



## **Community Participation in Environmental Conservation Based on Dawuhan Tradition in Tegalwaton Village Spring, Semarang Regency**

Andini Sukma Pratiwi<sup>1\*</sup>, Andhina Putri Heriyanti<sup>1</sup>

<sup>1</sup>Faculty of Mathematics and Natural Sciences, Semarang State University

\*[andinisukmapratiwi@students.unnes.ac.id](mailto:andinisukmapratiwi@students.unnes.ac.id)

### *ABSTRACT*

The form of community participation, especially in the environmental sector, lies in the relationship between humans and the natural environment in which they live. The main key to the success of environmental policy programs lies in their social aspects. Community participation can be used as a real action for the realization of environmental policy programs that can cause changes to human behavior itself and improve the quality of the surrounding environment. In this case, the problem and benchmark for researchers is the level of community participation in the dawuhan tradition in Tegalwaton Village towards springs as a form of environmental conservation, whether the village community has truly participated in carrying out their obligations as a responsible community, as well as discipline in protecting the local environment through the Dawuhan tradition. This research was conducted in June 2023 in Tegalwaton Village, Semarang Regency. The research method used in this study is the observation method. The data analysis used is descriptive, descriptive statistical analysis, and data reduction. Based on the calculation of the level of community participation in environmental conservation in the Dawuhan tradition in the spring of Tegalwaton village got a combined total score of 2,538, which is classified as very high. The finding of the level of community participation in this activity is shared control between the community and outsiders interacting as far as possible simultaneously.

**Keywords:** *Local Wisdom, Environmental Conservation, Community Participation Rate*

*Received:* March 21, 2024; *revised:* March 30, 2024; *accepted:* April 29, 2024.

*Citation:* Pratiwi, A. S., Heriyanti, A. P. (2024). Community Participation in Environmental Conservation Based on Dawuhan Tradition in Tegalwaton Village Spring, Semarang Regency. *Indonesian Journal of Earth and Human*, 1(1), 17-26.

### **1. INTRODUCTION**

Water resources are the potential capabilities and capacities of water that can be utilized by human activities for socio-economic activities. The community generally uses various water sources, such as seawater, rainwater, groundwater, and surface water. Good management of natural resources produces the greatest benefit for humans by not sacrificing the sustainability of natural resources themselves, one of which is the culture of Local Wisdom (Badrun et al., 2023).

Local wisdom is further expressed by two main roles: fulfilling water adequacy for people's livelihoods and lives and maintaining harmonious interactions between the community, Natural Resources, and the surrounding environment. The form of

community participation, especially in the environmental sector, lies in the relationship between humans and the natural environment in which they live. The main key to the success of environmental policy programs lies in their social aspects. Community participation can be used as a real action to realize environmental policy programs that can cause changes to human behavior and improve the quality of the surrounding environment (Hidayati, 2017).

The natural condition of Tegalwaton Village is at 725 meters above sea level, so the location is predominantly cool and still naturally equipped with a source in each dusunya, besides that one of the springs in Tegalwaton Village has the potential to be a good water resource used as bathing, irrigation of plantations, livestock needs or as a tourist spot. The existing springs are used as water resources and as a tourist spot for the people of Tegalwaton Village. Besides that, there is also a tradition that is carried out from generation to generation to manage the source of the spring so that it is maintained. The tradition that until now the people of Tegalwaton Village is the Dawuhan tradition; this tradition has become a characteristic of Tegalwaton Village. The Dawuhan tradition is carried out jointly by the village community by cleaning up the spring, which is carried out with all series of events attended by the people of Tegalwaton Village.

In this case, the problem and benchmark for researchers is the level of community participation in the dawuhan tradition in Tegalwaton Village towards springs as a form of environmental conservation, whether the village community has really participated in carrying out their obligations as a responsible community, as well as discipline in protecting the environment through the Dawuhan tradition.

This study aims to analyze the level of community participation in the Dawuhan tradition in Tegalwaton Village towards spring water sources as a form of environmental conservation. The research conducted focuses on Community Participation in the Community Sanitation Program (SANIMAS). This study is different because it is about community participation in environmental conservation based on the Dawuhan tradition in Tegalwaton Village (Surotinojo, 2009).

