

Original Research Paper

Policy Gap Analysis in Spatial Planning for Transition to Climate-Resilient Livelihoods (Case Study: Kordian District, Jahrom County)

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ARTICLE INFO	Abstract
Received: 2025/07/25 Accepted: 2025/08/22 PP: 1-10 Use your device to scan and read the article online 	The impact of climate change threatens rural livelihoods in semi-arid areas like Kordian District of Iran's Jahrom County, particularly where there is inadequate spatial planning. This research analyzes policy shortcomings in Iran's spatial planning framework concerning climate-induced resilient livelihood changes, based on the qualitative analysis of four documents and field survey of 18 stakeholders. This study identifies and analyzes the following critical gaps: 1 misalignment between climate adaptation objectives and land-use planning decisions spatial planning within higher order planning documents, 2 layered governance silos, and 3 the local livelihood framework is planned for but not planned with. The spatial analysis showcases overlooked economic opportunities like pastoralism, horticulture, and solar energy, which are limited by infrastructural deficits, climate hazards, and policy fragmentation. Further compounding these issues is geographic isolation and dysfunctional settlement morphology. This research outlines actionable strategies within the policy-action-institution matrix framework, calling for the spatial restructuring of service network configurations, climate-resilient livelihood diversification, improved governance coordination, targeted youth and female empowerment, and the ecosystem-based adaptation approach to spatial planning. The gaps between the objectives and the means employed demonstrate the inadequacy of current spatial planning approaches to semi-arid regions integrating climate, institutional frameworks, and socio-spatial relations. The proposed framework spatially called suggest is adaptable and enrich spatial.
Keywords: <i>Spatial planning, Climate-resilient livelihoods, Policy gaps, Institutional fragmentation, Ecosystem-based adaptation</i>	

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Introduction

Climate change, as one of the most critical challenges of the current century, has impacted numerous aspects of the social, economic, and environmental life of societies. In this context, spatial planning can serve as an effective platform for managing and reducing climate risks and supporting the transition to resilient livelihoods (Lin, 2015; Neglo, 2022). However, in many countries, including Iran, policy, institutional, and conceptual gaps between different levels of planning have hindered the efficient realization of climate adaptation and sustainable development goals (Kohaki et al., 2024; Sharifzadegan and Razavi Dehkordi, 2010).

International experiences have shown that factors such as lack of coherence in multi-level governance, focus on sectoral interests, weakness in spatial planning management, and inconsistency between executive agencies are among the most significant obstacles to the effective implementation of climate policies within spatial planning systems (Richard, 2013; Camargo et al., 2020). At the local level, disregarding the adaptive capacities of communities can lead to maladaptive actions that increase vulnerability in the long term (Rahman et al., 2019).

In Iran, research highlights deep deficiencies in the spatial planning system, which can be analyzed at three levels: structural-functional, epistemological, and operational. The lack of proper understanding of the land genome, the weakened position of planning within the legal and political framework, and the weak interaction between scientific and executive institutions have all contributed to this structural inefficiency (Kohaki et al., 2024). Furthermore, new approaches such as “ecosystem-based adaptation,” which can enhance urban and livelihood resilience, have not yet been institutionalized within the country’s spatial planning system (Mobarghaei and Mokhtari, 2017). This is in contrast to successful global experiences, which show that integrating ecosystem

services into local policymaking can reduce climate risks and improve quality of life (Mortimore & Manvell, 2006).

Additionally, a review of the historical trends in spatial planning in Iran reveals a trajectory marked by conceptual, legal, and institutional fluctuations. Due to limited perceptions and a prevailing sectoral approach, spatial planning has not been effectively integrated into development and policymaking processes (Sharifzadegan and Razavi Dehkordi, 2010). This has led not only to ineffective policies in reducing spatial inequalities and supporting local livelihoods, but also to the creation of greater disparities across regions.

As climate change impacts intensify, spatial planning is increasingly recognized as a key instrument in promoting resilient livelihoods. Nevertheless, gaps between macro-level climate policies and local-level actions remain evident in many countries, including Iran, preventing the full achievement of adaptation goals. Research has identified barriers such as weak multi-level governance, institutional incoherence, and the failure to effectively integrate climate considerations into spatial and territorial policies as key contributors to these gaps (Lin, 2015; Richard, 2013; Rahman et al., 2019).

