

## ASSESSING THE TOURISM POTENTIALS OF KOTA MARUDU AND ITS SURROUNDING VILLAGES, SABAH, MALAYSIA

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**Abstract:** Assessment of the potential of tourism is a crucial element that must be considered for tourism development. This paper examines and identifies the natural resources in and around Kota Marudu, focusing on potential rural tourism destinations. Conceptually, the assessment framework is developed from the perspective of tourist demands. This study classifies tourism potential based on two indicators, namely natural resources (14 items) and historical values (10 items). Cumulative scores are ascertained by applying the Weighted Sum Model (WSM). Consequently, eight potential tourism sites are recognised based on their natural attractions and historical values. The results also show that Kota Marudu has the highest potential score for natural attraction diversity. Based on valuable information about Kota Marudu's potential tourism development, this study proposes specific planning strategies to tap its diverse range of natural resources and the rich cultural traits of its village communities.

Keywords: Rural tourism, tourism potential assessment, weighted sum model, Kota Marudu, Sabah.

### Introduction

Development is required for the improvement of a region. Additionally, it also benefits the surrounding community. For this development to occur, a wide range of information is necessitated so that the area's potential can be identified and fully justified through an assessment (Gonzalez-Ramiro *et al.*, 2016; Cheablum *et al.*, 2021). This assessment aids in the identification and classification of various locally accessible tourism options, enabling local authorities to decide which locations have the potential to be developed as tourist attractions. As a result, knowing about natural and cultural resources, tourism services and facilities, tourism attractions, and essential tourism infrastructure is critical for fostering tourism development (Boniface & Cooper, 2010).

Assessing a region's tourism potential and developing it is one way to combat poverty in rural communities. Introducing the tourism industry means increasing income across multiple sectors and fostering economic growth

and employment creation (Farasha & Aslani, 2021). The identified tourism potential can come from existing natural resources, services or artificial products (Dwyer & Lim, 2003). The identified potential will then be converted into a strategic business model that will function as a tourist attraction and package into a natural, rural, ecotourism or cultural-based tourism product.

Attractions can be described as the distinctive qualities of a particular destination that motivate tourists to visit. These qualities include the area's pleasant environment, visually appealing natural features, unique cultural customs, and authentic cuisine options (Krešić & Prebežac, 2011). The capacity of tourist sites to draw in visitors is dependent upon aspects such as their level of accessibility, the quality of the readily accessible resources, the effectiveness of resource interpretation, and various other supporting elements. To effectively cater to tourists, tourist sites must possess

basic infrastructure, including amenities such as lavatory facilities, food services, logistical support, and transportation options. Assessing a destination's quality depends upon evaluating tourists' expectations and satisfaction and the overall quality of the surroundings (Deng *et al.*, 2002). These qualities are useful in directing decision-makers in their future planning and establishing the destination's competitiveness (Yan *et al.*, 2017).

Being competitive means that the ability to attract tourists is superior to that of competitors (Abreu-Novais *et al.*, 2016). Identifying potential tourist attractions and their resources is critical when planning and developing tourism destinations (Nasa & Hassan, 2016). The assessment of a destination's potential for the development of tourism-related activities can be conducted by examining either the supply perspective, which considers the quantity and quality of available goods in the area or the demand perspective, which considers the perception and desire of tourists in the area to visit the destination (Formica & Uysal, 2006; Nasa & Hassan, 2016; Yan *et al.*, 2017). The consideration of multiple perspectives is crucial in evaluating the capacity of a site to attract and accommodate tourists.

The term "potential", as used in this study refers to a community's or location's pool of resources that can be transformed and developed into tourist attractions or finished products (Bassey, 2015). Thus, this research aims to evaluate Kota Marudu's tourism potential as a rural tourist destination. Kota Marudu is a small town that is an agricultural hub for nearby villages and Kota Kinabalu's city centre. The study's results would emphasise the attributes as determined by the Weighted Sum Model (WSM), which assigns numerical values to each indicator of tourism potential and categorises them as high, average, or low levels of potential (Malik & Bhat, 2015; Nasa & Hassan, 2016). Furthermore, this study might serve as a valuable resource for decision-makers and urban planners in facilitating effective strategies for tourism development in Kota Marudu.

