

Analysis of Strengths-Weaknesses-Opportunities-Threats of Maliau Basin as a World Heritage Site

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Abstract: Maliau Basin is one of the oldest natural rainforests, not just in Sabah but also in Malaysia and Borneo. Its physical form is shaped like a volcanic caldera, in addition to reaching a depth of over 1000 m and is surrounded by the edge at the height of 1,500-1,700 m above sea level. The term Sabah's Lost World was given to the Maliau Basin because the inner part of the basin is connected to the outside world at the low height level only through the Maliau Gorge. SWOT analysis was employed based on the results of the questionnaire form, in-depth interview and literature review to identify each strength, weakness, opportunity and threat in fulfilling the criteria as a World Heritage Site. As a result, the spectacular structure of the terrain and the existence of flora and fauna that is hard to find elsewhere become its strength while the activities of illegal logging, theft of valuable timber and the lack of infrastructure are its weaknesses. Sabah's potential as an ecotourism hub in Southeast Asia and creating public awareness are among the few opportunities obtained while damage to the valuable natural heritage and natural resources' crisis are the major threats. Various roles and strategies have been implemented by Sabah Foundation and the Sabah Forestry Department as the main parties responsible for the regulation and management of Maliau Basin. Among these are sustainable forest management, enhancing research, environmental education and many others. In conclusion, Maliau Basin has high-value assets and is able to fulfill the criteria as a World Heritage Site. However, some improvements and early preventive efforts should be carried out to ensure that the recognition status is obtained as well as enable the sustainability and originality that it owns to be preserved and enjoyed not only by the present generation but also for future generations.

Key words: Maliau Basin, strength, weakness, opportunity, World Heritage Site

INTRODUCTION

Recognition as one of the World Heritage Site by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) is a valuable acknowledgement for an area that manages to successfully obtain it. The recognition directly opens up many opportunities to various sectors, especially the tourism sector in the effort to double the marketing activities at the international level. The widespread publicity as a result of the recognition also directly brings positive impact to the country's rate of economic growth. As a result of the various benefits received thus even more countries are competing to prepare and promote several areas or heritage or historical sites that they own with the aim of obtaining the recognition of World Heritage Site. In 2011, a total of 25 sites or areas have been recognized as World

Heritage Site and this made it an increase of 936 sites throughout the world (UNESCO, 2011). Malaysia is not an exception in owning several areas that have been successfully recognized as World Heritage Site. Among these are the Kinabalu National Park in Sabah and Mulu National Park in Sarawak that managed to obtain the recognition in 2000 for the criteria of nature while the city of Malacca and Georgetown obtained it in 2008 for the cultural criteria.

Following the success, Malaysia at present, through the Sabah State Government is doubling its effort to bring the name of Maliau Basin Conservation Area (MBCA) that is located in the Southern part of Sabah to UNESCO so that it can be gazette as a World Heritage Site. Danum Valley Conservation Area (DCVA) and Imbak Canyon Conservation Area (ICCA) are also included in the designation as a World Heritage Site after the Committee

Meeting that was held on 1st March, 2010 agreed to recommend both these areas together with MBCA and thus ultimately adopting the approach of listing the three areas as a group or cluster. If this recognition is successfully achieved, all the three locations will become the new landmark for Sabah apart from the Kinabalu National Park, in the effort to attract even more tourist arrival to this state thus putting the name of Sabah to a higher level which is at the international level as a state that has beautiful and unique natural resources.

Statement of problem: There are a few universal values that should be met, at least one from the ten criteria that have been set by UNESCO. In brief, the whole set criteria cover several aspects. Among them is that a site or area should have wonder and uniqueness that are remarkable from other existing places in the world. The site that will be made a World Heritage Site should not only have specialty in its physical form such as the landform, buildings, landscape and many others but also has advantage in terms of natural wildlife including threatened species that have exceptional universal values.

MBCA as a world heritage site candidate: According to the Council of Ministers for the State of Sabah has agreed to propose MBCA as a World Heritage Site. In the Committee Meeting that was held on 1st March, 2010, the meeting recommended that The Danum Vally Conservation Area (DVCA) and Imbak Canyon Conservation Area (ICCA) are also nominated together with MBCA as a World Heritage Site. This nomination not only was made because these two areas meet the criteria as a World Heritage Site but the approach to list the three areas as a cluster (Cluster Nomination) provides for a better and brighter chance if compared to recommending only one area which is MBCA. However, as explained, this study only focuses on MBCA as a research area compared to the two other areas involved, namely DVCA and ICCA.

