Developing Sustainable Design Strategies for Agritourism Accommodations in Shree Antu, Ilam, Nepal

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Abstract

Agritourism is an emerging concept that integrates agriculture with tourism, allowing visitors to engage in farming activities such as planting and harvesting while local producers provide lodging, meals, and guided experiences. Globally, agritourism often emphasizes farming practices, agricultural products, and recreational activities; however, in Nepal, it is distinguished by its focus on local cuisine, handicrafts, and rural hospitality. The research identifies a lack of awareness regarding agritourism, of its hospitality components, and the negative impacts of mass tourism as major challenges in the study area. This paper examines the current state of agritourism in Shree Antu, Ilam, and explores design strategies for sustainable agritourism accommodations. The NOISE framework (Needs, Opportunities, Improvements, Strengths, and Exceptions) is employed to evaluate existing accommodation practices. To better understand visitor perceptions and experiences, Google reviews of local accommodations were analyzed. Drawing on previous research and contextual analysis, the study proposes general architectural planning and design guidelines for agritourism accommodations, including farm stays, cottages, and eco-resorts. The findings emphasize that achieving sustainability requires accommodations to be carefully sited and oriented to capture natural views, constructed with locally sourced materials, and equipped with appropriate thermal insulation across building zones. Ultimately, agritourism accommodations should adhere to sustainable architectural principles while reflecting the local architectural character. The outcome of this research aims to inform architects, property owners, and potential investors, fostering the growth of agritourism and supporting sustainable rural development in Nepal.

Keywords*: Agritourism, Climate-responsive Design, Sustainable Architecture, Vernacular Architecture*

Introduction

Agritourism integrates agricultural activities with tourism, enabling visitors to engage in leisure experiences within rural landscapes (Sznajder et al., 2009). It offers opportunities to experience farm life, interact with nature, and explore local culture and traditions, serving as a restorative escape from urban environments (Alar, 2024). The global agritourism market demonstrates robust growth, valued at approximately USD 73.2 billion in 2024 and projected to reach USD 205.6 billion by 2033 (Group, 2025). In Nepal, where agriculture remains the economic backbone, agritourism presents significant opportunities (Yogi et al., 2025). With approximately 60% of the labour force engaged in farming and agriculture contributing nearly a quarter of the GDP, the country leverages its rural assets through local cuisine, home stays, handicrafts, and low-impact tourism(Park & Yoon, 2011). Regions such as Ilam and the Eastern Terai are noted for their tea gardens, scenic beauty, and unique local products like dried cheese (Bhatta, 2020). These areas sustain diverse agricultural production including buckwheat, millet, and citrus in the hills, and tea, coffee, ginger, and cardamom as major cash crops contributing to the rural economic development and the emergence of agriculture based tourism hubs (Khanal & Shrestha, 2019).

Although tourism significantly contributes to economic development, rural communities in Nepal still largely adhere to the traditional view that agriculture is their primary source of income (Kaini, 2019). Khanal and Shrestha (2019) observed that despite the hard work of rural farmers, their income remains insufficient to meet household expenses. Shree Antu, one of the prominent tourist destinations in Koshi Province, received 85,326 visitors in fiscal year 2080/81. Prior to the COVID-19 pandemic, Ilam experienced a remarkable tourism boom, attracting 133,445 and 129,581 visitors in fiscal years 2079/80 and 2078/79, respectively; however, the number dropped to 29,811 during the pandemic (Media, 2024). Despite its potential, Shree Antu's tourism sector remains underdeveloped due to short visitor stays, inadequate facilities, limited private-sector involvement, and low local

awareness (Shree & Kaini, 2021). Additional challenges include poor road connectivity, lack of public transportation and hospitality training, limited market access, language barriers, inadequate local food options, guest misbehavior, unrealistic service expectations, and the absence of essential facilities such as banks, hospitals, information centers, and promotional activities (Bhattarai & Adhikari, 2021).

Agritourism presents a viable opportunity for sustainable development in regions like Shree Antu by offering immersive experiences in traditional farming and tea cultivation (Turtureanu et al., 2025). The architectural design of agritourism accommodations plays a pivotal role in ensuring sustainability and enhancing visitor appeal (Fanelli & Romagnoli, 2020). Analyzing architectural practices in Shree Antu can thus provide insights into the integration of sustainable design principles that strengthen the interrelationship between tourism, agriculture, and the environment (Bhatta & Ohe, 2020). Effective agritourism development requires careful planning, as it merges agricultural and tourist activities, often resulting in high energy use and waste generation (Tseng et al., 2019). Therefore, environmentally responsive design is essential to minimize negative impacts and ensure the long-term sustainability of agritourism ventures (Subagya & Trimarianto, 2017).

Objective

To examine vernacular and contemporary architectural characteristics of existing agritourism accommodations and to formulate sustainable design strategies for future agritourism developments in Shree Antu, Ilam, Nepal.