## Literature Review

Sabah has an abundance of natural, cultural, and historical attractions. Tourism has been widely recognised as a significant industry for the state. Before the COVID-19 pandemic, Sabah received millions of domestic and international tourists annually. In 2023, an estimated 2.2 million tourist arrivals are anticipated to generate RM4.1 billion in expected income (Anjumin, 2023). As of September 2023, the Sabah Tourism Board reported that over 1 million domestic and approximately 143,857 international tourists had visited the state (Goh, 2022). This positive trend indicates that implementing inclusive tourism initiatives and programmes, particularly promoting tourism, expanding the air network (Anjumin, 2023), and raising awareness of branding power (Danting *et al.*, 2018) will further improve the tourism state development plan. Thus, great emphasis on digital adoption, innovation, health, and safety become the important pillars in most of the national strategic transformation plans that align with the recovery-phase measures (Shaliza *et al.*, 2023).

The aim to diversify the tourism product continues when potential attractions are further assessed. The potential for areas to become tourist destinations is contingent on natural attractions in the surrounding area. However, numerous factors must be considered before the site receives tourists. According to Shohan *et al.* (2012), the source of attraction is the sum of the natural, cultural, historical, and socio-economic context for the organisation of tourism activities in a particular region. These attractions belonged to a community or location that could be a tourist destination (Bassey, 2015). Although the site is a source of attraction, its ability to attract tourists depends heavily on other factors such as accessibility, resource quality, public infrastructure, basic amenities, public facilities, and other factors that tend to support the development of rural areas (Priskin, 2001; Nasa & Hassan, 2016; Sipatau *et al.*, 2020).

The Sabah Tourism Board introduced rural tourism in 2014 through the Tourism Products

Division, which also focuses on developing rural tourism products. Several districts, including Kota Marudu have introduced initiatives and collaborations with various tourism stakeholders since 2015 until now. The efforts and roles given by state agencies, local tourism associations, communities, and major tourism stakeholders involved in planning and tourism development will bear fruit by setting targets by 2030 to make Sabah a world-class rural tourism destination (Mu, 2022).

Planning is important if rural areas need to grow and change. At the same time, development requires proper planning to address challenges and improve social, demographic, economic, governance, and environmental aspects. The development in Kota Kinabalu demonstrates the usefulness of tourism as a tool for transformation. As the state of Sabah's principal entry point for domestic and international tourists, the influence of this tourism activity catalyses the urban sprawl of adjacent places such as Tamparuli, Kota Belud, and Kudat. Although Kota Marudu is located between Kota Belud and Kudat, both of which are well-known for their nature-based tourism products, Kota Marudu is a bit behind in competing with those two regions.

Kota Marudu offers a variety of attractions, from nature to artificial, agriculture, culture, and heritage (Sipatau *et al.*, 2020). Most of these potential attractions are on the fringe of the community area and some become part of their lives. The wide range of tourism products shows that Kota Marudu has a high potential to be developed as a rural tourism destination. It also coincides with the UNWTO definition of rural tourism as "a type of tourism activity where the visitor's experience is related to various products that are generally associated with activities based on nature, agriculture, rural lifestyle or culture, fishing, and sightseeing". Thus, those activities are indeed found in Kota Marudu, which is the experience prospective tourists will have. With the right tourism assessment and resource inventory, Kota Marudu can be Sabah's next outstanding rural destination.

Effective planning for rural tourist destinations requires a framework that permits systematic assessment of natural resources and can be incorporated into the planning process. The first step is to assess the capacities and potentials of rural settlements in rural tourism (Trukhachev, 2015). Examining supply and demand is a common approach for evaluating tourism potential. Based on the supply, the presence of attractions can be determined by assessing and classifying the potential tourism resources that can be generated based on the identified indicators. On the other hand, demand can be measured using tourist surveys or expert opinions to determine if the attraction is capable of being the primary driver for attracting tourists and to what extent the potential can accommodate tourism activities (Priskin, 2001; Deng *et al.*, 2002; Al Mamun & Mitra, 2012; Nasa & Hassan, 2016). Considering both approaches, the quantity and quality of potential tourism resources, spatial distribution, and importance can help local authorities and decision-makers choose the best possible action. There is little documentation on assessing tourism potential utilising the demand approach and considering villages, particularly in Kota Marudu. Thus, the current study employs a demand-driven approach to understand better the possible tourism resources that could meet tourist expectations, increase satisfaction, and improve the quality of the destination experience.