For example, a study of the spatial planning system in Taiwan identified inefficiencies in spatial management and inconsistencies across planning levels as major obstacles to the successful implementation of adaptation policies (Lin, 2015). Similar challenges have been observed in Europe and North Africa, where political commitments often conflict with actual implementation, and the interests of polluting industries contribute to deep political divides (Camargo et al., 2020). At the local level, neglecting the spontaneous adaptive capacities of communities can result in maladaptation and perpetuated vulnerability (Rahman et al., 2019). Theoretically, integrating ethical and environmental perspectives into territorial

planning necessitates a shift in development paradigms (Neglo, 2022).

The lack of coordination between policies, institutional structures, and local needs is particularly pronounced in semi-arid rural areas such as the Kordian District of Jahrom County. In these areas, local livelihoods are highly dependent on natural resources and climate conditions, meaning that even minor changes in spatial planning or water resource policies can destabilize livelihood systems. The Kordian District, which faces intersecting climatic, livelihood, and spatial challenges, serves as a concrete example of the ineffectiveness of current planning policies in addressing climate change. Analyzing these policy and planning gaps—through an interdisciplinary and comparative lens—can help identify the structural, institutional, and conceptual barriers that hinder the achievement of climate-resilient livelihoods.

Literature Review

Globally, numerous studies have highlighted persistent gaps between climate adaptation policies and spatial planning systems. Lin (2015), in a case study of Taiwan, identifies two major barriers: uncoordinated multi-level governance and weak spatial planning management. These limitations undermine the legitimacy and effectiveness of adaptation decisions. Similarly, Richard (2013), drawing from French planning experiences, argues that integrating climate considerations into territorial policies necessitates a fundamental shift away from traditional paradigms toward more localized, risk-sensitive approaches that reflect regional environmental realities.

Comparative studies further illuminate this disconnect. Camargo et al. (2020), analyzing climate policy implementation in Portugal, Spain, and Morocco, reveal a stark divergence between official climate commitments and actual practices on the ground. This gap is largely attributed to industrial dominance, ineffective inter-institutional communication, and institutional instability. In Bangladesh, Rahman et al. (2019) emphasize the dangers of overlooking local adaptive capacities. They show how top-down climate interventions, devoid of community input, often result in maladaptation, thereby exacerbating

vulnerability. Their work stresses the importance of ground-level assessments prior to policy implementation in order to ensure more effective, locally-responsive planning.

Neglo (2022) expands on these critiques by highlighting the failure of spatial planning to effectively address climate change unless it incorporates environmental, social, and ethical dimensions. Mortimore and Manvell (2006) further underscore the importance of livelihood resilience, particularly in vulnerable regions such as Iran, advocating for adaptive strategies that serve both ecological protection and socio-economic development.

Within Iran, domestic research has long scrutinized the shortcomings of the country's spatial planning system. Kohaki et al. (2024), through a comprehensive, data-driven analysis, identify 117 distinct deficiencies across epistemological, structural-functional, and operational dimensions. These include misinterpretations of core planning concepts, fragmented legal frameworks, and weak connections between academic research and policy practice. Sharifzadegan and Razavi Dehkordi (2010) similarly document the impact of conceptual, organizational, and legal failures, highlighting how fragmented governance structures and insufficient institutional mandates obstruct effective implementation of spatial policies.

Addressing urban resilience, Mobarghaei and Mokhtari (2017) introduce ecosystem-based adaptation as a critical yet neglected strategy. They point to Iran's lack of integrated policymaking and absence of comprehensive ecological databases as major obstacles. Their work advocates for a stronger municipal role in aligning ecosystem services with spatial and climate adaptation policies, particularly in urban areas vulnerable to climate stressors.

Despite the wealth of research on climate-spatial policy gaps, there remains a significant lack of localized studies that focus on the intersection of climate adaptation, spatial planning, and livelihood resilience in semi-arid regions. This is particularly relevant in areas such as the Kardin District of Jahrom County, where climate risks are acute and livelihoods heavily depend on natural resource management. Studies, including those by Raparhi (2016) and Rahman et al. (2019), indicate that land-use changes and water

mismanagement in such regions can severely disrupt socio-economic stability.