Literature Review

Agritourism combines agriculture and tourism, incorporating three key elements: accommodation, food, and entertainment. Farmers can generate additional income by renting out surplus rooms without disrupting their agricultural activities. The food component is a direct channel for selling farm produce, often highlighting traditional, locally sourced cuisine, which provides a dual benefit to both the farm and the surrounding region. Entertainment centers on authentic farm activities, offering tourists opportunities for both passive observation and active participation (Ciolac et al., 2019). The operational framework of agritourism positions it as a sustainable tourism modality, intrinsically linked to the preservation of local cultural assets and traditional agrarian practices. This segment promotes economic resilience by favoring local procurement and supporting small-scale rural enterprises. Furthermore, it explicitly endorses activities that safeguard cultural heritage while simultaneously advocating for environmentally sound practices and judicious resource consumption, specifically minimizing reliance on non-renewable inputs. Patterson and Aslam (2024) note that economic diversification imperatives, particularly within Less Developed Countries (LDCs), have driven the proliferation of agritourism, providing farmers with mechanisms to mitigate market volatility and adapt to climate-related risks. Consistent with Ammirato et al. (2020), sustainable agritourism necessitates a tripartite balance across economic viability, ecological stewardship, and sociocultural sensitivity, encompassing a spectrum of offerings from pedagogical tours to hospitality services.

Maximizing the financial utility derived from agritourism initiatives requires a deliberate and rigorous consideration of the architectural design and formal integration of these destinations within the rural landscape. Architects are pivotal in formulating integrated designs that not only sustain local economies but also ensure the preservation of the area's natural and cultural patrimony (Dwyer et al., 2019). The design process is inherently governed by principles of sustainable architecture, echoing the tenets of the Brundtland Commission, which stress energy and land-use efficiency, material optimization (favoring local and recycled content), adoption of innovative technologies, and robust waste management protocols (Syam et al., 2023). Strategic architectural interventions such as the design of farm-to-table dining facilities, ecologically sensitive lodging units that achieve contextual harmony, and flexible spatial configurations for recreational and educational functions are

instrumental in fostering regional economic growth and enhancing the socioeconomic well-being and resilience of rural communities (Geng et al., 2024).

Despite its potential, tourism's economic benefits often suffer from unequitable distribution, posing a significant challenge to inclusive community development. A study in mountain settlements, such as Nepal's Everest region, found that benefits largely accrue to residents along major trails (MT), including tourism entrepreneurs, while disadvantaged groups (e.g., farmers and laborers) residing off-trail (OT) receive fewer returns (Bhatta & Chan, 2023). This imbalance is compounded by persistent economic issues like leakages (money leaving the local economy), high inflation, and poor integration of local products into the tourism system. To ensure genuine sustainable and inclusive community development, a comprehensive tourism planning approach is imperative. This approach must actively ensure the inclusive participation of local people from all areas, facilitate the equitable sharing of tourism benefits, and implement strategies to reduce economic leakages (Bhatta & Chan, 2023).

Beeton (1998) describes accommodations as human-designed, organized, or managed spaces that allow visitors to stay and enjoy their surroundings, created specifically to fulfill various human needs. These spaces ranging from campgrounds and resorts to hotels and home stays can function as either temporary or long-term facilities. Within agritourism, the scope of services extends well beyond agricultural engagement and includes a broad array of lodging options. These may consist of farm stays, cottage accommodations, agri-hotels or motels, self-catered units, agri-camping sites, and other specialized forms of agri-lodging (Sznajder et al., 2009).To examine vernacular and contemporary architectural characteristics of existing agritourism accommodations and to formulate sustainable design strategies for future agritourism developments in Shree Antu, Ilam, Nepal. The sustainability of agritourism is challenged by recurring operational constraints, including high capital barriers, labor shortages, and logistical issues like bureaucratic delays and waste management deficiencies (Alar, 2024). Overcoming these requires the adoption of informed policies and site-specific strategies coupled with robust stakeholder training. Furthermore, enhancing market competitiveness and supporting community-based tourism (CBT) relies on simultaneously improving tourism products, services, staff competencies, and facilities (Somnuek, 2022).

The successful establishment of agritourism necessitates a holistic integration of educational, architectural, locational, and infrastructural elements. Educationally, agro-tourism sites must actively impart knowledge about agriculture (Faisala & Latifb, 2010). Architecturally, construction and materials for accommodation must reflect local culture, be climatically appropriate, and promote existing technology, ensuring buildings are linked to nature and community culture to blend with the surroundings (Faisala & Latifb, 2010). Locational and planning suitability requires careful consideration of zoning, carrying capacity, waste management, energy efficiency, security, accessibility, landscape appeal, and the provision of diverse community-generating and academic activities (Siriphanich et al., 2013). This planning must adhere to a basic land-use structure comprising nine essential zones: tourist service, home stay, farm service, office/shop, crop/animal farm, production/processing, owner's residence, circulation, and future development zones (Siriphanich et al., 2013). Operationally, the farm must be accessible and equipped with mandatory facilities and amenities, including reception, parking, dining areas featuring local food, farm shops, and farming guidance, supported by necessary infrastructure like interior roadways, walking paths, and reliable clean water and communication services. Also, safety and security protocols are mandatory, encompassing personnel, signage, no-entry zones, firefighting and first aid facilities, and animal information, alongside strict sanitation standards for restrooms, drinking water, and waste disposal (Mahaliyanaarachchi, 2015).