## **Methodology**

### ***Study Sites***

Kota Marudu covers an area of 1,917 km<sup>2</sup>. There are approximately 81,300 people who reside in Kota Marudu (Kependudukan Negeri Sabah, 2020). It is located in northern Sabah, 130 km from Kota Kinabalu's city centre. It has become an important agricultural centre where small farmers can grow industrial crops. It is bounded to the north by the Kudat and Pitas districts, to the east by the Beluran district, to the west by the Kota Belud district, and to the south by the Ranau district, making its location extremely

strategic. Figure 1 depicts this position and the location of this study.

Those wishing to travel to Kudat from the city centre will first travel to Kota Belud, then to Kota Marudu as a transit option before continuing to Kudat. Potential tourist attraction areas should be developed so that Kudat and Kota Belud will not overshadow Kota Marudu. The natural beauty and cultural significance of Kota Belud and Kudat are comparable. Because of their natural and cultural treasures, the Kota Marudu Tourism Development Action Council has suggested eight villages that could be promoted as rural tourism destinations (Janes Kansirong, February 9, 2021). The region’s cultural traditions, customs, and local community values, uncommon elsewhere in the world, complement its natural resources. It also makes Kota Marudu a cultural district and tourist destination for visitors who want

to experience the local lifestyle and culture as well as the opportunity to live in a traditional Rungus longhouse (Ministry of Tourism, Culture and Environment, 2015). An assessment of its attraction resources is required to identify Kota Marudu’s rural tourism potential fully. As illustrated in Figure 2, the conceptual framework is based on the demand approach. Two main indicators of assessment: Cultural and natural were used to determine the potential attractions surrounding the eight villages. The evaluation output is necessary for the planning and development stage, where decision-makers must prioritise the most important site.

**Sampling Method**

Given the pandemic situation involving COVID-19, the actual data collection was carried out online. It was decided to adopt the online sampling method because it is so