This study seeks to address this research gap by focusing on three primary contributions: first, analyzing the disconnection between Iran's spatial planning system and climate adaptation goals; second, examining the livelihood resilience of communities in the semi-arid Kardin District; and third, proposing integrative

frameworks that link spatial planning with climate-resilient development strategies. By grounding the analysis in local realities and vulnerabilities, this research aims to inform more adaptive, equitable, and sustainable spatial planning approaches suited to the unique challenges of climate-vulnerable regions. (Table 1).

Table 1. Achievements and Challenges of Capital Relocation from a Land-Use Planning Perspective

Category	Key Findings	Sources
Governance Challenges	Uncoordinated multi-level governance and weak spatial planning management hinder effective adaptation.	Lin (2015)
Localized Adaptation	Integrating climate concerns requires shifting from traditional planning paradigms to localized, risk-sensitive approaches.	Richard (2013)
Policy–Implementation Gap	Discrepancy between official climate commitments and actual implementation due to industrial influence, poor communication, and institutional instability.	Camargo et al. (2020)
Local Capacity Neglect	Top-down interventions risk maladaptation; understanding and utilizing local adaptive capacities is essential.	Rahman et al. (2019)
Integrated Planning	Spatial planning is ineffective without integrating environmental, social, and ethical dimensions.	Neglo (2022)
Livelihood Resilience	Multi-purpose adaptive strategies are crucial for building resilience in vulnerable regions.	Mortimore & Manvell (2006)
Systemic Shortcomings	Identified 117 planning flaws, including conceptual confusion, weak legal structures, and a disconnect between research and policymaking.	Kohaki et al. (2024)
Fragmented Governance	Conceptual, organizational, and legal fragmentation weakens the implementation of spatial plans.	Sharifzadegan & Razavi Dehkordi (2010)
Ecosystem-Based Adaptation	Lack of ecological data and policy integration; recommends stronger municipal roles in linking climate adaptation and ecosystem services.	Mobarghaei & Mokhtari (2017)
Local Livelihoods in Semi-Arid Areas	Limited research on climate-resilient livelihoods in semi-arid regions like Kardin, despite their high vulnerability.	Raparthi (2016); Rahman et al. (2019)

Source: Author Library Research, 2025

The Area under Study

The Kordian district is located in the southern part of Fars Province, Iran, with geographical coordinates ranging from 52°45' to 53°42' east longitude and 28°20' to 29°10' north latitude. The district spans an area of 1,108 square kilometers and shares borders with Fasa County to the north, central Jahrom to the east, central Jahrom and Simkan County to the south, and Khafer County to the west.

Administratively, the Kordian district consists of one city (Qutbabad City) and two rural districts (Qutbabad and Alawieh), which together contain 15 inhabited villages. Notably, 45% of villages in the district are currently uninhabited, reflecting broader demographic and socioeconomic challenges. This study focuses specifically on the 15 inhabited villages across the two rural districts, as these

communities' face pressing climate adaptation and spatial planning issues.

The selection of Kordian as a case study is particularly relevant due to its semi-arid climate and exposure to environmental stressors such as water scarcity, land degradation, and climate variability. The district's settlement patterns, characterized by depopulation and clustered habitation, highlight the need for targeted, place-based planning strategies that integrate climate resilience with local livelihood needs. By examining the intersection of spatial planning policies and community adaptation in Kordian, this study aims to identify pathways for more effective and equitable development in similar semi-arid regions.(Fig. 1).