Ecotourism accommodation must be intentionally designed as small-scale facilities that profoundly integrate local architecture, cultural heritage, and natural characteristics, aiming simultaneously for environmental conservation and direct socioeconomic benefits for the host community (Fischer-Zemin & Schipani, 2005). Achieving this requires rigorous adherence to sustainability and passive design principles, including preserving traditional forms, choosing strategic locations with accessible

transport, and implementing resource-saving measures like rainwater harvesting and energy-saving strategies (Pokharel, 2017). Furthermore, the design must prioritize the use of locally available materials, optimize building orientation for ample natural light and ventilation, and incorporate adequate insulation and design features (e.g., facade considerations, wind-escaping techniques) to effectively manage heat exposure and humidity (Pokharel, 2017). Operationally, successful ecotourism accommodations must be situated in quiet natural settings to capitalize on the best views, actively minimize waste, and proactively educate guests by providing essential cultural guidelines (Fischer-Zemin & Schipani, 2005)

Agritourism necessitates a holistic, design-led approach that strategically merges architecture, agriculture, and tourism to facilitate sustainable rural development (Sula, 2024). This requires stakeholders to combine traditional knowledge with modern design concepts to create destinations that celebrate local identities, strengthen economic resilience, and preserve natural resources (Sula, 2024). Essential built environment elements such as visitor centers, learning areas, accommodations, and circulation pathways must be integrated through functional zoning that effectively balances tourism and agriculture (Sangkakool, 2021). Key design considerations include accessibility, local architectural integration, and eco-friendly construction (Sangkakool, 2021). Furthermore, the adaptation of local homes for home stays, as examined by Oranratmanee (2011), demonstrates how spatial adaptations can support cultural preservation and financial benefits, though challenges remain in maintaining traditional aesthetics and managing cultural exchange.

Methodology

The paper employs a qualitative case study approach to analyze the vernacular and contemporary architectural techniques utilized for sustainable agritourism, focusing exclusively on Shree Antu, Ilam, Nepal. Data collection involves site observations and architectural documentation, complemented by content analysis of Google Reviews (which uses a 5-star Rating Scale) to understand guest perspectives along with researcher own experiences with accommodations. Using a convenience sampling method, the study selected 43 accommodations in Shree Antu, which emphasizes tea gardens, home stay-based agritourism, and vernacular architecture incorporating bamboo, wood, and stone. The analysis of Shree Antu's accommodations specifically considers three major factors sociocultural, environmental, and economic The current state of agritourism accommodation is systematically examined using the Needs, Opportunities, Improvements, Strengths, and Exceptions (NOISE) method, which is tabulated across architectural features and sustainability strategies like energy efficiency, water conservation, waste management, climatic and disaster response, pollution control, and passive design. The figure below shows that the study area is located on the northeastern part of Nepal in Suryodaya Municipality of Ilam district, and the hilly landform of the study area.

Results and Discussion

Shree Antu, located within Suryodaya Municipality and sharing a border with West Bengal, India (connected via Pashupati Nagar), is a notable tourist destination celebrated for its lush green hillocks, tea gardens, and cultural richness, offering high potential for ecotourism and cultural travel. The area's diverse cultural makeup includes major ethnic groups such as Limbu, Rai, Lepcha, Magar, and Tamang. Known primarily for its stunning natural resources, including the cool and windy climate, Antu Pokhari, Bhanjyang, Chiruwa, and opulent tea plantations, the 24-square-kilometer area is also a significant producer of organic agricultural materials like tea, cardamom, and garlic. The local economy sees tourism as a larger sector than agriculture, evidenced by 42 different housing options, which include hotels, cottages, resorts, and home stays. Accommodation planning in Shree Antu is heavily influenced by the sloping hill landscape and the focus on agritourism and ecotourism activities, with most

services clustered around Shree Antu Lake (Antu Pokhari), which acts as a central datum, and the Antu View Tower. Tourists, primarily arriving from Fikkal Bazar via private or rented vehicles, seek a cold environment, beautiful lake views, and tea garden scenery. The cost of lodging ranges widely, with home stay rooms priced between 500 and 1500 Nepali Rupees per day, and farm stay/hotel rooms starting from 1000 to 6000 NPR a night. Furthermore, tourist activities like horseback riding, boating, and view tower visits cost between 100 and 500 Nepali Rupees.

