Sustaining Traditional Communities and Vernacular Settlements: Insights from a Conservation Effort with Community Participation in Sakae Krang Floating Community, Thailand

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Abstract

The Sakae Krang floating community in Uthai Thani Province, Thailand is a unique cultural landscape facing significant threats from urban expansions, modernization, and environmental change. Although the knowledge and skills of the craftsmen have sustained this community in the past, they are fast disappearing today. In this context, this research examines how conservation practices can be introduced to this community to sustain them for the future. For this purpose, it identifies a comprehensive conservation framework for traditional floating communities in Thailand to preserve their harmony and complementarity within their surrounding environments, and implements a conservation task with community participation.

The research employs a qualitative research methodology involving site surveying, physical surveying, GIS mapping, as well as semi-structured interviews and participatory design workshops as data gathering techniques. All the 127 floating houses in the Sakae Krang have been surveyed. Interviews were carried out with the locals as well as the craftsmen of the village.

Findings reveal the significant role of craftsmen in keeping the traditions and culture of the community alive. Their skills and knowledge are significant not only in the repair and maintenance activities but also in analyzing and evaluating structural damages to the buildings. However, the Sakae Krang floating community faces challenges such as declining populations, changes in the traditional lifestyles, environmental degradation, and declining interest in traditional crafts among the younger generations.

The study found that successful conservation strategies must be holistic, integrating local craftsmanship into sustainable modern practices, promoting strong community participation, and balancing traditions with modernity through collaborations among all the stakeholders. It is concluded that such an approach will help preserve the cultural identity and ecological sustainability of the Sakae Krang community for the future.

Keywords: Cultural Heritage, Sustainable Development, Community Preservation, Sakae Krang Floating Community, Craftsmanship, Traditions, Architectural Identity

Introduction

The Sakae Krang community is a settlement within Uthai Thani Province that has a distinctive cultural heritage. People there have always depended on water resources for transportation and finding livelihoods. However, this group is facing many challenges in the contemporary society. The communities that have developed depending on the Sakae Krang River have undergone shifts in response to changes in the society. In fact, there have been movements to sustain and develop this community while maintaining its identity.

The historical significance of the Sakae Krang River is not only that it used to sustain the regional economy in the upper central area but also that it led to cross-cultural and social transactions. Floating houses, known as 'Ruen Pae,' are a manifestation of triumphs of its people because it signifies that they have co-existed in harmony with their aquatic environment for many years. Their house designs reflect techniques and materials and symbolizes ingenuity in the natural surroundings. Their traditional skills are vital for their ability to sustain and preserve the built environment, which is constantly changing in response to its natural surroundings.

However, with the development of roads and city infrastructure, the waterways have reduced in size and significance as important trading routes, resulting in a downturn in the traditional life of the floating communities. Consequently, people have had to migrate to settlements constructed on land, resulting in a reduction in the number of floating communities and a possibility of a lost traditional life. Thus, conservation of the traditional floating community focuses not only on the physical conservation of the traditional floating houses but on the development of a social structure within the community.

The village has a total of 127 houses distributed in three different groups in a location called Muang Uthai Thani district on the Sakae Krang River (Fig. 1). In this context, this research explores the knowledge and skills of the craftsmen who have sustained this community in the past but are fast disappearing. Its aim is to promote conservation practices that can be introduced to sustain them for the future.

Its objectives are as follows.

1. To identify the traditional values and practices of Sakae Krang community.
2. To identify the crafts and craftsmanship of keeping the settlement afloat
3. To propose a framework for the conservation of this community.

Fig. 1: Three groups of raft people and design workshops
Source: Author

Fig. 2: The Sakae Krang floating community taken in June 2021
Source: Author

The significance of this study is that it promotes and revives an interest in conservation and preservation of cultural heritage in Thailand. The participatory community process it proposes advocates a balanced perspective between conservation and modernization by fostering a shared understanding of local knowledge and craftsmanship, particularly community craftsmen.

Theoretical Framework

This research involves understanding and employing a number of theoretical constructs such as the concept of community preservation, architectural heritage and identity, sustainability, vernacular heritage, community preservation, community engagement and local knowledge. Its theoretical framework is thus articulated as follows.

The Concepts of Community Preservation and Conservation

Community conservation can be defined as a process involved in ensuring that the historical significance of a community is protected while still allowing sustainable development. The significance of conservation has often been highlighted in relation to the preservation of cultural heritage and other traditions and skills in a given community that are normally threatened in areas where urbanization and industrialization are occurring rapidly (UNESCO, 2003; Smith, 2006). In fact, the role of community involvement in conservation is important in making conservation more sustainable as well as allowing the community to feel a sense of ownership over its history (Sukkasame, 2018). Undeniably, this sense of history plays a significant role in deriving identity from architectural heritage.

Architectural Heritage and Identity

In this connection, Ashworth & Tunbridge (2000) point out that architectural heritage represents one of the factors through which communities establish identity. Indeed, architecture contributes not only to aesthetic sensitivity of a community but is a symbol of its values and history. Invariably, this symbolizes and reinforces community identity. As Sukkasame (2019) shows, cultural heritage is actually inseparable when it comes to conservation and preservation of cultural identity and heritage in a society. Indeed, most traditional communities possess such unique heritage that help them establish identity.

Sustaining Vernacular Heritage

For this reason, sustainability of vernacular settlements and cultural and architectural heritage they possess is paramount. In this regard, Dayaratne (2006;2011;2018), examine the transformations of vernacular housing in Sri Lanka and Bahrain and offers lessons from the vernacular settlements of Sri Lanka towards promoting sustainable developments. Similarly, Kaja (2012) examines the issue of reinventing traditional technologies for the sustainability of built environment in tropical areas of India. Numerous similar articulations exist which emphasize the significance of sustaining vernacular heritage in vernacular settlements by deriving the principles and practices from the communities themselves.

