

The Feasibility of Developing Agrotourism Complexes in Rural Regions: Review Paper

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Abstract:

Transforming rural areas into thriving, functional spaces can be achieved by integrating local community needs with tourism and hospitality services. This review aimed to explore the potential of agrotourism and establish a sustainable development model globally, with a particular focus on China. It underscored the importance of creating sustainable agrotourism complexes in rural regions while recognizing the challenges of merging agriculture with tourism. The review highlighted the necessity for empirical data, stakeholder input, and an understanding of context-specific factors to evaluate the positive and negative impacts of agrotourism development. Additionally, it stressed the value of learning from existing agrotourism models worldwide before making recommendations. The complex nature of agrotourism, its functions, and development goals were examined, with objectives classified into four key areas: revitalizing the rural economy, enhancing agricultural versatility and competitiveness, optimizing resource use and conservation, and promoting industrial transformation. Furthermore, the review categorized key indicators of successful agrotourism practices into five groups: development focus, stakeholder collaboration, governance structure, local engagement, and sustainability. The study concluded that integrating agriculture and tourism is a multifaceted process shaped by diverse structural and individual influences.

Keywords: Agrotourism Functions, rural economy, rural areas

1. Introduction

The rapid growth of the global economy and technological advancements in recent decades have brought substantial changes to people's lifestyles. Consequently, rural areas and the dynamics of countryside living have significantly shifted, often benefiting urban populations due to modernization and urbanization. Although urbanization offers many advantages, scholars have raised concerns about its adverse effects, particularly the hollowing out and underdevelopment of rural regions. For instance, in China, Huang et al. (2018) pointed out that with the country's fast-paced industrialization and urbanization, rural areas are experiencing inevitable hollowing out, the traditional agricultural sector is weakening, and rural culture is diminishing due to inadequate preservation. Other negative impacts of urbanization in rural areas include isolated farming communities (Li, Westlund, and Liu 2019), youth migration, land degradation, the abandonment of children and women (Choithani 2020), limited access to resources and services (Faysse et al. 2020), as well as excessive construction and pollution (Li, Zhang, and Zhou 2021). Consequently, scholars emphasize the need for policies to ensure balanced

development between urban and rural areas. Singh et al. (2021) noted that while China, once home to the world's largest rural population, has reaped the benefits of rapid urbanization, it also faces challenges. Other researchers (Ma et al. 2018, Gu 2019) have identified additional problems such as the loss of the agricultural workforce, inefficient land use, and environmental degradation due to unprecedented urbanization.

Amidst rising urbanization and shifting socio-ecological conditions in rural areas, agrotourism has emerged as a new approach to rural development. It involves the integration of various industries such as agriculture, pastoralism, and leisure tourism, along with fostering interactions within rural communities. This transformation is largely driven by policymakers, who aim to promote economic, cultural, and environmental benefits, as well as improve land management and revitalize rural areas. Consequently, the development of agrotourism and agropastoral complexes to cater to both tourism and local community needs and to bridge the urban-rural gap has gained traction worldwide. However, to fully understand the contributions and outcomes of integrating tourism with agricultural resources to enhance rural living and address underdevelopment, particularly in the case of Nanchang, further research based on empirical data is needed. The following sections will delve into key concepts, insights, and theories to inform the study's analytical framework and identify the agrotourism potential of the selected area.

2. Understanding Agrotourism and Agrotourism Complexes

The concept of agrotourism, often synonymous with rural tourism in some regions, has been discussed in academic literature since 1975. Despite ongoing debates, there is no single globally accepted definition of agrotourism. A recent literature review by Karampela, Papapanos, and Kizos (2019) explored different perspectives on terms like "agro," "agri," and "rural" tourism. Their research found that terms such as "agrotourism," "agro-tourism," and "agritourism" are often used interchangeably, though there is growing agreement that rural tourism is a broader concept, while agrotourism specifically involves visits to working farms (Phillip, Hunter, and Blackstock 2010), particularly in North America and Europe.

Havlicek, Lohr, and Benda (2009) define agrotourism as a type of rural tourism where visitors stay on farms and participate in daily agricultural activities while learning about local culture. In Europe, agrotourism has played a key role in transforming agriculture from being solely productivity-driven to more sustainability-oriented and multifunctional (Van der Ploeg 2008). Morán et al. (2017) described agrotourism as a modern representation of "multifunctional agriculture," a term originally coined by the European Commission in 1988 to indicate a shift from purely agricultural production to a service-oriented agricultural model. Yin, Chen, and Li (2022) highlighted agrotourism's potential as an innovative rural system aimed at revitalizing rural communities and promoting balanced, sustainable development, particularly in China and other developing countries.

Chen (2018) introduced the concept of rural agrotourism complexes as a comprehensive rural development model in China, integrating modern agriculture, leisure tourism, and pastoral life. These complexes aim to enhance the versatility of agriculture, promoting the organic integration of production, lifestyle, and ecology, while bridging tourism with the primary, secondary, and tertiary industries. Similarly, Xiao, Ming, and Li (2001) explained that agrotourism complexes and rural

tourism use local landscapes, traditions, culture, and rural lifestyles to attract urban tourists, offering customized tourism experiences. A more detailed definition from the Michigan Agricultural Tourism Advisory Commission (2005) describes agrotourism as the practice of visiting farms or other agricultural operations, such as orchards or livestock shows, for recreational, educational, or participatory purposes.

The review of agrotourism concepts and definitions reveals that it is a complex term. Some studies distinguish agrotourism from rural tourism, while others treat the terms as interchangeable. According to Barbieri and Valdivia (2010), agrotourism is a subset of rural tourism that focuses on recreational activities in rural settings or participation in agricultural practices for leisure, education, or hands-on experience. Che, Veeck, and Veeck (2005, Che 2008, Chen 2018) further argue that agrotourism differs from traditional rural tourism by serving as a new form of industrial tourism. It combines agricultural production with specialized tourism activities, offering a variety of products and services. In some regions, particularly in Europe, this concept is also referred to as agriculturalism, emphasizing its broader meaning (Sznajder 2009).

3. Primary Functions of Agrotourism Complexes

The combination of agriculture and tourism is seen as playing a vital role in transforming various aspects of rural life dynamics. Many scholars have explored the diverse functions and impacts of adopting this rural development strategy. According to Sayer, Sunderland, and colleagues (2013), this approach is typically applied in regions where agriculture, mining, and other productive land uses intersect with environmental and biodiversity objectives, aiming to achieve social, economic, and ecological benefits. Sznajder (2009) links this strategy to local income generation, job creation, the use of available housing, conservation of natural resources, as well as recreational and educational opportunities for both urban and rural populations. Iakovidou (2000) categorizes the functions of agrotourism into three broad areas: socio-psychological, economic, and spatial-environmental (as depicted in Figure 1).