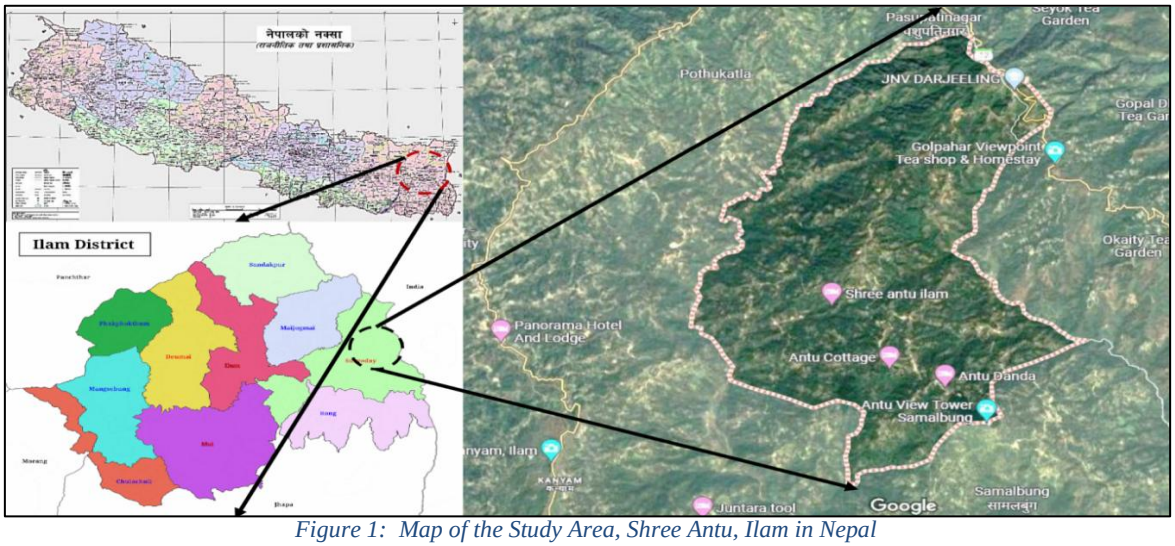

Figure 1: Map of the Study Area, Shree Antu, Ilam in Nepal

Architecturally, the structures are adapted to the site's sloping topography, cold climate, and high rainfall (especially in June and July). The most common construction types are wooden frames, reinforced cement concrete, and load-bearing stone masonry, with interiors often insulated with hardwood planks against the cold. The majority of homes feature slanted roofs made of CGI sheets supported by timber or steel trusses. While most residents are engaged in domestic and agricultural activities with cardamom, garlic, and tea being the three principal crops, the region's natural beauty and established lodging infrastructure position Shree Antu as a growing hub for tourism. The figure below shows search results from a topographic map of Shree Antu Pond drawn by the researcher and accommodations nearby it.