MATERIALS AND METHODS

This study was implemented using the mixed method approach to answer each research question to fulfill the requirements of the study's objectives. According to Creswell (2006), this approach gives focus on collecting, analysing and combining both the qualitative and quantitative data approaches in one study or series of study. By combining the data set, researcher provides understanding where combination could occur through three ways:

- First, combining or concentrating on two data sets, namely bringing them together
- Second, connecting two data sets or building another
- Third, applying one data set in another where one type of data provides the role of supporting the other data set

In accordance with the rules, it is not merely enough to collect and analyse qualitative and quantitative data where it needs to be a mix in several ways so that together it forms complete information. Thus, researcher adopted the first understanding, namely combining or concentrating two data sets for the purpose of mixing them.

Views on the potential of the Maliau Basin Conservation Area (MBCA) based on SWOT analysis (Strength-Weakness-Opportunity-Threat): As already explained, this study used the SWOT analysis model framework to examine the strength-weakness-opportunity-threat possessed by the Maliau Basin Conservation Area (MBCA) as a candidate of a World Heritage Site. Hence, each research finding was evaluated and analysed based on the categories that have been divided into strengths, weaknesses, opportunities and threats.

Strengths of Maliau Basin: The advantage possessed by an area becomes the main drive or charm that is capable of attracting the arrival of many tourists to the area. Thus, it is not surprising that the differences in an area if compared to other existing places are capable of inducing curiosity and the desire to feel the experience itself while being at the place among tourists. The disclosure of each strength or advantage possessed by Maliau Basin can be made into the main incentive for tourists to visit the place, in addition to being able to exploit it to gain the recognition as a World Heritage Site.

Figure 1 shows the main attractions available in MBCA. Most of the respondents stated that the waterfall is the main attraction where a total of 39% which is 78 respondents who agreed with the statement. This is followed by the greenness of the natural environment of which a total of 31% (62 respondents) selected it as the main attraction. Species of animals that are difficult to find in other places is the third highest choice of respondents, which is a total of 22% (44 respondents) while rafflesia only obtained 8% (16 respondents). This clearly proves that the waterfall is the main attraction or the physical strength owned by Maliau Basin, simultaneously contributing to the increase in the number of tourist arrivals.

