

## **Buyouts, Continued**

### **The Consumption and (Re)Production of the Post-Buyout Landscape: An Analysis of Visual Culture**

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Buyout programs relocate people out of high-risk areas with the intention of reducing both individual and collective risk. While these programs have considerable impacts on participating households, they also alter the physical and social landscape of urban neighborhoods in several important – and in some cases, permanent – ways. The newly created open space bears the imprint of past land uses, namely that of privately-owned homes and businesses. As local governments take ownership and management responsibilities for the acquired land, they demolish the existing built environment and implement open space land uses. Ranging in utility, these open space uses can offer improved mitigation, recreation, and ecological services for the participating community. However, if not properly developed and kept up, they can present issues for remaining residents and become a burden for local governments to manage and maintain. While post-buyout land use, or the function of the land as a resource, has received attention in the literature (Harter, 2007; Zavar, 2016; Zavar & Hagelman, 2016; Atoba et al., 2020; Zavar & Schumann, 2020), less is understood about how the post-buyout landscape is consumed and socially (re)produced in urban environments. This type of research is important as buyouts are becoming the tool of choice for climate adaptation (Mach et al., 2019), particularly in urban areas (Elliott et al., 2020). Similarly, a growing body of literature considers the effects of buyouts and the resulting landscape on residents living in peripheral communities, who are most directly impacted by post-buyout land uses (Zavar, 2016; Barile et al., 2019; Binder et al., 2020). As one of the oldest buyout programs in the country (Binder, Greer, & Zavar, 2020), and home to metropolitan Houston, Texas, the Harris County Flood Control District buyout program serves as a valuable case study to critically examine how the post-buyout landscape is socially constructed and to capture the narratives the landscape constructs. Engaging with Schein's (1997) framework for interpreting landscape, we used visual methodologies (Knorr, 2016; Rose, 2001) to analyze photographs collected over three site visits spanning 2018-2019. We combined this dataset with extensive participant observation and in-depth interviews with residents, government officials, and other stakeholders collected over the same post-Hurricane Harvey timeframe. Specifically, we identified the post-buyout landscape as a communication tool of five overarching narratives: community education, risk communication, political propaganda, surveillance, and commemoration. This visual analysis of the production of space reveals the social values imprinted on the post-buyout landscape and gives insight on how this landscape contributes to community identity for residents living in the periphery. Furthermore, it adds to the growing body of literature on the role of visual culture in shaping social and political discourse in the urban environment.

### **Goals and Outcomes of U.S. Voluntary Buyouts: A Systematic, Comparative Literature and Media Analysis**

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Managed retreat in the United States has largely occurred through voluntary buyouts of flood-prone homes. The lived experiences and governance challenges of buyouts, however, go beyond flood risk reduction, and affected stakeholders have differing objectives, perceptions, losses, and outcomes during and after buyouts occur. Despite increasing scholarship, evaluation of the goals and outcomes of buyouts remains sparse at crosscutting and programmatic scales. Here, we perform a set of three analyses to determine the range and prevalence of goals and perceived outcomes for all participating actors for buyouts in the United States to date. First, through a nation-wide systematic review, we assess (1) the documented range of goals for buyouts to date, (2) perceptions of outcomes, including those that go beyond documented goals, (3) which stakeholder groups are included versus omitted in existing documentation across buyout contexts, and (4) whether stakeholder groups share or have different goals for buyouts and perceptions of buyout outcomes. Second, we perform a machine-driven content analysis of media coverage for buyouts documented through the systematic review. We determine how reported experiences and media frames compare to patterns documented in academic, research, and peer-reviewed literature. Third, we compare the systematic review and media results to patterns of buyout outcomes assessed quantitatively through FEMA, floodplain, housing, and relocation address data sets. Through our analysis, we find that the goal of flood risk reduction dominates in planning stages, although processes of implementation then become common areas of concern. Once buyouts have occurred, outcomes beyond flood risk reduction become salient, especially social and economic impacts including proximity to valued resources, equity, community cohesion, and cultural heritage. Implementing local governments and participating residents are central in existing documentation of goals and outcomes. Mapping of relative power, differential interests, and contrasting experiences across stakeholders supports program design and implementation that are participatory, fair, and resource-effective. Associated lessons are necessary for supporting buyouts, especially if at greater scale as the climate continues to change.

