Journal of
INDONESIAN TOURISM
AND DEVELOPMENT STUDIES

Journal of Indonesian Tourism and Development Studies

TABLE OF CONTENT *Vol. 8 No. 2, April 2020*

Conceptualisation of Hotel Guest Experience Assessment Process and Electronic Words of Mouth

Han Chao [1], Basri Rashid[2*]

[1]Tourism Management, North Minzu University, China
[2]School of Tourism, Hospitality and Event Management, Universiti Utara Malaysia, Malaysia

Abstract

The success of a hotel depends on the guests' interpretation and reviews of their visit experience. Guests who perceived their visit experience as worthiness and satisfactory would circulate their experience to their acquaintances. In today's information based era, their visit experience can be widely circulated through electronic word of mouth (e-wom) such as the social media. This paper aims to construct a research framework to study hotel guests experience responses as the result from their encounters with the hotel's products and services during their stay. Unforgettable encounters would influence the guests' future behaviour, starting with their commitment and eventually translated into reaction in the forms of electronic word of mouth responses. Methodically, an exhaustive review of the literature was carried out to establish a theoretical underpinning of hotel guests experience assessment process and their future responses. Perceived value and satisfaction are deemed as important measurements in the initial stage of the hotel guest visit experience outcomes. In line with the current information technology trends, the guests are expected to use electronic word of mouth to disseminate their visit outcomes. Academically, the study framework reduces the gaps related to the formulation of research constructs for hotel visit experience assessment. It is assertive that this paper would be practically beneficial to hotel operators or relevant stakeholders in order to gain a comprehensive understanding about hotel guests' visit experience responses and their future behaviour, including the electronic word-of-mouth response.

Keywords: Commitment, electric word-of-mouth, hotel, perceived value, post visit responses, satisfaction.

INTRODUCTION

When hotel guests visit a hotel, they are exposed to the various products and services at the hotel. The hotel guests' experience then is determined whether these products and services can meet their needs and wants. Ideally, the overall experience is noted as the performance of the hotel staff, products, services, and hotel facilities, as well as the benefit gained by the guests from the performance. The outcome of this experience shall then influence their future responses.

Past research indicated that the customer experience assessment is a very complex process, and it is difficult to measure directly. However, the literature points out that perceived value would be a realistic component to initially measure customer responses. In this paper, it is asserted that perceived value can help the hotel analyse the overall experience of the hotel's guests and understand their behavior. Therefore, by understanding the guests' perceived value, hotels can provide a better experience to their guests by offering products, facilities, and services that meet their requirements.

Another important result of the visit experience is satisfaction. Past studies pointed out that perceived value is the antecedent of satisfaction. Thus in this paper, it is postulated that perceived value will influence satisfaction. In addition, customers frequently disseminate their experience to others through various mediums, and with the advancement of communication technology, social media is a common and convenient method of disseminating information. Those who are committed to this type of media would update their information regularly. Hence, the whole picture of guest experience process can be depicted through the relationship among perceived value, satisfaction, commitment, and electronic word-of-mouth. In other words it is foreseen that perceived value influences satisfaction and commitment in which ultimately affect hotel guests' electric word-of-mouth.

HOTEL GUEST'S EXPERIENCE

This segment reviews past studies that are related to customer post-consumption experience and relate them to the hotel guests' experience responses. Discussions are focused on the relevant constructs that lead to the formation of a research framework. Specifically, this section reviews related variables namely;

*Correspondence address:
  Basri Rashid
  Email   : basri@uum.edu.my
  Address   : School of Tourism, Hospitality and Event
               Management, Universiti Utara Malaysia,
               Malaysia, 06010

[64]

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

perceived value, satisfaction, commitment and electronic word-of-mouth, and the relationship among all these variables.

A. Perceived Value

A hotel can provide customers with acceptable products or services only if the needs and wants of the customers are fulfilled. The emphasis should be on the value delivery during the interaction between the customer and the operator [1]. As a result, the customers would feel they have received the value from what they have spent on. Past studies pointed out that perceived value plays an essential role to reflect the hotel guest's comprehensive experience and hotel guest behavior.

Perceived value is defined as the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given [2]. It translates perception as a whole unit, rather than just an emotion. This Perceived value definition extended as the customer's overall assessment of the net worth, which is derived from the customer's assessment of benefit they gained in relation to their participation with the services, products, and activities that also consume time, money, and energy [3]. Similarly, perceived value is a comparison of benefits, costs, and usually occur during the purchase of related products or services [4]. In addition, perceived value can be seen as the difference between the total benefits and the total costs experienced by hotel guests [5]. The total benefits are a combination of the corresponding attributes, for example, physical attributes and service attributes [6]. The total costs include monetary provisions [7] and non-monetary provisions [8].

However, researchers have disputes about the concepts of one-dimensional and multi-dimensional of perceived value. The first proposed the concept of price-perceived value one-dimensional, which is based on the monetary value dimension [2]. The one-dimensional is also used to measure the customer's overall value [9]. However, this measurement cannot reflect the viewpoint, which many researchers asserted *perceived value is the trade-off between benefits and sacrifices,* and it caused the one dimensional evaluation to receive less attention in the research community. Since every person has its own personality and characteristics, which results in various perceptions of customers towards the hospitality of each hotel, it is not adequate to explain the

perceived value using a one-dimensional (monetary value) approach [10].

Numerous other researchers are devoted towards the study of multi-dimensional aspects of perceived value. For example, four dimensions of perceived value: emotional value; social value; functional value (monetary); functional value (quality), as a more comprehensive measurement of perceived value [11]. On the other hand, perceived value is divided into five dimensions: quality, emotional response, monetary price, behavioral price, and reputation [12]. The four dimensions of perceived value represent the views of PERVAL and the five dimensions of perceived value represent the views of SER-PERVAL, the difference between them is that four dimensions of perceived value divided monetary value into two dimensions: monetary price and behavioral price, and suggested reputation take the place of social value. Overall, the validity and reliability of multi-dimensional perceived value have been confirmed [9], thus the multiple dimensional evaluation method is considered better than the single-dimensional evaluation method to explain the perceived value.

In order to attract new hotel guest or maintain the relationship with customers, hotel operators need to predict the guests' future behavior based on perceived value [1]. In this case, the guest's perceived value is based on the consumption of relevant products and facilities of the hotel that may influence guests' visit outcomes, namely satisfaction, commitment, and E-WOM. This statement is reasonable because many researchers have proved that customer perceived value can affect customer satisfaction and commitment [13,14,15]. Furthermore, customer experience and satisfaction can be used as a precedent for their future intentions [16,17,18].

B. Satisfaction

The main difference between perceived value and satisfaction is their occurrence time [19]. Perceived value can occur at a different stage of a purchase. However, satisfaction occurs at the post-stage of purchase. Hence based on past studies, it is asserted that satisfaction can be an outcome of perceived value [20,21,22].

Researchers have applied customer satisfaction theory to various service industries to investigate the applicability of customer satisfaction, including the hotel industry [23], the foodservice industry [24], and the tourism

industry [25]. Customer satisfaction defined as a result of high expectation towards the service provided [26]. This classical definition is based on the expectancy-disconfirmation theory (EDT), which has attracted the attention of many scholars and dubbed as the most widely used theory of customer satisfaction [26,27].

However, this theory has been challenged in various studies. Some researchers pointed out that there are some deficiencies in both the theoretical and operational aspects of the EDT. For example, excessive information might increase customers' expectations towards the service, compared to the expectation they had before [28]. When the hotel operator overstated advertising claims, the customer's expectations will be high. As a result, the customer will feel dissatisfied even with a high-quality service or product.

The measurements of satisfaction by expectancy-disconfirmation paradigm may only materialize if the consumers have expectations for related products and services before consumption [29]. In fact, it would be inappropriate to evaluate the hotel guest's satisfaction because whenever the customer is relatively unknown or unfamiliar with relative products and services of the hotel, they would have no pre-expectation of any such services.

Six alternative models were used to compare and examine the relative validity of these models to measure customers' satisfaction [19]. The models are performance only, important-performance, importance minus performance, direct confirmation-disconfirmation, confirmation-disconfirmation weighted by importance, and performance minus predictive expectation. It was concluded that the performance model offers a better framework for measuring customer satisfaction. Various other studies confirmed the advantages of using a performance-only model to study satisfaction. Therefore, perceived performance is the best predictor of satisfaction when it is difficult to measure the expected value [19,30-33]. In addition, satisfaction can be regarded as the customer's attitude towards service providers and conceptualized as an overall outcome of judgment [15].

Numerous researchers pointed out that satisfaction has a direct positive impact on commitment [34,35,36]. The influence of satisfaction on commitments has created a tendency that the customer will recommend the service provider to other consumers or create a preference for the service provider on the next purchase.

C. Commitment

The importance of the relationship in the service marketing field has been confirmed by many scholars, and this is often based on the mutual commitments of buyers and sellers [37]. The key to maintaining this relationship is when the customer has achieved a valuable experience, and the seller has made every effort to maintain and develop this relationship between them and the customer [6]. The widely accepted definition of customer commitment by academics is that trading partners who are willing to maintain a lasting and important relationship [38,39]. Therefore, commitments are a kind of psychological emotion, which forms between two or more business partners. It also reflects the continuity of the business.

There is no unified recognition of the structural model of commitment. Some researchers pointed out that commitment is a multidimensional structure that includes affective and calculative or continuance commitment [40,41]. Affective commitment is a combination of emotions that reflects the consumer's sense of participation and belonging to the service [40,42]. When continuance commitment occurs, consumers are forced to commit to the sales of organization because the termination of this bond may result in loss and sacrifice in business (economic or social sacrifice) [43].

In the marketing relationship, when the conversion cost is low, the consumers are given the freedom to choose many types of samples and items from the sales. However, when consumers are unfamiliar or neither purchased the product nor service, continuance commitment may not occur. Therefore, when commitment is primarily defined as affective commitment, it resolves as a better understanding of premises and thus a good analysis of emotional commitment [38]. Hence, many researchers suggest using a one-dimensional structure to measure commitment in a social-business bond.

In the vast majority of commitment-related marketing research, affective commitment is the one-dimensional structure measurement of commitment [44]. Affective commitment occurs when there is a consumption relationship between consumers and organizations [45]. Customer commitment aims to maintain a good

and reputable relationship with the organization, while affective commitment can represent the customer's commitment [46]. Affective commitment is rooted in identity, which represents the nature of the customer's assurance [47].

There is a positive relationship between the commitment of the organization and the future intention of consumers [38]. The positive effect of commitment on word-of-mouth was recognized by scholars [48,49,50]. The positive E-WOM will only arise when satisfaction translates into a commitment because the commitment leads to the willingness of the marketer and the buyer to maintain the behavior of partnerships [23].

D. Electronic Word-Of-Mouth

In recent years, due to the advancement in communication technology, numerous social media are freely available. This electronic communication platform has resulted in the widespread of information. The user-generated related content is the basis of social media, resulting in the creation of the term "electronic word-of-mouth" (E-WOM) [51].

Generally, word-of-mouth (WOM) defined as an informal communication of consumers about specific products or services [52], which is regarded as one of the most important sources of information by customers. Electronic word-of-mouth (E-WOM) can be defined as all informal communications to consumers through web-based technologies. Nowadays, customers can post their thoughts, ideas, and feelings about products and services online by sending emails or writing articles on blogs [53]. The impact of E-WOM towards decisions made by customers may be greater than the impact of traditional word-of-mouth. The E-WOM expands the customer's choice of collecting information about products and services from other customers. In other words, the electronic environment is an innovative and convenient place to collect the required information. Therefore, E-WOM plays an important role in purchasing today's consumption.

In the tourism industry, travelers are increasingly turning to E-WOM for support towards their traveling plans and traveling-related decisions [54]. E-WOM influences tourists' visit intention and points out that E-WOM provides travelers with more travel-related information and has a convincing influence on travelers' tour choices and behavior [55].

In the hotel industry, the relationship between E-WOM and consumers' online purchases seemed to be stronger than the tourism industry [56]. Positive online reviews improve the perception of hotels among potential consumers [57]. Moreover, the intangible nature of the experience intensifies the uncertainty of consumers, which motivates them to search for relevant information and increases their dependence on electronic word-of-mouth. The hotel guests showed significant interest in E-WOM [58]. Therefore, electronic word-of-mouth may greatly influence the hotel guest behaviour.

RELATIONSHIP AMONG THE VARIABLES

As deliberated in the preceding sections, this paper asserts that perceived value can be used in the overall assessment of the effectiveness of a product (or service) after the consumer experiences the process of related products and services. Satisfaction is presumed to be affected directly by perceived value. Nonetheless, perceived value is also one of the important factors affecting guests' commitment [59,60]. However, the literature also established the relationship between satisfaction and commitment, thus making satisfaction a mediator variable between perceived value and commitment [38,44,61]. Therefore, this paper proposes a research framework for the hotel guest experience assessment process, as depicted in Figure 1.
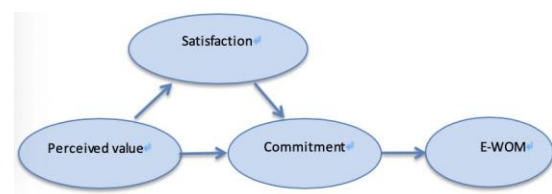
Figure 1. Research Framework

The framework shows that the variables under study are perceived value, satisfaction, commitment, and E-WOM. It examines the impact of hotel guests' perceived value on satisfaction and commitment. Commitment, in return, affects guests' E-WOM. In terms of classification, perceived value is an independent variable, while satisfaction can be seen as a moderator between perceived value and commitment. The effect of E-WOM can be measured directly and indirectly through the three variables; perceived value, satisfaction, and commitment.

CONCLUSION

This paper suggests that customer experience is a result of a comprehensive post-consumption assessment of perceived value responses. This assessment method is deemed applicable to the hotel industry. At the initial stage, the guest experience evaluation, perceived value, and satisfaction that play a very important role to generate guests' commitment. Ultimately, the guests are expected to use electronic word of mouth to disseminate their visit outcomes. Theoretically, the framework reduces the gaps related to the formulation of research constructs for hotel visit experience assessment. Practically, the framework is beneficial to hotel operators or relevant stakeholders to gain a comprehensive understanding of hotel guests' visit experience responses and their future behavior, including the electronic word-of-mouth response. Nonetheless, the framework should be tested to confirm its robustness.

REFERENCES

[1] Tadeja, K. 2008. The influence of perceived value on customer loyalty in Slovenian hotel industry. Turizam 12, 12-15.

[2] Zeithaml, V. A. 1988. Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence. The Journal of Marketing, 2-22.

[3] Kim, Y. H., J. Duncan, and B. W. Chung. 2015. Involvement, satisfaction, perceived value, and revisit intention: A case study of a food festival. Journal of Culinary Science and Technology 13(2), 133-158.

[4] Pandža Bajs, I. 2015. Tourist perceived value, relationship to satisfaction, and behavioral intentions: The example of the Croatian tourist destination Dubrovnik. Journal of Travel Research 54(1), 122-134.

[5] Jamal, S. A., N. A. Othman, and N. M. N. Muhammad. 2011. Tourist perceived value in a community-based homestay visit: An investigation into the functional and experiential aspect of value. Journal of Vacation Marketing 17(1), 5-15.

[6] Monroe, K. B. 1990. Pricing: Making profitable decisions. McGraw-Hill. New York.

[7] Anderson, E. W., and M. W. Sullivan. 1993. The antecedents and consequences of customer satisfaction for firms. Marketing Science 12(2), 125-143.

[8] Cronin, J. J., M. K. Brady, R. R. Brand, R. Hightower Jr, and D. J. Shemwell. 1997. A cross-sectional test of the effect and conceptualization of service value. Journal of Services Marketing 11(6), 375-391.

[9] Petrick, J. F. 2004. The roles of quality, value, and satisfaction in predicting cruise passengers' behavioral intentions. Journal of Travel Research 42(4), 397-407.

[10] Raza, M. A., A. N. Siddiquei, H. M. Awan, and K. Bukhari. 2012. Relationship between service quality, perceived value, satisfaction and revisit intention in hotel industry. Interdisciplinary Journal of Contemporary Research in Business 4(8), 788-805.

[11] Sweeney, J. C., and G. N. Soutar. 2001. Consumer perceived value: The development of a multiple item scale. Journal of Retailing 77(2), 203-220.

[12] Petrick, J. F. 2002. Development of a multi-dimensional scale for measuring the perceived value of a service. Journal of Leisure Research 34(2), 119-134.

[13] Wang, Y., H. Po Lo, R. Chi, and Y. Yang. 2004. An integrated framework for customer value and customer-relationship-management performance: a customer-based perspective from China. Managing Service Quality: An International Journal 14(2/3), 169-182.

[14] Dehghan, A. N., H. Alizadeh, and S. Mirzaei-Alamouti. 2015. Exploring the customer perceived values as antecedent of purchase behavior. Serbian Journal of Management 10(2), 173-188.

[15] Lemon, K. N., and P. C. Verhoef. 2016. Understanding customer experience throughout the customer journey. Journal of Marketing 80(6), 69-96.

[16] Yüksel, A., and M. Rimmington. 1998. Customer-satisfaction measurement: Performance counts. Cornell Hotel and Restaurant Administration Quarterly 39(6), 60-70.

[17] Page Jr, T. J., and R. A. Spreng. 2002. Difference scores versus direct effects in service quality measurement. Journal of Service Research 4(3), 184-192.

[18] Rashid, B. 2013. Post Visit Assessment: The influence of consumption emotion on tourist future intention. Journal of Business and Management 9(3), 39-45

[19] Woodruff, R. B. 1997. Customer value: the next source for competitive advantage. Journal of the Academy of Marketing Science 25(2), 139.

[20] Cronin Jr, J. J., M. K. Brady, and G. T. M. Hult. 2000. Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. Journal of Retailing 76(2), 193-218.

[21] Eggert, A., and W. Ulaga. 2002. Customer perceived value: a substitute for satisfaction in business markets?. Journal of Business and Industrial Marketing 17(2/3), 107-118.

[22] Kuo, Y. F., C. M. Wu, and W. J. Deng. 2009. The relationships among service quality, perceived value, customer satisfaction, and post-purchase intention in mobile value-added services. Computers in Human Behavior 25(4), 887-896.

[23] Bilgihan, A., F. Okumus, K. Nusair, and M. Bujisic. 2014. Online experiences: flow theory, measuring online customer experience in e-commerce and managerial implications for the lodging industry. Information Technology and Tourism 14(1), 49-71.

[24] Lee, J. S., Lee C. K., and Y. Choi. 2011. Examining the role of emotional and functional values in festival evaluation. Journal of Travel Research 50(6), 685-696.

[25] Zehrer, A., B. Muskat, and M. Muskat. 2014. Services research in tourism: Advocating the integration of the supplier side. Journal of Vacation Marketing 20(4), 353-363.

[26] Morgan, R. M., and S. D. Hunt. 1994. The commitment-trust theory of relationship marketing. The Journal of Marketing, 20-38.

[27] Baker, D. A., and J. L. Crompton. 2000. Quality, satisfaction and behavioral intentions. Annals of Tourism Research 27(3), 785-804.

[28] Dorfman, P. W. 1979. Measurement and meaning of recreation satisfaction: A case study in camping. Environment and Behavior 11(4), 483-510.

[29] Halstead, D., D. Hartman, and S. L. Schmidt. 1994. Multisource effects on the satisfaction formation process. Journal of the Academy of Marketing Science 22(2), 114-129.

[30] Brady, M. K., J. J. Cronin Jr, and R. R. Brand. 2002. Performance-only measurement of service quality: a replication and extension. Journal of Business Research 55(1), 17-31.

[31] Cronin Jr, J. J., and S. A. Taylor. 1992. Measuring service quality: a reexamination and extension. The Journal of Marketing, 55-68.

[32] Oliver, C. 1997. Sustainable competitive advantage: combining institutional and resource-based views. Strategic Management Journal 18(9), 697-713.

[33] Patwary, A. K., and B. Rashid. 2016. The impacts of hospitality services on visit experience and future visit intention of student travelers. International Journal of Business and Technopreneurship 6(8), 107-125.

[34] Dimitriades, Z. S. 2006. Customer satisfaction, loyalty and commitment in service organizations: Some evidence from Greece. Management Research News 29(12), 782-800.

[35] Gustafsson, A., M. D. Johnson, and I. Roos. 2005. The effects of customer satisfaction, relationship commitment dimensions, and triggers on customer retention. Journal of Marketing 69(4), 210-218.

[36] Royo-Vela, M., and P. Casamassima. 2011. The influence of belonging to virtual brand communities on consumers' affective commitment, satisfaction and word-of-mouth advertising: The ZARA case. Online Information Review 35(4), 517-542.

[37] Berry, L. L., and A. Parasuraman. 2004. Marketing services: Competing through quality. Simon and Schuster.

[38] Garbarino, E., and M. S. Johnson. 1999. The different roles of satisfaction, trust, and commitment in customer relationships. The Journal of Marketing, 70-87.

[39] Hennig-Thurau, T., K. P. Gwinner, and D. D. Gremler. 2002. Understanding relationship marketing outcomes: an integration of relational benefits and relationship quality. Journal of Service Research 4(3), 230-247.

[40] Fullerton, G. 2003. When does commitment lead to loyalty?. Journal of Service Research 5(4), 333-344.

[41] Harrison-Walker, L. J. 2001. The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. Journal of Service Research 4(1), 60-75.

[42] Rhoades, L., R. Eisenberger, and S. Armeli. 2001. Affective commitment to the organization: The contribution of perceived organizational support. Journal of Applied Psychology 86(5), 825.

[43] Fullerton, G. 2005. How commitment both enables and undermines marketing

relationships. European Journal of Marketing 39(11/12), 1372-1388.

[44] Keiningham, T., J. Ball, S. Benoit, H. L. Bruce, A. Buoye, J. Dzenkovska, and M. Zaki. 2017. The interplay of customer experience and commitment. Journal of Services Marketing 31(2), 148-160.

[45] Gruen, T. W., J. O. Summers, and F. Acito. 2000. Relationship marketing activities, commitment, and membership behaviors in professional associations. Journal of Marketing 64(3), 34-49.

[46] Levesque, T., and G. H. McDougall. 1996. Determinants of customer satisfaction in retail banking. International Journal of Bank Marketing 14(7), 12-20.

[47] Pritchard, M. P., M. E. Havitz, and D. R. Howard. 1999. Analyzing the commitment-loyalty link in service contexts. Journal of the Academy of Marketing Science 27(3), 333-348.

[48] Carpenter, J. M., and A. Fairhurst. 2005. Consumer shopping value, satisfaction, and loyalty for retail apparel brands. Journal of Fashion Marketing and Management: An International Journal 9(3), 256-269.

[49] De Matos, C. A., and C. A. V. Rossi. 2008. Word-of-mouth communications in marketing: a meta-analytic review of the antecedents and moderators. Journal of the Academy of Marketing Science 36(4), 578-596.

[50] Singh, J., and S. Pandya. 1991. Exploring the effects of consumers' dissatisfaction level on complaint behaviours. European Journal of Marketing 25(9), 7-21.

[51] Buhalis, D., and R. Law. 2008. Progress in information technology and tourism management: 20 years on and 10 years after the Internet - The state of e-Tourism research. Tourism Management 29(4), 609-623.

[52] Westbrook, R. A. 1987. Product/ consumption-based affective responses and postpurchase processes. Journal of Marketing Research, 258-270.

[53] Schindler, R. M., and B. Bickart. 2005. Published word of mouth: Referable, consumer-generated information on the Internet. Online Consumer Psychology: Understanding and Influencing Consumer Behavior In The Virtual World 32, 35-61.

[54] Amaro, S., and P. Duarte. 2013. Online travel purchasing: A literature review. Journal of Travel and Tourism Marketing 30(8), 755-785.

[55] Wang, P. 2015. Exploring the influence of electronic word-of-mouth on tourists' visit intention: A dual process approach. Journal of Systems and Information Technology 17(4), 381-395.

[56] King, R. A., P. Racherla, and V. D. Bush. 2014. What we know and don't know about online word-of-mouth: A review and synthesis of the literature. Journal of Interactive Marketing 28(3), 167-183.

[57] Vermeulen, I. E., and D. Seegers. 2009. Tried and tested: The impact of online hotel reviews on consumer consideration. Tourism Management 30(1), 123-127.

[58] Sotiriadis, M. D., and C. van Zyl. 2013. Electronic word-of-mouth and online reviews in tourism services: the use of twitter by tourists. Electronic Commerce Research 13(1), 103-124.

[59] Sharma, N., and P. G. Patterson. 2000. Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services. International Journal of Service Industry Management 11(5), 470-490.

[60] Bradley, G. L., and B. A. Sparks. 2012. Antecedents and consequences of consumer value: A longitudinal study of timeshare owners. Journal of Travel Research 51(2), 191-204.

[61] Kim, L. H., and D. J. Kim. 2017. Achieving relational outcomes in casual dining restaurants through consumer commitment. Current Issues in Tourism 20(2), 178-203.

Push and Pull Motivations on Halal Tourism

Faulina, Efni Siregar*, Vivianti Novita, Siti Arimbi

Department of Business Administration, Politeknik Negeri Medan, Indonesia

Abstract

The purpose of this study was to examine empirically the causal relationships among push and pull travel motivations, destination image, and tourists' travel satisfaction on halal tourism. The research conceptual framework and hypotheses were constructed, based on previous theoretical and empirical studies. A questionnaire survey was conducted with 200 respondents to collect the primary data. Multiple regression and Path Analyses were conducted to test the research hypotheses. As a result, push and pull factors had directly positive influences on tourist's travel satisfaction. Besides, the results also showed that push and pull factors were slightly indirect effect tourist's travel satisfaction through the halal destination image. Consequently, local government and business organizations working in the tourism sector should pay attention to the essential roles of push and pull factors. To attract more potential visitors and improve their satisfaction, enhance their perceived on halal destination image by doing the facility improvement and marketing activities are the compulsory actions.

Keywords: destination image, halal tourism, motivation, push and pull, travel satisfaction.

INTRODUCTION

Halal tourism becomes one of the faster-growing sectors of the global travel industry [1]. No alcohol, no pork, separate swimming pools for men and women, prayer facilities, and the other provisions based on the Muslim belief in the tourism facilities and services are needed in halal tourism. The performance of halal tourism began to rise in Muslim and non-Muslim countries. Although the concept of Halal tourism exclusively designed by Muslim roles, it inclusively covers the services for all, including non-Muslim travelers. In addition to the good servicing practices, the core of halal tourism emphasizes the principles of shariah-compliant aspects in both tourism management and services [2].

In 2018, there were 140 million international Muslim travelers, according to the latest Global Muslim Travel Index for Mastercard and Crescent Rating. By 2026, the segment is predicted to grow to 230 million people, forecasted $300 billion into the global economy [3]. This huge number of tourists need information, of course, about halal services and facilities at destinations to simplify their journeys.

Despite having five official religions and hundreds of ethnic groups, Indonesia has the largest Muslim population in the world that contributes 12.7% of the world's Muslims. According to a report, approximately 222 million people, or 87% of its population are Muslims [4].

---
*
Correspondence address:
Efni Siregar
E-mail : efnisiregar@polmed.ac.id
Address : alan Almamater No. 1, Kampus USU Padang
Bulan, Medan – 20155

In Indonesia, the tourism sector as one of the primary income sources for GDP (Gross Domestic Product). Therefore, understanding of Halal tourism concept and apply it in the Indonesian Tourism sector is expected to increase the national income. Knowing the needs of domestic and international tourists in Halal tourism is an urgent matter to recognize the tourists' concept of halal tourism. The study about motivations and destination image and tourist travel satisfaction is the obligatory process to understand tourists' needs and satisfaction in halal tourism.

Halal Tourism

Halal tourism is an umbrella term for tourism activities and products, includes Halal food, Halal Airlines, and Halal or Shariah-compliant Hotels [5]. It has economic, socio-cultural and religious aims as the revival of Islamic cultures and the spread of Islamic values, the economic benefit for Islamic societies, the strengthening of Islam self-confidence stereotyping in comparison to other cultures and lifestyles [6]. The definition focuses on Islamic law and its requirements to meet the tourist needs but ignored the religion of tourists (Muslims) and other dimensions [7].

