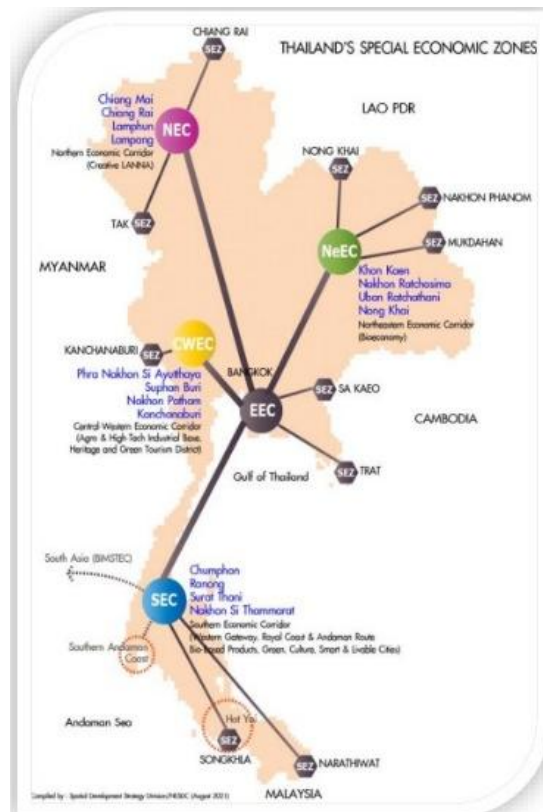


Cultural landscape and resource management for tourism in semi-rural destination: A case from railway development areas in Chiang Khong, Thailand

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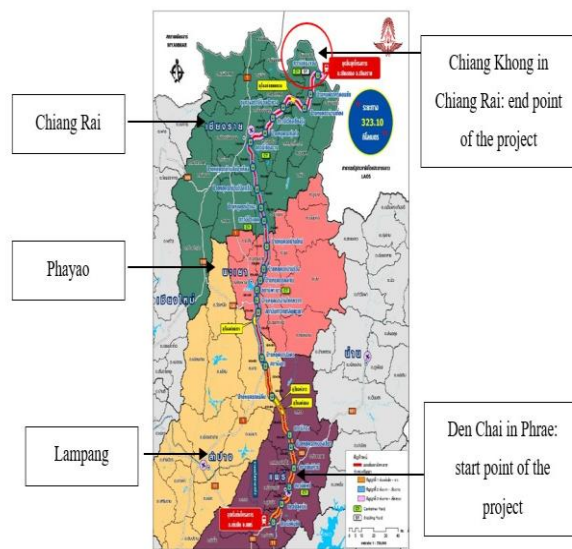
INTRODUCTION

A creative and holistic approach to tourism resource management is essential for communities in rural, semirural, and border region facing geographic and socio-economic challenges. These communities are highly dependent on government funding and closely working with local authorities for rural development, aligning with national development policies. Although tourism is not the primary income source, it plays an integral role in the community's economic and social activities, contributing to the overall welfare of the wider community (Wardana et al., 2020). Rural tourism is a representation of the local resource system, encompassing the local way of life, history, local production, cultural heritage, and the natural environment. However, the appeal and competitive advantage of tourism are not solely based on locally unique resources; external support, such as public facilities and infrastructure, plays a crucial role in enhancing accessibility, convenience, and visitor comfort, along with integrated management and the involvement of multiple actors. Endorsed by Thailand's Special Economic Zones (SEZ) Development policy, which designates Chiang Rai as part of the Northern Economic Corridor (NEC), the government's Den Chai- Chiang Rai- Chiang Khong railway project has been underway as a key initiative aimed at enhancing connectivity, logistics, and economic growth in northern Thailand. Thailand's SEZs have a total area of 6,221 square kilometers. The Special Economic Zone policy aims to attract foreign investment as a means to stimulate economic development in the peripheral regions, bordering other ASEAN member states. Its objectives include reducing income disparities and enhancing the quality of life for local residents. Additional anticipated benefits involve strengthening border security, creating a stable environment conducive to competitive business activities, and fostering closer economic and infrastructural linkages with neighboring countries (Open Development Thailand, 2018). The largest SEZ in terms of total area is the Chiang Rai SEZ which covers 1,523.63 square kilometers in 21 Sub-districts in 3 districts including Mae Sai, Chiang Saen and Chiang Khong. Each designated area within this SEZ holds unique developmental potential. Mae Sai, as a strategic border checkpoint, offers strong prospects for cross-border trade and tourism development. Chiang Saen is well-suited for development as a free trade area and duty-free zone, with the capacity to become a regional hub for international freight transport. Meanwhile, Chiang Khong, benefiting from its geographic location, is positioned to develop into a center for commerce, tourism, and integrated multimodal transportation. Proposed projects for Chiang Khong include the establishment of logistics hubs, commercial zones, and trade and customs offices (Trade and Investment Cooperation Division, Department of Foreign Trade, 2018). The facilities development to support this SEZ area was completed including Mae Sai customs checkpoint, Highway 1290 (Chiang Saen-Chiang Khong), Chiang Rai Bypass on the west, New Chiang Saen customs checkpoints, and Chiang Khong Intermodal Facilities Center (Office of the National Economic and Social Development Council, 2023). The Den Chai-Chiang Rai- Chiang Khong railway project aims to expand railway capacity, support goods and passenger transport, and integrate with neighboring countries' networks. The project route spans a total distance of approximately 325 kilometers with the cities on the corridor including Phrae, Lampang, Phayao and Chiang Rai. The starting point is Den Chai Station in Phrae at the eastern part of northern Thailand, and the end point is Chiang Khong in Chiang Rai the northernmost. The project consists of a total of 26 railway stations, divided into the following categories: 4 major stations (including Den Chai Station), 9 minor stations, and 13 train stops. Railway infrastructure is crucial for economic development, creating jobs and stimulating commercial activities around stations.