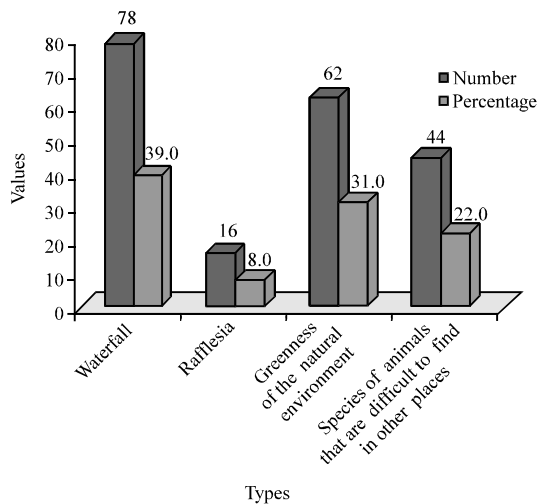


Fig. 1: MBCA's attraction

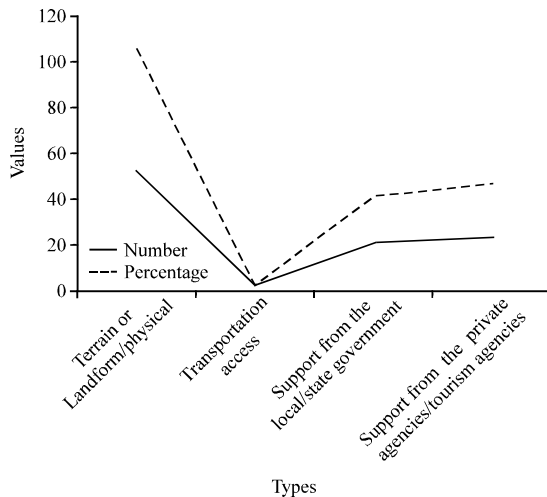


Fig. 2: Factors that support MBCA

The landform or physical form is the highest factor that supports the strength of MBCA in the effort of attracting the attention of visitors, either local or foreign. Figure 2 shows that a total of 52.5% (105 respondents) was recorded selecting the factor. Support from private agencies/tourist agencies was the second highest factor where a total of 23.5% (47 respondents) selected it. MBCA's unique and stunning landform or physical form proves that it is the main strength, simultaneously meeting the criteria of UNESCO as an outstandingly remarkable area or Out-standing Value (OUV) which is criteria VIII.

Research conducted by Sinun *et al.* (1998) found that MBCA indeed has potential as nature tourism. The emphasis was more on identifying the potential of MBCA for the purpose of biodiversity commercialization, in

addition to identifying the areas in MBCA that also have potential to attract interest and at the same time being promoted as an area for nature tourism and environmental education. For geographical attraction, they found that the unique shape of MBCA that has no comparison to any other geological formation in other places and the basin's elevation range which is from 220-1900 m and the length of its edges at around 35 km are discoveries that have not been found elsewhere in Malaysia. Apart from that the presence of primates and mammals such as Red Leaf, Proboscis monkey, Borneo gibbons, deer, mouse deer and others especially in the dipterocarp mountain forest and the opportunity to enjoy the views of various types of birds such as the Hornbills as well as the existence of a variety of reptiles and amphibians serve as MBCA's attraction. MBCA has potential in terms of its flora as a result of its tropical forest's ecosystem that is defined as natural and undisturbed. They mentioned that there are five types of forests and each can be distinguished and these are the mixed dipterocarp and heath highland forest, highland heath forest, mixed dipterocarp and heath lowland forest, lowland montane forest and mixed dipterocarp and limestone highland forest. Visitors who are interested to carry out adventure activities through the woods can feel and appreciate for themselves the diversity of orchid and pitcher plant species either small or big (Sinun *et al.*, 1998).

MBCA's weaknesses: Weakness is identified as internal factors that are able to bring harm or constraint to the achievement of an objective. In this study, the weaknesses of Maliau Basin Conservation Area (MBCA) are seen either from the aspect of the management, problems of forest crime, safety aspects and many others.

Based on Fig. 3, illegal logging becomes the main weakness faced by MBCA which could simultaneously affect the effort in obtaining the recognition as a World Heritage Site. A total of 34% of the respondents or 68 respondents are of this opinion. This is followed by theft of high quality timber where a total of 30.5% (61 respondents) was recorded. Other problems such as the lack of infrastructure, unsystematic monitoring and tourist guides who are not highly skilled recorded percentages of 18.5% (37 respondents), 8.5% (17 respondents) and 8% (16 respondents), respectively. Only 1% was recorded for safety factor. The problem of illegal logging appears to be difficult to handle in such a quick period of time. It is feared that it is capable of disrupting the process of obtaining MBCA's recognition as a World Heritage Site. In this case, the Forestry

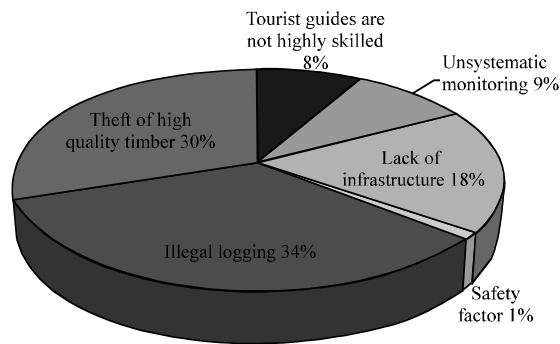


Fig. 3: MBCA's weaknesses

Department of Sabah that is responsible for all the forests in Sabah should take proactive and efficient steps to overcome the problem.

