

Night Sky Tourism Destinations: Raising Awareness of Community Potential Score

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ABSTRACT

Argodadi Village is an area with tourism potential due to the construction of the Yogyakarta International Airport route to Yogyakarta. One of the tourism potentials in this area is the Night Sky Tour which explores celestial objects. However, this potential has not been developed due to residents' limitations in tourism management, skills in astronomy and using telescopes, and marketing of tourism services. This activity aims to develop tourism destinations based on community participation in collaboration with the Tourism Office, sub-district and local village governments, universities, and other communities. Tour services include camping activities, observing celestial bodies at night and in the morning, and team building targeting children in the 5th to 8th grade-students. Promotions carried out through social media are relatively effective by gaining the interest of 54 participants from a quota of 35 participants. The questionnaire data found that the stakeholders showed optimism in this destination of 5.31 out of a scale of 7. Meanwhile, the Night Sky Tour activity participants responded with a satisfaction response of 4.82 out of a scale of 7. The inaugural activity of this Night Sky Tour needs to be followed up in several proposed agendas to maintain continuity.

Keywords: tourist destinations, community participation, astronomy, community service.

INTRODUCTION

The development of new tourist destinations is a trend at this time. This phenomenon occurs along with the level of society to show its existence in cyberspace with photos in various

'Instagrammable' places. The ability to determine the appropriate tourist segment will determine the success of developing the tourist destination. Developing tourism activities are not only a means of taking selfies but also getting an educational aspect. It is a challenge in the world of tourism. Number of obstacles in initiating tourist destinations generally are not about the availability of places but rather management skills (Saputra, 2020). In situations where the community does not have enough of these skills, the presence of relevant experts for the empowerment process is significant.

This phenomenon also occurs in people in Argodadi, DIY. On the one hand, Kepanewon (the District) of Sedayu has declared Argodadi as an integrated tourist destination. Argodadi is a strategic area between the Yogyakarta International Airport route and Yogyakarta. The Department of Tourism has made a roadmap for developing tourist villages on this route, one of which is Argodadi. The existing destinations are Praon Cawan which serves water tourism on the Progo River (Noname, 2018) and the Kamijoro Dam, which is a spot for cycling (Andayani, 2022). The potential raised in this empowerment program is the dark sky (low level of light pollution). It allows astronomical observations during the night and day. The light pollution condition can be seen through the night sky's brightness, as shown in Figure 1. The red star symbol indicates the tourist location of the night sky. The colors on the map indicate the brightness of the sky. Dark or dark green and green colors indicate that the sky brightness level is high or the light pollution level is low. At the same time, the reddish color indicates high light pollution conditions. It can be seen in Figure 1 on the top right, which is close to the center of Yogyakarta, the color is reddish. This potential of low level of light pollution is packaged into a tour package with several accompanying activities. In several discussions with the Bantul Regency Tourism Office, Village officers, and the local community, this tourism service is a new thing that requires support from various parties and interdisciplinary perspectives.

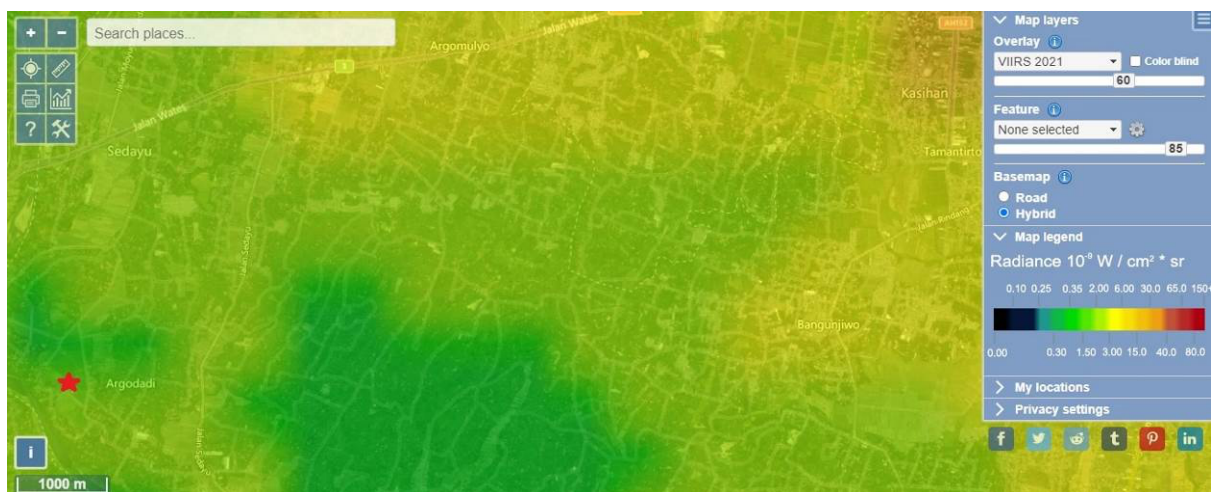


Figure 1. Map of Light Pollution in Sedayu and its surroundings. The red stars indicates the location of the night sky tour (lightpollutionmap.info).