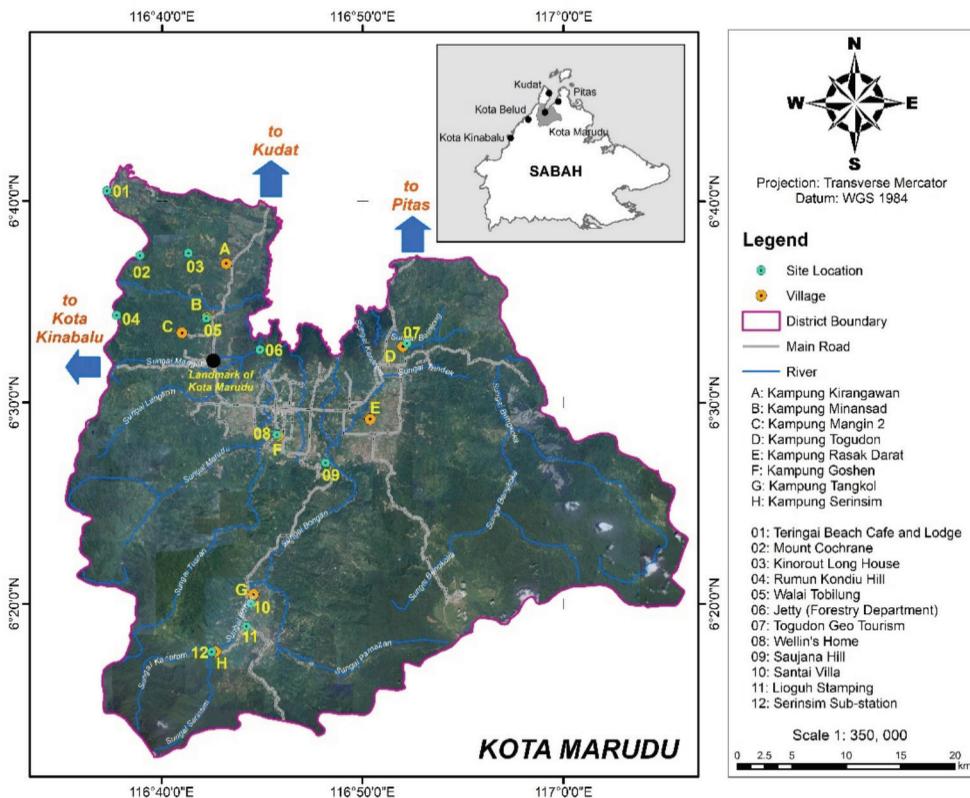


Figure 1: The location map of Kota Marudu, Sabah

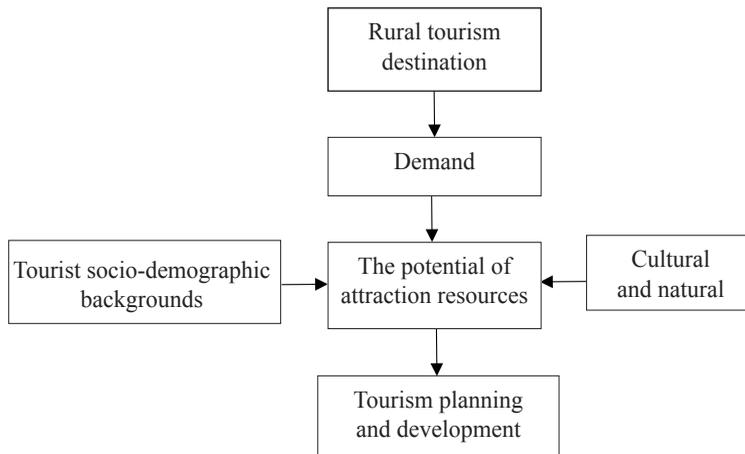


Figure 2: Conceptual framework of tourism potential assessment

commonly used to obtain difficult samples (Singh & Sagar, 2021). To emphasise the primary objective of this study, the questionnaire was disseminated conveniently in the form of an online survey created using the Google platform tool. A link to an online survey was conveniently distributed to several key person social media platforms (including Facebook and WhatsApp) and respondents were asked to participate. The Kota Marudu Tourism Development Action Council's Facebook page and local community associations promoting their tourism products and activities are some of the vital platforms and key individuals assisting in disseminating the online survey link. This intention also supplies potential respondents with background information on the local community activities and attractions in Kota Marudu.

The study sample comprised 60 participants, ranging in age from 20 to 60 years old, who either had prior experience visiting Kota Marudu or expressed intentions to visit soon. The rationale behind selecting participants who are 18 years old and older is to ensure that they possess the cognitive ability and maturity necessary to comprehend and effectively reply to the study inquiries. Sampling via social media, on the other hand, offers research advantages, including diversified audiences, and instantaneous data collection. It allows them to

participate on their own devices and at a time of their choosing (Singla & Durga, 2015; Azhar *et al.*, 2023).

This sampling method was carried out over two months, specifically from middle November 2020 to early January 2021. Even though the online response rate is quite low, this could be attributed to several factors, including the research approach and duration of data collection. It is believed that the pandemic has influenced how research is conducted. Researchers tried to disseminate the survey but it received little response. The pandemic may have contributed to survey fatigue, as evidenced by the lower response rate during the pandemic (Lavrakas, 2013). In this study, descriptive research was employed to assess the potential for rural tourism in eight villages and a smaller sample size was acceptable for descriptive analysis. According to Memon *et al.* (2020), a model with more variables requires a larger sample size than one with fewer variables.

### Data Collection

In this study, the design of the questionnaire is very important in choosing the right questions to get the research results and meet the objectives. The structured questionnaire was translated into Malay language. It was divided into two sections: (A) Respondent's socio-demographic

information and (B) tourism indicator assessment. Yan *et al.* (2017) adopted and modified the tourism potential indicators while the scoring method was adopted by Nasa and Hassan (2016). Table 1 shows 14 indicators for cultural values and 10 for natural sites.

