

空き家 (Akiya): Japan's Abandoned Assets

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Abstract

The long-lived, culturally significant buildings that define Europe's urban landscape are often cited as exemplars of sustainability and the circular economy. Adaptive reuse in this context typically refers to grand, iconic structures, with success measured through cultural, societal and economic value. However, greater emphasis should be placed on the adaptability and lifecycle of everyday architecture. This shift prompts reflection on the global applicability of adaptive reuse and calls for a deeper understanding of relationships between materials, context, people and architecture. Japan's escalating vacant house crisis, presents a compelling context for rethinking reuse. Driven by an ageing population, shifting social structures and economy, vacant properties have become a pressing issue impacting communities, housing markets and the environment. In 2023 Japan had nine million vacant homes. Rural areas face cultural erosion through depopulation, while urban centers struggle with overpopulation. This contrast highlights the complexities of reuse, demanding nuanced engagement with cultural, demographic and economic factors. My research *Japan's Abandoned Assets*, examined four dimensions of sustainable reuse: environmental, societal, habitation and economic, while also emphasising heritage, memory and community. Technical considerations such as construction, materiality and environmental conditions were also examined. Case studies across urban, suburban and rural contexts underscored the urgency of proactive, innovative strategies. Sustainable reuse extends beyond surface renovation, it requires cultivating ecosystems of connection, engagement and synergy between residents and newcomers. This research contributes to broader discourses on sustainable development and community revitalisation, proposing policy and community-driven initiatives, exploring reuse through adaptation, preservation and deconstruction as mediums for expanding architectural possibilities. Though complex, this phenomenon offers a global opportunity to reshape architecture. Ultimately, adaptation emerges at the forefront in contemporary practice, addressing two of the most pressing challenges of the twenty-first century; urbanisation and climate change.

Keywords: 空き家 (*Akiya* - Vacant House), Sustainable Re-Use, Community Revitalisation

Introduction

The phenomenon of 空き家 (*Akiya*), meaning vacant house, emerged in the late 1950s and has become a major social and environmental issue in recent decades. In 2018, Japan had the highest number of empty homes worldwide. Data since the first survey in 1948 shows that the number of uninhabited houses has doubled in just thirty years. Government figures released in 2023, reported nine million unoccupied homes across the country,

representing 13.8 percent of total housing stock (Statistics Bureau of Japan 2023), an increase of 510,000 since 2018. Nomura Research Institute projects that by 2030, one in three residential properties in Japan may be vacant or abandoned. Consequently, many rural villages have been disappearing, with predictions that by 2040, 896 towns and villages across Japan will no longer be viable (Sakakibara 2017). More than half of all municipalities are now designated as depopulated, experiencing population decline of thirty percent or more since 1980. This abandonment threatens Japan's cultural heritage, traditions and values. Conversely, Tokyo remains the most populated city in the world in 2025 with over thirty-seven million residents (World Population Review 2025). Japan faces a striking paradox; while overpopulation in major cities fuels housing demand and soaring prices, the country also holds more vacant homes than any other nation. What might seem like an obvious solution to both issues is, in reality, a far more complex and deeply rooted problem.

While headlines about acquiring a cheap or even free house attract foreign interest, the astonishing statistics and magnitude of the problem is still little known. The current problem extends beyond abandoned buildings, requiring an understanding of Japanese society, traditions and culture. The main purpose of this research is to shed light on the problem and propose plausible responses to the issue. The scope of the study aimed to explore the theories and practice of architectural heritage conservation and sustainable infrastructure development, examining reuse through adaptation, preservation, and deconstruction as strategies that expand the possibilities and impact of architecture.

Research

Until 1963, Japan had more households than housing units, but by 1968 this trend reversed and the number of housing units began consistently outpacing households. Between 2014 and 2018, 4.67 million new homes were built, while only 560,000 were demolished, resulting in a net gain of 4.11 million units. Over the same period, the number of households increased by just 2.11 million, leaving an oversupply of approximately 2 million homes (Catforehead 2023).

空き家(*Akiya*) exert numerous negative impacts on communities and municipalities, encompassing economic stagnation, rising property crime, weakened social cohesion and the erosion of cultural heritage. Neglected properties demand costly maintenance and repairs, imposing significant financial and administrative burdens on both property owners and local governments. Demolition also carries environmental risks, including construction waste and potential release of hazardous materials. 空き家(*Akiya*) contributes to visible urban decay, particularly in depopulating rural regions, accelerating neighborhood decline and reducing the attractiveness of communities for both residents and businesses.

