Sedang communal house in Kon Tum – conservation potential for continuing development

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Abstract. Sedang is one of the ethnic groups in Kon Tum, Vietnam with unique customs and practices expressed in traditional lifestyle, costumes, rituals, festivals etc. Previously, the Sedang people's life was always attached to a communal house, also known as Rong house. With its uniqueness, Sedang communal house contains many architectural, cultural and aesthetic values and has been a major place of living of the village community. However, recent economic, cultural and social changes in Kon Tum have caused the communal house to gradually lose its role as a cultural and religious centre, and at the same time face the degradation and destruction. The paper used the method of Heritage Conservation Potential Assessment proposed by Nahoum Cohen, adapted to specific context to analyse architectural features, assess values, and assess conservation potential of Sedang communal house, thereby proposing solutions to conserve and promote its values in the continuing development associated with the community life.

1 Introduction

According to Vietnam General Statistics Office’s data in 2019, Sedang is the largest population among ethnic minority groups in Kon Tum with 133,117 people, nearly double compared to Bahnar – the second largest group with 68,799 people [1]. However, mentioning about Kon Tum, it is normally to think about Bahnar, due to Sedang group mainly live far from the city such as Dak To, Tu Mo Rong, Dak Ha, or Kon Plong districts.

One of the most important architectural structures attached to the Sedang culture and people life is communal house. This communal house is the symbol of material and spiritual life of Sedang villages. The disappearance and deformation of the communal house in the one hand reflects profound changes in economy, culture, and society in the Sedang community, but on the other hand it shows the embarrassment of the managers and the inadequate attention of researchers to this unique building, especially the study of its architecture and conservation. Until now, there are not much intensive research on Sedang communal house. Among them notable is the research done by Ro Dam Thi Bich Ngoc in 2017, but rarely mentioning about architecture, this research focuses on ceremonies, customs and cultural activities relating to communal house [2]. Another noticeable topic

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research is “Research on conservation and promotion of communal house values in the Central Highlands in the current period” done by the Institute for Conservation of Monuments in 2019. However, this study is carried out in a very large scale covering the whole Central Highlands region with the provinces of Kon Tum, Gia Lai, Dak Lak, Dak Nong and Lam Dong, so the content about the Sedang communal house is relatively limited [3]. Regarding architecture, there has been recent research by Hung Tan Khuat (2019), which focuses on describing the most basic features of Se dang communal house in Kon Tum and proposes orientation for its conservation. However, these are just initial suggestions [4]. Some other authors also mention about communal house architecture, but it is the common communal house of the ethnic groups in the North Central Highlands or has a rough content, take for an example “The communal house of the Northern Central Highlands ethnic groups” by Nguyen Khac Tung (1991) [5] or “Sedang people in Vietnam” by Dang Nghiem Van (1998) [6).

The rapid decline in the number of communal houses since 1975 and especially the change in the behaviour of Sedang people with community houses cause many concerns about the existence of this shared house.

Based on these reasons, the paper aims to assess the conservation potential of Sedang communal houses and propose solutions to continue their life with the participation of local communities.

2 Overview of Sedang communal house

2.1 History of establishment and transformation

Until now, the time of Sedang communal house being appeared has not been determined. It is known for that Sedang communal house had closely associated with Sedang people's life for long time ago. In epic poems and in Sedang fairy tales, the image of communal house always exists as an essential part.

Originally, Sedang is a crop rotation ethnic group, in the past when finding a new village one of the first important things for the Sedang people to do is to build a communal house. After about 30-40 years residing, they back to their first old place and build a new communal house [2]. In this way “the construction of communal house is passed from generation to generation, and the house is” moved “from one place to another, integrating and adapting to each context” [4]. This explains to the diversity of Sedang communal houses in both scale and architectural form.

Later, Sedang people gradually change to settle down style, many of them were either Protestant or Catholic. Along with the transforming process of economy, socio-culture and the forest protection policy of the State, the communal house is no longer newly built, and gradually lost an important role in the village community. Many heavily damaged communal houses are not repaired, abandoned, or even demolished.

Since 1981, under the program of “cultural communal houses”, there were many communal houses with reinforced concrete built in Sedang villages without luring villagers' interests. For many Sedang people, the “cultural communal house” is not an accurate community house [7], [8], so recently, some villages have reconstructed their communal houses in a traditional way that extremely attracts participation of people in the community.

2.2 Architecture features

Sedang traditional communal houses are often located in the centre area of the village with large empty space in front to perform rituals and community activities.
This house has a stilt-like structure, including the pillars foot, the body, and the roof. The corresponding ratio between pillar foot plus body and roof of the house varies from 1:1 to 1:4. However, even if the ratio is 1:1, from the outside view, it seems to be that the roof is overwhelmed compared to other parts. It is due to the roof being lower less than 1m in length.