In fact, illegal logging activities have the potential as one of the threats that is capable of putting any site or property that has been recognized as a World Heritage Site in the endangered list by UNESCO, subsequently depriving it of that recognition if a solution meets a dead end. This is similar to what happened to the Tropical Rainforest Heritage in Sumatra, Indonesia which was placed in the endangered list on June 2011. The World Heritage Committee made the decision on the World Heritage Site that was recognized in 2004 as a result of the threats posed by poaching, illegal logging, agricultural encroachment and plans to build roads through the heritage site (UNESCO, 2011). Thus, accordingly the Forestry Department of Sabah and Sabah Foundation should address such a problem all out. In addition to overcoming the problem of logging and theft of valuable timber in MBCA, there are a few other weaknesses that should be of concern by the stakeholders. Among these is the lack of highly skilled tourist guides.

Even though the problem of lack of tourist guides is not a huge weakness in naming MBCA as a World Heritage Site as mentioned by Madam Mary, however, the researcher is of the opinion that the State Government should be concerned of this problem. Tourist guides play an important role in the effort to introduce and promote the place extensively to the tourists, especially the foreign tourists as they will be communicating with the tourists for a set period of time. Hence, they should prepare themselves to produce tourist guides that are highly skilled especially in communication skills and scientific knowledge skills as the problem now exists in the tourism industry in Sabah at the present time.

MBCA's opportunities: According to Er and Jahari (2009), opportunity occurs as a result of environmental differences between one country and another, in addition

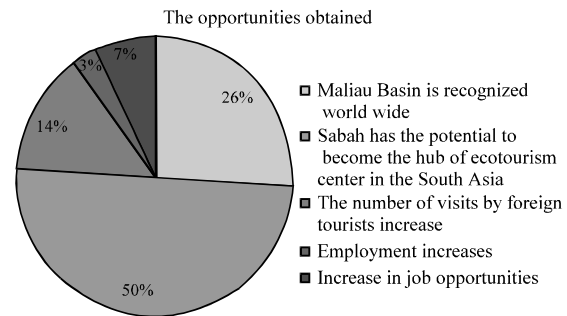


Fig. 4: MBCA opportunities

to allowing a shift in the competitive advantage of an industry. Opportunity is also identified as external factors that help to give positive impact on the achievement of objectives. Hence, according to Parnwell and Michael (2010), the acquisition of a natural world heritage status can be a two-edged sword. While it has the potential to initiate, facilitate and promote regulatory changes that could be beneficial to the wider ecology of the site than that contained in certain sites, it could also act as a magnet to forces that are potentially quite destructive. According to Yang *et al.* (2010), recognition as a World Heritage Site brings a lot of benefits to a country. Among them, the recognition can be widely used in the marketing campaign to promote the country's tourism at the international level. Apart from that this benefit is also enjoyed by developing countries or poor countries that do not have knowledge and technology resources to protect and preserve their heritage. When one of the countries' areas is acknowledged as a World Heritage Site, UNESCO will provide financial resources as well as technological assistance to improve and preserve the heritage (Fig. 4).

Sabah has the potential to be the hub of ecotourism centre in Southeast Asia achieved the highest percentage where a total of 50% (100 respondents) of the respondents are of the opinion that it is the main opportunity achieved if MBCA is successfully recognized as a World Heritage Site. The second highest percentage is Maliau Basin will be known worldwide of which the statement was recorded for a total of 26.5% (53 respondents) of respondents. Next, a total of 14% (28 respondents) stated that the number of foreign tourist arrival will increase. Meanwhile, a total of 6.5% (13 respondents) felt that an increase in job opportunities will occur while employment will increase was recorded for 3% of respondents (6 respondents) only.

Through the recognition of MBCA as a World Heritage Site, it can become a well-known hub of ecotourism centre in Southeast Asia. This is because of its status where it owns world-class biological diversity

that is unsurpassed by any other places. Therefore, most of the research conducted uncovered various types of plants or unique, rare and endangered species that can only be found in MBCA. Thus, it becomes the main attraction for the tourists or even researchers who are interested to find out about it, in addition to giving new experiences when in the area which is well known by the name Sabah's Lost World. Indirectly, the recognition also opens up new market opportunities especially in the tourism industry at the international level, simultaneously making MBCA well known throughout the world. The promotion carried out can attract the interest of foreign tourists to visit MBCA that can lead to the increase in the number of foreign tourists to Sabah. When Sabah receives the arrival of many foreign tourists, hence, it is not impossible that the workforce needed in the tourism industry will increase. As a result of that increase in job opportunities will occur and this situation will boost the economic growth of Sabah.