Halal tourism is one of the new phenomena that emerged from the growth of the Halal industry. As Halal matters advancing the tourism industry, many Muslim and non-Muslim countries are set to capture the Muslim tourists' market by providing tourism products, facilities, and infrastructures to cater to their needs [8].

Travel Motivation

Travel motivation is the fundamental reason for the traveling behaviour and plays a vital role

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[71]

in understanding the decision-making process of tourists [9]. It has drawn increasing attention from the travel industry and motivates Indonesian tourists to undertake Halal tourism activities during their stay. The push-pull theory has been widely applied to tourism research, and specifically to traveler motivations. The theory provides a framework for examining customers' motivations for choosing to visit specific locations by analyzing two aspects: factors that push customers into making decisions via internal forces and factors that pull customers to choose desired locations via external forces, such as the attributes of the destination [10].

Some common push factors found in many studies include situational factors [11], socio-psychological factors (escape from routine everyday life, relaxation, exploration, social interaction, relationship enhancement, prestige), novelty-seeking, cultural experience, and escape [12,13]. Pull factor characteristics refer to *place* as a tourism product that defines a destination: static factors (scenery, cities, climate, wildlife, historical, and local cultural attractions); dynamic factors (accommodation, food, entertainment, access, political condition, and trends in tourism); and information such as marketing and advertising [13,14]. Push and pull travel motivations are not independent, but related to each other, push factors to refer to individual and pull factors pull tourists to visit the destinations [15,16]. Tourist motivation not only exerts influence over the choice of destinations but also over satisfaction [17].

Destination Image and Satisfaction

Destination image defined as an expression of knowledge, impressions, prejudices, imagination, and emotion and individual has of a specific place. In terms of impressions, regarding the fact that they may be true or false, real or imagined [18]. The destination image formation acts as the influence of the image on tourist satisfaction. It is important to gain a better understanding of tourists' perceptions of destination image, why they are loyal to a destination, and why it drives loyalty. One of the key elements of destination marketing success is tourist satisfaction because it influences the choice of destination [19,20]. A significant relationship occurs between tourist involvements, place attachment, and satisfaction [21].

Tourists' travel satisfaction is the extent of overall pleasure or contentment felt by the visitor, resulting from the ability of the trip

experience to fulfill the visitor's desires, expectations, and needs about the trip [20]. Tourist satisfaction is one of the prime variables to sustain competitive business in the tourism industry because it affects the choice of destination, consumption of products, and services [22]. The evaluation of tourist satisfaction is generally a direct measurement of its overall satisfaction with the destination experience; few studies involving satisfaction with destination attributes or combining a variety of common satisfaction models [17].

Various concepts explained the tourist's travel satisfaction in direct and indirect influences. Figure 1 illustrates the proposed hypothetical model in this study.
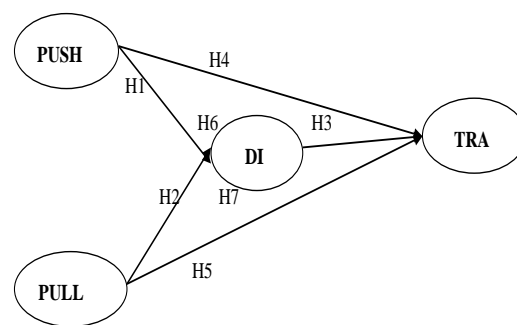
Figure 1. The Proposed Model
Description:
PUSH: Push factor, PULL: Pull factor, DI: destination image, TRA: tavel satisfaction.
H1 :Push factor is positively and directly affect halal destination image
H2 :Pull factor is positively and directly affect halal destination image
H3 :Halal destination image is positively and directly affect tourists' travel satisfaction.
H4 :Push factor is positively and directly affect halal destination image
H5 :Pull factor is positively and directly affect tourists' travel satisfaction
H6 :Push factor indirectly affects tourists' travel satisfaction through halal destination image
H7 :Pull factor indirectly affects tourists' satisfaction through tourists' destination image

MATERIAL AND METHOD

A structured interview utilized to gather basic information about Indonesian tourists from Medan. This instrument provides primary pertinent information to develop the questionnaire survey. The survey questionnaire was used as the main data gathering instrument for this study based on structured interviews and previous literature. After the development of the survey questionnaire, the pilot test was conducted with a validity and reliability study to examine the construct of the questionnaire.

The items of the questionnaire were based on literature reviews. The questions were in the form of five-scale Likert statements from 'strongly disagree' to 'strongly agree'. The instrument of the study was developed based on the review of related literature on Push and Pull motivation factors, destination image, and travel satisfaction. About twenty-four Likert scale questions in the questionnaire to help this study to get an overview of the research question divided into three categories: push and pull motivation, destination image, and travel satisfaction.

Data Collection

This study will use descriptive and causal research design and mainly applied a quantitative approach to examine the effects between variables. The descriptive method was used to describe the profile of Indonesian tourists in Medan city, collecting data through a questionnaire to answer the question concerning the motivation factors and travel satisfaction. The survey was delivered and collected online through Google form and offline and conducted from October to November 2019.

The questionnaire distributed to Indonesian Muslim tourists who stay in Medan and wish to travel for Halal tourism purposes. One of the reasons Medan is selected because it has international airports that offered international flights to different countries. This study used purposive sampling with total respondents was 200 people of Medan.

Table 1. Socio-demographic profile of therespondents

Socio-Demographic		Frequency	%
Gender	Male	49	24.7%
	Female	151	75.3%
Age	10-15	0	0%
	16-21	102	51.1%
	22-27	63	31.7%
	≥28	34	17.2%
Education Level	Junior High School	0	0%
	High School	9	45.9%
	Diploma	46	23.2%
	Bachelor Degree	62	138
Number of Visit	One time	6	3.2%
	Two times	6	3.2%
	Three times	4	1.6%
	≥4 times	184	91.9%

As shown in the Table 1, the distribution according to the gender of respondents showed that 24.7 % were males and 75.3% females. More than half of respondents (51.1%) were 16-21 years old, 31.7 % were 22-27 years old, and 17.2% of respondents had 28 years and above.

The results of 200 respondents' recent education indicated that 45.9% of them were in high school, 30.8 % were bachelor's degrees, and 23.2% of respondents were students in diploma. By analyzing the number of visits as a tourist, it was determined that most respondents had traveled as tourists to different destinations more than four times (91.9%).Data received from the survey were processed by using the IBM SPSS (Statistical Package for the Social Sciences) statistical software version 22.0 to analyze the data. The reliability test used to ensure the indicators were reliable. To achieve scale stability, Exploratory Factor Analysis (EFA) was used for scale development and to identify underlying constructs. For this study, two exploratory factor analyses (EFA) conducted with Kaiser-Meyer-Olkin and Bartlett's test of sphericity and Varimax rotation. The KMO measure of sampling adequacy for both groups of independent (KMO=0.711) and dependent variables (KMO=0.500) was greater than the minimum value for a good factor analysis 0.50 [23]. Also, Bartlett's test of sphericity was significant (Sig.=.000), indicating the sufficient correlation between the variables.

Almost all the factor loadings meet the minimum requirement except for several independent variables: 'Halal destination is known as the clean place' (0.484), 'I prefer to visit destinations which have many tourists' attractions' (0.481), I like to visit historical tourist's destination' (0.451) and one dependent variable: 'I will be satisfied if the tourists' destination is safe ' (0.358). The items that met the minimum requirement were included in further processes. Regression and Path Analysis conducted to identify the interrelationship among variables to confirm the research hypotheses. Subsequently, Multiple Regression and Path Analysis were used to explore the causal relationships among variables and then conclude in the research hypotheses.

Descriptive statistics of the constructs

Refer to Table 2, items concerning Push Factors such as 'psychological factors' (PSY1), 'static factors' (STAT1), and 'dynamic factors' (DYN3) were among the highest mean values (4.55±0.646, 4.60±0.656, 4.34±0.872, respectively). The results suggested the importance of many halal destinations offered to explore with natural and cultural attractions, and the respondents were looking forward to having halal facilities while traveling (4.22±0.957).

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[73]

At the EFA stage, items with a loading factor of ±0.5 retained and grouped into factors. Besides, Bartlett's test of sphericity was significant (Sig.=.000), indicating the sufficient correlation between the variables. As shown in Table 2, one push motivation factors (SIT3) and two pull motivation factors (STAT2 and STAT3) pulled out of the sample set. Dependent variables, which were Destination Image (DI) and tourists' Travel Satisfaction (TSA), have four and six items. A congeneric factor with two items can

be considered as the factor that has a significant relationship with any other factor [24]. All of the totals of 25 items retained, respectively.

Table 3 presents the items about Destination Image and tourists' travel satisfaction. DI2, DI4, and all the TSA items were among the highest mean values, except TSA5 (0.538±0.358). Prayer place, halal facilities in accommodations, and friendly societies are the important factors in destination image and tourists' travel satisfaction.

Table 2. Mean scores, Standard Deviation, EFA, and Reliability of Push and Pull Motivators

		Mean	Std Deviation	Factor Loading	Cronbach α
Push Motivation Factors					
SIT1	Want to visit halal destination	4.00	1.065	0.656	
SIT2	The halal destination is known as the safest place	4.08	0.958	0.632	0.845
SIT3	The halal destination is known as the clean place	3.85	0.982	0.484	
PSY1	I like to travel to new places	4.55	0.646	0.517	
PSY2	I like to meet new people	4.06	0.937	0.598	
PSY3	I love to explore the new cultural experimental	4.12	0.838	0.659	0.620
PSY4	I always want to travel to halal destinations	3.84	1.202	0.713	
PSY5	I believe halal tourism keeping me feel comfortable	4.01	1.032	0.715	
Pull Motivation Factors					
STAT1	I prefer to visit the beautiful natural attractions	4.60	0.656	0.634	
STAT2	I prefer to visit destinations which have many tourists' attractions	3.82	0.843	0.481	0.503
STAT3	I like to visit historical tourist's destination	4.01	0.889	0.451	
DYN1	I prefer to visit destinations that offer halal facilities	4.22	0.957	0.569	
DYN2	Halal food is the main reason to visit the tourist's destination	4.20	0.975	0.698	
DYN3	I want to visit destinations if offer many prayers places	4.34	0.872	0.584	0.777
DYN4	I want to visit a halal destination because of friends and relatives	3.97	0.805	0.566	
INF1	Magazines and newspapers wrote many interesting halal destinations	3.76	0.942	0.703	
INF2	I want to visit a halal destination because of social media reviews	3.83	0.950	0.750	0.868
INF3	I want to visit halal tourism because of the travel agent's promotions	3.66	1.039	0.682	

Table 3. Mean scores, Standard Deviation, EFA, and Reliability of Destination image and Satisfaction factors

Construct		Mean	Std Deviation	Factor Loading	Cronbach α
Perceived Destination Image					
DI1	My concern is halal facilities	4.18	0.795	0.577	
DI2	Fast and easy access to the prayer place	4.34	0.764	0.713	0.807
DI3	The security concern in halal destinations is my purpose	4.48	0.720	0.545	
DI4	Review and news lead me to halal destinations	4.20	0.786	0.616	
Satisfaction					
TSA1	The access to the halal destination is easy and reachable	4.44	0.711	0.659	
TSA2	I will be satisfied if the halal facilities offered by the accommodations	4.39	0.739	0.734	
TSA3	I will be satisfied if many restaurants around the halal destinations	4.41	0.762	0.670	0.877
TSA4	I will be satisfied if the affordable price for halal tourism offered	4.62	0.629	0.574	
TSA5	I will be satisfied if the tourists' destination is safe	4.72	0.538	0.358	
TSA6	I will be satisfied if the people in the halal destination are tourists' friendly	4.48	0.760	0.722	

RESULT AND DISCUSSION

Pearson's Correlation Analysis and Linear Regression Analysis were applied to find out the relationship among variables. Table 4 illustrates the positive correlations between Push and Pull as independent variables, the mediate variable (Destination Image), and the dependent variable (tourists' Travel Satisfaction). This means that the stronger Push and Pull travel motivations the travellers had, the higher the Destination Image and Travel Satisfaction degree.

Table 4. Correlations Between Variables

	TSA	1	2	3
1. PUSH	0.492			
2. PULL	0.570	0.584		
3. DI	0.692	0.610	0.744	
Mean	27.06	36.72	40.79	17.20
S.D.	3.278	4.461	5.196	2.440

Notes: PUSH: Push factor, PULL: Pull factor, DI: destination image, TSA: tavel satisfaction.

H1: Push factor is positively and directly affect halal destination image

H2: Pull factor is positively and directly affect halal destination image

The result of the data revealed that there were significant positive relationships between the mediate variable of DI and the independent variables: Push (r=0.610, p<0.01) and Pull (r=0.744. p<0.01). Regression Coefficient of Push and Pull were β= 0.146, p=.000 and β= 0.276, p=.000, respectively. It implied that Push and Pull factors had positive and relatively strong effects on Destination Image. Furthermore, Push and Pull factors could explain 60% of the variation of tourist Destination Image (R^2 = 0.600).

H3: Halal destination image is positively and directly affect tourists' travel satisfaction.

There was a positive correlation between the mediate variable (DI) and the dependent variable (TSA) with r= 0.692, p<0.001. The coefficient of determination (β= 0.929, p=.000) indicated the strong influence of Destination Image on Travel satisfaction at the 99% confidence level. The R squared value was 0.478, which means 47.8% of the variation of Travel Satisfaction can be explained by halal Destination Image.

H4: Push factor is positively and directly affect halal destination image

H5: Pull factor is positively and directly affect tourists' travel satisfaction

The Pearson Correlation analysis results showed the positive correlations between two independent variables and the dependent variable (TSA), with r= 0.492, p<0.01, and r=0.570, p<0.01, respectively. Travel Satisfaction directly affected by the Push factor (β= 0.177, p=.001) and Pull factor (β=0.270, p=.000) in a positive direction. The R^2 = 0.363 implied that the Push and Pull factors can explain 36.3% of the variation of tourists' Travel Satisfaction on halal destination.

H6: Push factor is indirectly affect tourists' travel satisfaction through halal destination image

H7: Pull factor indirectly affect tourists' satisfaction through tourists' destination image

The two independent factors directly influenced DI, and then this mediate variable caused an effect on Travel Satisfaction with β=0.929, p=0.000. Consequently, Push and Pull factors create indirect effects on Travel Satisfaction. Sobel Test was used to access the significance of the indirect effects [25]. It can be concluded from this test that the indirect effects of Push and Pull on TRA were indeed significantly different from zero at p<0.05 (two-tailed) and the mediation of DI in this study was true with the residual coefficients were 0.632 (Push→DI) and 0.647 (Push and Pull→DI→TSA).

Table 5 summarized the causal effect of independent variables and mediate variable on Travel Satisfaction. As regards the total effects that were shown, DI had the strongest impact on TSA (β=0.564), followed by Pull motivation factor (β=0.332). Push factor had the slightest effect on TSA to halal destination with β=0.151 only. The total effect of these factors on TSA was 1.047, in which direct effects of factors of Push, Pull, and DI accounted for more than 60% while indirect effects made up nearly 40%.

Table 5. Regression and Sobel Test Summary

Variable	b	β	Std Error	Sig
Push → DI	0.267	0.146	0.030	0.00
Pull → DI	0.588	0.276	0.026	0.00
Push → TSA	0.241	0.177	0.051	0.00
Pull →TSA	0.429	0.270	0.044	0.00
DI→ TSA	0.564	0.757	0.107	0.00
Push→DI→TSA	0.151	0.067	0.091	0.00 (Sobel)
Pull→DI→TSA	0.332	0.061	0.097	0.00 (Sobel)

The empirical results of this study supported the model, which provided a conceptual framework to positively explain and predict the items that provide tourists' satisfaction while

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[75]

traveling to halal destinations. The statistical findings showed that Push and Pull factors did not only directly affect tourists' Travel Satisfaction, but also had indirect impacts on travel satisfaction through Destination Image. It means that when travelers have stronger intrinsic desires to go on a vacation and perception towards the halal features, attractions, or attributes of a destination, they may get the positive Perceived Destination Image as well as satisfaction while traveling.

This study proved that Muslim tourists always want to travel to a halal destination because it will comfort them. They prefer halal food nearby tourist attraction and reachable prayer places near the tourists' attractions because the Muslim tourists can practice their act of religious devotion while visit tourists' destinations. The support of accommodation' managers to facilitate and to serve the halal facilities and services is one of the biggest favours, too [8]. The clean and safe places while visiting tourists' destinations, surprisingly were not the main subjects of this study.
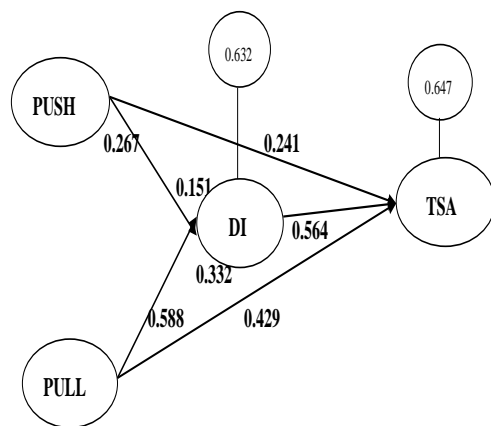

Figure 2. Path Diagram

This finding was supported by some previous researches that agreed that travel motivation, including situational and psychological motives (Push factor) and external motives of the destination attribute (Pull factor), positively affected tourists' travel satisfaction of destination [26,27]. The results in this research indicate that Push and Pull factors had a slight influence on tourists' travel satisfaction in the halal destination.

It was concluded that Push and Pull factors had significant effects on the destination image. Therefore, the halal destination image handles the important role to satisfy tourists while traveling to halal destinations. It means the halal destination depends on the image created. The

tourists' satisfaction or dissatisfaction is much dependent on how well the tourists perceived about the halal concept and the destination image.

Recommendation

The findings of this research proposed some constructive recommendations for business organizations working in the tourism sector, destination marketers, and local governments. First, based on the empirical research findings, this study provided practical evidence on the causal relationships between travel motivation, destination image, and satisfaction to visit halal destination; to increase the awareness of tourism government and organizations about the role of push and pull factors and their positive influences on destination image and tourist's travel satisfaction. They should pay attention to both intrinsic and extrinsic reasons why people decide to travel to the halal destination, and their basic needs and expectations about that trip as well (halal food, no alcohol drink, prayer places, etc) to comfort them while traveling.

Moreover, building the image as a halal destination is compulsory to attract more tourists from Muslim countries such as Indonesia, Malaysia, and Middle East Countries. The image can be build by preparing the Muslim's basic needs, in minimum, and then share this improvement through social media, reviews on magazines and newspapers, television, and online promotion, respectively. Besides, the local governments should consider protecting the tourists by developing the policies and to educate the societies to respect and help the tourists while traveling to their places, with no exception. Destination marketers can design marketing strategies that show the uniqueness of nature and cultures as well as the affordable facilities and services prepared for Muslims. The city which promotes halal tourism should be aware of the Muslim requirements in the halal concept.

CONCLUSION

This study aimed to identify the travel motivation of Muslim travelers and investigate the causal relationships among the push and pull travel motivations, destination image, and tourists' travel satisfaction. Based on previous theoretical and empirical studies, the research conceptual framework and hypotheses were constructed.

After analyzing the collected data, all proposed hypotheses and models were accepted,

and the research's goals have successfully obtained. Both push and pull motivation factors have a significant and positive influence on halal destination image, but only have a slight effect on tourists' travel satisfaction. Therefore, business organizations working in the tourism sector should take serious attention to the essential roles of push and pull factors, to understand and respond to tourists' demands and expectations when they travel to destinations. The results of this research can be used as valuable and accurate information for destination governments, marketers, and managers to implement policies, strategies, and plans to attract more potential Muslim visitors and to improve their travel satisfaction and encourage them to visit and re-visit the destination.

REFERENCES

[1] Kamin, D. 2019. The rise of halal tourism. Available at: https://www.nytimes.com/2019/01/18/travel/the-rise-of-halal-tourism.html.

[2] Jaelani, A. 2017. Halal tourism industry in Indonesia: Potential and prospects. International Review of Management and Marketing 7(3). 25-34.

[3] Neubauer, I. L. 2019. Halal tourism boom draws Muslim holidaymakers to Asia. Available at: https://asia.nikkei.com/Business/Business-trends/Halal-tourism-boom-draws-Muslim-holidaymakers-to-Asia2.

[4] Lipka, M. 2017. Muslim and Islam: Key findings in the U.S. and around the world. Available at: http://www.pewresearch.org/fact-tank/2017/02/27/muslims-and-islam-key-findings-in-the-u-s-and-around-the-world/.

[5] Mansouri, S. 2014. Role of halal tourism ideology in destination competitiveness: A study on selected hotels in Bangkok, Thailand. Proceeding International Conference on Law, Education, and Humanities (ICLEH'14). 20-23.

[6] Al-Hamarneh, A., and C. Steiner. 2004. Islamic tourism: Rethinking the strategies of tourism development in the Arab World after September 11, 2001. Comparative Studies of South Asia, Africa and the Middle East 24(1). 173-182.

[7] Battour, M. 2018. Muslim travel behavior in halal tourism. Mobilities, Tourism and Travel Behavior - Contexts and Boundaries, 3-16.

[8] Samori, Z., N. Z. Md Salleh, and M. M. Khalid. 2016. Current trends on Halal tourism: Cases in selected Asian countries. Tourism Management Perspectives 19, 131-136.

[9] Wall, G., and A. Mathieson. 2006. Tourism: change, impacts, and opportunities. Pearson Education Limited. Harlow.

[10] Crompton, J. L. 1979. Motivations for pleasure vacation. Annals of Tourism Research 6, 408-424.

[11] Misbah, H. 2014. Customer switching behavior: An exploratory study of predictive factors in the UK retail banking context. Dissertation. University of Edinburg, UK.

[12] Jensen, J. M. 2011. The relationships between socio-demographic variables, travel motivations and subsequent choice of vacation. Proceeding of International Conference on Economics, Business and Management, IPEDR, Vol. 22. IACSIT Press. Singapore.

[13] Dayour, F., and C. A. Adongo. 2015. Why they go there : International tourists' motivations and revisit intention to Northern Ghana.Tourism Management 4(1), 7-17.

[14] Madden, K., B. Rashid, and N. A. Zainol. 2017. Determinants of Intention to Visit Phuket. Thailand. Journal of Tourism and Management Research 2(1), 31-43.

[15] Kim, K. 2008. Analysis of the structural equation model for the student pleasure travel market: motivation, involvement, satisfaction, and destination loyalty. Journal of Travel & Tourism Marketing 24(4), 297-313.

[16] Khuong, M. N., and T. T. Ha. 2014. The influences of push and pull factors on the international leisure tourists' return intention to Ho Chi Minh City, Vietnam — a mediation analysis of destination satisfaction. International Journal of Trade, Economics and Finance 5(6), 490-496.

[17] Li, Z., A. Rehman, B. Zhao, and Z. Peng. 2016. Analysis of the relationship between tourist motivation, satisfaction and loyalty for China special theme tourism. Asian Research Journal of Arts and Social Sciences 1(5), 1-14.

[18] Ruiz, E. C., G. B. Gonzales, and D. T. Zamora. 2018. Destination image, satisfaction and destination loyalty in cruise tourism: the

case of Malaga (Spain). Tourism and Management Studies 14(1), 58-68.

[19] Yoon, Y., and M. Uysal. 2005. An examination of the effects of motivation and satisfaction on destination loyalty: A structural model. Tourism Management 26(1), 45-56.

[20] Chen, C. F., and D. Tsai. 2007. How destination image and evaluative factors affect behavioural intentions?. Tourism Management 28, 1115-1122.

[21] Hwang, S. N., C. Lee, and H. J. Chen. 2005. The relationship among tourists' involvement, place attachment and interpretation satisfaction in Taiwan's National Parks. Tourism Management 26(2), 143-156.

[22] Kozak, M., and M. Rimmington. 2000. Tourist satisfaction with Mallorca, Spain, as an off-season holiday destination. Journal of Travel Research 38(3), 260-269.

[23] Field, A. 2000. Discovering statistics using SPSS for Windows. Thousand Oaks – New Delhi: Sage publications. London.

[24] Hair, J. F., W. C. Black, B. J. Babin, R. E. Anderson, and R. L. Tatham. 2010. Multivariate data analysis. Pearson Education. New Jersey.

[25] Kline, R. B. 2011. Principles and practice of Structural Equation Modeling. Guilford Press. New York.

[26] Pratminingsih, S. A., C. L. Rudatin, and T. Rimenta. 2014. Roles of motivation and destination image in predicting tourist revisit intention: A case of Bandung – Indonesia. International Journal of Innovation, Management, and Technology 5(1), 19-24.

[27] Khuong, M. N., and P. A. Nguyen. 2017. Factors affecting tourist destination satisfaction and return intention. A study in Ho Chi Minh City, Vietnam. Journal of Economics, Bussiness and Management 6(2), 95-102.

Tourism Impact on Conservation and Utilization of Borobudur Temple After Being Declared as Ten New Bali Tourist Destination in Indonesia

Cerry Surya Pradana[1], Carlos Iban[2], R. Setyastama[3]

[1]Departement of Language, Art, and Culture Management, Faculty of Vocational College, Universitas Gadjah Mada, Indonesia
[2]Departement of Language, Art, and Culture Management, Faculty of Vocational College, Universitas Gadjah Mada, Indonesia
[3]Yayasan Irama Tjitra Yogyakarta, Indonesia

Abstract

Borobudur as a world heritage site is one of *10 New Bali Tourist Destination* or *10 Priority Tourist Destination* in Indonesia. The problem arises as government's aim to attract tourists as many as possible can be contrary to the conservation principles. This study aimed to identify the impact of the establishment of Borobudur Temple as one of 10 priority tourist destinations, specifically in terms of conservation and utilization. In addition, it is aimed to view the readiness and strategy of the manager of Borobudur Temple Heritage Site toward the policy of 10 New Bali Tourist Destination. The method used in this study is descriptive qualitative. Data will be collected by doing observation and in-depth interview as well as literature review. The data are analysed using the hermeneutic paradigm in which researchers expect the interpretations of the manager of Borobudur Temple Heritage Site dealing with the topic of the study. Data analysis is done by using hermeneutic paradigm which is expected to answer the research questions. The preliminary findings of this study, that are based on interview and literature review, state that there is a different job description between BKB and PT. TWCBRB. This study has found out the impact of the establishment of Borobudur Temple as 10 New Bali Tourist Destination in conservation and utilization term.

Keywords: Borobudur Temple, heritage tourism, tourism impacts, 10 New Bali, 10 priority tourist destination.

INTRODUCTION

The development of priority tourism destinations made by the Ministry of Tourism (Kemenpar) of the Republic of Indonesia, consists of ten destinations that are expected to become 10 *New Bali* destinations [1]. However, in 2017, the Indonesian Minister of Tourism, Arief Yahya, stated that only four destinations would be reallocated to become priority tourism destinations, namely Borobudur Temple, Lake Toba, Mandalika, and Labuan Bajo [2]. In 2019, the level of tourist arrivals (foreign tourists) to the Borobudur Temple is targeted at 2 million people [3]. It is inversely proportional to the statement of Borobudur Conservation Center (BKB) staff, who said that maximum carrying capacity in Borobudur Temple is 123 people to climb(stepping on rocks) the temple at one time, 528 people in the temple yard, and 10,308 people in the temple yard [4].

In 2017, the average number of domestic tourists visiting Borobudur Temple every day is at 7,000 people, while foreign tourists are 700-800 per day (Tempo.co/ANTARA, 11 August 2017). The Government of Indonesia in 2019 targets the increasing number of tourist arrivals from 750,000 people per year to 2 million people per year (Republika.co.id, 10 February 2018). This target is said from foreign tourists alone. Thus, there is a possibility that domestic tourists visiting Borobudur Temple will be even greater than in previous years. The number of visitors certainly have the potential to damage the temple rocks trampled by footwear used by tourists (Nainggolan, pekanbaru.tribunnews.com, October 14, 2015). Another concrete example that often occurs at site locations is the frequent tourists taking selfies, which do not heed the rules for the sake of getting photos that are considered satisfactory. Cases like this occur in several locations, including the Borobudur Temple, where tourists often climb the stupa for the sake of existence (Oda, Tribunnews.com, 2017). In addition, it is not uncommonly sight for the author to find tourists and visitors at temples and cultural heritage sites, who do not heed the rules, such as smoking clandestinely in the site and ascending to a place that has been marked *No Prohibited Up/Prohibited Sitting*.

