Climate **Migration** and What it **Means for** Florida

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- 1.Quick refresher: What is climate change?
- 2.Overview: Why do people move?
- 3. Overview: Current perspectives on climate migration
- 4. Gazing into the crystal ball: What will this mean for Florida?

Quick Refresher:

What is climate change?

Activities such as driving, farming, shipping, manufacturing, etc. emit **greenhouse gasses** such as carbon dioxide and methane.

These gasses **trap heat from the sun**.

This extra heat **is** what we call **global warming** (or climate change)





Lindsey, R. & Dahlman, L. (2024). *Climate Change: Global Temperature*. NOAA - Climate.gov. https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature

Florida's specific risks



Hotter, longer summers



Sea level rise







More frequent and more powerful hurricanes



Why do people move?

In short... it's complicated

Different groups have different motivations and barriers for moving.

There isn't only one reason that people move.

Different groups or even individuals in a group will have different reasons.



Figure 8. A conceptual framework for the drivers of migration

Meso



These are not fixed categories



Reality check: You are already a potential climate migrant

Florida is incredibly exposed to climate change. If you live here, you are also exposed.

You may not even realize that climate change is at the core of why you decide to move. Relocation is typically driven by social or economic considerations. Climate change can affect these.

Depending on your social and economic reality, **you may not be able to move**.





Current perspectives

Matthew Hauer (2017)

Dr. Matthew Hauer of FSU is arguably the preeminent scholar in this field.

In a 2017 paper he projected that **by 2100 in-land cities** such as Austin, TX and Orlando, FL **would see population gain while coastal cities** such as Miami, FL **would see population loss**.

JY Commentary: Generally, these intercity/interregional moves only occur after people have decided to remain in their current location.

Hauer, M. Migration induced by sea-level rise could reshape the US population landscape. *Nature Clim Change* 7, 321-325 (2017). https://doi.org/10.1038/nclimate3271

2023 - 2100 Population Change due to SLR Induced Climate Migration



25% or greater increase

Anecdotal evidence found in journalism

Why This Florida City Is a Safe Haven From Hurricanes

Ocala is at less risk from coastal flooding than other parts of the state, according to a new analysis, making it a popular option for storm-weary home buyers

Cities like Ocala are now being **discussed** as **safe havens** from the dangers of the coast.

This is only one example, but these narratives tend to be self-reinforcing. These types of ideas tend to propagate through social networks.



Link to the article

The **First Street Foundation** released a report that **projects substantial intra-regional migration**. The report presupposes that economic drivers will be a key driver of relocation decisions.

JY Commentary: Typically, people will stay within their original communities. If they cannot, then questions of economics and environment come into play.

Shu, E.G., Porter, J.R., Hauer, M.E. *et al.* Integrating climate change induced flood risk into future population projections. *Nat Commun* 14, 7870 (2023). https://doi.org/10.1038/s41467-023-43493-8

Comparison of Future Population Projections by Future Projections of the Percent of Properties at 100-Year Flood Risk, 2053



Population Projection

Less Stable Gain

Percent Change in Flood Exposure



Little Haiti Residents Fear Losing Their 'Home Away from Home'

The Miami neighborhood's proximity to hip restaurants and shops and its relative safety from flooding have attracted investors and developers who are pushing out longtime residents.



Link to the article

Little Haiti is a highpoint in Miami. It will likely be the focus of redevelopment efforts by Miami residents fleeing flooding. In the absence of policies to prevent displacement, this neighborhood will become a textbook case of "climate gentrification".

A recent paper out of the San Francisco Federal Reserve suggests that we may already be seeing a de-coupling of warm weather and migration decision making.

JY Commentary: As people are exposed to more extreme heat for longer, the narratives around temperate Sunbelt weather may begin to change. Figure 2: Cross-County Relationship between Population Growth and Extreme Temperatures



Leduc, Sylvain, and Daniel J. Wilson. 2024. "Snow Belt to Sun Belt Migration: End of an Era?" Federal Reserve Bank of San Francisco Working Paper 2024-21. https://doi.org/10.24148/wp2024-21

Δ of -0.009

Δ of +0.019

Anecdotal evidence found in journalism

'This ain't the same sun': Extreme heat is changing summertime for kids in the South

WWNO - New Orleans Public Radio | By Drew Hawkins Published June 21, 2024 at 2:36 PM CDT





Link to the article

While this is not necessarily a piece on climate migration, the underlying point – that **hotter weather is changing people's experience in the Sunbelt** – is related.

If people moved to the Sunbelt to escape the cold, they could move north to escape the heat.

Gazing into the crystal ball:

What will this mean for Florida?

DISCLAIMER!!!

This is all speculation...

Non-exhaustive examples of types of migrants

Mobile

- Wealthier households (postdisaster)
- Recent college graduates
- Families without children

Settled

- Wealthier households
- Recent transplants (renters)
- Snowbirds

Rooted

- Less wealthy households
- Recent transplants (homeowners)
- Families with children

Trapped

- Less wealthy households (postdisaster)
- Retirees
- Farmers (post-disaster)

Coastal communities will increasingly be **populated only** by households **wealthy** enough to rebuild after a storm.

Expect to see working-class households commuting to the coast and living farther inland.

Households may be unable to liquidate coastal real-assets at the cost they were originally purchased for.



If people decide to remain in Florida, it's likely that they will relocate to the (relatively) high elevations of Florida's central ridge.

These cities are less exposed to sealevel rise and hurricane storm surges.

A key policy challenge will be providing enough housing and being strategic with infrastructure investments to integrate these migrants into an already over-stressed urban environment.



It's likely that as the climate becomes less hospitable, **people will move back to their original locations**.

Depending on how long people have been in the state, they still have social networks in place in their original locales.

This will mean a decrease in taxrevenues and will fundamentally challenge Florida's growth based economic model. 2021 - 2022 Transplants to Florida



THANK YOU!





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