

Spatial Distribution and Influencing Factors of Traditional Music Intangible Cultural Heritage: A Mini Review and Spatial Cultural Ecosystem Framework

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ABSTRACT

Traditional music represents a vital component of intangible cultural heritage (ICH), reflecting the historical experiences, cultural identities, and social practices of communities. In recent years, scholars have increasingly applied spatial analytical approaches to examine how cultural heritage resources are distributed across geographic landscapes. However, existing studies on the spatial distribution of traditional music heritage remain largely fragmented across regional case studies, limiting broader conceptual understanding of the factors shaping these patterns. This study conducts a mini-review of recent empirical research examining the spatial distribution of traditional music-related intangible cultural heritage in China. Drawing on seven peer-reviewed studies employing spatial analytical methods such as geographic information systems (GIS), kernel density estimation, and spatial clustering analysis, the study synthesizes key spatial patterns and influencing factors. The review reveals that traditional music heritage demonstrates significant spatial clustering, particularly along river systems, mountainous regions, and historical cultural corridors including the Silk Road and the Grand Canal. The distribution of musical heritage is shaped by the interaction of natural geographic environments, socioeconomic conditions, and historical mobility networks. Building on this synthesis, the study develops a spatial cultural ecosystem model that reconceptualizes traditional music heritage as a dynamic system shaped by the interaction and co-evolution of environmental, socioeconomic, and historical mobility systems. Rather than treating these as isolated factors, the model advances a systems-oriented perspective that highlights feedback processes and spatial-cultural interdependencies. The findings contribute to ethnomusicology and heritage studies by offering a theoretically grounded framework for understanding the spatial dynamics, transmission, and sustainability of musical traditions.

Keywords: traditional music heritage; intangible cultural heritage; spatial distribution; spatial analysis; cultural landscape; ethnomusicology

INTRODUCTION

Intangible cultural heritage (ICH) has increasingly become a central concept in cultural policy, heritage studies, and interdisciplinary research concerned with the preservation of living traditions. The adoption of the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) marked a significant shift in global heritage discourse by emphasizing the importance of protecting cultural expressions that exist primarily in non-material forms, including oral traditions, performing arts, social practices, and traditional knowledge systems. Unlike tangible heritage, which is often represented by monuments or artifacts, ICH is embedded in social practices and collective memory and is continuously recreated by communities in response to their environment and historical experiences (Kurin, 2022; Cuffy & Carr, 2023). As such, intangible cultural heritage plays a critical role in sustaining cultural diversity, reinforcing community identity, and transmitting knowledge across generations. The recognition of these cultural practices has also expanded the scope of heritage studies,

encouraging scholars and policymakers to develop new strategies for safeguarding cultural expressions that are inherently dynamic and community based.

Among the various forms of intangible cultural heritage, traditional music occupies a particularly significant position. Musical traditions often function as cultural repositories through which communities express their histories, rituals, languages, and collective identities. Ethnomusicological research has long emphasized the importance of music as a medium of cultural transmission, highlighting how musical practices reflect broader social and cultural structures within communities (Krüger, 2009). Traditional music is therefore not merely an artistic form but also a social practice that carries symbolic meanings and cultural values. In many societies, musical traditions are closely intertwined with ceremonial activities, religious rituals, and everyday social life, making them a vital component of cultural continuity. Recent studies have further highlighted the role of ethnomusicological approaches in supporting the sustainable transmission of musical heritage, particularly in communities experiencing cultural transformation or generational change (Liu et al., 2026). These perspectives underscore the importance of understanding traditional music as both a cultural practice and a heritage resource that requires appropriate safeguarding strategies.

In recent years, scholars have increasingly turned to spatial perspectives to examine the distribution and dynamics of cultural heritage. Spatial analysis provides methodological tools for investigating how cultural phenomena are distributed across geographic space and how environmental, historical, and socioeconomic factors shape these patterns. By examining spatial relationships and geographic clustering, researchers can better understand how cultural traditions emerge, spread, and persist within specific cultural landscapes. This spatial perspective has become particularly relevant in studies of intangible cultural heritage, as many cultural practices are closely associated with particular environments, settlement patterns, and historical routes of cultural interaction. Cultural heritage, including traditional music, is therefore often embedded within distinct geographic contexts that influence both its development and its transmission.