Beyond housing statistics, the 空き家(*Akiya*) issue intersects with broader dimensions of Japanese society, urban planning, property governance, economic resilience and cultural preservation, making it one of the most multifaceted urban and regional challenges Japan faces today.

Demographic and Spatial Context of 空き家(*Akiya*)

The phenomenon of 空き家(*Akiya*), is deeply rooted in Japan's broader demographic and socioeconomic transformations and can be best examined across rural, suburban and urban context.

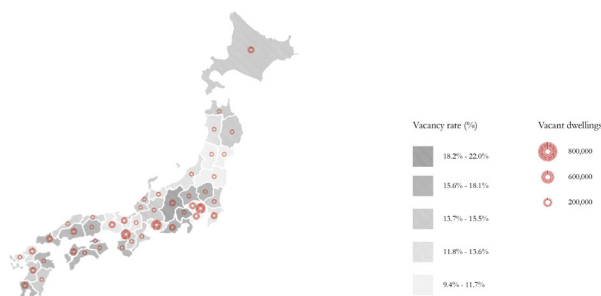


Fig. 1. Vacancy rate, Japan. Statistics Bureau of Japan, 2013 (Emily Marie Shiga, 2025)

In rural Japan, decades of urban migration following the postwar economic expansion have caused severe depopulation. A 2006 Ministry of Agriculture, Forestry and Fisheries survey identified 775 villages already depopulating and 1,403 at risk of disappearing. By 2019, two hundred and fifty to three hundred hamlets consisted entirely of residents aged seventy-five or older (Wang 2019), highlighting acute demographic decline and fragile communities. Rural prefectures such as Akita, Aomori and Shimane now record vacancy rates exceeding twenty percent, often in structurally sound homes that remain unoccupied due to a lack of successors or market demand. Suburban areas, including provincial cities and commuter belts, face population shrinkage driven by low birth rates, accelerated aging and outmigration to major urban centers. Over ninety percent of municipalities experience decline, a trend intensified by the COVID-19 pandemic. Suburbs, developed during the 1960s-1970s economic boom, now suffer from aging infrastructure. Detached homes from this period are often difficult to renovate or resell due to outdated designs, poor insulation and non-compliance with modern seismic standards. This has transformed once-vibrant suburban districts into semi-abandoned zones. Urban areas present a paradox of high density and growing vacancies. Between 1960 and 2010, the urban population increased from 63.27 percent to 90.81 percent, which placed immense pressure on housing and infrastructure. Despite this growth, major cities such as Tokyo recorded an eleven percent housing vacancy rate in 2014 (Ward 2014). In 2011, central Tokyo had one hundred thousand vacant homes, a forty percent increase from the previous decade, rising by roughly three thousand units annually (Japan Today 2011). Dr. Chie Nozawa (2022) predicts that vacancies will intensify in central urban districts, particularly in aging neighborhoods that have not been revitalised. High-rise condominiums are also beginning to show vacancies as owners age or pass away without heirs. Tokyo's immense scale and population density amplify the consequences of these vacancies, providing insights for other global mega-cities facing similar challenges. Examining this issue across these spatial contexts clarifies their causes and risks but not their resolution, as the persistence of the issue lies in deeply interwoven social, political and economic dynamics. In essence, Japan's demographic and spatial dynamics form an interconnected housing crisis, rural depopulation, suburban decline and urban aging coalesce into a nationwide geography of vacancy. Accordingly, the 空き家 (*Akijya*) phenomenon can be analysed on three levels: why properties become abandoned, why they remain so and why the numbers continue to rise.

Why Properties become Abandoned

Japan's population has been steadily declining for decades, with projections estimating a contraction of nearly one-third within fifty years (National Institute of Population and Social Security Research 2023). In 2022 alone, the population fell by 801,000, the largest annual decline on record, affecting all forty-seven prefectures. This demographic decline, combined with rapid aging, underpins the structural causes of the 空き家 (*Akija*) proliferation. The population peaked in 2008 at over 128 million and has since decreased by more than three million, standing at approximately 125 million in 2023 (Statistics Bureau of Japan 2023). One-third of citizens are now over sixty-five, making Japan the world's most aged society. This demographic shift drives the 空き家 (*Akija*) phenomenon, particularly in rural areas. Large-scale outmigration from rural areas since the 1950s has left many remote settlements, known as 限界集落 (*Genkai shūraku*, "marginal villages"), economically stagnant and demographically unsustainable, intensifying land and property abandonment. Factors such as rising living costs, career-focused lifestyles and limited family support networks accelerate depopulation and strain welfare systems, contributing to the abandonment of homes. Nearly three-quarters of vacant homes are owned by elderly individuals, with fifty percent of owners aged sixty to seventy-four and twenty-three percent over seventy-five (Statistics Bureau of Japan 2018a). As these owners grow older, many can no longer maintain their homes, and the cost of demolition, often higher than their pension income, makes selling or redeveloping the property impractical.

