



The Role of Residential Buyouts in Post-Disaster Housing Recovery Support: A Comparison of Recent Cases from Japan and the United States

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After recent disasters in Japan and the United States, government acquisition of residential land has played a larger and increasing role within and in relation to housing recovery support programs. With different historical, legal, and governance contexts, residential buyouts are shaped by the respective policies of each country. Framed by earlier precedents, this paper explains the development and implementation of residential buyout programs used after recent disasters: the 2011 Great East Japan Earthquake and tsunami in Japan and 2012 Superstorm Sandy in New York City and New York State in the United States. Through a comparison of roles of buyout in relationship to other aspects of post-disaster housing reconstruction and recovery support, some similarities are identified in the challenges of implementation, as well as uniquely different issues faced by the affected communities and households in each case.

Keywords: buyouts, land acquisition, housing recover, Great East Japan Earthquake, Superstorm Sandy.

Introduction

Residential buyouts have played significant roles in post-disaster housing recovery programs after recent disasters in Japan and the United States. Both countries had pre-existing programs for acquiring private residential land for disaster mitigation, and precedents for their use in post-disaster recovery. After the 2011 Great East Japan Earthquake (GEJE) in Japan, residential buyouts are being implemented on an unprecedented scale in collective relocation projects in municipalities throughout the tsunami-affected coastal region. After 2012 Superstorm Sandy in the US, various types of residential buyouts were included in housing recovery programs of affected jurisdictions, with unprecedented use in coastal areas.

Within respective disaster recovery policy contexts, this paper compares recent residential buyouts after the 2011 Great East Japan Earthquake and 2012 Superstorm Sandy in New York City and New York State. Situating these case within land and housing reconstruction policies, it explains the development and implementation of buyout programs and considers their varied impacts. After introducing relevant legal framework, precedents, and post-disaster housing recovery programs, the buyout programs are compared based on the following three aspects: 1) goals for mitigation and/or housing recovery; 2) what is included in the buyouts, including the relationship to land as well as housing; and 3) impacts on recovery projects and affected communities.

Although both cases include goals of disaster mitigation and recovery support, legal frameworks, precedents, and relationship to housing reconstruction programs vary significantly. In the U.S., where housing recovery programs focus on support for private property reconstruction, residential buyouts are foremost a property transaction; government purchase of land is one option to support homeowners' recovery. In Japan, where housing recovery policies avoid providing compensation for private property focusing instead on investment for public benefit, buyouts are a conceived as part of a community level project. U.S. buyouts are a stand-alone program; in Japan they are one part of a set of programs dealing with former land and provision of land in new residential areas. In both countries, residential buyout programs with the stated purpose of pre-disaster mitigation are in fact used post-disaster to support recovery projects.

Background of residential buyout programs in Japan

On March 11, 2011, the Great East Japan Earthquake caused massive devastation along Japan's Tohoku coast. Following national government guidelines, local municipalities implement recovery plans with housing reconstruction projects including relocation, support for reconstruction of new private housing areas and public housing. Since the 1995 Hanshin Awaji Earthquake in Kobe, where there was almost no support for private reconstruction, more subsidies have been made available for private reconstruction. However, Japan's approach



to recovery focuses on investment in public infrastructure and community facilities, guided by an underlying principle of even distribution of public support. Whereas direct government investment in the construction of private housing is minimal, government programs provide residential lots. Buyouts in Japan have a dual focus on former/hazardous land and new/safer residential land. The legal basis to justify land acquisition and support for relocation is designation of land as hazardous. Then the government can purchase it and provide new land for relocation. Using Article 39 of Japan's 1950 Building Standards Law,¹ local governments can designate an area as hazardous, which prohibits any future residential use. While intended to promote mitigation by pre-disaster relocation, this law has primarily been utilized reactively – post-disaster – to relocate residents from damaged areas.²

Along with the designation of hazardous land, there are two primary residential relocation programs: one supports groups of residents to relocate collectively, the other the relocation of individual households. The Collective Relocation for Disaster Prevention program was established in 1972, and has been primarily used to relocate residents from isolated areas to safer, more convenient locations.³ For individual households the Relocation of Housing from Hazardous Cliffs program is designed to move individual households at risk of landslide away from steep hillside areas.⁴ Because slope failure risk is localized in small areas, this program supports the relocation of individual households' instead of groups. More flexible without requiring community consensus, it has been used more often than collective relocation programs.⁵

Recent evolution of the use of residential buyouts in Japan

After the 2004 Chuetsu Earthquake, which struck a rural mountainous area in Niigata Prefecture, already facing aging and population decline, Collective Relocation projects were used with provision of public housing to move residents from former mountainous areas to new residential areas in more convenient locations. There is also a precedent for the use of Collective Relocation after a tsunami in 1983, when residents in Okushiri Island in Hokkaido were relocated to higher land away from the sea.

