

Understanding ‘Blue-lining’: From concept to a working definition developed for disadvantaged communities and communities of color.

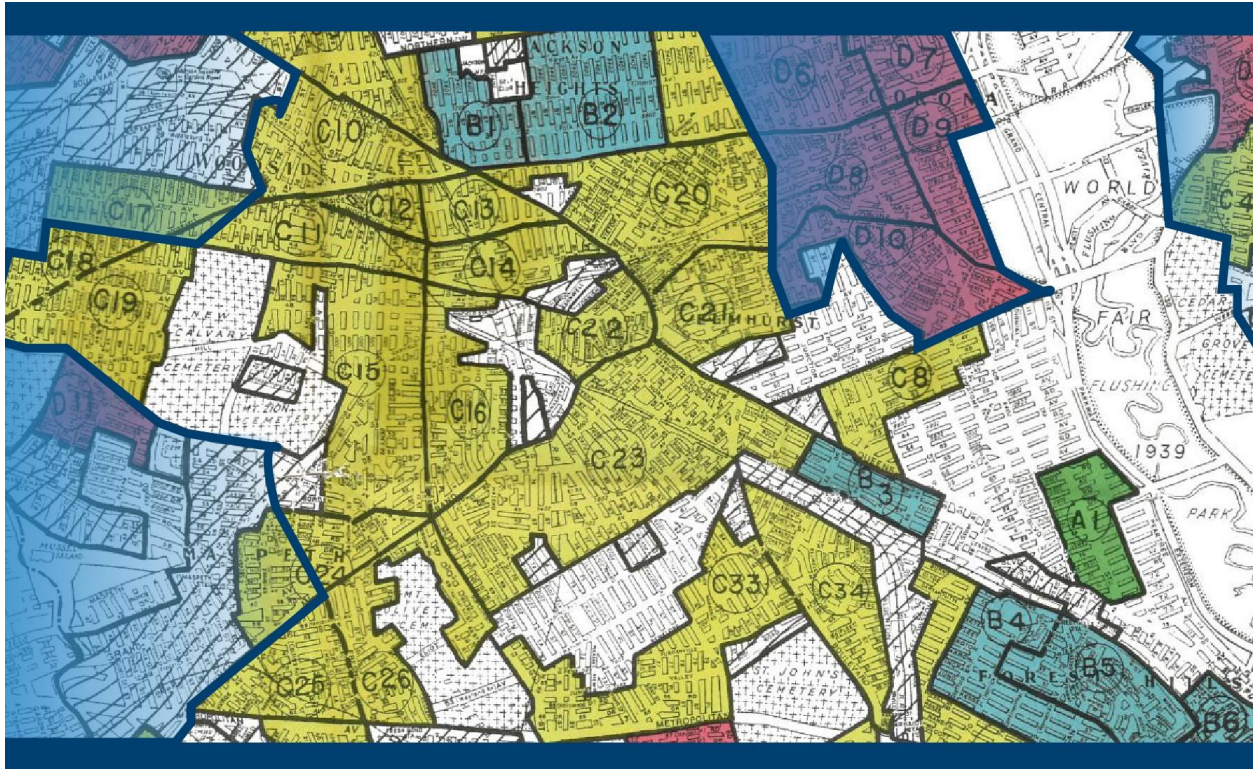


Photo montage of a Home Owners' Loan Corporation (HOLC) map of Richmond, Virginia, where a Blue-lined perimeter was superimposed over majority Redlined areas. Photo Source: Mapping Inequality Project.

About

This project uses an equity lens to examine ‘Blue-lining’ as a concept and assess its multi-layers to develop the ‘right’ definition that responds to the needs of disadvantaged communities and communities of color. This project also hopes to contribute to the understanding of how race and ethnicity plays a role in the institutional response to the climate threat, and how racial discrimination is enacted by design or through cumulative impacts that come from redlining, environmental racism, racialized topographies, etc., setting the stage for what may seem like ‘rational’, risk-averse, financial decision making that seeks to protect resources and assets, but leads to policies, practices and outcomes that disproportionately impact people of color.