Despite the growing number of studies applying spatial analytical approaches to cultural heritage research, much of the existing literature tends to focus on individual regional case studies. These studies provide valuable insights into local heritage dynamics, but they often remain limited in scope and do not always offer a broader comparative understanding of spatial patterns across different regions. Consequently, the spatial characteristics of intangible cultural heritage, particularly those related to traditional music, remain fragmented across separate empirical investigations. The lack of synthesis across regional studies makes it difficult to identify broader spatial trends or common influencing factors that shape the distribution of musical heritage.

To address this gap, the present study conducts a mini review of recent research examining the spatial distribution of intangible cultural heritage related to traditional music. By synthesizing empirical findings from multiple regional studies, this research aims to identify common spatial distribution patterns and to analyze the key factors influencing the geographic concentration of traditional music heritage. Through this synthesis, the study seeks to contribute to a deeper understanding of how spatial environments, cultural processes, and socioeconomic conditions interact to shape the distribution and sustainability of musical traditions within the broader framework of intangible cultural heritage. Beyond synthesizing existing findings, this study aims to move from a factor-based interpretation toward a systems-oriented conceptualization of traditional music heritage. Specifically, it develops a spatial cultural ecosystem perspective in which environmental, socioeconomic, and historical dimensions are understood as interacting systems rather than independent variables. This perspective allows for a more integrated explanation of how musical traditions emerge, cluster, and evolve across geographic space, while also addressing the dynamic processes underlying cultural sustainability.

METHODOLOGY

This section describes the research design, literature search strategy, and analytical procedures used to synthesize recent studies on the spatial distribution of traditional music-related intangible cultural heritage.

Research Design

This study adopts a mini review approach to synthesize recent empirical research on the spatial distribution of intangible cultural heritage (ICH) related to traditional music. Review-based research has become an important

methodological strategy for organizing fragmented knowledge and identifying emerging research patterns within a specific field. Structured literature reviews enable researchers to synthesize existing findings systematically, reduce interpretive bias, and provide a comprehensive overview of current research developments (Caldwell & Bennett, 2020; Iddagoda & Flicker, 2023). While systematic reviews often aim to exhaustively identify all available studies on a topic, mini reviews focus on synthesizing representative and recent research to highlight emerging trends and analytical insights (Guerra et al., 2024). Given the relatively recent development of spatial approaches in the study of cultural heritage and traditional music, the mini review design is appropriate for examining how spatial analysis has been applied to understand the geographical distribution of musical heritage. The present study therefore synthesizes a selected set of empirical studies that employ spatial analytical approaches to investigate the distribution patterns and influencing factors of traditional music-related ICH. Additionally, while the number of studies included in this mini review is limited, this reflects the emerging nature of spatial analytical approaches in traditional music heritage research. Rather than aiming for exhaustive coverage, this study adopts an analytical synthesis approach, focusing on methodologically comparable studies that employ GIS-based spatial techniques. This allows for deeper conceptual integration across studies with similar analytical frameworks, which is particularly important for developing the proposed spatial cultural ecosystem model.

Data Source and Literature Search

The literature search was conducted using the Scopus database, which is widely recognized as one of the largest curated abstract and citation databases for peer-reviewed academic publications. Scopus provides extensive multidisciplinary coverage and high-quality bibliographic metadata, making it a reliable source for literature retrieval and scholarly analysis (Baas et al., 2020). Previous comparative studies have also identified Scopus as a major global bibliographic database with broad journal coverage across multiple scientific disciplines (Singh et al., 2021; Visser et al., 2021). To identify relevant studies, a structured keyword search strategy was implemented within the Scopus database. The search query combined terms related to intangible cultural heritage, traditional music, and cultural transmission. The search string included combinations of the following keywords:

- *“intangible cultural heritage” OR “cultural heritage” OR “heritage” OR “tradition”*
- *“traditional music” OR “folk music” OR “ethnic music” OR “cultural music”*
- *“preservation” OR “conservation” OR “safeguarding” OR “protection”*
- *“identity” OR “community” OR “expression” OR “art”*
- *“transmission” OR “education” OR “teaching” OR “learning”*

These terms were combined using Boolean operators to retrieve studies addressing the preservation, transmission, and cultural significance of traditional music within the broader framework of intangible cultural heritage. The search results were subsequently screened to identify studies specifically examining the spatial distribution or geographic patterns of intangible cultural heritage, particularly those employing spatial analytical approaches such as geographic information systems (GIS), kernel density estimation, or spatial clustering analysis.

