Public perspective on conservation value of Malay rural traditional village landscape in Langkawi Geopark

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Abstract: The Malay rural traditional village landscape in under tremendous pressure being transformed into other uses to fulfil current socio-economic needs and urbanisation. Due to various anthropogenic activities, they are being abandoned and neglected. Furthermore, people less depended on the rural landscape for the provision of food and other requirements. The conservation and preservation of traditional rural village are crucial not only to protect cultural values but also as a national heritage for future generation. In this study, we estimate the value of rural landscape through their willingness to pay (WTP) for the conservation of the Malay rural traditional landscape. This study was conducted to explore the public perspectives on the conservation value of the Malay rural traditional village landscapes, cultural value, and their willingness to pay. The findings suggested that 15.3% of respondents were willing to contribute between RM 50.01 to RM 200.00 on the conservation of the Malay traditional village landscape. The highest contribution was RM 500 000. The results also show that 30% of the respondents, were satisfied with the present situation of traditional village environment and 50% of the respondents stated that the government should be responsible for the cost of conservation of the Malay traditional village landscape.

Keywords: conservation, malay rural, traditional village landscape

1. Introduction

With rapid urbanisation, rural landscape is under constant threats to converted to more valuable economic activities. Due to various anthropogenic activities, they are being abandoned and neglected. Furthermore, people were less dependent on the rural landscape for the provision of food and other requirements. However, over the past few decades, concerns about disappearing rural landscapes and encroachments of new and emerging features in the landscapes has become a severe issue in both advanced and developing countries. The conservation of rural landscape required in-depth analysis to enable the preservation of the rural setting as a traditional heritage for future generation.

The rural landscape made up where people have developed an area from a wilderness to a small settlement area. They built their settlement from the natural resources such as timber, and building material founded from their surrounding environment. The rural landscape is very rich in flora and fauna which provide the need of people for medicinal and food. According to Benson [1], the rural landscape...
is the land which is populated by human beings and worked on by them, exploiting its natural resources, primarily by agriculture, aquaculture and silviculture, but excluding areas densely built over and housing human beings living and working nearby. In many ways, the rural landscapes are also very rich in people custom and beliefs that represent the culture of the community in that area which includes religion, language, mannerism, dressing, rituals, music, festival, food, norms, among others. In Malaysia, for example, culture is being practised and expressed by its multi-ethnic groups.

The traditional land use systems in Peninsular Malaysia have changed over time, as a function of the interplay of socioeconomic and technological factors [2]. In the early human settlements were located along the major rivers and coastal region. The village was mainly fisher, hunter and gatherer of forest produce. The Malay settlements concentrated along the coastal and estuarine fishing villages followed by wet paddy growing including the establishment of the fruit orchard.

As the rural resources entail all natural and human-made elements that depict the character of rural areas. In the most common landscape character can be seen until today are the paddy fields, vegetable farms and or orchards [3]. Since the early 1970’s, palm oil plantation has become the dominant new look for the traditional landscape of the country, while, paddy fields were found in the north-western region of the peninsula, as well as along the foothills in the east coast. Meanwhile, rubber and palm oil cultivated areas mainly founded in the foothills scattered along the Peninsular Malaysia, besides these areas, the natural landscape was primarily covered by forest or some on the coastal areas [4]. In the most common landscape character can be seen until today are the paddy fields, vegetable farms and orchards.

The Malay rural traditional village landscape is under pressure to being transformed into other uses to fulfil current socio-economic needs and rapid urbanisation. However, some development continues to erode the natural environment, and cultural values that embodied in the landscape that has maintained the traditions are under threat. Due to it’s the villages, and kampong house also has lost much of its heritage value as the Malays become indifferent to and or ignorant of its cultural importance [5]. The aim of the study examines the fundamental knowledge on landscape characteristics of conservation in the rural area by enquiring the public’s perspective on aesthetics value of landscape characteristics and their willingness to contribute to the preservation. Also, public knowledge and recognition of ecosystem services generated by Malay rural traditional landscape and their expectation of the traditional rural landscape, and others influencing factors explored. One of the most precious parts of Langkawi that attract every public in their visits is the Malay rural landscape, cultural and geological heritage. In Langkawi, tourism activities have significantly influenced on land use land cover. Although this island attracts more than 2 million tourists from local or abroad yearly, not much changes of its land use land cover had occurred in the last 30 years. However, some of the areas undergoing significant changes mostly centred around Kuah area and near existing population centres such as in Padang Mat Sirat and Pantai Chenang. The result of this study will contribute towards to protection and conservation of natural resources, the rural landscape assets and heritage. In this regard, the Government is committed to the stewardship and preservation of our natural environment and non-renewable resources.