Current Challenges in Community Preservation

However, many challenges and issues exist in relation to their conservation, despite the fact that heritage buildings are recognized for their values and importance. In this regard, Graham et al. (2016) point out that expansions in urban areas, tourism developments and economic factors have often led to either the degradation or destruction of heritage buildings. There is no doubt that, to a great extent, the growing urban landscape can contribute to a loss of heritage in places which witness fast developments and growth. Moreover, frameworks for conservation policies have not always made a point to preserve both physical and intangible resources that are reflective of heritage. This brings us to the issue of community engagement in cultural heritage and its preservation.

Community Engagement and Local Knowledge

Community engagement includes participation, sharing or distribution, power and control, resources, benefits, knowledge, and skills. Participation is a voluntary process through which the people influence or control the decisions that affect them. The essence of participation is to enable the engagement of people's voices and human developments, and organization and management abilities, to solve problems in order to maintain and improve their quality of life.

Arnstein (1969) articulates this clearly, while discussing the understanding of citizen participation and its impact in developing countries. In fact, he sets out the levels of public participation as the ladder of citizen participation model, divided into eight stages: manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control. For Arnstein, Stages 1 and 2 do not result in public participation, and therefore is also known as non-participation. Stages 3 to 5, called Tokenism, mean that people have the opportunities to express their opinions but still lack the power to make decisions. Stages 6, 7 and 8 assume that people have the power to make decisions. This is also known as Citizen Power. This ladder reflects that participation at the partnership level is the beginning of the role and power of the people.

However, Choguill (1996) revises Arnstein's concept concerning citizen's power and redistribution of power. She proposes a new ladder for the developing countries by corroborating the findings of Arnstein's work. She is concerned that the highest rung is empowerment, which reflects the power of people to make decisions. On the other hand, the lowest rung is self-management, expressing the daily struggle for one's livelihood, taking place away from the government. In fact, many new ideas have been created by employing the model of Arnstein (1969) and Choguill (1996). For instance, Hurlbert and Gupta (2015) propose the ladder to present a diagnostic and evaluation tool for tackling the problems. Adding to this, Lynam et al. (2007) propose three types of interactions with the stakeholders: extractive use, co-learning and co-management.

To overcome these issues, community participation has recently emerged as a decisive factor in making conservation initiatives successful. In fact, community participation can add to greater cultural sensitivity and success in conservation. Moreover, skills and knowledge possessed by craftsmen are vital in building conservation. As Tuan (2011) notes, the expertise of local craftsmen is crucial to accurately represent cultural heritage. In relation to the floating community of Sakae Krang, this implies that skills and knowledge possessed by craftsmen need

to be incorporated in conservation initiatives. They will remain in line with the traditional practices and preserve the distinct identity of the floating community.

Thus, participatory approaches are methods of community development that include participation of members in a community. Moreover, the need for equality and the capacity of individuals serve as a basis in a participatory approach. Following theoretical model therefore could illuminate the processes underlying the community being studied in this research. It possesses three central facets: Architectural heritage and identity, community engagement and local knowledge and community preservation: all affecting each other in a circular manner.

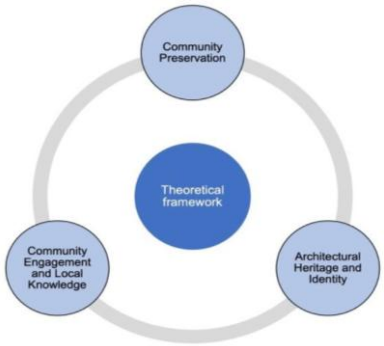

Fig. 3: Theoretical framework
Source: Author

Conservation of the floating community of Sakae Krang is a complex process that necessities the involvement of community members and their in-depth knowledge of history and culture. The challenges of urbanization and modernization demand innovative approaches that preserve the distinct identity of the community, although the inhabitants collaborate in decision-making processes at various stages to solve problems. In this context, while employing the above theoretical model to investigate the settlement, their participation in a project needs to be considered. Indeed, creating a perception of belonging within a community can help in making fruitful and responsible decisions.

Research Methodology

The research methodology aims to develop a comprehensive strategy for preserving the floating community in Uthai Thani Province. It employs a qualitative approach. Following data gathering techniques were employed.

1. Site survey of physical characteristics
2. Photographic surveys
3. Documentation of the village employing GIS
4. Semi Structured Interviews
5. Participatory design workshop

The process involves a site survey to generate initial information regarding physical characteristics and house forms as well as everyday practices in the traditional floating community of Sakae Krang. Data gathering involved a series of surveys and photographs to assess a full spatial model of the community.

The physical characteristics and designs of the floating houses were analyzed to critically review the building features and strategic environmental factors surrounding the community. For this, the features of all the 127 floating houses were documented through GIS to identify where all the houses were and develop a meaningful map of the floating community. Documentation involved a critical interest in all the design aspects and especially noted the use of local materials and traditional handmade methods. The approaches involved a critical analysis of all the houses to develop a basis for understanding their physical strength and uniqueness in their designs (Fig. 7-10).

In addition to this, semi-structured interviews were conducted to gather information from the locals as well as the craftsmen. Information gathered in this process is imperative in understanding the traditions and the significance of floating houses in relation to identity. The intentions of these interactions were listening to the voices of the public and observing the context to define and explain the situation (Sukkasame, 2019). The methodology was a participatory, action-oriented process, summarized in the Fig. 4, operationalized through a series of detailed design workshops and a clear method for data analysis.

The Case Study: Sakae Krang Village and its Historical Background

The Sakae Krang floating community in Uthai Thani Province, Thailand is a unique cultural landscape facing significant threats from urban expansions, modernization, and environmental changes. Its history dates back to the Ayutthaya period when Uthai Thani was a trading point. In fact, this location has had a strategic position in trading and commercial activities, especially those involving rice trade between northern and central Thailand. The village has emerged when Chinese traders had come and settled near the river in response to trade developments.