To ensure the relevance and timeliness of the literature, the search was restricted to peer-reviewed journal articles published between 2021 and 2025. Following the retrieval process, the titles, abstracts, and keywords of the identified publications were reviewed to assess their relevance to the research focus. Through this screening process, seven studies were identified as meeting the inclusion criteria and were subsequently included in the final synthesis. The search process yielded a limited number of studies applying spatial analysis to traditional music-related intangible cultural heritage, reflecting the emerging nature of this research field. Although Scopus was selected due to its comprehensive coverage and high-quality indexing, it is acknowledged that relevant studies may also exist in other databases such as Web of Science and Google Scholar. Future research could expand the database scope to enhance coverage and further validate the generalizability of the findings.

Study Selection and Analytical Approach

Following the initial literature search, studies were screened based on predefined inclusion criteria. Articles were included in the review if they met the following conditions:

- 1) The study was indexed in the Scopus database as a peer-reviewed journal article.
- 2) The research focused on the spatial distribution or spatial patterns of intangible cultural heritage.
- 3) The study employed spatial analytical techniques such as geographic information systems (GIS), kernel density estimation, nearest neighbor analysis, or related spatial methods; and
- 4) The study reported empirical findings regarding factors influencing the geographic distribution of heritage resources.

Through this screening process, seven studies were identified as meeting the inclusion criteria and were subsequently analyzed in this review. These studies examine different regional contexts in China, including river basins, coastal regions, mountainous areas, and historical cultural corridors. The analytical process involved a qualitative synthesis of spatial findings reported in the selected studies. Spatial analysis is widely used in geographic and social science research to examine patterns, clustering, and relationships between phenomena distributed across geographic space (Murayama & Thapa, 2011). By analyzing georeferenced data and spatial relationships, such approaches allow researchers to identify patterns such as clustering, dispersion, or regional concentration of cultural phenomena (Paramasivam & Venkatramanan, 2019). In the context of intangible cultural heritage research, spatial analysis provides valuable insights into how environmental conditions, historical developments, and socioeconomic factors shape the geographical distribution of cultural practices. Based on this analytical framework, the findings of the selected studies were synthesized to identify three main aspects: spatial distribution patterns of traditional music heritage, key influencing factors shaping these patterns, and broader spatial characteristics observed across different regional contexts. These selected studies therefore form the empirical basis for examining spatial distribution patterns and influencing factors of traditional music-related intangible cultural heritage. The synthesis derived from this analytical process provides the foundation for the results presented in the following section.

RESULTS

This section presents the key findings derived from the synthesis of the selected studies, focusing on spatial distribution patterns and the main factors influencing the geographic concentration of traditional music heritage.

Overview of Reviewed Studies

This mini review synthesized findings from seven empirical studies examining the spatial distribution of intangible cultural heritage (ICH) related to traditional music in different regions of China. These studies were published between 2021 and 2025 and are indexed in the Scopus database. The reviewed studies cover diverse geographical contexts, including river basins, coastal regions, mountainous areas, and historically significant cultural corridors such as the Silk Road and the Grand Canal. Most studies employed geographic information system (GIS)-based spatial analysis methods to examine the spatial patterns of ICH distribution. Common analytical techniques included kernel density estimation (KDE), nearest neighbor index analysis, buffer analysis, GeoDetector models, and spatial regression. These methods enabled researchers to identify clustering patterns, spatial heterogeneity, and potential environmental or socioeconomic factors influencing the distribution of traditional music heritage. Table 1 summarizes the key characteristics of the reviewed studies, including the study region, identified spatial patterns, and major influencing factors.

Table 1. Summary of Studies on Spatial Distribution of Intangible Cultural Heritage Related to Traditional Music

Region	Spatial Pattern	Key Influencing Factors	Source
Xiangxi, Central China	Agglomeration pattern with spatial heterogeneity	Rivers, topography, GDP, transportation	Zhang et al. (2022)

Yellow River Basin	Triangular clustered distribution	Highway density, GDP, population density, urbanization	Nie et al. (2022)
Grand Canal Basin	Distribution along river with two cores and two belts	Water systems, landforms, regional culture	Li (2023)
Xinjiang	Multiple high-density areas along historical routes	Geomorphology, river systems, Silk Road history	Wang et al. (2021)
Fujian Province	Overall aggregate spatial pattern	Population, urbanization rate, physical geography	Han et al. (2024)
Guangdong Province	Significant spatial clustering	Flat terrain, rivers, socioeconomic development	Zhang et al. (2025)
Guizhou Province	Concentration in karst mountainous regions	Topography, water systems, transportation	Zhang et al. (2021)