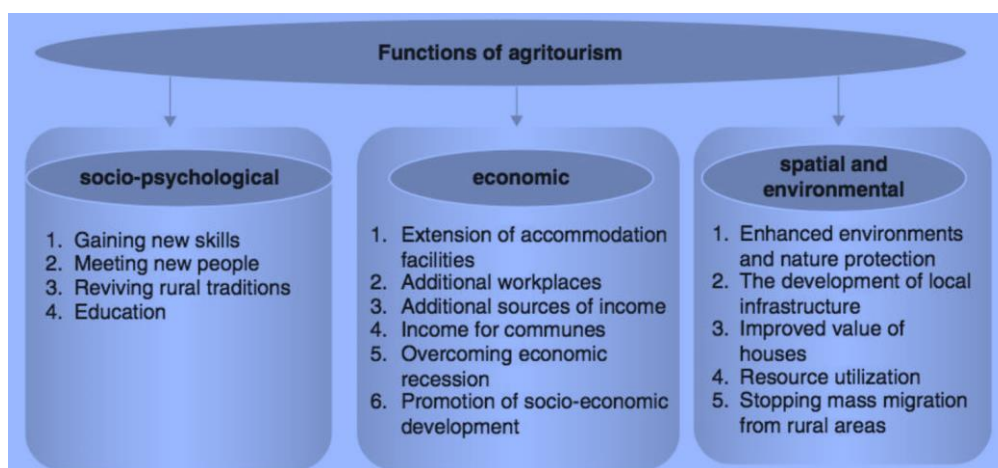


Figure 1: Functions of agritourism (source: (Iakovidou 2000))

Yang (2017) suggests that the socio-psychological function fosters appreciation for the local community and serves as a bridge between urban and rural areas, enabling urban dwellers to experience traditional lifestyles, thereby promoting and revitalizing rural traditions. This makes the socio-

psychological aspect significant in the planning of agrotourism complexes in rural settings. The economic function, as described by Sznajder (2009), involves creating job opportunities to address employment shortages and optimizing the demographic structure of rural communities. The spatial and environmental function focuses on the strategic management of land use in rural regions, enabling efficient organization of village spaces, agricultural environments, and infrastructure, as outlined by Yang, Hao, and colleagues (2016).

While these agrotourism functions have been well-researched globally, there remains a lack of studies examining the perspectives of different actors and stakeholders on the innovations within agrotourism, particularly in the selected study area. This includes both the positive and negative impacts, explored through a mix of qualitative and quantitative data. The present study aims to fill this gap by evaluating the potential of Nanchang County, a region rich in agriculture, for the development of leisure tourism, focusing on stakeholder insights and lessons learned from similar initiatives both within and outside China.

4. Development Goals of Agrotourism Complexes

The development of agrotourism complexes plays a significant role in rural transformation, and it has been applied in various countries. The integration of agricultural, pastoral, and marginal areas with the tourism sector is commonly undertaken to improve the performance and capacities of rural areas for tourism development. However, such integration policies are multifaceted and are pursued for a wide array of objectives, driven by the unique socioeconomic, sociocultural, and geographic characteristics of different countries. Based on the literature reviewed in this study, the key goals of developing agrotourism complexes worldwide can be categorized into four main objectives (see Figure 2).

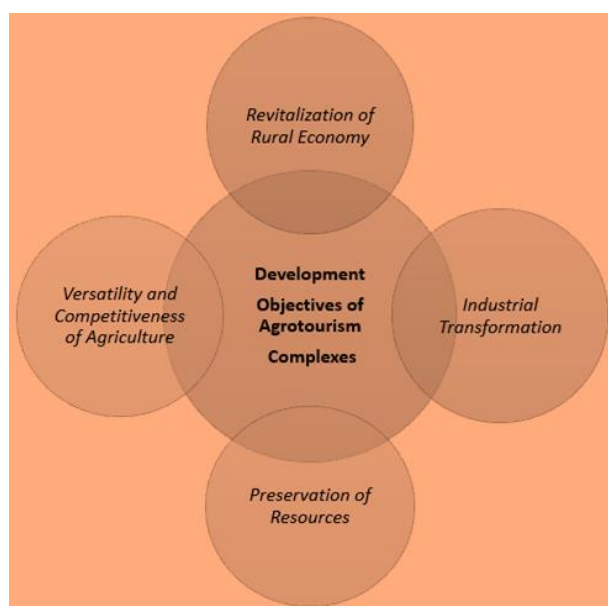


Figure 2: Development Objectives of Agrotourism Complexes.

4.1 Revitalization of the Rural Economy and Reducing the Urban-Rural Divide

One of the main goals of integrating agriculture with tourism, as pursued by many governments, is to stimulate rural economies and bridge the gap between rural and urban areas. As a response to changing

rural-urban dynamics, numerous countries have adopted rural revitalization policies to boost the rural economy. Agrotourism complexes are seen as a successful governmental strategy to promote socio-economic development in rural regions. It is widely acknowledged that agrotourism positively influences the rural economy by enhancing rural productivity, improving business efficiency, and fostering economic growth (Gong, Jian et al., 2022). In China, the Rural Revitalization Strategy, introduced in 2018, aims to transform rural areas into regional complexes with natural, social, and economic features (Yin, Chen, and Li, 2022).

Various studies emphasize the economic benefits of incorporating agricultural and pastoral landscapes into rural and leisure tourism industries. The World Travel & Tourism Council (Europe 2023) highlights that rural tourism can generate employment, strengthen industrial structures, improve public services, and reduce disparities between urban and rural regions. Aref and Gill (2009) suggest that rural tourism acts as a catalyst for revitalizing rural areas and their local economies, while Nematpour and Khodadadi (2021) note that it offers additional income to small-scale operators.

For China, narrowing the urban-rural divide by enhancing regional tourism appeal and increasing rural farmers' incomes has been a key motivation for government support in merging agriculture and tourism. Wang, Li, and You (2021) observe that the rural pastoral complex development aligns with government policies aimed at closing this gap.

4.2 Diversifying and Increasing Agricultural Competitiveness

A second key objective of agrotourism is to enhance the versatility and competitiveness of agriculture. Bonadonna, Peira, et al. (2021) argue that improving agricultural performance and boosting productivity are central goals of agrotourism, leading to increased profitability. Wang, Kumar, et al. (2020) add that enriching the diversity of agricultural products aligns with China's economic development goals, which also focus on raising farmers' incomes and reducing the urban-rural economic disparity. They emphasize that, according to rural development policies in China, rural regions must adapt to local conditions to develop rural complexes.