After the Great East Japan Earthquake (GEJE) and tsunami, the national government prepared a menu of 40 types of recovery projects that would be fully funded, including the construction of public housing, land readjustment, and collective relocation. Local municipalities chose which of these projects to include in their town's recovery plan. Collective Relocation was one of the main programs selected by a large number of municipalities, with a total of 321 Collective Relocation projects used by municipalities in Iwate, Miyagi and Fukushima Prefectures.⁶ With up to a third of tsunami-affected land area designated as hazardous,^{7,8} the use of collective relocation and buyouts on this scale has created several challenges for the future of affected communities.

With a strong singular focus on creating new housing sites in high-land areas, there is a lack of flexibility or holistic consideration to support other residents who choose not to join the programs, or to address the physical environment that results. Some choose to stay and repair their houses on site (although hazard zones forbid new construction, repairing and living in existing structures is allowed), resulting in a patchwork of houses and empty lots; others find new land and rebuild on their own outside of government project areas, which can also negatively impact the built environment with low density sprawl.⁹

Although there have been collective relocation projects for disaster prevention purposes in Japan since the early 1970s, past projects focused on relocating people away from remote/hazardous areas, with no need to plan for reuse of acquired lands. After the GEJE, municipalities are left to manage vast amounts of land, with a significant financial burden, and, with depopulation and an aging society, to deal with a lack of demand for a use that would financially justify redevelopment.¹⁰

Whereas former communities included a dense mix of commercial and residential uses, Collective Relocation projects are limited to creating residential land. In a society with an already rapidly aging population, the massive investment in infrastructure to create relocation areas away from city centers and services raises serious questions for long-term sustainability.

The United States land use and housing reconstruction policy context for buyouts

Compared to residential buyouts and relocation projects after the GEJE in Japan, buyouts in the United States have a smaller role, with a different history and relationship to national policies, programs, and federal funding for hazard mitigation and recovery. Residential buyouts after Hurricane Katrina in 2005 and Superstorm Sandy in 2012 had different goals for mitigation and housing recovery and different relationships to federal mitigation programs.

Flood insurance and disaster mitigation



The National Flood Insurance Program (NFIP) plays a key role for determining land use control and flood mitigation in the U.S. Although 90% of U.S. disasters involve flooding, private insurance companies usually exclude floods because of their catastrophic and unpredictable damage,¹¹ resulting in increased costs of government-provided disaster assistance--compensation of loss of private property--in proportion to the number of uninsured homeowners. After several increasingly damaging hurricane and flood disasters, the 1968 National Flood Insurance Act created the NFIP, aiming to reduce flood losses: shifting government spending from disaster assistance to mitigation.¹² On the condition that local governments passed floodplain ordinances, the NFIP provided low-cost government-backed flood insurance to local homeowners; a 1973 NFIP revision required purchase of flood insurance for any federally backed loan. The Act also led to a vast flood-mapping effort; local governments were promised technical information to help them “steer development away from” floodplains.¹³ FEMA creates these flood maps, but the maps do not directly allow or forbid construction. Based on the mapped flood zone, local governments can require certain construction types and elevations; flood insurance premiums are also reduced based on the elevation height.

With subsidized low premiums and multiple large payouts, the NFIP was fiscally unsustainable and deeply in debt after Hurricane Katrina. In response, there was an attempt to modify the program through the Biggert-Waters bill, which would increase premiums over time. Coinciding with post-Sandy housing recovery, the timing of planned implementation of these reforms (especially rising premiums) and significant impacts for affected residents led to strong push-back. Although subsequent legislation slowed the planned increases, rising flood insurance premiums add a significant challenge for residents rebuilding after Sandy.