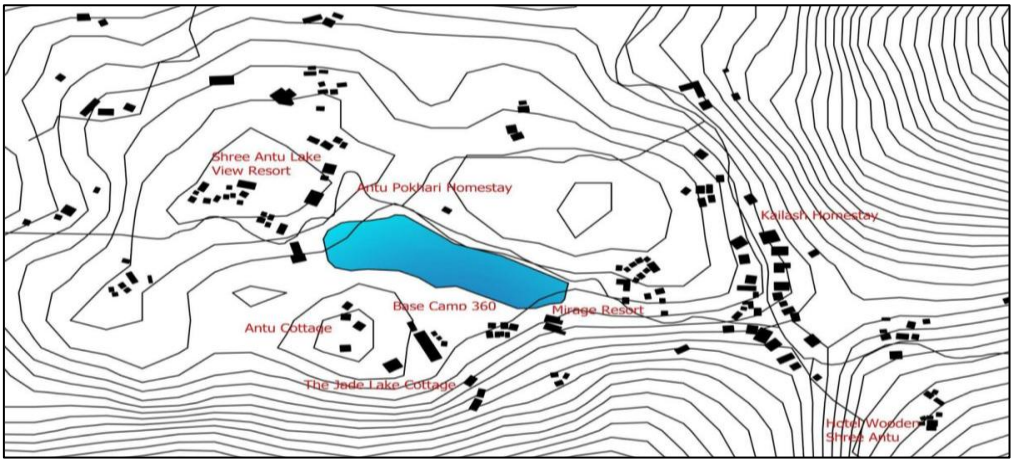

Figure 2: Shree Antu Pond and Accommodations

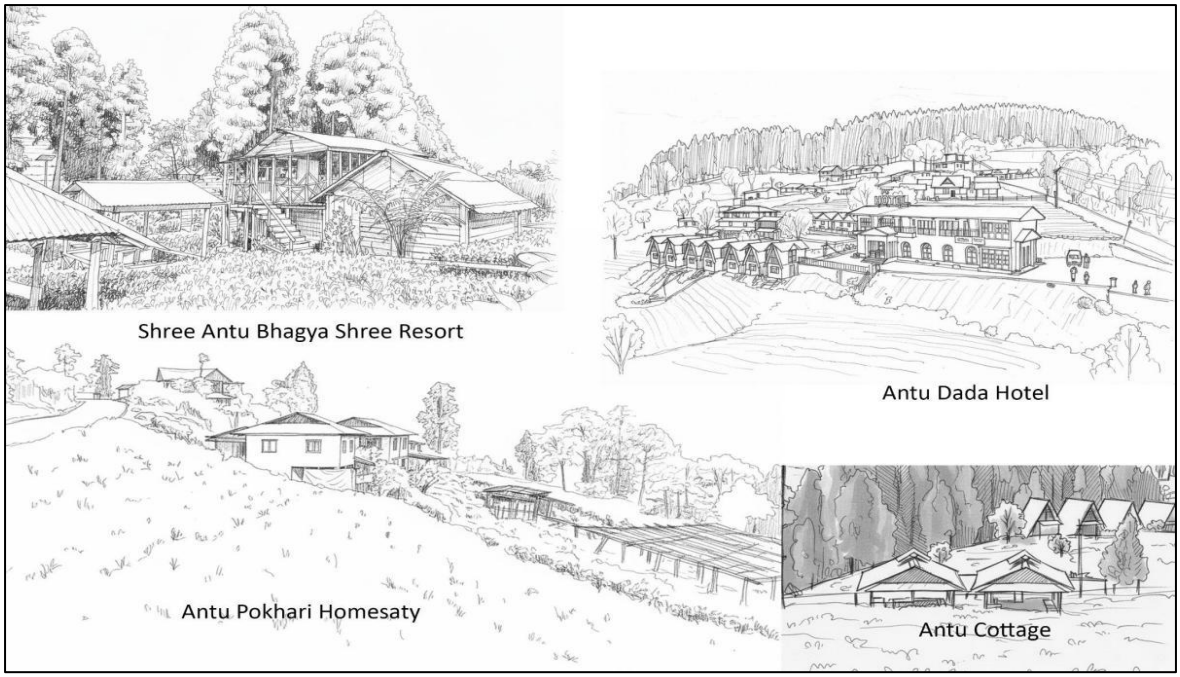

Figure 3: Sketches of the Accommodations around Shree Antu Pond

The sketch above is created by the researcher presents diverse accommodation examples in Shree Antu, illustrating the regional architectural style, local building material use, and integration into the landscape, such as at the Shree Antu Bhagya Shree Resort, distinctive design elements, including the specific roof forms and exterior color palettes, are noticeable in the Antu Dada Hotel, while Antu Pokhari Home stay further showcases characteristic local architecture, particularly its roof design. Antu Cottage shows how accommodation is integrated with the tea garden. The NOISE (Needs, Opportunities, Improvements, Strengths, and Exceptions) analysis, as applied to the agritourism accommodations in Shree Antu, Ilam, Nepal, systematically examines the current state across sociocultural, environmental, and economic factors. Based on the study's scope (which uses site observations, architectural documentation, and content analysis of Google Reviews), the detailed breakdown is provide on the table below.

Table 1: Detailed NOISE Analysis

N (Needs) Accessible modes of transportation, Enough room, Affordable lodging, Parking garage, Records of the number of visitors and information on crowd control, Warm rooms, Educational programs and environments focused on agritourism, A good drainage system Materials for floors, walls, and roofs that are thermally insulated
O (Opportunities) The natural landscape and good views, Favorable site setting for agritourism business, An increasing number of domestic tourists
I (Improvements) Tourism marketing, information, and security, Hospitality, sanitation, and healthy food services, Knowledge about technological advancement in the agritourism industry, Knowledge of building construction and insulation techniques
S (Strengths) The long history of the agritourism business, Location, climate and views, Availability of local building materials

E (Exceptions)
Health services and transit facilities, Similar to the natural and cultural landscape with bordering countries.

Sustainable Agritourism Accommodations in Shree Antu, Nepal are tabulated for architectural features and sustainability strategies such as energy efficiency, water conservation, waste management, climatic response, disaster response, pollution, passive design strategies, and other aspects.

Table 2: Sustainable Agrtourism Criteria

Architectural Features	
Architectural Typology	Traditional wooden and bamboo home stays
Spatial Organization	Courtyard-based, terraced houses with shared spaces
Construction Techniques	Vernacular and Contemporary techniques
Building Materials	Locally sourced bamboo, wood, and stone
Sustainability Strategies	
Energy Efficiency	Solar panels, biogas use
Water Conservation	Rainwater harvesting, spring water use
Waste Management	Composting, organic waste recycling
Climate Response	Insulated walls, pitched roofs for rainfall
Disaster Response	Planned according to the sloping landscape
Pollution Response	Green Landscapes
Passive design strategies	Integrating structures with the natural topography
Other	
Tourist Experience	Tea garden stays, cultural interactions
Local Community Involvement	Homestay model run by local families
Sustainability Certification	Some homestay follows eco-tourism guidelines

The table above shows and analyses details of sustainable strategies for the accommodation and tourism. After analyzing the Google Reviews left by past visitors and site visit and observation by the researcher, the most common issues are capacity, availability, booking system, and price. Certain societal issues, such as parking shortages and loud noises at night, are also evident. The biggest issue with lodging is the absence of basic hotel amenities like hot water, additional blankets, hygienic food, and sanitation. Poor roofs, flooring, and heat insulation are the main architectural issues. Most reviewers praised the hotel's scenic beauty and location, especially around Antu Lake. They are satisfied with the accommodation's current services, such as food and drinks. During their stay, they appreciated the ambiance by appreciating the architectural features like the high gable form of the roof, the wooden teak interior design, and the wooden exterior walls and cladding. Researchers have also spent 3 days in Antu Dada Hotel, and observed most of the accommodation by themselves.