Research has also highlighted challenges such as land fragmentation and depopulation in agricultural and pastoral areas, which negatively impact productivity and competitiveness. Wang, Kumar, et al. (2020) assert that sustainable development and respect for agricultural characteristics are essential to overcoming these challenges. However, some scholars warn that a business-driven focus on agrotourism may have unintended negative consequences for agriculture, as seen in Italy where modernization and commercialization can erode the agricultural essence of farms (Santucci, 2017; Roman and Golnik, 2019).

4.3 Sustainable Resource Utilization and Conservation

A third primary objective of agrotourism is to ensure efficient utilization and preservation of rural resources, including ecological, natural, cultural, socio-economic, and human resources. Land use planning (LUP) is central to this goal. In a report on the Global Land Outlook, Metternicht (2017) suggests that LUP is an effective strategy for protecting and rehabilitating natural resources and biodiversity while identifying untapped land use potential. This is particularly important for agrotourism in China, which has vast pastoral ecosystems and large populations. Hua, Squires, et al.

(2015) note that China's pastoral lands, the second largest in the world, play a vital role in the global environment, but these ecosystems are at a turning point due to rapid social and economic changes.

In Italy, Bonadonna, Peira, et al. (2021) found that land fragmentation hinders agricultural and forestry development, which limits tourism opportunities and income in marginal areas. This study suggests that landscape-based land management can enhance the region's tourism appeal. Most European agrotourism policies focus on improving land management and consolidating fragmented lands, aiming to reverse depopulation and promote sustainable tourism. Yi, Zhao, and Fu (2019) argue that the quality of agricultural resources is a key determinant of tourist attraction and satisfaction. Studies show that the effective use of natural and human resources is critical to the success of agrotourism, helping preserve biodiversity, traditional farming practices, and local cultures (Ferreira and Sánchez-Martín, 2022).

Cultural heritage, social values, and educational opportunities are also important considerations in rural tourism. Authentic natural, cultural, and biodiversity resources in rural areas can play a significant role in preserving agricultural landscapes and traditions (Solecka, Raszka, and Krajewski, 2018; Sarmiento-Mateos, Arnaiz-Schmitz, et al., 2019; Xie¹ and Schöbel-Rutschmann, 2015). It is evident that resource preservation should be at the core of any agrotourism development initiative.

4.4 Industrial Transformation and Modernization

The final objective focuses on the industrial and technological transformation of agriculture and rural development. Industrial upgrading is seen as essential to overcoming inefficiencies in agricultural and rural services. In China, recent government plans and rapid economic growth have put pressure on farmland to adopt new technologies and infrastructure, such as highways, railways, and power grids (Hua, Squires, et al., 2015).

In the planning of agrotourism complexes, it is crucial to consider the demands for modern industrial and technological advancements. Although rural revitalization is a multifaceted process, it can be argued that the main driving force behind most agrotourism complexes is the creation of economic value. This, in turn, provides a foundation for achieving other development goals.

5. Rural Tourism Research and its Current Status in China

The United Nations Convention to Combat Desertification (UNCCD) (UNCCD 2017) highlights substantial evidence that human activities such as hunting, foraging, land clearing, and agriculture have been modifying terrestrial ecosystems for about 12,000 years. This period, often called the "Neolithic Revolution," saw agriculture gradually reshape societies, shifting from nomadic lifestyles to permanent settlements with consistent food sources (UNCCD 2017). However, the trend of urbanization has continued, with over half the global population now living in cities, a figure expected to rise to 66% by 2050, while the number of cities in developing countries is projected to triple by 2030.

To address the imbalance between urbanization and rural decline and to bridge the urban-rural divide, various strategies have been implemented globally in recent decades. One of the most debated but less explored approaches is the construction of agrotourism complexes in rural areas. Numerous scholars have studied the integration of agriculture and tourism as a way to promote the rural economy. According to Yi, Zhao, and Fu (2019), merging agriculture and tourism helps overcome the limitations

of traditional agriculture, strengthens industry linkages, and encourages a symbiotic relationship between agriculture and tourism. Songkhla and Somboonsuke (2013) argue that agrotourism policies in developing nations must foster interaction between tourism and local agriculture. Ren (2017) similarly asserts that the fusion of traditional agriculture and rural tourism not only enriches rural tourism with an ecological aspect but also fosters agricultural innovation and tourism transformation.

Recognizing the benefits of integrating rural agriculture, pastoralism, and leisure tourism, China has consistently introduced policies to promote rural tourism development. With one of the largest agricultural sectors globally, China boasts significant competitiveness compared to developed countries and has the world's largest rural population, making its rural areas particularly susceptible to socio-economic and cultural challenges.

Gongbuzeren, Wenjun, and Yupei (2021) argue that in light of current socio-ecological changes, pastoral communities in China are increasingly integrated into complex networks, facing uncertainties such as climate change, market volatility, population mobility, and evolving socio-economic structures. Historically, as Yang, Hao, et al. (2016) note, China's earliest agri-tourism initiatives took place over 40 years ago in suburban Beijing, featuring activities like fruit and vegetable picking, farm-to-table dining, and accommodations. According to Yang, Cai, and Sliuzas (2010), farmers initiated these early efforts in the 1980s, meeting market demand without government regulation or support.

However, the integration of agriculture with other industries, including tourism, began to appear in China's official documents in 2013. Chinese scholars generally agree that while agrotourism emerged later in China, its development has been rapid. Liu and Wong (2019), for instance, highlight rural tourism's growing role in Beijing's economy, particularly in nearby suburban or rural zones. The "tourism+" initiative (Yi, Zhao, and Fu 2019) and the "Outline of the Twelfth Five-Year Plan for China's Tourism," developed by China National Tourism Administration, reflect a positive trend in the nation's tourism sector, with a focus on balancing national tourism demand with product supply. Efforts have been made to improve the protection and development of rural leisure tourism resources.

The 2017 "Notice on Promoting the Implementation of Policies for the Development of Leisure Agriculture and Rural Tourism" emphasized the importance of rural industrial restructuring, using tourism to drive tertiary industry development and guide sustainable rural economic growth (Wang, Li, and You 2021). In 2018, the government released the Strategic Plan of Rural Development (2018–2022), prioritizing rural over urban development (State Council of the PRC, 2019). Xu, Pittock, and Daniell (2021) highlight the approval of the Rural Development Promotion Law in 2021. Additionally, the State Council of the PRC (2021) emphasized in Article 11 of the "Opinions on Comprehensively Promoting Rural Revitalization and Accelerating Rural Modernization" that rural development should capitalize on unique regional resources to enhance agriculture and tourism routes.