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Short bio

Carlos Claussell Velez (he/his/el) is a 2022 Climate Justice Design Fellow from Harvard University. For the last 10 years Carlos has focused on implementing equity-driven, community-centered processes and supporting community-based organizations, non-profits, government and philanthropic entities to advance climate equity strategies at the local, regional and national level. He currently serves as the Climate, DEI and Environmental Justice Manager for WWF focusing on advancing equitable strategies for the *America is All In* and *Renewable Thermal Collaborative* (RTC) Initiatives. For RTC, Carlos is responsible for establishing a Just Transition framework within the decarbonization of heavy industry. Carlos also serves as Commissioner for the City of Philadelphia's inaugural Environmental Justice Advisory Commission (EJAC), tasked with advising the Mayor, City Council and Office of Sustainability on environmental justice issues and advocating for environmental justice communities in the City. Carlos is a 2022 Clean Energy Leadership Institute (CELI) fellow and a 2020 Environmental Leadership Program Senior Fellow. Carlos has worked as a Senior Program Officer at the Institute for Sustainable Communities (ISC), serving as the National Program Office Lead for The Kresge Foundation Climate Change, Health & Equity Initiative (CCHE), as the Urban Conservation Project Manager for the City of Philadelphia at The Nature Conservancy (TNC), and as the Urbanism & Infrastructure Project Manager for the Caño Martín Peña ENLACE Project Corporation, an internationally renowned community-led initiative and winner of the 2016 United Nations World Habitat Award. Carlos holds a master's degree in architecture and a bachelor's degree in civil engineering from the University of Puerto Rico.

Contact information: carlosclaussell@bluelining.org

Introduction

Climate risk is now becoming an integral part of the value of a home. Buying and selling, and insuring real estate in these high-risk areas may become more and more complex, if not impossible soon. For 'Underwater-writing', banks and lending institutions are considering climate science, catastrophe modeling, and insurance modeling to assess a home's value. From a banking perspective, 'Underwater-writing' is a new tool for financial risk reduction where lenders assess climate data against home values and determine the financial risk of lending in those areas during the underwriting process. Where risk levels are high, mortgage lending becomes cost-prohibitive for the bank. From a homeowner's perspective though, 'Blue-lining' might result in high interest rates and high flood insurance for a potential buyer and low appraisals for a seller due to the assessed climate risk. People being denied a loan or seeing how their home equity is devalued by what may feel like 'arbitrary' reasons, certainly with not a lot of transparency from the lending side, might be the generalized assumption when thinking about the impacts of 'Blue-lining'. From a taxpayer's perspective, using taxpayer dollars to insure and rebuild these areas might result in a generalized demand for more scrutiny on how these processes and decisions are made, and how federal agencies determine the feasibility of public investment in response to extreme weather events caused by climate change. But what happens when financial and institutional policies that seek to address climate change focus on risk reduction and asset protection over lives and well-being of communities and people? Furthermore, what are the outcomes that we might expect from 'Blue-lining' and would these

outcomes impact disadvantaged communities and communities of color often at the frontlines of climate risk?

Context setting

The image is a screenshot of a CNBC news article. At the top, there is a navigation bar with the CNBC logo and various menu items: MARKETS, BUSINESS, INVESTING, TECH, POLITICS, CNBC TV, INVESTING CLUB, and PRO. The main headline reads: "Banks consider climate risk for home loans, a process called 'underwaterwriting' or 'blue-lining'". Below the headline, it says "PUBLISHED MON, SEP 20 2021-3:04 PM EDT | UPDATED THU, SEP 23 2021-3:15 PM EDT". The author is Lindsey Jacobson, with social media handles @IN/LINDSEY-JACOBSON-8A48A420/ and @LINDSEYTWEETED. There are share icons for Facebook, Twitter, LinkedIn, and Email. The main image shows a yellow house with a sign that says "AMERICA'S CLIMATE CRISIS" against a blue sky with clouds.

To understand the concept of 'Blue-lining' we started with the following definitions which came from media articles written on the subject:

- **'Blue-lining'**: When banks or mortgage lenders draw lines of risk around certain neighborhoods and streets based on their susceptibility to flooding or other climate-related disasters. The term is meant to be reminiscent of redlining, a product of institutionalized racism that restricted loan availability to homeowners in minority-dominated neighborhoods.
- **'Under-waterwriting'**: Process of banks considering external climate data, including business analytics, climate science, catastrophe modeling and insurance modeling, when making loans and assessing a home's value.
- **'Blue-lined' communities**: Residential neighborhoods and areas that have been established as having a high climate risk therefore economic and financial investment is discouraged.

The current definition of 'Blue-lining' acknowledges these 3 perspectives at best. The financial perspective that's being represented by the banking industry, the homeowner perspective (which also represents the buyer and seller) and the taxpayer's perspective (which means the government).