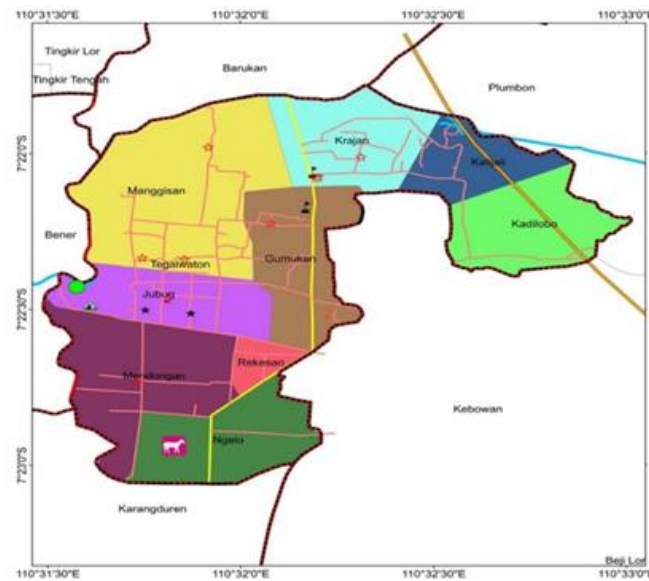
## **2. METHODS**

### **Time and Place**

This study took approximately 5 months. The research stage starts with the process of preparing tools and materials for research and ends with the data processing process. The process of collecting research data is estimated to take 1 month. The location of the study can be seen in Figure 1.

### **Population dan Sample**

According to the study, population is the totality of each element to be studied that has the same characteristics; it can be individuals of a group, event, or something to be studied. Popuasi, in this study, is the community of Tegalwaton Village, which has a population of 4,783 (Handayani, 2020). Sugiyono (2018) posits that the sample is part of the number and characteristics possessed by that population. This study uses the Slovin formula because the number must be representative in sampling so that the research results can be generalized, but this can be done with the Slovin formula and simple calculations.



**Figure 1.** Place of Research

$$n = \frac{N}{1+N(e)^2} \dots (1)$$

The Slovin formula for determining the sample is as follows:

$n$  = sample size/number of respondents

$N$  = Population size

$e$  = Percentage of looseness in sampling error accuracy that can still be tolerated,  $e = 0.1$

$n = 4783 / (1+4783(0,1)^2)$

$n = 4783/48,83 = 97.9$ . Rounded by researchers to 100.

Based on the above calculations, the sample of respondents in this study was rounded up to 100 Tegalwaton Village communities.

### Data Sources

Primary data were collected through several ways, namely questionnaires, observations, and interviews. Secondary data in this study is in the form of literature studies/literature studies, the central statistics agency as a reference in looking at population figures and village report data.

### Data Collection Techniques

#### 1. Observation

According to observation, it is a data collection technique with specific characteristics compared to other techniques. Observations in this study were made to obtain complete information about community participation in dawuhan traditions in environmental conservation based on local wisdom, and researchers observed how the environmental condition of Sendang Senjoyo Springs (Sugiyono, 2018).

#### 2. Questionnaires and Measurement Scales

In this study, the questionnaire is open and direct so that respondents can choose available answers to get information, and questionnaires are given directly to respondents. In operation, these variables are all measured by measuring instruments in the form of questionnaires that satisfy Likert scale-type statements. According to, the Likert scale measures the attitudes, opinions, and perceptions of a person or group of people about social phenomena. For each answer choice scored, the respondent must describe and support the statement (positive) or not support the statement (negative) (Sugiyono, 2018).

**Table 1.** Measurement Scale

<b>Respondent's Answers</b>	<b>Score</b>
<b>Strongly disagree</b>	<b>1</b>
<b>Disagree</b>	<b>2</b>
<b>Disagree Less</b>	<b>3</b>
<b>Agree</b>	<b>4</b>
<b>Totally Agree</b>	<b>5</b>

### 3. Interview and Documentation

The interview was conducted by giving a series of questions directly to the local community, caretakers, and village heads to find out more clear information about the Level of Community Participation in the Dawuhan Tradition as a form of environmental conservation. Documentation is carried out to obtain secondary data; information about secondary data needed by researchers can be obtained through daily records, archives, photos, and others.

#### Data Analysis Techniques

The steps in analyzing data on forms of community participation are as follows (Princess, 2019). Descriptive statistics are statistics used to analyze data by describing or describing the data that has been collected as it is.