The problem of tourism in Indonesia not only caused by tourists. It is supported by the conclusion that there is a conflict of interest in

---

* Correspondence address:
Cerry Surya Pradana
E-mail : cerrysuper@ugm.ac.id
Address : Universitas Gadjah Mada, Bulaksumur,
Kabupaten Sleman, Daerah Istimewa Yogyakarta 55281

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[79]

Indonesian society regarding the management of cultural heritage [5,6]. Thus, the problem of tourism in Indonesia must be viewed from various perspectives. The entry of Borobudur Temple in the Borobudur, Prambanan, and Ratu Boko Tourism Park Limited Companies (PT. TWCBPRB), relates to the existence of the Borobudur Conservation Center (BKB). If PT. TWCBPRB focuses on marketing and increasing tourist visits, so it is different from BKB, which has a focus on conservation and preservation.

This conservation activity is inversely proportional to the job of PT. TWCBPRB, which are the manager of tourism activities at Borobudur Temple and aim to bring as many tourists as possible. Not to mention currently, the Republic of Indonesia's Ministry of Tourism has formed the Borobudur Authority Agency (BOB), which has also contributed to the increasing numbers of agencies involved in the planning and management of the Borobudur Temple Area.

The Government of Indonesia, through the Ministry of State-Owned Business Agency (BUMN), is making a solution so that visitors at Borobudur Temple can provide benefits to residents around the temple. The solution is to create a Village Economic Center (Balkondes), which is supported by 18 SOBAs (BUMN). Until now, there have been 20 Balkondes around the Borobudur Temple. The efforts made by the Indonesian government, in this case, the Ministry of Tourism, should be appreciated. However, it is also important to consider the problem of carrying capacity of a tourist destination that will or is being developed. Thus, tourism activities can work while also give some attention to the principle of conservation.

Research on the impact of tourism in Borobudur Temple was conducted in a previous study, which stated that tourism activities in Borobudur Temple were not controlled because of the large number of visitors, can be anticipated by adding supervision and application of the rules [7]. Wahyuningsih from BKB, studied the Borobudur Cultural Heritage Conservation stated that there needs to be a pattern of visiting arrangements at Borobudur Temple [8].

Biantoro and Ma'arif [9] wrote that the communities around Borobudur Temple, who do not work in Borobudur Temple, do not feel the benefits of the Borobudur Temple economically. This research, however, is becoming less relevant, because nowadays there are already 20 Village Economic Center (Balkondes) prepared to absorb the potential economical income from visitors who come to the Borobudur area. Another research found that there were negative and positive impacts on the community around the Borobudur Temple. In terms of economics and education, there is a good increase. While in terms of security, there is actually a decline, in addition to the increasingly crowded population around Borobudur Temple [10].

Cultural impacts in tourism occur because there are factors that result in so. Pitana [11] mentioned 13 factors that cause socio-cultural impacts in tourism, namely (1) Comparison of tourist numbers to local residents; (2) The dominant object that becomes the tourism attraction and the needs of tourists related to it; (3) The forms of attraction presented (nature, culture and other forms); (4) Tourism structure and organization in tourism destination area; (5) Differences in economic and cultural between tourists and local people; (6) Difference between tourist culture and local people; (7) Level of autonomy from tourism destination area; (8) Speed of tourism growth; (9) The level of tourism development (still in its early days or when saturation has started); (10) The level of DTW economic development; (11) The social structure of the local community; (12) Types of resorts developed; and (13) The role of tourism in the tourism destination area economy.

Ahimsa-Putra and Raharjana [12] explained that the cultural impact meant the various changes that occur in the value system, rules, and various rules as a result of changes in the physical, social, and cultural environment of the system. Cultural impacts are divided into two parts, namely based on the nature or character of the impact and based on its aspects. Based on the nature or character, cultural impacts are divided into positive impacts and negative impacts. Based on its aspects, it is divided into qualitative and quantitative impacts.

Yoeti [13] stated that tourism often has a negative impact on socio-cultural activities, while the positive effects are often in economic terms. Tourism as a cultural impact gives rise to what is called by Yoeti with the commercialization of art. One example is the Kecak Dance performance in Bali. The dance, which is a fragment of the Ramayana, is a compact and concise version of the show, even though the actual performance can take two to three nights. In addition, there was a falsification of handicrafts (imitation), demonstration effects, the demoralization of

young people, and the commercialization of customs.

Ardika [14] stated that heritage tourism is an alternative tourism that is useful for reducing mass tourism activities which have a more capitalist tendency in developing the tourism industry. Heritage tourism, currently has a rapid development, due to the tendency for tourists to look for new and authentic things.

Park [15] also stated that heritage tourism is a dominant tourism activity looking at material and non-material cultural forms originating from the past. The most important thing that was conveyed by Park was that in the context of tourism, the *heritage* that was intended was neither static nor permanent. The context of this *heritage* is constantly evolving and reinterpreted, in an effort to attract tourists and reflect socio-cultural changes in the contemporary world. Park also said the relationship between heritage and tourism is a complex, complicated, and symbiotic relationship.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) stated that heritage tourism is a tourism activity to enjoy a variety of local customs, cultural heritage objects, and nature. It is along with all its contents in its original place, which aims to provide knowledge and understanding of cultural and natural diversity for visitors [16]. It also mentioned in the article, that the involvement of local communities had an important role in determining the success of heritage tourism.

Research and writings on the theme of the impact of tourism, especially related to cultural heritage, have been written by researchers from academia and practitioners alike. However, research on the impacts of tourism-related after the decision on Borobudur Temple as one of the priority destinations has not been studied in-depth, mainly relating to the management of destinations in terms of conservation and utilization. Therefore, this research aimed to determine the tourism impacts on the conservation and utilization of Borobudur Temple decided after being declared as Ten New Bali tourists destination in Indonesia, that has never been studied previously.

RESEARCH METHOD

The research method is a method used to solve problems in a case study. The method used in this research is a descriptive qualitative method. It is how to solve the problem under study, by describing the object of research in detail based on the facts contained in the field. The reasoning method used in completing this research is deductive. Analytical reasoning that moves from the study of general facts or symptoms, which then concluded to be specific phenomena [17]. The following are the steps that will be carried out in this research.

Data Collection

This stage carried out to obtain data related to research. Data collected at this stage consists of primary data and secondary data. Primary data searched in two ways, namely observation or direct observation and interviews, while secondary data obtained through documentation techniques.

Literature Study/Documentation Techniques

A literature study was conducted to obtain secondary data related to the research topic. Literature study aims to obtain information about responsible tourism and management of cultural heritage objects, in this case, Borobudur Temple. The study of responsible tourism can be obtained through various libraries or scientific publications, which are available in various places such as data libraries and other locations. Likewise, data on the management of cultural heritage objects as tourist attractions were also collected. This literature study aims to complete the data collected through observation and support the arguments to be conveyed.

Observation

The observation locations, which are the main focus, located in the core zone, where conservation activities carried out. Whereas supporting observation locations will be carried out in buffer zones, development zones, and support zones. The role and/or participation of managers, visitors, and government institutions in these zones were observed.

Interview

The interview stage conducted to complete the observation data and literature study. The data were related with the responsible tourism and its relationship with the building of cultural heritage, especially in Borobudur Temple. In-depth interviews were conducted with relevant informants. Parties taken as in-depth informants consisted of managers and related government institutions. The manager who will be the guest speaker is from PT. Taman Wisata Borobudur, Prambanan, and Ratu Boko (PT. TWCBPRB). It is because the PT is the party who is directly responsible for tourism activities in the

Borobudur Temple. Researchers will interview two types of speakers, namely the leadership of PT. TWCBPRB and the person in charge of representing PT. TWCBPRB at Borobudur Temple.

The second party who became the resource person was the leader and officer of the Borobudur Conservation Center (BKB), which was the manager in charge of conservation, especially about the sustainability of the preservation of Borobudur Temple. This party cooperates and is closely related to PT. TWCBPRB in management at Borobudur Temple. The selection of BKB as a resource was due to its association with the management of tourism in Borobudur Temple. In contrast to PT. TWCBPRB, which is oriented towards tourism activities, Village Economic Center (Balkondes) is oriented towards conservation.

RESULT AND DISCUSSION

Based on literature studies and interviews, the division of work zones associated with the zoning of Borobudur Temple is obtained. Where the Borobudur Temple is divided into at least three zones, namely zone I is the Conservation Zone, which is managed by the Borobudur Conservation Office; zone II is a buffer zone, which is managed by PT. Taman Wisata Borobudur, Prambanan, and Ratu Boko temples; and zone III is the Utilization Zone, which is managed by the Regional Government of Magelang Regency. These three zones become a benchmark in the implementation of tourism activities, as well as the division of responsibilities among managers involved in tourism activities at Borobudur Temple.

Impacts on Conservation

The zoning distribution conducted at the Borobudur Temple is a provision that has been made by the Government of the Republic of Indonesia. The party responsible for preservation in Borobudur Temple is BKB, which is under the Indonesian Ministry of Education and Culture. BKB made several policies related to preservation efforts carried out at Borobudur Temple.

First, the BKB made a study that produced the maximum number of visits (carrying capacity) in Zone I (the zone where the main temple located). The number of visits intended in one unit of time (for example, in 1 hour of visit), which is 128 visitors. For conservation, BKB also limits the number of visitors in Zone II to 523 visitors and Zone III to ± 10,000 visitors at the same time. Thus, if the opening hours of the visit at Borobudur Temple, for example, are for 10

hours, then the maximum number of visitors entering zone I is 128 people multiplied by 10 hours, for a total of 1280 visitors.

Secondly, based on the data obtained, there are obstacles in the implementation of conservation in Borobudur Temple, which is carried out by BKB. These constraints are due in theory, Zone I is the responsibility of the BKB, which is a conservation Zone. However, in practice, tourists who come to Borobudur, enter Zone I, where these tourists are the responsibility of PT. TWCBPRB is responsible for Zone II. Thus it can be stated that PT. TWCBPRB as the person in charge of tourism puts tourists in Zone I, which is the domain of Zone I. So that the responsibilities of officers overlap, whether it is the responsibility of BKB or PT. TWCBPRB.

Third, based on interviews, the BKB does not really care about the large number of visitors who come to Borobudur Temple. They also did not question the Ministry of Tourism targeting any number of visits, to Borobudur. As long as the maximum number of visitors in each zone, according to what they have made before. In addition, they stated that Borobudur was not only composed of one temple but a cultural heritage area in Magelang Regency. Thus, the BKB hopes that there will be a fair visit to the Borobudur area.

Impacts on Utilization

PT. TWCBPRB, based on the division of work zones, is responsible for zone II in the Borobudur Temple Area. Zone II or buffer zone, as the name implies, is a buffer from Zone I (Conservation Zone). If related to tourism, zone II is a supporter of tourism activities carried out in zone I. In relation to the impact of tourism on the utilization of Borobudur Temple, there are several impacts that occur. The following is an impact that occurred as a result of the disconnection of Borobudur Temple as a new 10 Bali tourism destination, which later developed into a priority tourist destination.

First, the Ministry of Tourism's target of bringing in two million foreign tourists (tourists) in Borobudur, becomes the main focus that has a big impact in the region. Based on the 2018-2019 Strategic Plan Book made by the Ministry of Tourism [18], the target of foreign tourist arrivals in 2018 of 19% and 15% in 2019, is inversely proportional to the target of increasing tourist arrivals (wisnus) by 1.85% in 2018 and 1.85% in 2019. The increase in the number of tourist arrivals (both domestic and international) has an

impact on the use that occurs in Borobudur Temple related to tourism.

Secondly, there is a target of the Indonesian government through the Ministry of Tourism relating to the amount of tourism investment entering the Borobudur Area, which is four hundred billion rupiah (400,000,000,000.00 IDR) in 2018 and five hundred billion rupiah (500,000,000,000.00 IDR) in 2019. Meanwhile, the number of tourist attractions in Borobudur targeted to increase by five attractions in 2018 and ten attractions in 2019. In addition, the number of tourism businesses is expected to increase to 224 businesses in 2018 and to 230 businesses in 2019.

Based on the area of responsibility, these targets are realization targets, which must also be met by PT. TWCBPRB, where they get the mandate to manage zone II in the Borobudur Temple area. In addition, this is in line with the main tasks and functions as a State-Owned Enterprise (BUMN), whose job is to seek and obtain as much financial income. However, although PT. TWCBPRB works in zone II, but tourists who enter Borobudur Temple are also allowed to enter zone I which is part of BKB.

Discussion

Based on the research results above, there are two things that can be discussed. First, the conservation that BKB wants is contrary to the target of tourist visits by PT. TWCBPRB. BKB does not make an issue with any number of tourists coming to the Borobudur area, as long as it follows the maximum number of visits in each zone at a time. Unlike the case with PT. TWCBPRB, who 'sells' Borobudur area with Borobudur Temple as the main attraction and has a minimum target of the visit.

Second, until now, the author still could not understand whether what PT really wanted. TWCBPRB is the number of tourists or the quantity of money received. If the targeted quantity is tourists, it will always conflict with the conservation efforts carried out by BKB. However, if what is desired is the quantity of cash income, then the target can be achieved, both the target of cash income and conservation.

CONCLUSION

The impact of tourism on conservation and utilization in the Borobudur Temple after being determined as a priority tourist destination occurs in several aspects. From a conservation standpoint, conservation work is getting tougher with this policy. It is due to the limited

supervision team, while the number of tourists targeted to come is always increasing. In essence, the BKB as a preserver of conservation in the Borobudur Temple Area has no objection to the increase in tourist targets, as long as it adjusts to the capacity of the visits they have made. When viewed from the aspect of utilization, the PT. TWCBPRB as a BUMN strives to meet the targets set by the government, in this case, the Ministry of Tourism of the Republic of Indonesia.

The relationship between conservation and utilization of the Borobudur Temple Area needs further attention. Thus, research on this matter needs to be done, with the hope of finding the right formula in applying the principles of conservation and utilization in the area side by side. In addition, it is also necessary to ascertain the desires of the Government of Indonesia in this case the Ministry of Tourism (current nomenclature of the Ministry of Tourism and Creative Economy), regarding what is meant in *quantity*, whether the quantity of visitors or the quantity of income obtained as foreign exchange.

REFERENCES
[1] Ratman, D. R. 2016. Pembangunan destinasi pariwisata prioritas. Akselerasi pembangunan kepariwisataan dalam angka pencapaian target 12 juta wisman dan 260 juta wisnus 2016. National Coordinating Meeting. Indonesian Ministry of Tourism. Jakarta.
[2] Gumelar, G. 2017. 10 Bali baru kini tinggal empat lokasi. Available at: https://www.cnnindonesia.com/gaya-hidup/20171116201131-269-256186/10-bali-baru-kini-tinggal-empat-lokasi.
[3] Raharjo, B. 2018. 2019, wisatawan ke Borobudur ditarget 2 juta orang. Available at: https://www.republika.co.id/berita/ekonomi/korporasi/18/02/10/p3xe2m415-2019-wisatawan-ke-borobudur-ditarget-2-juta-orang.
[4] Fitriana, I. 2017. Cegah kerusakan, sebetulnya berapa kapasitas pengunjung Candi Borobudur? Available at: https://travel.kompas.com/read/2017/07/11/140500427/cegah.kerusakan.sebetulnya.berapa.kapasitas.pengunjung.candi.borobudur.
[5] Nuryanti, W. 2009. The role of heritage tourism in communityplanning and development. Gadjah Mada University Press. Yogyakarta.
[6] Tanudirdjo, D. A. 2003. Warisan budaya untuk semua: arah kebijakan pengelola

warisan budaya Indonesia di masa mendatang. Paper presented at the 5th Cultural Congress in Bukittinggi. 19-23.

[7] Taufik, M., and S. Atmosudiro. 2005. Minimalisasi dampak negatif Candi Borobudur sebagai objek wisata. Jurnal Humanika 18(3), 425-437.

[8] Wahyuningsih, I. 2010. Physical carrying capacity (daya dukung fisik) Candi Borobudur. Jurnal Konservasi Cagar Budaya 4(1), 30-35.

[9] Biantoro, Rudi dan Ma'arif, Samsul. 2014. "Pengaruh Pariwisata Terhadap Karakteristik Sosial Ekonomi Masyarakat Pada Kawasan Objek Wisata Candi Borobudur Kabupaten Magelang", dalam Jurnal Teknik PWK. Volume 3, no.4, hlm. 1038-1047.

[10] Hamzah, F., H. Hary, and Wigati. 2018. Evaluasi dampak pariwisata terhadap sosial ekonomi masyarakat lokal. Jurnal Pariwisata 5(3), 195-202.

[11] Pitana, I G. 1999. Pelangi pariwisata Bali. Bali Post Publisher. Denpasar.

[12] Ahimsa-Putra, H. S., and D. T. Raharjana. 2001. Dampak sosial budaya pembangunan pariwisata. Jurnal Nasional Pariwisata 1(1), 5-9.

[13] Yoeti, O. A. 2008. Perencanaan dan pengembangan pariwisata, 2nd Ed. PT Pradnya Paramita. Jakarta:

[14] Ardika, I W. 2015. Warisan budaya perspektif masa kini. Udayana University Press. Denpasar.

[15] Park, H. Y. 2014. Heritage tourism. Routledge. London.

[16] Cahyadi, R., and J. Gunawijaya. 2009. Pariwisata pusaka: masa depan bagi kita, alam, dan warisan budaya bersama. UNESCO Office. Jakarta.

[17] Nawawi, H. 2003. Metode penelitian bidang sosial. Gadjah Mada University Press. Yogyakarta.

[18] Republic of Indonesia Ministry of Tourism. 2018. Rencana Strategis 2018-2019. Ministry of Tourism. Jakarta.

Design of RIVAL (*Cari Travel Malang*) Application as One Stop App Solution for Travel Reservation in Malang

Novita Rosyida*, Agung Dwi Saputra

Program of Vocational Education, University of Brawijaya, Malang, Indonesia

Abstract

Reservations can be interpreted as order transaction for place, ticket, or goods between business owners or service providers with consumers. In Malang, people especially reserved some travel reservations manually. They reserve the travel by phone to the travel customer service or came to the travel office. Based on the problem, the author made an application called RIVAL (*Cari Travel Malang*) as a one-stop app solution for travel reservations in Malang that runs on a mobile platform with an Android operating system. In this design phase, the application is still local, runs on the local server developer, and runs online for application testing to several people. With this application, it is expected that travel reservations that initially carried out manually by coming to the service provider, now it can be done anywhere. The results of the implementation and testing were given to eight respondents with several different versions of the Android operating system, namely Android Lollipop, Marshmallow, Oreo, and Pie. It was found that the application runs well without any UI constraints or main functions in the application with additional data response obtained from the test questionnaire form that the application is easy to understand from the user interface, provided information, and easy to use. With this application, it is expected travel reservation in Malang can be done easily and efficiently.

Keywords: Mobile Application, Reservation, Travel application.

INTRODUCTION

Business in the 4th industrial revolution era is a recent change that concerns in technological development. It includes cyber-physical organization, the internet of matter or internet of thing, cloud technology, and cognitive technology [1]. The newest technical growth in the travel industry called an Automated Booking System (ARS) that assisted travel agents to manage an online booking system. The general booking system offered a single direction of operation to book travel products such as car rental or travel reservations using online bookings. The current beginning in the travel industry not only offered many benefits to the travel organization but also managed to offer cost-effectively and simple travel item to the customer.

Smartphones have continued to grow in popularity within the Indonesian citizen over the past few years, particularly with older citizens, creating a need for universal usability within the applications that these devices contain. Mobile Application Development refers to the process of making application software for hand held devices such as mobile phones and Personal Digital Assistants [2,3].

Through the usage of mobile apps, the user is provided with various features that will enable him to fulfill all his needs and much more. Apps should be interactive to the users.

Malang is one of the second largest cities in East Java after Surabaya. Malang has been known as one of the hot sport for tourism attraction in East Java. Tourism destination was distribute from coastal area to mountian area. Bromo Tengger Semeru is one of the most visited destination, in which tourism can access numerous natural attraction from Malang area [4,5,6].

The relationship between tourism and transportation can be seen from the advancement of the tourism industry that can create a demand for transportation to meet needs, and the transportation facilities can encourage tourism progress [7]. Based on a survey conducted on several travel companies in Malang at the end of 2018, the travel booking system from Malang to Surabaya or surrounding cities conducted by the customer is still done manually. The customer comes to the office of travel service providers directly, or by calling customer service from the travel agent, then the travel agent will collect the customer data.

According to information obtained through www.similarweb.com, which is a website providing a comparative analysis of the use of websites and applications in the world, at the end of 2018 the total access to online booking applications such as Traveloka in 1 month can reach 39.18 million, Tiket.com reaches 8.90 million, and Booking.com reached 3.97 million within one month [8]. A total of 70 percent of

* Correspondence address:
Novita Rosyida
Email : novitarosyida@ub.ac.id
Address : Program of Vocational Education, University of Brawijaya, Veteran Malang, 65145.

users prefers to order these services through the application rather than website. Data from similarweb.com shows the high public interest in online booking to reduce ineffective manual travel booking. So that in this research, we design the RIVAL (*Cari Travel Area Malang*) application as one solution for rent car and travel booking in Malang Area. RIVAL designed for Android-based smartphones because most people in Malang using Android smartphones.

METHOD

RIVAL application is an application designed to facilitate the user in searching and booking travel in the Malang area using an android application. The general description if RIVAL application is shown in Figure 1. The stages of developing RIVAL applications are designing flow diagram/flowchart, designing database, designing UI and UX, and functionality test of rival application.

Figure 1 shows the interaction between the user, RIVAL application, and database. To make a reservation, the user should open the application to choose departure and destination city. After that, they chose a departure date and number of passengers. The server will process the data that inputted by the user then give a response, which travels that available according to the data input from the user. Then the user chose the schedule from the server and chose the seat according to the availability of travel. The user fills the reservation form, then the reservation will

process by the server, and the user gets confirmation from the server. The flowchart of the RIVAL application is shown in Figure 2.
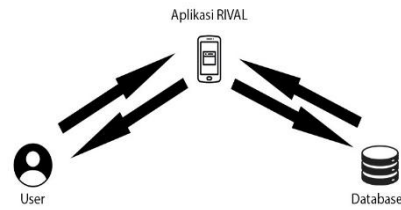
Figure 1. General Description of RIVAL Application

Software requirement

The software requirements to design and develop RIVAL application are:
- Android Studio Application version 3.3.1, is used as an IDE to built RIVAL application based on Android.
- Json Pojo Schema, as a tool to facilitate the conversion of JSON data format into GSON data format, so the data can be accessed by Java.

Database Design

The database design of the RIVAL application is using eight entities or tables, that are: user, company/travel agent, destination track, seats, city transfer, city, district, and schedule. Each entity is interrelated to run the system, if one of the entities removed, it will cause errors in the system because the data in each entity, is needed by other entities. The description of the database design is shown in Table 1.

Figure 2. Flowchart of RIVAL Application

Table 1. Database Design of Rival Application

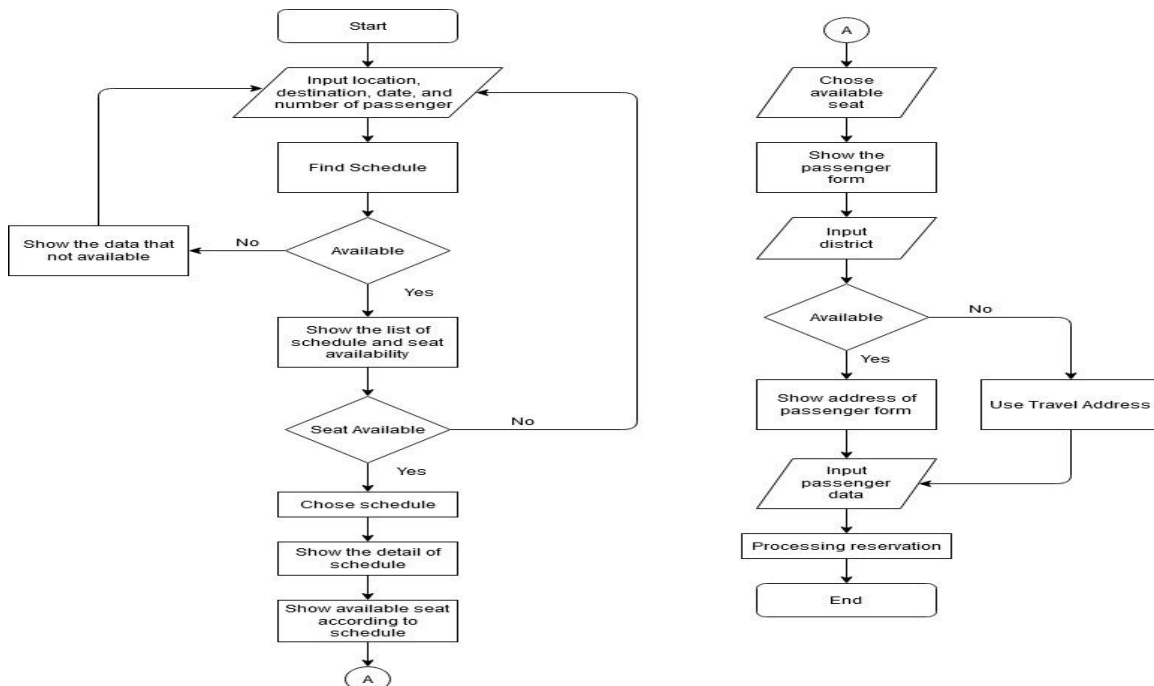| No	Entity	Description
1	User	The user table is used to save all user data who access this application. The columns are: id, username, password, email, phone number, status, and cancel.
2	Company/ travel agent	The company table is used to save all travel agent data registered in the RIVAL application. The columns are: company_id, admin_id, name of travel agent, office_address, phone_number.
3	Destination	The destination table is used to save the reservation data. The columns are: address_id, destination_id, travel_id, passenger_id, seat, reservation_date, departure_date, pick up address, destination address, name of passenger, phone number
4	Seat	The seat table is used to show seat data and seat availability on RIVAL Application. The columns are: seat_id, destination_id, seat_status.
5	City transfer	City transfer is the city that passed by the travel according to the schedule that registered by admin. The columns are: city transfer_id, destination_id, city_transfer, price.
6	City	All destination city that registered by admin. The columns are: id_city, city.
7	District	Th district is the district that passedthrough by the travel that registered by admin. The columns are: district_id, district.
8	Schedule	The schedule table shows the travel schedule that registered by admin. The columns are: destination id, travel_id, city_id, distric_id, departure_city, departure_district, destination, car_id, car_number, seat availability, start_date, end_date, travel status.

Table 2. Black-box Testing Scenario

No	Tested component	Detail of testing
1	Login page	Show login form Run the login function
2	Register page	Show register form Run the register function
3	Main menu	Show the reservation menu Showing side menu Run the finding schedule function
4	Schedule page	She the departure schedule of travel
5	Detail of schedule page	Show the timeline schedule
6	Seat page	Show the empty seat and reserved seat
7	Reservation form page	Show the district list Show address filling form
8	Confirmation page	Show the confirmation of reservation
9	List of reservation page	Show the list of active reservation
10	Historical page	Show the history of reservation

Software Testing

Software testing is very necessary to ensure the software or applications that made run according to the functionality, which is expected. A software developer or tester must prepare a special session to test programs that have been made so that the errors or deficiencies can be detected early and corrected immediately. Testing is a critical element of software quality assurance and is an inseparable part of the cycle live software development as analysis, design, and coding [9]. The software testing that we use is alpha testing and beta testing.

Alpha Testing is a type of software testing that performed to identify bugs before releasing the product to real users or to the public. The method of alpha testing is using black-box testing. Black-Box Testing is testing focuses on functional specifications from the software. A tester can define a collection of input conditions and testing the specifications' functional program [10]. The testing scenario is shown in Table 2.