1.1. Malay Rural Traditional Village Landscape
The traditional Malay landscape are invariable could be found in the rural setting, and the kampong (Malay village) house represents the conventional form of the dwelling of the Malay people in Peninsular Malaysia. According to Lee & Lau [5] to in the last decade of the 20th century, the landscape of Malay villages in the rural areas of Peninsular Malaysia seems to paint an assuring picture that the Malays have managed to preserve their non-urban socio-cultural character.

According to Yuan[6], the kampong or village is a rural settlement sustained traditionally by subsistence activities like paddy-growing, fishing and other agricultural practices. The kampong randomly distributed with Malay houses, trees, compounds and paths which blends harmoniously with the environment. There are usually not many main roads in the kampong except occasionally for the access road leading into the kampong, instead of the paths of a link to the village that lead from one house to another, winding through the houses and leading to other parts of the villages. Due to the preference for community intimacy over personal privacy, house compounds are often open and
The villages have no clear geometric boundaries, the bunds and irrigation canals more clearly define the boundaries in paddy fields. They also do some farming, fishing, chicken raring and raising livestock activities for daily consume. Fishing villages are found close to the sea while the inland village usually located near the paddy fields, rubber or oil palm plantations.

The most distinctive features of Malay vernacular houses built from timber. The houses constructs on the traditional Malay architecture contributes to the shaping of the Malay aesthetical such as the carving design of the roof, wall, door, and window. The numerous features in the traditional Malay house are to providing sufficient ventilation; the house is raised on stilts as to catch winds of a higher velocity. Meanwhile, the elongated structure of the traditional Malay house with minimal partitions in the interior as to allows smooth passage of air and cross-ventilation. The traditional Malay house used ventilation, and solar radiation control devices as to provide climatic comfort in the house atmosphere and these are the most effective means for climatic support in a house in the warm and humid Malaysian climate.

The characters of Malay rural landscape influenced mainly by neighbouring regions of the Malay Archipelago, which they brought the traditional cultural values and lifestyles. Furthermore, the arrivals of Islam in the 13th century in the Peninsular, have made the Malays were strongly animistic in their beliefs and the spirit on the dependent decision-making became the foundation in their daily routines. According to Malikii, the kampung environment largely depends on the principles of the Malay socio-cultural practice, where Malay culture is closely related to Islamic traditions. In the kampung architecture the most common and prominent structures in kampung are the village mosque (masjid) often stands out in a kampung landscape, and every village has a masjid or a smaller prayer house (madrasah or musola) which is the Malay going to performs their prayers.

1.2. Valuing Rural Landscape

Landscape character is a product of an interaction between ecological and socioeconomic processes made by the human. Nevertheless, human activities are always dominating the natural processes resulting in landscape change and habitat loss of the environment. Human has made modifications to the landscape as to extend their settlements, creating the fields and pastures for agriculture, clearing the forests and draining the marshes and wetlands as to fulfil their socioeconomic needs. Indeed, due to various anthropogenic activities, global climate change and dwindling natural resources, the landscapes change rapidly as well as changes in lifestyles and the competing demands for land for local and global food and fuel security.

As almost people valuing landscape as about places and locations that reflect land use, however rapid changes on landscape dynamics make people feel the urgency of preserving (traditional) landscape values, or at least of managing and developing landscapes sustainably. Since placing monetary values on the landscape has never been an easy task due to the complexity of representing landscape features in economic models. In interpreting many environmental goods, a landscape is often considered to be a public good as well no market price exists to indicate their economic value and consequent impacts on the landscape.