(Source: Office of the National Economic and Social
Development Council, 2023)

Figure 1. Thailand's Special Economic Zones



(Source: State Railway of Thailand)

Figure 2. Northern Double-Track Railway (Den
Chai - Chiang Rai - Chiang Khong)

Chiang Khong, a border district linked to Lao PDR and China, while designated as part of the SEZ, is geographically situated in a remote area in the far north of Thailand—approximately 141 kilometers from Chiang Rai's central district (Muang District), making it the most distant district from the provincial center. Covering an area of 836.9 square kilometers, Chiang Khong has a population of approximately 62,691, according to the Department of Provincial Administration, Ministry of Interior, resulting in a population density of 74.91 persons per square kilometer. This location reinforces its predominantly rural character, especially when combined with traditional livelihoods and natural landscapes; however, its accessibility is relatively high due to significant investments in land transport infrastructure associated with its SEZ status. Certain parts of the district, especially on the lowland also feature basic urban services, such as a post office, small malls, convenience stores, a transport hub, and hospitals—elements that contribute to its classification as a semi-rural area where some urban characteristics start to appear, but rural elements still dominate, additionally with the majority of households still occupied in land and river agricultural activities such as rice planation, farming, gardening, fishing, and some livestock. Others include general labor and producing crafts.

This study investigates the cultural landscape resources of Chiang Khong across three sub-district municipalities to provide recommendations for their integrated use in tourism development in light of the forthcoming railway expansion. Using the resource-based view (RBV) framework in tourism (Melián-González and García-Falcón, 2003, in Simão, 2010) alongside the concept of clustering, the study explores strategies for managing these resources in semi-rural and border areas in the context of the railway network expansion project. While RBV in business and management tends to focus on how firms make or manage resources to become a source of competitive advantage, with a strong emphasis on financial and operational outcomes, the application of RBV in tourism requires a broader lens that includes cultural and environmental sustainability. Current literature shows that RBV has been predominantly applied in fields such as operations management, general business research, production, and supply chain studies (Mailani et al., 2024). During the maturity phase of RBV research, scholarly

attention increasingly focused on specifying resource-based managerial actions, leading to the emergence of two prominent theoretical frameworks: resource management and asset orchestration (D'Oria et al., 2021). RBV study has been extended to tourism through the natural-resource-based view (NRBV), emphasizing the strategic role of the natural environment and ecological resources in generating sustainable competitive advantage (Wang, et al., 2024), while another places particular emphasis on the VRIN attributes of resources: valuable, rare, inimitable, and non-substitutable, within the RBV framework, exploring how local endorsement influences the development and effectiveness of VRIN resources to enhance the competitive advantage of the tourism villages (Iriani et al., 2025). This current study seeks to address the broader socio-cultural and spatial dimensions that define tourism destinations embedded within cultural landscapes. The integration of RBV with perspectives such as cultural landscape and tourism cluster for visualization of resource classification, especially in regions undergoing transformation due to infrastructure development such as in this case contribute to a clearer understanding and better reflection of destination resources and the complexity of tourism development in the peripheral, culturally rich area like Chiang Khong.

LITERATURE REVIEW

The Resource-Based View (RBV)

The resource-based view (RBV) is a strategic management concept that helps organizations achieve sustainable competitive advantage by leveraging unique, hard-to-imitate attributes. RBV suggests that superior performance stems from distinctive resources that competitors cannot easily replicate (Madhani, 2010). Existing literature shows that RBV has been predominantly applied in fields such as operations management, general business research, production, and supply chain studies (Mailani et al., 2024). During the maturity phase of RBV research, scholarly attention increasingly focused on specifying resource-based managerial actions, which led to the development of two influential theoretical frameworks: resource management and asset orchestration (D'Oria et al., 2021). Resource management focuses on structuring a firm's resource portfolio, bundling resources to develop capabilities, and leveraging them to create and sustain value (Sirmon, Hitt, and Ireland, 2007). Asset orchestration involves identifying and investing in strategic assets (search/selection), and then coordinating and deploying them effectively (configuration/deployment), including nurturing innovation (Helfat et al., 2007, cited in D'Oria et al., 2021). RBV study has been extended to tourism through the natural-resource-based view (NRBV), emphasizing the strategic role of the natural environment and ecological resources in generating sustainable competitive advantage (Wang, et al., 2024). The NRBV provides theoretical foundation by positioning natural resources fundamentally as a site or landscape and a place for activities or experiential arena and core attractions (attractiveness) that drive tourism development. These natural assets contribute significantly to both financial performance and destination competitiveness. The study further highlights that nature-based tourism (NBT) holds intrinsic economic value that is vulnerable to loss when the environment is degraded. To mitigate such risks and enhance sustainability, the implementation of risk reduction and sustainability strategies is essential. These strategies may include diversifying the local economy by establishing a range of ecologically sustainable tourism and recreational offerings, based on the region's natural and cultural assets. Another study places particular emphasis on the VRIN attributes of resources: valuable, rare, inimitable, and non-substitutable, within the RBV framework, exploring how local endorsement influences the development and effectiveness of VRIN resources to enhance the competitive advantage of the tourism villages (Iriani et al., 2025). Findings underscore the critical role of VRIN resources in shaping destination competitiveness, revealing that local endorsement, manifested through residents' pride, willingness to share their cultural heritage, and active participation in tourism, significantly enhances the perceived value and uniqueness of the destination. Moreover, VRIN resources such as specialized local knowledge, community reputation, and collaboration experience are shown to be central in creating a unique and attractive destination for tourists. In the context of tourism, RBV is applied to rural and semi-rural destinations, where resources—shaped by political and environmental factors—are key drivers of competitive advantage and sustainable development. It emphasizes the importance of managing tourism resources, including cultural landscapes, in ways that enhance a destination's appeal. RBV suggests that not all resources contribute to competitive advantage. Strategic resources must be heterogeneous and irreplaceable. In tourism, resources' imperfect mobility and

heterogeneity features arise from a destination's unique geographical and socio-cultural characteristics, making it difficult for competitors to replicate. However, with the rise of mass tourism and social media, imitation and homogenization are becoming risks, especially for destinations in the stagnation and post stagnation stage. To maintain a competitive edge, destinations must continuously innovate their tourism products and processes (Wardana et al., 2020). RBV also provides a theoretical perspective on value chain coordination, emphasizing the importance of linking different areas or firms rather than focusing solely on internal factors.