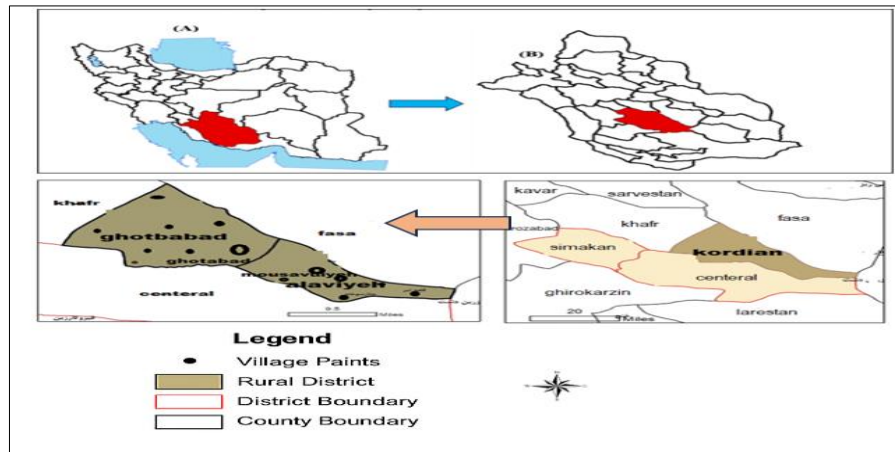


Fig 1. Study Area and Geographical Location of Kordian District, Jahrom County

Methodology

This study employs a mixed qualitative approach to analyze policy gaps in land use planning and assess their impact on the transition to climate-resilient livelihoods in the Kordian District of Jahrom County, a semi-arid and climate-vulnerable region. The research integrates a systematic review of spatial development documents with an analysis of local lived experiences and community capacities. Given the focus on institutional inconsistencies, policy ruptures, and the assessment of resilient livelihoods, the study is applied in nature and exploratory in methodology. A qualitative content analysis with an inductive approach was used, and field data were analyzed through grounded theory, open coding, and comparative analysis to uncover hidden patterns in policymaking and local livelihood strategies.

The research includes two main units of analysis: (a) policy and development documents such as the Fars Province Planning Plan, the South Fars Regional Comprehensive Plan, the Jahrom County Long-Term Development Document, and Economic Development and Employment Studies of Jahrom Villages and (b) rural communities in the Kordian District characterized by fragile climatic conditions and traditional livelihoods heavily dependent on natural resources. Data collection consisted of two components: document analysis and field data. The document analysis involved reviewing national and local spatial planning documents using qualitative content analysis, extracting codes and concepts under three thematic frameworks: conceptual gaps (misalignments in planning principles), institutional gaps (governance weaknesses), and implementation gaps

(disconnects between policy and practice). Each document was independently analyzed and synthesized into a comparative matrix to enhance analytical precision and depth.

In the fieldwork phase, Rapid Rural Appraisal (RRA) was employed to identify local capacities, limitations, and suggestions concerning livelihoods across ecological, economic, social, and spatial dimensions. Findings were organized into categorized tables (e.g., capabilities vs. bottlenecks). Semi-structured interviews were conducted with 18 local actors, including village heads, experts, officials, and local activists. The interview data were analyzed through open coding and structural-functional analysis, focusing on settlement patterns and livelihood strategies. The findings from field data were then compared with document analysis results to identify overlaps and divergences between policy intentions and ground realities. Triangulation through document review, interviews, and field observations ensured validity and reliability, forming the foundation for a policy-action-implementation matrix aimed at enhancing resilience and coherence in spatial planning.

Results and Discussion

Regional Policy Proposals for the Transition to Climate-Resilient Livelihoods for the Jahrom Kordian District

Based on the analytical findings of this study, the Kurdish system faces a heterogeneous structure, scattered capacities, and serious constraints that have challenged the realization of livelihood resilience. In order to transition to climate-adapted livelihoods and increase the socio-economic resilience of the settlements in this system, formulating policy proposals

requires considering the capacities, bottlenecks, ecological conditions, institutional structure, and cultural-nomadic background of the region. These proposals are presented in the following five main axes:

Spatial reorganization and organization of the settlement structure of the system: The spatial-administrative structure of the Kurdish system is disrupted in spatial efficiency due to the concentration of services in the center of the district, the high dispersion of settlements, and the lack of a cluster pattern. To improve this situation, restructuring the settlement structure in the form of defining functional clusters with one or more focal villages will be a key strategy. In these clusters, central villages play the role of providing basic educational and health services, local markets, and technical workshops. Reforming political-administrative divisions should also be on the agenda, especially in rural areas where the long distance from the district center has led to reduced access and institutional efficiency. Also, the creation of multi-purpose inter-village centers and spatial planning of services will lead to the spatial redistribution of opportunities and the reduction of intra-regional gaps.

Diversification and resilience of rural livelihoods: The economy of the Kurdish rural areas is highly dependent on vulnerable natural resources such as water and pasture; therefore, strengthening economic resilience requires diversifying livelihoods and strengthening existing activities. Traditional animal husbandry, which is rooted in nomadic life, can be transformed into a more sustainable livelihood by improving productivity and semi-industrialization. In addition, the development of small-scale greenhouses, cultivation of medicinal plants, exploitation of solar energy, and the establishment of agricultural processing and packaging industries are practical strategies to reduce dependence on limited resources and create added value. Using the location of some villages on the edge of the transit road to develop the road economy and service jobs is also part of this diversification strategy.