In interpreting the public good of landscapes, landscape elements, such as hedgerows, trees, grass strips, ditches, or walls, are interpreted as publicly, commonly, or privately owned. As far as they are publicly owned, the government need the decision making proses in designing the landscape for best to the society. Due to the public good character of the landscape, the effective governance of landscape management is complex and challenging. As it is a fundamental part of this process is to establish the ‘value’ of the landscape conservation assets within an area. This value can then be compared with data for other ecosystem services to identify management priorities under different future scenarios. However, there is little consensus on how to perform such an evaluation. In this study, we explore the public perspectives on the conservation value of the Malay rural traditional village landscapes, their knowledge and recognition of ecosystem services generated by the rural landscape, their expectation on the cultural value, and their willingness to pay. To calculate the monetary value of such ecosystem services by using contingent valuation method (CVM) as to value the stewardship and preservation of our natural environment and non-renewable resources. Thus, this paper aims to estimate their
willingness to pay (WTP) for the conservation of the Malay rural traditional landscape on the existing area. Under certain circumstances, consequences of policy changes towards the rural landscape as to support for conservation, intervention in rural areas, as well as changing economic demands and policies towards the rural people.

2. Materials and methods

2.1. Study Area

Langkawi Geopark is Malaysia's and Southeast Asia's first established Geopark in this region. Covering an area of about 478 square kilometres, the rocky tropical legendary islands are rich in geodiversity, many of which have a scientific value of national and regionally significant. It is a tropical island located off the north-west coast of Peninsular Malaysia between 6° 10’N and 6° 30’N latitude and 99° 35’E and 100° 0’E longitude. It is unique in the sense that it formed of 104 islands that made up the legendary Langkawi Archipelago. The topography of this island is mountainous covered by forest reserved area of 26,266 ha that is 54.6% of the total land area (Langkawi Municipal Council).

2.2. Sampling Method and Data Analysis

There were several methods used in the data collections in this research such as observations, interviews and questionnaire surveys. The instrument of this survey was designed to measure the following: i) the public perspectives on the conservation value of the Malay rural traditional village landscapes, their knowledge and recognition of ecosystem services generated by the rural landscape, and their willingness to pay towards the conservation of the scenes. The survey consisted primarily of categorical choice questions and Likert-type survey items that provided a list of statements or characteristics of interest (e.g., visitors understanding towards the traditional village landscape and character for conservation elements) and asked respondents to tick the space associated with their level of agreement or concern about that particular statement or characteristic.

The primary data for this study gathered through interviewing by selecting the visitors randomly. A total of 456 respondents were interview into six sub-districts namely is Kuah, Ulu Melaka, Bohor, Kedawang, Padang Matsirat and Ayer Hangat to elicit their preference for traditional rural development, their perceptions of rural character, and their attitudes towards rural living in general. Most of the visitors gave full cooperation during the field survey. The data were analysed using the SPSS software.

3. Result and Finding

Respondents were asked to determine the value of their willingness to contribute to the conservation of Malay traditional village landscape, the result of the values of WTP study showed that 23% of respondents indicated their willingness to contribute and 77% of respondents did not want to contribute as shown in Table 1. This studies also show that there are only 8.1% of respondents able to contribute as much as RM100.00 and 5% of respondents able to donate as much as RM200.00.

Meanwhile, the high value of donations was RM500 000, and the lowest amount is RM1.00 among the respondent who wish to contribute or the purpose of conservation of Malay traditional kampong landscape. Based on descriptive analysis shows that the mean and median scores. The study also found that a higher mean score valued at RM 4,927.00, while the median score valued at RM 150.00, this indicates that this means score cannot state the majority characteristics of the other scores in the value of an ability to pay by respondent.