Responding to these government policies, China has increasingly focused on expanding leisure tourism in rural areas and integrating tourism with agricultural and pastoral communities. The country is actively promoting cultural and tourism integration to create a more attractive tourism industry, aiming for rural tourism to follow a sustainable development path (Wang, Li, and You 2021). Recent national strategies, including rural revitalization, industrial restructuring, and the promotion of China's beautiful leisure villages and national pastoral complexes, have guided rural tourism development (Dai, Jiang,

et al., 2017). According to the National Rural Industry Development Plan (2020–2025), in 2019, rural tourism attracted 3.2 billion visits, generating over 850 billion RMB yuan in revenue, a 6.3% year-on-year increase (Jia, Jiao, et al., 2022).

China's latest Rural Revitalization Strategy is already showing positive effects, sparking renewed interest in rural development. Scholars suggest that a diversified industrial structure, compared to a traditional agriculture-driven rural economy, can boost productivity, improve efficiency, and foster economic growth (Ma, Jiang, et al., 2018; Gong, Jian, et al., 2022). Many rural areas have adjusted their industrial structure, incorporating new sectors like rural tourism, agricultural leisure, and online agricultural product sales in line with rural revitalization policies (Zhu, Zhang, and Ke, 2018).

However, the government's rural revitalization strategies have produced mixed outcomes in different communities and regions. Gongbuzeren, Wenjun, and Yupei (2021) argue that while urbanization in agricultural regions often results from voluntary migration driven by market opportunities (Jin and Li, 2019), urbanization in pastoral regions is influenced by various long-term policies, including ecological conservation, school consolidation, rangeland reforms, and poverty alleviation programs (Washul, 2018; Bao and Shi, 2020).

6. Indicators of Successful Agrotourism

Agrotourism is a multifaceted and complex phenomenon shaped by various factors. According to the literature, there are several key points that serve as indicators of successful agrotourism practices worldwide. Based on the literature review conducted in this study, these factors (referred to as indicators) can be grouped into five main categories, as illustrated in Figure 3: 1) development orientation, 2) stakeholder interaction, 3) governance model, 4) localism and community-centeredness, and 5) sustainability and continuity.



Figure 3: Indicators of the successful agrotourism practices

6.1 Development Orientation

Development orientation refers to the primary goals and interests of those initiating agrotourism projects. Zhang (2011) emphasizes that agrotourism must be structured into specific models and patterns. Previous studies suggest that agrotourism models are primarily defined by two main aspects: 1) the connection between local agriculture and tourism, and 2) the development of local agricultural resources (Feng 2021).

Initially, agrotourism was a production-oriented industry focused on selling agricultural products. However, as it integrated with tourism, it transitioned to a service-based industry where farmers not only provide agricultural products but also offer accommodations, meals, and cultural experiences

(Che, Veeck, and Veeck 2005; Sonnino and Marsden 2006). As agrotourism expanded, it was recognized for its potential to boost rural development and the national economy, thus evolving into an enterprise-oriented and economically driven sector. Scholars like Roberts and Hall (2001), Che, Veeck, and Veeck (2005), and Midi, Sarkar, and Rana (2010) suggest that agrotourism serves as a tool for economic diversification, landscape protection, and engagement in environmental and social activities.

In China, agrotourism is often shaped by government policies and rural revitalization strategies. While the focus is on establishing successful business enterprises, aspects like aesthetics, welfare, and sustainability are also highlighted. Different regions in China have developed unique agrotourism models. For instance, Cheng et al. (2011) identified four types of agrotourism in Hunan: idyllic life, rural, technological, and agro-trade. Similarly, Zhang (2011) categorized Chinese agrotourism into various types based on rural resources, such as sightseeing, science demonstrations, and folk festivals. Jia (2011) and He (2002) proposed other models, like agricultural sightseeing and the "Companies + Farmers + Communities" framework.

In contrast, European agrotourism often focuses on land management, with the primary goal being efficient rural landscape use, while socio-economic and tourism benefits are secondary. Bernués et al. (2011) highlighted the role of pasture-based livestock systems in conserving natural resources and traditions in Europe. The coexistence of tourism with such systems is essential for the sustainability of mountain regions. Agrotourism planners should therefore align their strategies with local rural development goals to ensure the successful implementation of their projects.

6.2 Stakeholder Interaction

Given its multidimensional nature, agrotourism requires effective interaction mechanisms among various stakeholders. Research has emphasized the importance of understanding the roles and relationships between stakeholders in the agrotourism industry (Stoffelen and Vanneste 2016; Keyim 2018; Park and Widyanta 2022). Park and Widyanta (2022) note that one of the challenges in sustainable tourism development is ensuring cooperation among stakeholders to avoid marginalization and achieve consistent commitment. Other researchers have highlighted issues related to stakeholder conflicts, power imbalances, and the marginalization of local communities (Toonen 2013; Dredge 2006; Saarinen and Wall-Reinius 2019).

This study views agrotourism's potential through the lens of four key stakeholder groups: 1) farmers, pastoralists, and rural communities, 2) tourists, 3) private entrepreneurs and investors, and 4) governmental authorities. To prevent the failure of agrotourism policies, it is crucial to adopt effective governance strategies that consider stakeholders' needs and expectations. Encouraging the active participation of local communities is especially important. CHEN et al. (2013) argue that local voices can increase transparency and trust in the planning process, while Hall et al. (2011) emphasize the importance of involving actors from various levels in governance.

6.3 Governance Model

The complexity of agrotourism necessitates careful governance, coordination, and regulation to ensure smooth interaction between stakeholders. As a result, selecting an appropriate governance model is vital for the success of agrotourism development. Several governance approaches exist, including

community-based or bottom-up approaches, hierarchical or top-down models, and collaborative or participatory frameworks. Some countries may use a combination of these strategies, each with its strengths and weaknesses.

Community-based models foster a sense of ownership and involvement, though they may lack efficiency in decision-making compared to top-down models. Top-down approaches, prevalent in China, are more efficient in implementing policy directives but may slow decision-making due to multi-layered bureaucracies (Hua and Squires 2015). Agrotourism governance in China primarily follows a top-down model, in contrast to the bottom-up or community-based approaches in other countries like Indonesia and Brazil (Fazito, Scott, and Russell 2016). Chinese scholars like Jia et al. (2022) argue that the top-down governance model is better suited to the country's socio-economic and governance context, offering organizational support for grassroots stakeholders.

While top-down management provides a solid foundation, some argue that collaborative governance, which fosters equal participation, offers a more democratic and efficient solution. Waayers, Smith, and Malseed (2011) emphasize the need for coordination and collaboration between public and private actors in tourism governance.

6.4 Localism and Community-Centeredness

Localism plays a pivotal role in agrotourism, emphasizing the importance of local communities, resources, and adherence to local conditions in achieving agrotourism goals. Many agrotourism models embrace localism, promoting diversity and the utilization of rural resources such as agricultural development and local products. Previous research (He 2002; Sharpley 2010; Chin and Pehin Dato Musa 2021) highlights the significance of local conditions and resources in various aspects of agrotourism.