Respondents were asked to rate eight areas on a scale of 1 to 3 using 24 indicators. Nasa and

Hassan (2016) proposed three value categories ranging from 1 (low) to 3 (high). Coding values were assigned to each category: 1.00 to 1.66 as low potential, 1.67 to 2.33 as moderate potential, and 2.43 to 3.00 as high potential. The assessment output was differentiated by high, moderate, and low.

Table 1: List of indicators

No.	Indicators	Weighing Score
<b>Cultural Value</b>		
1	The uniqueness of lifestyle, knowledge, and wisdom	2
2	Continuation of cultural tradition	2
3	The beauty of the culture	2
4	Continuation of lifestyle, wisdom, and knowledge	2
5	History of culture that can be found	2
6	The commitment of residents to preserve the culture	2
7	The wholeness to maintain the cultural identity	2
8	Connection with the group of culturalist	2
9	Access to facility	2
10	Signboard facility	2
11	Safe from natural disaster	2
12	Safe from outside threat	2
13	Variety of tourism activities	1
14	Relationship with other attraction	1
<b>Natural Sites</b>		
1	Element of attraction and uniqueness	3
2	Rich in nature and natural ecosystem	3
3	Opportunity to see wildlife	3
4	Quality of landscapes and aesthetic values	3
5	Suitability of tourism activities related to characteristics of the sites	3
6	Variety of tourism activities	2
7	Micro weather condition	2
8	Accessibility	2
9	Independent	2
10	Opportunity for challenge, interesting, and unique experience	2

**Data Analysis**

The Weighted Sum Model (WSM) approach was used to quantify the attributes by their respective weights. This approach demonstrates that the greater the value of the weight, the greater the importance of the indicator in the assessment (Nasa & Hassan, 2016). The simple weighting score formula is used to calculate the potential as in Formula (1) while the potential level of the attraction source can be calculated using Formula (2):

$$TRP = \frac{\sum(i = 1) (W_i \times R_i)}{\sum(i = 1)W} \tag{1}$$

where *TRP* is a potential source of tourism,  $W_{i-1}$  is weighing indication score from 1 to *i*, and  $R_{i-1}$  is the score valued from indicator 1 to *i*.

$$\begin{aligned} \text{Class interval size} &= \frac{\text{Max score} - \text{min score}}{\text{Total interval}} \tag{2} \\ &= (3-1)/3 \\ &= 0.66 \text{ (difference of each} \\ &\quad \text{potential level)} \end{aligned}$$

Potential level:

- 2.34-3.00 = high potential
- 1.67-2.33 = average potential
- 1.00-1.66 = low potential

**Results**

**Respondents' Characteristics**

The descriptive analysis, as shown in Table 2 summarises the socio-demographic background information of 60 respondents. Most are female with an average age of 25.62 years old and the

Table 2: Socio-demographic information

Socio-demographic	Frequency (N = 60)	Percentage (%)
<b>Gender</b>		
Male	16	26.7
Female	44	73.3
<b>Age (Mean = 25.62)</b>		
20 - 22 years old	25	41.7
23 - 25 years old	20	33.3
> 26 years old	15	25.0
<b>Origin</b>		
Peninsular of Malaysia	30	50.0
Sarawak	3	5.0
Sabah	26	43.3
Labuan	1	1.7
<b>Education level</b>		
Upper secondary	4	6.7
Diploma	12	20.0
Tertiary	44	73.3
<b>Income (Mean = RM1,554.45)</b>		
< RM1,100.00	40	66.7
RM1,101.00 - RM3,800.00	14	23.3
> RM3,801.00	6	10.0

highest age bracket is between 20 and 22 years old. Half of the respondents' origins are from the Peninsular of Malaysia (50%), followed by Sabah (43.3%), and the remaining are from Sarawak (5%) and Labuan (1.7%), respectively. In terms of education, more than half of them attained tertiary level and received an average income of RM1,554.45 per month.

### *Assessment of Tourism Potential*

The results in Table 3 show the overall assessments of Kota Marudu's eight villages. The elements of culture and nature are the strengths of Kota Marudu. Kampung Kirangawan scored the highest for cultural potential (Mean = 2.62), followed by Kampung Tangkol (Mean = 2.58), and Kampung Mangin 2 scored the lowest mean, making Kampung Mangin 2 (Mean = 2.15) a cultural site with moderate potential.