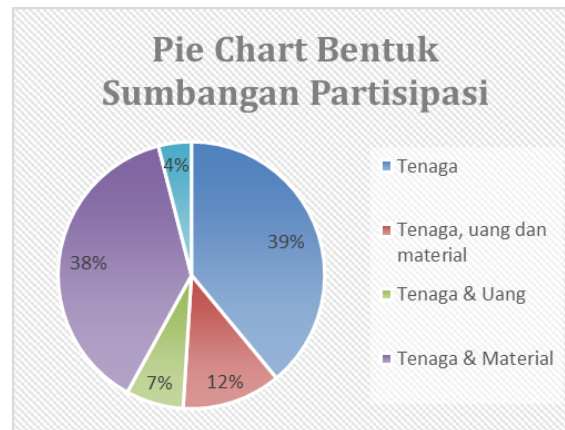
- a. Create parameters to measure participation rates
- b. Convert qualitative scores to quantitative scores
- c. Tabulate scores

**Table 2.** Participation Rate Scoring Rate Criteria

<b>Score Interval</b>	<b>Criterion</b>
<b>2524-3004</b>	<b>Very High</b>
<b>2043-2523</b>	<b>Tall</b>
<b>1562-2042</b>	<b>Quite High</b>
<b>1081-1561</b>	<b>Low</b>
<b>600-1080</b>	<b>Very Low</b>

### 3. RESULTS AND DISCUSSION

The figure below shows that most respondents follow each stage of participation both in energy, energy, money and material, energy and money, energy and material and money & material. Donations in the form of energy 39 respondents (39%), donations in the form of energy, money and materials 12 respondents (12%), donations in the form of energy and money 7 respondents (7%), donations in the form of energy and materials 38 respondents (38%), donations in the form of money and materials 4 respondents (4%). It can be described with a pie chart as follows.



**Figure 2.** Pie Chart Form of Participation Donations

The community also provides forms of participation in Traditional Dawuhan activities, such as thought donations. In meetings held related to carrying out the activities carried out or evaluating the activities that have been carried out for the next activity.

**Table 3.** Frequency Distribution of Forms of Thought Contribution in Meetings

No	Category	Frequency	Presented
1	Proposal	54	54
2	Suggestion	24	24
3	Criticism	22	22
	Sum	100	100

The table above shows that in the meeting attended by respondents, most of them contributed their thoughts, namely as many as 54 respondents (54%) in the form of proposals, giving suggestions as many as 24 respondents (24), giving criticism as many as 22 respondents (22%). This illustrates that some respondents prefer to give suggestions in meetings.

### Results of Participation Rate Analysis

Of the 6 variables of 5 indicators with a scale of between 1 to 5 each, then with a sample of 100 respondents, it can be seen that measuring the minimum score for the overall community participation rate ( $1 \times 6 \times 100$ ) is 600 and the maximum score  $\{(3,000 \div 6 \times 100)$  is 3,000, then the interval of the maximum and minimum scores is  $\{(3,000 - 600 / 5)\}$  is 450. So that it can be known the level of community participation is:

- Very High: 2524-3004
- High: 243-2523
- Quite High: 1562-2042
- Low: 1081-1561
- Very Low: 600-1080

Table 4 below shows that the total score obtained is 2,538, where the number is included in the very category, so the participation rate can be concluded.

The community of Tegalwaton Village, Semarang Regency, in the Dawuhan Tradition, can be said to be very high because it is in the interval 2524-3004. In Mulyana's opinion (2012), the length of time a person lives in a certain environment and his experience interacting with that environment will affect one's participation. The longer he lives in a particular environment, the more his sense of belonging to the environment tends

to be more visible in his participation in each of these environmental activities. Attendance in discussions at meetings is quite high; the community answers most on the scale of agreeing rather than strongly agreeing. This is in accordance with opinions; a person's free time to be involved in organizations or activities in the community is also influenced by the type of work; many residents who have been busy with their main work or daily activities are less interested in attending meetings (Nurbaiti et al., 2019), discussions or seminars. The level of participation in the implementation of service work in the dawuhan tradition is quite high, of course, because the spirit of the community is quite high, and this activity has made it a forum to strengthen fellow citizens. This can be strengthened by Kusnaedi's (2006) opinion that teamwork is a positive attitude that supports the development of the village and needs to be maintained as a manifestation of the habit of doing a job together. Respondent's answers to the activity of Dawuhan Tradition from 100 samples almost followed the activity. This calculation can be seen from the percentage who answered very actively in the activity, which was 56 respondents (56%). Respondents who answered agreed with as many as 44 respondents (44%). In his opinion, community participation, in general, can be seen from the participation of the community, which consciously and voluntarily participates in various forms ranging from planning to participation in various things in the village. Kurniyati (2019) states that community participation in an activity is important. Thus, the activity will be successful if it involves all groups of people participating in program contributions; according to Taufiqullah (2007), community participation in terms of energy donation can also be interpreted as the form of community participation being related to its ability to contribute.

Based on the previous table, it can be said that the frequency of community activity contributing to the overall mind contributes to participation. The percentage calculation can be seen in the bar chart below. According to him, one form of community participation in village development is contributing ideas, which allows the community to convey ideas and criticism in the village development implementation plan (Astuti, 2013).