Beta Testing performed by real users of the software application in a real environment. Beta testing is one of the types of User Acceptance Testing. Beta testing is a test conducted to know the extent of system performance, whether it meets expectations or not [11]. For beta testing, data collected through questionnaires from respondents or potential users of the system. The respondent evaluation will be count from the percentage of score or value given by respondents (Table 3).

$$P = \frac{(QxS)}{Ideal\ Score} x100\%$$

Description:
P = percentage
Q = Number of user
S = Score
Ideal Score = Highest score x number of user

Table 3. Percentage of testing

No	Percentage (%)	Result
1	0–20	Very difficult
2	20–40	Quite difficult/not help
3	40–60	Neutral
4	60–80	Quite easy/quite helpful
5	80–100	Very easy/very helpful

RESULT AND DISCUSSION
Rival Application Display

UI (User Interface) is a bridge between the user (user) with the application through a visual display of shapes, colors, writing (typography) to create interesting interactions of an application. Whereas UX (User Experience) is the experience gained by users when using an application. So that in making the UI/UX focused on three main basic colors, there are blue, white, and orange, with a small number of color combinations it is expected that users have experience using the application easily. The login and register form of Rival Application showed in Figure 3. It is the first page when we open the RIVAL application and used it to access the reservation feature of RIVAL Application.
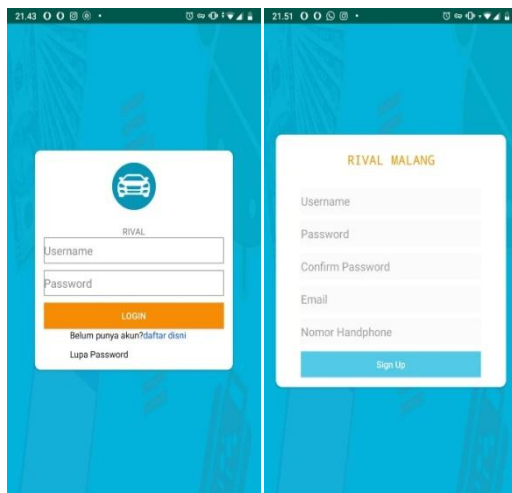

Figure 3. Login and Register Form of Rival Application

The home menu shows the searching schedule form with departure location, destination, date of departure, and the total of passengers. The list of schedule forms shows the schedule of travel that available, the agent of travel, type of car, and price. The detailed schedule form shows the schedule selected by the passenger with the travel agent, departure time, and total of available seats. The list order form shows the active reservation and the data of passengers who succeeded in doing the reservation. All UI/UX that has been designed and developed will be tested to know the functionality of the application.

Testing Result
Alpha Testing

Alpha testing has been done based on the black-box method (Table 2). There are ten components of the application page (UI/UX) that tested using the black-box method.The components are login page, registered page, main menu page, schedule page, detail of schedule page, seat page, reservation form page, confirmation page, list of reservation, and historical page. The result of black-box testing showed in Table 4. Based on the alpha testing with the testing scenario in Table 4, we can conclude that the RIVAL application work properly, but the development of aplication always needed.

Beta Testing

In beta testing, the application tested to eight respondents with a different version of the Android application. All respondents tried the RIVAL application and gave an evaluation of the application from the questionnaire. Then the evaluation made from the percentage value for each question. The results of beta testing are shown below.

Question 1. *The user interface of RIVAL application is easy to understand.*

Table 5. Result of Question 1

Question	No	Information	Score	Q	S
1	1	Very easy	5	4	20
	2	Quite easy	4	4	16
	3	Neutral	3	0	0
	4	Quite difficult	2	0	0
	5	Very difficult	1	0	0
Total				**8**	**36**

$$P = \frac{36}{40} x 100\% = \mathbf{90}\%$$

Intepetation:the UI display of the RIVAL application is very easy to understand.

Question 2. *The information of travel reservation using RIVAL application is easy to understand.*

Table 6. Result of Question 2

Question	No	Information	Score	Q	S
2	1	Very easy	5	1	5
	2	Quite easy	4	5	20
	3	Neutral	3	2	6
	4	Quite difficult	2	0	0
	5	Very difficult	1	0	0
Total				**8**	**31**

$$P = \frac{31}{40} x 100\% = \mathbf{77.5}\%$$

Intepetation:the information of travel reservation using RIVAL application is quite easy to understand.

Table 4. Result of Alpha Testing Using Black Box Method

Component	Testing Scenario	Expected Result	Test Result
1. Login page	Open RIVAL Application	Show the login form	[✓] Success[ ] Fail
	Fill the login data and press login button	Login success and go to main menu	[✓] Success[ ] Fail
2. Register page	Choose register page	Show register form	[✓] Success[ ] Fail
	Fill register data and press register button	Register success and go to login page	[✓] Success[ ] Fail
3. Main menu	Enter the main menu after login	Show the home page with schedule searching menu	[✓] Success[ ] Fail
	Press the navigation bar	Show the side menu	[✓] Success[ ] Fail
	Filling data in searching schedule menu and press searching button	Searching menu success and go to schedule page	[✓] Success[ ] Fail
4. Schedule page	Filling data in searching schedule menu and press searching button	Show the list of travel schedule that available	[✓] Success[ ] Fail
5. Detail of schedule page	Choose the schedule from the list of available schedule	Show the time schedule according to available schedule	[✓] Success[ ] Fail
6. Seat page	Choose the detail of available schedule	Go to seat page and show the list of reserved seat and available seat	[✓] Success[ ] Fail
7. Reservation form page	Choose the available seat	Go to reservation form	[✓] Success[ ] Fail
Confirmation page	Choose the district	Showing pick up form	[✓] Success[ ] Fail
	Choose other district	Show travel address	[✓] Success[ ] Fail
8. List of reservation page	Press reservation button	The booking was successful and returned to the main menu	[✓] Success[ ] Fail
9. Historical page	Select the order list menu in the side menu	Displays the list of active orders	[✓] Success[ ] Fail
10. Schedule page	Select the history menu in the side menu	Displays the order history list	[✓] Success[ ] Fail

Question 3. *The RIVAL application is easy to operate.*

Table 7. Result of Question 3

Question	No	Information	Score	Q	S
3	1	Very easy	5	3	15
	2	Quite easy	4	5	20
	3	Neutral	3	0	0
	4	Quite difficult	2	0	0
	5	Very difficult	1	0	0
Total				**8**	**35**

$$P = \frac{35}{40} x100\% = \mathbf{87.5\%}$$

Intepretation: RIVAL application is quite easy to operate.

Question 4. *The RIVAL application help you to make travel reservation.*

Table 8. Result of Question 4

Question	No	Information	Score	Q	S
4	1	Very helpful	5	1	5
	2	Quite helpful	4	7	28
	3	Neutral	3	0	0
	4	Unhelpful	2	0	0
	5	Very unhelpful	1	0	0
Total				**8**	**33**

$$P = \frac{33}{40} x100\% = \mathbf{82.5\%}$$

Intepretation: the RIVAL application is very helpfull to make travel reservation.

Question 5. *Do you find any obstacle or bugs while using RIVAL application?*

Table 8. Result of Question 4

Question	No	Information	Score	Q	S
5	1	Yes	1	1	1
	2	No	2	7	14
Total				**8**	**15**

$$P = \frac{15}{16} x100\% = \mathbf{93.8\%}$$

Intepretation: there is no obstacle or bugs while using RIVAL application.

The results of beta testing have been done by summarizing the results of the questionnaire obtained from eight respondents. It can be concluded that the RIVAL application has met or achieved the desired goals and also obtained constraint responses to the problems of the choice of departure city and destination city that previously used the the Popup menu. Itthen converted to use Alert Dialog, because when using popup menu while the application is accessed using a Smartphone that has a small screen size, the popup menu is almost filled the screen.

CONCLUSION

The RIVAL (Cari Travel Area Malang) has been designed and developed using the Android

system as a one-stop application to make travel reservations in the Malang area. The stage of developing the RIVAL application started by designing a flowchart as the business process of RIVAL application, designing the database, UI/UX, system implementation, and testing. The result of testing shows that the RIVAL application work properly and easy to use. Hopefully, in the next stage, we can develop using the IOS system and can develop not only in Malang city.

REFERENCES

[1] Marr, B. 2016. Why everyone must get ready for the 4th Industrial Revolution. Available at: https://www.forbes.com/sites/bernardmarr/ 2016/04/05/why-everyone-must-get-ready-for-4th-industrial-revolution/#29d896003f90

[2] Baktha, K. 2017. Mobile application development: all the steps and guidelines for successful creation of mobile app: case study. International Journal of Computer Science and Mobile Computing 6(9), 15-20.

[3] Sahri, I. K. 2017. ICT dan perubahan budaya di Indonesia: kajian atas penggunaan ICT kecenderungan perubahan budaya masyarakat Indonesia. TARBAWI 6(2), 101-114.

[4] Purmada, D. K., Wilopo, and L. Hakim. 2016. Pengelolaan desa wisata dalam perspektif community based tourism (studi kasus pada Desa Wisata Gubug Klakah, Kecamatan Poncokusumo, Kabupaten Malang). Jurnal Administrasi Bisnis 32(2), 15-22.

[5] Wibowo, T. S., and I. Pratomo. 2020. Analysis of Malang City readiness in realizing Smart Tourism with new integrated E-Readiness model. 2020 International Conference on Smart Technology and Applications (ICoSTA) IEEE. 1-6.

[6] Nuansa, C., S. Suryadi, and D. Wisadirana. 2014. Designing promotion strategy of Malang Raya's tourism destination branding through audio visual media. Journal of Indonesian Tourism and Development Studies 2(2), 82-85.

[7] Surilansih, P.,B. Supriyono, and M. Hadi.2013. Upaya pelaksanaan sinergi kebijakan transportasi sebagai penunjang pengem-bangan potensi pariwisata di Kota Blitar (studi pada Dinas Perhubungan Daerah Kota Blitar dan Dinas Komunikasi). Informatika dan Pariwisata Daerah Kota Blitar. Jurnal Administrasi Publik1(4), 203-212.

[8] Similarweb. 2018. The use of websites and applications in the world.Available at: www.similarweb.com.

[9] Shi, M. 2010. Software functional testing from the perspective of business practice computer abd information science. Available at: www.ccssenet.org/cis.

[10] Khan, M. E. 2011. Different approach to blackbox testing technique for finding error. International Journal of Software Enginering and Application 2(4), 31-40.

[11] Mohd,C. K. N., and F. Shabodin.2015. Personalized Learning Environment: Alpha Testing, Beta Testing and User Acceptance Test. World Conference on Technology, Innovation and Entrepreneurship.

The Analysis of Instagram Use as a Media of Tourism Promotion in Malang City (Case Study on @Amazingmalang Instagram Account)

Alma Saquille Rashad[1], Tri Mega Asri[2*]

[1]Department of Biology, Faculty of Mathematics and Natural Sciences, University of Brawijaya, Malang, Indonesia
[2]Laboratorium of Physiology, Faculty of Medicine, University of Brawijaya, Malang, Indonesia

Abstract

Today's social media use is very influential in the lives and perspectives of finding a wide variety of information. Most social media users prefer to use Instagram as an attractive information provider app with Visual media treats in the form of images and videos tourism industry that has undergone a lot of rapid progress. Like the city of Malang, it becomes the main tourist destination for tourism by foreign and foreign tourists when they want to go on holiday. This research discussed the success rate of Instagram as a tourism promotion media in Malang. This type of research is qualitative descriptive research. The data collection techniques used are three ways: interviews, questionnaires, and case studies. The results showed the success rate of tourism promotion in Malang City using the Instagram @amazingmalang.

Keywords: Instagram, promotions, tourism.

INTRODUCTION

Along with the times, the development of communication science can not be separated from information technology. Without communication, information cannot be conveyed. In the current era of globalization, information and communication technology plays an important role in various aspects of human life. The role of information technology and communication will increase along with the times and eventually become a basic element in human life.

Social media, as one of the most powerful online networking tools, has been integrated into social and economic life in the real world. Social media marketing is a powerful way for businesses of all sizes to reach prospects and customers [1]. The customers are already interacting with brands through social media, and if the brands are not speaking directly to their audience through social platforms like Facebook, Twitter, Instagram, and Pinterest. Considering the survey report for the year 2018 [2], the second reason 1st rank about using the internet, 19.1% said The Social Media. About internet content (Social Media), the most accessed 17.8% is Instagram. Of the many information technologies that can be accessed easily from anywhere is to use print or mass media commonly known through television, radio, internet, newspapers, and others. Tourism businesses use a lot of media to promote tourism

in their area. One of the easiest media to promote tourism is Instagram. The presence of Instagram makes it easy for people around the world to find out the potential of tourism they want to visit.

According to the media intelligence company Isentia, they captured discussions on social media related to tourism and the year-end holiday of 139,438 buzz in the past month. This discussion is counted from 1 October to 8 November 2019 [3].

During this period, Yogyakarta became the area that most talked about by people, which is 40,988 buzz. The second place is in Bali with 37,792 Buzz, followed by East Java with 20,146 buzz. Furthermore, there is central Java with 16,143 Buzz, North Sumatera 6,558 Buzz, South East Sulawesi 4,661 Buzz, South Sulawesi 3,996 Buzz, and West Papua 9,149 Buzz social media talks. From this, we can conclude that East Java tourism ranks 3rd with the most buzzer, including @amazingmalang, who participated in tourism promotion in Malang City [3].

Instagram account @amazingmalang provides many recommendations for information about tourism in the city of Malang. The account created on 20th October 2015, has gained 470,000 followers with a total of 5,523 accounts followed. Until now, the number of posts on the @amazingmalang account is 5,745 images with 20 videos on IG TV, a number that is extraordinary for the development over the past four years. Not only that, but @amazingmalang account has also grown to have a youtube channel and an @amazingmalangeats account that offers shop or restaurant recommendations in Malang. Achievements continue to be achieved by the @amazingmalang account, until

---
[*] Corespondence Address:
Tri Mega Asri
E-mail : trimega@ub.ac.id
Address : Program of Vocational Education, University of Brawijaya, Veteran Malang, 65145.

now it has its own TV show and cooperates with Malang Struddle.

@Amazingmalang account has the following highlights: Travel hack, kid-friendly, recommendations, cheap travel, culinary, behind the scenes, wallpapers, photo spots, beaches, and local events. @Amazingmalang account activity is a post about the recommendations of natural tourism in Malang city, besides this account also repost for photos on the Instagram account of other people who go to the tourism place in Malang city. The goal is to give a good effect to the content on the @amazingmalang account and also make the photo owner popular.

In this case, it can be certain that the account @amazingmalang not only have one admin. The way they develop this account is to often do the 25,000 meal voucher on the condition that the person is taking a survey created by them and tagging the other five target audience. The result is that more and more people are aware of this account and make this account a reference to finding a tourist spot. In this paper, we will discuss the analysis of the success rate of Instagram as tourism promotion media in Malang, a case study on Instagram account @amazingmalang seen from the number of public interest with the existence of this account.

MATERIAL AND METHOD

The population in this research is active account owner on Instagram and follow an Instagram account @amazingmalang Malang that actively visits the account timeline @amazingmalang at least 1 time a week. According to Sugiyono [4], a decent sample size in the study was 30 to 500. So in this study took 120 samples. The sampling method uses purposive sampling.

Data Collection

In this study used data collection techniques by giving questionnaires to respondents who became samples. The question presented in this questionnaire is a closed question, that is, the model of the question has been provided the answer, so that the respondent only choose from an alternative answer that corresponds to his or her opinion or choice. From the answers to the list of questions asked to respondents, we use a scale rating, which is a scale containing five levels of answer preference. All data in the entry to the computer by using the program Microsoft Excell 2010. Further tabulation of variable data to view and analyze the promotion level of Attention, Interest, Desire, Action (AIDA) [5] showed in Table 1.

Table 1. Variable Operational Definitions of AIDA

Variable Research	Operational Definition	Indicator
Attention	Attention is a form of attention and awareness of the existence of an account. Attention can be seen through the frequency of Instagram followers accessing social media and the total time of accessing Instagram social media so be aware of travel promotional activities.	Attention to travel places photos in Timeline
		Attention to profile picture
		Attention to Location Tour
		Attention to Information Be Shown
Interest	Interest is an interest that appears in Instagram on a product that has been realized and exposed to the promotion delivered through Instagram.	Interest in looking for more information about content
		Consider visiting
		Desire to know Content
		Interest to visit
Desire	Desire is a desire that arises because of an exchange process that appeals to followers. Desire can be seen from the desire to visit that grows after seeing Instagram	Ask other travel recommendations
		Inquire with the promo
		Inquire the location of places
		Inquire website Visits
		Inquire about More info
Action	Action is an action to visit by doing a visiting decision. Actions can be seen from the visit of Instagram followers marked by real action followers visit tourist attractions after viewing the account content.	Visit the tourist spot
		Decide to visit a tourist spot
		Invite others to visit the place

RESULT AND DISCUSSION

Actual Overview of Followers

The characteristics of Instagram followers @amazingmalang account can be seen in this study, which consists of four variables, namely: Age, Hometown, Followers Since, Frequency, and Duration (Table 2). The results showed that the average age of the 100 respondents in this study was 21 years. It appears that most respondents were in the age category of 20-24 years. It is caused by the majority of followers @amazingmalang, mostly among students or as fresh graduates. Most of the respondents came from East Java, with 82%. It shows that the area around East Java indeed chose Malang as the desired tourist destination.

Social Media Exposure Levels

Exposure in this research is traced through the identification of general and specific behavior towards tourism products through the social media of Malang City. Dissertiveness is the activity of listening, seeing, and reading, or more generally giving some attention to a message delivered by using the media as an intermediary [6]. This research was conducted to measure the extent of the influence of Malang tourism social media seen from the behavior of tourism accounts @amazingmalang in Malang City.

Interest is a desire that arises in followers to find out more about tourism. It can be seen from the data above (Table 3) that the interest of @amazingmalang account followers is very high. It is because the content served by the @amazingmalang account is indeed interesting and makes the reader motivated to go to these tourist attractions. Here is an example post @amazingmalang that has an average number of likes 8,000 and above (Fig. 1).

Table 3. Follower Interest

No	Indicator	Yes	No
1	Do you have an interest in visiting tours after seeing Instagram @amazingmalang	98%	2%
2	Have you ever been to a tourist place according to a recommendation	94%	6%

Figure 1. Content of @amazingmalang

Table 2. Number and Percentage of Active Followers

No.	Characteristics of followers	Category	Percentage (%)
1	Age	10-18	12
		19-25	**79**
		26-35	7
		36 and above	2
2	Hometown	Banten	3
		Jakarta	3
		Jawa Barat	5
		Jawa Tengah	3
		Jawa Timur	**82**
		Kalimantan Timur	1
		Nusa Tenggara Barat	2
		Riau	1
3	Followers Since	Less than 1 month	36
		2 month	7
		3 month	6
		More than 3 months	**51**
4	Frequency	1 time a week	**53**
		2 time a week	21
		3 time a week	7
		More than 3 time a week	19
5	Duration	Less than 30 m per day	**65**
		30 - 45 minutes per day	22
		45 - 60 minutes per day	5
		More than 60 m per day	8

The desire that arises in the followers of @amazingmalang accounts is very high (Table 4). It is a sign that this account has indeed succeeded in influencing the desires of tourists/ followers to visit tours that have been recommended by the @amazingmalang account. In this case, many followers go on vacations by inviting friends and family, as evidenced by several followers who commented on this account by inviting friends and relatives.

Table 4. Desires of Followers

No.	Indicator	Ever	Never
1	Have you ever recommended the @amazingmalang account to your colleagues?	91%	9%
2	Have you ever looked for deeper information by visiting the Amazing Malang website?	78%	22%

Comments on the @amazingmalang account show followers' interest in this account, arguably the response from followers. In a piece of information or communication, there is a reciprocal name. The @amazingmalang account shows that reciprocity from followers looks enthusiastic and fun.

The actions taken by followers are clear proof that the @amazingmalang account is on target to promote tourism in Malang through Instagram (Table 5). Some actions taken by the @amazingmalang account followers are by visiting tourist attractions; besides that @amazingmalang account also organizes promos for active followers to attract other institutional users. Here is an example of a promo given by the @amazingmalang account (Fig. 2).

Table 5. Action of Followers

No.	Indicator	Ever	Never
1	Have you ever given likes to the @amazingmalang account?	98%	2%
2	Have you ever commented on the @amazingmalang account?	71%	29%
3	Have you ever followed the promo on the @amazingmalang account?	68%	32%
4	Have you ever taken the quiz on the @amazingmalang account?	62%	38%

Not only has that but @amazingmalang account also often held quizzes for loyal followers. Do not forget that each quiz given is always spiked with attractive prizes given by this account. One of the presents is merchandise that reads Amazing Malang. With this gift, it makes it easier for people to remember this name because it is well spread. The example of a quiz held by the @amazingmalang account showed in Figure 3.

Figure 2. @amazingmalang Promo

Figure 3. Instagram Quiz

Effectiveness Level of Dissemination of Media Information and Promotion

Promotion is one of the focal points of business people to introduce products and be marketed to prospective consumers. Promotion is said to be effective if the message conveyed is easily digested and understood by the public and contains correct information so that the public (consumers) can observe information with the right perspective [7]. Measurement of the effectiveness of the promotion of tourism products in Malang through social media Instagram, especially on followers @amazingmalang, is done by looking at the four stages of AIDA (Attention, Interest, Desire, and Action). A more detailed explanation can be seen in the following Table 6.

Table 6. The Percentage of Followers of the Malang Tourism Products Instagram Account

No.	Effectiveness of Instagram Media Promotion Tourism	Percentage (%)
1	Attention	100
2	Interest	96
3	Desire	84.5
4	Action	74.75

The use of the internet and other information communication technologies is leading to a new era for the global economy. Social media continues to grow and increasingly influence many social and economic aspects of the tourism and hospitality industry. Social media is fundamentally changing the way travelers and tourists' search, find, read, and trust, as well as collaboratively produce information about tourism suppliers and tourism destinations [8]. In the tourism sector, Instagram has a role as an online photo album that can be accessed by others, and users can also use it as a promotion channel [1]. This method also helps marketers to gain feedback from the customers. These benefits given by Instagram to the marketers have made Instagram as one of the strong tools in the social network marketing strategy.

Based on our observation, we analyze that Instagram becomes the best channel for promoting destination images by tourism operators. For example, the account of @amazingmalang has a result almost all respondents said the account @amazingmalang has the effectiveness of Instagram media promotion tourism by aspect attention, interest, desire, and action.

The result of this research points out that the process of promotion on Instagram is different from conventional media such as print and electronic advertising and success to promote Malang tourism. Instagram is built on interactions and inspiration from family, friends, colleagues, and acquaintances: people you know, you trust, and whose opinion you are more likely to take into account when it comes to making a travel decision [9].

The influence of Instagram is leveraged by brands as well [9], who have moved towards campaigns and content that is *more human* and visual. Such content is more captivating and connects to our innate desire to travel and discover. While destinations have not changed, and neither has the concept of hospitality, the modern traveler has definitely changed. The perspectives from which travelers want to explore a destination, and the tools used to share the experiences have changed considerably.

Nevertheless, Instagram has shown to be a very useful marketing tool in the new era. There still are various disadvantages when it is used as a marketing tool [1]. Firstly, the customer's information is not fully protected. Secondly, the interaction between the customer and the marketer is through a media platform. It becomes hard for the marketer to know, who their customers are, because fake identity may be created for online business. To develop an appealing and engaging brand image on Instagram, tour and activity operators should:

1. Consider the content and hashtags users might find appealing. Also, think about how to make the content memorable for users.
2. Inspire travelers by showing off the best side of the destination.
3. Collaborate with the local operator network - create an overarching vision and allow individual operators to adapt it to their services and target market.
4. Inspire travelers by creating engaging stories. Remember that travelers want to explore a destination in a deep, personal, and meaningful way.

CONCLUSION

As Instagram platforms play an important an increasingly central role in social media, it is important that users or scholars alike begin to see that these platforms are not simply as interaction or communication tools. Instagram, from a simple picture sharing and social tool, transformed into a new marketing tool in social media marketing. The results of this research showed that the effectiveness of Instagram as media promotion for tourism in Malang city in the Instagram media was in the high category. It means that promotional activities carried out were able to cause attention, interest, and feedback, and some of them carried out activities to promote travel and tourism from followers. In the future, it is necessary to activate online promotional activities that have proven to be effective in generating activities to making a travel decision (actions) from followers.

REFERENCES

[1] Vinaika, R., and D. Manik. 2017. How Instagram is changing the way marketing works? International Journal of Managemet and Business Studies 7(4), 12–16.
[2] Asosiasi Penyelenggara Jasa Internet Indonesia. 2018. Profil pengguna internet

Indonesia. Asosiasi Penyelenggara Jasa Internet Indonesia. Jakarta.

[3] Kumparan. 2019. 8 destinasi wisata paling hits di media sosial, Jateng hingga Sulsel. Available at: kumparan.com.

[4] Sugiyono, P. D. 2015. Metode penelitian dan pengembangan. Research and Developmet D, 39-41.

[5] Gharibi, S., S. Y. S. Danesh, and K. Shahrodi. 2012. Explain the effectiveness of advertising using the AIDA Model. Interdisciplinary Journal of Contemporary Research in Business 4(2), 926-940.

[6] Trihayuningtyas, T. S. E., and Y. Adriani. 2018. Media sosial sebagai sarana informasi dan promosi (Social media as a mean of tourism information). Tourism Scientific Journal 4, 1-22.

[7] Khairani, Z., E. Soviyant, and A. Aznuriyandi. 2018. Efektivitas promosi melalui instagram pada umkm sektor makanan dan minuman di Kota Pekanbaru. Jurnal Benefita 3(2), 239. DOI: 10.22216/benefita.v3i2.2738.

[8] Zeng, B., and R. Gerritsen. 2014. What do we know about social media in tourism? A review. Tourism Management Perspectives 10, 27-36.

[9] Biagoti, M. G. 2017. How Instagram has changed the tourism and travel industry. Available at: https://www.trekksoft.com /en/blog/how-instagram-has-changed-the-tourism-and-travel-industry.

Suitability and Carrying Capacity of Seagrass for Snorkeling on Tunda Island, Banten

Prafitri Saraswati Darmawan[1*], Wahyuniar Pamungkas[2], Indah Riyantini[2], Sri Astuty[2]

[1]Faculty of Fisheries and Marine Sciences, University of Padjadjaran, Sumedang, Indonesia
[2]Departement of Marine Sciences, Faculty of Fisheries and Marine Sciences, University of Padjadjaran, Sumedang, Indonesia

Abstract

The seagrass ecosystem has ecological and economical functions, which can provide benefits to the surrounding community as a conservation area and marine tourism. Studies on the suitability of seagrass ecosystems for marine tourism, especially snorkeling, on Tunda island are needed to support their use. The purpose of this research is to evaluate the suitability and carrying capacity of seagrass ecosystems on Tunda Island, Banten for marine tourism snorkeling. The research was conducted in March - July 2019. The research method carried out was a survey with five observation stations in the seagrass area on Tunda Island. The parameters observed are seagrass cover, seagrass type, fish type, brightness, temperature, depth, current speed, substrate type, salinity, pH, DO, facilities, and infrastructure as well as accessibility. Data analysis was performed in a comparative description between five observation stations. The result of this research showed that station 1 (in north area) and station 4 (in southeast region) had a value of the Tourism Suitability Index in the range of 73.15% - 77.78% and included in the *Suitable* category, which are potential stations to be developed as snorkeling marine tourism areas. The carrying capacity of the seagrass area for snorkeling tours on Tunda Island, Banten with an area of 11,197 hectares is 44 people per day.

Keywords: Marine tourism, regional carrying capacity, regional suitability, seagrass, snorkeling.

INTRODUCTION

Ecotourism in Indonesia has been studied extensively because of its economic benefits and contributions to local development. In this case, tourism to natural environments, especially coastal and beach areas in small islands. It happened to be more famous because the coastal and beach area are the potential to be developed on its biodiversity, tourism, and sustainability value [1,2].