This approach can help destinations develop a more strategic and cooperative tourism management framework. Barney (1991, in Madhani, 2010) categorized resources into three main types: physical, human and organizational resources, which can guide tourism destination in leveraging unique, non-substitutable assets. The RBV adopts an inside-out perspective, focusing on internal strengths and capabilities to drive tourism performance. This approach can help destinations become attractive to tourists, and to further benefit the community and local tourist trade (Nakatani-Massukado and Teixeira Meira, 2009).

The Tourism Cluster

The concept of tourism clusters plays a vital role in enhancing competitive advantage. Clusters are geographic concentrations of interconnected businesses and institutions that foster collaboration and competition. It also attracts human capital, leading to knowledge accumulation, innovation, and productivity growth. In tourism, a cluster refers to a concentrated group of key attractions within a defined geographical area, equipped with essential features and management structures to support the industry and enhance visitor experiences (Doçaj, Domi, Terpollari and Kadiu, 2018). Tourism destinations naturally facilitate the formation of tourism clusters due to the availability of diverse tourism products, services, and strong supply chains. These clusters consist of businesses directly and indirectly linked to tourism, as well as infrastructure, government agencies, and regulatory bodies that influence tourism agglomeration (Doçaj, Domi, Terpollari and Kadiu, 2018). Costa (2005, in Ferreira and Estevão, 2009) identified key components of tourism cluster development, including static elements (e.g., accommodation and dining), mobility elements (e.g., transport, visitor services and digital resources), and dynamic elements (e.g., recreation, culture, sports and events) which “animate” tourism clusters, and are responsible for the moderate increase of permanence and for the increase of spending by visitors (Ferreira and Estevão, 2009). Tourism clusters can be formed using three main models: (1) geographical model – clusters formed based on geographic data; (2) specialized model – clusters focused on specialized businesses offering unique tourism products and services; and (3) functional model – clusters categorized by their function or usage within the tourism industry (Merylova, 2024). The success of these clusters relies on 6 key service and experience nodes: food, shopping, transport, accommodation, entertainment, and attractions. Other factors include location, available resources, climate, ecosystem, accessibility, market demand, economic conditions, legal frameworks, and social characteristics. Additionally, urban planning and infrastructure development are essential, influencing zoning, facility distribution, road networks, and transportation systems, contributing to the success of tourism clusters (Kulakov et al., 2024). Implementing this approach, supported by government and business sector policies, can drive tourism development, strengthen skills, and improve management systems (Jackson and Murphy, 2006). Classification of tourism clusters is outlined in the three-step process (Merylova, 2024): (1) defining area boundaries, involving the geographical boundaries of a region using historical data to highlight spatial differences including aspects such as ethnicity, economy, socio-cultural factors, and natural characteristics; (2) analyzing natural and cultural resources, focusing on assessing the natural features of the area, as well as considering both tangible (material culture) and intangible (non-material culture) cultural heritage, levels of urbanization and infrastructure development; (3) evaluating cluster experience, involving the study of the experience of the defined clusters covering analysis of related literature and related case studies to understand the characteristics and development of defined tourism clusters. A comparative analysis can be conducted across several dimensions for example recreational resources, cultural heritage objects, cultural traditions, infrastructure, and industrial heritage. This analysis supports the assessment of tourism cluster potential and guiding future development strategies.

The Cultural Landscape

As the study emphasizes the investigation of the cultural landscape within the study areas, it is important to clarify the concept of cultural landscape. Cultural landscapes are recognized as cultural properties that represents the “combined works of nature and of man”. They are described as “illustrative of the evolution of human society and settlement over time, under the influence of physical constraints and/or opportunities presented by their natural environment and of successive social, economic, and cultural forces, both external and internal”. The term “cultural landscape” embraces a diversity of manifestations of the interaction between humankind and its natural environment (IUCN-The World Conservation Union, 2002). These landscapes illustrate how communities have adapted to, utilized, and transformed their surroundings, providing meaningful insights into their historical and cultural development. Taylor and Lennon (2011) describe cultural landscapes as the environment that surround us—landscapes that influence the patterns of our settlement. These landscapes have been altered or transformed over extended periods of time and continue to evolve through ongoing human interaction with the natural environment. The character of the landscape thus reflects the values of the people who have shaped it, and who continue to live in it (Taylor and Lennon, 2011). Culture itself acts as the shaping force behind landscapes. A landscape is not a random occurrence—it is a cultural expression deliberately crafted in alignment with human ideologies. If we, as humans, can learn to read and understand the outcomes and values passed down from previous generations, cultural landscapes become powerful symbols that reveal who we are today and how we are connected to our past. In essence, cultural landscapes serve as enduring records of human actions, evolving from the past into the present. This means that cultural landscapes are product of change, and reflect the shifting attitudes and values human holds towards their environment over time. It is therefore essential to view and interpret cultural landscapes as living histories—rich, meaningful layers of our collective experience—and as vital components of our national and cultural identity. Given that cultural landscapes are dynamic by nature, the changes they undergo are not merely positive—some can have negative consequences that must be critically considered in development planning.