The body of the Sedang communal house usually consists of 8 pillars arranged in 4 parallel rows and equally space, each row consists of 2 pillars, forming a 3-compartment layout. The 4 pillars in the middle compartment are larger than the 4 gable pillars, of which the 2 back pillars are usually the most beautiful ones. To increase the bearing capacity of the house, especially when crowded, people add supporting pillars in both the horizontal and vertical directions.

Besides the conventional 8-pillar communal house, there is also a 6-pillar communal house, but not it does not make the house dimension being reduced. For example, the communal house in Kon Ro village, Ngok Reo commune, Dac Ha district only has 6 pillars in the body, but due to the special structure, the floor plan size is up to 8 x 19m. Covering the body is usually wooden planks or woven bamboo / neohouzeaua erected vertically or in “thuong thach ha thu” style [4].

![Fig. 1. Drawing of a Sedang communal house in Kon Tum [3]](image)

In contrast to the body structure made of good wood with average section or more which are not much in quantity to create a clear space, the roof uses a lot of small section and light weight components, mainly are bamboo or small tree. These materials will easily create the desired shape for communal house at the same time ensure the reliability and the stability without large load. Roofing materials are mainly grass or palm leaves, but recently communal house has been built by corrugated iron roof.

With his height and superficiality, the communal house is always an outstanding architectural and landscape highlight.
2.3 Function and transformation

Like the communal house of other ethnic groups in the North Central Highlands, Sedang communal house is a multifunctional shared house with many diverse activities, from religious practice to normal activities. It is to “demonstrate the strong cohesion/solidarity of the community in the life of Sedang people” [2]. Through these activities, indigenous traditions are nurtured and handed down. However, up to now, for many reasons, many traditional functions of the communal house have disappeared. The below table shows the traditional functions of the Sedang communal house and the current practice level of those functions.

<table>
<thead>
<tr>
<th>No</th>
<th>Traditional function</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Disappeared</th>
</tr>
</thead>
<tbody>
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<tr>
<td>1</td>
<td>Organizing community rituals activities</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>New Year Healthy ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Fire God worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Rice God worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>New Rice worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Mountain God worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Water God worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Safety worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Disease elimination worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Term-offering worship ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Village leaving ceremony</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Meeting</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Holding festivals</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cultural and art activities</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Education training and craft transmission</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Sleeping place for unmarried men and widowers</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Guest reception place of the villagers</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Traditional exhibition</td>
<td></td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

At present, most community rituals are no longer held in frequently, only done in some areas of Tu Mo Rong district [2]. The most popular ritual is the communal house worship ceremony, but it is no longer held at a fixed time and can take place at any time of the year especially when the communal house is newly built or reconstructed. Other rituals are also gradually lost or tend to be simplified or have new elements [9]. The most frequent function of the communal house today is to meet and disseminate policies. The other functions are performed sparsely and depended on the local elements. Traditional exhibition are no longer products associated with community life but mainly certificates and merits. All Sedang communal houses surveyed by the author at Ngok Wang and Ngok Reo communes, Dac Ha district and Ngok Tu commune, Dac To and Kon Tum districts in November and December 2019 are not visited, lacked of frequent care, and absence of traditional activities.

The main causes of such transformation are identified as follows [9], [10], [11]:

- Economic transformation
- Natural environment changes
- Changes of social management institution and family model
- Influence of outside religions and beliefs
- Cultural exchange and acculturation in the context of development and integration
- Subjective factors of the cultural subject

However, the main overall reason is the disruption of community structure. Previously, Sedang people run based on common community activities with strict order formed for a long time. They farm agriculture cooperatively, they have the same interests in daily life, have the same gods to worship, they must rely on each other to survive and cope with the outside world...

The communal house is a community product - where most of the villagers' activities take place and is also a symbol of that community. Once the community no longer has common interests, the communal house is abandoned and rarely used is understandable.
3 Method for assessment of urban and architectural conservation potential

In the past, the assessment of urban heritage’s conservation potential was mainly based on qualitative basis therefore it created the feelings that the assessment depended too much on the subjective inference of the assessor. To overcome that, in 1999, researcher Nahoum Cohen (Israel) proposed a method to assess the potential of urban heritage conservation. This method finds unique differences of heritage and assesses its historical and aesthetic values based on 5 criteria:

1. Physical characteristics and boundaries of the site
2. The uniqueness of the place and the place’s sense
3. Internal proportions and internal relationships
4. Architectural style and structural design
5. Building materials and specific construction methods

The above criteria have an equal importance and the maximum score of 20% for each criterion [12]. This scale allows the evaluation for each criterion in a relatively qualitative manner (not deeply in detail), but when combined, the number of scores obtained (compared to the total of 100%) will reflect the overall situation of area with a percentage as a relatively quantitative measure. When the total score reaches over 50%, the urban site has conservation potential, and the higher the total score is, the greater the conservation potential is.