### **Results of Participation Rate Analysis**

In the initiative stage of Dawuhan Tradition activities, the role of the village outsider is the most dominant, so at this stage, it is classified at the indirect level. This is in line with the opinion of Hamdi et al. (1997) that the indirect stage is the same as no participation, but the information is something specific. Two factors are needed for the success of this indirect participation: the availability of reliable and adequate data and expertise in collecting and processing data. At the planning stage, community participation is at the level of shared control. According to Hamdi et al. (1997), the community and outsiders simultaneously interact as far as possible at this stage. Divided decision-making requires relatively small groups to achieve effective results.

The discussion needs to include core groups of stakeholders representing various fixed interests in society. The design stage is a very technical stage and must be carried out by people who are experts in their fields because the design stage, especially in environmental conservation, both in waste management and in the preservation of springs, needs help from the community and support from outsiders. Both parties need each other to accommodate each other's activities, including in levels (shared control). In the stages of implementing Dawuhan Tradition activities, community participation is at the level of shared control. In the maintenance stage of Dawuhan Tradition activities, the level of participation of the Tegalwaton Village community is at the highest level, namely full control. The role of the village government and the outsider is only enough to make

observations or provide something technically helpful when needed. Hamdi et al. (1997) explain that society dominates and outsiders as practitioners are resources. Outsiders who make observations or provide something are technically helpful when needed.

**Table 4.** Calculation of Participation Rate Score with Likert Scale

No	Category	Scale	Frequency	Shoes
<b>1</b>	<b>Meeting Attendance</b>			
<b>A</b>	Very Agree	5	49	245
<b>B</b>	Agree	4	50	200
<b>C</b>	Less Agree	3	1	3
<b>D</b>	Disagree	2	0	0
<b>And</b>	Very Disagree	1	0	0
				<b>448</b>
<b>2</b>	<b>Lively Discussion</b>			
<b>A</b>	Very Agree	5	26	130
<b>B</b>	Agree	4	58	232
<b>C</b>	Less Agree	3	16	48
<b>D</b>	Tidak Sejuju	2	0	0
<b>And</b>	Very Disagree	1	0	0
				<b>410</b>
<b>3</b>	<b>Join the Service</b>			
<b>A</b>	Very Agree	5	50	250
<b>B</b>	Agree	4	48	192
<b>C</b>	Less Agree	3	2	6
<b>D</b>	Disagree	2	0	0
<b>And</b>	Very Disagree	1	0	0
				<b>448</b>
<b>4</b>	<b>Liveliness in Activities</b>			
<b>A</b>	Very Agree	5	56	280
<b>B</b>	Agree	4	44	176
<b>C</b>	Less Agree	3	0	0
<b>D</b>	Disagree	2	0	0
<b>And</b>	Very Disagree	1	0	0
				<b>456</b>
<b>5</b>	<b>Donations in the Program</b>			
<b>A</b>	Manpower, money, and materials	5	39	195
<b>B</b>	Power and Money	4	12	48
<b>C</b>	Money Power Material	3	7	21
<b>D</b>	Money and Materia	2	38	76
<b>And</b>	Power	1	4	4
				<b>344</b>
<b>6</b>	<b>Mind Donation</b>			
<b>A</b>	Proposal	5	54	270
<b>B</b>	Suggestion	4	24	96
<b>C</b>	Criticism	3	22	66
<b>D</b>	None	2	0	0
<b>And</b>	Tidak Ada	1	0	0
				<b>432</b>
<b>TOTAL SCORE</b>				<b>2538</b>

### Identify factors influencing community participation.

To determine the relationship between factors that influence community participation, namely internal factors (occupation, education level, gender, age), with the form and level of community participation in implementing the Dawuhan Tradition

activity program in this study is a descriptive analysis technique with frequency distribution.

### Internal Factors

Internal factors originate in the community itself, namely individuals and the unity of the group within it. According to Slamet (2013) Theoretically, there is a relationship between individual characteristics and the level of participation, such as age, education level, type of work, length of time as a member of society, amount of income, involvement in development activities will greatly affect participation.

According to respondents' answers and survey results at the research location, the interview results obtained were more in women, namely 62 respondents (62%), while men were 38 respondents (38%). The number of respondents was more women because researchers attended village PKK management events and RT / RW associations with several female respondent associations more than male respondents; this is because, at the time of the RT/RW association, male respondents had other activities during the schedule of the association. Wulandari's opinion (2016) also explains that men tend to have more time than women because part of women's time is used to take care of the household, so the allocation of work time for men tends to be greater than for women.

