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A Tradition That Continues to be Built: Recording the Process of Building a Traditional Toba Batak House in Samosir in 2025 As an Architectural Heritage of the Archipelago

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ABSTRACT:

This study aims to record and analyze the ongoing construction process of Toba Batak traditional houses in Samosir Regency in 2025 as part of the Indonesian architectural heritage. The approach used is descriptive qualitative with a case study method through field observations, visual documentation, in-depth interviews, and literature review. The results show that the construction process of Toba Batak traditional houses still maintains traditional construction stages, wooden structural systems, and nailless connection techniques passed down through generations, although there are adjustments to current conditions. The construction process functions not only as a construction activity but also as a cultural practice that embodies customary values, local knowledge, and social togetherness. This study confirms that Toba Batak traditional houses constitute a dynamic architectural heritage, where building traditions remain alive and relevant amidst changing times. Documentation of this construction process is expected to support efforts to preserve and develop knowledge of Indonesian architectural knowledge sustainably.

Keywords: Toba Batak traditional houses, building traditions, Indonesian architecture, Samosir, cultural heritage.

INTRODUCTION

The Toba Batak traditional house is a significant architectural heritage of the archipelago, possessing significant value not only in its form and aesthetics, but also in its construction process, which embodies local knowledge, traditional construction technology, and the social and cultural values of the Batak people. The process of building a Toba Batak traditional house involves a wooden structural system, traditional nailless joining techniques, the selection of local materials, and the practice of mutual cooperation (gotong royong). This practice has been passed down from generation to generation and has become part of the Toba

Batak people's cultural identity.

With the passage of time and the dominance of modern construction technology, the tradition of building Toba Batak traditional houses is increasingly rarely practiced in its entirety. Many traditional houses are now preserved only as tourist attractions or cultural symbols, while knowledge regarding the construction stages, construction techniques, and work practices of traditional craftsmen is not systematically documented. This situation has the potential to lead to the loss of practical, unwritten traditional construction knowledge.

Samosir Regency, as one of the centers of Toba Batak culture, will continue to demonstrate the practice of building Toba Batak traditional houses in the contemporary era until 2025. This practice is a significant phenomenon because it demonstrates the continuity of building traditions amidst social, economic, and regulatory changes. Furthermore, these building practices have also undergone various adaptations, both in material use, work methods, and adjustments to current needs. This situation demands comprehensive documentation efforts to ensure that surviving building knowledge is not lost.

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Previous studies on Toba Batak traditional houses have generally focused on the architectural form, typology, and symbolic meaning. Simatupang (2012) examined the cultural and philosophical values inherent in Toba Batak traditional houses, while Sihombing (2014) theoretically discussed traditional construction technology and wooden structural systems. Another study by Nainggolan and Situmorang (2017) highlighted the preservation of Toba Batak traditional houses in the Lake Toba area, but with greater emphasis on physical preservation and tourism. Hutabarat (2019) examined Toba Batak vernacular architecture in the context of modernization, while Manurung et al. (2021) emphasized the importance of documenting traditional architecture as a cultural heritage. However, research specifically documenting and analyzing the construction process of Toba Batak traditional houses today, based on actual field documentation, is still very limited.

Based on this situation, the primary research question in this study is how the construction process of Toba Batak traditional houses is still practiced in Samosir Regency in 2025, how traditional structural systems and construction techniques are applied, and how building traditions are adapted to contemporary contexts. The lack of direct documentation of the construction process presents a research gap that needs to be filled to maintain the sustainability of vernacular architectural knowledge.

This study aims to document and analyze the construction process of Toba Batak traditional houses in Samosir Regency in 2025, focusing on the construction stages, structural systems and wood joints, the use of local materials, and the adaptation of building traditions to the current era. This research also aims to produce architectural documentation that can serve as an archive of traditional Toba Batak construction knowledge.

The benefits of this research are expected to contribute academically to the development of vernacular architecture and archipelago architecture studies, serve as a reference for the preservation and conservation of Toba Batak traditional houses, and support the documentation of local knowledge as part of a sustainable cultural heritage. Furthermore, the results of this research are expected to be used as educational material, for planning preservation, and for developing cultural tourism based on traditional architecture in the Samosir region. The following is Diagram 1 of the State of the Art in this research.