1. Banking perspective: Where risk levels are high, mortgage lending becomes cost-prohibitive for the bank therefore it needs to act to minimize losses and reduce exposure.
2. Homeowner's perspective: 'Blue-lining' might result in high interest rates and high flood insurance for a potential buyer and low appraisals for a seller due to the assessed climate risk. People being denied a loan or seeing how their home equity is devalued by what may feel like 'arbitrary' reasons without much transparency might be the generalized assumption when thinking about the impacts of 'Blue-lining'.
3. Taxpayer's perspective: Using taxpayer dollars to insure and protect 'Blue-lined' areas might result in a generalized demand for more scrutiny on how these processes and decisions are made, and how government agencies determine the feasibility of public investment in response to extreme weather events caused by climate change. Constantly covering losses from federal programs in the aftermath of a natural climate disaster will bring significant stress towards public finances and will certainly prompt action from elected officials.

Are these the only stakeholders that Blue-lining should account for? What comes to mind when we think about the profile of a homeowner and of the taxpayer? Who's left out?

Driving Questions

After reviewing such definitions, the closeness of the term 'Blue-lining' to Redlining led to an immediate questioning of whether this new term had any connection to government-sponsored racial segregation policies and practices or whether this new concept of 'Blue-lining' could also be considered a Redlining 2.0. To this effect, we're posing the following questions:

1. **Is there a connection between government-sponsored racial segregation like Redlining with current government-sponsored aid policies in response to natural climate hazards, disproportionately impacting disadvantaged communities and communities of color?**
2. **Would 'Blue-lining', as it's currently defined, potentially exacerbate those already disproportionate impacts by underserving and promoting disinvestment policies? How?**
3. **Which forces and what are the variables and mechanisms that could operationalize 'Blue-lined' communities?**
4. **What would be a definition for 'Blue-lining' that captures the perspective of disadvantaged communities and communities of color?**

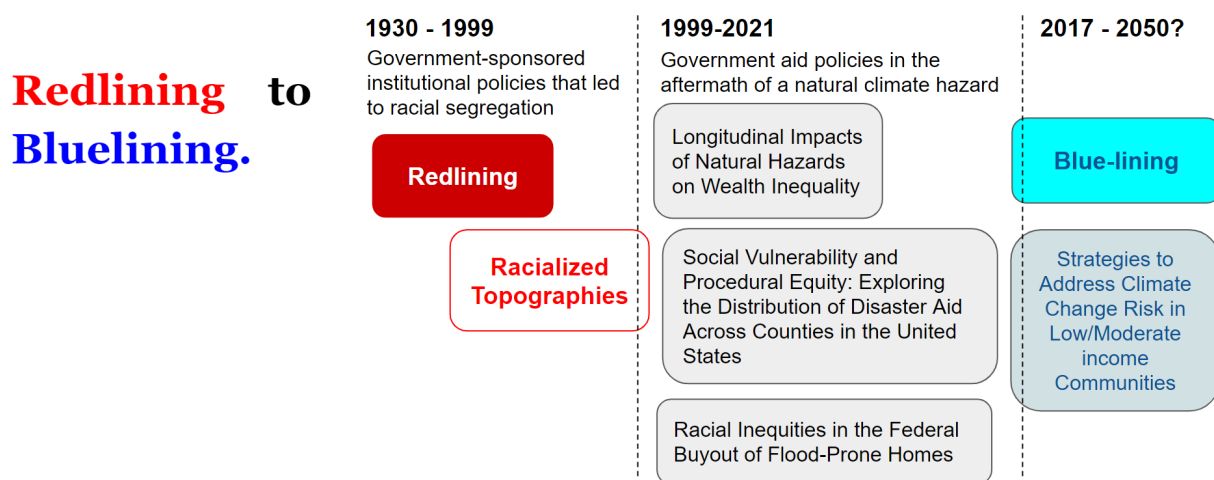
Desktop research and literature review

To answer these driving questions we conducted desktop research and a literature review on the following topics:

1. Impacts of government-sponsored racial segregation in the 1930s-1960s;
2. Criteria and decision-making in federal government aid policies in response to natural hazards;

3. Policy strategies to operationalize ‘Blue-lining’ led by the banking sector.

The reason to assess these three topics is to establish if there’s any connection between the concept of ‘Blue-lining’ and governments-sponsored racial segregation policies and practices like Redlining. To do so, we must also understand if the outcomes of policies and practices like Redlining are connected in some way to current federal government aid policies in response to natural climate hazards because we interpret that the banking and financial sector seek to directly and indirectly influence such policies through the operationalization of ‘Blue-lining’. If ‘Blue-lining’ is fully operationalized, the federal government will have to review and update policies associated with natural climate hazards to minimize financial risk and liability for insurance and financial markets and the federal government itself.