### **Control over one's environment? Leveling political capabilities to advance procedural justice in managed retreat**

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With the Antarctic ice-sheet melting faster than expected, we need to anticipate the possibility of accelerated sea-level rise (Haasnoot et al., 2020). Managed retreat from low-lying coastal areas is one way to reduce exposure to climate risks such as sea-level rise (Ajibade et al., 2020). Besides anticipating climate impacts, we should also anticipate the controversies and justice issues that arise with buy-out programs and (in)voluntary relocations. There will be disagreements between people about whether retreat is the best course of action for an area. Socio-economic, cultural and geographic inequalities influence the ability of individual people and communities to steer the discussion about how managed retreat is operationalized, whether people are compensated, and if alternatives are sufficiently examined. The concept 'political capabilities' developed by Holland (2017) can help to better understand and potentially resolve inequalities in decision-making for climate adaptation (Nussbaum, 2011; Schlosberg, 2012; Wolff & Avner, 2007). In this contribution, we propose an adapted definition of political capabilities, namely: 'having sufficient political control over one's environment'. With this threshold approach, we can address both actors that have too little political influence as well as those actors that have too much political influence. Our paper further discusses the possibilities- and limitations of the concept of political capabilities for justice questions in climate adaptation. The concept of political capabilities has potential since it draws attention to the politics of climate adaptation and is

well adaptable to different decision-making contexts. Moreover, political capabilities shift the focus from vulnerability to human agency, which also helps to address experienced injustices described in several cases in the literature about involuntary relocations and the loss of autonomy (Bertana, 2020; Nine, 2016; Otto et al., 2018). Limits to be resolved with using the capabilities approach, are for example the inclusion of future generations and ecological integrity. Moreover, the notion of ‘human control’, does not yet acknowledge the call for more modest and horizontal relations between humans and other species in climate adaptation. This is especially relevant considering the history of unintended consequences due to engineering in water systems (Stirling, 2020; van der Vleuten & Disco, 2004). This interdisciplinary research combines political philosophical literature with empirical policy analysis. The Dutch Room for the River program is proposed as an empirical case to test- and further develop the political capabilities framework. The past few years, multiple buy-outs and relocations have taken place in flood plains of the Rhine river (Edelenbos et al., 2017; Roth & Warner, 2007). With a better understanding of how existing inequalities influenced who have more and who have less access to decision-making in a particular context, we might be able to strengthen procedural justice for less-advantaged groups. Ultimately, the aim is to strengthen the political capabilities of people currently at a disadvantage due to social, cultural, or economic inequalities. Leveling political capabilities might help to reach this objective, for example by making institutional adjustments or developing policy tools to correct for asymmetries in political influence. Climate change impacts risk aggravating existing inequalities. Hence, we should find ways to prioritize the inclusion of justice considerations into long-term climate adaptation policies.

### **Towards a Better Buyout**

Author: Sara Bohnert (University of Waterloo)

Increasingly, researchers are recommending managed retreat as the most cost-effective and permanent solution to address coastal erosion and flooding. Managed retreat can take many forms; however, buyouts are a core strategy. Buyouts in Canada are usually reactionary, rare and limited in scope, which reduces their effectiveness and ensures continued vulnerability for community members and assets. Moreover, buyouts suffer significantly from a lack of trust between stakeholders, and from concerns around equity. Common questions include who is bought out, why are they bought out, how is the buyout funded and who decides? The literature often points to the difficulty of anticipating homeowner flood-risk perception and buyout acceptance; however, researchers now suggest collaboration with the community can increase the acceptance and efficacy of these programs. Yet, little research exists on how this can be achieved, or what measures community members find “fair”. To answer these questions, I have focused on Erie Shore Drive, a particularly flood-prone road in Chatham-Kent, Ontario. Using a mixed-method approach, I will integrate literature and semi-structured interviews with homeowners, researchers and public officials. I will determine what, if any, measures property owners are willing to accept, and how this can be integrated into Chatham-Kent’s coastal management strategy to proactively reduce community vulnerability. At present, participant responses indicate a significant interest in exploring how to “soften” the buyout process.

### **Best Practices for Voluntary Buy-Out Programs**

Author: Steve Mollica (The LTL-Schock Group)

The need for more and more "buy-outs" of homeowners due to climate change and managed retreat will result in a marked increase in the need for the application of uniform assistance to displaced persons. There is a template for voluntary buy-outs to mitigate the affects of noise around airports. In 1970, there were approximately 7,000,000 people who lived in proximity to an airport where the interior noise level was deemed to be incompatible with safe living standards. In 2012, that number was reduced to approximately 300,000. There are approaches taken that resulted in this reduction that can be applied to buy-out programs for displacement of residents due to climate change, but the need to act is now. Issues of funding, methods of approaching and compensating affected occupants, models to prioritize need and other issues all can be taken from the success of the noise mitigation efforts and applied to climate change displacement. We can look at laws that were made to address this problem in the mid-1960's. By reviewing these laws, we can consider how new laws could be crafted to create a fair, equitable and consistent treatment of the masses in the United States will need to be relocated. The session will look at the best practices that were implemented as part of the Federal Uniform Relocation Act and provide a summary for possible improvements to the program.