Tunda Island is a small island in Serang Regency. Tunda Island has a coastal ecosystem consists of mangrove, seagrass, and coral reef ecosystems, which were still natural. Seagrass ecosystem is a place to live and breed for various marine biotas, such as sea turtle, dugongs, fish, echinoderms, and invertebrate biota. It makes seagrass beds have functioned as a nursery ground, feeding ground, and spawning ground. Besides being beneficial from the ecological view, seagrasses can also be used as educational objects and conservation-based recreation objects [3].

Seagrass conditions on Tunda Island included in the fine category, with its cover reaching 66% [4]. Seagrass species that scattered in Tunda

Island waters are *Cymodocea rotundata*, *C. serullata*, *Enhalus acoroides, Halophila ovalis,* and *Thalassia hemprichii* [5]. Fine seagrass conditions and the many associated biotas in the seagrass beds make the seagrass ecosystem on Tunda Island interesting to be developed as a marine tourism object.

Marine tourism is a tourism activity that prioritizes underwater resources and seawater dynamics, such as diving, snorkeling, swimming, boating, sunbathing, water sports, seagrass tours, etc [6]. Snorkeling tourism is also one of the marine tourism activities that can be done in the seagrass ecosystem. Along with the tourism activities that could be done, it may also cause the degradation of the seagrass ecosystem. This marine tourism activity can be one of the sectors of development and sustainable development, and can provide income for the community without losing the conservation value of the seagrass ecosystem [7]. This research was aimed to evaluate the suitability and carrying capacity of seagrass ecosystems on Tunda Island, Banten for marine tourism snorkeling.

MATERIAL AND METHOD

The research was conducted in March-July 2019, which consisted of several stages, namely the survey phase, the data collection stage, and data processing. The research location is in the waters of Tunda Island, Banten, which is one of

---

[*] Correspondence address:
  Prafitri Saraswati Darmawan
  E-mail   : psaraswatid@gmail.com
  Address : Jl. Raya Bandung Sumedang KM 21, Jatinangor,
       West Java, 45363.s

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[97]

the tourist destination locations. There are five data collection stations located in certain parts of Tunda Island waters. The selection of each data sampling location based on the differentiation of seagrass and its habitat characteristics [8]. The coordinates stated in Figure 1.

Seagrass Vegetation

Data on seagrass vegetation taken includes the seagrass cover percentage and its species. Quadrant transect method is a method used to obtain the cover percentage and seagrass species using quadrant transects measuring 50 x 50 cm^2 with four small boxes in quadrant transects (Fig. 2). There are three transect lines in each station

[9]. The length of the transect line is 100 m, with the distance from one transect line to another is 50 m so that the total area is 100 x 100 m^2. The distance between one quadrant and another quadrant transect is 10 m so that the total quadrant transect of each transect line is 11. The starting point of the transect placed at a distance of 5-10 m from the shore, located where the seagrass is encountered.

The results of the data taken in the field will be processed in the form of a percentage of seagrass cover. The value of the average seagrass coverage per location is categorized into four percentage categories (%), as seen in Table 1.
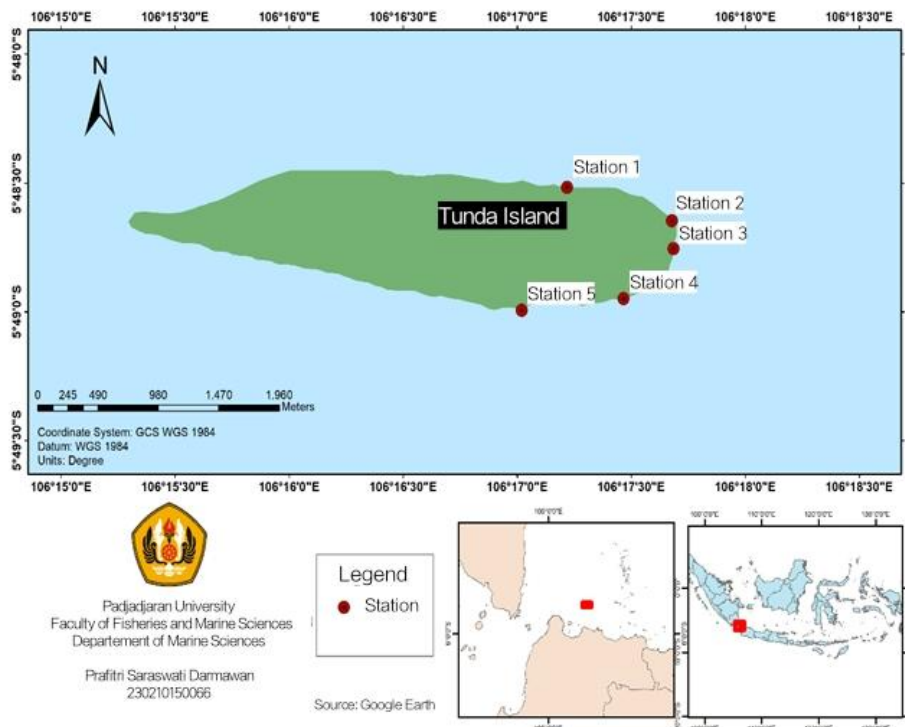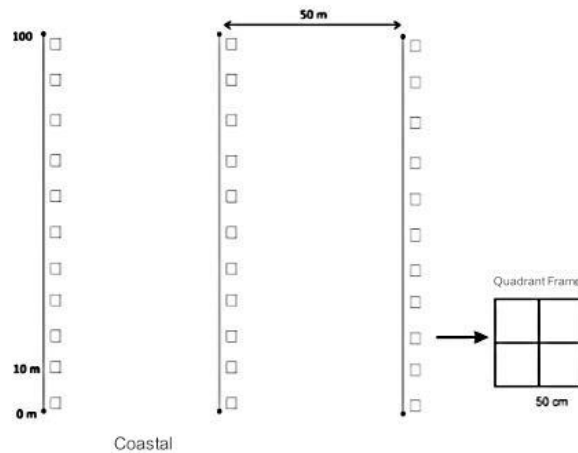

Figure 1. Research Location

Figure 2. Quadrant transect

Average Seagrass Cover(%) =
$$\frac{\text{Area of seagrass cover throughout transects}}{\text{Area of the entire transect quadrant}}$$

Table 1. Categories of Seagrass Cover Area [9]

Coverage (%)	Category
0 – 25	Rarely
26 – 50	Moderate
51 – 75	Dense
76 – 100	Very Dense

Biota Association

Identification of association biota is done by observing the biota that lives around the seagrass ecosystem using visual methods, by snorkeling in the area around the seagrass ecosystem. The observed biota divided into coral fish and other invertebrates, and the identification stated as the family name of each biota. The identification of the biota is needed as the parameter of the water quality and seagrass ecosystem richness [8].

Waters Quality

Water quality is including physical-chemical parameters. There are eight parameters, namely substrate type which determined by visual observation, visibility and depth are determined by using Secchi disk, current speed determined by tracking float tools, temperature determined by a thermometer, salinity determined by the help of refractometer, also DO and pH determined by the help of DO meter and pH meter [8]. The results of the data taken are then compared with the quality standards stated in the Indonesia's Minister of Environment Decree No. 51 of 2004.

Tourism Suitability Index (TSI)

The tourism suitability analysis is using a suitability matrix based on the importance of each parameter to support activities in the area. The suitability matrix of the seagrass area for the snorkelling tourism category showed in Table 2. The formula used to determine the suitability of seagrass tourism is the TSI formula or the Tourism Suitability Index, while the calculation method [10].

$$TSI = \Sigma \left(\frac{Ni}{N\ max}\right) x\ 100\ \%$$

Description:
TSI = Tourism Suitability Index
Ni = Parameter value (Weight x Score)
N max = Maximum value of a tourism category

Regional Carrying Capacity (RCC)

RCC is the maximum number of visitors who can be physically accommodated in the area, provided at a certain time without causing disturbance to nature and humans. The completeness of the data in using the RCC formula will be completed by the visitor's ecological matrix and the visitor activity matrix.

It is stated that the ecological potential (K) of snorkeling activity is one visitor per 100 x 5 m unit area, while the time provided by the region for tourism activities in one day (Wt) is six hours, and the time spent by visitors for snorkeling activity (Wp) is three hours. Based on the explanation above, the calculation of the Regional Carrying Capacity is as follows:

$$RRC = K\ x\ (Lp\ /\ Lt)\ x\ (Wt\ /\ Wp)$$

Description:
RRC = Regional Carrying Capacity
K = ecological potential
Lp = Area or length of area that can be utilized
Lt = Unit area for tourism certain categories
Wt = Tourism activities in one day
Wp = Time spent by visitors for snorkeling activity

In accordance with Indonesia's Government Rules No. 18/1994 concerning the Exploitation of Nature Tourism in the Utilization Zone of National Parks and Natural Tourism Parks, the area permitted to be developed is 10% of the area of utilization zone. So the calculation of the Regional Capability of Utilization (RCU) is done by the formula:

$$RCU = 10\%\ x\ RRC$$

Description:
RRC = Regional Carrying Capacity
RCU = Regional Capability of Utilization

Table 2. Suitability Matrix of Seagrass Areas for Snorkeling Tourism [9]

No.	Parameter	Score	CategoryS1	Score	Category S2	Score	Category S3	Score	Category N	Score
1.	Seagrass Cover (%)	5	>75	4	>50 – 75	3	25 – 50	2	<25	1
2.	Visibility (%)	5	>75	4	>50 – 75	3	25 – 50	2	<25	1
3.	Fish Species (Family)	5	>10	4	6– 10	3	3 – 5	2	<3	1
4.	Seagrass Species	5	≥ 4 species	4	3 species	3	2 species	2	1 species	1
5.	Substrate Type	3	Coral sand	4	Sand	3	Muddy Sand	2	Muddy	1
6.	Current Speed (cm.s^{-1})	2	0-15	4	>15 – 30	3	>30 – 50	2	>50	1
7.	Depth (m)	2	1,5-2	4	>2-3	3	>0,5-1,5	2	>3	1

Notes: Maximum score are 108, S1 (VerySuitable) with a value of 81% -100%, S2(Suitable) with a value of 61% - <80%,S3 (Conditionally Suitable) with a value of 41% - <60%, N (Not Suitable) with a value <40%.

RESULTS AND DISCUSSION
Water Quality

Water quality assessed from the results of measurements of several physical and chemical parameters, which play roles in supporting the life of seagrass biota, as also stated in Indonesia's Indonesia's Minister of Environment Decree No. 51 of 2004 about Sea Water Quality Standards for Marine Biota. The results of data retrieval can be seen in Table 3.

The results of data collection in the field showed that there are three types of substrates that have been identified, namely coral-sand, sand, and muddy sand. The different types of substrates will affect the type of seagrass that grows on it. Seagrasses tend to live on sandy, muddy substrates, or on table fragments [11]. Substrates play a role in the stability of seagrasses, which are growing media, and nutrient source cycles [12].

The visibility value is related to the depth of the water. The depth obtained is ranging from 0.4 m - 1 m, with visibility reaching 100%. Water visibility is strongly influenced by weather conditions, measurement time, turbidity, and suspended solids [13]. High water visibility affects the visibility of tourists on existing attractions. With a shallow depth, sunlight penetration is expected to enter the bottom, and there are no factors that can block incoming the light, such as mud, fine sand, or other organic or inorganic materials [14].

The speed of water currents is influenced by the wind that moves on the surface of the water. In addition to the wind that forms currents, the topography forms the seabed and surrounding islands can form currents [15]. When collecting current data at five observation stations, the obtained velocity ranges from 2 to 6.12 $cm.s^{-1}$. The current velocity values obtained are classified as very slow [16]. Currents with very slow speeds have values <10 cm and are able to support the life of seagrass ecosystems.

The measured water temperature is indicated to be able to support the life in it properly. *Enhalus acoroides* is able to live at temperatures of 26.5-32.5°C, and in shallow waters can tolerate temperatures up to 38°C until the conditions recede [17]. If the temperature reaches 45°C, then the growth of seagrass will be disrupted, and seagrass will experience stress until it can experience death [18]. Salinity measured worth 21.5-29 ppt. Seagrass vegetation has a fairly high tolerance to salinity, which is 10-40 ppt with its optimum at 35 ppt. Decreased salinity will reduce the ability of seagrass photosynthesis. The low salinity value compared to this quality standard can be caused by patterns of water circulation, evaporation, precipitation, rainfall, and freshwater supply [19].

DO data in waters can be said to be fair. It shows that oxygen demand both for chemical and biological processes of biota in the waters of Tunda Island are equals. Or in other words, seen from the DO value, the waters of Tunda Island are sufficient to support life contained in the seagrass ecosystem.

Water pH ranges from 7 - 8.5 and can support the life of biota that lives in its waters. The pH value can be influenced by biological, chemical activities such as photosynthesis, temperature, DO, and pollutants that enter the waters. Biota death is more often caused by low pH than high pH [20].

Seagrass Vegetation Condition

The results of observations of seagrass vegetation at the research site on Tunda Island, based onfive observation stations. There were five types of seagrasses, namely *Cymodocea rotundata (Cr), Cymodocea serrulata (Cs), Enhalus acoroides (Ea), Halophila ovalis (Ho) and Thalassia hempricii (Th)* with varying mean of seagrass cover at each station, obtained from three lines transects (Table 4).

Table 3. Water Quality Data

Station	Parameters							
	Substrate Type	Visibility (%)	Depth (m)	Current Speed ($cm.s^{-1}$)	Temperature (°C)	Salinity (ppt)	*DO* ($m.L^{-1}$)	pH
1	Coral Sand	100	0,4	3	32	28,8	9,65	8,1
2	Coral Sand	100	0,4	2	31	28,7	8	7,8
3	Coral Sand	100	0,5	2	29,5	26	8,3	7,5
4	Sand	100	0,55	2,78	34	21,5	7,86	8,2
5	Muddy Sand	100	1	6,12	29,7	29	8,25	7,7
Quality Standard		>3		-	28-30	33 - 34	>5	7-8,5

Table 4. Average Seagrass Cover at Research Locations

Station	Seagrass Cover per-Species (%)					Average per-Station
	Cymodocea rotundata	*Cymodocea serrulata*	*Enhalus acoroides*	*Halophila ovalis*	*Thalassia hempricii*	
1.	28.75	3.71	0	0	0,3	33.94
2.	0.53	1.02	0.64	0.3	4.43	6.93
3.	1.25	2.19	2.5	0	4.2	10.6
4.	0.34	2.05	12.69	1.55	5.46	22.08
5.	0	0	31.02	0	5.0	34.85

The diversity of species that grow in the area is influenced by the type of substrate. The horizontal distribution of seagrasses influenced by substrate characteristics and water motion conditions [19]. The diversity of species found in the field shows that the quality of these waters is in fine condition and is not contaminated with harmful elements. The diversity that grows in the area is also influenced by the quality of the waters. Seagrass coverage is a percentage value of the seagrass ecosystem cover that describes how wide the seagrass covers a water area. The percentage value of seagrass coverage does not always equal to the percentage value of seagrass species in an area because the percentage of coverage are considering the leaf scope while the density of species seen by the number of stands.

Biota Association

Identification of associated biota in seagrass areas in the research location, separated into two groups, namely coral fish and other biotas. Observations were made visually at five observation stations. The results of coral fish observations are listed in Table 5.

Table 5. Associated Coral Fish in the Seagrass Area, Tunda Island

Station	Coral Fish (Family)
1.	Nemipteridae, Apogonidae, Labridae
2.	Nemipteridae, Apogonidae, Labridae,
3.	Nemipteridae, Apogonidae, Labridae
4.	Nemipteridae, Apogonidae, Labridae, Pomacentridae
5.	Nemipteridae, Apogonidae, Labridae

Observation of coral fish at the research location, obtained as many as four families, namely Nemipteridae, Apogonidae, Labridae, and Pomacentridae (Table 5). The four families were only found at station 4, while at the other station, only three families were found scattered in various ways. Coral fish from the Pomacentridae family show a preference attitude that is limited to the substrate and depth and is known as fish that are territorial, social, spatial, and relatively stable. Pomacentridae family belongs to the major group, as well as the family

Apogonidae and Labridae. Pomacentridae family has a variety of diverse colors. The Nemipteridae family belongs to the target fish group, a carnivorous fish that eats small bottom fish, cuttlefish, crustaceans, or worms. Coral fish families found the majority are fish families that spawn and migrate temporarily in the seagrass ecosystem, to then return to their habitat, the coral reef ecosystem.The observations of other associated biotas in the seagrass area of Tunda Island are listed in Table 6.

Table 6. Other Biota Associating in the Seagrass Area, Tunda Island

Station	Biota Association
1.	Sea cucumbers (family Holothuroidae), snails (class Gastropods)
2.	Sea cucumbers (family Holothuroidae), snails (class Gastropods), crustaceans and crabs (subfilum crustaceans)
3.	Sea cucumbers (family Holothuroidae), snails (class Gastropods), crustaceans and crabs (subfilum crustaceans)
4.	Sea cucumbers (family Holothuroidae), snails (class Gastropods), crustaceans and crabs (subfilum crustaceans), sea urchins (family Echinoidae), starfish (family Oreastridae)
5.	Snails (Gastropods class)

Associated biotas other than coral fish found at the data collection station are sea cucumber, snails, crustaceans, crabs, sea urchins, and starfish are invertebrate biota that often found in seagrass ecosystems. Station 4 identified to have the highest diversity of biota associations compared to the other four stations. Itis presumably because station 4 has the most diverse type of seagrass with a moderate percentage of cover. This diversity supported by the type of sand substrate, which is indeed covered by various types of seagrass. The coral-sand substrate and sand are a type of substrate that has a high enough oxygen content to allow many biotas to live on the substrate. A sand substrate is also a habitat for these invertebrate biotas.

The shallow water depth also affects the penetration of light entering the water, supporting seagrass as a photosynthetic agent. In

addition, the condition of the seagrass ecosystem is directly adjacent to the coral ecosystem, thus enriching the biota that can live in it. The velocity of the calm waters also supports the life of the associated biota. The relatively quiet current velocity favored by small fish and invertebrates such as bivalves, gastropods, crustaceans, and others [19]. It shows that the seagrass ecosystem in Tunda Island is still in fine condition and productive to be able to support the lives of various marine biota and add attraction to be used as marine tourism activities, especially snorkeling.

Suitability of Seagrass Areas for Snorkeling Tourism

The suitability index of the seagrass area for snorkeling tours assessed through seven parameters, namely seagrass cover, visibility, associated biota, seagrass species, substrate type, current speed, and depth [9]. The determination of suitability is based on the multiplication of scores and weights obtained from each parameter. The suitability of the area can be seen from the level of suitability percentage obtained by summing the values of all parameters, while the results obtained are listed in Table 7.

Based on the calculation of the suitability of the seagrass area for snorkeling tours for stations 1 to station 5, the value of TSI on Tunda Island, Banten, ranged from 59.26 - 77.78%. The station 1, station 2, station 3 and station 4 are included in the category S2 or Suitable, and station 5 is included in the category S3 or Conditionally Suitable (Table 7). In general, it can be said that the seagrass area in the waters of Tunda Island, Banten, is suitable to be used as a marine tourism area for snorkeling, but there needs to

be supervision and maintenance of the seagrass ecosystem and the surrounding area. While the S3 category can be interpreted that the seagrass area at this station, is inadequate to be used as a tourist area because the seagrass species are few, as there are only two seagrass types, although the seagrass cover is quite large relative to station 1. Also, some factors can become obstacles for snorkeling tours, including water that is somewhat turbid due to the type of muddy sand substrate, as well as the location of seagrasses close to residential areas with their activities.

The similarity of the categories found in each station does not guarantee that the value of each parameter owned by each station is the same. The size of the value obtained is adjusted to the weight of the calculated value. Some parameters with high weights show significant differences from each station, such as seagrass cover, brightness, seagrass species, and associated fish species. The identified TSI value can be used as a recommendation whether or not, the seagrass area in Tunda Island is to be used as a snorkeling tourism area by considering the ecological conditions of the existing seagrass resources. The map of the suitability value of the seagrass area for snorkeling tours can be seen in Figure 3.

Carrying Capacity of Seagrass for Snorkeling Tourism

The carrying capacity of the seagrass area for snorkeling tours obtained in this research, calculated by the RRC formula was 448 people per day with 500 m^2 per person because the area of the seagrass area on Tunda Island was 11,197 hectares. This carrying capacity is the carrying capacity of the entire existing seagrass area and cannot necessarily be realized.

Table 7. Level of Suitability of Seagrass Areas for Snorkeling Tourism on Tunda Island, Banten

| Parameter	Station 1		Station 2		Station 3		Station 4		Station 5	
	Result	Scores	Result	Scores	Result	Scores	Result	Scores	Result	Scores
Seagrass Coverage (%)	33.94	10	6.93	5	10.6	5	22.08	10	34.85	10
Visibility (%)	100	20	100	20	100	20	100	20	100	20
Coral Fish (Family)	5	10	6	15	6	15	9	15	4	10
Seagrass Species	3	15	5	20	5	20	5	20	2	10
Substrate Type	C-S	12	C-S	12	C-S	12	S	9	M-S	6
CurrentSpeed (cm.s^{-1})	3	8	2	8	2	8	2.78	6	6.12	2
Depth(m)	0.4	4	0.4	4	0.5	4	0.55	4	1	4
TSI (%)	73.15		77.78		77.78		77.78		59.26	
Category	S2 (Suitable)		S2 (Suitable)		S2 (Suitable)		S2 (Suitable)		S3 (Conditionally Suitable)	

Notes: CS = Coral-Sand, S = Sand, M-S = Muddy-Sand
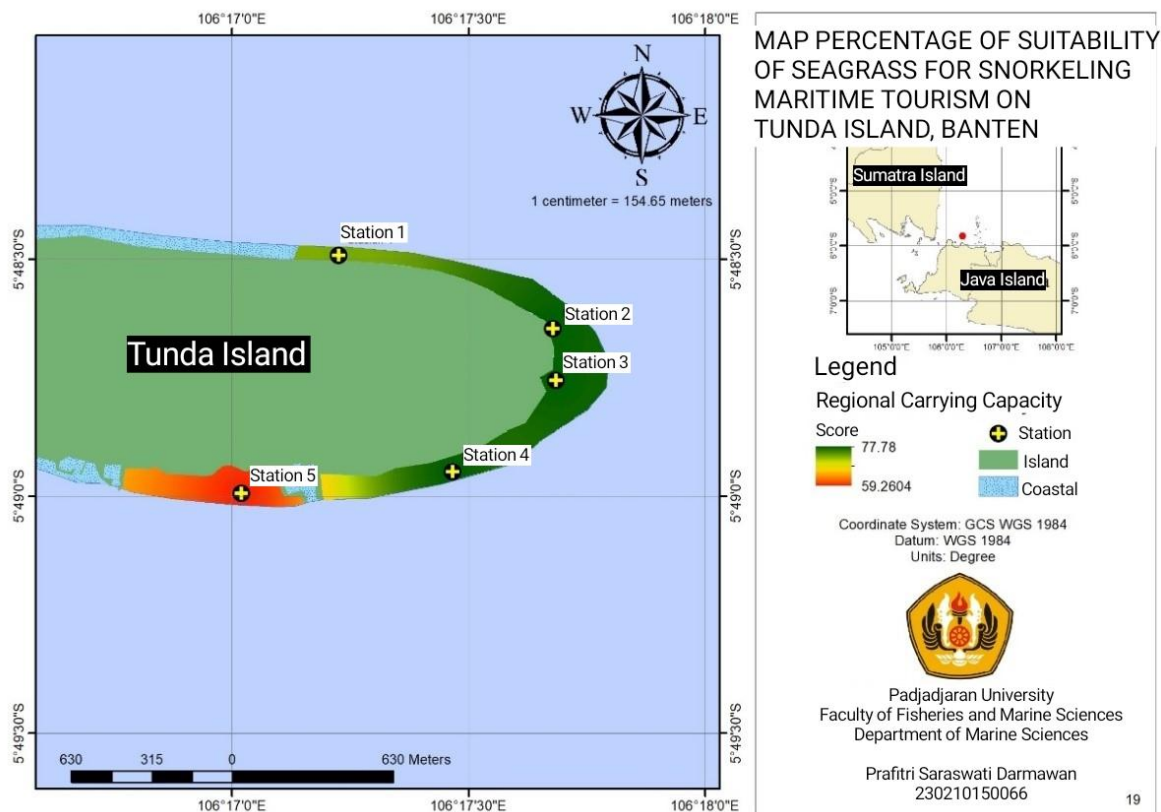
Figure 3. Suitability Map of Seagrass Area for SnorkelingTourismonTunda Island, Banten

In accordance with Indonesia Government Regulation No.18/1994 concerning Nature Tourism Exploitation in the Utilization Zone of National Parks and Natural Tourism Parks, the area permitted to be developed is 10% of the utilization zone area, so that the final value in the utilization of conservation tourism business activities[9]. The value of carrying capacity that can be used in seagrass areas for snorkeling tours on Tunda Island based on the RCU formula is 44 people per day. Tourists who come are expected not to exceed the carrying capacity, so that the seagrass area on the island of Tunda remains in fine condition and sustainable.

Based on the result of the research suggestions that can be made are the use of seagrass areas for snorkeling tourism is recommended to be carried out at station 1 (northern region) and station 4 (southeast region). Besides judging from the seagrass ecological conditions and their accessibility, but also need to accompanied by seagrass rehabilitation efforts to increase the extent of seagrass cover and diversity of seagrass species and seagrass association biota. Either way, for station 2 and station 3, rehabilitation needs to be done before it is utilized for snorkeling marine

tourism. It is also necessary to calculate or study the carrying capacity of seagrass areas for snorkeling marine tourism specifically for each station, in order to evaluate the carrying capacity of the area to be more comprehensive.

CONCLUSION

Condition of seagrass area in the waters of Tunda Island is, there are five types of seagrasses, namely *Cymodocea rotundata, Cymodocea serrulata, Enhalus acoroides, Halophila ovalis, and Thalassia hempricii.* Percentage of seagrass cover between 6.93% - 34.85%. They are included in the category of rare-moderate, with water conditions classified as fine for seagrass growth and associated biota life.

Based on the suitability value of seagrass areas for snorkeling tourism on Tunda Island, in general seagrass areas in the north, east - northeast and southeast regions of Tunda Island (TSI 73.15% -77.58%), while seagrass areas in the southern region are suitable conditional (TSI 59.26%). Carrying capacity of seagrass area in Tunda Island covering an area of 11,197 hectares for snorkeling tourism, as many as 44 people per day.

REFERENCES

[1] Hakim, L., M.Soemarno, and S. K. Hong. 2012. Challenges for conserving biodiversity and developing sustainable island tourism in North Sulawesi Province, Indonesia. Journal of Ecology and Environment 35(2), 61-71.

[2] Hidayah, A., S. Sunarti, and L. Hakim. 2017. Potensi dan pengembangan objek wisata Bahari Tulamben, Kabupaten Karangasem, Bali. Jurnal Administrasi Bisnis 50(2), 93-98.

[3] Philips, C., and E. Menez. 1988. Seagrass. Press. Washington DC.

[4] Firdaus, A.M. 2013. Seagrass species association in the Tunda Island Waters of Banten Bay. Journal of Fisheries and Maritime Affairs 4(2).

[5] Azizah, N. N. 2016. Wide spatial analysis of seagrass cover in Tunda Serang Island, Banten. Bogor Agricultural Institute. Omniakuatika 12(1), 73-80.

[6] Darsoprajitno, S. 2013. Tourism ecology implementing object management and tourism attraction. PT. Angkasa. Bandung

[7] Mulyadi, A., D.Yoswaty, and I. Ilham. 2017. Environmental impact of the development of marine ecotourism in the Trikora Seagrass Conservation Area, Bintan, Riau Islands. Periodically Terubuk Fisheries 45(1), 96-111.

[8] Johan, Y. 2017. Study of seagrass potential in Basing Coast Limas, Sebangka Island, Senayang District, Lingga Regency. Master thesis. King Ali Hajj Maritime University.