To better understand the impacts of government-sponsored racial segregation in the 1930s-1960s (and long-term impacts over time) we reviewed the following:

1. *The Color of Law: A forgotten history of how our government segregated America* by Richard Rothstein
2. *The Study Racialized Topographies: Altitude and Race in Southern Cities* by Jeff Ueland and Barney Warf
3. *The study A Racist Past, a Flooded Future: Formerly Redlined Areas Have \$107 Billion Worth of Homes Facing High Flood Risk—25% More Than Non-Redlined Areas* by Redfin.

To better understand the criteria and decision-making when applying federal government aid policies in response to natural hazards exacerbated by climate change we assessed the following studies and reports:

1. *Social Vulnerability and Procedural Equity: Exploring the Distribution of Disaster Aid Across Counties in the United States* by Simone J. Domingue and Christopher T. Emrich;
2. *Damages Done: The Longitudinal Impacts of Natural Hazards on Wealth Inequality in the United States* by Junia Howell and James R. Elliott;

3. *Let the Rich Be Flooded: The Distribution of Financial Aid and Distress after Hurricane Harvey* by Stephen B. Billings, Emily A. Gallagher and Lowell Ricketts;
4. *Who Gets Emergency Housing Relief? An Analysis of FEMA Individual Assistance Data After Hurricane Maria* by Deepak Lamba-Nieves and Raul Santiago-Bartolomei;
5. *Racial Inequities in the Federal Buyout of Flood-Prone Homes: A Nationwide Assessment of Environmental Adaptation*, by James R. Elliott, Phylicia Lee Brown and Kevin Loughran
6. *Equitable buyouts? Learning from state, county, and local floodplain management programs* by Linda Shi, Anjali Fisher, Rebecca M. Brenner, Amelia Greiner-Safi, Christine Shepard and Jaime Vanucchi.
7. *Turning the Tide: Opportunities to build social equity through Federal Flood Disaster Policy* by The American Flood Coalition

To better understand the concept of ‘Blue-lining’, the research being conducted by academia in the impact of ‘Under-waterwriting’, the actions and policy advocacy efforts to operationalize ‘Blue-lining’ being conducted by the banking and financial sector, we reviewed the [Strategies to Address Climate Change Risk in Low- and Moderate-income Communities - Volume 14, Issue 1](#), from the Federal Reserve Bank of San Francisco. We also listened to media interviews given by Jesse M. Keenan on this topic. Jesse M. Keenan is an Associate Professor of Sustainable Real Estate within the faculty of the School of Architecture at Tulane University and a leading researcher and expert on ‘Blue-lining’. Keenan also served as a Visiting Scholar at the Federal Reserve Bank of San Francisco, where he led the publication of the volume aforementioned.

Key takeaways

Key takeaways for this section come from the resources identified above, as part of the desktop research and literature review for this project.

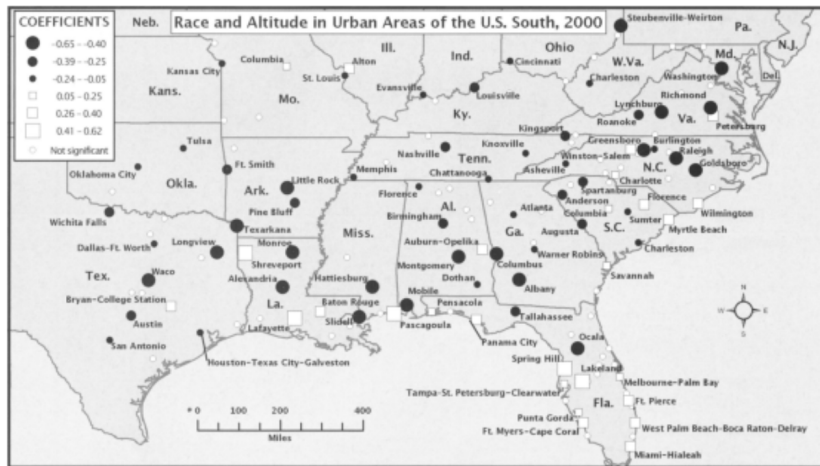
Government-sponsored racial segregation: Redlining and Racialized Topographies

A look at government-sponsored racial segregation in the 1930s-1960s and its impact in present time showed that unconstitutional government-sponsored racist policies like Redlining (1930s-1960s) resulted in racial segregation via housing and school segregation, and lack of public investment, displacing and forcing Black families and other minorities to relocate in low-lying, flood prone, inland geographical areas (1930-2000). This led to low education attainment and low residential property value for Black people and minorities living in segregated communities, and impacting family and generational wealth.