For the researcher, the opportunity in getting the status of nature conservation is really important to avoid unpredictable problems occurring in the future. As an example, protecting endangered wildlife such as the Sumateran Rhinoceros. Even though MBCA has already been classified as Class 1 Forest Reserve (Protection), through this recognition, it will be a special privilege where each protection activity that is carried out will gain attention not only at the state or national level but also at the international level. Various organisations and even international non-governmental organizations will channel aid, either in the form of financial resources, expertise, technology, Research and development (R&D) and many others. The situation where transfer of knowledge takes place can occur among the tourists. It indirectly creates an atmosphere of learning process where a lot of interesting information related to flora and fauna contained within MBCA can be channeled to the tourists.

In addition, it can also encourage the tourists to love and respect the existing natural environment even more and avoid from doing any activity that can destroy it such as littering, picking plants, walking in prohibited tracks and many others. The opportunity to develop awareness among the public community can also be implemented. Moreover, after Maliau Basin has been successfully recognized as a World Heritage Site, more people will realize the importance of preservation and conservation efforts being conducted on each forest or wildlife that are threatened by development. Hence, public awareness is important to open up the opportunity for the responsible parties to disseminate information related to the importance of nature in human life.

MBCA's threats: Table 1 shows the threats that can affect MBCA if it is successfully recognized as a World Heritage Site. The destruction of valuable natural treasure recorded the highest percentage with a total of 50% (100 respondents) of respondents. This is followed by unplanned development process at 25% (50 respondents). Other types of threats such as the uncontrolled arrival of tourists, safety factor and natural disasters recorded percentages of 13% (26 respondents), 8% (16 respondents) and 4% (8 respondents), respectively. Given that MBCA is rich in its natural resources, hence, it is not impossible that this recognition can become a threat of destruction to the natural treasure, occurring as a result of the arrival of a small number of tourists who do not obey the rules destroying the plants that grow wild in MBCA's surrounding. Undeniably, MBCA is a vast logging concession area in Sabah. However, the change in its status to protected forest resulted in illegal logging activities being carried out in the area. All the more, after it has been classified as Class 1 Forest Reserve (Protection), there are still a small number of logging activities being carried out illegally, particularly in the MBCA buffer zone.

In this matter, the researcher evaluated that the form of threats that have to be faced is physical threats. When an area becomes the focus of many visitors, it indirectly leads to the loss of privacy or even the well being that has been held totally all this while. The arrival of many tourists in uncontrolled numbers can create an unpleasant atmosphere that it can result in the various species inhabiting the habitat in the area feeling threatened and unsafe. As mentioned by Hadi (2000), the increase in the population in an area that is environmentally sensitive even though small will give more pressure on the resources and in the end the ecology of the area will be disturbed. When this situation persists, it is not impossible that several types of animals that all this while have inhabited the MBCA area will act to migrate to other areas.

This has also been acknowledged by Ahmad (2010) where he states that the ability of a destination to accommodate the influx of tourists in the long term is really critical because the experience of the congestion is not only in terms of accommodation, food and drinks, roads, public transportation and many others but is also

Table 1: Threats that could affect Maliau Basin

Type of threats	Number	Percentage
Destruction of valuable natural heritage	100	50
Uncontrolled tourist arrival	26	13
Unplanned development process	50	25
Natural disasters	8	4
Safety factor	16	8
Total	200	100

Field Work (2012)

caused by the presence of excessive mass tourists and negative behaviour of some tourists in ecotourism areas which are environmentally sensitive, forming two challenges that create pressure on the natural environment of the destination. Thus, limiting the number of tourist arrivals appropriate to the carrying capacity is an ideal step for restoring the disturbed ecology as a result of the influx of too many tourists. Naturally, these places should be rested from receiving visitors or tourists who will give negative impacts that are difficult to be restored.

RESULTS AND DISCUSSION

Based on the findings of the study, researcher found that the objectives have successfully been achieved. Based on the strengths it has Maliau Basin has its own advantages and uniqueness as a candidate of a World Heritage Site where it not only has the advantage in terms of the structure of the geological formation that is really unique but also the richness and beauty of flora and fauna such as the large number of waterfalls, endangered wildlife species, rare plant species and the biggest freshwater lake which could also become the main driver of the natural originality of Maliau Basin.