These early settlers have built floating houses, made up of houses capable of floating and have been used for both residence and trade. The village has thus got its name “Sakae Krang Village” because of the presence of Sakae trees found in large numbers near the river (Fig. 2).

The Sakae Krang floating community has developed over time to become a bustling economic hub. In the Rattanakosin Era and under the King Rama III, many settlers have moved to live near the river. Indeed, the settlers have been driven to enhanced transportation and trading activities within the river. The community has grown as people constructed wooden houses on rafts. It has developed a distinct architectural style that is not only sustainable but practical. The houses designed have been capable of withstanding changes in the water level and have even offered employment to the residents as fish-mongers and traders.

Intensely connected to water, the distinctive architectural identity of the floating community of Sakae Krang is based on its innovative application of native materials and skills. Majority of the buildings are constructed primarily from bamboo and wood. Such materials are common in this area. This type of construction not only reflects the community's cultural identity but also demonstrates its strategy for adapting to the environment. The community’s ability to develop roofing that is distinct in its traditional gabled features not only shows its connection to the natural surroundings but is a symbol of harmony with Nature. This combination of architectural design and adaptation to the environment has made the community unique and prosperous.

Although this historic and culturally rich community is very important in history and its rich resources, it faces many challenges. Modernization and urbanization affect traditional practices and customs. The younger generation is abandoning the community increasingly, to pursue better opportunities in city life. The community also faces environmental degradation related to water quality and climate change.

To improve the situation, an important endeavor is underway to preserve its unique heritage. In 2021, a research project, supported by Community Organizations Development Institute (CODI), has joined hands with the members of this community to initiate activities to raise greater awareness and promote sustainable practices. There is also a need to preserve and ensure that these houses are in good structural condition in order to promote cultural tourism.

The process adopted in the implementation of this research is as follows. It begins by participation in the community project to generate mutual earning, which enables the conceptualization of the research questions and objectives. Research is implemented afterwards by observing and reflection, followed by three house design workshops involving the inhabitants of the settlement. This is diagrammatically presented below with detailed explanations of each step.

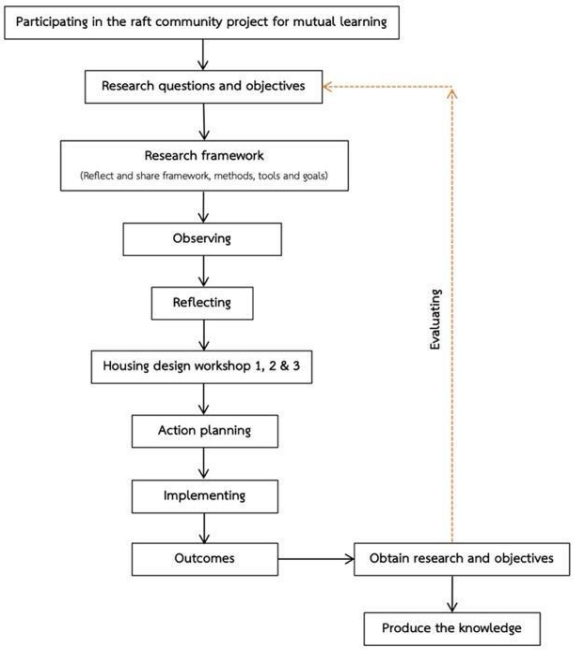

Fig. 4: A working process for the floating community
Source: Author

The process should thus be clearly articulated in the work and reflected in operational management. Therefore, the essential steps of the participation process used in working with the people are detailed as follows:

- The first step was getting to know each other, listening to the people's voices and observing the context in order to define and describe circumstances, and explain the background of the research study and setting out the problem.
- The second was reflecting and sharing ideas with each other on what we found, to analyse and interpret the situation to understand the nature and context and how to maximise the potential of the project. The 'raft people' and participants reflected on the problems of living and the causes of current problems.
- The third stage was the design workshops; drawing, making models and designing houses to investigate what they needed and required to change and build their houses. Participants began to design their own future houses and possibilities. They created these by drawing lines on graph paper with pencils and coloured pens.
- The fourth stage was planning the strategies to identify the building process and the action plan.
- The fifth stage involved actions or building the houses following the strategies and the action plan.
- The last stage was evaluating the project outcomes and sharing them with the people. This is a vital stage to receive feedback and suggest tentative solutions to the problems.
- Finally, it evaluated and reflected on the possibilities of raft houses and living on the Sakae Krang River. The stages are repeated, to gain better insights.

Participatory Design Workshops

A central component of the community engagement was a series of design workshops, which correspond to the third stage in the flowchart (Fig. 4). This was not a single event but a structured process:

The workshops involved a total of 39 participants from the community. To facilitate focused discussions, the community was organized into three distinct groups based on their locations along the river (as shown in the Figure 1). The workshops were conducted with each group separately:

- Design Workshop 1 included about 10 participants, with an age range primarily between 40 and 70 years old.
- Design Workshop 2 included 12 participants, Design Workshop 3 was the largest, with 17 participants.

The design workshop is a stage of participation in housing. Three workshops were conducted. They were collaborative activities sharing ideas to explore the possible solutions (Fig. 5). The format of the workshops are as follows.

1) Introduction: introduce the project and explain briefly the project information. Teaching and preparing: explaining how to draw houses such as scale and proportion.
2) Categorizing: participants were divided into small groups of four or five people.
3) Getting started: participants drew their house designs under constraints such as budgets, and building materials.
5) Presentation: participants presented their designs and exchanged ideas within the groups.

Thus, this research casts a critical eye on the strategies that ensure a balance between traditions and modernization by engaging community participation instead of any imposed planned interventions.

Fig. 5: Design Workshop
Source: Author

Data Analysis and Design Selection

Qualitative data from the interviews and observations was analyzed through the 'reflecting and sharing' step (Fig. 4, Step 2), where researcher and the participants collaboratively interpreted the situation to identify the core problems. The design workshop data is analyzed through a direct democratic process led by the members of the community. In this way, not only is the final outcome observed and recorded by the researchers but is designed and validated through the community members. After this, as shown in the steps in the Fig. 4 below, action planning and implementation took place.