It is easy to find that Cohen's method is primarily directed to urban heritage. However, he also applied this method to assess the conservation potential of architectural heritage in his book “Urban conservation”, only he did not adjust the mentioned criteria in line with architectural heritage.

Sedang communal houses can be considered as architectural heritage. These buildings dominate surrounding environment and landscape, and they can be independently reviewed and assessed on conservation potential. Therefore, it is possible to use the Cohen's method for their assessment, but to match specific conditions, the criteria can be adjusted as following:

1. Overall characteristics and boundaries of the heritage works
2. The uniqueness of the building and the perception of it in relation to the place
3. Internal proportions and internal relationships
4. Architectural style and structural design
5. Building materials and specific construction method

Among these criteria, the number 3, 4 and 5 are basically remained, while criterion 2 is supplemented with intangible elements to emphasize the spirit of the place where the work is built.

Specific contents of each criterion and their maximum marks are presented in the following table:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Mark (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall characteristics and boundaries of the heritage works (20 %)</td>
<td>Having clear and stable boundary</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Having a clearly and widely view onto it and being easily accessible</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Having architectural features consistent with surrounding works</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Having close relationship with nature (green, face water, topography...)</td>
<td>5</td>
</tr>
</tbody>
</table>
Cohen (Israel) proposed a method to assess the potential of urban heritage conservation. This method finds unique differences of heritage and assesses its historical and aesthetic characteristics and values based on 5 criteria:

1. Overall characteristics and boundaries of the heritage works (20 %)
   - Having a unique, representative form 5
   - The building is a symbol of the community/place 5
   - The work is the place where typical local cultural activities take place, creating a clear sense of the place. 5
   - Contains architectural elements and details that are culturally specific to the site/community 5

2. Internal proportions and internal relationships (20 %)
   - Having harmonious proportion between architectural components and elements 5
   - Having unity between form and architectural space 5
   - Having a special relationship between inner and outside space 5
   - There is a reasonable division of space, in accordance with the operating characteristics. 5

3. Architectural style and structural design (20 %)
   - There is a typical architectural style, characterised for the place 5
   - Having unique architectural details and components 5
   - Using harmonious colours, suitable for the building type 5
   - Having creativeness in spatial and structural organization 5

4. Building materials and specific construction method (20 %)
   - Using proper materials suitable with building type 5
   - Promoting the characteristics and features of the material 5
   - Coordinating the use of different materials effectively 5
   - The originality and rationality of the construction method 5

5. Total 100

<table>
<thead>
<tr>
<th>Criteria Description</th>
<th>Mark (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Located in the centre of the village, with a clear and stable boundary without being violated</td>
<td>5</td>
</tr>
<tr>
<td>Easily to be accessed and be perceived from many angles due to its superior height and air-open space surround.</td>
<td>4</td>
</tr>
<tr>
<td>Being the most important and dominant building, but the uniformity of architectural work with surrounding buildings is not high because most of the surrounding houses have been deformed or replaced.</td>
<td>1</td>
</tr>
</tbody>
</table>

### Results

Based on the set of criteria for the assessment of architectural heritage conservation potential identified in Table 2, the general conservation potential of Sedang communal house is summarized in Table 3 below:

<p>| Table 3: Assessment of conservation potential of Sedang communal house |
|-------------------------|-----------------|----------|
| Criteria | Description | Mark (%) |
| Overall characteristics and boundaries of the heritage works (20 %) | Located in the centre of the village, with a clear and stable boundary without being violated | 5 |
| | Easily to be accessed and be perceived from many angles due to its superior height and air-open space surround. | 4 |
| | Being the most important and dominant building, but the uniformity of architectural work with surrounding buildings is not high because most of the surrounding houses have been deformed or replaced. | 1 |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>The uniqueness of the building and the perception of it in relation to the place (20%)</td>
<td>Having a unique shape characterizing for Sedang culture, creating a strong impression and the most obvious sense of place. Having vernacular characteristics in the North Central Highlands, emphasizing the symbolism. The building has been and continues to be a symbol of the Sedang community.</td>
<td>5</td>
</tr>
<tr>
<td>Internal proportions and internal relationships (20%)</td>
<td>The roof has a superior proportion to the rest of the house, making a strong impression. There is a unity between the architectural form and the interior space, in which the roof space is not hidden. The form of the house is extroverted, but the space inside is introverted, limiting the opening of doors around, not exploiting direct natural light, but mainly diffused light. The inner space is divided evenly into sections, but the role of single section is not too important, but towards the overall space, suitable for the characteristics of versatile and flexible operation.</td>
<td>5</td>
</tr>
<tr>
<td>Architectural style and structural design (20 %)</td>
<td>Architectural style typical for traditional Sedang communal house architecture. There are several unique architectural elements and details: the curvature of the roof, the curvature of the roof top and the soft curvature of the ridge. The colours of the buildings are made up from natural colours of materials, with a few focus points in simple motifs with main colours of red, black, yellow, and white to decorate inside and outside the house. The inside space is formed on a drum shape plan and heading to skyward thanked to the simple but effective roof structure.</td>
<td>5</td>
</tr>
<tr>
<td>Building materials and specific construction method (20 marks)</td>
<td>Using natural materials available at the site: wood, bamboo, grass, rattan... Taking advantage of the characteristics and function of materials: wood for making pillars, beams and purlin, bamboo for roof frames, cork for knitting surrounding walls, thatched grass for roofs, rattan for binding ring...</td>
<td>3</td>
</tr>
</tbody>
</table>
Linking on the body using a simple joggle truss type, while the roof tied by rattan strings. Materials are used in combination with the principles: the higher level is, the lighter materials are used. The use of many bamboos or wood (lightweight) trusses for roof structure will create stable and firm, but it seems to be entangled and somewhat be messy roof space.

The building process may have conducted many unique rituals and request the whole community engagement. The unique secret to creating the curvature shape of the body roof, the curvature of the roof top, and the curvature of the roof edge.

<table>
<thead>
<tr>
<th></th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>72</td>
</tr>
</tbody>
</table>

With a score of up to 72%, it reveals that Sedang communal house has a high conservation potential, even though the traditional functions associated with the communal house have been lost. Because Sedang communal house has a variety of sizes, forms and decorative motifs, for each specific communal house, based on its own characteristics it may have higher or lower conservation potential in comparison to the above score.

5 Discussion

With a high conservation potential, it proves that Sedang communal houses has the unique and outstanding architectural values, and affirms that they deserve to be conserved and existed in cultural life of Sedang society.

From the above analysis, we can see that Sedang communal house is a common product of the traditional community, where the villagers share the same interests, the same cultural and belief activities and closely associate with each other in order to living and survival. Once losing those “common factors”, the reason for the communal house remaining will be loosen. Therefore, the overwhelming principle for conservation and promotion of communal house values is to ensure the community characteristics.

For some villages wishing to build a new communal house or repair an old one, the principle of ensuring community characteristics can be only implemented through direct participation of local people in building/repairing activities by following traditional method and process. In this way, not only the house but also building technique is preserved and handed down to future generations. Some studies show that the main reason people are not interested in cultural communal houses is because these structures were not built by themselves [7], [8].

For villages remaining the cultural and architectural features and/or beautiful landscape, a community-based tourism model as village-stay can be developed as successfully applied in Tam Thanh mural village (Quang Nam), where instead of developing a popular homestay model, the whole village or most of the households in the village, will together join in tourism activities [13], and the local people become more and more active thanks to the design approach gradually shifted from “design for community”, through “design with community” and finally “design by community” [14]. In this model, households, depending on their own capabilities and strengths, can provide a type of necessary tourism services to visitors, while remaining their existing means of livelihood [15]. Visitors will be treated as common guests of the whole village as it is a traditional custom of Sedang village. They can stay at a communal house or any house in the village, but eat and drink in another house, participate in farm-stay farming or experience traditional career with another family. They can learn about the culture under the help of the elders, or immerse they themselves in...
the festive atmosphere of the village, etc. The cultural and belief activities will be restored and maintained in both serving tourism and at the same time satisfying the needs of the villagers themselves. In this way, the communal house will remain the true communal house of a village and continue to be conserved in the continuing development.

6 Conclusions

The communal house is a unique cultural and architectural product of Sedang people in Kon Tum. This type of architecture has a very high conservation potential and deserves to be conserved and transferred to the future generations. Conserving and promoting the value of Sedang communal houses should be based on the principle of ensuring community characteristics. For villages with abundant natural and human resources, the village-stay tourism model can be developed in the involvement of the whole community in activities together and closely related together as happened in former traditional Sedang villages.

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