The natural sites found in Kota Marudu have a great deal of potential. Kampung Rasak Darat scored 2.64, Kampung Minansad scored 2.60, and Kampung Goshen scored 2.60, which means this site has a high natural potential. The higher the average score, the greater the area's tourism potential. Also considered to have a high nature potential are Kampung Kirangawan and Kampung Serinsim, which have scores of 2.59 and 2.58, respectively.

Kampung Togudon and Kampung Mangin 2 recorded scores of 2.49 and 2.45 within the high potential level assessment. Kampung Tangkol had the lowest possible score for the natural site with a score of 2.17, making the natural site potential assessment at a moderate level. Although these results indicate the potential level, they are useful for town planners in organising strategies and developing future tourism products.

Table 3: Results of the potential attraction resource index around Kota Marudu (eight villages)

	Interesting Place/Tourism Products	Potential	
		Score	Level
<b>Cultural sites (three sites)</b>			
1	Kampung Kirangawan	2.62	High
2	Kampung Mangin 2	2.15	Moderate
3	Kampung Tangkol	2.58	High
<b>Natural sites (eight sites)</b>			
1	Kampung Goshen	2.60	High
2	Kampung Kirangawan	2.59	High
3	Kampung Mangin 2	2.45	High
4	Kampung Minansad	2.60	High
5	Kampung Rasak Darat	2.64	High
6	Kampung Serinsim	2.58	High
7	Kampung Togudon	2.49	High
8	Kampung Tangkol	2.17	Moderate

Note: 1.00-1.66 = Low potential; 1.67-2.33 = average potential; 2.34-3.00 = high potential.

Due to its proximity to the Panorama Paradise Resort, Kampung Rasak Darat has the potential for natural attractions. This resort is located within the village and close to Terengai Beach Cafe and Lodge. Meanwhile, interestingly, Kampung Kirangawan, which is located near Mount Cochrane also has a high potential for cultural attractions (Mean = 2.62) compared to its natural resources (Mean = 2.59).

Kampung Minansad has a high natural resource potential value (Mean = 2.60) due to its tourism products such as hiking and sightseeing. It is also located near the Walai Tobilung Cultural Village, which is one of the purposes of preserving and showcasing the culture of the Tobilung ethnic group that resides in Kota Marudu. Kampung Mangin 2 is located near Walai Tobilung, which has a modest cultural potential value (Mean = 2.15) and a high potential value for natural attractions (Mean = 2.45). This area offers a hiking experience, where you can climb the highest peak, Rumun Kondiu Hill.

Kampung Goshen, located close to Marudu Bay and the Kota Marudu town recorded a high natural potential (Mean = 2.60). This village is also near Lungking River Park, which offers a scenic view of the river with crystal clear water. Kampung Togudon, located near Nambuyukong Mountain recorded a high natural potential value (Mean = 2.60). Kampung Serinsim recorded a high potential value of 2.58, near the Serinsim Sub Station Kinabalu Park. This substation is located within the Kinabalu Geopark biological site. Kampung Tangkol registered a high cultural value (Mean = 2.58) and a moderate natural resource potential (Mean = 2.17). Kampung Tangkol is also the furthest village in Kota Marudu town than other villages.

## Discussion

### *Potential Attractions at Kota Marudu*

In this study, the natural and the cultural aspects are weighted according to the position of potential visitors (Yan *et al.*, 2017). Based on this weighting, the potential of the location can

be divided into three levels: High, moderate, and low. Weights can indicate the presence of tourism resources, which consists of natural, artificial, or infrastructure components that can be comprehended as tourism potential (Dwyer & Lim, 2003; Al Mamun & Mitra, 2012). The potential level of each location within the study area is outlined in Table 3. Each location demonstrates its potential, allowing the local government to make decisions regarding the planning and allocating of resources for tourism development in the area based on the information provided (Yan *et al.*, 2017).