Findings and the Discussion

This study reveals that the traditional floating houses are a symbol of the community's architecture and its adaptation to its surrounding environment. Moreover, they are a symbol of shared history and experiences and memories. The houses symbolize a level of important cultural values in that society. In fact, they are a symbol of how the society and its people value and embody a certain life-style.

In relation to the Sakae Krang floating community, the theoretical approaches adopted stress the significance of community engagement in protecting not only its physical characteristics but its intangible characteristics as well. The need for community involvement, especially craftsmen, is found to be an important factor in sustaining its architecture while simultaneously passing it down to the future generations (Harrison, 2013). In fact, Sukkasame (2019) argues that due to its distinct architectural features like traditional houses that can actually float on water, conservation strategies must identify and adopt different frameworks that surround its identity as a whole. In the context of the Sakae Krang floating community, the challenges are abundantly evident, as reliance on tourism presents both opportunities and risks for the community. Thus, conservation efforts should not simply be for the building itself.

House Characteristics and Environment

Through the physical survey, it was noted that the Sakae Krang floating houses exhibited distinct house styles characterized by their wooden structures, sloping roofs, and floating platforms. The materials used predominantly consist of local timber, bamboo, and in some cases, recycled materials. The main types of floating houses are identified as follows as shown in the Figs. 6. & 7.

(1) Gable house,
(2) Twin gable house,
(3) Three-gable houses
(4) Hip-shaped house, and
(5) Traditional Thai house