[9] Malikusworo, H. and A. Nontji. 2014. Padang seagrass monitoring guide. PT. Sarana Komunikasi. Bogor.

[10] Yulianda, F. A., A. A. Fahrudin, S. Hutabarat, K. Harteti, S. H. Kang, and I. Adrianto. 2010. Integrated coastal and marine management. Forestry Training Center-Ministry of Forestry, SECEM-Korea International Cooperation Agency. Bogor.

[11] Newmaster, A. F., K. J. Berg, S. Ragupathy, M. Palanisamy, K. Sambandan, and S. G. Newmaster. 2011. Local knowledge and conservation of seagrasses in the Tamil Nadu State of India. Journal of Ethnobiology and Ethnomedicine 7(37). DOI: 10.1186/1746-4269-7-37.

[12] Short, F., T. Carruthers, W. Dennison, and M. Waycott. 2007. Global distribution and diversity diagram: A bioregional model. Journal of Experimental Marine Biology and Ecology 350, 3-20.

[13] Effendi, H. 2003. Telaah kualitas air, bagi pengelolaan sumber daya dan lingkungan perairan.Kanisius Publisher. Jakarta.

[14] Riniatsih, I., and E. W. Kushartono. 2009. Basic substrate and oceanographic parameters as determinants of the existence of gastropods and bivalves in Sluke Beach, Rembang Regency, Sluke Beach, Rembang Regency. Journal of Marine Sciences 14(1), 50-59.

[15] Hutabarat, S., and S. M. Evans. 1985. Introduction to Oceanography. University of Indonesia Press. Jakarta.

[16] Mason, C. F. 1998. Biology of freshwater pollution, 2nd Ed. Longman Scientific and Technical. New York.

[17] Erftemeijer, P. I. A., and J. J. Meddelburg. 1993. Sediment-nutrient Interactions in tropical seagrass beds: a comparison between a terrigenous and a carbonate sedimentary environment in South Sulawesi (Indonesia). Marine Ecology Progress Series 102, 187-198.

[18] Berwick, N. L. 1983. Guidelines for analysis of biophysical impacts to tropical coastal marine resources. The Bombay Natural History Society Centenary Conservation Seminar in Developing Countries-Problems And Prospects. Bombay. 6-10 December 1983.

[19] Nybakken, J. W. 1992. Marine Biology: An Ecological Approach. PT Gramedia. Jakarta.

[20] Wijayanti, H. 2007. Aquatic quality in Bandar Lampung City beach based on animal makrobenthos community. Master Thesis. Diponegoro University. Semarang.

Identifying Tourism Attractions' Potentials of Protected Area: A Case Study in Bulue Village, Soppeng District, Indonesia

Eko Yuwono[1*], Risma Illa Maulany[2,] Roland A. Barkey[2]

[1]Graduate School, Hasanuddin University, Makassar, Indonesia
[2]Faculty of Forestry, Hasanuddin University, Makassar, Indonesia

Abstract

The purpose of this study was to identify the tourism attractions' potentials of the landscape that had the major function as protected areas. Bulue Village was selected in this study as nearly 85% of the territory lies inside the protected areas. The comprehensive spatial analysis combined with descriptive analysis was utilized as approaches toward the study. The Scenic Beauty Estimation (SBE) was also carried out to obtain the potential of nature-based tourism attractions based on tourist's perceptions. The results showed that there were nine spots of attractions that had a high value of SBE. Those attractions were identified as Lejja hot spring (SBE=81.33), Lejja view (SBE=129.33), camping ground (SBE=51.78), Datae hot spring (SBE=71.22), Menawoe waterfall (SBE=184.44), Lapaserengi waterfall (SBE=143.00), Batumurue waterfall (SBE=127.89), Waepuange waterfall (SBE=122.11), and Sarasa-tandre waterfall (SBE=147.44). Only Anoa sanctuary has a moderate value. Nevertheless, there some issues that need to be considered, in particular, to prevent further forest degradation by providing economic alternatives for the locals and improving the management of the site. These findings have shown the need for finding a specific strategy to develop ecotourism activities based on the characteristics of the landscape.

Keywords: Bulue village, ecotourism in protected area, landscape-based ecotourism, scenic beauty estimation.

INTRODUCTION

Ecotourism is a component of sustainable tourism [1,2]. According to The International Ecotourism Society, ecotourism as responsible travel to natural areas maintains the welfare of the local community and involves interpretation and education [3]. The development of ecotourism has to contribute minimal impact on ecosystems and benefit to the local community's economy, as well as to respect and value the local culture/local wisdom. Ecotourism is developed using a participatory process that involves all stakeholders and is monitored to detect negative and positive impacts generated from the activities. Meanwhile, it becomes more commons that ecotourism is seen as part of a protected area's management strategy. The integration of ecotourism with protected areas creates a symbiotic relationship: ecotourism needs protected areas and protected areas need ecotourism [4].

A landscape typically consists of physical, biotic aspects, and human elements [5], which has historical and cultural dimensions [6]. The functions of landscape relate to the provision of environmental goods and services, including production functions (food, clothing, housing, energy), habitat (biodiversity), regulators (various

cycles in the biosphere, and atmosphere) and information (beauty, recreation, cultural) [7]. A landscape that functioned as a protected area has a higher vulnerability value than other forms of the area. Landscape utilization activities that ignore the value of vulnerability can harm environmental aspects (water, soil, air, flora, and fauna), cultural (decreasing local wisdom values), and the beauty of the landscape. Landscape inventory and evaluation of natural and spatial culture values recognized as an important step in the planning and development process of a landscape [6].

Bulue Village has various types of landscapes with hilly topography and different altitudes from 80 to 920 m above sea level [8]. As indicated in the map (Fig. 1), nearly 85% of the village's area is included as the conservation and protected forest. Only 15% of the area is utilized as cultivated areas. Furthermore, Bulue landscape is a part of Batu-batu River catchment area, which flows to Lake Tempe. Currently, the width of Lake Tempe has shrunk extensively due to massive sediment flow from the upstream eroded land in rainy seasons [9]. High erosion in the upstream area was caused by the massive conversion of protected areas into dry land cultivation areas.

There are many human settlements in Bulue Village. Most of the people have lived as farmers so that the potential of forest degradation is very large in the area and tends to increase with the growing population [10]. Forest areas that are relatively critical due to forest degradation can

*Correspondence address:
Eko Yuwono
Email   : yuwono.wono@gmail.com
Address   : Graduate School, Hasanuddin University,
              Makassar, 90245.

reduce the value of natural beauty so that forest management systems that are related to ecotourism are needed to create alternative income for the community. Thus, the purpose of this study is to identify the tourism attraction potential of Bulue Village, which can be used as the driving factor in developing ecotourism.

MATERIAL AND METHOD

To identify the tourism attractions' potential of Bulue Village, the approaches used were by combining spatial analysis and descriptive analysis [11]. The Scenic Beauty Estimation was also employed to describe the perceptions of the local people/visitors toward tourism attractions potential. The study was Bulue Village, Soppeng District (Fig. 1). Meanwhile, the stages of this study were presented in Figure 2, which is included preliminary studies, data collection, analysis, synthesis, and recommendations.

Data Collection and Analysis

The data in this study obtained from several sources. To build spatial analysis, the data were gained from online and offline searches via internet access and government official agencies. The primary data of the tourism attractions potential were obtained through surveys and interviews. The survey was conducted on landscape elements (land cover), which classified based on object-based image analysis from Spot 6/7 imagery, which was acquired in 2018. The assessment of land cover included a variety of scenery and the uniqueness of attractions. Data were taken in the field, including coordinates and photos of each location. Interviews were conducted with the people who live nearby the potential area. The results of the survey captured accessibility, current utilization activities, and the community livelihood.

To provide information on the perceptions of local people/visitors on the potential attractions and measure the scenic beauty estimation (SBE), a set of the questionnaire were distributed to 30 respondents. The respondents were only given a maximum of eight seconds to give value to each photo of the nature-based tourism attractions. The rating scores ranged from 1 to 10, where a score of 1 indicates the least preferred value, and a score of 10 indicates the most preferred value. The questionnaire results analyzed by using the SBE [12]. The SBE formula is presented in Equation 1. The data were analyzed descriptively by incorporating the results of spatial analysis and scenic beauty estimation.

$$SBEx = (Zx - Zo) \ x \ 100 \qquad (1)$$

Description:
SBEx = the estimation of the aesthetic value of xth photo
Zx = the average of z value (using z table) of xth photo
Zo = the average of z value (using z table) of xth photo as a standard.

RESULT AND DISCUSSION
Landscape Potentials for Tourism Attraction

Landscape elements of Bulue Village were dominated by secondary forest 56.393% and primary forest 24.24%. Another elements are rainfed field 8.917%, mixed plantation 4.393%, rice field 2.767%, shrub 2.312%, settlement 0.976%, and swamp 0.003% (Fig. 3).

The nature-based tourism attractions were dominated by aquatic-based attractions, in line with the major function of the landscape as the upstream area of the Batu-Batu River, which provides flows to Lake Tempe. Lejja hot spring, Lejja view, Anoa sanctuary, camping ground, Datae hot spring, and Lapaserengi waterfall were located in Lejja Recreation Park. Meanwhile, Menawoe waterfall, Batumurue waterfall, Waepuange waterfall, and Sarasa-tandre waterfall were located in Walanae Protected Forest.

Lejja hot spring has the potential for hot spring water that smell-free of sulfur with relatively large water discharge. It has become the leading tourist destination of Soppeng District [13]. Meanwhile, other potentials have not been chosen nor utilized as tourist destination objects. Anoa sanctuary is a place to save endemic Sulawesi animals outside their natural habitat. Lejja's view is the natural scenery of the Bulue landscape. The camping ground comprised of a relatively large shrub area in Lejja Recreation Park. In general, accessibility to Lejja hot spring, Anoa sanctuary, Lejja view, and camping ground are paved road. Meanwhile, accessibility to Menawoe waterfall, Batumurue waterfall, Waepuange waterfall, Sarasa-tandre waterfall, Lapaserengi waterfall, and Datae hot spring are secondary roads and trail roads.

Besides the nature-based tourism attractions, the livelihood of Bulue's people also could attract special traveler, i.e. harvesting honey directly from the forest, and traditionally palm sugar making. The activity of observing the process of taking honey in a tree, eating a beehive containing eggs and larvae mixed with honey, could be used as a tour package, as seen in Figure 4.
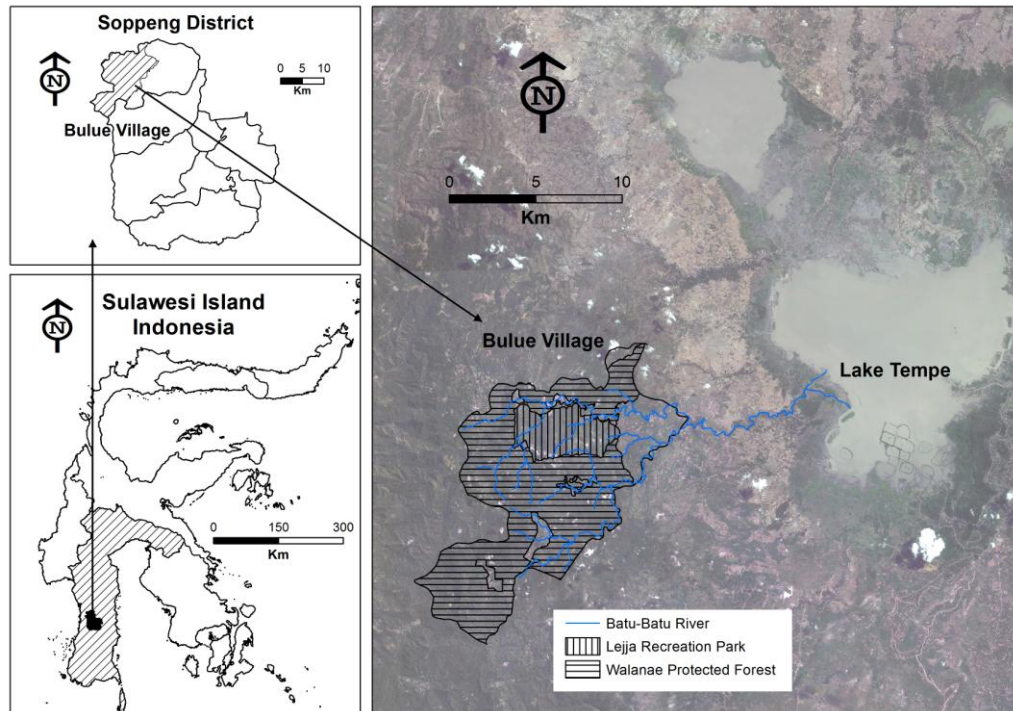
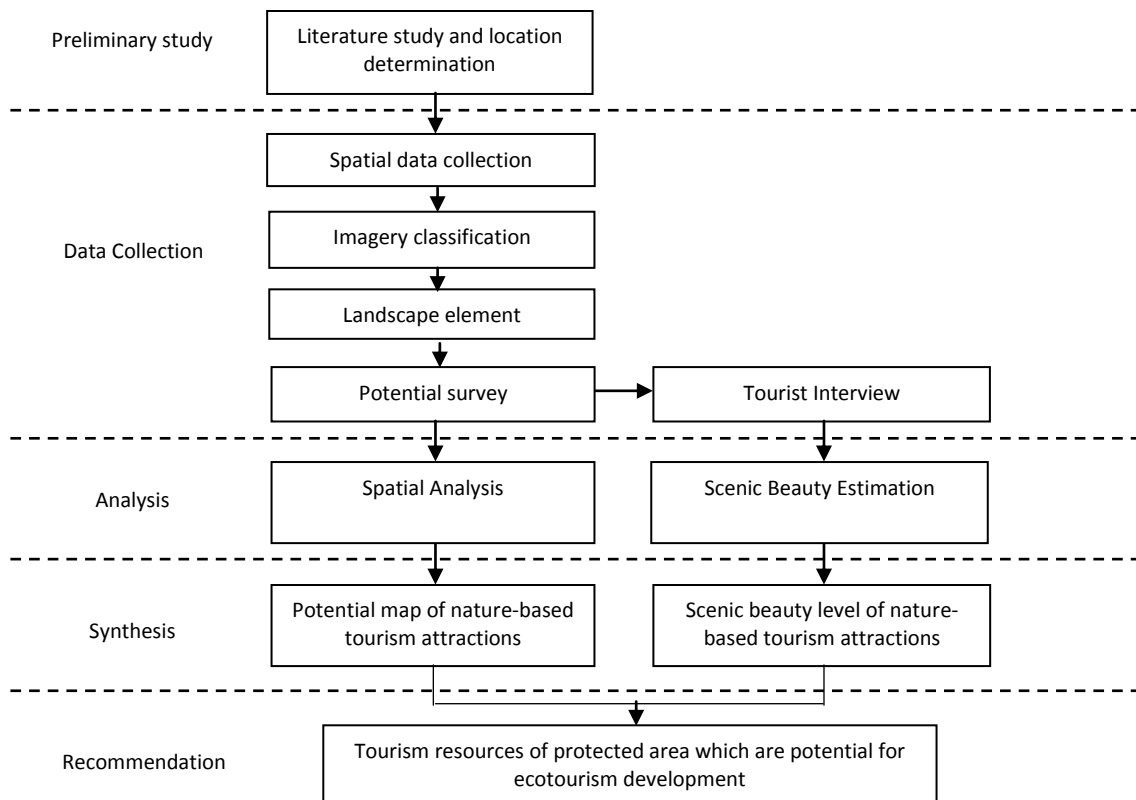**Figure 1**. The geographical location of Bulue Village, Soppeng District, Indonesia

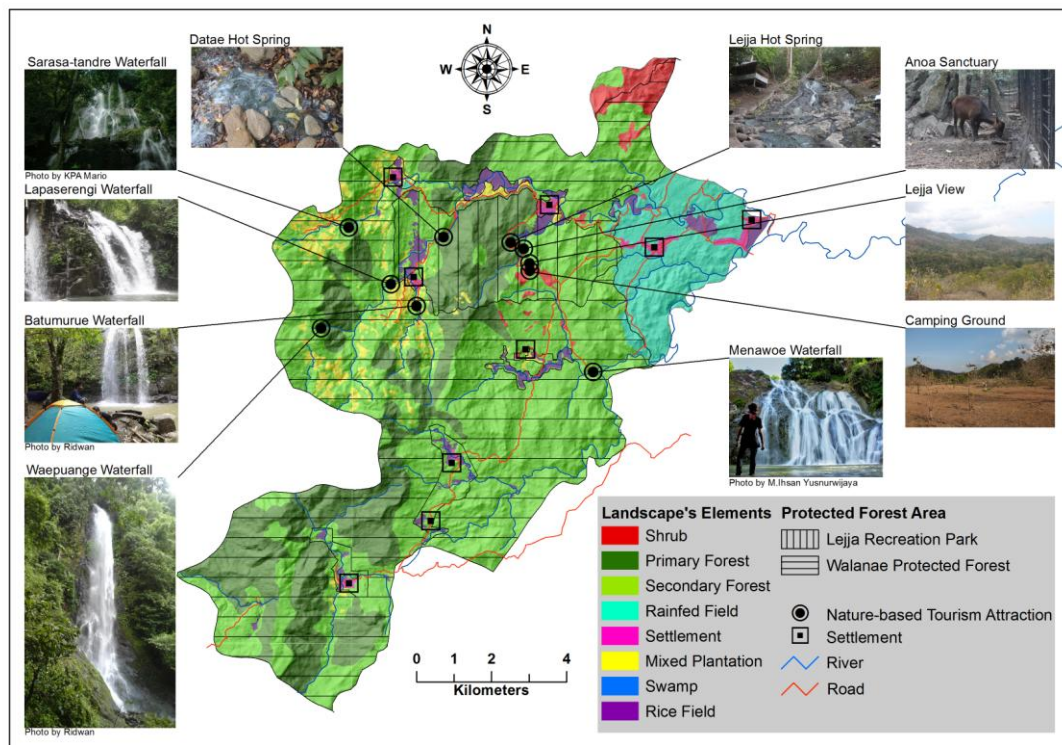**Figure 2**. Phases of Study Process

Figure 3. The nature-based tourism attractions of Bulue village, Soppeng district, Indonesia

Table 1.1 Scenic beauty estimation value of the nature-based tourism attractions of Bulue Village, Soppeng district, Indonesia (SBE= Scenic Beauty Estimation) (* High SBE score: > 20; Moderate:-20 <SBE score > 20; Low SBE score < -20)

No	Nature-based tourism attractions	Descriptions	SBE Score	Scenic Beauty Value *
1	Lejja hot spring	Smell-free sulfur of hot spring water sources used by visitors. It has become a tourist destination for the relaxing soak activities	81.33	High
2	Anoa Sanctuary	Built as semi-natural cage in Lejja recreation park for preserving the endemic Sulawesi animals	0.00	Moderate
3	Lejja view	Portraying the natural scenery of the Bulue landscape	129.33	High
4	Camping ground	Providing an attractive of natural scenery and potential space for the camping area	51.78	High
5	Datae hot spring	Potential for warm water recreation which is located near the river flows, mixed between warm water and cold water	71.22	High
6	Menawoe waterfall	Portraying waterfalls with a total height of ±10 m in a relatively remote area	184.44	High
7	Lapaserengi waterfall	One level waterfalls with a height of ±5 m located near Datae	143.00	High
8	Batumurue waterfall	One level waterfalls with a height of ±15 m located near Datae	127.89	High
9	Waepuange waterfall	Showing one level waterfalls with a height of ±25 m located in a remote area	122.11	High
10	Sarasa-tandre waterfall	A stratified waterfall with a total height of ±15 m located near Gellenge	147.44	High

The community of Bulue Village is divided into 9 settlements (Mario, Galungkalunge, Lejja, Datae, Gellenge, Kajuara, Poro, Lamatanruk and Wawogalunge). They are agricultural society, as seen as the pattern of the settlement located near to the river and rice fields. Meanwhile, the protected forest area, which is upstream of the river that flows into Datae and Gellenge, has been degraded.

The source of living in the community is dominated by farming. They need the extensification of farming for mixed plantation.

The extensification of farming has caused landscape fragmentation. Landscape fragmentation will change a small portion of native habitat into a new habitat, which triggers the process of emigration and immigration of plant and animal species [7].

A. Taking honey in a tree   **B.** Eating the beehive mixed with fresh honey

C. Fresh Honey   **D.** Beehive containing eggs and larvae

Figure 4. Forest Honey Harvesting

Based on research in the protected forest of Sinjai district, it was shown that the community encroached the forest because they did not know that the area is a protected forest area [14]. It caused by rare or unclear boundary signs of the protected forest area. The disturbance to protected forest areas has increased the level of turbidity, dissolved sediment, and nitrate content, especially in the rainy season [15]. Disturbance in the form of illegal logging and the conversion of part of the forest area into mixed fields do not significantly affect the decline in river water quality.

However, gold mining, settlement, and agriculture activities in the form of rice fields cause a significant decline in river water quality. The total percentage of the land cover of the Bulue landscape in the form of mixed plantations, settlements, rice fields, and rainfed fields is 17%. Also, there is a high fluctuation in river flows between rainy season and dry season. Thus it can be said that land use activities in the Bulue landscape, more or less, affect habitat changes in the upstream and water quality in the downstream, especially in the rainy season.

The livelihoods of Bulue's people are mostly dependent on nature. Also, the lack of electricity has encouraged the community to use river flows for micro hydropower plants. However, landscape fragmentation has caused a high fluctuation in river flows. Life dependence on nature has the potential to create strong bonds. Thus, it can be used as social capital to include the community in maintaining the preservation of natural resources.

Scenic Beauty of The Nature-based Tourism Attractions

The results of the tourist's assessment have been obtained the beauty value of each attraction (Table 1). Calculations using the tabulated data show that Anoa sanctuary has an average value of z = -0.17 (closest to 0), so it used as standard value in calculating the SBE. There is only Anoa sanctuary that has a moderate value of scenic beauty. Meanwhile, the other attractions have a high value of scenic beauty. Natural landscape tends to have a high value of SBE [16]. The high value of SBE can be the driving factor in developing ecotourism.

The existence of Lejja hot springs in the Lejja Recreation Park as a leading tourist destination in Soppeng District certainly provides a big opportunity for the ecotourism development of other nature-based tourism attractions in the surrounding area, such as Walanae Protected Forest. It is expected to combine with the livelihood-based tourism attraction of Bulue's people.

Nearly 85% of the Bulue Village area is a state forest with the function of protected areas. It makes Bulue Village suitable to be a conservation village. Conservation village is a conservation model approach that provides opportunities for people living around conservation areas to be actively involved in efforts to manage conservation areas [17]. Meanwhile, the purpose of establishing conservation village is more directed at efforts to improve the welfare of village communities in and around production forests, protected forests, and conservation forests through empowering local potentials as an effort to increase resilience and the ability of communities to become actors of protection, preservation, and sustainable use. To empower the local potentials, the community needs to be strengthened through the development of the ecotourism network, which is a modification of Village Ecotourism Network (Jaringan Ekowisata Desa - JED) developed in Bali.

JED was formed to realize ecotourism programs based on the community and the environment and as a form of commitment from several community groups who want to determine their future, culture, and environment [18]. Bali is a major tourist destination in Indonesia. Its people have actively implemented Community-Based Ecotourism (CBE) as a reaction to mass tourism activities that not only bring economic growth but also lead to ecological and social costs. The CBE initiative began by forming Jaringan Ekowisata Desa (JED) in collaboration with Yayasan Wisnu and Yayasan Kehati to find a more sustainable approach to tourism through stronger ownership and minimization of negative ecological impacts [19].

To implement CBE in Bulue Village as a strategic approach in developing ecotourism certainly needs modification and adjustment under the characteristics of the landscape also the legal status of the village's area, which is mostly a state forest area in the form of protected forest and conservation forest. Furthermore, collaborating among stakeholders is fully needed through synchronization of the planning until field implementation.

CONCLUSION

The Bulue Village has the potential of nature-based and livelihood-based tourism attractions with the high value of SBE. There are ten spots of attractions highlighted in the study consisted of five waterfalls, two hot springs, one wildlife sanctuary, one nature scenery, and one camping ground. Nevertheless, there some issues that need to be considered, in particular, to prevent further forest degradation and to provide economic alternatives for the locals as well as to improve the management of the site.

REFERENCES

[1] Bunruamkaew, K., and Y. Murayama. 2011. Site suitability evaluation for ecotourism using GIS & AHP : A case study of Surat Thani Province, Thailand. Procedia - Social and Behavioral Sciences 21, 269-278

[2] Kiper, T. 2013. Role of ecotourism in sustainable development. Advances in Landscape Architecture, INTECH, 774-802.

[3] Ecotourism.org. 2019. What is ecotourism? Available at: https://ecotourism.org/what-is-ecotourism/.

[4] Drumm, A., and A. Moore. 2005. Ecotourism development - a manual for conservation planners and managers Volume I : An Introduction to ecotourism planning, 2nd Ed. The Nature Conservancy Worldwide. Arlington, Virginia, USA.

[5] Fandeli, C., and Muhammad. 2009. Prinsip-prinsip dasar mengkonservasi lanskap, 1st Ed. Gadjah Mada University Press. Yogyakarta.

[6] Janic, M., and P. Sestras. 2019. Identification and evaluation of landscape as a precondition for planning revitalization and development of mediterranean rural settlements — case study : Mrkovi Village, Bay of Kotor, Montenegro. Sustainability 11(2039), 1-15.

[7] Prasetyo, L. B. 2017. Pendekatan Ekologi lanskap untuk konservasi biodiversitas. Faculty of Forestry, Bogor Agriculturl University. Bogor.

[8] Statistic Center of Soppeng Regency. 2018. Kecamatan Marioriawa in numbers. Statistic Center, Soppeng Regency. Watansoppeng.

[9] Marjuki, B. 2016. Pendangkalan Danau Tempe Sulawesi Selatan (1981 - 2015) dan upaya konservasi sumber daya air. Ministry of Public Works and Housing, Republic of Indonesia. Jakarta.

[10] Forestry Sevice, South Sulawesi Province. 2018. Rencana Pengelolaan Hutan Jangka Panjang (RPHJP) KPHL Unit XII Walanae Periode 2019 - 2028. Forestry Sevice, South Sulawesi Province. Soppeng.

[11] Rahayuningsih, T., E. K. S. H. Muntasib, and L. Budi. 2016. Nature based tourism resources assessment using Geographic Information System (GIS): case study in Bogor. Procedia Environmetal Sciences 33, 365-375.

[12] Daniel, T., and R. Boster. 1976. Measuring landscape esthetic: the scenic beauty estimation method. USDA Forest Service U.S Department of Agricultural. US.

[13] Local Company of Soppeng Regency. 2019. Rencana pengusahaan pariwisata alam Perusda Kabupaten Soppeng - di ruang usaha dari Blok Pemanfaatan TWA Lejja, Kabupaten Soppeng, Provinsi Sulawesi Selatan jangka waktu tahun 2020 s/d 2075. Local Company of Soppeng Regency.

[14] Wahid, A. M. Y., N. Bohari, and Achmad. 2015. The environmental law enforcement in forestry sector (study on the protected forest in Sinjai Region, South Sulawesi). Hasanuddin Law Review 1(1), 61-73.

[15] Supangat, A. B. 2013. Effects of disturbances of protected forest area on river water quality: case study at Jambi

Province. Indonesian Forest Rehabilitation Journal 1, 75-89.

[16] Wakyudi. 2016. Perencanaan lanskap ekowisata di daerah penyangga kawasan konservasi Taman Nasional Ujung Kulon Provinsi Banten. Bogor Agricultural University. Bogor.

[17] Nugroho, S. S., and N. D. Setyowati. 2014. Model pengembangan desa konservasi berbasis pendayagunaan potensi lokal Kawasan Lindung Lereng Gunung Wilis Kabupaten Madiun Jawa Timur. Sosial 15, , 54-62.

[18] Saragih, W. R. J., I. M. Sendra, and I. G. S. Mananda. 2015. Karakteristik dan motivasi wisatawan ekowisata di Bali 9 studi kasus di jaringan ekowisata desa. Jurnal Industri Perjalanan Wisata 3(1), 17-21.