In addition, the local community is an important stakeholder in rural tourism development. Their enthusiasm and willingness to participate in tourism activities can lead to changes in the development of their area. Therefore, the opinion of the local community about the potential attractions of the rural tourism area is important and should be considered in the resources possessed by a community (Bassey, 2015). Local knowledge and cultural values of local communities can determine the potential level of an area. Tourists may not be able to understand and appreciate the real values of local culture and traditions. Accessibility is another factor that influences tourism. The distance between the destination and other tourist attractions could significantly impact the potential attraction to the area itself (Dwyer & Lim, 2003; Landorf, 2016).

This study determined that the sites with the greatest potential are the natural components of Kota Marudu. The natural resources of Kampung Rasak Darat, Kampung Minansad, and Kampung Goshen contribute significantly to their ability to attract tourists. Its proximity to most existing attractions and the town makes it a potential site for developing one of the rural tourism products in Kota Marudu.

Although cultural sites have less potential than natural sites, future digitalisation plans will increase demand for cultural and heritage destinations (Santos *et al.*, 2014). Kampung Kirangawan has a high potential for cultural resources and a high supply of natural

attractions. These combinations pool the community's resources and turn them into rural tourist attractions (Basse, 2015). Furthermore, Kampung Kirangawan has a one-of-a-kind local attraction where the Rungus ethnic group have been promoting their traditional culture for a long time. Furthermore, the village has the advantage of being close to Mount Crochane and Malas Kallas Trail is well-known for hikers who love to experience overnight in the forest.

The villages that score highly on the tourism potential assessment in Kota Marudu also have the potential to be sustainable if they commit to participating in tourism-related activities. After determining the strength of the attractions, the next stage is to assess the local community's willingness to engage and empower them in the activities. Empowerment has also been acknowledged as a crucial motivator in sustainable development (Khalid *et al.*, 2019). Thus, the roles played by the local agencies are crucial as mediators to support local communities in having appropriate awareness, knowledge, and skills to develop their tourism products.

## Conclusions

Finally, Kota Marudu was discovered to have a very high potential for rural tourism. This study achieves its main goal, which is to evaluate Kota Marudu as a rural tourist destination based on tourist demand perspectives. Indeed, the findings show that Kota Marudu and the surrounding villages have a lot of potential for tourism growth in terms of cultural and natural attractions.

In fact, according to data collected, particularly regarding actual tourist demand, the overriding attraction of the Kota Marudu region and its surrounding villages is their natural and cultural resources. They received the highest natural potential sites due to their strategic natural landscape and breathtaking scenery. Kampung Kirangawan deserves special attention among the villages because it has a balance of natural and cultural assets, making it

a highly potential site for future development. Most village areas studied have high potential scores, culturally or naturally, but they are remote. Accessibility is a critical factor that both attracts tourists and facilitates development.

This study demonstrates that the evaluation of an area's potential, whether based on its current resources or prospects can be quantified through the analysis of demand-related aspects. If there is a demand for the potential, the agencies will evaluate, make decisions, and take additional steps to assist with developing the tourism product. The potential assessment can serve as a planning guide and a method to evaluate the development priority area. Because it is based on variables associated with visitor demand, the higher the potential value, the greater the potential for the location to become a tourist destination.

This study used a descriptive approach to ascertain the natural resources near Kota Marudu, specifically identifying possible rural tourism sites. The assessment of tourism product development encompasses not only demand-based measurements but also evaluations of potential from the supply perspective. One suggestion for future research is to assess the potential from the supply perspective by employing a comprehensive indicator. This component will be seen from a new perspective. It will serve as a reference for town planners and other authorities involved in prioritising the development of rural tourism products that require more attention.

Finally, no research project can avoid encountering limitations. The researcher has highlighted certain shortcomings in this study, specifically. The sample size used in this study was determined by non-probability sampling, which limits the generalisability of the findings. Another area for improvement is obtaining the latest updates on the total number of tourists visiting the location, which could have helped determine the sample size. Also, the pandemic may have affected scientific research and an online survey is the best solution. However, the low online response rate caused researchers

to spread the survey link to an online survey conveniently distributed to several social media platforms. Hence, future studies may consider that these findings can help understand the assessment of tourism potential and the convenient methods that suit the research process.

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### Conflict of Interest Statement

The authors declare that they have no conflict of interest.

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