- Some of the variables associated with government-sponsored racial segregation that apply to this project are: *race and ethnicity, education attainment, income and wealth, geographic location, homeownership, residential property values, flood risk, government backed low-interest loans, federal investment.*

Racialized Topographies: Altitude and Race in Southern Cities, researched 146 cities and urban areas in the South of the US from years 1990-2000 to determine if racial segregation was still prevalent in these regions.

Redlining to
Government
aid policies.

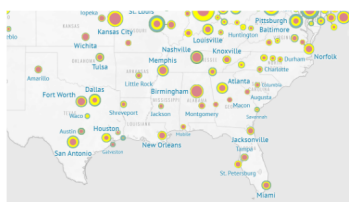
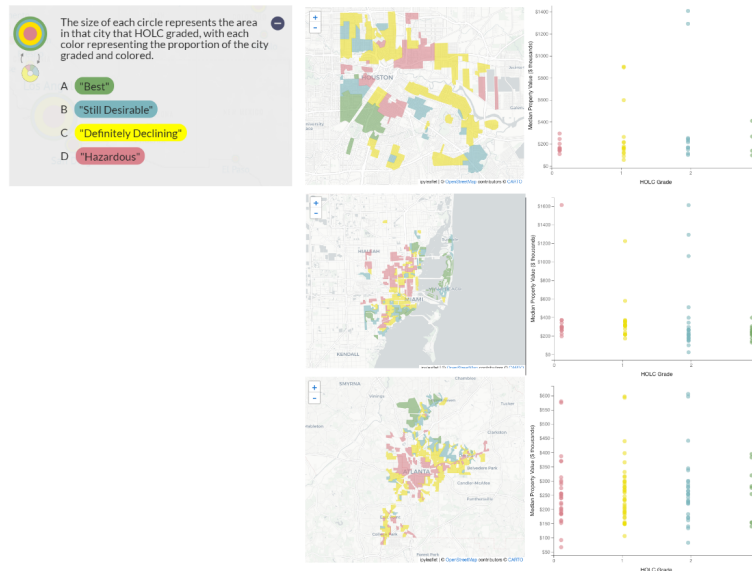


Mapping for Redlining within Racialized Topographies

The Study *Racialized Topographies: Altitude and Race in Southern Cities*, researched 146 cities and urban areas in the South of the US from years 1990-2000 to determine if racial segregation was still prevalent in these regions. We also looked at the Home Owners’ Loan Corporation maps from the [Mapping Inequality Project](#) developed by the University of Richmond. 29 of the 146 southern cities and urban areas studied showed HOLC grading (Redlined non-redlined neighborhoods). We pulled the HOLC maps in these 29 cities and urban areas to look at FEMA flood hazard maps and current (2020) Census/ACS data to explore the current median property values and racial makeup of these neighborhoods. Access the maps and datasets [here](#).

29 of the 146 southern cities and urban areas studied in *Racialized Topographies: Altitude and Race in Southern Cities* showed HOLC grading (Redlined non-redlined neighborhoods).

Redlining and
Racialized
Topographies.



Mapping Inequality - Redlining in New Deal America

Federal government aid policies for natural climate hazards

An assessment into federal government aid policies allowed us to identify the main policies used by the federal government, primarily by the Federal Emergency Management Agency (FEMA), Department of Housing and Urban Development (HUD) and the US Army Corps of Engineers (USACE).

The National Flood Insurance Program (NFIP) is designed to insure property owners living in floodplain areas from future losses after a flood event. This program eliminated the financial risk for property owners with properties located in a floodplain or proximity to other water hazards. In 1979, federal flood insurance was made mandatory for “all property owners with federally backed mortgages in high-risk flood zones”. NFIP also lacks the authority to restrict new development in local floodplains.

The bulk of post-disaster reconstruction efforts are funded through several federal sources, including FEMA’s Public Assistance (PA) and Hazard Mitigation Grant Programs (HMGP), and Community Development Block Grants assigned by the U.S. Department of Housing and Urban Development (HUD)—for disaster recovery (CDBG-DR) and mitigation (CDBG-MIT) projects. In 1985, Congress created the HMGP to provide the option for ‘buy-outs’ for homeowners in high flood risk areas impacted by flood events where they can opt to “sell” their property to the federal government at the pre-flood market value. This federal policy empowers local flood control districts to identify and purchase properties most at risk for future flooding. Since 1989, the program has bought out over 43,000 properties.