We should recognize the value of cultural heritage that emerges from the relational process between people and their environment, and approach the management of cultural landscape changes with a deep understanding. This allows for the meaningful and sustainable use of cultural landscapes across social, cultural, and economic dimensions. The study of cultural landscapes involves classifying cultural expressions into various types based on different criteria. One widely accepted framework is provided by the World Heritage Committee in the Operational Guidelines for the Implementation of the World Heritage Convention (UNESCO, 2024), which identifies three main types of cultural landscapes. (1) Clearly defined landscape designed and created intentionally by man- this landscape is deliberately planned and constructed for aesthetic reasons, such as gardens and parks, or those associated with religious or commemorative purposes. (2) Organically evolved landscape- these landscapes have developed in response to social, economic, political, and/or religious changes, and their evolution continues to the present day. The landscapes maintain a functional relationship with the natural environment of their specific location. This category can be further divided into two subtypes: (2a) relict (or fossil) cultural landscape-these are remnants of cultural landscapes that have been abandoned due to natural decline or sudden changes, yet their defining features remain visible and recognizable; and (2b): continuing landscape- this is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time, it exhibits significant material evidence of its evolution over time. (3) Associative cultural landscape-these landscapes are valued primarily for the strong spiritual, artistic, or cultural associations they hold for a community, rather than for any visible material transformations. Although they may lack significant built structures, they are rich in intangible cultural meanings and reflect deep connections to beliefs, traditions, or the artistic expression of a community, such as sacred natural sites or places of spiritual significance or inspiration drawn from natural features. Recognizing and understanding these different types of cultural landscapes enables more thoughtful and effective preservation, ensuring that they continue to serve as vital, living expressions of cultural identity and heritage.

According to UNESCO (2018), the elements of cultural heritage within the framework of cultural landscapes can be broadly categorized into two main types: (1) Tangible heritage/ tangible cultural resources, which refer to physical elements that can be seen and touched. Tangible heritage is further

divided into: (1a) immovable heritage, which includes structures or built environments that are fixed in place, such as community layouts, houses, historic buildings, monuments, and archaeological sites; (1b) movable heritage, which includes objects that can be transported, such as tools used in daily life, artworks, handicrafts, and various material artifacts. Tangible heritage embodies evidence of human presence, cultural expression, human activities, and significant events from both the past and the present; (2) Intangible heritage/ intangible cultural resources, which encompasses the non-physical aspects of culture, including practices, expressions, knowledge, skills, and associated spaces that communities, groups, or individuals recognize as part of their cultural heritage. Intangible heritage is transmitted across generations and continually reshaped by communities through their interactions with nature, history, and the environment. It plays a vital role in maintaining cultural identity, supporting cultural continuity, and encouraging diversity and creativity. Examples include oral traditions, performing arts, rituals, festivals, traditional craftsmanship, and indigenous knowledge systems. Together, these tangible and intangible cultural elements form the essence of cultural landscapes, illustrating the profound and evolving relationship between people and their environments and representing the cultural development of societies over time. In addition, the values associated with cultural landscapes and heritage are addressed in the Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (Australia ICOMOS, 2013). The Charter emphasizes that cultural significance is the sum of all the values—historical, aesthetic, social, spiritual, and scientific—attached to a place or object, as detailed in Table 1.

Table 1. Cultural Landscape Values Defined by the Burra Charter (Australia ICOMOS, 2013)

Categories	Definition
Aesthetic	Pertains to the sensory and perceptual experiences associated with a place. It reflects how people respond—both visually and non-visually—to a site through elements such as sound, scent, and atmosphere. These responses influence thoughts, feelings, and attitudes. Aesthetic value also encompasses culturally influenced ideals and concepts of beauty.
Historic	Refers to all historical aspects of a place, including the history of aesthetics, art, architecture, science, spirituality, and society. A place may be considered historically significant due to its influence on—or its being influenced by—key historical events, periods, movements, activities, individuals, or groups of people. These associations contribute to its importance as a site of memory and legacy.
Scientific	Refers to the informational content of a place and its potential to reveal aspects of the past through investigation, research, or archaeological techniques. This type of value is especially associated with a site's capacity to contribute to knowledge through empirical inquiry and evidence-based study.
Social	Refers to the relationship or connection a place holds with a community or cultural group, and the social and cultural meanings that people in that group attach to it. A place may be considered socially valuable when it represents a shared identity, memory, or way of life. This value often arises from long-term use, interaction, and emotional or symbolic attachment by the community.
Spiritual	Refers to the intangible meaning and significance associated with a place, which contributes to spiritual identity, traditional knowledge, art, and practices of a cultural group. These values are often deeply personal and emotional, linked to belief systems, customs, or sacred stories.

Survey and evaluation of the values of heritage in the cultural landscapes is a crucial step that allows us to explain why certain sites or objects are significant, as well as to demonstrate the value and importance of a place from various perspectives. This is done using indicators of both tangible and intangible cultural heritage in line with the Burra Charter (Australia ICOMOS, 2013), which emphasizes all types of areas, including cultural, natural, indigenous, and historical areas that have both cultural and natural value. The survey and evaluation are the first step in managing cultural landscapes, leading to decision-making and practices that will not destroy or diminish the value of that cultural landscape.

The RBV and the cultural landscape perspective share a similar conceptualization of resources, recognizing both tangible and intangible, heterogeneous (or movable), and immobile (immovable) resources as essential elements (Mailani et al., 2024), variedly based on different context of organizations, supply chains, or landscapes. However, the cultural landscape perspective emphasizes the long-standing interaction between people and their environment, where resources are not only economic but also deeply embedded in historical, cultural, and spatial contexts. These resources are often inherited and sensitive to change, making them vulnerable without sustainable planning and protection. Cultural landscapes embody cultural diversity and complexity, shaped over time through

evolving patterns of human settlement and land use. This view highlights the importance of strong place-based resource stewardship, which extends beyond the economic value. Applying RBV to tourism destinations through the lens of cultural landscapes offers a more holistic and place-sensitive framework. It recognizes that tourism resources are not isolated assets but are deeply embedded in the land, culture, geography, and lived experiences of local people. This integration enables a more meaningful interpretation of value creation—one that supports the long-term sustainability of both people and place, particularly in areas with rich cultural heritage and rural landscapes that are undergoing transformation due to increasing urbanization.