For instance, Chin and Pehin Dato Musa (2021) stress the importance of local food and product diversification to create multiple income sources for farms. He (2002) asserts that localism is a defining characteristic of rural tourism, while Sharpley (2010) argues that sustainable tourism must engage local communities in planning, development, and management, supported by government and industry.

6.5 Sustainability and Continuity

Sustainability is a key element of agrotourism, as noted by Awan, Saeed, and Zhuang (2016), who highlight the importance of the United Nations' Sustainable Development Goals (SDGs) in promoting land management practices. Agrotourism's close link to sustainability has been well-documented in previous studies (Ammirato et al. 2020). For example, Chin and Pehin Dato Musa (2021) found that in the wake of the COVID-19 pandemic, agrotourism farms had to innovate and remain competitive to ensure sustainable rural development.

Jin et al. (2021) argue that agrotourism is a vital path toward sustainable development for both developed and developing nations. In China, rural development has long been a government priority, and sustainable practices have been crucial to achieving this goal (Awan, Saeed, and Zhuang 2016). Sustainable strategies, such as the integration of resources and innovative business models, contribute to rural revitalization through agrotourism (Huang et al. 2018).

7. Previous Research on the Development of Agrotourism Complexes

The integration of modern agricultural-pastoral communities with leisure tourism to create agritourism complexes has recently attracted significant research interest (Songkhla and Somboonsuke 2013, Chen 2018, Ciolac, Adamov et al. 2019, Meng 2019, Zhao, Yi and Fu 2019, Wang, Kumar et al. 2020, Bonadonna, Peira et al. 2021, Kai 2021, Li, Zhang and Zhou 2021, Ferreira and Sánchez-Martín 2022, Ghadami, Dittmann et al. 2022). Given the distinct nature and goals of agriculture and tourism, achieving a balance between these sectors has been a primary concern for policymakers and practitioners. The key issue is that if this balance is not maintained, the expansion of tourism in rural areas may lead to the neglect of agricultural activities and the degradation of natural and ecological resources. To address this, many countries have attempted to optimize the synergy between tourism and agriculture through the concept of agro-tourism complexes. However, this approach has had its challenges, and in some places, such as Greece, agritourism has at times contributed to the decline of agriculture (Kizos and Iosifides 2007). Similarly, in China, concerns have arisen over the loss of traditional agricultural systems due to a shift in the economy from agriculture to tourism, a trend that has been particularly problematic over the past decade (Sun, Jansen-Verbeke et al. 2011), largely due to resource policies that prioritize the service and industrial sectors over agriculture (Ghadami, Dittmann et al. 2022).

Despite these concerns, numerous studies suggest that integrating agricultural-pastoral and tourism sectors is a complex process influenced by various structural and individual factors (Torres and Momsen 2011). A study by Ghadami, Dittmann et al. (2022) in Mazandaran, a northern province of Iran, identified several consequences of converting agricultural lands into tourism destinations. These include the limited ability of the agricultural sector to generate income and jobs compared to tourism, weaknesses in land use regulations and inter-organizational coordination in enforcing laws, inadequate property registration systems, and insufficient government support for agriculture. Additionally, there has been a rapid increase in land prices and a shift in farmers' attitudes, particularly among the younger generation, regarding agricultural activities and their perceived level of welfare. These findings suggest that the successful development of agritourism in rural areas requires carefully planned strategies that consider the local context and employ well-designed plans to ensure proper integration and transformation.

Wang et al. (2020) argue that integrating agriculture and tourism increases the versatility of the agricultural sector. They highlight that the development of rural complexes utilizes agricultural products and rural tourism projects, focusing on the promotion of agricultural goods and attracting tourists from nearby cities and regions for sightseeing and tourism. This, in turn, drives economic growth. Their study, which analyzed sustainable village development in China, offers design ideas for the XiangFeng Pastoral Complex in Guangzhou Province, proposing that these ideas can be applied in the planning and construction of pastoral complexes in other regions. As shown in Figure 4 the XiangFeng Pastoral Complex, designed by Wang et al. (2020), consists of four key functional areas to support agritourism activities: (1) a research and experience area (for agricultural training, picking, parent-child activities, etc.); (2) a catering business area; (3) a leisure accommodation area; and (4) a large-scale planting area for farming.

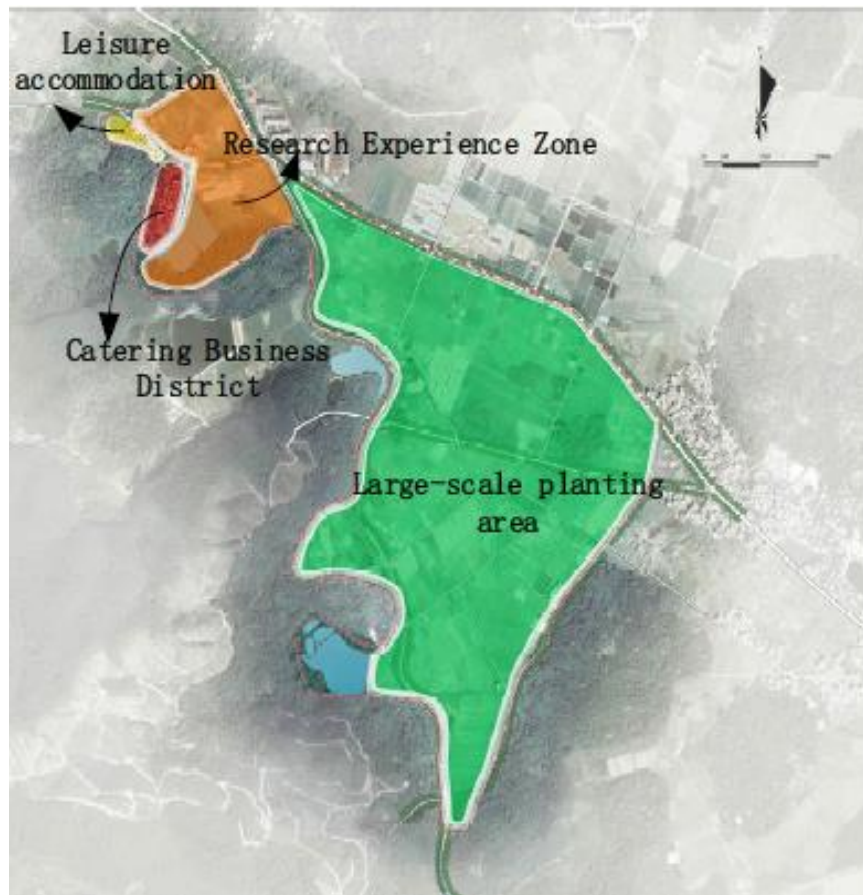


Figure 4. Functional Area Plan of the Design of XiangFeng Pastoral Complex in Guangzhou (Taken from (Wang et al. 2020))

The authors state that the design of the XiangFeng Pastoral Complex considers the needs of various agritourism user groups. Provisions have been made for different consumption purposes such as recreation, education, office work, group gatherings, outdoor activities, and learning experiences. The proposed design is said to offer multiple benefits, including contributions to sustainable development, easy transportation access, diverse product offerings, and alignment with national rural development goals. However, it also faces challenges like high investment demands, the need for infrastructure improvements, and the importance of enhancing business branding to better promote products and services.