Spatial Distribution Patterns of Traditional Music Intangible Cultural Heritage

The reviewed studies consistently reveal that the spatial distribution of traditional music as a form of intangible cultural heritage is characterized by non-random patterns and clear spatial clustering. Several regions demonstrate strong agglomeration effects, indicating that traditional music heritage tends to concentrate in specific geographic areas rather than being evenly distributed. For instance, research in Xiangxi, Central China, shows that traditional music and other performing arts heritage items exhibit spatial heterogeneity with a clear agglomeration trend, particularly in the southern part of the region (Zhang et al., 2022). Similarly, studies in the Yellow River Basin reveal a triangular distribution pattern with significant clustering in the central and western areas (Nie et al., 2022). In Guangdong Province, spatial analysis identified major hotspots in the Pearl River Delta and the eastern coastal region, reflecting strong clustering of heritage resources (Zhang et al., 2025).

River systems appear to play a particularly important role in shaping spatial distribution patterns. In the Grand Canal Basin, the distribution of folk songs demonstrates a distinct “two cores and two belts” structure along the waterway, indicating the importance of river-based cultural exchange and communication (Li, 2023). Likewise, many ICH items in Xiangxi are located within close proximity to river systems, highlighting the role of waterways in facilitating cultural transmission (Zhang et al., 2022). Mountainous and frontier regions also exhibit unique spatial characteristics. In Guizhou Province, many heritage elements are concentrated in low and middle karst mountain areas, reflecting the cultural isolation and preservation of ethnic traditions in these landscapes (Zhang et al., 2021). In Xinjiang, multiple high-density areas of ICH are located along historical trade routes associated with the ancient Silk Road, demonstrating the role of long-distance cultural interaction in shaping musical heritage distribution (Wang et al., 2021).

Influencing Factors of Spatial Distribution

The spatial distribution of traditional music heritage is influenced by a complex interaction of natural, socioeconomic, and historical-cultural factors. Across the reviewed studies, these factors collectively shape the concentration, diffusion, and preservation of intangible cultural heritage.

Natural Geographic Factors

Natural environmental conditions are consistently identified as fundamental determinants of ICH distribution. Rivers, topography, and geomorphological conditions strongly influence the location and preservation of traditional cultural practices. For example, proximity to river systems significantly affects the spatial distribution of heritage in Xiangxi and the Grand Canal Basin, where many cultural practices historically developed along waterways that facilitated communication and trade (Li, 2023; Zhang et al., 2022). Similarly, in Guangdong Province, areas characterized by flat terrain and access to river networks demonstrate higher concentrations of

ICH resources (Zhang et al., 2025). In mountainous regions such as Guizhou, the spatial distribution of heritage elements is closely associated with karst landscapes and river basins, which historically shaped settlement patterns and cultural development (Zhang et al., 2021).

Socioeconomic Factors

Socioeconomic conditions also play an important role in determining the distribution of traditional music heritage. Indicators such as gross domestic products (GDP), population density, urbanization levels, and transportation infrastructure have been identified as significant factors influencing the concentration of ICH projects. For instance, studies in the Yellow River Basin highlight highway density as one of the most influential variables affecting the spatial distribution of heritage resources, followed by GDP and population density (Nie et al., 2022). Similarly, research in Fujian Province indicates that human geography factors, including resident population and urbanization rates, have a strong influence on the distribution of ICH items (Han et al., 2024). In Guangdong, regions with higher economic development and stronger infrastructure networks tend to host greater numbers of registered heritage projects (Zhang et al., 2025).

Historical and Cultural Factors

Historical processes and cultural traditions also significantly shape the spatial patterns of traditional music heritage. Cultural corridors such as the Silk Road and the Grand Canal have historically facilitated cultural exchange and the diffusion of musical traditions. In Xinjiang, the spatial clustering of ICH resources is closely associated with historical Silk Road routes and oasis settlements, where cultural interactions between different communities contributed to the development of diverse musical traditions (Wang et al., 2021). Similarly, the Grand Canal Basin represents an important cultural communication corridor where folk song traditions developed and spread through trade and migration networks (Li, 2023).