Hazard mitigation in the US

Administered by the Federal Emergency Management Association (FEMA), the Hazard Mitigation Grant Program (HMGP) is the primary source for federal grants for disaster mitigation, including purchasing land to reduce disaster risk. The HMGP was established by the 1988 Stafford Act,¹⁴ the main law governing disaster response and recovery in the United States, which authorized post-disaster mitigation efforts including acquisition of damaged properties to discourage rebuilding in hazardous areas.¹⁵ After the Great Midwest Flood of 1993, the most damaging flood disaster in U.S. history,¹⁶ the Stafford Act was amended to increase support for relocation projects targeting flood-prone properties, requiring the removal of structures and designation of acquired land in “perpetuity for a use compatible with open space, recreational, or wetlands management.”¹⁷ The HMGP was used for the first time for large-scale buyouts after the Great Midwest Flood, reducing the number of structures in the floodplain by 14,000-20,000.¹⁸ As all US buyouts, participation in HMGP buyouts is voluntary; HMGP requires 100% of homeowners in a designated buyout area agree to participate and forbids redevelopment of acquired land. HMGP can fund 75% of the cost for land acquisition; the other 25% can come from local government funds or recovery funding such as Community Development Block-Grants for Disaster Recovery (CDBG-DR).

Housing recovery programs in the U.S. after Hurricane Katrina and Superstorm Sandy

In recent years Community Development Block Grants for Disaster Recovery (CDBG-DR) from the Department of Housing and Urban Development (HUD) have been the main support for post-disaster housing reconstruction in the United States. These funds are allocated to affected (usually State level) jurisdictions based on detailed recovery projects specified in their Action Plans. As block grants, CDBG-DR funds allow flexibility for jurisdictions to design their own housing reconstruction programs. In late August 2005, Hurricane Katrina caused massive damage in the U.S. Gulf Coast region, including storm surge devastation in Mississippi and long-term and devastating flooding in the City of New Orleans in Louisiana; 80% of New Orleans flooded after levees failed.¹⁹ The largest residential damage in US history, more than 1 million houses were damaged in the region, and 134,000 in New Orleans alone.²⁰

Usually CDBG-DR “funds are used explicitly for repairs or reconstruction” in a rehabilitation model,²¹ but both Louisiana and Mississippi were granted waivers to use a compensation model that “disburses funds directly to homeowners for damages suffered regardless of whether they intend to rebuild”²² for their CDBG-DR-funded programs. While homeowners in both states could receive up to \$150,000 (depending on housing value, damage, and other support received), Mississippi’s program was a simpler compensation program. Louisiana’s program combined compensation and rehabilitation support, and attempts (later revised) to combine CDBG-DR and HMGP funding.²³

Called the Road Home, Louisiana’s CDBG-DR-funded housing recovery program included 3 options for homeowners: 1) rebuild on site; 2) sell and stay in Louisiana; or 3) sell and move outside the state. To encourage homeowners to stay in Louisiana, only 60% of market value was provided for option 3. Road Home had a large buyout component; however, these buyouts were not guided by hazard mitigation principals. Any damaged residential property within the city was eligible and future use was not restricted. Properties were acquired from



scattered sites throughout the city, resulting in a checkerboard pattern of empty lots and a challenge for the City to manage their redevelopment.

In October 2012, Superstorm Sandy caused severe housing damage along the east coast of the United States. Although the words “buyout” and “acquisition” are almost equivalent, in post-Sandy recovery they refer to 2 types of projects. In “buyouts” land is purchased for higher pre-storm values; redevelopment is forbidden. In “acquisitions” land is purchased for lower post-storm values²⁴ and redevelopment allowed.²⁵ Funded by CBDG-DR grants, New York City’s ‘Build it Back’ housing recovery program and New York State’s “New York Rising” housing recovery program both included options for housing repairs, rebuilding, elevation, and property acquisition. These property acquisition programs give an option for homeowners who do not want to rebuild; the use of the acquired property is not limited. In fact, Build it Back called this pathway “Acquisition for Redevelopment” and envisioned the redevelopment of acquired properties by New York City; properties acquired through New York State’s acquisition programs are sold at public auction.

With an early commitment to returning some areas to nature, New York State created and managed a separate HMGP-funded buyout program preserving properties as open space. A 10% bonus was available in areas targeted for “enhanced buyouts,” with an additional 5% bonus for homeowners who relocated within the county.²⁶ As a result of pro-active organizing by local residents, three communities in Staten Island were successfully selected as enhanced buyout areas. In Fox Beach, the first buyout community, the majority of properties were purchased and houses demolished and after several years the land is visibly returning to a natural state similar to the surrounding marshes.