In France, the government's initiative that introduced 'new farm tourism' and 'new green holiday tourism,' focusing on vineyards and wine-making workshops, has been a successful example of agritourism, leading to increased annual incomes for farmers. In this form of farm tourism, "visitors can not only taste delicious grapes and wine, but also observe the entire wine-making process, take home self-produced wine, and experience a pastoral lifestyle in a unique way compared to buying wine in urban settings" (Ruíz, Bohorquez and Rodríguez Molano 2017).

In Germany, three types of agritourism have emerged: holiday farms, citizen farms/parks, and rural museums, as noted by (Ruíz, Bohorquez and Rodríguez Molano 2017). Holiday farms repurpose unused rooms on farms to provide homestays for tourists, allowing them to experience rural life.

Citizen parks are located in urban or suburban areas and involve dividing land into small plots, which are rented out to individuals for gardening, offering them the opportunity to enjoy a leisure-filled rural lifestyle. This model of leisure agriculture has become a hallmark of European and American agritourism (Wang, Kumar et al. 2020).

Japan's approach to agritourism, known as 'tourist agriculture,' uses creative concepts to promote sightseeing agriculture. According to (Koo, Mendes-Filho and Buhalis 2019), Japanese agritourism involves a variety of farms offering diverse service models and unique concepts, showcasing vibrant rural landscapes that reflect Eastern philosophies. This appeals to both domestic and international tourists who are drawn to Japan's oriental culture. Tourists are also invited to participate in traditional agricultural activities such as harvesting, setting fishing nets, milking cows and sheep, grazing, and other agricultural leisure experiences (Koo, Mendes-Filho and Buhalis 2019).

8. Conclusion

In conclusion, the integration of agriculture and tourism presents a promising yet complex pathway for rural revitalization and sustainable development. This review highlighted the potential of agrotourism, particularly in China, while acknowledging the challenges of balancing agricultural and tourism activities. To achieve successful outcomes, it is crucial to consider empirical data, stakeholder input, and local context-specific factors. Drawing lessons from global agrotourism models can provide valuable insights for developing sustainable strategies. The study identified four key objectives for agrotourism revitalizing rural economies, enhancing agricultural competitiveness, optimizing resources, and promoting industrial transformation. Additionally, success in agrotourism depends on factors such as development focus, stakeholder collaboration, governance, local engagement, and sustainability. Ultimately, agrotourism's success lies in carefully navigating its multifaceted nature and addressing both structural and individual influences to foster sustainable rural development.

Declarations and Statements

Author contribution

Conceptualization, Zaharah Mohd Yusoff; methodology, Cai Ling; software, Cai Ling; validation, Cai Ling, Zaharah Mohd Yusoff, and Nor Aizam Adnan; formal analysis, Cai Ling; investigation, Cai Ling; resources, Cai Ling; data curation, Cai Ling; writing—original draft preparation, Cai Ling; writing—review and editing, Cai Ling and Nor Aizam Adnan; visualization, Cai Ling; supervision, Zaharah Mohd Yusoff and Nor Aizam Adnan; project administration, Zaharah Mohd Yusoff; funding acquisition, Cai Ling. All authors have read and agreed to the published version of the manuscript.

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All relevant data are within the paper.

Conflicts of Interest

The authors declare no conflict of interest.

References

1. Ammirato, S., et al. (2020). "Agritourism and sustainability: What we can learn from a systematic literature review." *Sustainability* **12**(22): 9575.
2. Aref, F. and S. S. Gill (2009). "Rural tourism development through rural cooperatives." *Nature and Science* **7**(10): 68-73.
3. Awan, S. A., et al. (2016). "The prospects of agritourism development in China." *Prospects* **7**(5).
4. Bao, Z. and T. Shi (2020). "Urbanization and ecological governance in pastoral areas." *Soc. Sci. China* **3**: 146-207.
5. Barbieri, C. and C. Valdivia (2010). "Recreation and agroforestry: examining new dimensions of multifunctionality in family farms." *Journal of Rural Studies* **26**(4): 465-473.
6. Bernués, A., et al. (2011). "Sustainability of pasture-based livestock farming systems in the European Mediterranean context: Synergies and trade-offs." *Livestock Science* **139**(1-2): 44-57.
7. Bhatta, K. and Y. Ohe (2020). "A review of quantitative studies in agritourism: The implications for developing countries." *Tourism and Hospitality* **1**(1): 23-40.
8. Bonadonna, A., et al. (2021). "Rural tourism destination: The Ligurian farmers' perspective." *Sustainability* **13**(24): 13684.
9. Che, D. (2008). "Agritourism and its potential contribution to the agricultural economy." *CABI Reviews*(2007): 7 pp.
10. Che, D., et al. (2005). "Sustaining production and strengthening the agritourism product: Linkages among Michigan agritourism destinations." *Agriculture and Human values* **22**: 225-234.
11. Chen, S. (2018). *New Theory of Tourism* [M]. Beijing Beijing Institute of Technology Press.
12. Chen, Z., et al. (2013). "The Organizational Evolution, Systematic Construction and Empowerment Significance of Langde Miao's Community Tourism." *Tourism Tribune/Lvyou Xuekan* **28**(6).
13. Cheng, S., et al. (2011). "Tourism potential of agricultural heritage systems." *Tourism Geographies* **13**(1): 112-128.
14. Chin, W. L. and S. F. Pehin Dato Musa (2021). "Agritourism resilience against COVID-19: Impacts and management strategies." *Cogent Social Sciences* **7**(1): 1950290.
15. Choithani, C. (2020). "Gendered livelihoods: Migrating men, left-behind women and household food security in India." *Gender, Place & Culture* **27**(10): 1373-1394.
16. Ciolac, R., et al. (2019). "Agritourism-A Sustainable development factor for improving the 'health' of rural settlements. Case study Apuseni mountains area." *Sustainability* **11**(5): 1467.
17. Dai, B., et al. (2017). "China's outbound tourism—Stages, policies and choices." *Tourism management* **58**: 253-258.