After considering the requirements of Shree Antu and references from past studies, the placement of agritourism farms and hotels should be on-site, easily accessible, and connected to the major highway by whatever means. The qualities of the farm, the surrounding environment, and the views would define the ideal site for lodging. Just the natural environment has been considered in the case of Shree Antu, and less attention has been paid to the farm and agritourism activities. A place for educational facilities is required, along with an agricultural information center and a place for purchasing goods. The building should be planned by considering regional architectural design, building materials, and climate-responsive construction methods. There must be sufficient parking spaces for the number of rooms. However, good parking spaces are fewer at Shree Antu. Thus, it is essential to enhance the current parking area while improving an effective drainage system.

Agritourism accommodations should enhance their hospitality, water supply, cleanliness, and provision of wholesome cuisine. Despite being in a region with perfect natural conditions for the production of agricultural goods, Shree Antu's tourism operators must be familiar with global business and industrial management standards. This area needs to entice foreign visitors as well, rather than relying solely on native ones. The site's major drawback is that, due to its geographic constraints, it is challenging to build healthcare facilities. Being adjacent to India implies that the natural and cultural landscape that attracts tourists is similar. It is difficult to generalize architectural design principles since they depend on social, cultural, environmental, and economic factors. The distribution of the site's sloping topography is considered in multiple-level designs, and the allotment of floor spaces following various agritourism activities. Instead of just following the layout of the street, it is suggested that the building's longest portion face east or south. The site should utilize local food, labor, and services to support the surrounding economy and create mutual value, and include signage, demonstration farms, and interactive experiences to educate visitors on sustainable farming and rural life. Expensive rooms should be placed on the highest floor as far as possible to get an ample view. Most of the accommodations in Shree Antu are constructed using stone and wood in a typical cottage style.

The use passive design strategies such as natural ventilation, thermal mass, and solar orientation to reduce energy should be adopted. The key problem is the thermal insulation of the walls, roofs, and floors; therefore, designers of new accommodations should consider this. The exterior should be designed with the provision of sun decks. However, in the interior, it is possible to insulate a wall utilizing cavity wall construction and the addition of insulation materials in between, as contrasted to just using inside timber boards, which is thought to be less efficient during the colder months.

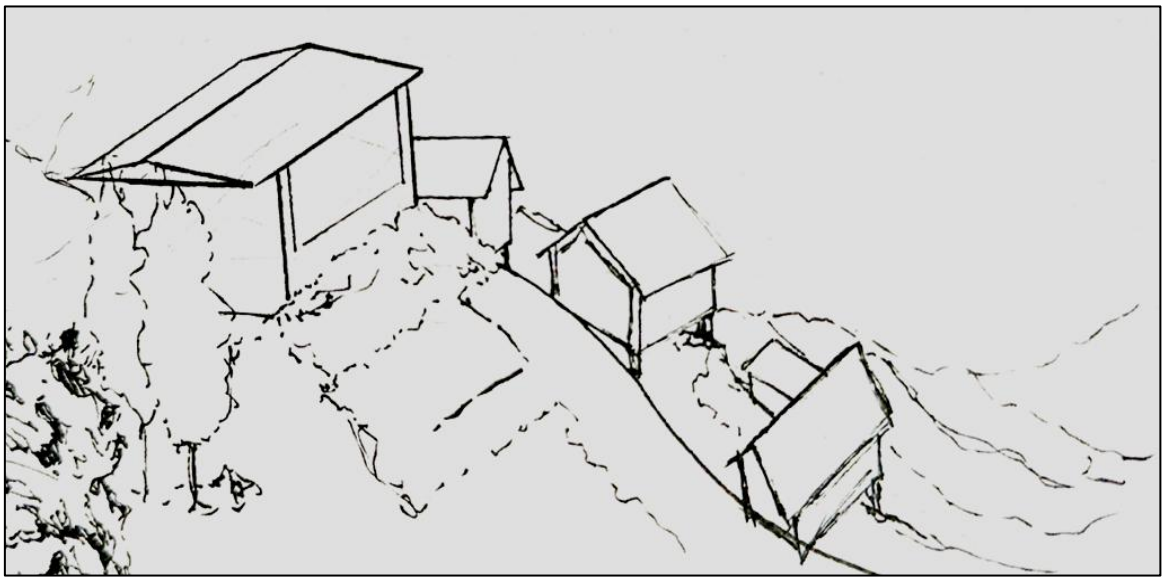

Figure 4: Design of accommodation according to the terraced landscape sketch drawn by the researcher

Future homes should consider CGI sheets with insulation linked to them, even though the roof has enough slope, with the use of CGI sheets. As far as feasible, the windows should be larger on the east and south sides and planned with pleasant views in mind. Because humidity and ventilation have less of an effect year-round, they can be flexibly designed. For exterior façade decorating, wood cladding should be used. Last but not least, the interior decor of the lodging should adhere to the concept, but both current and future lodgings should offer clean furnishings and materials.