Reforming the institutional structure and strengthening local governance: One of the fundamental challenges in the path of sustainable and livelihood-oriented development of the Kurdish system is the weakness of the institutional structure at the local level and the lack of inter-sectoral

cohesion at the executive level. To address this challenge, it is necessary to strengthen the village councils and local councils through training, delegation of authority, and facilitating access to financial resources. The formation of regional rural development committees with the participation of representatives of the Agricultural Jihad, Natural Resources, Labor Department, and financial institutions can provide a basis for coordination in the implementation of projects. Along with this structure, the implementation of participatory approaches in development planning (such as community-based participatory planning) and utilizing the capacity of local facilitators will increase social ownership and the effectiveness of interventions.

Empowering the local population and promoting social capital: One of the worrying trends in the smaller settlements of the system is population decline, youth unemployment, and migration due to economic despair. In such circumstances, maintaining the human and social capital of villages requires targeted interventions in the areas of education, employment, and population motivation. Providing skills training to youth and women in areas such as modern animal husbandry, ecotourism, handicrafts, solar energy, and home-based businesses can play an effective role in creating employment and promoting social participation. Also, the creation of local cooperatives, the development of small businesses, and financial and credit support (such as low-cost facilities) are vital tools for strengthening the incentive to remain in villages and sustainably exploiting the human capacities of the region.

Environmental and climate policies in the service of resilient livelihoods: Given the arid and semi-arid climate of the region and the persistence of drought, spatial and economic policymaking in the Kurdish system must be seriously based on the axis of climate adaptation. Promoting drought-resistant crops such as saffron and medicinal plants, strengthening modern irrigation systems, and establishing local water resources management councils are key tools in this direction. In addition to these measures, the development of renewable energies through solar farms in plain lands, and supporting greenhouse activities and recycling of biological materials will help

diversify income sources, reduce pressure on natural resources, and promote livelihood resilience. Policymakers also need to pay attention to the management of environmental

hazards such as floods and earthquakes and develop plans focused on ecological resilience. (Table 2).

Table 2. Policy–Action–Responsible/Supporting Institution Matrix (Towards a Transition to Climate-Resilient Livelihoods in the Kordian district)

Policy Axis	Proposed Action / Key Project	Responsible Institution / Executor	Supporting / Coordinating Institution
Spatial Reconfiguration of Settlements	Defining settlement clusters with a central service-providing village	Fars Governorate / Jahrom County Government	Housing Foundation, District Office, Village Councils
	Establishing multifunctional inter-village centers (health, education, agricultural services)	Rural and Councils Affairs Office / Education Department	Agricultural Jihad Organization, Health Network
	Reviewing political–administrative divisions of Alaviyeh Dehestan and remote settlements	Ministry of Interior / Fars Governorate	Islamic Councils, Planning and Budget Organization
Diversification of Local Livelihoods	Construction of small-scale greenhouses with technical–financial training and support	Agricultural Jihad / Omid Entrepreneurship Fund	Basij-e-Sazandegi, Relief Committee, Natural Resources
	Launching packaging and agro-processing workshops for dates, citrus, and livestock	Ministry of Industry, Mine, and Trade (IMT) / Industrial Towns Company	Cooperative Department, Agricultural Jihad, Village Councils
	Developing solar farms on plain lands (Ahmadiyeh, Khaneh-Nahr)	Power Distribution Company / Renewable Energy Dept. of Ministry of Energy	District Office, Barakat Foundation, Knowledge-based Companies
Institutional Reform and Local Governance	Empowering village administrations (Dehyari) by increasing financial and technical authority	Ministry of Interior / Governorate / Dehyari Organization	County Government, Municipalities Organization
	Forming a regional rural development committee with multi-agency participation	County Government / District Office / Agricultural Jihad	Natural Resources, Handicrafts, Environment, Labor Office
	Activating local councils for participatory planning	Village Islamic Councils / District Office	Facilitation Offices, Housing Foundation
Social and Demographic Empowerment	Holding skill-training courses for youth and women (tourism, solar, handicrafts, livestock)	Technical and Vocational Training Org. / Relief Committee / Welfare Org.	Agricultural Jihad, Cultural Heritage Org., Basij-e-Sazandegi
	Supporting small businesses (loans, equipment, market access)	Omid Entrepreneurship Fund / Agricultural Bank	Alavi Foundation, Relief Committee, Governorate
	Creating local cooperatives for women and youth in handicrafts, tourism, livestock feed production	Dept. of Cooperatives, Labor and Social Welfare	Village Councils, Governorate's Women's Affairs Office
Climate Adaptation and Ecosystem Protection	Promoting cultivation of medicinal and drought-resistant plants (e.g., saffron, fig)	Agricultural Jihad / Natural Resources Office	Agricultural Research Center, Environmental Taskforce
	Participatory water resource management (local protection councils, qanat and well projects)	Water Resources Dept. / Agricultural Jihad	Local Councils, Village Councils, Department of Environment
	Construction and equipping of greenhouses resistant to climate stress	Agricultural Engineering Organization / Agricultural Jihad	Local Facilitators, Indigenous Entrepreneurs
	Developing a disaster resilience plan (flood, earthquake) for high-risk settlements	Red Crescent Society / Provincial Crisis Management	Housing Foundation, Geological Survey, Seismology Center