Railway not only enhances the appeal of tourist destinations but also contributes to place branding. The development of tourism along railway routes relies heavily on the active participation of local communities situated along railway routes. Strengthening community engagement in tourism development can generate employment opportunities, improve local livelihoods, and promote cultural exchange. Moreover, such inclusive development contributes to tourism diversification, which can lead to widespread economic benefits (Peira, Lo Giudice and Miraglia, 2022). A recent study (Ristić et al., 2024) highlights the importance of spatial planning in fostering economic development through tourism. The research presents a framework for organizing tourism areas, emphasizing designated tourist routes through area-based analysis. This approach identifies tourism zones with high potential that can serve as core areas for the development of attractions and tourism value along planned routes. The systematic organization of tourism areas includes designing connected tourism routes that link a variety of attractions and local resources. These routes are structured around central hubs that act as key distribution points for tourism services and experiences. The framework also supports the integration of designated tourism zones along railway corridors, allowing for a more comprehensive and decentralized approach to tourism development. Through clustering attractions of historical and cultural significance, these integrated tourism routes encourage in-depth exploration while fostering balanced regional development. By categorizing and linking attractions based on thematic or cultural narratives, the framework supports the creation of diverse tourism effectively (Ristić et al., 2024).

METHOD

This study employs qualitative methods including field surveys, focus group discussions and in-depth interviews. The field surveys were carried out to explore cultural landscape components in the three communities along the railway corridor in Chiang Khong District, Chiang Rai. This area serves as a strategic destination within the railway network, marking the final projected zone for the construction of railway and depot stations. Additionally, its significance is heightened by its connection to Lao PDR via the Thai-Lao Friendship Bridge 4 Checkpoint. The findings were validated by local participants during focus group discussions, where they assessed the perceived value of the identified cultural landscape components. These perceived values were visually presented using spider charts. Cultural landscape resource data were also collected through focus group discussions involving 45 representatives from the three communities, all of whom play active roles in community development and tourism initiatives. Additionally, in-depth interviews were conducted with key informants, including local authorities, academics, and entrepreneurs at the destination. The interview data were analyzed using an inductive content analysis approach, allowing key themes and insights to emerge.

FINDINGS

The communities are set within a diverse landscape of plains, mountains, and the Mekong River, bordering Houayxay Town, Laos. Chiang Khong's rich cultural heritage, shaped by Tai Lue, Khmu, and Lahu ethnic groups, enhances its distinctive identity (Maneerat and Zhongwei, 2024). Tourism remains tied to the nostalgic Mekong River and its related cultural landscape and activities such as boat trip, and peaceful atmosphere, ethnic diversity, and border town linking to Laos. It is a popular stopover destination before travelers continue their journey to Laos and China, or when arriving from China via the R3A route. The cultural landscape field survey highlights a linear corridor possibly linking railway nodes to communities. While ethnic heritage and the Mekong riverscape attract tourists, other local resources, though locally significant, hold less economic and rarity values. The communities assessed the values of the identified cultural landscape components. In Sri Don Chai, the community

demonstrated a high level of perceived value across several dimensions: aesthetic or visual quality, historical significance, spiritual meaning, integrity, and absence of threats. The aesthetic value, in particular, was recognized as the most significant, closely associated with the Tai Lue cultural heritage and its related elements. However, the social value attributed to certain landscape features, such as public parks and river confluence (Mekong River and Pak Ing River confluence), was perceived at a relatively lower level. In Sathan, the community also exhibited high perceived values in the dimensions of aesthetics, social significance, spirituality or wisdom, integrity, and absence of threats, though the overall levels were somewhat lower compared to Sri Don Chai. Notably, there was strong recognition of the value connected to occupational groups (livelihoods) and archaeological and cultural sites. However, the perceived value of natural landscape features, such as wetlands, remained relatively low. For Huai So, the community expressed high perceived values in aesthetics, historical significance, social value, and spirituality or wisdom, with aesthetic appreciation being the most strongly recognized. Nevertheless, perceptions of integrity and absence of threats were relatively low, particularly regarding key heritage assets such as archaeological sites, Buddhist monuments, and stupas.

Table 2. Checklist of Cultural Landscape Components Identified in the Three Communities from the Survey (Source: Authors, 2025)

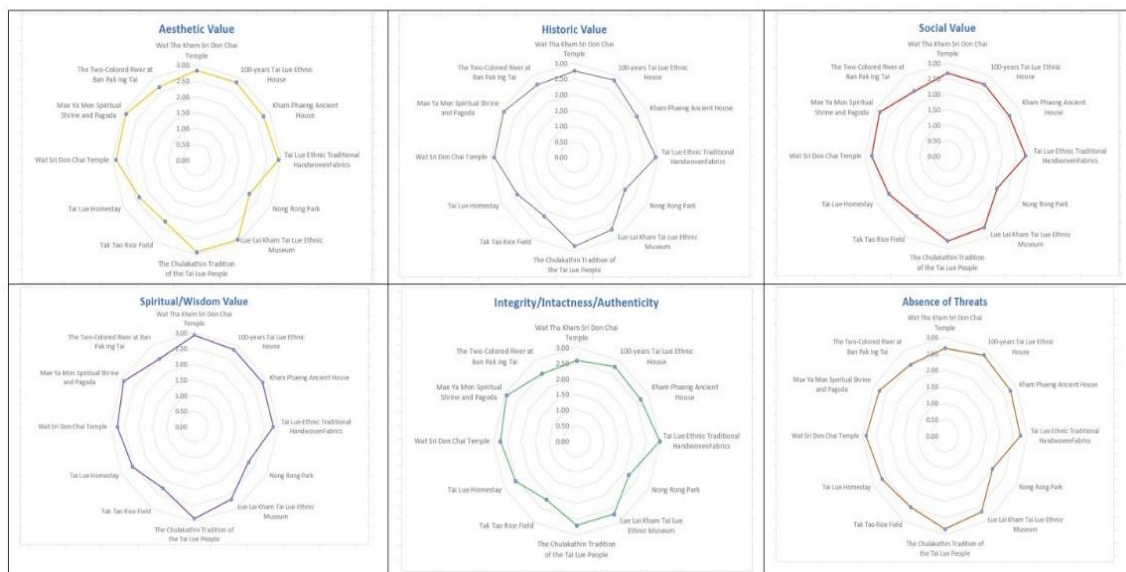
Types / Community	Site/Structure (Immovable) [A]						Object (Movable) [B]				Intangible (Beliefs, Knowledge, Memories, Activities) [C]						
Code	A1	A2	A3	A4	A5	A6	B1	B2	B3	B4	C1	C2	C3	C4	C5	C6	C7
Sri Don Chai	✓	N/A	✓	N/A	✓	✓	✓	N/A	✓	✓	✓	✓	✓	N/A	N/A	N/A	N/A
Sathan	✓	✓	N/A	N/A	✓	✓	✓	✓	✓	✓	N/A	✓	✓	N/A	✓	✓	✓
Huai So	✓	✓	N/A	N/A	✓	✓	✓	N/A	✓	✓	N/A	✓	N/A	✓	N/A	N/A	✓