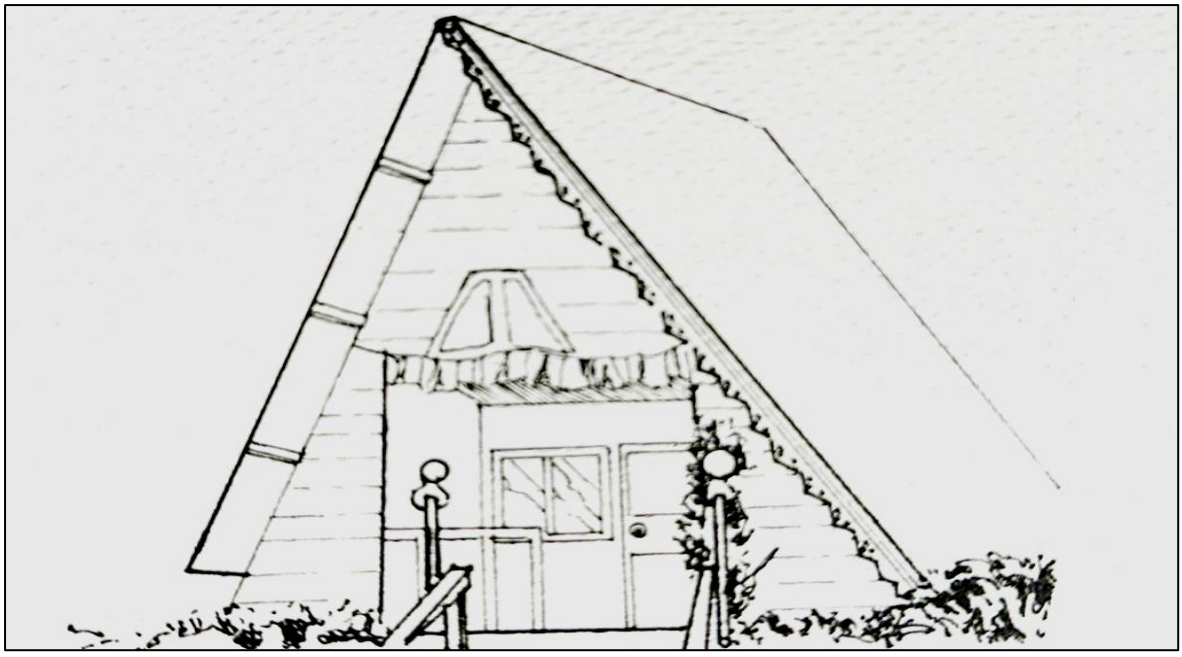

Figure 5: Sketch of cottage style accommodation drawn by the researcher

Conclusion

Shree Antu offers a wealth of attractions and a stunning natural location to offer for the expansion of the agritourism sector and accommodation. The management and operation of camps, farms, farm stays, agro hotels, and educational structures must be managed and operated following the norms for architectural design. At Shree Antu, it's important to give visitors a comfortable place to stay while also educating them about agriculture and farming. Agritourism in Shree Antu should use local materials and climate-responsive design, improve parking, drainage, and hospitality, and support the local economy. Better insulation, scenic orientation, and clean, well-designed interiors are essential. Operators should follow global standards to attract international tourists, with mobile healthcare as a possible solution..

Conflict of Interest

Authors declare no conflict of interest.

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References

Alar, S. S. (2024). Agritourism in Central Luzon, Philippines: Status, Challenges, and Pathways to Sustainable Growth. *Philippine Social Science Journal*, *6*(3), 63-71. https://doi.org/10.52006/main.v6i3.799

Ammirato, S., Felicetti, A. M., Raso, C., Pansera, B. A., & Violi, A. (2020). Agritourism and Sustainability: What We Can Learn from a Systematic Literature Review. *Sustainability*, *12*(22), 9575. https://www.mdpi.com/2071-1050/12/22/9575

Beeton, S. (1998). *Ecotourism: A practical guide for rural communities*. Landlinks press.

Bhatta, K. (2020). What is Agritourism in Nepal? *Journal of Tourism and Hospitality Education*, *10*, 170-178.

Bhatta, K., & Ohe, Y. (2020). A Review of Quantitative Studies in Agritourism: The Implications for Developing Countries. *Tourism and Hospitality*, *1*(1), 23-40. https://www.mdpi.com/2673-5768/1/1/3

Bhatta, K. D., & Chan, R. C. (2023). Ecotourism, environmental impacts and sustainability in the Himalayan settlements: Study of Sagarmatha (Mt. Everest) national park, Nepal. *Himalayan Journal of Applied Science and Engineering*, *4*(1), 16-32.

Bhattarai, R. K., & Adhikari, B. (2021). An Overview of Home Stay at Antu Tourism Area of Ilam District. *Journal of Business and Social Sciences*, *3*(1), 77-86.

Ciolac, R., Adamov, T., Iancu, T., Popescu, G., Lile, R., Rujescu, C., & Marin, D. (2019). Agritourism-A Sustainable development factor for improving the 'health'of rural settlements. Case study Apuseni mountains area. *Sustainability*, *11*(5), 1467.

Dwyer, L., Chen, N., & Lee, J. (2019). The role of place attachment in tourism research. *Journal of Travel & Tourism Marketing*, *36*(5), 645-652.

Faisala, F. B., & Latifb, M. N. (2010). Design and Character of Architecture of the Agro-Tourism Site in Indonesia and Malaysia.

