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DISPLACEMENT BEYOND SHELTER: ACCOMMODATION PATHWAYS, LIVELIHOOD DISRUPTION AND HOUSING RECOVERY FOLLOWING THE JOSHIMATH LAND SUBSIDENCE CRISIS, INDIA

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ABSTRACT
Disaster-induced displacement disrupts housing, livelihoods and social relations simultaneously. This paper examines these interconnected consequences through the 2023 land subsidence crisis in Joshimath, Uttarakhand, India. The study uses household-level evidence from 308 disaster-affected respondents, supported by field observations and contextual literature. The findings show that 35% of respondents stayed with relatives or friends, 32% used hotels or homestays, 20% entered rental accommodation and 13% used community facilities. Homestay activity constituted the largest livelihood category, demonstrating the close relationship between dwelling space and household income. The study argues that post-disaster housing cannot be evaluated through physical shelter alone. Recovery planning must integrate safety, livelihood continuity, location, privacy and community networks. The findings offer implications for context-sensitive recovery planning in environmentally fragile mountain settlements.

Keywords: *Accommodation pathways; Disaster displacement; Housing recovery; Joshimath; Land subsidence; Livelihood continuity.*

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INTRODUCTION

Disaster-induced displacement is commonly described as the movement of people away from homes that have become unsafe, damaged or inaccessible. Such a definition, although useful for emergency response, understates the broader consequences of losing access to a dwelling. A house is simultaneously a place of shelter, privacy, family life, social identity and, in many contexts, economic production. Consequently, displacement can disrupt multiple dimensions of everyday life even when an affected household has obtained immediate physical accommodation.

Post-disaster recovery scholarship increasingly treats recovery as a complex and non-linear process rather than a simple sequence from emergency shelter to reconstruction. Housing recovery is shaped by the interaction of physical safety, household resources, social networks, institutional arrangements, land and livelihood opportunities. Davidson et al. (2007) emphasised that post-disaster housing is embedded within relationships between affected communities and recovery institutions. Kennedy et al. (2008) similarly argued that recovery should connect physical rebuilding with wider social and economic processes. Such perspectives are especially relevant where housing and livelihood functions overlap.

The relationship between housing and livelihoods is pronounced in tourism-dependent and mixed-use settlements. Rooms within a dwelling may be used for family residence, guest accommodation, storage, food preparation or other household enterprises. The loss of a house can therefore involve both residential displacement and loss of productive assets. Research from disaster-affected communities in India has likewise shown that relocation and housing reconstruction can alter livelihoods, access to resources, social relations and cultural continuity (Mukherji 2013; Davidson et al. 2007).

Joshimath provides an important setting in which to examine these relationships. The Himalayan town experienced an acute land subsidence crisis during 2023, with visible cracks and deformation affecting buildings and infrastructure. Scientific investigations have linked the crisis to the interaction of fragile geological conditions, land deformation and anthropogenic pressures, while documenting substantial damage to the built environment (Shukla et al. 2024; Singh et al. 2025). The event produced immediate safety concerns and forced households to seek alternative accommodation, making it possible to examine how displacement pathways interact with livelihoods and social continuity.

This paper investigates the accommodation and recovery experiences of disaster-affected households using empirical evidence from 308 respondents. It asks: (i) what accommodation pathways were adopted after displacement; (ii) how does the local livelihood structure influence the consequences of housing displacement; and (iii) what lessons do these findings offer for post-disaster housing recovery in fragile mountain settlements? The paper argues that successful housing recovery should be understood as integrated recovery. Physical safety remains essential, but recovery outcomes are strengthened when accommodation also supports privacy, household autonomy, livelihood access and community continuity.

METHODS

The study forms part of a broader investigation of post-disaster housing in Joshimath. A mixed empirical approach was adopted, combining household survey evidence with field observations and contextual review. The analysis presented in this paper is centred on 308 disaster-affected respondents and focuses specifically on household displacement, immediate accommodation and livelihood structure.