From discussions with residents, there is a tendency to explain that the most appropriate approach to community culture is to provide opportunities for the community to be involved in the initiation of this night sky tourist destination. This choice is important considering that the long-term impact beneficiary is the Argodadi community itself. Based on participatory management theory, when people feel a sense of participation and task involvement in a

psychologically supportive climate, they will identify activities, take responsibility, and strive to contribute to the existing organization. Participatory management can be an option in the community empowerment process to achieve better performance in managing this destination (Marysya & Amanah, 2018). Participation will provide space for the community to be motivated and trained in decision-making and work effectively in teams (Husni & Safaat, 2019). Participation is a way to create an environment for changing work patterns when managing tourist destinations.

EMPOWERMENT MODEL: PARTICIPATORY MANAGEMENT

In general, participatory management theory assumes that people prefer to take a role in making decisions for themselves. Thus, through participatory management, the involvement of partners in the development of empowerment activities can be balanced (Dyczkowska & Dyczkowski, 2018). Giving greater decision-making authority and responsibility to the involved communities are the core of participatory management of community empowerment. Communities can be engaged in various activities to increase productivity, although often at a non-strategic level (Tao, Song, Ferguson & Kochhar, 2018). To date, participatory management is one of the most important and widely used strategies for developing a society that emphasizes productivity growth (Jung & Choi, 2019). Participatory groups are more than just the existence of individuals in the group. But also, their mental involvement is related to individuals' abilities, skills and interests in decision-making activities together (Garcia, Mizrahi & Korazim-Kőrösy, 2022).

Participatory management is used in organizations to satisfy engaged people and increase their productivity (Jung & Choi, 2019). By 'participatory', it means different types and levels of community involvement in activities' control and decision-making aspects (Tao, Song, Ferguson & Kochhar, 2018). All fields, methods and forms of participation illustrate that participatory management is a multidimensional concept suitable for today's complex community empowerment. The motivational model states that the community deserves to be rewarded through involvement in decision-making. Therefore, they try to improve their performance with a higher level of psychological empowerment. The exchange-based model implies that participatory behavior means more respect and concern for others and a higher level of trust in partners by showing a higher work performance (Jung & Choi, 2019). Some positive impacts of participatory management include increasing the feeling of "we" or cohesiveness in the organization, reducing the number of conflicts, increasing personal understanding of each other, and a more innovative and creative work climate (Dyczkowska & Dyczkowski, 2018).

METHODS

Context of Community Empowerment Program

This program is an implementation of Community Service funded by Dikti (Ministry of National Education). The activity initiates tourist destinations that focus on observing celestial objects using a telescope. Target tourists can be clustered by age or education. This destination is named Night Sky Tour, located in Argodadi Village, Sedayu, Bantul, Indonesia that several destinations already exist in this village, namely Praon Cawan and Kamijoro Dam. The community generally comprises farmers and ranchers, some of whom are civil servants or private companies with lower to middle-income levels. This empowerment program was implemented from April 1st to August 1st, 2022.

Implementation Stage

To grow the participation of residents around the destination is the primary goal of the community service program. Several activities focus on strengthening the commitment to the sustainability of this tourist destination. Various preliminary activities were conducted to ensure residents could run astronomy-based tourism services. The related activities are shown in Figure 2.

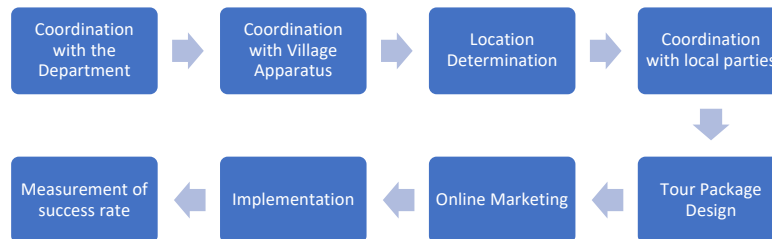


Figure 2. Stages of Community Service Activities

Instruments and Analysis Techniques

Two instruments are used to measure this tourist destination's potential, namely the level of tourist perception and the perception of stakeholders. Both instruments are in the form of a questionnaire with the Likert scale from 1 (very poor) to 7 (very good). The results were analyzed descriptively (frequency, percentage, averages, standard deviation) to conclude the level of potential. Tourist Perception Questionnaire (18 points) consists of aspects of Ease of Information and Registration (2 points), Environment (6 points), Participant Facilities (5 points), and Officer Services (5 points). The Stakeholder Perception Questionnaire consists of the potential aspects of Economic Activity Development (4 points), Jobs (4 points), Community Participation (2 points), and Tourism Area Development (4 points). Each questionnaire is given a suggestion form to include perceptions that have not been accommodated.