| No. | Value (RM) | Frequency | Percentage (%) |
|-----|------------|-----------|----------------|
| 1.  | 1          | 1         | 0.2            |
| 2.  | 2          | 1         | 0.2            |
| 3.  | 3          | 1         | 0.2            |
| 4.  | 10         | 2         | 0.4            |
| 5.  | 20         | 3         | 0.7            |
| 12. | 250        | 7         | 1.5            |
| 13. | 300        | 9         | 2.0            |
| 14. | 350        | 2         | 0.4            |
| 15. | 400        | 1         | 0.2            |
| 16. | 500        | 1         | 0.2            |
The analysis on the willingness to contribute to the conservation of Malay traditional village landscapes found that only 8.1% of respondents were willing to commit from RM 50.01 to RM 100.00. Meanwhile, there are 2.7% of respondents were willing to contribute between RM 0 to RM 50.00 while 12.2% of respondents willing to pay between RM 100.01 to RM 500 000.00 as shown in Table 2.

| Range                | Frequency | Percentage (%) |
|----------------------|-----------|----------------|
| Below RM 25.00       | 8         | 1.8            |
| RM 25.01 to RM 50.00 | 4         | 0.9            |
| RM 50.01 to RM 100.00| 37        | 8.1            |
| RM 100.01 to RM 200.00| 33        | 7.2            |
| Higher than RM 200.00| 23        | 5.0            |
| No information       | 351       | 77.0           |
| Total                | 456       | 100.0          |

On the other hand, the analysis showed that 30% of respondents or 137 respondents, were satisfied with the present situation of the traditional village environment as shown in Table 3. Meanwhile, 50% or 228 respondents stated that the government should be responsible for the cost of conservation of the Malay traditional village landscape. In this study also indicate that 11% of respondents or 50 respondents gave their view that allowing others to contribute to the conservation and conservation of the traditional Malay village landscape. Meanwhile, only 2.6% of respondents did not provide any reason for their views on the traditional Malay village landscape.

| Visitor Perception Malay Rural Traditional Landscape | Frequency | Percentage (%) |
|------------------------------------------------------|-----------|----------------|
| a. I am satisfied with the current situation of traditional village environment. | 137       | 30.0           |
| b. Let others donate.                                  | 50        | 11.0           |
| c. The government is responsible for the costs of conservation | 228       | 50.0           |
| d. Other reasons.                                     | 12        | 2.6            |
| f. No information.                                    | 29        | 6.4            |
| Total                                                | 456       | 100.0          |

The selection of this placement makes the residence of the Malay or kampong community unique and distinctive that is a combination of physical, artistic and environmental aspects. Given the identity of the traditional Malay traditions and its surroundings at the beginning of the settlement of the Malay community it was described by Moorhead (1965), that the river was the only means of communication and transport to the interior; while its output is the perfect place for placement.

The analysis showed that 26.2% of respondents placed a high priority on the determination of the traditional character of traditional Malay landscape and 57.7% of the respondents rank a moderate of priority of the character of the traditional Malay landscape. This shows that the physical environment, topography, drainage, land and sampling capabilities to the settlement area still have the uniqueness of the Malay identity as shown in Table 4.

This traditional Malay environment also means that there are several elements such as home, town, fort, chart, base, granary, madrasah, mosque or musola or agricultural activity. However, 16.1% of respondents stated that the identity of the characteristic of the traditional village landscape did not depend heavily on the physical environment of the village.
Majority of the respondent or 53.5% of respondents have chosen the architectural aspect as one of the factors that contributed to the retention of the identity of a traditional village, at a moderate level of preference, while 35.3% of respondents placed at high priority levels in determining the character identity of the landscape. These also means the uniqueness of the traditional Malays’ identity based on the architectural characteristics of the Malay identity that still present in the structures of houses, towns, fortifications, stubs, bases, granaries, madrasahs, mosques or musola.

The analysis also found that 51.8% of respondents’ views of putting a level of moderate priority on the land use environment in agricultural activities such as rice fields, fields, hamlets, gardens, farms and open space still exists in most traditional Malay villages. Meanwhile, 14.1% of respondents set the land use environment is not a priority in determining the character of traditional Malay village landscape.