18. Dredge, D. (2006). "Networks, conflict and collaborative communities." *Journal of Sustainable Tourism* **14**(6): 562-581.
19. Europe, C. o. (2023). "European Landscape Convention. 2000." from <https://rm.coe.int/16802f80c6>.
20. Faysse, N., et al. (2020). "Mainly farming... but what's next? The future of irrigated farms in Thailand." *Journal of Rural Studies* **73**: 68-76.
21. Fazito, M., et al. (2016). "The dynamics of tourism discourses and policy in Brazil." *Annals of Tourism Research* **57**: 1-17.
22. Feng, L. (2021). Agri-tourism and Rural Revitalization in China's Peri-urban Areas: The Case of Dutang.
23. Ferreira, D. I. R. and J.-M. Sánchez-Martín (2022). "The assessment of the tourism potential of the Tagus international nature reserve landscapes using methods based on the opinion of the demand." *Land* **11**(1): 68.
24. Galdeano-Gómez, E., et al. (2011). "The complexity of theories on rural development in Europe: An analysis of the paradigmatic case of Almería (South-east Spain)." *Sociologia ruralis* **51**(1): 54-78.
25. Gellrich, M., et al. (2007). "Agricultural land abandonment and natural forest re-growth in the Swiss mountains: a spatially explicit economic analysis." *Agriculture, Ecosystems & Environment* **118**(1-4): 93-108.
26. Ghadami, M., et al. (2022). "Factors affecting the change of agricultural land use to tourism: A case study on the Southern Coasts of the Caspian Sea, Iran." *Agriculture* **12**(1): 90.
27. Gong, J., et al. (2022). "Transitions in rural settlements and implications for rural revitalization in Guangdong Province." *Journal of Rural Studies* **93**: 359-366.
28. Gongbuzeren, et al. (2021). "The role of community cooperative institutions in building rural–urban linkages under urbanization of pastoral regions in China." *Frontiers in Sustainable Food Systems* **5**: 612207.
29. Gu, C. (2019). "Urbanization: positive and negative effects." *Science Bulletin* **64**(5): 281-283.
30. Hall, R., et al. (2011). "Towards a better understanding of global land grabbing: an editorial introduction." *The Journal of Peasant Studies* **38**(2): 209-216.
31. Havlicek, Z., et al. (2009). "ICT and agritourism in Czech Republic." *APSTRACT: Applied Studies in Agribusiness and Commerce* **3**.
32. He, J. M. a. L., L.H. (2002). "the Concept of Rural Tourism." *Journal of Southwest Normal University* **5**: 127-128.
33. Hua, L., Yang, S., Squires, V., Wang, G. (2015). "An alternative rangeland management strategy in an agro-pastoral area in western China." *Rangeland ecology & management* **68**(2): 109-118.

34. Hua, L. and V. R. Squires (2015). "Managing China's pastoral lands: Current problems and future prospects." *Land Use Policy* **43**: 129-137.
35. Huang, C., et al. (2018). "Hydrogeological features of water supply in city center of Nanchang City." *J. Nanchang Inst. Technol* **37**: 12-16.
36. Iakovidou, O. (2000). "Agro-tourism in Greece: the case of women agro-tourism co-operatives of Ambelakia." *Medit* **8**(1): 44-47.
37. Jia, S. F., Wang, X. P., Liu, Z. W., Xiao, Z., Jin, L. P., & Bi, H. (2011). "Study on international experiences of agri-tourism and its inspiration for Hainan tropical agri-tourism." *Journal of Green Science and Technology* **4**.
38. Jia, Z., et al. (2022). "Rural tourism competitiveness and development mode, a case study from chinese township scale using integrated multi-source data." *Sustainability* **14**(7): 4147.
39. Jin, X., et al. (2021). "Agritourism development in the USA: The strategy of the state of Michigan." *Sustainability* **13**(20): 11360.
40. Jin, Y. and W. Li (2019). "Impacts of Spontaneous Migration and Policy-Driven Migration on the Livelihood of Pastoralists: A Case Study in Nangqian County, Yushu Tibetan Autonomous Prefecture of Qinghai Province." *Beijing Da Xue Xue Bao* **55**(6): 1119-1128.
41. Kai (2021). "Xiangyi Rural Complex Project of Jilin City." from Retrieved from http://www.jl.gov.cn/szfzt/tzcyj/zdxm/english/ly/202104/t20210419_8030840.html.
42. Karampela, S., et al. (2019). "Perceptions of agritourism and cooperation: Comparisons between an Island and a mountain region in Greece." *Sustainability* **11**(3): 680.
43. Keyim, P. (2018). "Tourism collaborative governance and rural community development in Finland: The Case of Vuonislanti." *Journal of travel research* **57**(4): 483-494.
44. Kizos, T. and T. Iosifides (2007). "The contradictions of agrotourism development in Greece: evidence from three case studies." *South European Society & Politics* **12**(1): 59-77.
45. Koo, C., et al. (2019). "Smart tourism and competitive advantage for stakeholders: Guest editorial." *Tourism Review* **74**(1): 1-4.
46. Li, W., Zhang, Z., Zhou, Y. (2021). "Policy strategies to revive rural land in peri-metropolitan towns: resource identification, capitalization, and financialization." *Land* **10**(2): 132.
47. Li, Y., Westlund, H., Liu, Y. (2019). "Why some rural areas decline while some others not: An overview of rural evolution in the world." *Journal of Rural Studies* **68**: 135-143.
48. Liu, R. and T.-C. Wong (2019). "Rural tourism in globalizing Beijing: Reproduction of the mountainous suburbs into a new space of leisure consumption." *Sustainability* **11**(6): 1719.
49. Ma, W., et al. (2018). "How do population decline, urban sprawl and industrial transformation impact land use change in rural residential areas? A comparative regional analysis at the peri-urban interface." *Journal of Cleaner Production* **205**: 76-85.