Primary household information was organised to identify where affected households stayed after displacement and how their principal occupations were distributed. Accommodation responses were grouped into four empirically observed pathways: staying with relatives or friends, using hotels or homestays, entering rental accommodation, and staying in schools, Gurudwaras or other community facilities. Livelihood responses were grouped according to the principal occupation reported by respondents.

The analysis is descriptive and interpretive. Percentages and frequencies are used to identify the relative importance of different accommodation and livelihood pathways. These results are subsequently interpreted in relation to the wider literature on post-disaster recovery, displacement, relocation and livelihood continuity. The objective is not to claim that accommodation type alone determines recovery, but to demonstrate how different accommodation arrangements can create different conditions for privacy, autonomy, affordability, work and community interaction.

The study therefore treats the household as the principal unit of analysis while recognising that household recovery is embedded within a wider settlement system. In Joshimath, this is particularly important because

housing, tourism, hospitality and small-scale commerce are spatially interconnected. The interpretation of the empirical findings consequently considers both the immediate shelter function of accommodation and its relationship with the social and economic functions previously performed by the dwelling.

RESULTS AND DISCUSSION

Household Displacement and Immediate Accommodation Pathways

The survey demonstrates that displaced households did not follow a single accommodation pathway. Instead, respondents relied on a combination of informal social networks, existing commercial accommodation, rental housing and community facilities. The diversity of these arrangements indicates that emergency displacement in Joshimath was spatially dispersed and socially differentiated.

The largest proportion of respondents (35%) stayed with relatives or friends. Hotels and homestays accommodated 32%, rental accommodation accounted for 20%, and 13% stayed in schools, Gurudwaras or other community facilities. The findings demonstrate the importance of pre-existing social and settlement resources during sudden displacement.

Table 1. Immediate accommodation pathways among affected households

Accommodation pathway	Percentage	Approximate respondents (N = 308)
Relatives/Friends	35%	108
Hotels/Homestays	32%	99
Rental accommodation	20%	62
Schools/Gurudwaras/Community facilities	13%	40
Total	100%	308

Source: Author's empirical survey analysis.

The reliance on relatives and friends highlights the role of informal support networks in emergency recovery. Such arrangements can offer immediate safety and emotional reassurance, particularly when formal shelter is unavailable or unsuitable. However, prolonged dependence on host households may create overcrowding, reduced privacy and uncertainty about the duration of stay. It can also affect household autonomy because displaced families must adapt their routines to another household's space and resources.

The use of hotels and homestays demonstrates the role of existing tourism infrastructure as an emergency accommodation resource. This pathway may provide more immediate privacy than collective facilities, yet it does not necessarily reproduce the domestic functions of a permanent dwelling. Extended dependence on commercial accommodation may also generate uncertainty concerning affordability, duration and the ability to carry out normal household activities.

Rental accommodation provided a comparatively autonomous pathway for one-fifth of respondents. Renting can permit families to re-establish domestic routines, but it introduces financial obligations at a time when disaster-related livelihood disruption may already reduce income. It may also move households away from established neighbourhoods, workplaces and support networks.

Community facilities served an essential emergency function for the remaining respondents. Schools, religious institutions and public facilities can provide rapid protection during evacuation, but their suitability declines when displacement becomes prolonged. Collective settings may limit privacy, domestic routines and space for household belongings. The empirical pattern therefore reinforces the distinction between emergency shelter and sustainable recovery.

Taken together, these findings show that the question is not simply whether displaced households have a roof over their heads. Accommodation pathways shape the quality of recovery because they influence privacy, autonomy, cost, location and access to livelihood opportunities. This supports the argument that housing recovery should be assessed as a wider social process rather than solely as the provision of physical units (Oliver-Smith 1991; Mukherji 2013).