Synthesis of Spatial Characteristics

A synthesis of the reviewed studies reveals several overarching spatial characteristics of traditional music intangible cultural heritage. First, the distribution of traditional music heritage is typically characterized by spatial clustering rather than random dispersion. High-density areas tend to emerge in regions with favorable environmental conditions, strong cultural traditions, and historical significance. Second, river basins and transportation corridors function as important cultural pathways for the development and transmission of musical traditions. Many heritage elements are concentrated along major waterways and historical trade routes, suggesting that cultural mobility and interaction play a crucial role in shaping the geographic distribution of traditional music.

Third, both natural and human factors interact to influence spatial patterns. While environmental conditions such as topography and river systems provide the foundational landscape for cultural development, socioeconomic factors and historical processes further shape the concentration and evolution of intangible cultural heritage. The combined influence of these factors highlights the multidimensional nature of cultural heritage distribution and underscores the importance of interdisciplinary approaches in understanding the spatial dynamics of traditional music heritage. These patterns suggest that spatial distribution should be understood not as the result of isolated variables but as the emergent outcome of interacting systems, providing the conceptual basis for the spatial cultural ecosystem framework proposed in this study.

DISCUSSION

The findings presented in the previous section reveal several consistent spatial patterns in the distribution of traditional music-related intangible cultural heritage across different regions of China. This discussion interprets these patterns within broader theoretical perspectives from ethnomusicology, cultural geography, and heritage studies. By examining the spatial clustering of musical heritage, the role of historical mobility networks, and the implications for heritage preservation, this section situates the empirical findings within wider scholarly debates on cultural landscapes, transmission processes, and cultural sustainability.

Spatial Concentration of Musical Heritage as Cultural Landscape Formation

The spatial clustering patterns identified in this review indicate that traditional music heritage is not randomly distributed across geographic space but is instead strongly embedded within specific cultural landscapes. While previous studies have acknowledged the geographic contexts of cultural heritage practices, most research has examined these dynamics within isolated regional case studies (Nie et al., 2022; Zhang et al., 2022). The synthesis presented here suggests that these spatial patterns represent a broader structural phenomenon rather than merely local variations. Traditional music-related intangible cultural heritage consistently clusters into areas characterized by strong environmental connectivity, historical exchange routes, and culturally dense community networks.

This finding extends existing heritage scholarship by highlighting the role of spatial ecology in shaping the persistence of musical traditions. Earlier heritage studies emphasized the community-based nature of intangible cultural heritage and the importance of safeguarding living cultural practices (Kurin, 2022; Cuffy & Carr, 2023). However, these discussions often focus primarily on institutional frameworks, cultural policies, or documentation practices rather than on the spatial environments in which cultural practices are embedded. The present synthesis demonstrates that geographic landscapes, particularly river systems, mountainous terrains, and historical transport corridors, serve as structural conditions that enable the formation and continuity of musical traditions (Han et al., 2024; Zhang et al., 2021).

From an ethnomusicological perspective, this observation resonates with long-standing discussions regarding the relationship between music, place, and community. Musical traditions are rarely detached from their ecological and social environments; instead, they emerge within networks of everyday social interaction, ritual performance, and localized cultural identity (Krüger, 2009). The spatial clustering observed across multiple regional studies therefore reinforces the notion that traditional music should be understood not only as a cultural artifact but also as a place-based cultural practice embedded within environmental and social landscapes. Recognizing these spatial dynamics provides an additional analytical dimension for ethnomusicology by linking musical traditions to broader geographic and socio-historical processes.

Mobility, Cultural Corridors, and the Diffusion of Musical Traditions

Beyond environmental conditions, the reviewed studies highlight the importance of mobility and cultural interaction in shaping the spatial distribution of musical heritage. The concentration of heritage resources along historical corridors such as the Silk Road and the Grand Canal illustrates how musical traditions often spread through networks of trade, migration, and cultural exchange (Li, 2023; Wang et al., 2021). These findings align with ethnomusicological theories that conceptualize musical traditions as dynamic systems of cultural transmission rather than static cultural forms. Traditional music evolves through continuous processes of interaction among communities, performers, and cultural institutions. Musical styles, instruments, and performance repertoires frequently travel along routes of social exchange, producing localized variants that reflect both shared cultural foundations and regional adaptation. Such processes are particularly visible in frontier regions where multiple ethnic groups and cultural traditions intersect. In these contexts, musical heritage becomes an outcome of historical mobility and intercultural dialogue rather than isolated cultural continuity.