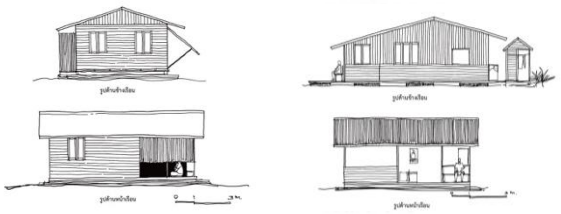

Fig. 6.a: Gable House
Source: Author

Fig. 6.b: Double Gable House
Source: Author

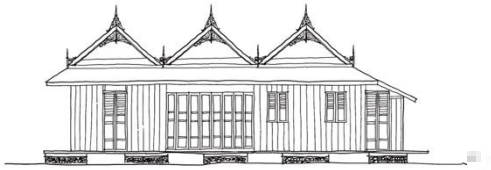

Fig. 6.c: Three Gable House
Source: Author

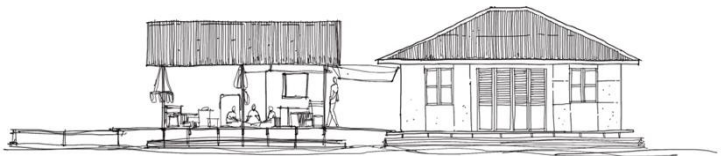

Fig. 6.d: Hip Roof House
Source: Author

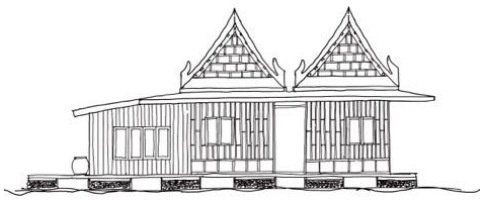

Fig. 6.e: Traditional Thai House
Source: Author

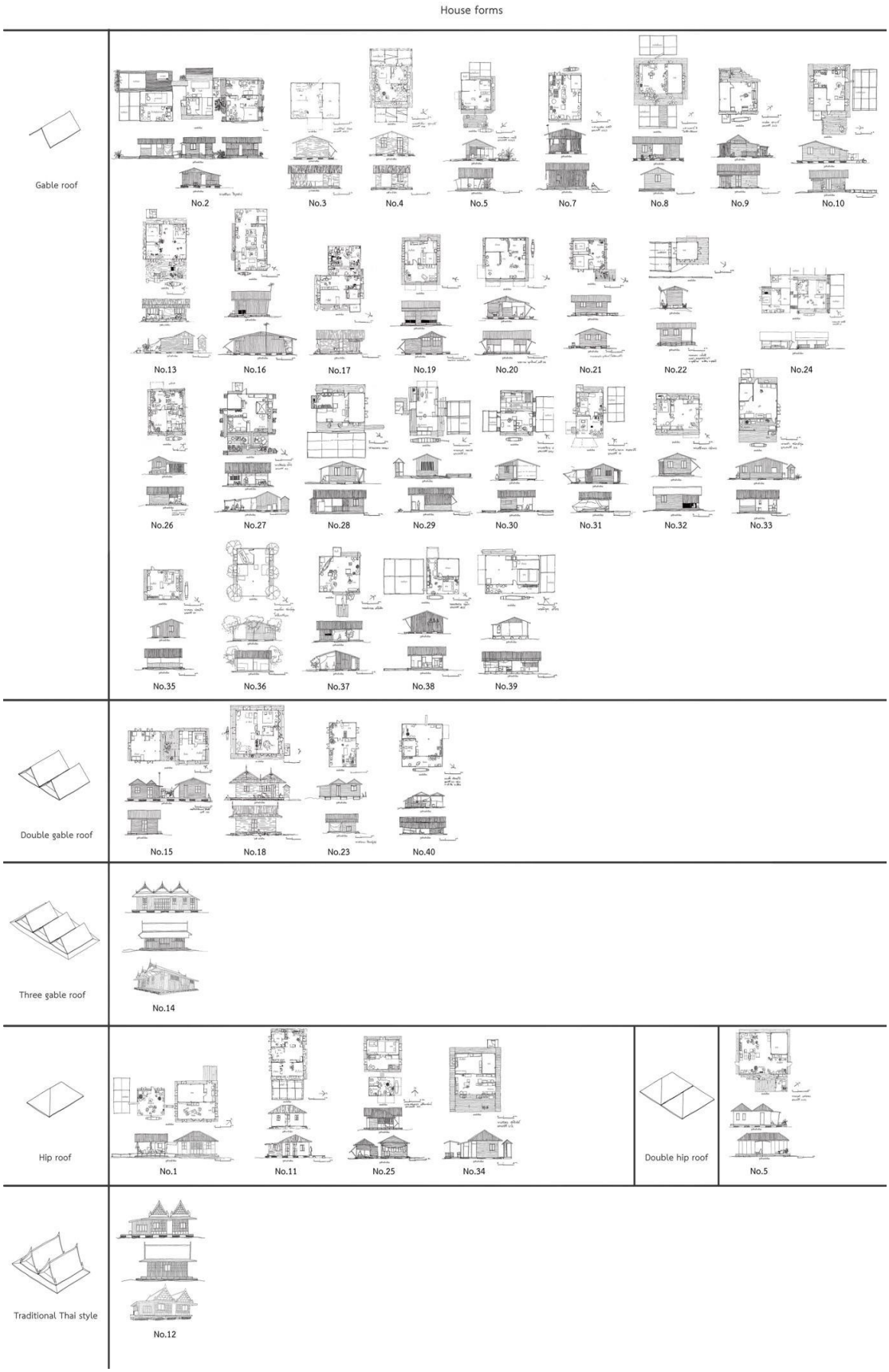

Fig. 7: The main types of floating houses
Source: Author

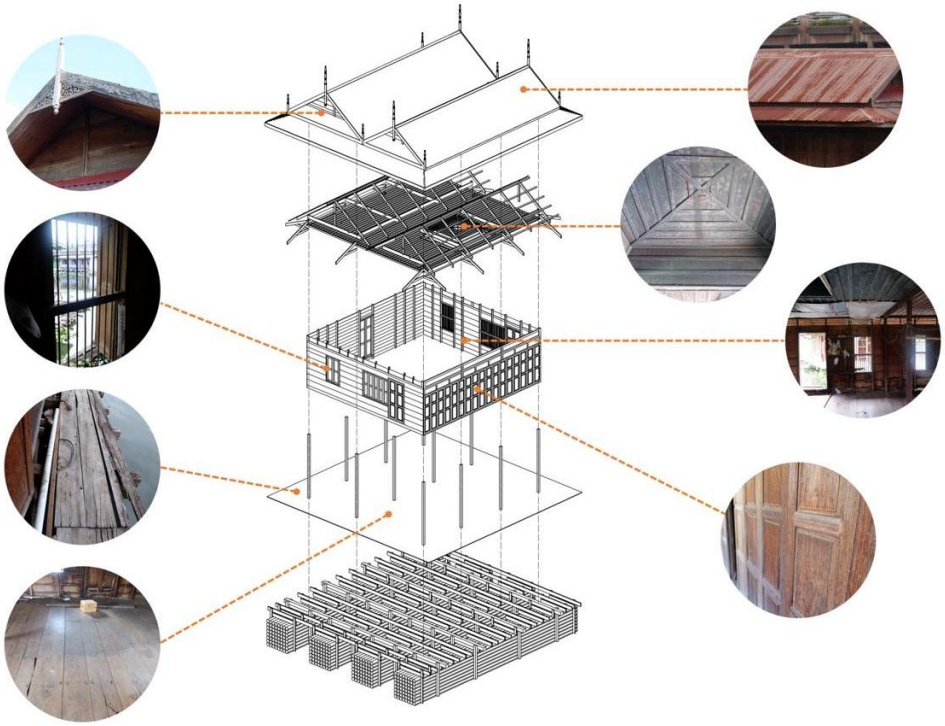

Fig. 8: Projection of each part of the twin gable house
Source: Author

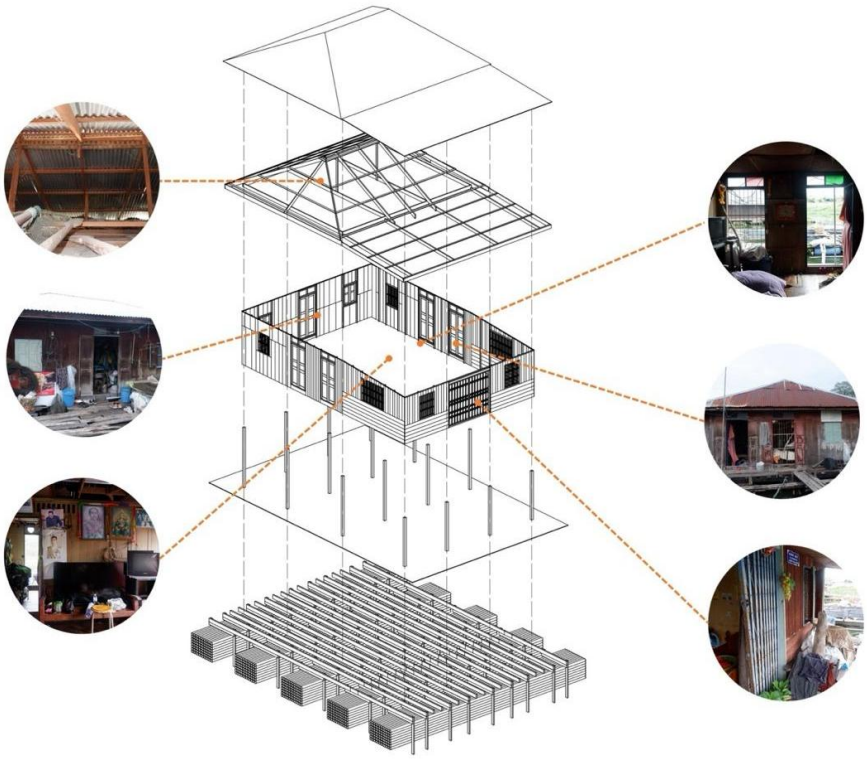

Fig. 9: Projection of each part of the hip-shaped house
Source: Author

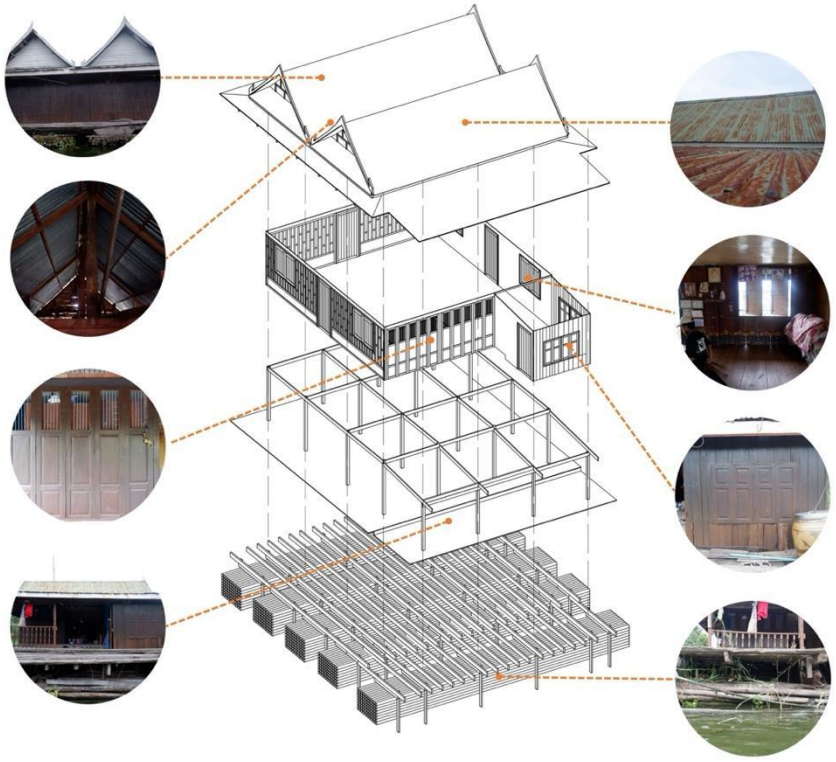

Fig. 10: Projection of each part of the traditional Thai house
Source: Author

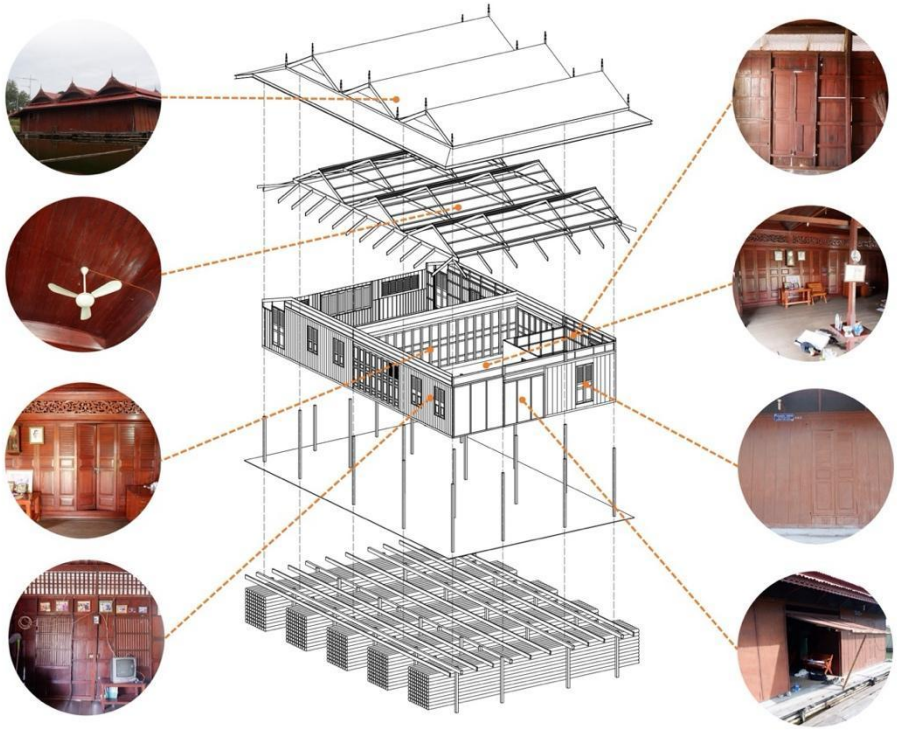

Fig. 11: Projection of each part of the three-gable house
Source: Author

The common features of the floating house in relation to its interior and exterior design can be associated with the lifestyle of the people. The space in front of a house is a cooking area. There is a multipurpose area, a sleeping area, and a storage area side by side. The environment surrounding a house has a walkway that features a terrace where they can perform washing and cooking. In a group of rafts associated together as a cluster of rafts, a walkway is joined via a plank that connects the houses. Most roof shapes are dominated by a gable roof structure. The wall structure is made of wood. Moreover, they opt for galvanized metal sheets to substitute for wooden walls as they are easily obtained and are cheap. However, not much skill is required. The windows and doors are somewhat diverse. The doors are dominated by wooden doors and galvanized doors since they are lightweight and can easily be opened and closed. The physical characteristics of this environment lead to a floating community. The houses are constructed in a manner related to their culture and environment.

A demographic analysis of the community revealed a population of approximately 300 people in 127 households, with each family consisting of three to five members. Majority of the people are involved in occupations directly related to the river, such as fishing, trading and tourism-related services. Changes in water levels seasonally affect fishery production. However, the community is proud of its culture and generally supports the conservation projects focused on preserving its floating communities. During the interviews, villagers expressed concern about the rapid degradation of their livelihoods and recognized the need for integrated conservation approaches that combine traditional practices with modern challenges. For example, one resident expressed his concern about the rapid degradation of their community and the settlement:

> I (old man) couldn't imagine my future. My children and grandchildren had moved to live on land. None of them wanted to live in a floating house; it was too difficult for them. (…) The main difficulty is the deterioration and decay of the bamboo stilts, which is a common issue in many floating houses. The water level is so low that we can't move the floating house in time, causing it to get stuck on the bank and leading to the bamboo stilts deteriorate more quickly.
>
> Interview, August 2020

Another resident articulated his position with regard to the participation of the inhabitants in the management of the village and any process of change.