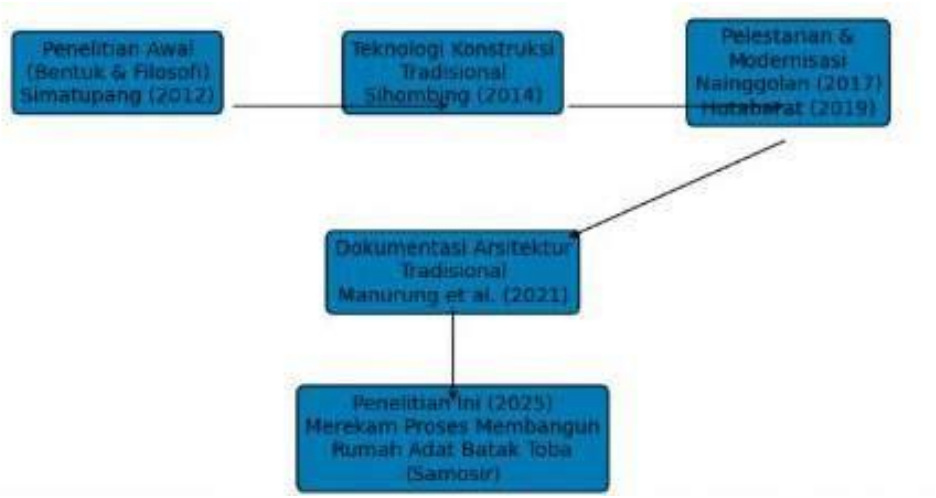

Diagram 1 State of the Art

RESEARCH METHOD

Research Approach and Type

This research uses a descriptive qualitative approach with a case study. The qualitative approach was chosen because the research aims to deeply understand the process of building traditional Toba Batak houses, which is still ongoing today, particularly in Samosir Regency in 2025, as part of the Indonesian architectural heritage. This research is not oriented towards quantitative measurements, but rather to

uncover the meaning, stages, techniques, and cultural values contained in traditional construction practices. Case studies were chosen because the research object is specific, contextual, and unique: one or several processes of

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building traditional Toba Batak houses that still adhere to traditional principles but take place within a contemporary social and technological context.

Research Location and Timeline

This research was conducted in Pangururan District, Samosir Regency, North Sumatra Province, at the ongoing construction site of a Toba Batak traditional house. The location was chosen based on the consideration that Samosir is the center of Toba Batak culture and still maintains the tradition of building traditional houses passed down through generations. The research was conducted in 2025, aligning with the stages of construction of the traditional house being studied, from the initial construction phase to a specific stage that allows for comprehensive documentation of the process. Figure 1 shows the research location.