Source: Motaghi Dastnaei et al., 2013; Mousavi and Bagheri Koshkouli, 2015; Miraei et al., 2016; and authors' library research, 2025

Conclusion

Climate change, as a complex and pervasive threat, has increasingly exposed local livelihoods in semi-arid regions to significant risks. This situation underscores the urgent need for a fundamental revision of spatial planning mechanisms and the strengthening of community resilience. The findings of this research indicate that a major challenge facing rural areas in Iran is the persistent gap between macro-level planning policies and the local requirements of climate-oriented livelihoods. The study area—namely, the rural system of Keridin in Jahrom County—represents a tangible example of these multidimensional gaps.

Based on the analysis of upstream and downstream planning documents, field observations, and a structural–functional assessment of local settlements, the study identifies three categories of policy gaps within Iran’s land-use planning system: (1) Conceptual gaps, such as limited understanding of integrated spatial planning and the insufficient incorporation of climate considerations; (2) Institutional gaps, including incoherence among agencies, weak multi-level governance, and the absence of active local institutions; and (3) Implementation gaps, manifested in the lack of systematic monitoring, spatially sensitive planning mechanisms, and participatory tools for livelihood adaptation. These findings are consistent with international literature, including studies by Lin (2015), Camargo et al. (2020), and Rahman et al. (2019).

Moreover, the analysis of Keridin’s rural settlements revealed that despite holding natural, cultural, and productive assets—such as nomadic livestock potential, horticultural agriculture, handicrafts, and solar energy capacity—the incoherent spatial structure, scattered service delivery, and lack of integrated cluster-based planning have

prevented these advantages from being fully realized. As a result, many local livelihoods are in decline and increasingly vulnerable to both climatic and structural shocks.

Theoretical and international experiences emphasize that the effectiveness of spatial and planning policies relies heavily on the integration of three critical components: institutional coherence across governance levels, incorporation of ecosystem-based adaptation in livelihood design, and the establishment of strong linkages between macro-level planning and local capacities (Neglo, 2022; Mortimore & Manvell, 2006; Mobarghaei & Mokhtari, 2017). Unfortunately, these pillars remain underdeveloped in Iran’s current planning system.

Accordingly, this study demonstrates that transitioning from the current fragmented approach to climate-resilient livelihoods in regions like Keridin necessitates a comprehensive, interdisciplinary, and policy-driven strategy. In this direction, actions such as spatial reorganization of rural settlements, livelihood diversification, institutional reform, community empowerment, and proactive climate adaptation must be pursued synergistically and simultaneously. These strategies can only be effective if they are not confined to policy texts but are also embedded within the executive framework, backed by political will, adequate financial resources, and participatory governance mechanisms.

Ultimately, the case of Keridin offers a generalizable model for similarly vulnerable regions across Iran’s arid and semi-arid zones. The insights derived from this research can serve as a foundation for designing localized policy interventions, revising territorial planning documents, and developing robust frameworks to enhance regional and livelihood resilience nationwide.

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