A1: Temples, spiritual and religious sites, sacred sites
A2: Archeological sites
A3: Historic houses, historic buildings
A4: Monuments
A5: Natural sites
A6: Other cultural sites

B1: Antique objects, artifacts
B2: Art objects, works of art
B3: Handicrafts
B4: Fine art, paintings

C1: Folk literature, legends, language, documentary heritage
C2: Social practices, rituals, and festivals
C3: Knowledge and practices concerning nature and the universe
C4: Knowledge in ecosystem management
C5: Knowledge and beliefs in site selection for settlement or other purposes
C6: Traditional craftsmanship
C7: Traditional and indigenous games, dances, and sports

Figure 3-5 presents spider charts comparing the perceived value levels of cultural landscape components across the three communities, based on aesthetic, historic, social, spiritual/wisdom, integrity (intactness/authenticity), and absence of threats dimensions.



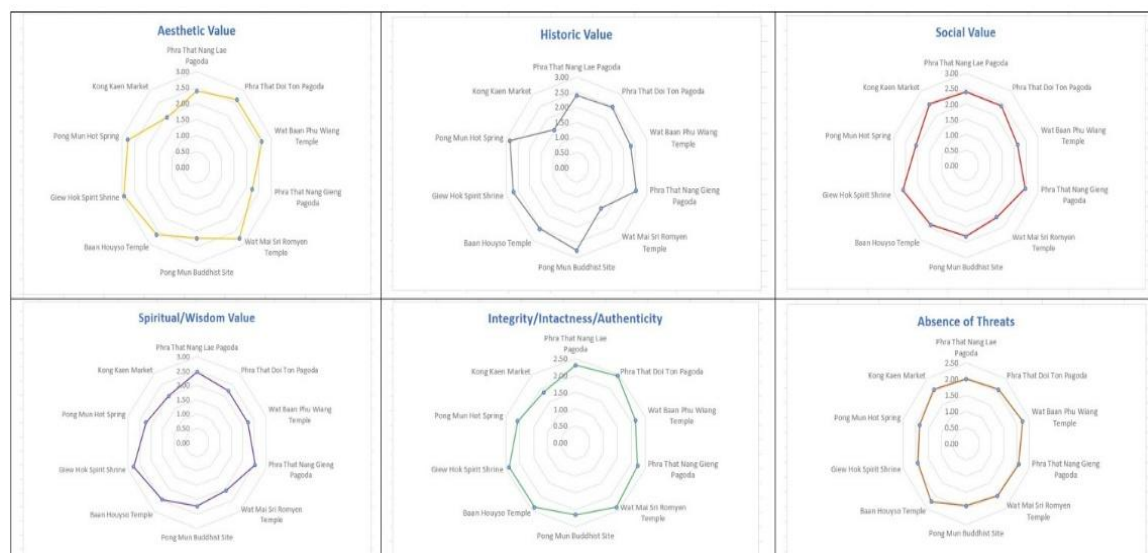
(Source: Authors, 2025)

Figure 3. Spider Chart Comparing Perceived Value Levels of Cultural Landscape Components by Aspects: Sri Don Chai



(Source: Authors, 2025)

Figure 4. Spider Chart Comparing Perceived Value Levels of Cultural Landscape Components by Aspects: Sathan



(Source: Authors, 2025)

Figure 5. Spider Chart Comparing Perceived Value Levels of Cultural Landscape Components by Aspects: Huai So

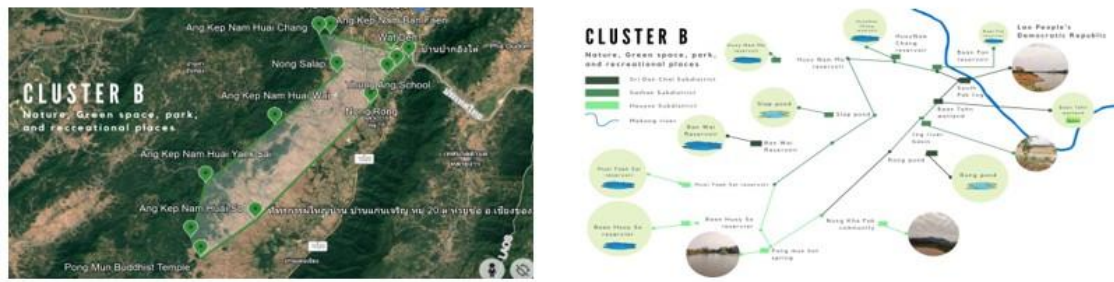


(Source: Authors, 2025)

Figure 6. Cultural Landscape Cluster A: Sacred and Religious Landscape

Clustering analysis classifies the cultural landscape resources into 4 clusters, illustrated through both geographical and thematic maps in Figure 6-9: (A) Sacred and Religious Landscape; (B) Nature Park

and Green Landscape; (C) Livelihoods and Agricultural Landscape; and (D) Arts and Handicraft Landscape.



(Source: Authors, 2025)

Figure 7. Cultural Landscape Cluster B: Nature Park and Green Landscape



(Source: Authors, 2025)

Figure 8. Cultural Landscape Cluster C: Livelihoods and Agricultural Landscape



(Source: Authors, 2025)

Figure 9. Cultural Landscape Cluster D: Arts and Handicraft Landscape

Inductive content analysis of interviews reveals 7 key aspects: (1) tourism and trade development around railway nodes; (2) integration of tourist routes linking railway nodes to community tourism networks; (3) emerging travel patterns including rail, river, and land-based tourism; (4) strategic management of tourism interpretation at the destination level; (5) development and enhancement of community resources as attraction nodes and local experience; (6) ecological and cultural landscape conservation concerns; and (7) local capacity building in tourism.