The Small Business Administration (SBA)’s Disaster Loans program and the Federal Emergency Management Agency (FEMA)’s Individual Assistance (IA) Program are the primary sources of federal post-disaster assistance for families during the emergency management stages that follow a natural hazard event. Financial aid for homeowners in the aftermath of a natural climate disaster comes in the form of Private insurance (outside of the floodplain), FEMA National Flood Insurance Program and Federal Disaster Loan Program, implemented by the Small Business Administration (SBA).

When assessing the criteria used to inform decision-making in the implementation of federal government aid policies in response to natural hazards, we found that criteria and decision-making processes are deeply inequitable, disproportionately impacting disadvantaged communities and communities of color.

- How FEMA determines applicant eligibility is opaque in nature, and the wide discretion exercised by field workers who make key decisions, may have contributed to programs like IA disproportionately benefit wealthier and white households over low-income (low-wealth) and minority populations.
- FEMA and The U.S. Army Corps of Engineers (USACE) — the premier federal agency charged with building and maintaining flood mitigation infrastructure — significantly incorporates property value into their benefit-cost analysis (BCA), by which they approve and prioritize projects. BCA seeks to determine if future benefits of the proposed ‘investment’ is cost-effective. If the benefit-cost ratio is greater than 1.0 then financial benefits of the buyout exceed immediate costs to taxpayers. Wealthy urban areas with

higher property values are deemed more worthy of public investment, because the BCA ‘performs’ better than poorer cities and some rural areas.

- FEMA SBA loan program rules explicitly limit loan eligibility to higher credit-quality applicants. After FEMA’s initial income screen, SBA denies most applicants due to credit history (57%) and lack of repayment ability (24%), such that low credit score and/or income should explain the vast majority of the SBA loan denials. Homeowners are less likely to get an SBA loan if they live in areas with families that have low-ability-to-repay loans. Registrant homeowners with damage are 58% less likely to be approved for an SBA loan when they live in blocks where there reside a large share of residents who we classify as low-ability-to-repay.
- As local hazard damages increase, so does wealth inequality, especially along the lines of race, education and homeownership. The more aid the Federal Emergency Management Agency (FEMA) gives to an area, the more wealth inequality over time.
- The federal ‘buy-outs’ program is considered a rational program by some because of its market-based voluntary implementation that provides vulnerable residents with options to move out of harm’s way, the government assesses benefits compared to costs and can reduce its liabilities, and land can be restored. This argument also presumes that homeowners who participate in the program are free to make logical economic and environmental decisions. Critics of the ‘buy-outs’ program highlight that (1) intervenes not just in local floodplains but also in local housing markets, which remain racially segregated in the United States; (2) the process is not standardized, leaving much room for interpretation and bias; local governments must cover 25% of the total cost which can benefit governments with higher property tax revenue; (3) procedurally favors single-family homeowners, nuclear households with a single head of household, and those with a clear mortgage, ownership documentation, US citizenship, and the ability to engage in a lengthy, burdensome process.
- Flood damage is not the only predictor of where buyouts occur. Racial composition seems to matter too. Data shows that whiter central counties and relatively whiter neighborhoods are more likely to gain access to federal buyout assistance despite homeowners in neighborhoods of color being more likely to accept that assistance. Non-white neighborhoods in majority white counties are statistically the areas of greatest ‘buy-outs’ suggesting a pattern of continued housing segregation between white and non-white communities.
- Some of the variables associated with criteria and decision-making in federal government aid policies in response to natural hazards are: *race and ethnicity, gender, age, education attainment, geographic location, homeownership, residential property value, creditworthiness, income and wealth, employment, flood risk, government backed low-interest loans, federal investment, public and private insurance.*

‘Blue-lining’

When looking at the concept of ‘Blue-lining’ and ‘under-waterwriting’ and policy advocacy efforts to operationalize ‘Blue-lining’ we found the following premises:

- Scholars studying the concept of ‘Blue-lining’ believe that the assessment of climate risk in the housing market is a matter of market survival. A combination of market forces and

democratic processes will determine what is considered essential and what will society have to give up in the face of climate change.