Existing ethnomusicological literature has long emphasized the social processes through which musical knowledge is transmitted across generations and communities (Krüger, 2009). More recent research has further demonstrated that sustaining traditional music requires adaptive strategies that respond to contemporary cultural transformations, including modernization, urbanization, and generational change (Liu et al., 2026). The spatial perspective introduced in this study complements these insights by illustrating how cultural transmission is also shaped by geographic connectivity. Regions characterized by dense networks of mobility, whether through rivers, trade routes, or migration pathways, tend to foster more diverse and resilient musical traditions (Li, 2023). Conversely, areas experiencing demographic decline or social fragmentation may face increasing challenges in maintaining traditional transmission systems. The identification of these spatial dynamics contributes an additional interpretive dimension to ethnomusicology by demonstrating that cultural transmission is not only a social process but also a spatially structured phenomenon. Understanding how musical traditions move through geographic networks therefore helps explain why certain traditions flourish while others gradually decline.

Rethinking Heritage Preservation Through Cultural Ecosystems

The findings of this review also raise important questions regarding prevailing approaches to safeguarding intangible cultural heritage. Many contemporary heritage preservation strategies prioritize documentation, institutional recognition, or digital archiving (Kurin, 2022). While these measures are valuable for preserving records of cultural practices, they often overlook the social and spatial conditions that enable cultural traditions to remain active within communities. The spatial patterns identified in this study suggest that safeguarding strategies should shift from a primarily documentation-oriented approach toward a cultural ecosystem perspective. In such a framework, traditional music is not treated solely as an object of preservation but as part of a broader system of relationships involving communities, environments, performance contexts, and historical processes. Heritage preservation efforts that focus exclusively on cataloguing cultural elements may fail to sustain the social environment in which these traditions are practiced and transmitted.

This perspective resonates with broader discussions within heritage studies emphasizing community participation and culturally embedded safeguarding practices (Aikawa-Faure, 2022; Cuffy & Carr, 2023). Rather than imposing standardized preservation models, heritage policies should be sensitive to the ecological and cultural contexts in which traditions exist. For example, in mountainous regions where musical traditions are closely tied to ethnic identity and ritual practice, safeguarding efforts may be needed to prioritize community-led cultural activities and informal transmission systems. In contrast, in historically connected cultural corridors such as river basins, heritage initiatives may benefit from fostering intercultural exchange and collaborative cultural programming across multiple communities. By emphasizing the ecological relationships among cultural practices, communities, and landscapes, the findings of this study highlight the need for context-sensitive preservation strategies. Such an approach recognizes that sustaining intangible cultural heritage requires maintaining the cultural environments that support living traditions rather than merely preserving their documented representations.

Implications for Ethnomusicology and Interdisciplinary Research

One of the most significant implications of this study lies in its contribution to ethnomusicological scholarship. While ethnomusicology has traditionally focused on the cultural meanings, performance practices, and transmission systems of music, recent scholarship has increasingly emphasized the importance of situating musical traditions within broader socio-cultural and environmental contexts (Krüger, 2009; Liu et al., 2026). In this regard, spatial analysis offers a complementary perspective that highlights the geographic dimensions of musical heritage. Integrating spatial perspectives into ethnomusicological research allows scholars to examine how environmental conditions, mobility networks, and regional landscapes influence the development and sustainability of musical traditions. Recent heritage research has also demonstrated the value of interdisciplinary approaches that combine cultural analysis with spatial and environmental perspectives in order to understand how cultural practices interact with social structures and ecological settings (Han et al., 2024; Nie et al., 2022; Jiménez de Madariaga, 2021).

Within the broader field of heritage studies, intangible cultural heritage has increasingly been conceptualized not merely as a collection of cultural artifacts but as a dynamic system of practices embedded within communities, landscapes, and social relationships (Kurin, 2022; Cuffy & Carr, 2023). Such perspectives highlight the importance of understanding cultural heritage as a living process shaped by ongoing interactions between people, place, and historical experience. Similar conceptual efforts in related performing arts scholarship have also emphasized the importance of relational frameworks for understanding localized performance traditions as interconnected cultural systems rather than isolated artistic forms (Liang & Gingging, 2026). Building on these perspectives, the synthesis presented in this review suggests that traditional music heritage should therefore be conceptualized as part of a spatially embedded cultural system in which musical practices interact with environmental conditions, social structures, and historical mobility patterns.

