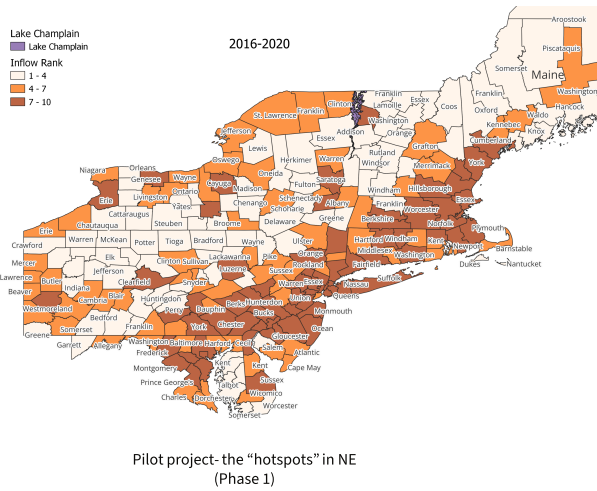


ANALYSIS

Exploring Datasets

Identifying & gathering datasets

1. ACS-population, inflow/outflow of migration (2016-2020)
2. IRS- address changes of the taxpayers (2011-2021)
3. Redfin-house sales in the region



Peer-Reviewed Articles

1. Systematic literature review

Research questions:

1. Where do the climate migrants move? And what are the reasons behind moving to these areas?
2. To what extent climate migration-models include identified reasons?
3. What are the characteristics of the sending communities?
4. What are the impacts on the receiving communities?
5. Did Covid 19 have any impact on climate migration?

Data: 28 articles—interdisciplinary literature; content analysis

R.Q.	Preliminary findings
Pull factors	Social ties, favorable weather, affordable housing/job prospects (Findlay, 2011; Gutmann & Field, 2010).
Factors used in CM models	Sea level rise, the main driver used in the models (Chen & Lee, 2022; Hauer, 2017; Robinson et al., 2020).
Push factors	Household income, the severity of hazards (Hauer, 2017; and Robinson et al., 2020; Sheldon & Zhan, 2022).
Impacts of CM on receiving communities	Disproportionate effects on the low-income, and non-English-speaking residents, gentrification, lack of jobs & affordable housing, transportation and growth-management issues (Li & Spidalieri, 2021; Zaninetti & Colten, 2012).
Covid-19 effect on CM	Budget constraints of local governments, increased vulnerability of migrants (Marandi & Main, 2021).

2. Climate migration & housing market (Phase 2)

Research questions:

1. To what extent have climate change impacts played a role as motivations in domestic migration decisions to rural areas in the NE Region?
2. What are the factors that influence the locational decisions of movers motivated by climate risks?
3. What are the outcomes of climate in-migration for housing market? What are the implications of such outcomes for environmental justice?

Data-case study:

Primary data: 8 focus groups w/real estate professionals, affordable housing advocate groups, mobile home park managers (n=64—targeted)
Secondary data: e.g., census data (ACS, 2020); county-level domestic migration data (IRS, 2021)

Sample:

Hotspots—counties in MA, NY, CT, RI, ME, NH, VT that;

- a) Ranks high in recent (2016-2020) inflow list (ACS, 2020; IRS; 2021)
- b) Mostly include suburban areas, non-adjacent to a metro area (USDA, 2013)

GRANT WRITING

Lake Champlain Sea Grant (LCSG) Proposal (Submitted in May 2023) (Phase 3)

Research questions:

1. What areas of the LCB are likely to experience the most growth, given existing or planned sanitary infrastructure, climate change, and zoning?
2. What concerns and opportunities arise from this growth?
3. How does the interaction of climate migration and infrastructure affect equity such as housing access and affordability or other issues identified by environmental justice communities?
4. Is scenario planning a helpful way to move toward consensus on appropriate policies to address these issues?

Data

Primary data:

1. Focus groups & interviews (n=40-48—targeted): Vermont- and New York State-based RPBs, EJ experts and rep. of minoritized communities
 2. Scenario planning workshop: with planners and EJ leaders
- Secondary data: Migration flows (IRS, ACS and US Boundaries shapefiles); sanitary systems (Vermont Open Geodata Portal, 2020)

Sample: Counties around Lake Champlain Basin (Vermont and New York)

CONVERGENT RESEARCH

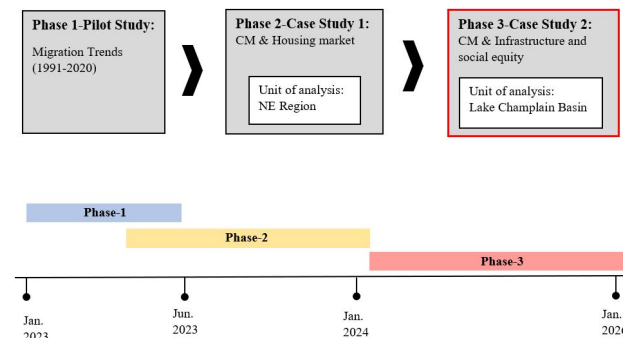
Collaboration

- Steering committee meetings (monthly)
- LCSG proposal, prepared in collaboration with researchers from various departments (e.g., the Environmental Program, Urban Planning) at the University of Vermont, Harvard University
- Collaboration with master's students from the Data Analytics and Computational Social Science (DACSS) department at UMass, Amherst.

Diversity & Inclusion

- Indigenous perspectives: representatives of Native American Indian tribes (e.g., Vermont Commission on Native American Affairs)

Timeline



IMPACT

Dissemination

Presentation by E. Infield at American Society Adaptation Professionals (ASAP) Climate Migration Managed Retreat (CMMR) Panel, March 22, 2023
Abstract submission for presentation at Association of Collegiate Schools of Planning (ASCP) Annual Conference, October 19-21, 2023, Miami, FL
Peer-reviewed articles (in progress):

1. systematic literature review
2. Qualitative analysis of climate migration and housing market

Education & Broader Impacts

Course modules (Fall, 2023): four different classes at UMass to develop SRS-related modules for their classes, exposing around 450 freshmen to doctoral students
Contributions to postdoc's professional career:

1. Collaborative research
2. Research presentations & publishable research
3. Mentoring experience (Ph.D. and Masters students)
4. Proposal writing experience as a co-PI
5. Guest lecturing
6. Technical training support (ISSR Workshop on QGIS, July 17-18, 2023)
7. Attending conferences (e.g., Managed Retreat Conference, June 20-23, Columbia University, New York, NY)