Livelihood Structure and the Housing–Economy Relationship

The livelihood structure of surveyed households provides important context for understanding the consequences of displacement. Homestay activity constituted the largest occupational category, followed by tourism, hotel activity, shops and restaurants. These activities indicate a local economy in which the dwelling and its surrounding location can directly support income generation.

The prominence of home-linked and tourism-linked livelihoods is significant because it complicates the conventional distinction between a house and a workplace. For households operating homestays, the same

building may provide family accommodation and generate income through guest rooms. Damage to, or evacuation from, such a building can therefore remove both shelter and productive space.

Table 2. Livelihood profile of surveyed respondents

Occupation/Livelihood	Frequency	Percentage
Hotel	48	15.6%
Restaurant	35	11.4%
Shop	42	13.6%
Homestay	112	36.4%
Tourism	50	16.2%
Construction	10	3.2%
Taxi	4	1.3%
Other	7	2.3%
Total	308	100%

Source: Author's empirical survey analysis.

The results suggest that housing recovery in Joshimath cannot be separated from livelihood recovery. Kennedy et al. (2008) argued that recovery interventions should link shelter and longer-term social and economic needs. This observation is particularly applicable where household enterprises operate from or depend upon residential premises.

The predominance of homestay activity (36.4%) indicates that a substantial proportion of respondents were connected to a form of tourism economy directly associated with dwelling space. Hotels and tourism together represented another important share of employment. Shops and restaurants also depend on accessibility, visitor movement and proximity to commercial areas. Consequently, relocation to a physically safe site may still weaken recovery if the new location substantially reduces access to customers, employment or tourism networks.

The findings therefore support a location-sensitive approach to housing recovery. A structurally safe dwelling is indispensable, but the suitability of a recovery solution also depends on whether households can sustain their means of living. Studies of post-disaster reconstruction have repeatedly demonstrated that recovery outcomes improve when physical rebuilding is connected to social and economic needs rather than treated as an isolated engineering exercise (Davidson et al. 2007; Kennedy et al. 2008; Mukherji 2013).

For Joshimath, this has a specific implication: household needs assessment should extend beyond family size and structural damage. It should identify whether the dwelling previously supported homestay rooms, tourism services, storage, retail activity or other forms of household production. Without this information, replacement housing may restore shelter while failing to restore the economic system through which the household sustained itself.

Social and Community Implications of Household Displacement

Displacement also has a collective dimension. Households do not recover in isolation; they are embedded in neighbourhood relationships, kinship networks and everyday systems of mutual assistance. When families are distributed among relatives, rental units, hotels and community facilities, the original spatial pattern of the community may be fragmented.

Social networks can support recovery by providing information, temporary accommodation, emotional assistance and practical help. At the same time, dispersal can reduce routine contact with neighbours and alter access to familiar institutions and services. These effects may become increasingly important when temporary displacement continues for long periods.

Oliver-Smith (1991) emphasised that relocation and resettlement must be understood through social, cultural and economic relationships rather than through physical site selection alone. Davidson et al. (2007) likewise highlighted the importance of participation and the relationship between communities and institutions in post-disaster housing processes. The present findings do not imply that all affected households should necessarily be accommodated together; safety and household preferences remain critical. Rather, they indicate that unnecessary fragmentation of established social networks can create additional recovery burdens.

In mountain settlements, neighbourhood continuity may be especially important because access to services, transport and livelihoods can be constrained by topography and distance. Recovery planning should therefore

consider whether temporary accommodation and permanent relocation options enable households to retain practical connections with schools, markets, workplaces, relatives and local support systems.

From Temporary Accommodation to Sustainable Recovery

The empirical findings reveal a clear distinction between emergency protection and sustainable recovery. Immediate accommodation is essential when structures become unsafe, yet the provision of a temporary place to stay does not automatically restore the functions previously performed by housing.