This perspective opens new possibilities for interdisciplinary collaboration between ethnomusicology, cultural geography, and heritage studies. Such collaboration may lead to more comprehensive analytical frameworks capable of explaining not only the cultural significance of musical traditions but also the spatial processes that shape their distribution and transformation. In recent years, scholars have increasingly recognized that the

safeguarding of intangible cultural heritage requires integrated approaches that combine cultural analysis, community participation, and technological innovation (Aikawa-Faure, 2022; Goussous, 2022). For instance, studies on the digital preservation of cultural heritage have shown that technologies such as virtual reality and digital archiving can enhance cultural visibility and documentation, but their effectiveness ultimately depends on how well they are integrated with community-based cultural practices and transmission systems (Li, 2020; Zhao, 2017). Consequently, interdisciplinary collaboration is essential for developing preservation strategies that balance technological innovation with cultural authenticity and community participation.

Furthermore, integrating spatial perspectives may help ethnomusicologists address contemporary challenges related to cultural sustainability. As globalization, urbanization, and technological change reshape cultural landscapes, traditional musical practices increasingly face pressures arising from demographic change, cultural commercialization, and shifting patterns of cultural participation (Al Matani, 2025; Vaivade, 2024). Spatial analysis can therefore provide valuable insights for identifying regions where musical traditions remain culturally resilient as well as areas where transmission systems are under threat. These insights may contribute to more effective cultural policies, educational initiatives, and community-based safeguarding strategies aimed at supporting the long-term sustainability of traditional music practices.

To synthesize the relationships identified across the reviewed studies, Figure 1 presents a spatial cultural ecosystem framework explaining the distribution of traditional music-related intangible cultural heritage. The framework was developed through the synthesis of three recurring analytical patterns identified across the reviewed literature. First, many studies highlight the importance of environmental landscapes, such as river basins, mountainous regions, and rural cultural environments, in shaping the emergence and persistence of traditional cultural practices (Han et al., 2024; Jiménez de Madariaga, 2021). Second, research consistently demonstrates the influence of socioeconomic conditions, including population distribution, transportation infrastructure, and urbanization processes, on the concentration and institutional recognition of cultural heritage resources (Nie et al., 2022; Goussous, 2022). Third, historical processes of cultural exchange and mobility have played a critical role in the diffusion and transformation of musical traditions across regions, reflecting the dynamic nature of intangible cultural heritage as a product of social interaction and cultural transmission (Kurin, 2022; Liu et al., 2026).

The spatial cultural ecosystem framework integrates these dimensions into a unified conceptual model, illustrating how musical heritage emerges from the interaction of environmental landscapes, socioeconomic structures, and historical cultural corridors. Rather than treating these factors as independent variables, the framework conceptualizes them as mutually reinforcing components of a broader cultural ecosystem. In doing so, the model contributes to ethnomusicological scholarship by providing a conceptual bridge between spatial analysis and cultural interpretation. It highlights how musical traditions are simultaneously shaped by geographic environments, social institutions, and historical processes of cultural exchange.

This study moves beyond a factor-based interpretation by proposing a systems-oriented perspective, where traditional music heritage is understood as part of a dynamic spatial cultural ecosystem characterized by interaction, co-dependence, and feedback processes. By articulating these relationships, the framework moves beyond descriptive mapping of cultural heritage distribution and instead provides a theoretical basis for understanding the spatial dynamics of traditional music. In particular, it emphasizes that the sustainability of musical heritage depends not only on cultural preservation efforts but also on the broader ecological and social environments within which cultural practices are embedded. As such, the spatial cultural ecosystem framework offers a new analytical lens through which researchers and policymakers can better understand the complex interactions that shape the distribution, transmission, and sustainability of traditional music heritage.