IMPLICATIONS

Viewed through the lens of the RBV, the management and coordination of resources, particularly through the use of clustering technique, can help destinations better understand how resources are categorized and spatially concentrated. This perspective ties back to the concept of structuring a resource portfolio, which forms the foundation for bundling resources, developing capabilities, and ultimately leveraging them to create and sustain value (Sirmon, Hitt, and Ireland, 2007). Resource clustering analysis informs tourism cluster formation, guiding rural tourism management. When combined with optimized railway connectivity, it has the potential to significantly enhance destination

competitiveness. This study conceptually applies the specialized and functional models, grouping tourism resources into 4 cultural landscape clusters to enhance site development and regional value along planned routes (Ristić et al., 2024). Clustering fosters collaboration among attractions, services and community experiences, leading to strengthening destination image, branding, and competitiveness. Once resources are clustered—whether by similarity or distance (Duarte-Duarte, Talero-Sarmiento and Rodríguez-Padilla, 2021)—thematic routes can be applied to enhance narrative connectivity and reinforce destination branding. These routes should highlight historical, architectural, and production-related elements to create curated visitor experiences. The area's geographical constraints due to its mountainous and river terrain characters necessitate ongoing review of physical clustering models. Beyond geographical linkages, tourism routes can be linked through shared historical or cultural narratives. The railway expansion will integrate cultural, natural, and built resources, linking land, river, and rail-based attractions to promote tourism diversification in the communities. The clusters identified in this study highlight the diverse character of Chiang Khong's cultural landscape, reflecting where local communities place their values and how they perceive and engage with their surroundings—physically, spiritually, artistically, and economically. Further investigation is needed to establish clearer clusters for specialized or unique products and services, particularly once related offerings are developed to better represent the area's distinct identity and enhance its tourism potential. The upcoming railway network, running parallel to existing roads, presents rural tourism opportunities by improving connectivity between railway nodes and community areas. Effective integration of these networks is crucial for optimizing local resources and bolstering the regional tourism competitiveness. Returning to the RBV, railway development in the current study area is regarded as a significant resource that can unlock further opportunities, such as enhanced connectivity with external transportation networks at the interregional scale.

Community-led tourism initiatives function as community tourism enterprises, serving as a tool and effective intangible asset for driving community development. Community enterprise model emphasizes local production, innovation, creativity, the application of local wisdom, integrated operations, a learning-centered approach, and self-reliance. Despite tourism not being the primary source of income, these enterprises face challenges in competing within the broader commercial tourism market. The government actively supports them by fostering networks that connect them with local government units and other organizations, such as universities, which serve as training hubs. This management structure can be leveraged to consolidate tourism services and experiences, enhancing the overall tourism value chain. Collaboration between community enterprises and emerging cultural entrepreneurs in the area can foster innovation, competitiveness, and sustainability. This study suggests examining the RBV for managing community tourism across municipalities, while adjustments in local authority management and funding are necessary to scale up community tourism and strategically integrate it into broader tourism systems. A shared-resource approach among municipalities is suggested to enhance efficiency and sustainability. Chiang Khong, in its tourism stagnation stage, requires strategic tourism management. Railway development serves as an incremental strategy to prolong its tourism life cycle stages, and will gradually shape the tourism development in the area (Gore, Borde, and Desai, 2023). To prepare for this transition, priorities include development of new tourism products, establishment of tourism corporations, and formulation of tourism plans that align with railway infrastructure. Understanding the underlying mechanisms is essential for creating meaningful impacts in this configuration. Local government efforts, in collaboration with entrepreneurs, should focus on leveraging the destination's unique resources, providing holistic interpretation, and developing effective marketing strategies to position Chiang Khong competitively within the tourism landscape.

In managing tourism logistics within the context of the three communities—Sri Don Chai, Sathan, and Huai So—a holistic management approach is essential. This approach should integrate both tourism and logistics perspectives, particularly focusing on physical flows in the area, and encompass all phases of the tourist journey: pre-travel, travel, and post-travel. The goal is to create and maximize value in the entire supply chain—from upstream to downstream. Such an approach would enable the formulation of contextually appropriate strategies that enhance local benefits and support more efficient management of tourist flows. Accordingly, efforts should be made to forecast visitor numbers, understand tourist behavior, and promote tourism in ways that attract more visitors to the area. The approach would also contribute to an implementation of the tourism clusters by facilitating coordinated planning, shared

infrastructure, and the integration of complementary attractions and services across the communities. As Chiang Khong serves as a strategic destination, with designated zones for the construction of railway and depot stations, preliminary recommendations for the development of areas surrounding these transport nodes are additionally made. (1) Priority should be given to enhancing the built environment around the station to support tourism, commercial, and cultural activities. (2) Concentrated nodes of activity and interaction should be developed at key landmarks and transportation hubs to create vibrant spaces for interactions, serving both local tourism operators and cross-border trade and tourism. (3) A feeder system should be established to connect surrounding communities with the core development zones, ensuring smooth mobility and improved access to key attractions and services. (4) The creation of distinct ‘districts’, each with a thematic identity and concentrated activities, can help establish recognizable zones that facilitate event planning, destination branding, and targeted tourism marketing. These recommendations aim to strategically enhance the readiness and attractiveness of the station’s areas, aligning local infrastructure with broader regional tourism and economic development goals.