A useful way to understand the recovery process is through four interconnected stages. The first is emergency protection, in which households are removed from unsafe structures. The second is stabilisation, in which accommodation should support privacy, domestic routines and access to essential services. The third is social and economic recovery, involving renewed access to employment, markets, education, healthcare and community networks. The fourth is durable recovery, in which a long-term housing solution addresses safety, affordability, household requirements and contextual suitability.

These stages should not necessarily be treated as strictly linear. Some households may regain livelihood access before permanent housing, while others may experience prolonged economic disruption even after obtaining a structurally safe dwelling. The key implication is that temporary accommodation should be connected to a wider recovery pathway. Kennedy et al. (2008) similarly emphasised the importance of linking transitional processes with longer-term recovery rather than treating emergency shelter as an independent end point.

The Joshimath findings therefore encourage a broader evaluation of accommodation quality. Adequacy should include not only structural protection but also the capacity to support household life. Privacy, affordability, domestic space, accessibility and proximity to livelihoods should be treated as recovery variables. A temporary arrangement that performs poorly on these dimensions may remain physically safe while producing prolonged social and economic stress.

Policy and Planning Implications for Mountain Settlements

The findings have several implications for post-disaster housing policy in environmentally fragile mountain settlements. First, emergency accommodation planning should recognise the plurality of accommodation pathways. Informal hosting, rental housing and existing hotels or homestays can complement formal shelters when integrated into a coordinated response.

Second, housing needs assessment should include livelihood characteristics. Where homes function as productive assets, replacement housing should consider mixed residential-economic requirements. In Joshimath, this is particularly relevant for homestay households and other tourism-linked activities.

Third, location should be treated as a central recovery variable. Resettlement planning should consider physical safety together with access to employment, markets, education, healthcare and community networks. Recent Joshimath research on resettlement suitability similarly demonstrates the importance of systematic consideration of multiple geographical and environmental parameters when identifying safer locations (Joshi & Saxena 2025).

Fourth, temporary and permanent recovery strategies should preserve household choice wherever possible. A single standardised accommodation model is unlikely to respond equally well to households with different family structures, livelihood patterns and social networks. Flexibility can therefore improve the fit between recovery support and actual household circumstances.

Finally, the Joshimath case reinforces the need for risk-sensitive planning before disaster displacement occurs. Fragile mountain settlements require close integration of land-use planning, infrastructure management, drainage, construction practices, hazard monitoring and community preparedness. Housing recovery becomes more difficult and costly when these wider vulnerabilities are addressed only after households have already been displaced.

CONCLUSIONS

This paper examined displacement and recovery through empirical evidence from 308 disaster-affected households in Joshimath. The findings demonstrate that displacement extended beyond the immediate loss of physical shelter. Households followed multiple accommodation pathways, with 35% staying with relatives or friends, 32% using hotels or homestays, 20% entering rental accommodation and 13% using community facilities.

The livelihood profile showed a strong relationship between housing and the local economy. Homestay activity represented the largest occupational category, demonstrating that the dwelling can operate simultaneously as

a residential and productive asset. Tourism, hotel work, shops and restaurants further indicate that household recovery is closely connected with accessibility and the functioning of the local settlement economy.

The study therefore concludes that post-disaster housing should be evaluated through its contribution to integrated recovery. Safety is the essential starting point, but adequate recovery also requires attention to privacy, household autonomy, affordability, livelihood continuity, location and community relationships. A structurally safe housing solution that disconnects households from work and social networks may produce incomplete recovery outcomes.

For Joshimath and other fragile mountain settlements, future recovery planning should connect emergency accommodation with longer-term housing and livelihood strategies. Household assessment should identify mixed residential-economic functions, while site selection should consider both hazard safety and access to everyday opportunities. The broader lesson is that displacement extends beyond shelter: when a dwelling is lost or abandoned, the social and economic systems organised around that dwelling may also be disrupted. Effective post-disaster housing must therefore support the recovery of households as integrated social and economic units rather than merely replace a physical structure.

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