RESULT AND DISCUSSION

Parties Involved and Their Roles

Figure 3 shows the parties who were directly involved in implementing the inaugural activity of the Night Sky Tour. From Figure 3, it can be seen that citizen participation has not focused on the core activities of observing celestial bodies. Observation activities by operating telescopes still require assistance from the Pusat Studi Astronomi (Center for Astronomy Studies) Universitas Ahmad Dahlan (UAD). For the program's sustainability, the training in operating the telescopes for potential residents as destination managers is needed. The involvement of various parties is expected to foster commitment and better decision-making, according to a study by Jung & Choi (2019). This result can also be seen in the activities carried out by Saputra (2020) in building tourism village governance.

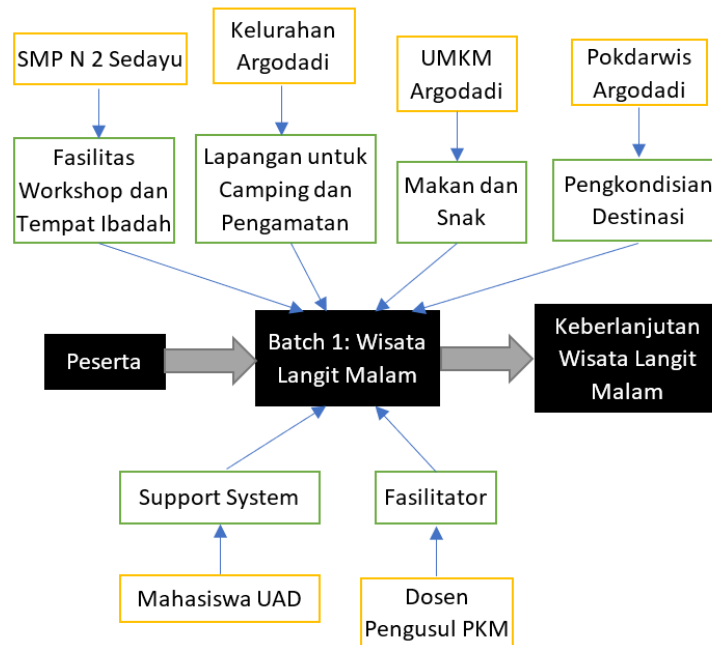


Figure 3. Parties Related to the Implementation of the Night Sky Tour

Activity Implementation

The socialization of the program was carried out using networks on social media in a relatively short time (2 weeks) with promotional materials, as shown in Figure 4. However, the number of participants who had a relatively high interest was 54 out of 30 available quotas. The distribution of participants is also rather diverse. This extensive distribution of participants makes it possible to use word-of-mouth in services (Husni & Safaat, 2019).



Figure 4. Promotional Materials via Social Media

At the time of implementation, the activities varied between observing celestial bodies and several other activities such as (training on reading sky maps, techniques for taking pictures of celestial bodies, team building, and bonfires). During the implementation, participants stayed

in the tents provided for two days and one night. The facilities for worship rooms, training, and bathing use facilities belong to SMPN (The State of Junior High School) 1 Sedayu, which already has a collaboration with UAD. Residents provide food and drink during the activity. All these facilities are packaged at the cost of 120 thousand Rupiah to 170 thousand Rupiah, according to the available tour packages (See Figure 4). Figure 5 shows the various activities during this tour.



Figure 5. Various Night Sky Tourism Activities

Level of success

Stakeholder Response

During the preparation, discussions were held with residents who would become tourism destination businesses. Furthermore, at the opening of the inaugural Night Sky Tour, various parties were present, namely the Tourism Office, Agriculture Service, Education and Culture Office, Pokdarwis (The Tourism Community Group), Kapanewon (sub-district), Dusun (village), and residents. In discussions with stakeholders, they generally expressed optimism about the program's sustainability. Local government of Argodadi stated that this destination is in line with the program being developed by the District, making destinations at several points. This statement was also supported by the Head of the Bantul Regency Tourism Office, who made the Sedayu area (including Argodadi in it) as a tourist destination that took people's mobility from Yogyakarta International Airport to Yogyakarta. The Department has also promised to include this destination in the Bantul City tourism activity schedule which was released at various events. The complexity of the multiple interests of citizens needs to be discussed to foster optimum participation, as stated by Garcia, Mizrahi & Korazim-Körösy (2022) regarding community empowerment.