Meanwhile, 31.2% of the respondents have set high levels of priority in determining complement activities which it contributes to the retention of traditional Malay village identity. The complementary activities can be explained as the socio-cultural values such as culture, handicraft, processing and sales of forest products while socio-economic activities were family gatherings such as feast or banquet and religious activities. The analysis suggested that the identity of the traditional Malay village in the aspect of architecture is the main priority of maintaining Malay character, which is at the mean 1.76 range which was high priority ranges as in Table 4.

The analysis showed that 38% of respondents stated that the thought factor was at a moderate level of preference. These means that the thought of the present generation has changed dramatically because of the modernisation of science and technology. Meanwhile, 46% of respondents stated that confidence factor was at moderate-high priority. These imply that the beliefs inherent in their parents from previous ancestors can be the basis of a change in the development of traditional Malay landscape at present.

The result shows that the factors affecting the traditional Malay village landscape are traditional factors, practices, ideas, beliefs that are a modest priority in influencing the development of the traditional Malay village landscape, which at the mean 2.08 to 3.13 which is within simple priorities as in Table 5.

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### Table 4: Uniqueness of Malay Identity

| Malay Identity Aspect                                                                 | Very Low Priority | Low Priority | Moderate | High Priority | Very High Priority | Mean |
|--------------------------------------------------------------------------------------|-------------------|--------------|----------|--------------|--------------------|------|
| 1) Built Environment (houses, cities, forts, jetty, paddy fields, religious schools, mosques and musola) | 35.3%             | 53.5%        | 11.2%    | 1.76         |                    |      |
| 2) Agricultural Land Use (paddy fields, orchards, gardens, fields and open spaces)  | 34.2%             | 51.8%        | 14.1%    | 1.80         |                    |      |
| 3) Complementary activity (cultural, handy craft, selling forest product)             | 31.2%             | 49.1%        | 19.6%    | 1.88         |                    |      |
| 4) Physical Environment (topography, drainage, soil and accessibility)                | 26.2%             | 57.7%        | 16.1%    | 1.90         |                    |      |

### Table 5: Influencing Factor Towards the Development of Malay Traditional Village Landscape

| Factor   | Very Low Priority | Low Priority | Moderate | High Priority | Very High Priority | Mean |
|----------|-------------------|--------------|----------|--------------|--------------------|------|
| 1) Customs                                    | 34.5%         | 37.9%       | 15.5%    | 9.8%         | 2.3%               | 2.08 |
| 2) Practices                                  | 35.5%         | 23.2%       | 21.1%    | 17.2%        | 3.0%               | 2.29 |
| 3) Thought                                    | 18.5%         | 22.7%       | 38.4%    | 19.4%        | 0.9%               | 2.62 |
| 4) Believes                                   | 13.4%         | 15.3%       | 20.9%    | 46.0%        | 4.5%               | 3.13 |
| 5) Others                                     | 4.1%          | 5.8%        | 6.6%     | 7.9%         | 75.6%              | 4.45 |

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4. Conclusion
The study found that the public views on the importance of preserving and the value of Malay rural traditional landscape value and the WTP value for the Langkawi Geopark conservation. The public hold on the government should be responsible for the cost of preservation and protection of Malay traditional village landscapes. These shows that public also provides support to the conservation of the rural landscape through their willingness to pay for the preservation of the Malay rural traditional landscape. Almost less than one-fourth of respondents indicated their willingness to contribute to the conservation of Malay traditional landscape.

The Malay rural traditional landscape alteration in the form of modernism of the rural Malay village it has given the most significant impact toward the cultural landscape of the Malay traditional village in Malaysia into the level of loss it peculiar identity in every place in the country. The study of rural landscapes identifies the appearance of areas to understand processes that are affecting a scene and meanings in the human features of the landscape. Moreover, the cultural sustainability is vital to create a sustainable rural development and preserve the cultural and traditional values for future generations.

Acknowledgement
Centre of Studies for Park and Amenity Management, Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Institute for Environment and Development (LESTARI), Universiti Kebangsaan Malaysia, 43650 Bangi, Selangor. Department of Landscape Architecture, Faculty of Design and Architecture, University Putra Malaysia, 43400 UPM Serdang, Selangor, are greatly acknowledged.

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