50. Marín-Yaseli, M. and T. Lasanta (2003). "Competing for Meadows: A Case Study on Tourism and Livestock Farming in the Spanish Pyrenees." *Mountain Research and Development* **23**: 169-176.
51. Meng, T. (2019). "Study on motivation mechanism and countermeasures of integration of agriculture and tourism industry based on value chain." *Jiangsu Agricultural Sciences* **47**(6): 320-324.
52. Metternicht, G. (2017). "Land use planning." *Global Land Outlook (Working Paper)* **2**(3): 25-31.
53. Midi, H., et al. (2010). "Collinearity diagnostics of binary logistic regression model." *Journal of interdisciplinary mathematics* **13**(3): 253-267.
54. Nematpour, M. and M. Khodadadi (2021). "Farm tourism as a driving force for socioeconomic development: A benefits viewpoint from Iran." *Current Issues in Tourism* **24**(2): 247-263.
55. Palmi, P. and G. E. Lezzi (2020). "How authenticity and tradition shift into sustainability and innovation: Evidence from Italian agritourism." *International Journal of Environmental Research and Public Health* **17**(15): 5389.
56. Park, E. and A. Widyanta (2022). "Food tourism experience and changing destination foodscape: An exploratory study of an emerging food destination." *Tourism Management Perspectives* **42**: 100964.
57. Phillip, S., et al. (2010). "A typology for defining agritourism." *Tourism management* **31**(6): 754-758.
58. Ren, Y. (2017). "Under the New Normal, the Integration of Rural Tourism Industry and Traditional Agriculture in China Is Optimized." *Agricultural Economy*(10): 38-40.
59. Roberts, L. and D. Hall (2001). *Rural tourism and recreation: Principles to practice*, Cabi.
60. Roman, M. and B. Golnik (2019). "Current status and conditions for agritourism development in the Lombardy region." *Bulgarian Journal of Agricultural Science* **25**(1).
61. Ruíz, M., et al. (2017). "Colombian Tourism: Proposal App to Foster Smart Tourism in the Country." *Advanced Science Letters* **23**: 10533-10537.
62. Saarinen, J. and S. Wall-Reinius (2019). *Enclaves in tourism: producing and governing exclusive spaces for tourism*, Taylor & Francis. **21**: 739-748.
63. Santucci, F. M. (2017). "Agritourism for Rural Development in Italy, Evolution, Situation and Perspectives." *Fundamental and Applied Studies in EU and CIS Countries*: 302.
64. Sarmiento-Mateos, P., et al. (2019). "Designing protected areas for social–ecological sustainability: Effectiveness of management guidelines for preserving cultural landscapes." *Sustainability* **11**(10): 2871.
65. Sayer, J., et al. (2013). "Ten principles for a landscape approach to reconciling agriculture, conservation, and other competing land uses." *Proceedings of the National Academy of Sciences of the United States of America* **110**: 8345-8348.

66. Sharpley, R. (2010). "The myth of sustainable tourism." *CSD Center for Sustainable Development* **4**: 1-14.
67. Singh, C., et al. (2021). "Losses and damages associated with slow-onset events: urban drought and water insecurity in Asia." *Current Opinion in Environmental Sustainability* **50**: 72-86.
68. Solecka, I., et al. (2018). "Landscape analysis for sustainable land use policy: A case study in the municipality of Popielów, Poland." *Land Use Policy* **75**: 116-126.
69. Songkhla, T. N. and B. Somboonsuke (2013). "Interactions between agro-tourism and Local Agricultural Resources Management: a case study of agro-tourism destinations in Chang Klang District, Southern Thailand." *Discourse journal of agriculture and food sciences* **1**(4): 54-67.
70. Sonnino, R. and T. Marsden (2006). *Alternative food networks in the south west of England: towards a new agrarian eco-economy? Between the Local and the Global*, Emerald Group Publishing Limited: 299-322.
71. Stoffelen, A. and D. Vanneste (2016). "Institutional (dis) integration and regional development implications of whisky tourism in Speyside, Scotland." *Scandinavian Journal of Hospitality and Tourism* **16**(1): 42-60.
72. Stoyanets, N., et al. (2019). "The evolution and experience of China's rural governance reform." *Agricultural and Resource Economics: International Scientific E-Journal* **5**(2): 40-50.
73. Sun, Y., et al. (2011). "Tourism potential of agricultural heritage systems." *Tourism Geographies* **13**(1): 112-128.
74. Sznajder, M. P., L.; Scrimgeour, F (2009). *Agritourism*. UK, CABI:Wallingford.
75. Toonen, W. H. (2013). *A Holocene flood record of the Lower Rhine*, Utrecht University.
76. Torres, R. and J. Momsen (2011). *Tourism and agriculture: new geographies of consumption, production and rural restructuring*, Routledge.
77. UNCCD (2017). *United Nations Convention to Combat Desertification (UNCCD)*.
78. Van der Ploeg, J. D. (2008). *The new peasantries*. London, Earth Scan.
79. Waayers, D., et al. (2011). "Inter-nesting distribution of green turtles (*Chelonia mydas*) and flatback turtles (*Natator depressus*) at the Lacepede Islands, Western Australia." *Journal of the Royal Society of Western Australia* **94**(2): 359.
80. Wang, T., et al. (2021). *A Review of China's Rural Tourism Research*. 2nd International Conference on Management, Economy and Law (ICMEL 2021), Atlantis Press.
81. Wang, W., et al. (2020). "Realizing the potential of the internet of things for smart tourism with 5G and AI." *IEEE network* **34**(6): 295-301.
82. Washul, E. (2018). "Tibetan translocalities: navigating urban opportunities and new ways of belonging in Tibetan pastoral communities in China." *Critical Asian Studies* **50**(4): 493-517.
83. Xiao, Y., et al. (2001). "On the concept and types of rural tourism." *Tourism Science* **3**(1): 8-10.

84. Xie, Y. and S. Schöbel-Rutschmann (2015). "Identifying and Reactivating Historic Cultural Landscape Elements as Green-Blue Infrastructure for Polder Urbanization. A Case Study of Suzhou, Yangtze River Delta Region." *Habitat International* **30**(2): 245-260.
85. Xu, H., et al. (2021). "China: a new trajectory prioritizing rural rather than urban development?" *Land* **10**(5): 514.
86. Yang, Y. (2017). "From hollowing area to livable rural area." Developing agritourism from a perspective of landscape design as a catalyst for sustainable rural development Case study in Shenyang, China: MSc Thesis Landscape Architecture Wageningen University.
87. Yang, Z., et al. (2010). "Agro-tourism enterprises as a form of multi-functional urban agriculture for peri-urban development in China." *Habitat International* **34**(4): 374-385.
88. Yang, Z., et al. (2016). "Peri-urban agricultural development in Beijing: Varied forms, innovative practices and policy implications." *Habitat International* **56**: 222-234.
89. Yi, Y., et al. (2019). "Research on the integration and development of modern agriculture and rural tourism based on AHP—take Yangjia town in Mianyang city as an example." *Open Journal of Social Sciences* **7**(7): 76-87.
90. Yin, X., et al. (2022). "Rural innovation system: Revitalize the countryside for a sustainable development." *Journal of Rural Studies* **93**: 471-478.
91. Zhang (2011). "Study on the development mode and countermeasures of agricultural tourism in New Rural Construction. ." *Review of Economic Research*: 52-55.
92. Zhao, C., et al. (2019). "Research on the integration and development of modern agriculture and rural tourism based on AHP—take Yangjia town in Mianyang city as an example." *Open Journal of Social Sciences* **7**(7): 76-87.
93. Zhu, F., et al. (2018). "Rural industrial restructuring in China's metropolitan suburbs: Evidence from the land use transition of rural enterprises in suburban Beijing." *Land Use Policy* **74**: 121-129.
94. Zoderer, B. M., et al. (2019). "An integrated method for the mapping of landscape preferences at the regional scale." *Ecological Indicators* **106**: 105430.