Economic pressures and legal constraints compound the problem. Japan's inheritance tax 相続税 (*Sōzoku zei*), the world's highest, ranging from ten to fifty-five percent, combined with registration fees and high maintenance costs, discourages property transfer. Until the 2024 amendment of the 登記法 (*Tōkikibō*), ownership registration was not mandatory, allowing heirs to avoid liability for fixed asset taxes by abandoning unwanted property. As fixed asset taxes apply regardless of occupancy, many owners found it economically preferable to abandon homes rather than pay continuous upkeep and taxation, further inflating the number of 空き家 (*Akija*).

Why Properties Remain Abandoned

Understanding why properties remain abandoned involves examining the barriers that prevent reuse or sale after vacancy. While temporary vacancy is inevitable following the departure or death of residents, prolonged neglect rapidly reduces a property's marketability and structural viability. A survey found that seventy-three percent of inherited or gifted vacant houses had been left neglected for over five years (Statistics Bureau of Japan 2018a). Social and psychological factors are key drivers of this prolonged abandonment. Many owners lack the time, financial means or knowledge to manage inherited homes, while emotional attachment often deters sale or demolition. Japanese culture places strong emphasis on ancestral respect and familial continuity, leading many to preserve inherited properties as memorial sites rather than assets. In addition, geographical and environmental factors also discourage reoccupation. Japan's exposure to earthquakes, tsunamis and typhoons raises the maintenance burden on older structures, many of which require costly seismic reinforcement to meet safety standards.

Why the Number of 空き家(Akija) Continue to Grow

Social factors remain a primary influence. Cultural preferences for new, modern housing led many Japanese buyers to avoid older properties. In 2018, second-hand homes accounted for only 14.5 percent of all sales in Japan, compared to eighty-one percent in the United States and eighty-six percent in the United Kingdom (Catforehead 2023). Concerns about quality, hidden defects and the stigma associated with death in a property further discourage purchase or renovation.

Japan’s strict property and land-use regulations also inhibit revitalisation. Many properties are restricted by zoning laws that restrict demolition or redevelopment, while preservation rules often mandate maintaining the original structure and form, limiting flexibility for renovation.

Economically, high renovation costs, fixed asset taxes and limits on reconstruction make investment unattractive, particularly when profit margins are narrow. Purchasing property entails numerous administrative fees and layered taxes including registration, acquisition, fixed asset and city planning levies, creating significant entry barriers for prospective buyers. The current tax system, which assesses value rather than condition, discourages maintenance, as owners incur costs without corresponding gains in property worth. Recent reforms and initiatives at national and municipal levels such as tax breaks, renovation subsidies and demolition assistance demonstrate growing recognition of the issue, aiming to revitalise rural areas and expand affordable housing. Yet, significant economic and regulatory obstacles persist, limiting the feasibility of property acquisition and reuse. The long-term effectiveness depends on broader cultural attitudes and socioeconomic conditions that continue to shape owner behavior.

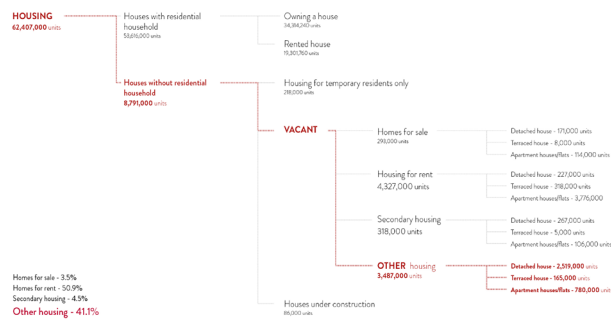


Fig. 2. Classification of housing and the associated statistics in Japan. Housing and land statistical survey, 2018 (Emily Marie Shiga, 2023)

Summary and Key Findings

The research concludes by clarifying statistical interpretations central to understanding the 空き家(Akija) crisis. While media discourse often amplifies alarming figures, a closer examination reveals more nuanced realities. The “nine million vacant homes” does not equate to nine million abandoned or derelict properties. In 2018, of Japan’s 8.5 million vacant units, 4.3 million were rental properties, and 3.5 million fell under the vacant etc.