> The most important thing is that the villagers should manage themselves. The villagers must come together and manage things collectively, not individually. (...). The major challenge is creating sustainability and stability –systems that are self-repairable, environmentally conscious (...)
>
> Interview, March 2020

Process of Repairing the Sakae Krang House

The research reveals that the community of this village is constantly engaged in the repair and maintenance of the houses. While the central tasks are led by the craftsmen, almost all the members of the community take part in them in some ways and ensure that the buildings remain strong, steady and accommodate the daily needs of the families. The procedure to repair a floating house is complex and involves several steps. The collaborative process adopted in this research has identified some of the essential steps as follows.

1) Initial Assessment

The repair process starts with a thorough assessment of the structure to identify areas requiring repair. Experienced craftsmen, often referred to as community carpenters, examine several key elements. In this step, they will carry out a check on the vital aspects of a house and ensure that there is stability in the

structure regarding the roof beams and floors. In relation to this and in relation to roof repair and condition, they will check for leaks and rust that could end up causing more damages in the future. In this case, this is one of the critical steps and ensures that the craftsmen are well informed about the materials and tools needed for the repair work.

2) Selection of Materials

After a physical examination has been conducted, the next step is to identify the materials that can be used. In traditional repair techniques, natural materials are used that can conform to the original structure of a house. The materials that can be used include bamboo for making buoys and wooden materials for making the structure, as they are lightweight and resilient to water exposure. In some instances, steel can also be used to construct some points of structure. In relation to repair work, it is important to ensure that all the materials used can conform to wooden materials in a structure. Traditional craftsmen have emphasized using materials with natural finishes that ensure a structure maintains its cultural significance.

Fig. 12: Repair of bamboo buoys and raft support
Source: Author

3) Repairs to Structural Elements

The repair work always begins with fixing the buoyed structure to hold a bamboo buoy. In cases where there is a damaged raft, fixing the bamboo buoy will be mandatory. The work will entail removing all the supports for a damaged raft and damaged bamboo buoys while making sure that all the houses are buoyed by bamboo buoys (Fig. 12). Next, strengthening connections between the beams and posts is critical. This can involve adding steel brackets where necessary for added support, and repairing or replacing any compromised wooden beams, ensuring that they are treated to resist moisture and pests.

4) Floor and Wall Repair

With the structural integrity ensured, the next step is to repair the floor and wall damages. However, if the wooden floor is rotten and unstable, it has to be replaced. To achieve this, one has to remove all the rotten wood and then install new floor boards to replace it. Conversely, when repairing a wall that has been damaged,

one has to strengthen it if its frame is rotten as well. To achieve this goal, one needs to remove all the rotten wall materials and then install new boards. After this is completed, one needs to apply paint and sealants to cover and preserve all the wall damages (Fig. 13 and Fig. 14).

5) Roof Repair

The roof is a critical component of the floating house, protecting it from both the elements, rain and the intense heat of the sun. If the roof shows signs of wear and tear, it is necessary to replace it with new galvanized roofing sheets. This involves removing the old roofing materials without damaging the original structure, and replacing it with new materials of acceptable quality to the villagers (Fig. 15).

Fig. 13: Repair of wooden floors
Source: Author

Fig. 14: Repair of walls of wooden structures
Source: Author

Fig. 15: Repair of the roof of a wooden structure
Source: Author

Fig. 16: Craftsmen team collaboration
Source: Author

Roles of the Craftsmen in the Community

The craftsmen in the community hold significant importance in preserving the unique floating houses. This community, with its rich historical background and sustainable living practices, requires various skilled craftsmen to maintain and develop their structures and cultural practices. The craftsmen are generally categorized into two primary groups: those who specialize in the construction of wooden structures and those who work with metal. This division of expertise allows for a more efficient and skilled approach to the construction and maintenance of the floating houses. These carpenters are skilled in using wood from local resources, such as bamboo and various types of timber, to construct the houses and various fixtures within the community (Fig. 15). They are adept at utilizing traditional tools and methods passed down through generations. On the other hand, with the increase in the use of

metal materials for construction, some craftsmen specialize in working with steel and other metals. They are responsible for creating sturdy frameworks and other structural elements that enhance the durability of the floating houses.

Craftsmen often serve as educators within the community, passing down their skills to the next generation. Young community members are encouraged to apprentice under skilled craftsmen, gaining hands-on experience and learning about the significance of their heritage through direct involvement. The craftsmanship in this community transcends mere functionality; it embodies the cultural identity of the people. Each floating house, meticulously crafted, tells a story of the community's past, with designs that reflect both practical needs and aesthetic sensibilities unique to this region

However, despite their critical roles, craftsmen face numerous challenges in their profession. For instance, climate change poses a significant threat to the community and its way of life. Rising water levels and extreme weather conditions can damage both the structures and the materials used to construct them. The traditional materials used by craftsmen, such as specific types of wood and bamboo, are becoming harder to source as environmental degradation impacts local ecosystems.

Learning from the Participatory Process

Implementing a participatory design task includes various components of participation and decision-making in various stages of funding management and resources, final output, and mutual benefits. In other words, participation is information sharing, consultation and decision-making. These are essential elements of engagement.

As people participate in making decisions, solving problems and learning what is happening, this learning is achieved through experience. This leads to changes in attitudes, behaviors, confidence and leadership. The newly acquired knowledge is, therefore, the result of participation in empowerment resulting from participation in decision-making. The results of the participatory process are empowerment and creating a vibrant organisation.