Although environmental aspects are beyond the primary scope of this study, the importance of environmental and ecological concerns, as well as the heritage aspect cannot be overlooked. Certain sections of the construction area hold historical and ecological significance, even though these have not yet been extensively studied or brought to broader public attention. Local environmental stakeholders have raised specific concerns about the Ing River Watershed—the main river system in Chiang Khong. This 260-kilometre river basin flows from Phayao Province through Chiang Rai Province in northern Thailand and eventually merges with the Mekong River, supporting a large wetland forest that is ecologically vital. The wetland forest lies within this watershed, where the community generates income from managing the wetland fishery. The income is directed into a village fund, with a portion reserved annually for conservation and maintenance of the wetland (UNDP Thailand, 2020). Recognition is given to local individuals who actively engage in protecting their wetland, while a study on wetland and biocultural heritage conservation through thematic ecological tourism in a district adjacent to Chiang Khong that shares the same wetland resource also highlights the community’s awareness of its ecological value (Yiamjanya, et al., 2024). The environmental study of the railway construction project was carried out in accordance with the guidelines for preparing Environmental Impact Assessment (EIA) reports. These guidelines require that all types of mass transit rail systems must prepare an EIA report to be submitted during the project approval or permitting phase. The State Railway of Thailand (SRT) conducted the study and prepared the report based fully on the EIA guidelines for transportation projects issued by the Office of Natural Resources and Environmental Policy and Planning (ONEP), and the monitoring reports have been regularly published. The environmental impact assessment of the project found that the project’s development may cause environmental impacts in the following areas: (1) Physical resources, such as noise and vibration, groundwater hydrology and quality, geology and seismic activity, mineral resources, and soil resources including erosion; (2) Biological resources, such as forest resources and aquatic ecological resources; (3) Human use values, including water usage, agriculture, flood control and drainage, and watershed management; and (4) Quality of life values, including socio-economic conditions and archaeological sites (Office of Transport and Traffic Policy and Planning, 2017). An official document also reported that the project’s railway tunnel construction route passes through Watershed Class 1A areas within the Upper Mekong River Basin, according to watershed classification and characteristics defined by the Royal Forest Department, Ministry of Natural Resources and Environment (Royal Forest Department, 2009), which could easily receive severe environmental damages by land use alteration. The area is denoted as the watershed area with forest cover that has never faced disturbance of any kind, and should be protected and reserved as head watershed and maintained as natural resources of the country. While the development cannot avoid this area and it is necessary the construction to carry out as the contract was signed for the implementation of the project, specifically Contract No. 3 covering the Chiang Rai- Chiang Khong section, the SRT responded to the issue by making a request for a waiver to use the Watershed Class 1A area. To comply with the relevant forestry regulations and laws in utilizing forest land, the SRT outlined key environmental prevention and mitigation measures for soil resources and erosion prevention, geology and earthquakes, air quality and noise, land use and watershed management. Some measures concerning land use and watershed management include carrying out reforestation to compensate for forest loss by planting at least an equivalent area of forest in nearby locations; building observation posts at tunnel

entrances that intersect high-quality watershed zones; assigning responsible agencies for forest conservation; and avoiding activities that may cause forest fires or adversely affect forest areas (Official document, the Secretariat of the Cabinet). The project has established measures for reforestation to replace the forest areas lost due to the project's route cutting through national reserved forest areas including conservation forests (Zone C Forest area) and economic forests (Zone E Forest area). It also includes measures to prevent and mitigate the impacts on forest resources in the tunnel construction area, as well as monitoring environmental impacts in all aspects during both the construction and operational phases. Additionally, there are strict controls to ensure that contractors carry out the work according to the Impact Reduction Action Plan and the specified measures. A locally engaged stakeholder group concerned with the Mekong River environment in Chiang Khong has also raised concerns that the mega construction project could disrupt underground waterways, potentially affecting local agricultural activities. Even in light of the development's anticipated benefits, this issue warrants serious attention. Although conservation and development are often in conflict, environmental and cultural elements are essential to the long-term sustainability of the land and its communities, and must not be overlooked. Other emerging concerns include Chiang Rai's vulnerability to natural disasters, including earthquakes and flooding, which further underscores the need for careful, holistic, and sustainable planning. Development planning should integrate tourism, cultural heritage, and natural conservation strategies into the broader railway development plan. It is essential to promote the incorporation of structures and design approaches that minimize ecological impact while preserving the inherited ecological and cultural values of the surrounding areas, such as introducing the ecological corridors to allow safe passage for wildlife (Qiu, 2023). Establishing a cultural landscape management plan can provide strategies to protect and showcase the ecological and cultural values along railway routes. This may include developing museums or interpretive centers that educate visitors about the history and development of this railway—highlighting various aspects of area's cultural landscapes and creating information linkages to the surrounding communities.

Unlike tourism development in urban areas, which often evolves independently and benefits from natural agglomeration, tourism in semi-rural regions—such as Chiang Khong—retains its cultural rurality but remains fragmented, as much of the land is still dominated by natural landscapes, and built-up areas have yet to form a cohesive urbanized environment. Although the region has been designated as a strategic zone for border trade, tourism, and as a logistics hub due to its geographical advantages, the socio-cultural landscape of Chiang Khong continues to reflect its rural roots, with its people maintaining a strong reliance on the land and rivers for their livelihoods. This contrast raises important considerations about how its unique rural character can be sustained amid increasing urbanization. The ongoing railway project challenges the status quo of tourism development in this semi-rural area, and the balance between physical connectivity and accessibility development and the preservation of essential elements critical to the sustainability of its cultural landscapes. It brings with it both opportunities and challenges—particularly in managing resources in ways that both generate and safeguard value while enhancing regional competitiveness for economic benefit.

Future research should explore RBV implementation and necessary local management adaptations. Moreover, with the forthcoming extension of the railway connection to Chiang Khong District, further research is encouraged to examine the potential impacts of this infrastructure on tourism dynamics, particularly in the contexts of domestic and cross-border travel. As Chiang Khong increasingly emerges as a strategic gateway linking Thailand, Laos, and China—via the Kunming–Yuxi–Pu'er–Boten–Luang Namtha–Huay Xai–Chiang Khong–Chiang Rai railway corridor—future studies could explore anticipated changes in tourist behavior, travel patterns, and demand for local services. Research could also address the readiness of local communities to engage with transnational tourism flows, opportunities and challenges for sustainable tourism and logistics management, and strategies for developing tourism products and experiences that reflect local identities while meeting international expectations.

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