By looking at the enthusiasm of the participants of the Night Sky Tour, which participants from outside Yogyakarta dominate, the potential is relatively high. The obstacle presented by the community of prospective tourism managers is that there is not yet one of the residents who can operate a telescope and understand astronomy well. Meanwhile, from the readiness of accommodation (tents, meals, place), these are insignificant problem. Since, they can be solved

by the community with various traditional local activities, such as feasts, weddings, and village clean-ups. The Pokdarwis that were formed at the time of the initiation of this program are also optimistic about this activity. Still, it is necessary from the start to emphasize clean behavior for all parties, including suggesting that from the beginning, there is a sorting of waste at the activity/tourism sites. Figure 6 shows the level of stakeholder optimism of as many as 17 respondents from various parties. In the follow-up development, the clarity of the duties of each party and the existence of leadership are the determinants of the sustainability of this tour related to leadership theory in the development of community participation (Dyczkowska & Dyczkowski, 2018).

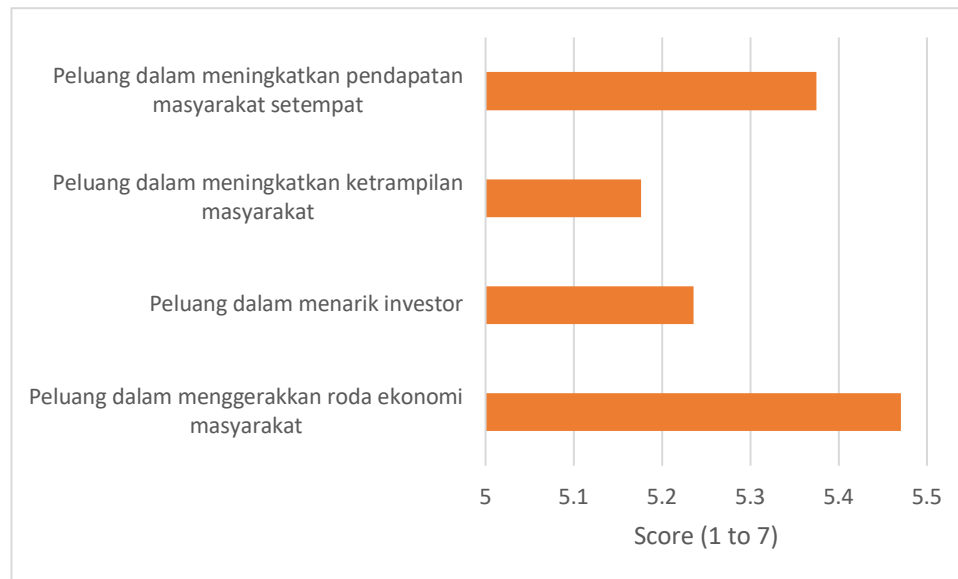


Figure 6. Level of Stakeholder Optimism in Four Aspects

From Figure 6, in all aspects, stakeholders have high optimism (average of 5.31 out of 7 with a standard deviation of 1.45). The aspect of opportunities in improving community skills (5.24 out of 7) is the lowest aspect that needs special attention. These results align with the responses of prospective managers who have concerns about skills in tourist destination management and telescope operations. To encourage economic growth, stakeholders provide input so that activities can be carried out sustainably while maintaining the authenticity of nature. Integration of tourism management with elements of local culture/art is highly expected, such as performing arts and traditional games, Javanese/local language/literature, traditional local culinary, and cultural heritage. Cultural-based tourist attractions can also be included in the series of events. The quality of the area arrangement can be improved so that all aspects can provide a unique synergy as an attraction.