The exchange of ideas within the community organisations draws more people into the process of change and supports local reflection and analysis. This helps them reach out and unite. For this reason, it develops the collective vision and strength and helps to build close relationships within the community. Various options are presented and negotiated and people are reassured that they are not alone in their community development. The effectiveness of a participatory process relates to four factors: the range of people, stakeholders, funding and flexible planning. The process adopted is as follows.

1. The occupants were involved from the beginning of the project and participated in the decision-making, brainstorming and solving of problems. This is a solution to the community's issues and creates ownership together.

2. The raft people and government agency officials have a stake in the project. They have engaged in the participation process. The success of working on the project depends not only on the participants but also on all the government agencies such as the municipalities, the Marine Department and the provincial Culture Department. However, it is necessary to look at long-term project outcomes. Moreover, engagement and management must ensure that all the stakeholders get a chance to participate. The success of the process is not just about raising awareness or the preservation of the raft community, but also about the government agencies involved in the project. However, municipalities should also include a plan as a municipal strategy.

3. Funding is an important factor in enabling the project to be driven. Funding relates not only to the physical but also involves deeper social issues. As owners of the project, the raft people have revealed their spending honestly and also their

respect for each other. By engaging with economic and cultural issues at the same time, people are given the opportunity to manage all their grants.

4. Finally, one must adjust the process according to the situation. Since 2019–2021, when Thailand faced the Covid-19 pandemic, the collaborative process was disrupted at various points, especially collaboration meetings, which caused some months of research work to stumble. The schedule had to be changed many times. The schedule and process, therefore, should be flexible depending on the circumstances.

Conclusions and Recommendations

This study examines the conservation of the Sakae Krang floating community, which faces significant threats from multiple factors. It reveals a complex interplay of cultural, historical, and ecological elements that form the fabric of community life. The conclusions drawn from this study identified several critical aspects worthy of further exploration (Fig. 17). They are as follows.

1. The importance of local craftsmanship and knowledge cannot be overstated. The community craftsmen are aware of the building and maintenance requirements for those who live on water. Their skills in building and maintaining houses that can easily float are a valuable asset that reflects a legacy and a culture associated with life in and around water. The skills possessed by this community are not only vital but a valuable heritage that needs to be preserved and protected in a world that is progressing to a more advanced life. The need to reach out to the young and train them in this vital skill can hardly be over emphasised.

2. Environmental challenges and modernization pose significant threats to the integrity of the Sakae Krang community. The effect of climate change and water level fluctuations, and urbanisation are some factors that affect livelihood. Thus, sustainable practices must be at the forefront of preservation efforts. Incorporating sustainability in conservation and restoration initiatives, like the utilisation of local materials like natural wood, is essential. Environmentally sustainable technologies like recycled plastic for floatation will aid in reaching a balance between the conservation of traditional architecture and the challenges posed in contemporary times.

3. Engaging all the stakeholders from the local residents is vital. It is significant to build a spirit of common initiatives to promote shared ownership of the conservation process. For instance, holding meetings enables people to voice their concerns and views for the future. Thus, this will enable them to develop common strategies. In addition, this is important in ensuring that all the conservation strategies are in line with their values and lifestyles. Moreover, the importance of having floating houses symbolises the identity of people in the Sakae Krang community. Each of these houses is not just a place of residence but symbolises how this place has developed over history in relation to changes in the society over centuries. Therefore, conservation of this distinctive architecture needs to ensure that its importance is emphasised within its value in the community.

4. Finally, the conceptual framework of conservation presented in the research underline that preserving the past is not merely about maintaining physical structures; it encompasses nurturing the collective memory, identity, and social structures of the community. Thus, success in a conservation project for a Sakae Krang community will not only preserve its floating houses but also ensure a

better life for its people. In subsequent research studies, a more focused effort needs to be made to directly involve youth in a Sakae Krang community to assess not only their need to experience a balance between tradition and modern approaches but also how this need is different from that of the past generations.

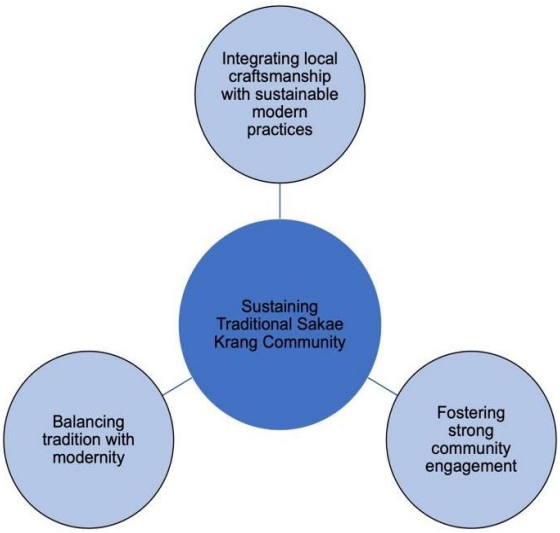

Fig. 17: Proposed Approach and Outcomes
Source: Author

Strengths, Weaknesses and Limitations

This research examined the broader issue of sustaining traditional communities and vernacular settlements. It specifically examined the issues of conservation and community engagement in Sakae Krang, Thailand. This divulged the craftsmen and craftsmanship involved in the making and maintenance of the houses as floating structures, which is an enormously complex task. However, it was revealed that the traditional knowledge and skills of the craftsmen played the major role in ensuring that the communities sustain their culturally rich built-environment and preserve their cultural heritage and identity. These traits may be common to all other such communities. Its strength lies in the fact that the research has generated deep insights into this community and the house building practices which is rare. Nevertheless, this is only one case study and therefore the findings cannot be generalized.

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Ethical Practice: This research followed accepted ethical practices. It did not involve any personal data, nor did it coerce any participants to take part in this research under pressure. No person has been identified.

Availability of Data: Data presented in this research is selected from a larger data set and they are available for scrutiny by any legitimate organization.

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