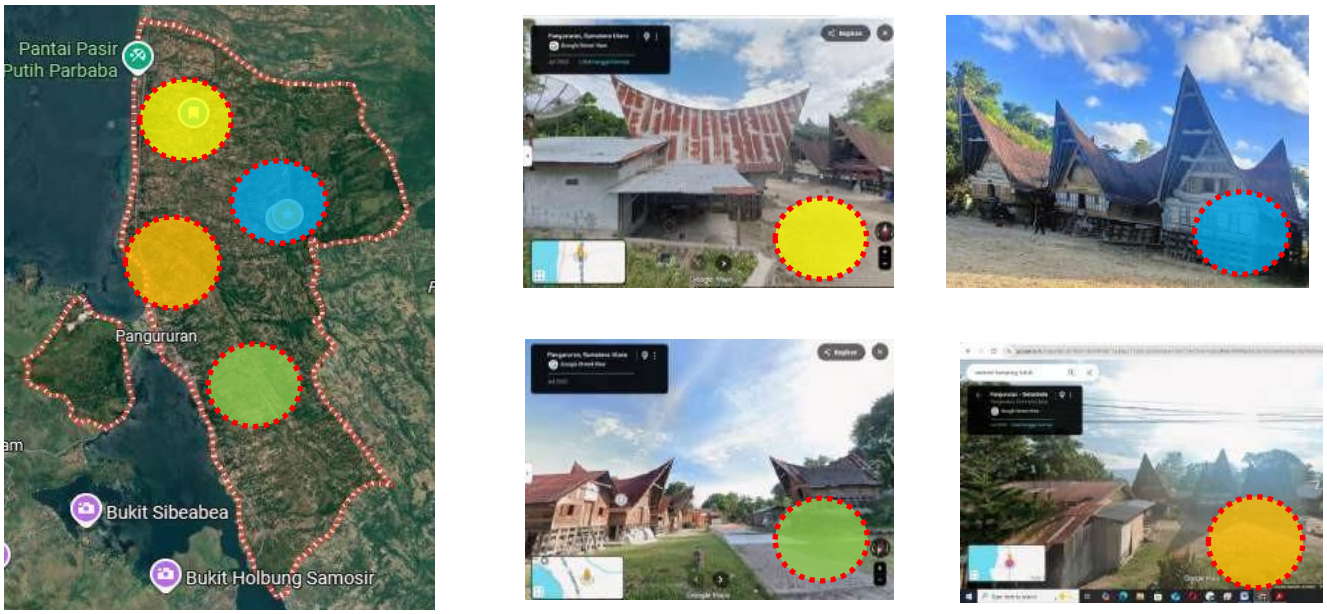

Figure 1. Research Location

Research Object and Subject

The research object is the process of building a traditional Toba Batak house, which includes the construction stages, structural systems, joining techniques, material use, and adaptations to current conditions.

Figure 2. Research Objects and Subjects

The research subjects included:

1. Traditional craftsmen/artisans (panjae or panragi) who were directly involved in the construction process;
2. Local traditional leaders or elders who understood the rules and meaning of building traditions;
3. Owners or parties who built traditional houses.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue XII, December 2025

Data Collection Techniques

Data collection in this study was conducted using several techniques, as follows:

Field Observation

Observations were conducted directly at the construction site to record the stages of the process of building a traditional Toba Batak house. Observations included work sequences, construction techniques, structural systems, and interactions between construction actors. Observations were conducted in a limited participatory manner, with the researcher acting as an active observer without interfering with the work process.

Visual Documentation

Visual documentation was conducted through photographs and videos taken at each stage of construction. This documentation aimed to record construction details, structural form, connections, and changes that occurred during the construction process. In addition, documentation in the form of field sketches and recording the dimensions of building elements served as supporting data.

Figure 3. Visual Documentation

In-Depth Interviews

Semi-structured interviews were conducted with research subjects. The interviews aimed to elicit information about traditional knowledge, the reasons for using certain techniques, the symbolic meaning of the construction process, and perspectives on contemporary change and adaptation. Interviews were conducted with craftsmen (pande) who were familiar with the sequence of work involved in building a Batak house, as well as with the Batak house owners, regarding the work carried out on their Batak houses.

Literature Review

The literature review was conducted by reviewing books, scientific journals, previous research results, and documents related to Toba Batak architecture and cultural heritage preservation. This study served as a theoretical basis and comparison for field findings. The books used in the literature review were

Exploration of Sumatran Architecture, Edition: Toba Batak Ethnicity by Yuri Hermawan and *Structural and Thermal Reliability* (Edition: Toba Batak Houses) published by the Ministry of Public Works and Public Housing.

Data Analysis Techniques

Data analysis was conducted qualitatively and descriptively with the following stages:

1. Data reduction, namely sorting and selecting data from observations, interviews, and documentation relevant to the research objectives;

2. Data presentation, namely compiling data in narrative form, descriptive tables, process flow diagrams, and

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construction schematics;

3. Conclusion drawing, namely formulating patterns, stages, and characteristics of the process of building traditional Toba Batak houses today and their relationship to the architectural heritage of the Indonesian archipelago.

Research Flow

The research flow began with a preliminary study and literature review, followed by field data collection through observation, documentation, and interviews. The data obtained were then analyzed qualitatively to produce a comprehensive description of the process of building traditional Toba Batak houses in Samosir in 2025 as part of the Indonesian architectural heritage.

RESULTS AND DISCUSSION

Overview of the Research Object

The object of this research is the construction process of a Toba Batak traditional house that took place in Samosir Regency in 2025. The traditional house exhibits the distinctive characteristics of traditional Toba Batak architecture, particularly in its steeply curved roof, stilt structure, and the use of wood as the primary material. The construction process was carried out by traditional craftsmen who still rely on inherited knowledge, although some aspects have been adapted to current conditions. This building does not require working drawings for its implementation, and according to observations, the craftsmen (pande) did not have working drawings at the time of construction. This is because the Pande today have a thorough understanding of the Toba Batak house construction process.