- Smaller, localized banks and financial institutions have more reliable climate risk data by being ‘on-the-ground’ and knowing which areas are most at risk given past and current events. This gives an advantage to such banks helping them to better navigate exposure and liability. Larger banks haven’t standardized a practice of assessing climate risk data and mostly rely on outdated data to determine risk.
- Advocacy for the creation of new standardized metrics, scoring systems, and risk assessment tools to be utilized at the time of mortgage origination, as well as in asset management for the life of loan and portfolio metrics.
 - These new metrics and tools will help markets better understand the flood risk at the time of mortgage origination and in their portfolios over the life of each loan as future conditions change. Updated mortgage loan products will encourage ‘prudent behavior’ in making property investments which increase resiliency.
 - These metrics and the new tool should reduce lenders and insurers financial risk and losses to property owners, lenders, insurers, municipalities as well as all of those who share in the direct and indirect losses from floods, as well as encourage ‘prudent behavior’ by property owners who must learn to adapt and live with flood waters in new ways.

Proponents of these (and other) actions to protect the housing market from climate risk believe that establishing this new overall practice could support new government policies like updated building codes and zoning ordinances, and climate action through the improvement of critical infrastructure. Other possible impacts could be of lenders “Blue-lining” certain locations for ‘unacceptable’ flood risk causing real estate values in some communities to decrease as well as the inability of buyers to gain access to the 30-year mortgage loan.

More on: ‘Blue-lining’

As part of the assessment of practices that might not be considered being part of the ‘Blue-lining’ concept but certainly fall within its domain we highlight the following set of practices:

- The banking industry determines how many revenue cycles a high flood risk residential area will have before it’s ‘blue-lined’:
 - Dr. Kevin Loughran pointed out that while touring Houston to assess the landscape of the local buy-outs program he noticed that investors were buying properties that have been impacted by Harvey and were in bad shape from low-income/low-wealth residents that were desperate to receive any sort of compensation. The goal seemed to be to buy properties at a very low cost, rent them for a period of time and then sell them to the local buy-out program for a profit.
- AI and Scenario Planning modeling to identify “climate-proof geographies”:
 - New practice coming from operationalizing ‘Blue-lining’. [Climate Oases.ai](#), a startup business that offers a comprehensive toolkit that forecasts the geographies that are best prepared as climate change and other disruptions intensify. It supports land owners, property developers, and the real estate industry, as well as national, state, and municipal authorities, to identify the most

resilient locations for building the residential and commercial assets of the future.

- Climate migration in the US:
 - [University of Vermont published a 10-year study](#) which found that people are leaving many of the U.S. counties hit hardest by hurricanes and heatwaves—and moving towards areas with dangerous wildfires and warmer temperatures (some still prone to hurricanes and storms).

Answering Driving Questions and Proposing a new working definition for ‘Blue-lining’ and ‘Under-waterwriting’

Is there a connection between government-sponsored racial segregation like Redlining with current government-sponsored aid policies in response to natural climate hazards, disproportionately impacting disadvantaged communities and communities of color?

Now, race and ethnicity are not a factor in who receives aid but the outcomes of government-sponsored racial segregation like Redlining are associated with key criteria elements used for eligibility and decision-making under these programs. Based on current research, the federal government aid policies seem to be producing similar outcomes to the redlining era.

- Homeowners that live in neighborhoods with a certain property value threshold, have good credit standing and a certain level of income and wealth, seem to have access to and benefit from the ‘buffet’ of federal disaster aid in the aftermath of a natural climate hazard. These homeowners are mostly white and live in white majority communities.
- Except for ‘buy-outs’, the profile of families and individuals that aren’t eligible to receive federal disaster aid also coincides with people targeted and impacted by government-sponsored racial segregation policies like Redlining.
- Racial segregation seems to be an outcome of federal buy-outs as majority white counties opt to ‘erase’ non-white neighborhoods.
- As local hazard damages increase, so does wealth inequality, especially along the lines of race, education and homeownership. The more aid the Federal Emergency Management Agency (FEMA) gives to an area, the more wealth inequality over time.

Would ‘Blue-lining’, as it’s currently defined, potentially exacerbate those already disproportionate impacts by underserving and promoting disinvestment policies? How?

Yes, because “Blue-lining” is a market-driven response that seeks to reduce financial risk and liabilities, and protect profitable assets, over people. ‘Blue-lining’ doesn’t bring people and community-centered solutions to the climate threat, it’s intended to protect wealth and the status quo by making it harder to access financial resources and by limiting investment.