Spatial Cultural Ecosystem of Traditional Music Heritage

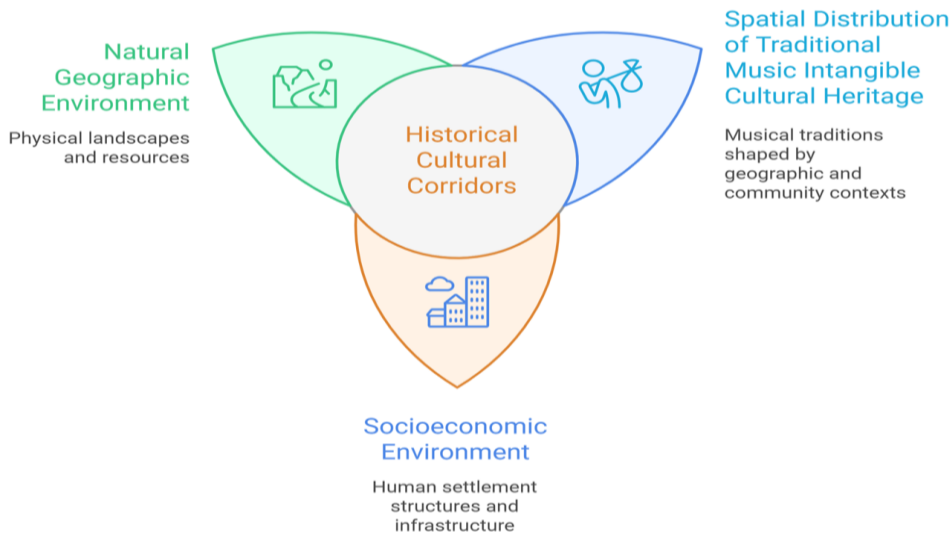


Figure 1. Spatial cultural ecosystem framework explaining the distribution of traditional music-related intangible cultural heritage.

Figure 1 presents a spatial cultural ecosystem framework that conceptualizes traditional music intangible cultural heritage as an emergent outcome of dynamic interactions among environmental conditions, socioeconomic structures, and historical cultural corridors. Although these components are visually represented as overlapping domains, they should not be interpreted as independent factors. Instead, they operate as interdependent systems that continuously shape and reinforce one another. Environmental landscapes provide ecological constraints and opportunities for cultural practices, socioeconomic systems influence patterns of human settlement, institutional recognition, and resource allocation, while historical cultural corridors facilitate processes of cultural diffusion, exchange, and transformation.

Importantly, the framework is not static. The spatial distribution of musical heritage both results from and contributes to these systems through feedback mechanisms. For example, areas with dense cultural heritage may attract policy attention, tourism development, and community engagement, which in turn reshape socioeconomic conditions and cultural transmission processes. In this sense, the framework reflects a dynamic cultural ecosystem in which spatial patterns, cultural practices, and social structures co-evolve over time. The framework therefore serves as a conceptual model rather than a purely descriptive diagram, providing a theoretical lens for understanding the spatial dynamics of intangible cultural heritage.

Limitations of the Study

This study has several limitations. First, the mini review is based on a relatively small number of studies, reflecting the emerging nature of spatial analytical approaches in traditional music heritage research. While this allows for focused conceptual synthesis, it may limit the generalizability of the findings. Second, the literature search was restricted to the Scopus database, which may have excluded relevant studies indexed in other databases such as Web of Science or Google Scholar. Third, the analysis is based on secondary data and does not incorporate primary spatial or ethnographic data. Future research could address these limitations by expanding database coverage, increasing the number of reviewed studies, and integrating mixed-method approaches combining spatial analysis with ethnographic fieldwork.

CONCLUSION

This study synthesizes recent research on the spatial distribution of intangible cultural heritage related to traditional music in China through a mini review of empirical studies employing spatial analytical approaches. The findings demonstrate that the distribution of traditional music heritage is characterized by clear spatial clustering patterns shaped by the interaction of natural geographic environments, socioeconomic conditions, and

historical cultural corridors. River systems, mountainous landscapes, transportation networks, and historically significant routes such as the Silk Road and the Grand Canal have played important roles in structuring the geographical concentration and diffusion of musical traditions. These patterns highlight that the spatial organization of musical heritage cannot be explained by single environmental or economic factors alone but instead reflects complex interactions between ecological settings, community structures, and historical processes of cultural exchange.

Conceptually, this study contributes to ethnomusicological scholarship by proposing a spatial cultural ecosystem perspective for understanding traditional music heritage. Rather than treating musical traditions as isolated cultural artifacts, the framework emphasizes their embeddedness within geographic landscapes, social environments, and historical mobility networks. This perspective provides a more integrated approach for interpreting how musical traditions emerge, spread, and persist within specific cultural contexts. Future research may expand this approach by incorporating comparative cross-regional analyses and integrating spatial data with ethnographic fieldwork to better understand the dynamic relationships between musical traditions, cultural landscapes, and community-based cultural transmission. Such interdisciplinary approaches may further strengthen the role of ethnomusicology in addressing contemporary challenges related to the sustainability and safeguarding of intangible cultural heritage. Future studies are encouraged to adopt multi-database review strategies to strengthen evidence synthesis across disciplines.

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Competing Interests

The authors declare no competing interests.

Data Availability

Data sharing is not applicable to this article, as no new data were created or analysed in this study.

Ethical Approval

Not applicable.

Consent To Participate

Not applicable.

Consent To Publish

Not applicable.

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