Participant Satisfaction Response

Participants targeted as many as 35 people, and at the closing of registration jumped to 54 people. However, the number of participants remains limited due to the limitations of existing telescopes. The composition of participants according to origin is Semarang (3 people), Wonosobo (5 people), Cikarang (3 people), Kendal (3 people), Kulon Progo (2), Sleman (2), Bantul (11) and Yogyakarta (6). Under the promotion, the participants were students in grades 5 to 8. However, some were accompanied by their parents. The results of the analysis of

participant satisfaction responses to participation in this program tend to be in good to excellent criteria, as shown in Figure 7, (average of 4.66), facilities for participants (average 4.75), and service personnel (average 4.88). The high aspect of the participants is the ease of getting information and registration. The distribution of participants from various cities supports this finding. At the same time, other aspects tend to be almost the same below 5. Even though it is above a score of four, it is necessary to make improvements according to the response to each item, as shown in Figure 7. The fifth item is related to the atmosphere of the hill (average 4.27), and the eleventh is associated with the bathroom (4.19), the lowest item of the participant's response. Limited bathrooms that are not following the cleanliness standards of tourist destinations are still a problem. It requires coordination with partners, namely local schools. If this destination goes well, there needs to be a separate bathroom for participants.

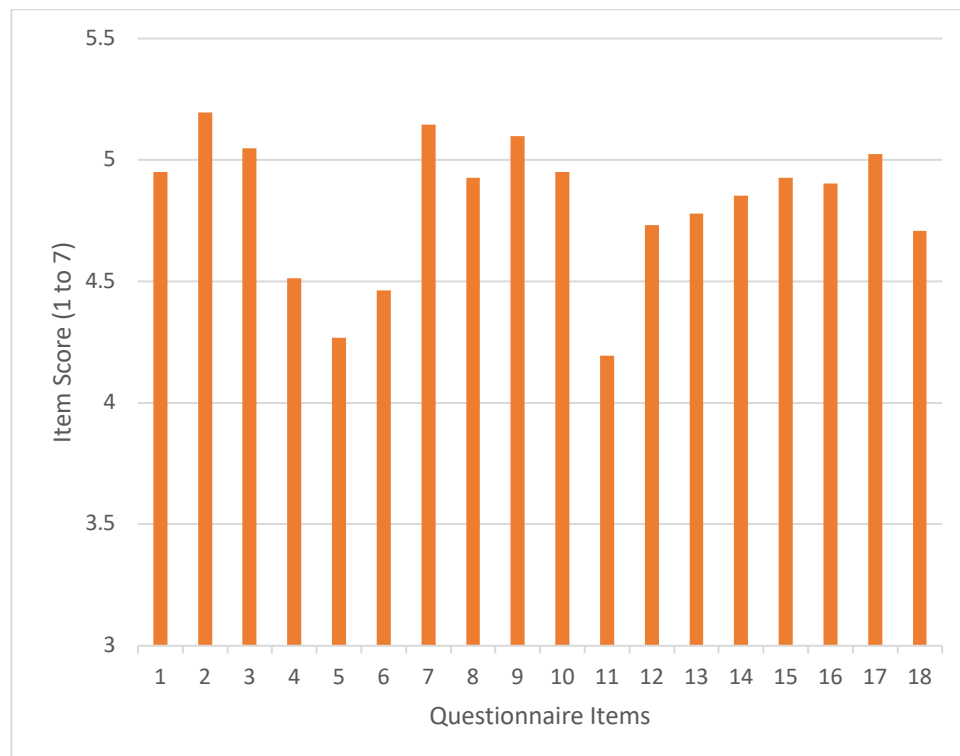


Figure 7. Responses of Tour Participants on All Items

The results of a good response need to be grown in the following service programs on a scheduled basis. Various promotional media that utilize word-of-mouth on the inaugural tour must be optimized. Other business people also carry out promising results from promotional activities like this (Marysya & Amanah, 2018; Husni & Safaat, 2019).

Follow-up

Some of the essential follow-ups for sustainability are training destination management residents on basic astronomy knowledge and using telescopes facilitated by UAD. Coordination with several local tourist destinations needs to be done to increase the variety of activities, such as Praon Cawan, IoT-based Pilot Gardens, and Kamijoro Dam, which Kapanewon can facilitate. In addition, there needs to be tourism management training by utilizing digital technology,

which the Tourism Office will reduce. Figure 8 shows four tourist destinations that will be integrated into the program of several tour packages.



Figure 8. Four Integrated Tourist Destinations. They area Praon Cawan, IoT-based Pilot Gardens, Kamijoro Dam, and Night Sky Tourism of Argodadi

CONCLUSION

Night Sky Tourism Destinations is a unique tour service for fans observing celestial bodies. As new tourism, there are number of challenges for residents as destination managers so that this activity can be sustainable. In the implementation of the inaugural tour, the potential for tourism development shows the participants' high potential. Various parties, such as the Tourism Office, show policy support and the development of resources that can manage tourist destinations. Integrating this destination with several other destinations in the same area is an alternative for citizen synergy in developing tourism that utilizes the economic growth path from Yogyakarta International Airport to Yogyakarta City.

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