[19] Byczek, C. 2011. Blessings for all ? Community-Based Ecotourism in Bali Between Global , National , and Local Interests – A Case Study. Austrian Journal of South-East Asian Studies 4(1), 81-106.

ICT Usages in Yogyakarta's Tourist Villages Development

Ulfah Choirunnisa[*], Rini Rachmawati

Urban Development Research Group, Department of Development Geography, Faculty of Geography, Universitas Gadjah Mada

Abstract

Developmental gap between tourist villages occurs due to differences in tourist attractions, existing facilities, and also the use of Information, Communication, and Technology (ICT). One of the innovations which is presently in line with global development is the use of information technology. This study was aimed at identifying the development of 17 tourist villages using the Butler Tourist Area Life Cycle Theory, determining the use and needs of ICT in tourist villages using the Smart Tourism Destinations Theory, and analyzing the role of ICT in developing tourist villages in the City of Yogyakarta. The results of this study indicated that the dynamics of the development of tourist villages were caused by several factors: availability of human resources, the potential of tourist villages, and tourism awareness of tourist village communities. Besides, the use of ICT in the villages was limited to wi-fi usage and the use of social media such as Facebook and Instagram. Lastly, the role of ICT actively by managers and passively by tourists was able to accelerate the development of tourist villages.

Keywords: ICT, Tourist villages.

INTRODUCTION

Several tourist villages in Yogyakarta have been well developed. For example, Dipowinatan is often visited by Czech tourists. Same as Cokrodiningratan, which attracts Japanese tourists and Purbayan, which attracts USA tourists. One of the indicators used to measure the intelligence level of tourist villages is the accessibility of information [1].

The developmental gap between tourist villages occurs due to differences in tourist attractions and existing facilities. One of the innovations which are presently in line with global development is the use of information technology. It includes information systems, internet, information technology, communication, computer software, networks, along with the hardware. The function of hardware is to process, to send information supported by its following software and also networks [2].

Efforts to evolve tourist villages through the use of information technology are in line with various forms of promotional support and information stipulated in Yogyakarta Mayor Regulation number 115 of 2016 article 15 verse(2) word (f). One of Yogyakarta's tourism sector opportunities is the development of information technology and social media [3].

Tourist village has an attraction that could attract people to come, getting entertained, and got unique experiences [4]. The important criteria to build a positive relationship between tourism and culture are: 1) Having a routine cultural performance, 2) Participating local community and for additional, participating tourists, 3) Be able to create product/service needed by tourists, and 4) Be able to gain profit from cultural performance [5].

The development of tourist villages could be analyzed by using the Tourist Area Life Cycle theory by Butler. It was explained that there are seven phases of development: Exploration, Involvement, Development, Consolidation, Stagnation, Decline, and Rejuvenation.
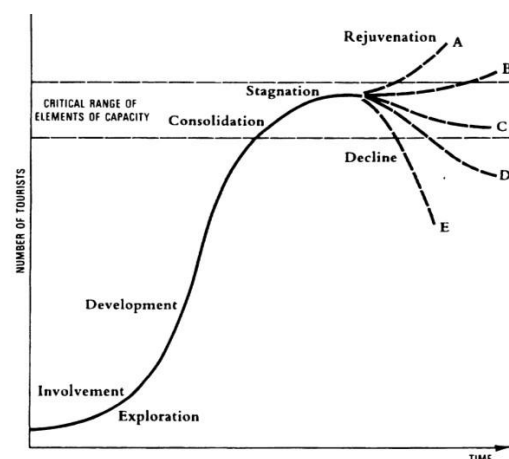

Figure 1. TALC Curve (Source: ijier.net)

Tourism destinations should have supported by 4 main components called '4A'. It refers to Attraction, Amenities, Access, and Ancillary services including ICT [6].

*Correspondence address:
Ulfah Choirunnisa
Email   : ulfahc@outlook.com
Address   : Bulaksumur, Caturtunggal, Kec. Depok,
              Kab. Sleman, Daerah Istimewa Yogyakarta
              55281

ICT is a group of technology along with the applications related to an electronic process, storage, and information transfer for various forms of usage [7]. Independent tourism emerged from the synergic relation among stakeholders by technology platform where tourism activities can be instantly given and received [8]. Smart Tourism Destinations made use of 1) Technology embedded environment (Internet of Things, sensors), 2) Responsive processes at micro and macro levels (Intelligent services), 3) End-user devices (Smartphones), and 4) Engaged stakeholders that use the actively use platform to gain information [8]. Smart Tourism Destinations into two categories: 1) SoftSMARTness: collaboration, innovation, leadership (human resources) and 2) HardSMARTness: technology and infrastructures (the heart of smartness) [9].

The development of ICT usages in several countries started from 1970-2007 [7]. Yogyakarta, in 2005, has begun to use the internet and ATM [7]. Then, in 2007, in the same city, the use of ICT facilities and internet cafés were developed [7]. One of the previous researches related to ICT showed that villages managed by using ICT were more flexible against industrial changes and could adjust better [10]. The higher the level of ICT's utilization, the faster industrial changes occur. ICT is also one of the determinants that need to be considered in choosing housing locations. Research showed that 55% respondent chose to move on housing location where provides ICT facilities [11]. Besides, ICT also affects economy and movement space changes [12]. From the dynamics of population mobility and the dynamics of the location of economic services, it could be concluded that the future city structure will be determined by ICT usages in various types of activities that shorten travel distance and time [13]. This study was aimed at identifying the development of 17 tourist villages using the Butler Tourist Area Life Cycle Theory, determining the use and needs of Information, Communication, and Technology (ICT) in tourist villages using the Smart Tourism Destinations Theory and analyzing the role of ICT in developing tourist villages in the City of Yogyakarta.

MATERIAL AND METHOD

This study used qualitative research. A literature review was done by reviewing the previous researches, government policies,

related books, and other valid data sources. The observation was done in 17 Yogyakarta's tourist villages by observing either the physical characteristic or social activities. An in-depth interview was done to the 17 managers of tourist villages, which will be clearly explained below.

Data Collection

The in-depth interview technique for each manager in 17 tourist villages was accomplished to disclose its development in a chronological descriptive manner. Three of 17 tourist villages had chosen as the samples in identifying the use and needs of ICT was adopting a purposive sampling technique with criteria for the level of search for tourist villages on the internet: very low, average, very high, so does the unique development. Furthermore, the researcher also conducted independent observation through the internet to obtain additional information regarding the use of ICT and the development of tourist villages in Yogyakarta.
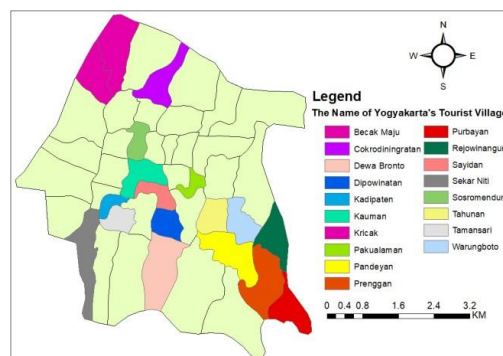

Figure 2. Research Location Map (**Source:** Yogyakarta Municipal Department of Tourism, 2017)

Data Analysis

This research was using descriptive analysis. It is to show the data and to explain the tourist village development chronologically.

RESULT AND DISCUSSION

Tourist villages Development

The development of The Tamansari Tourist Village has been in the phase of consolidation. It was indicated by the number of tourists who have reached the peak, so that, the quota has set to 500.000 tourists each year, and tourist who came in above 4 pm in each day was forbidden. It was set to avoid public inconvenience. It also indicated by the rise of the craft trade scale (it has already gone international), and the more facilities, accommodations, transportation, and other complementary, needs to be provided. However, tourists who used the accommodation facilities were not the only tourist who aimed to

visit Tamansari Tourist Village only. Most of them were tourists who were on the Yogyakarta city tour but looking for the cheap inn and near the city center. The arrival of this visitor despite helping village promotion, but on the other hand, this indicated that the value of tourist villages was fade away because the culture was no longer attracts tourists.

Kadipaten tourist village still in the exploration phase where there were no economic opportunities, either tourism package or its unique product. Besides, the number of tourists could not be predicted even monthly. It was too small. It has happened too in the Kauman tourist village. Cokrodiningratan tourist villages have been in the involvement phase which indicated by the emerging of company supports in facilities development, facilities provided by its local community, profit gained by local community from their facilities providing. Sosromenduran tourist village was in the development phase. It was indicated by the emerging of investors and has been known by their promotion either offline or online.

Dewa Bronto, Sayidan, Sekar Niti, and Pakualaman tourist villages were the same in the involvement phase. Local community has started to provide accomodation facilities and restaurant. The increasing of tourists occurs on holiday.

Becak Maju tourist village still in the exploration phase. It was occurred because of no economic opportunities available, either a tourism package or a unique product. Tahunan, Rejowinangun, and Prenggan tourist villages have been in the development phase, which has been known by people either from offline or online media. The trade scale has already raised to international, and they improve their village's promotion.

Dipowinatan tourist village has been in the consolidation phase. It was indicated by the wider promotion they did and the emerging of the competitor. Warungboto tourist village has been the most developed village among the 16 others. The phase of development has been in the highest one, which is the rejuvenation phase. Rejuvenation phase indicated by making new alternative attractions. This village has developed three phases at the same time in just three months only. Whereas, one last village, Pandeyan, experienced an anomaly development because it didn't experience sequent phase per phase. But it directly collapses from the exploration phase to the decline phase. The decline phase is the lowest phase where tourist villages couldn't compete with the surroundings, quality service decreasing, and it was affected by the function of its tourist village. People was not having pride anymore toward their tourist village because they didn't have any feeling through the function of it, especially from the economy side. The visualization of the development phase for each tourist village showed in the Figure 3 and 4.
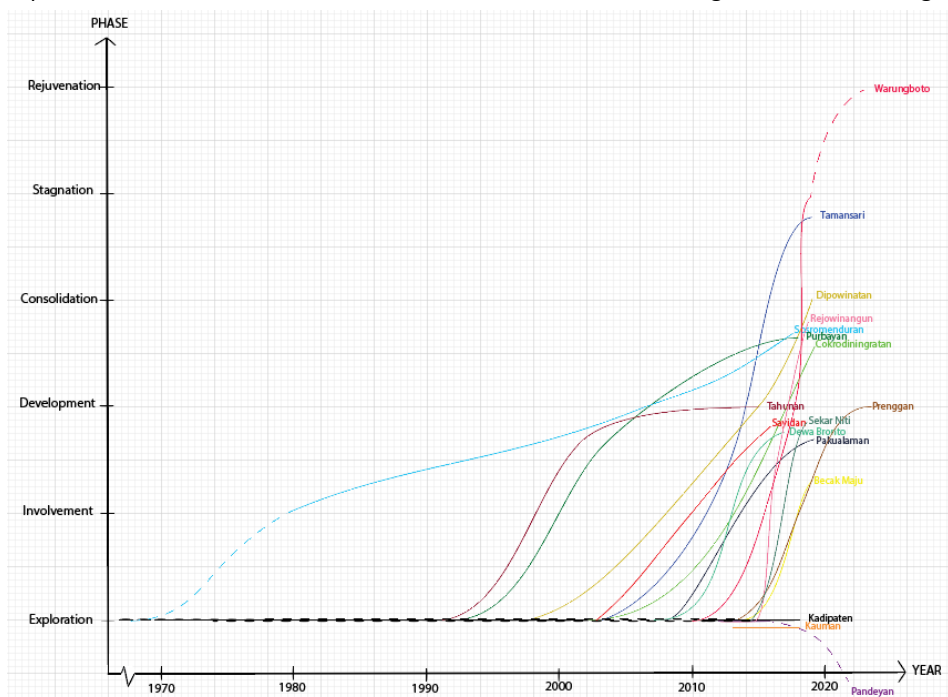

Figure 3. The Curve of Yogyakarta's Tourist villages Development Phase (**Source:** Data Analysis, 2019)
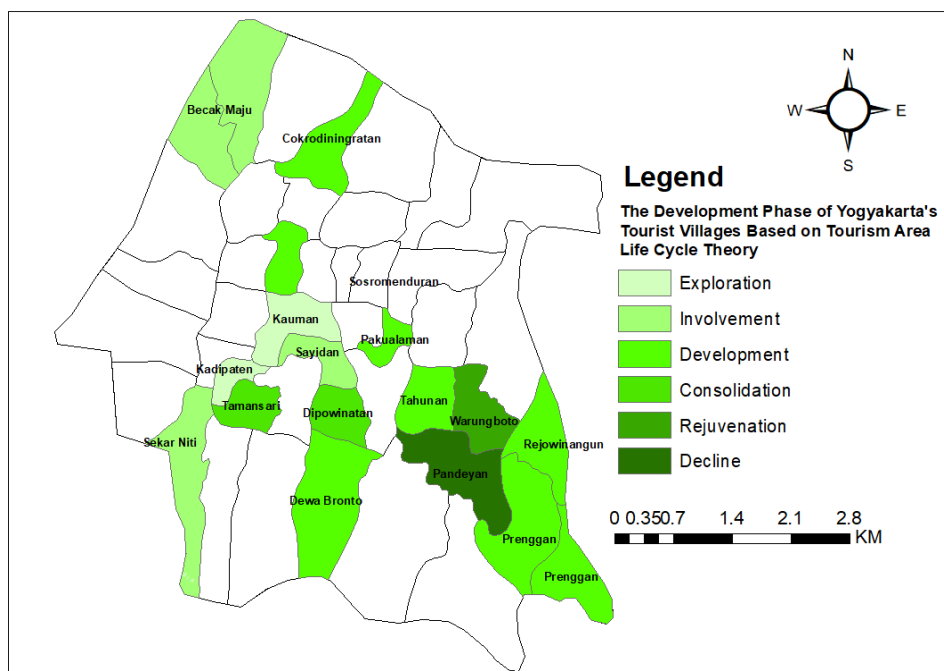
Figure 4. Yogyakarta's Tourist villages Development Phase Distribution Map
(**Source:** Data Analysis, 2019)

ICT Usages and Needs

ICT usage and needs in the development of tourist villages measured from HardSmartness (hardware) and SoftSmartness (software) aspects. Hardware are including Wi-Fi, NFC, AR, and APP(s) for 'technology embedded environment' indicator and 'End-user' hardwares such as smartphones and laptops. Meanwhile, softsmartness could be applications, social media, and other various forms of activities that improving expertise on the use of ICT [8]. All 17 tourist village managers have used smartphones. Only one from four hardware has been provided by governance for a tourist village. The hardware is Wi-Fi. Fourteen tourist villages have been facilitated Wi-Fi by Yogyakarta Governance. The other three were still waiting for the Wi-Fi installation (Fig. 5).
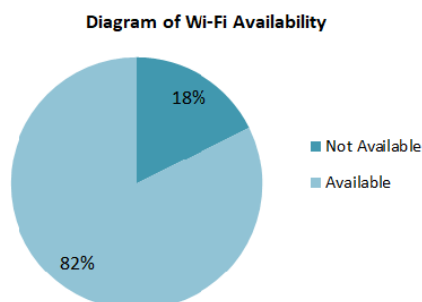

Figure 5. The Diagram of Yogyakarta's Tourist villages Wi-Fi Availability (**Source:** Field Survey, 2019)

NFC hasn't been installed in tourist villages to be used for ticketing or other transaction. It because tourist villages were not a one-gate-tourism destination. Tourists could enter tourist villages from any gate they found without any fee. Hardware used in tourist villages is a smartphone, laptop, and Wi-Fi. Smartphone has become primary hardware owned by each tourist village managers. This hardware used for receiving the reservation of tourism package, selling products/services, and receiving critics and suggestions from tourists.

The use of softsmartness includes ICT softwares, networks, and human resources. ICT software, in this case, were smartphone applications like WhatsApp and google maps. Meanwhile, social media networks were limited to Facebook, Instagram, Youtube, and Blog/Website. Five tourist villages (29%), has 3 of 3 social media which are Website, Facebook, and Instagram. Three tourist villages (18%) have 2 of 3 social media, seven tourist villages only have 1 social media, and the other 2 tourist villages have any. The number of tourist villages searches based on its name on the internet also observed by www.brand24.com. It is a site that could count how many does the keyword search in the current time. In this research, the time set is May 17, 2019, to June 17, 2019.

Table 1. Number of Tourist villages Search name as a Keyword Search

Village	Facebook	Instagram	Blog	Youtube	Website	Total
Tamansari	79	**2042**	**956**	26	**265**	3368
Kauman	**139**	202	142	0	**214**	697
Kadipaten	58	197	144	30	92	521
Pakualaman	10	124	291	21	71	517
Warungboto	3	191	13	29	8	244
Rejowinangun	19	88	14	31	17	169
Sayidan	8	69	17	**40**	26	160
Purbayan	6	90	10	0	22	128
Pandeyan	15	58	29	7	13	122
Sekar Niti	3	89	3	3	2	100
Bener	13	18	11	11	13	66
Kricak	13	18	11	11	13	66
DewaBronto	2	16	11	1	14	44
Prenggan	5	16	6	2	7	36
Sosromenduran	5	4	7	0	9	25
Cokrodiningratan	0	13	5	1	5	24
Dipowinatan	0	1	3	3	14	21
Tahunan	0	0	0	0	0	0

Source: brand24.com, 2019.
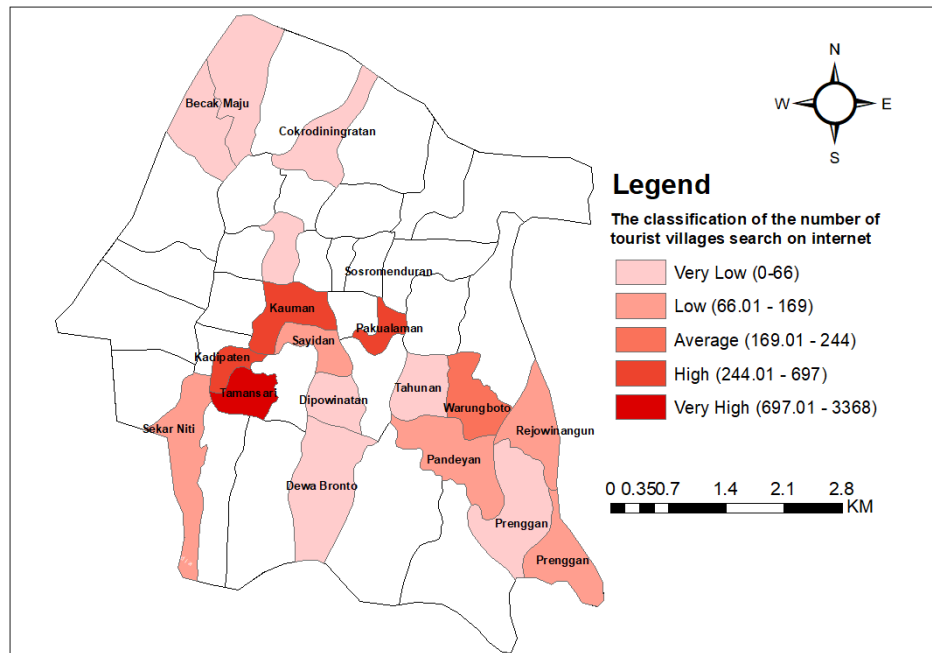
Figure 7. Map of the Level of Mention of Tourist Villages on the Internet
(**Source:** Data Analysis based on brand24.com, 2019)

The table 1 above shows the number of tourist villages keyword searches. Within a month (May 17 to June 17, 2019), the most discussed tourist village is Tamansari: 3368 words search. The tourist village that most discussed on Facebook was Kauman: 139 words. Then, the most tourist village discussed on the Instagram, blog, and website was Tamansari: 2042, 956, 265. The most discussed on Youtube was Sayidan: 40. Last, the most discussed tourist villages on the website are Tamansari and Kauman (265 and 214 discussed).

The other ICT usage is the use of WhatsApp messenger. It used to connect government and intervillage tourist village managers by communication forum virtual group. This virtual group became the main promotion of all the tourist villages. Then, google maps, as one of the most applications installed on tourist village managers are used to drive tourists to come to the tourist villages. Social media that widely used by all of the tourist village managers are Instagram and website. But, not all of them were active. Figure 7 is a map of the search level of tourist villages based on the brand24 site.

Samples selected from the lowest, average, and highest class. Those are Dipowinatan, Warungboto, and Tamansari, respectively.

Dipowinatan has Facebook, Instagram, and website accounts. But the website is inactive. Tamansari and Warungboto both have Facebook and Instagram accounts. Warungboto's Facebook account is active, while both of Tamansari's accounts are inactive.

The needs of ICT devices have been felt enough by all tourist villages in Yogyakarta It turned out because most of the tourist villages have been facilitated with Wi-Fi by the government, although it hasn't been massively utilized. A matter that needed now is ICT socialization, especially for the SMEs perpetrator. This socialization is needed for doing online marketing.

The needs of online marketing also felt by other tourist villages as the findings in the study toward Village Development Movement (Gerakan Desa Membangun - GDM). This program was established since the critics toward the top-down development where the village's role as an object, not a subject. GDM is a program related to social, economic, cultural, political, and technology aspects. There, villages trained to stand by their selves by improving villages management, including the ICT usages such as websites for their local products [14]. This finding was also similar to research on the Jambearum tourist village. The findings showed that the SME's had promoted their product by SMS, *gethok tular*, exhibition, brochures, but very few people have used the internet as s marketing media. So they wanted the website that contains all of the products of all SME's there [15].

This research about ICT usages in tourist villages development was giving the same result as two previous researches that people have not used the internet well for promoting their product and attraction. Besides villages, ICT has been a factor in choosing housing [11]. People were tending to choose in a housing that provides ICT facilities [11]. It explained that ICT was the main factor. Further than that, in the urbanization era, ICT has changed people's behaviors such as the changing shopping methods (from offline to online), changing working methods (remote working by teleconference), and communicating methods [16]. It concluded that ICT would make a change in the economic and mobility space [12]. So, it was a need for the tourist village's local community to get embedded with ICT due to face globalization and develop their villages.

The Role of ICT in Developing the Selected Tourist villages

The role of ICT in developing tourist villages divided into two categories: active from tourist village managers and passive from tourists. Tamansari tourist village tends to the passive role through their tourist who shared their photos after visiting Tamansari on Instagram. Individual observation through hashtags search on Instagram has done to find out how many posts shown. Through hashtag '#tamansari', it found out 224669 photos (June 22, 2019) uploaded by tourists. Meanwhile, Tamansari's Instagram and Facebook accounts were inactive.

Warungboto tourist village has a typical attraction as Tamansari. But, Warungboto's visit is still free. Individual observation through hashtags searches '#situswarungboto' found out 9266 photos (June 22nd, 2019). It was 480 numbers above the previous one on April 26th, 2019. Tamansari and Warungboto have a differentiation related to the role of ICT. Warungboto could balance the role, both passive and active, to raise their tourist village's promotion. Meanwhile, Tamansari mostly tends to a passive role.

Dipowinatan tourist village has a small number of searches on the internet based on brand24. Social media they owned were also inactive. It turned out that the target of tourists is the Czech tourist. The customer of their tourism package was only from international tourist, especially Czech. This focused tourist market target effects on the services provided. ICT's role as the strategy to promote their tourist villages is still limited. They prefer using a repeater, someone whose origin was in Dipowinatan, but now is living in Czech and doing promotion from people to people.

CONCLUSION

The dynamics of the development of tourist villages were caused by several factors, including the availability of human resources, which are the driving force, the potential of tourist villages, and tourism awareness of tourist village communities. The use of ICT in the villages was limited to Wi-Fi usage and the use of social media such as Facebook and Instagram. The role of ICT actively by managers and passively by tourists was able to accelerate the development of tourist villages.

REFERENCES

[1] Wiyatiningsih. 2016. Smart Tourism Kampung di Yogyakarta. Jurnal Penelitian BAPPEDA Kota Yogyakarta 12, 88-96.

[2] Onn, C. W., and S. Sorooshian. 2013. Mini literature analysis on information technology definition. Information and Knowledge Management 3(2), 139-140.

[3] Syakdiah. 2017. Dinamika pariwisata Daerah Istimewa Yogyakarta. Proceeding of Seminar and Call For Paper 20th-21st October 2017. Faculty of Social and Political Sciences, Muhammadiyah University of Sidoarjo, Indonesia.

[4] Sihombing, A., J. Gunawijaya, S. A. Zanny, and A. Pratiwi. 2016. Sustainable tourism in rural area development, case study: Kampung Tourism in Wanayasa, Purwakarta, West Java, Indonesia. Journal of Tourism, Hospitality and Sports 15, 16-22.

[5] Organisation for Economic Co-operation and Development. 2005. Culture and local development. OECD Publishing. Paris.

[6] Suwena, I. K., and I. G. N. Widyatmaja. 2010. Pengetahuan dasar ilmu pariwisata. Analisis Pariwisata, 58-72.

[7] Rachmawati, R. 2014. Pengembangan Perkotaan dalam Era Teknologi Informasi, dan Komunikasi. Gadjah Mada University Press. Yogyakarta.

[8] Buhalis, D., and A. Amaranggana. 2013. Smart tourism destinations. Springer international publishing. Switzerland.

[9] Beemt, W. P. d, dan Smith, R. 2012. Smart Tourism Tools: Linking Technology to The Touristic Resources of A City

[10] Moinnemati, A. H. 2015. The roles of information and communication technology on rural development. Global Journal of Human Science: H Interdisciplinary 15(2), Version 1.0 2015. Global Journals Inc. USA.

[11] Rachmawati, R., R. Rijanta, and A. Djunaedi. 2015. Location decentralization due to the use of information and communication technology: Empirical evidence from Yogyakarta, Indonesia. Human Geographies 9(1), 5-15.

[12] Rachmawati, R. 2011. Perubahan pola spasial pergerakan penduduk dan lokasi pelayanan ekonomi yang tersubstitusi oleh teknologi informasi dan komunikasi (studi kasus: perkotaan Yogyakarta). PhD Thesis. Graduate School, Gadjah Mada University. Yogyakarta.

[13] Rachmawati, R. 2012. Population mobility and urban spatial structure: does the use of nformation and communication technology matter? Regional Views 25, 9-19.

[14] Badri, M. 2016. Pembangunan pedesaan berbasis teknologi informasi dan komunikasi (studi pada gerakan desa membangun). Jurnal RISALAH 27(2), 62-73.

[15] Arbainah, S. 2014. Pemasaran bersama berbasis ICT sebagai media promosi alternatif bagi UMKM desa wisata. Jurnal Akuntansi Bisnis dan Perbankan Indonesia 22(2), 180-187.

[16] Rachmawati, R. 2016. Urbanization in the era of Information and Communcation Technology (ICT). Proceeding of the 13th International Asian Urbanization Conference. Rapid Urbanization and Sustainable Development in Asia. Study Program of Regional Development, Faculty of Geography. Gajah Mada University. Yogyakarta, 6-8 Januari 2016. 281-290.

COVID-19 and the Moment to Evaluate Tourism Euphoria, Indonesia

Luchman Hakim[*]

Department of Biology, Faculty of Mathematics and Natural Sciences, University of Brawijaya, Indonesia

Abstract

COVID-19 outbreak has been influenced tourism sectors in Indonesia. Many economic activity related to tourism industry was drop and many tourism worker loss jobs. In the absent of tourism activity, the natural ecosystem has opportunities to restore the degraded system caused by intensive use of tourist visitation. Traveling responsible to pandemic disease spread through the tourist movement and human physical contact. New tourism should be able to promote responsible travels through the management of visitor, reduce mass tourism and create high tourism product which are able to support economic benefits to local community, socio-cultural aspect preservation, and environmental conservation. The quality is important rather than quantity or the number of tourist. COVID-19 pandemic provides significant lesson learned for new tourism implementation in Indonesia.

Keywords: environmental conservation, mass tourism, responsible tourism, sustainable tourism.

INTRODUCTION

COVID-19 suddenly destroys the tourism sector in Indonesia. The ambitious target of tourism grows has disturbed by new virus strains, which spread very fast. The new pandemic called Corona Virus Disease firstly identified in Wuhan in December 2019, and rapidly spread to Europe, America, East Asia, and Southeast Asia. COVID-19 identified as a new strain of corona virus (SARS-CoV-2) cause serious pneumonia. UNWTO report that global tourism sectors significantly affected by COVID-19 pandemic [1,2,3].