Comparison of recent buyouts

Key differences and similarities between residential buyouts in Japan after the GEJE and U.S. after Superstorm Sandy can be clarified by considering three aspects: 1) goals for mitigation and/or housing recovery; 2) what is included in the buyouts with what relationship to land; and 3) impacts on recovery projects and affected communities.

1. What are the goals for buyouts in terms of both mitigation and household recovery support?

Both Japan and US buyout programs promote disaster mitigation through managed retreat, although acquisition projects in New York and the earlier Road Home were not for hazard mitigation, but homeowners’ recovery support. In Tohoku, the mitigation goal of buyouts is to move housing away from coastal areas, reducing future tsunami damage. The option to sell their land also financially supports residents’ recovery, including for rebuilding housing. New York State buyouts, as in Staten Island, aim to preserve a natural/ buffer zone. Other acquisition programs allow redevelopment instead of preserving open space; these are available to homeowners in the overall flood zone but are not clustered, resulting in scattered sites whose redevelopment will depend on the strength of the local property market. In all cases in Japan and the U.S., buyouts can also be seen as a type of government support compensating homeowners for damaged property. For acquisition projects in New York and properties purchased through Road Home, the goal was not hazard mitigation, but support for homeowners’ recovery.

2) What is included in buyout programs, and with what relationship to land?

Residential buyouts relate to the intersection of policies dealing with housing damage and reconstruction, as well as compensation and provision of land. Residential buyouts in Tohoku are one part of a set of multiple recovery projects within a large-scale implementation of relocation including: (government) designating former land as hazardous; (residents) having the option to sell this land to the government; (government) preparing new residential land areas in higher areas; and (residents) having the option to rebuild on these new lots. In contrast, buyouts in the United States are complete after one transaction--the purchase of privately owned land by the government. Although in the Road Home or enhanced buyouts in New York State, incentives are provided to homeowners to relocate in the state, there is no system to support residents’ finding their next house.

In Japan, buyouts are part of relocation programs which must both secure and prepare new residential lots for residents to rebuild on, and then manage the large amount of publicly-owned land acquired. In the U.S., where government does not strongly control land use, buyouts can result in scattered empty lots; the difficulty of managing (reselling or redeveloping) these lots varies based on local property markets.

3) What is impact of buyouts on the recovery process and post-disaster housing reconstruction?

In Japan, where land targeted for buyouts is designated hazardous and residential construction forbidden, there is stronger control and ability of the government to implement buyout programs. While goals of moving housing away from the coast can be achieved, it is questionable if massive infrastructure investments to carry out these projects are supporting a sustainable long-term future. In the US, although efforts are made to acquire land



strategically to create buffer zones, as buyout programs are voluntary lower density checkerboard land use patterns may result.

Regardless of location, buyouts have a clear benefit for individual households who want to move and can sell their former property above market rate. However, some homeowners are not eligible for the buyout programs because of their property's location or mortgage situation. For places like New York City, residents are unable to afford to buy another comparable house on today's market with the money from a buyout.

Unlike in Japan, where massive land areas have been designated hazardous and targeted for buyouts, buyout programs in the U.S. are restricted to limited areas, depending on political will as several levels of government (state, county, city); after Superstorm Sandy, there are communities who wanted but were not able to get a buyout, as well as counties where this option was not offered.

There are also residents in Tohoku communities who wanted to rebuild in place, but were forbidden to do so after collective relocation was selected. The time needed to implement rebuilding programs led many people to drop out of government programs, rebuild on their own and/or move away. Affected communities face the challenge of forming new communities, whereas in the U.S. residents are scattered.

Conclusion

The character of buyout projects in Japan and the U.S. is quite different. With strong government control in Japan, buyouts are implemented across large areas and connected to large scale creation of new settlements in highland areas. However, the strong focus on relocation projects targeting new areas has led to a lack of integration with other non-project areas. In areas struggling to maintain their population, the time required to complete large-scale projects completely alters the physical landscape and contributes to people's choices not to return. In the U.S., there is less government control to implement large-scale buyouts. Individual household decisions shape the results in buyout target areas, leading to scattered, empty lots. Although recent implementation of residential buyouts represents the divergent nature of housing recovery support in Japan and the U.S., both cases demonstrate limits of buyouts as a contribution to housing reconstruction programs. Looking at these two cases, significant questions arise about the use of buyouts as part of housing recovery; in both the U.S. and the Japanese context, buyout programs require significant improvement if they are to function as a successful support for housing reconstruction of affected people on a large scale.

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⁴ Ibid, p. 29

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