Apart from that, researcher found that there is continuity for each role played by the stakeholders in ensuring that the sustainability of Maliau Basin is always assured and safe-guarded. Although, there is some flexibility on the aspects of enforcement and monitoring as there are still reports related to forest crime such as illegal logging, theft of valuable timber, poaching and many others, the efforts of improvement that are always conducted by the stakeholders from time to time make it relevant to the needs of Maliau Basin as Class 1 Forest Reserve (Protection) in Sabah. The sense of accountability and commitment among the stakeholders will result in lucrative results in line with the recognition of Maliau Basin as a World Heritage Site that is to be acquired in the future. Researcher also examined the strategy employed by the stakeholders in ensuring the sustainability of Maliau Basin is guaranteed. Sabah Forestry Department and Sabah Foundation are the main organizations that are responsible for the management of Maliau Basin. Based on the principles of Sustainable Forest Management by the Sabah Forestry Department and Maliau Basin Strategic Management Plan Programme by Sabah Foundation through the Conservation and Environment Management Department (CEMD), these have become the guidelines and reference in the effort to maintain the sustainability of Maliau Basin so that it continues to be maintained for the use of future generations.

The research findings show that the SWOT Model framework is capable of translating each element and

facilitates, researcher in conducting the evaluation and describing in detail to consider the good and bad of the elements involved. For the element of strength, Maliau Basin has a diversity of valuable natural treasure that is rarely seen in other places in this world. The source of richness and beauty possessed not only consist of the flora and fauna but also the formation of its landform's physical structure which is very unique and remarkable, making it a world-class natural environment.

Additionally, Maliau Basin could not escape from weaknesses. The problem of illegal logging and theft of valuable timber that have been reported to occur in Maliau Basin can affect the efforts to uphold it as a World Heritage Site if such a problem is not curbed immediately. Apart from that the problem of the lack of tourist guides faced by Sabah at the moment also contributes to the decline in its value in the eye of the world. Many opportunities will be received if Maliau Basin is successfully recognized as a World Heritage Site. The influx of foreign investors into Sabah is able to further boost the economic growth apart from making it well known to the world. The tourism industry which indeed is the second largest source of income contributor of Sabah's economy after the palm oil industry is able to generate considerable returns as a result of the recognition of Maliau basin. Investment in the research industry will also increase in which even more public sector, private sector and Non-Governmental Organizations (NGO) will be interested to conduct research on the varied biodiversity of Maliau Basin in the long term. This indirectly could trigger new fields in research as a result of the technology and knowledge transfer received by the Maliau Basin management from other parties especially from abroad.

Researchers evaluated the form of threats in the form of physical threats. The privacy that has all this while been enjoyed by the wildlife will be disappearing if tourist arrivals to Maliau Basin in uncontrolled numbers occur. This will not only cause the wildlife to feel unsafe and disturbed, in fact the destruction to the valuable natural treasure can be a huge threat to the stability of the Maliau Basin ecosystem. Unplanned development process could also make possible the occurrence of natural disasters such as erosion, mud flood, landslide and others that are capable of visually altering the Maliau Basin environment.

CONCLUSION

Overall, the MBCA is an area that has huge potential as a World Heritage Site. The richness and beauty of the natural resources that it owns is incomparable to any other areas in the world, making it the main strength in meeting UNESCO's criteria as a World Heritage Site. It can also function as a new platform that should be visited

by tourists both local and foreign, in completing their holiday calendar and their visit to Sabah, all the more should the recognition as a World Heritage Site is successfully obtained.

However, the weaknesses and threats that exist before and after this recognition should be emphasized and solved jointly by the responsible parties on MBCA, particularly Sabah Foundation and Sabah Forestry Department and assisted by the public, private and Non-Governmental Organization (NGO) agencies. For researchers, the strong cooperation amongst them need to be continued and improved from time to time to ensure that its sustainability and authenticity is guaranteed and it continues to excel as a world-class ecotourism destination and hopefully as a World Heritage Site.

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