Figure 4. Overview of Research Object

The construction of this traditional house is not only understood as a physical construction activity, but also as a cultural practice that is full of meaning, involving traditional values, togetherness, and respect for ancestral traditions.

Stages of the Toba Batak Traditional House Construction Process

Based on field observations and visual documentation, the process of constructing a Toba Batak traditional house in Samosir in 2025 can be divided into several main stages as follows:

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue XII, December 2025

Preparation Stage

This stage includes site determination, land clearing, and wood preparation. Wood selection is carried out taking into account strength, durability, and compliance with customary regulations. This stage also includes discussions between the builder, the homeowner, and traditional leaders regarding the construction plan.

Figure 5. Discussion between the craftsman and the owner

Substructure Construction Stage

The substructure of a traditional Toba Batak house is built on stilts, with wooden pillars arranged on stone platforms or pedestals. This system protects the building from soil moisture and increases structural durability. The wood is joined without nails, but rather with a traditional system of pegs and ties.

Figure 6. The lower structure and pillars of a house on stilts

Superstructure and Roof Frame Construction Stage

This stage is the most visually dominant. The roof frame is shaped with a steep slope and the distinctive curves of the Toba Batak. The roof frame assembly process is carried out in stages and requires high precision, as the roof structure serves as both the main supporting element and a symbol of the traditional house's identity.

Figure 7. Roof Structure and Roof Frame

Refinement and Adjustment Stage

The final stage includes refining the structure, adding complementary elements, and adapting certain aspects to current needs, such as strengthening the structure or adjusting the room dimensions. However, the basic form and traditional construction principles are maintained.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue XII, December 2025

Figure 8. Final Stage Image

Traditional Structural Systems and Construction Techniques

Research results show that the structural system of Toba Batak traditional houses is still dominated by a wooden frame structure with traditional connection systems. Each structural element has an interrelated function, forming a stable, unified system. The construction techniques used demonstrate the builders' empirical understanding of loads, balance, and structural resistance. This knowledge was not acquired through formal education, but rather through experience and direct learning from previous generations. This confirms that the process of building Toba Batak traditional houses constitutes a living, intangible heritage..

Figure 9. Traditional Structure and Construction

The Role of Actors and Traditional Values in the Construction Process

Interviews indicate that traditional craftsmen play a central role in determining the work stages and construction techniques. Traditional leaders serve as guardians of customary values and regulations, while homeowners bridge the gap between traditional and modern needs. The construction process is not solely focused on the final product, the building, but also on togetherness, mutual cooperation, and respect for tradition. These values remain strong despite the development taking place amidst social and technological change.

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIV, Issue XII, December 2025

Figure 10. Role of Actors and Role of Tradition

Discussion from the Perspective of Previous Research and the State of the Art

Compared to previous research, the results of this study demonstrate a shift in focus from merely examining the form and meaning of Toba Batak traditional houses to understanding the building process as an ongoing tradition. While previous research often viewed traditional houses as static objects, this study positions them as dynamic, living practices. Within the context of the State of the Art, this study is at the stage of documenting the process of building traditional houses today, a practice still rarely undertaken. This study fills this research gap by documenting the construction stages, the roles of actors, and the adaptation of traditions to the context of 2025. Thus, this study strengthens the position of Toba Batak traditional houses not only as a physical architectural heritage, but also as a legacy of knowledge and building practices.

Implications for the Preservation of Indonesian Architectural Heritage

The results of this study have important implications for efforts to preserve Indonesian architectural heritage. Documentation of the building process can serve as a basis for the development of knowledge archives, architectural learning materials, and the development of digital technologies such as 3D modeling or visual-based educational media. By documenting ongoing building traditions, this research contributes to the sustainable preservation of Toba Batak architectural values, while also opening up opportunities for the integration of tradition and innovation in the future.

CONCLUSION

This study concludes that the construction process of Toba Batak traditional houses in Samosir Regency in 2025 still maintains the stages, wooden structural systems, and traditional construction techniques passed down through generations, although they have been adapted to meet current needs. The building process serves not only as a construction activity but also as a cultural practice that embodies customary values, local knowledge, and social togetherness. This confirms that Toba Batak traditional houses are a dynamic architectural heritage of the Indonesian archipelago, where building traditions remain alive and relevant amidst changing times.

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