- It doesn't seek to address the harm caused by past and current institutional policies that have led to racial segregation and delivered racial inequality through wealth, education attainment and home equity.
- It doesn't solve the inequities produced by current federal policies to address natural climate hazards that increase wealth inequality along the lines of race, education and homeownership.
- It only sees climate-driven flood risk or other natural hazards as a disruptor of the housing and real estate market, and only acknowledges stakeholders with financial equity at stake in the banking sector, homeowners, "taxpayers".
- It sees an opportunity in the climate crisis to push for market solutions despite the banking sector benefiting tremendously from market-driven real estate development practices within the floodplain while passing the bulk of the financial risk to the federal government. The federal government carries one of the biggest (if not the biggest) liability.
- It doesn't consider low-income/low-wealth communities, frontline/fence-line and EJ communities, renters, families with no creditworthiness, as stakeholders.

Which forces and what are the variables and mechanisms that could operationalize 'Blue-lined' communities?

Although this is still an ongoing project we believe that operationalizing a set of policies and practices that could result in 'Blue-lined' communities should be driven by the following forces, variables and mechanisms:

1. Forces - Banking sector, Real Estate investors and developers, "Taxpayers", Elected officials at the federal, state and local level, government employees and contractors, Media and the Judicial system.
2. Variables - Geographic area, Flood risk, property value, property taxes, fiscal stability of local government/county.
 - a. *21 drivers of procedural inequities: race/ethnicity, gender, age, education attainment, homeownership, property value, creditworthiness, income, wealth, employment, flood risk, financial assistance, public investment, public and private insurance, geographic area
3. Mechanisms - Federal, state and local policies, Financial and investment practices and tools.

*We highlight the Study *Social Vulnerability and Procedural Equity: Exploring the Distribution of Disaster Aid Across Counties in the United States* which identified 21 drivers of procedural inequities.

What would be a definition for 'Blue-lining' that captures the perspective of disadvantaged communities and communities of color?

- **'Blue-lining'**: Inequitable practice of using climate science and climate risk data to identify the geographies and neighborhoods that will be most impacted by natural climate hazards (hurricanes, storms, floods and wildfires) and label them "climate sacrifice zones" to extract wealth using predatory schemes before enacting policies that

discourage public and private investments and “tank” property value within those areas. The term is meant to be reminiscent of redlining, a product of institutionalized racism that restricted loan availability to homeowners in minority-dominated neighborhoods.

- **Under-waterwriting:** Process of banks considering external climate data, including business analytics, climate science, catastrophe modeling and insurance modeling, to determine “climate sacrifice zones” and ideate wealth extraction strategies before discouraging investment.
- **‘Blue-lined’ communities:** Residential neighborhoods that have been identified as having a high climate risk therefore economic and financial investment is discouraged (or even prohibited). These communities can be subjected to wealth extracting practices like buying property at a low-cost, taking advantage of low-wealth families impacted by natural climate hazards, to benefit from a last cycle of revenue opportunities in those areas like rent-to-buy-out scheme, where the property is rented out until they can sell the property to a local ‘buy-out’ program, or other.

Seeking input and feedback to jumpstart the Next Phase

Understanding ‘Blue-lining’ and using an equity lens to examine this concept, assessing its multi-layers and even proposing a working definition that responds to the needs of disadvantaged communities and communities of color is still part of a discovery phase. There’s so much to unpack and to share still. **This is still an ongoing project.**

The next phase of this project will consist of writing and hopefully publishing an article on understanding ‘Blue-lining’ from an equity and justice viewpoint, conducting selected interviews with subject matter experts and facilitating workshops to capture input and feedback from members of the broader community of practice. This next phase will bring more clarity as to which paths this project needs to pursue. If you’re interested in this project and broader topic feel free to contact me at carlosclaussell@bluelining.org.

Additional Questions to consider:

1. Do you have an opinion on whether there’s a connection between the outcomes of government-sponsored racial segregation and federal aid policies and the eligibility criteria used under federal government aid policies in response to natural climate hazards?
2. Are you familiar with these terms ‘Blue-lining’, ‘Under-waterwriting’, ‘blue-lined communities’?
3. How would ‘Blue-lining’, as it’s currently defined, impact or influence federal aid policies and the eligibility criteria used under federal government aid policies in response to natural hazards?
4. Would ‘Blue-lining’, as it’s currently defined, lead to increasing inequality along the lines of race, education and homeownership? How?
5. Would ‘Blue-lining’, as it’s currently defined, contribute to racial segregation? How?

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