Since the first case of COVID-19 in Jakarta, the confirmed COVID-19 case has been reported increased significantly. The local transmission continuously grows a function of government late responses, community poor literacy, awareness about pathogens pandemic, lack of health instrument to identify pathogens spreads, and lack of health system readiness [4,5,6]. Without comprehensive emergency actions and community participation, there is a potentiality for Indonesia as a new epicenter of the COVID-19 pandemic.

Global pandemic management argues that human travels should be minimized to reduce pathogens spreads [1,7]. Global policy to restrict traveling causes a significant tourist arrival in Indonesia. On February 5th, 2020, the Indonesian government officially suspend flight to mainland China. By April 24th, 2020, the Indonesian government closed international and domestic

flight [8]. Central Bureau of Statistics of Indonesia reported international tourist arrivals in March 2020 decrease 45.50% compared to February 2020. Compared to March 2019, international tourism arrivals decreased by 64.11% [9]. These lead to a significant impact on the tourism industry in Indonesia. The aim of the paper was to describe the Indonesian responses to COVID-19 pandemic, especially in tourism sectors and the government scenarios in the tourism industry recovery. The COVID-19 pandemic as a moment to evaluate tourism was discussed to enhance the future sustainability and competitiveness of tourism industry in Indonesia. Recent literature reviews, document reports, and newspaper content analysis were done to construct discussion. The discussion focused on the recent Indonesian responses to COVID Pandemic, and argument to establish a new approach in tourism implementation in Indonesia.

Indonesian Responses to COVID-19 Pandemic

Indonesia's government argues that managing human movement, traveling, and strictly control community health with COVID-19 symptoms is important to minimize the recent Corona virus outbreak. In order to minimize outbreak potentiality in the Indonesian archipelago that caused by tourism activities, international flight and visa on arrivals policy were suspended. Health checks were implemented in many sites, including airport, seaport, and terminals.

Numerous regulations were released as responses to minimize COVID-19 outbreaks. Some crucial regulations were released related to the restriction of human concentration in a particular area and human movement. It is

[*] Correspondence Address:
Luchman Hakim
E-mail : luchman@ub.ac.id
Address : Dept. Biology, University of Brawijaya, Veteran Malang, 65145.

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[119]

particularly important because May has many holidays, and there is a collective leave of Eid-al-Fitr, the great day of Muslims in Indonesia. Every year, there is significant people movement to visit relatives and recreation activities during the collective leave of Eid-al-Fitr. In response to these situations, the Indonesian government released some significant regulations related to traveling. It includes:

- Regulation No. 25/2020 regulates the use of transport vehicles during the exodus (also known as *mudik* or *pulang kampung*, which translates to going home) season that will come in the last weeks of May (issued by The Ministry of Transportation) [8].
- Circular No. HK.02.01/Menkes/332/2020 on Health Protocols for Indonesians or foreign nationals arriving from overseas into areas where PSBB has been declared (issued by The Ministry of Health) [10].
- Circular No. 4/2020 on the Criteria of Personal Travel in the Effort to Mitigate COVID-19 (issued by The Indonesian COVID-19 Task Force) [11].

Indonesian government identifies numerous people to lose jobs as an impact of the COVID-19 pandemic. International and domestic flight cancels influences travel industry jobs decrease significantly. In the accommodation sector, the number of guests in hotels, resort, lodges, and home stay was decreasing sharply. Domestic transportation stopped, and access to attractions was closed to minimize the corona outbreak spread. According to Mr. Sukamdani, head of PHRI, about 1.642 hotel and 353 restaurant and tourism attractions have closed as an impact of the COVID-19 outbreak. These lead to the loss of 4 US$ (equal to 62 trillion rupiahs) potential revenue generated from tourism sectors. The most serious impacted area included Bali, Batam, and Manado [12]. Decrease of the tourism industry in such place influence the national economic earnings from tourism.

COVID-19 has leads to the economic crisis, especially among workers works in tourism industry. To cope with such an economic crisis, the Indonesia government release *Bantuan Langsung Tunai* (Direct Cash Assistance, a temporary cash transfer program) to tourism workers who are seriously affected by the COVID-19 outbreak. The Ministry of Tourism allocates 500 billion rupiahs to support tourism workers through the Direct Cash Assistance program. The Indonesian government also

released numerous workshops and training to increase human capacity in tourism sectors [13].

MOMENT TO EVALUATE TOURISM

Tourism rapid growth in Indonesia is an interesting phenomenon. In the past decades, tourism has contributed to a significant role in national economic earning in Indonesia, but it was received little attention, especially in the development context. The intensive tourism development in Indonesia took place in 2015 through the initial development of a strategy called "new 10 Bali". The ambitious international tourist arrival was targeted at 20 million by the end of 2019 [14]. Numerous infrastructures to support tourism growth were developed. It was accompanied by massive training and skill improvement program to tourism sector workers and communities surrounding tourism destinations. The community development especially implemented to prepare the community as an active party in optimizing cultural and natural resources as a tourism attraction.

The euphoria of tourism in the local context was shown by the growth of village tourism sites (*Desa Wisata*). The precise number of village tourism was not available, but many areas report the significant increase in village tourism number. From the online newspaper and tourism websites, the Ministry of Village, Disadvantaged Regions Development, and Transmigration (*KEMENDESA*) have the target to create ten thousand villages tourism. By August 2019, it claimed that the number of village tourism was 7,275 or equal to 9.75% of total villages in Indonesia.

According to BPS-Statistic Indonesia, the potential number of village tourism sites in Indonesia in 2018 was 1,734 sites. The highest number of village tourism was found in Java-Bali (857 sites), followed by Sumatera (355 villages tourism sites), Nusa Tenggara (187 villages sites), Sulawesi (119 villages sites), Kalimantan (117 villages sites), Papua (74 villages sites) and Maluku region (23 village sites). Another report mentioned Bali has 110 villages tourism, and claimed as the province with the highest village tourism number [15].

By 2019, East Java reported 290 sites as tourism villages, and the number could increase in the near future. From 290 village sites, only 26 sites have been reported visited by tourists [16]. There is no study was conducted to describe the reason behind the less number of the visited area

compared to the reported sites. Besides the problems of data generated from the field, it seems that the declaration of villages as village tourism without comprehensive planning contributes to the less-visited sites. The top-down approach of village tourism development is dominant rather than bottom-up initiation.

Tourism in the village area or forest adjacent to the villages has created Self-Portrait spots to attract tourists. The creativity and innovation to create interesting tourism object in village tourism sites has been fast developed, even, it is sometimes beyond normality of natural features. The original rural landscapes often contaminated by numerous tourism attractions. Tourism program which is able to deliver environmental messages were absent, lead to the fail of environmental education and awareness programs.

Mass tourism is another issue of tourism implementation in Indonesia, especially in villages and natural areas. It has been widely criticized that the high number of tourists in the natural area has a negative impact on the ecosystem. Problem with serious mass tourism was observed in Mt. Bromo [17,18]. Natural beach is the other example of sites with abundance visitors in fragile ecosystem.

Problems with the sudden increase in tourist visitation contribute to the problems in the area of the villages. The traffic jam was the common problems related to the abundance of tourist vehicles. It was often followed by soil erosion, dust pollution, vegetation disturbance along corridors, and waste abundance. Parking area availability is often in problems with the abundance of car and tourist vehicle. These lead to social problems in the local community.

The current COVID-19 outbreak has stop tourism activity and leads the natural ecosystem in a temporary break. It is a good sound for environmental resiliency after high-intensity use of the natural ecosystem as tourism destinations. Conservationists, photographers, and news reporters report some wild species during the pandemic era. In Mt. Unggaran, conservationists from Universitas Negeri Semarang found deer, eagle, hornbill, Javan langur, and pigs roaming freely in empty habitat [18]. Sumatran serow was reported rarely found, but it was captured by the camera at the end of May in Leuser national park [20]. There are no scientific studies to confirm the relationship of less human activity during pandemic and wildlife emergence. However, COVID-19 outbreaks seem to contribute to the ecosystem resilience after heavy human disturbance.

Tourism without proper management is the main factor in the rapid pandemic spread. Three months of COVID-19 pandemic incident has hit the tourism sector in Indonesia. Strict control and limitation in traveling, avoiding crowding, and enhancing physical distancing to minimize pandemic diseases spread provides a clear argument to the importance of visitor management, especially in visitor numbers in limited space recreation sites. Health protocols against pandemic were established and promoted to all stakeholders related to the tourism industry. The new regulation and implementation of tourism through visitor management were introduced to minimize the pathogens spreads. Lesson learned from three months within pandemic provides evidence and suggestion to consider the carrying capacity and avoid mass tourism.

Recent policy to open recreation sites, however, should be criticized to ensure the past worst of tourism practices and its impact were not repeated. Environmental issues should be put as a crucial point since the aspect influence the quality of destination, including health issues in recreation sites. Reducing tourist numbers without disturbing economic potential loss should be the main agenda of tourism planning and implementation. Attempts to create a high quality of tourism experiences in the natural tourism area were urgent to increase the economic benefits generated from visitation in controlled visitor numbers. The quality is important rather than quantity or the number of tourists.

A recent trend in "new normal" provides new opportunities for new tourism with smarter and consider economic, socio-cultural, and environmental balance. This linear with the recent global tourism trend, in which tourism should contribute to the Sustainable Development Goals. Tourism should be contributing to the increase in human life through health quality. Specifically, tourism should be able to reduce potential mechanisms for pandemic disease threats, provides experience to live within sustainable living frameworks, and provides healthy food and environment to support the sustainability of man in the biosphere [21].

Indonesia movement and the local community should be able to changes the aspect

tourism models (i.e. mass tourism) to the responsible tourism through:

1) Evaluate the impact of aspect tourism in social, cultural, and environmental issues
2) Establish and develop a mechanism to meet sustainable tourism business
3) Increase local government, planner, field manager, and the local community participation to be able to think and implement sustainable tourism
4) Strengthen stakeholder support to implement sustainable tourism

In the recent rapid tourism growth in Indonesia, these aspects crucial to accelerate responsible tourism and reduce mass tourism waves in Indonesia. There should be the spirit in planning and implementation that the quality is important rather than quantity or the number of tourists.

CONCLUSION

COVID-19 pandemic provides opportunities to re-thinking tourism practices and implementation. Since tourism is a potential vehicle for disease spreads, the management of tourism destinations to be able to minimize pandemic disease spread was crucial. Mass tourism should be evaluated, and tourism programs with high quality of the product should be promoted to increase the economic benefit of tourism, appreciate the socio-cultural aspect of the local community and conserve the environment.

REFERENCES

[1] Chinazzi, M., J. T. Davis, M. Ajelli, C. Gioannini, M. Litvinova, S. Merler, A.P. Piontti, K. Mu, L. Rossi, K. Sun, C. Viboud, X. Xiong, H. Yu, M.E. Halloran, I.M. Longini Jr., and A. Vespignani. 2020. The effect of travel restrictions on the spread of the 2019 novel coronavirus (COVID-19) outbreak. Science 368(6489), 395-400.

[2] Cucinotta, D., and M. Vanelli. 2020. WHO declares COVID-19 a pandemic. Acta bio-medica: Atenei Parmensis 91(1), 157-160.

[3] Hoque, A., F. A. Shikha, M. W. Hasanat, I. Arif, and A. B. A. Hamid. 2020. The effect of Coronavirus (COVID-19) in the tourism industry in China. Asian Journal of Multidisciplinary Studies 3(1), 52-58.

[4] Djalante, R., J. Lassa, D. Setiamarga, C. Mahfud, A. Sudjatma, M. Indrawan, B, Haryanto, C. Mahfud, M. S. Sinapoy, S. Djalante, I. Rafliana, L. A. Gunawan, G. A. K.

Surtiari, H. Warsiklah. 2020. Review and analysis of current responses to COVID-19 in Indonesia: Period of January to March 2020. Progress in Disaster Science 6, 100091.

[5] Hakim, L. (in press). COVID-19, tourism, and small islands in Indonesia: Protecting fragile community in global pandemic Coronavirus. Journal of Marine and Island Culture.

[6] Setiati, S., and M. K. Azwar. 2020. COVID-19 and Indonesia. Acta Medica Indonesiana 52(1), 84-89.

[7] Epstein, J. M., D. M. Goedecke, F. Yu, R. J. Morris, D. K. Wagener, and G. V. Bobashev. 2007. Controlling pandemic flu: the value of international air travel restrictions. PloS one 2(5), 1-11.

[8] Ministry of Transportation, Republic of Indonesia. 2020. Ministry Regukation No. 25 about transportation control during Eid Al-Fitr Period Year 1441 H. Ministry of Transportation. Jakarta.

[9] Ministry of Tourism and Creative Economy, Republic of Indonesia. 2020. Decrease visit of international tourist due to COVID-19. Pers Release of Ministry of Tourism and Creative Economy. Available at: http://www.kemenparekraf.go.id/post/siar an-pers-penurunan-kunjungan-wisman-ke-indonesia-akibat-pandemi-covid-19-sesuai-perkiraan.

[10] Ministry of Home Affairs, Republic of Indonesia. 2020. Ministry of Home Affairs Decree No. 440-830 of 2020 about Guidelines for productive and safe New Normal Corona Virus Disease 2019 for state civil apparatus in the Ministry of the Home Affairs and regional government. Ministry of Home Affairs. Jakarta.

[11] Ircular Letter of Task Force for Acceleration of Handling COVID-19 No. 4 of 2020 about criteria for restricting the travel of men in the context of handling acceleration of Corona Virus Disease 2019 (COVID-19). Task Force for Acceleration of Handling COVID-19. Jakarta.

[12] Ibnu, A. 2020. Bali become the main location for tourism assistantce. Available at: https://koran.tempo.co/read/ekonomi-dan-bisnis/451981/bali-jadi-lokasi-utama-bantuan-pariwisata?

[13] Aditya, N.R. 2020. Kemenparekraf reallocation of IDR 500 billion budget to help the tourism sector and the creative economy. Availabe at:

https://travel.kompas.com/read/2020/04/17/181816127/kemenparekraf-realokasi-anggaran-rp-500-miliar-untuk-bantu-sektor-pariwisata

[14] Databoks. 2019. Government targets 20 million foreign tourists in 2019. Available at: https://databoks.katadata.co.id/datapublish/2019/03/04/pemerintah-targetkan-wisatawan-mancanegara-20-juta-kunjungan-pada-2019

[15] Putra, D.A. 2018. Data of BPS-Statistic Indonesia: Indonesia has 1734 tourism villages. Available at: https://www.merdeka.com/uang/data-bps-indonesia-miliki-1734-desa-wisata.html#:~:text=Merdeka.com%20%2D%20Kepala%20Badan%20Pusat,desa%20wisata%20di%20seluruh%20Indonesia.

[16] Basyari, I. and A. S. Pandia. 2019. Tourism Village in East Java grow. Availale at: https://sukuh.com/desa-wisata-di-jatim-menggeliat/#:~:text=Kepala%20Dinas%20Kebudayaan%20dan%20Pariwisata,luar%20negeri%20untuk%20menarik%20wisatawan.

[17] Hakim, L., and M. Soemarno. 2017. Biodiversity conservation, community development and geotourism development in bromo-tengger-semeru-arjuno biosphere reserve. Geojournal of Tourism and Geosites 20(2), 220-230.

[18] Firmansyah, Y., L. Hakim, and A. Darmawan. 2018. Analisis pemanfaatan ruang wisata SPTN 1 Taman Nasional Bromo Tengger Semeru menuju destinasi yang berkelanjutan. Jurnal Administrasi Bisnis 58(2), 56-65.

[19] Fardianto, F. 2020. Fresh air in COVID-19 deer to langur appear in mountain Ungaran national. Available at: https://www.idntimes.com/news/indonesia/fariz-fardianto/udara-bersih-saat-covid-19-kijang-hingga-lutung-muncul-di-gunung-ungaran-nasional.

[20] Khoiri, A. M. 2020. Rare! Sumatran forest goat sees again in Gunung Leuser National Park. Available at: https://travel.detik.com/domestic-destination/d-5032335/langka-kambing-hutan-sumatera-terlihat-lagi-di-tn-gunung-leuser.

[21] Hall, C. M. 2019. Constructing sustainable tourism development: The 2030 agenda and the managerial ecology of sustainable tourism. Journal of Sustainable Tourism, 27(7), 1044-1060.

J. Ind. Tour. Dev. Std., Vol.8, No.2, April 2020

[123]

MANUSCRIPT SUBMISSION

FOCUS AND SCOPE

Competitiveness of destinations, products and Indonesian tourism business; Diversification of tourim products; Incentive system of business and investment in tourism; Information, promotion and communication in tourism; Tourism supporting infrastructure; Security and convenience in tourism; Tourism policy; Unique tourism community life (living culture); Local knowledge, traditions, and cultural diversity; Diversity and attractions in ecotourism; Diversity of natural attractions in ecotourism; Pluralistic diversity of ecotourism society; Diversity of ecotourism activities; Hospitality of the local resident; The quality of torism services; Quality of HR in tourism (Standard, accreditation and competence certification); The market share of tourism and integrated marketing system; Package of tourism attraction; Development of tourism regions; Community based Eco-Toutirsm.

PEER REVIEW PROCESS

Publication of articles by JITODE is dependent primarily on their validity and coherence, as judged by peer reviewers, who are also asked whether the writing is comprehensible and how interesting they consider the article to be. All submitted manuscripts are read by the editorial staff and only those articles that seem most likely to meet our editorial criteria are sent for formal review. All forms of published correction may also be peer-reviewed at the discretion of the editors. Reviewer selection is critical to the publication process, and we base our choice on many factors, including expertise, reputation, and specific recommendations. The editors then make a decision based on the reviewers' advice, from among several possibilities:

Accepted, with or without editorial revisions
Invite the authors to revise their manuscript to address specific concerns before a final decision

Rejected, but indicate to the authors that further work might justify a resubmission

Rejected outright, typically on grounds of specialist interest, lack of novelty, insufficient conceptual advance or major technical and/or interpretational problems

PUBLICATION FREQUENCY

JITODE publish 3 Issues per year.

OPEN ACCESS POLICY

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

COPYRIGHT NOTICE

PRIVACY STATEMENT

The names and email addresses entered in this journal site will be used exclusively for the stated purposes of this journal and will not be made available for any other purpose or to any other party.

Title Typed in Bold, Capitalize each First Letter of Each Word, Except Conjunctive, *Scientific name* should not be Abbreviated (Calibri 14 Bold Center, should not exceed 12 words, except conjuctive)

First Author[1]*, Second Author[2], Third Author[3] (Calibri 12 Center, without title)

[1]First Author Affiliation, Correspondence author should be indicated by * symbol (Calibri 9 Center)
[2]Department of Biology, Faculty of Mathematics and Natural Sciences, University of Brawijaya, Malang, Indonesia
[3]Laboratorium of Physiology, Faculty of Medicine, University of Brawijaya, Malang, Indonesia

Abstract (Calibri 9 Bold Center)

This article illustrates preparation of your paper using MS-WORD (.doc or .rtf). Manuscript was numbered consecutively. Main text typed in two columns (67 characters), except title and abstract in one column. The manuscript should be written in English. The length of manuscript should not exceed 10 pages including table and figure in this format using A4 paper single space. The text should be in the margin of 3 cm up, down and left side, 2.5 cm on right side. Abstract includes the research purposes, research method and research results in one paragraph of *essay,* not *enumerative*. No citation in abstract. Abstract should not exceed 200 words. Keywords typed after abstract. (Calibri 9 Justify).

Keywords: manuscript, English, format, 5 words maximum (Calibri 9 Left)

INTRODUCTION*(Calibri 10 Bold, Left, Capslock)

All submitted manuscripts should contain original research which not previously published and not under consideration for publication elsewhere. Articles must be written in ENGLISH and manuscripts may be submitted for consideration as research report articles, short reports or reviews.

The introduction explains the background of the problem, the study of literature and research purposes. Some initial introduction paragraphs explain the problem and background to these problems [1]. The next few paragraphs explain the study of literature that contains recent knowledge development which is directly related to the issues. The last paragraph of the introductory section contains a description of the purposes of the study. (Calibri 10 Justify)

MATERIAL AND METHOD(Calibri 10 Bold, Left, Capslock)

This section describes the types of methods (qualitative, quantitative or mixed-method) with details of methods of data collection and data analysis [2]. This section also describes the perspective that underlying the selection of a particular method. (Calibri 10 Justify)

Correspondence address: (Calibri 8 Bold, Left)
Full name of correspondence author
Email : sapto@jurnal.ub.ac.id
Address : afiliation address include post code

Data Collection (Calibri 10 Bold, Left)

Explain the data collection methods, i.e. surveys, observations or archive, accompanied by details of the use of such methods. This section also describes the population, sampling and sample selection methods. (Calibri 10 Justify)

The use of English language should followed proper grammar and terms. Name of organism shoul be followed by its full scientific name in the first mention, in *italic* [3]. Author of the scientific name and the word of "var." typed regular. Example: *Stellaria saxatillis* Buch. Ham. First abbreviation typed in colon after the abbreviated phrase.

Author must use International Standard Unit (SI). Negative exponent used to show the denominator unit. Example: $g\ l^{-1}$, instead of g/l. The unit spaced after the numbers, except percentage [4]. Example: $25\ g\ l^{-1}$, instead of $25gl^{-1}$; 35% instead of 35 %. Decimal typed in dot (not coma). All tables and figures should be mentioned in the text.

RESULT AND DISCUSSION (Calibri 10 Bold, Left, Capslock)

This section contains the results of the analysis and interpretation or discussion of the results of the analysis. Describe a structured, detailed, complete and concise explanation, so that the reader can follow the flow of analysis and thinking of researchers [5]. Part of the results study should be integrated with the results of the

analysis and the results and discussion are not separated.

Table

Table should be submitted within the manuscript and in separated file of *Microsoft Excel* (xls.). Table whould not exceed 8 cm (one column) and 17 cm (two columns). Table should be embedded in different page after references.

Table should be numbered in sequence. Table title should be brief and clear above the table, with uppercase in initial sentence. Vertical line should not be used. Footnote use number with colon and superscripted. Symbol of (*) or (**) was used to show difference in confidence interval of 95 and 99%.

Table 1. Example of the Table (Calibri 8.5 Left)

No	Point (Calibri 8.5 Justify)	Description
1		
2		
3		
4		
5		

Sources: Journal of PPSUB (Calibri 8.5 Left)

Figures

Figures should be in high resolution and well contrast in JPEG or PDF with the following conditions:

- Monochrome image (line art), figures of black and white diagram (solid/no shades of gray), resolution 1000-1200 dpi (dot per inch).
- Combination Halftone, combine figure and text (image containing text) and coloured graphic or in grayscale format. Resolution 600-900 dpi.
- Halftone, coloured figure or grayscale format without text. Resolution 300 dpi.

- Black and white figure should be in the grayscale mode, while coloured figures should be in RGB mode.
- Figure should not exceed the width of 8 cm (one column), 12.5 cm (1.5 columns) or 17 cm (two columns).
- Figures title typed clearly below the figure.
- Figure with pointing arrow should be grouped (grouping).
- Figures were recommended in black and white.
- Legend or figure description should be clear and complete. If compressed, the figure should be readable.
- Statistic graphic should be supplemented with data sources.
- If the figures come from the third party, it should have the copyright transfer from the sources.
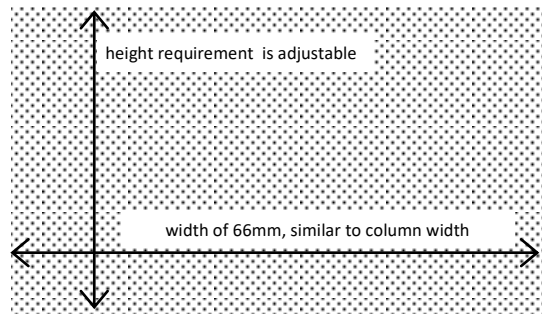

Figure 1. Illustration of Dimensional Figure of one column width. Figure dimension adjusted to the width of one column. Name the figure (diagram) written below the image. (Calibri 8.5 Justify)
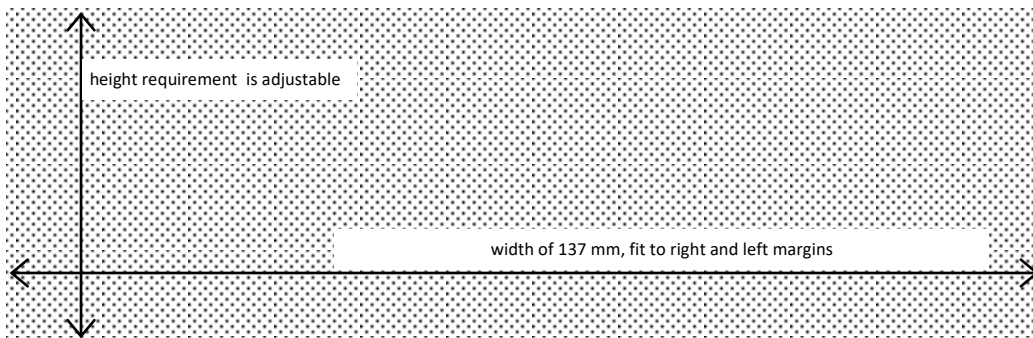

Figure 2. . Illustration of Dimensional Figure of two column width. Figure dimension adjusted to the width of two columns (137 mm). Figure were align top or bottom of the page. (Calibri 8.5 Justify)

References

1. Primary references include journal, patent, dissertation, thesis, paper in proceeding and text book.
2. Avoid self citation.
3. Author should avoid reference in reference, popular book, and internet reference except journal and private ana state institution.
4. Author was not allowed to use abstract as references.
5. References should been published (book, research journal or proceeding). Unpublished references or not displayed data can not be used as references.
6. References typed in numbering list (format number 1,2,3,…), ordered sequentially as they appear in the text (system of Vancouver or author-number style).
7. Citation in the manuscript typed only the references number (not the author and year), example: Obesity is an accumulation of fat in large quantities which would cause excessive body weight (overweight) [1]. Obesity is a risk factor of diabetic, hypertension dan atherosclerosis [2].

CONCLUSION (Calibri 10 Bold, Left, Capslock)

Conclusion of the study's findings are written in brief, concise and solid, without more additional new interpretation. This section can also be written on research novelty, advantages and disadvantages of the research, as well as recommendations for future research.(Calibri 10 Justify)

ACKNOWLEDGEMENT (Calibri 10 Bold, Left, Capslock)

This section describes gratitude to those who have helped in substance as well as financially. (Calibri 10 Justify)

REFERENCES (Calibri 10 Bold, Left, Capslock)

[1]. (Calibri 10 Justify, citation labelling by references numbering)
[2]. Vander, A., J. Sherman., D. Luciano. 2001. Human Physiology: The Mecanisms of Body Function. McGraw-Hill Higher Education. New York. (Book)
[3]. Shi, Z., M. Rifa'i, Y. Lee, K. Isobe, H. Suzuki. 2007. Importance of CD80/CD86-CD28 interaction in the recognation of target cells by CD8^{+}CD122^{+} regulatory T cells. *Journal Immunology.* 124. 1:121-128. (Article in Journal)
[4]. Syafi'i, M., Hakim, L., dan Yanuwiyadi, B. 2010. Potential Analysis of Indigenous Knowledge (IK) in Ngadas Village as Tourism Attraction. pp. 217-234. In: Widodo, Y. Noviantari (eds.) Proceed-ing *Basic Science National Seminar 7* Vol.4. Universitas Brawijaya, Malang. (Article within conference proceeding)
[5]. Dean, R.G. 1990. Freak waves: A possible explanation. p. 1-65. *In* Torum, A., O.T. Gudmestad (eds). Water wave kinetics. CRC Press. New York. (Chapter in a Book)
[6]. Astuti, A.M. 2008. The Effect of Water Fraction of *Stellaria* sp. on the Content of TNF-α in Mice (*Mus musculus* BALB-C). Thesis. Department of Biology. University of Brawijaya. Malang. (Thesis)