Fanelli, R. M., & Romagnoli, L. (2020). Customer Satisfaction with Farmhouse Facilities and Its Implications for the Promotion of Agritourism Resources in Italian Municipalities. *Sustainability*, *12*(5), 1749. https://www.mdpi.com/2071-1050/12/5/1749

Fischer-Zemin, V., & Schipani, S. (2005). Designing and operating an ecolodge in the LAOS PDR. *Laos: Mekong Tourism Development, Lao National Tourism Administration, Asian Development Bank*.

Geng, Y., Yang, X., Zhang, N., Li, J., & Yan, Y. (2024). Sustainable rural development: differentiated paths to achieve rural revitalization with case of Western China. *Scientific Reports*, *14*(1), 31507. https://doi.org/10.1038/s41598-024-83339-x

Group, I. (2025). *Agritourism Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2025-2032*. https://www.imarcgroup.com/agritourism-market

Kaini, M. (2019). Agro-tourism in Nepal: a rural development perspective. *Nepalese journal of development and rural studies*, *16*, 53-65.

Khanal, S., & Shrestha, M. (2019). Agro-tourism: Prospects, importance, destinations and challenges in Nepal. *Archives of Agriculture and Environmental Science*, *4*(4), 464-471.

Mahaliyanaarachchi, R. (2015). Agri tourism farm and farm stay. *Department of Agri Business Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka*.

Media, C. (2024). *Tourism Rebounds: Ilam Sees Rise in Visitor Numbers After 3 Year Break*. https://whatthenepal.com/2024/01/28/tourism-rebounds-ilam-sees-rise-in-visitor-numbers-after-3-year-break/

Oranratmanee, R. (2011). Re-utilizing space: Accommodating tourists in homestay houses in northern Thailand. *Journal of Architectural/Planning Research and Studies (JARS)*, *8*(1), 35-54.

Park, D. B., & Yoon, Y. S. (2011). Developing sustainable rural tourism evaluation indicators. *International journal of tourism research*, *13*(5), 401-415.

Patterson, I., & Aslam, M. U. (2024). Agritourism as an Emerging Sustainable Tourism Industry in Uzbekistan. *Sustainability*, *16*(17), 7519. https://www.mdpi.com/2071-1050/16/17/7519

Pokharel, P. (2017). **เกณฑ์ การ ออกแบบ ที่พัก อาศัย ส า ห รับ การ ท่องเที่ยว เชิง นิเวศ ใน ทั ม ลิง ตา ร์ ประเทศ เนปาล** Accommodation design consideration for ecotourism in Tumlingtar, Nepal. *JOURNAL OF ENVIRONMENTAL DESIGN*, *4*(1), 82-99.

Sangkakool, T. (2021). Built Environmental to Increase the Potential for New Agro Tourism: Model Farm, Songkhla. *Art and Architecture Journal Naresuan University*, *13*(1), –. https://so01.tci-thaijo.org/index.php/ajnu/article/view/246931

Shree, B., & Kaini, T. R. (2021). Perception on Tourism Infrastructure available in Kanyam, Ilam Located in Eastern Nepal. *NUTA Journal*, *8*(1-2), 32-41.

Siriphanich, S., Angsuratana, A., Kalpax, T., & Tepwongsirirat, P. (2013). LANDSCAPE DESIGN GUIDELINES FOR AGRO-TOURISM LOCATIONS: A CASE STUDY OF SUBSANOON VISITOR CENTER, SARABURI, THAILAND.

Somnuek, P. (2022). Development of Community-Based Tourism in Ban Khok Muang (Thailand) and Banteay Chhmar (Cambodia). *GMSARN International Journal*, *16*(2), 146-151.

Subagya, S., & Trimarianto, C. (2017). Application of Ecological Architecture Principles in Eco Resort Design at Pemenang, Lombok. *Journal of A Sustainable Global South*, *1*(2), 5.

Sula, S. (2024). *A REVIEW OF AGRITOURISM DESIGN: THE ROLE OF ARCHITECTURE* EPOKA UNIVERSITY]. http://dspace.epoka.edu.al/handle/1/2493

Syam, F. H., Wisdianti, D., Sajar, S., & Bahri, S. (2023). Study of sustainable architecture concepts. *International Journal of Research and Review*, *10*(4), 419-424.

Sznajder, M., Przezborska, L., & Scrimgeour, F. (2009). Agritourism. UK. In: MPG Books Group.

Tseng, M.-L., Chang, C.-H., Wu, K.-J., Lin, C.-W. R., Kalnaovkul, B., & Tan, R. R. (2019). Sustainable Agritourism in Thailand: Modeling Business Performance and Environmental Sustainability under Uncertainty. *Sustainability*, *11*(15), 4087. https://www.mdpi.com/2071-1050/11/15/4087

Turtureanu, A.-G., Crețu, C.-M., Pripoaie, R., Marinescu, E. Ș., Sîrbu, C.-G., & Talaghir, L.-G. (2025). Sustainable Development Through Agritourism and Rural Tourism: Research Trends and Future Perspectives in the Pandemic and Post-Pandemic Period. *Sustainability*, *17*(9), 3998. https://www.mdpi.com/2071-1050/17/9/3998

Yogi, L. N., Thalal, T., & Bhandari, S. (2025). The role of agriculture in Nepal's economic development: Challenges, opportunities, and pathways for modernization. *Heliyon*.