Category (Fig. 2), which includes abandoned, uninhabitable houses (Statistics Bureau of Japan 2018a). While still significant, this distinction highlights that not all vacant properties contribute equally to the 空き家 (*Akijya*) phenomenon. Additionally, the national data, to a certain extent, relies on estimation, incorporating a percentage of error allocated to each study. This methodology does not undermine data reliability but does introduce a margin of error that should inform interpretation. Future studies could enhance accuracy through more localised, bottom-up data collection approaches that capture regional variations in vacancy patterns.

Conclusions

The 空き家 (*Akijya*) problem in Japan arises from a complex interplay of social, economic and political factors. Aging demographics, urbanisation and changing lifestyles have produced an abundance of vacant homes, causing economic impacts such as wasted resources and decreased property values, contributing to urban decay and straining local governments’ capacity to maintain infrastructure and services. While architectural solutions can contribute to addressing the problem, the issue cannot be fully resolved through design alone. A comprehensive approach is needed, combining architectural innovations with social policies promoting sustainable urban development, economic incentives for property owners, legal reforms and community engagement, with collaboration among local governments, property owners, and communities essential for viable solutions. The examination of the 空き家 (*Akijya*) problem across different environmental contexts highlights the diverse situations faced throughout Japan, emphasising the urgency of proactive and innovative strategies to mitigate the adverse effects of vacant homes and providing insights for policy recommendations and targeted interventions across both urban and rural landscapes. The call to action, echoed throughout this research, emphasises the need for a collaborative and holistic approach involving government initiatives, community-driven efforts and private sector involvement. As Japan navigates demographic shifts, economic fluctuations and evolving societal needs, sustainable strategies must encompass not only the physical aspects of an 空き家 (*Akijya*) but also their socio-cultural

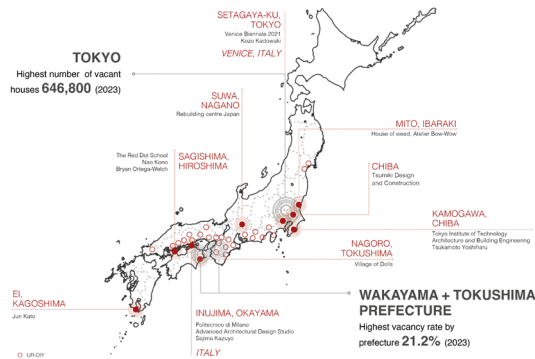


Fig. 3. Selected examples of current initiatives and projects relevant to the topics addressed in this paper (Emily Marie Shiga, 2025)

and economic dimensions. This research contributes to the ongoing dialogue surrounding this problem in Japan, fostering a deeper understanding of its root causes. One crucial element of effecting change lies in transforming public perceptions of 空き家 (*Akiya*). This can be achieved through model projects promoted through exhibitions, publications, competitions and networks, laying the foundation for effective strategies and meaningful change. The research revealed that a growing number of initiatives have begun to emerge and be implemented across Japan (Fig. 3). Despite their increasing presence and potential significance, many of these efforts remain relatively unknown to the broader public and relevant stakeholders. As a result, they are often confined to isolated, project-based interventions rather than being integrated into a cohesive or widely recognised national framework. By raising awareness and broadening understanding, these initiatives not only accelerate the development of innovative solutions but also foster an environment where knowledge and expertise circulate freely, creating a more robust ecosystem of projects working toward shared goals. Revitalisation requires more than renovating individual houses, it demands an integrated approach combining social and economic development, community connectivity and synergy among residents and newcomers. Success relies on the symbiosis between each project, sparking a chain reaction of positive transformation, drawing in new residents, businesses and opportunities. Ultimately, the goal is not only physical renewal but the creation of thriving, self-sustaining communities where the whole exceeds the sum of its parts. Coordinated, small-scale interventions can protect existing assets while also addressing depopulation and housing concentration challenges. By leveraging existing materials and architectural heritage, Japan can transform the 空き家 (*Akiya*) problem into an opportunity for sustainable development, community-making and innovative architecture, not only in Japan but also worldwide.

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