**Table 5.** Characteristics of Respondents

No	Category	Frequency	Percentage
<b>1</b>	Gender		
<b>a</b>	Woman	62	62%
<b>b</b>	Man	38	38%
<b>2</b>	Age		
<b>a</b>	20 to 29 years old	19	19%
<b>b</b>	30 to 39 years old	36	36%
<b>c</b>	40 to 49 years old	30	30%
	>50 years	15	15%
<b>3</b>	Work		
<b>a</b>	Merchant	15	15%
<b>b</b>	Student	6	6%
<b>c</b>	Farmer	5	5%
<b>d</b>	Private Employees	26	26%
<b>e</b>	Housewives	48	48%

From the results of the study, it can be seen that at the age of 30 to 39, respondents had a higher level of participation, then followed by people aged 40 to 49 years, and continued with the age of 20 to 29 years, people aged 30 to 39 years most follow at the age of 32 to 35, 32 years as many as 12 people 35 years as many as 10 people, and people aged



41 to 44 years most follow at the age of 41 & 44, people aged 41 years as many as 14 people and 44 years as many as 10 people. This can be influenced by people who are accustomed to participating in these activities, and the dominance obtained also comes from Housewives who still have free time in these activities, while in other positions, the community has other activities or activities.

### External Factors Affecting Community Participation

- **Village government leadership**

The community is a combination of several individuals who have different traits and characters, so to unite different traits and characters, of course, strength is needed, namely the ability to dominate by the village government leader, in this case, the village head as a supporter of these activities, without sharing the village head with the community, of course, the activities do not run smoothly and do not run simultaneously. According to Kaehe et al. (2019), key bettors are those who have a very significant influence or an important position to succeed in the program.

- **Facilities**

In carrying out the duties of the village head and his equipment, a place or a location is needed to carry out the Dawuhan tradition activities. The location that has been determined by the village apparatus and the community is an important means of carrying out its functions, and the role of a leader must be able to set a good example so that various useful activities can be created for Tegalwaton Village and the Tegalwaton Village Community. According to (Islamiah, 2018) also states that facilities are one of the factors that influence village officials and village heads in carrying out their duties and functions.

### 4. CONCLUSIONS

Based on the calculation of the level of community participation in environmental conservation in the dawuhan tradition in the spring of Tegalwaton village got a combined total score of 2,538, which is classified as very high. The finding of the level of community participation in this activity is shared control between the community and outsiders interacting as far as possible simultaneously. Dawuhan traditions are less helpful overall and less helpful in the long term, as they are only done once a year.

### REFERENCES

- Astuti, D. F. (2013). *Community Participation in Village Community Development through Micro Processing of Etawa Goat Milk in Tlogoguwo, Kaligesing, Purowrejo, Central Java (Thesis)*.
- Badrun, B., Zulharnah, H. R., Sukri, A. S., Rustan, F. R., Sari, D. P., & Bungin, E. . R. (2023). *Water Resources Infrastructure Planning*. TOHAR MEDIA.
- Handayani, R. (2020). *Social Research Methodology*. Trussmedia Grafika.
- Hidayati, D. (2017). Fading Value of Local Wisdom of the Community in Water Resources Management. *Population of Indonesia*, 11 (1), 39–48.
- Kafiar, F. P. (2013). Local Wisdom of the Amungme Tribe in Natural Resources and Environmental Management in Mimik Regency, Papua. *Ecoscience*, 5 (1), 35–43.
- Kurniyati, Y. (2019). *Community Participation in Village Development in Mulyorejo Village 1, Bunga Mayang District, North Lampung Regency (Dissertation)*. UIN Raden Intan Lampung .
- Mulyana, S. (2012). *Community Participation in Village Development in Banjar Panjangv Pelalawan Village (Dissertation)*. Sultan Syarif Kasim State Islamic University of Riau.

- Nurbaiti, S., Robiah, & Aziz Nur Bambang. (2019). Factors Influencing Community Participation in Implementing Corporate Social Responsibility (CSR) Programs. *Proceedings of Biology Education Conference*, 14 (1), 224–228.
- Oktarini, H. (2014). *Community Participation in Community-Based Environmental Conservation: Implementation of Clean Times Program by Paguyuban Bendolole Asri in Kelurahan Kricak Tegalrejo District, Yogyakarta City (Dissertation)*. Gajah Mada University.
- Princess, I. M. (2019). Community Participation in the Implementation of the Climate Village Program in Soka Hamlet, Lerep Village, West Ungaran District, Semarang Regency in 2019. *Edu Geography*, 7 (1), 1–9.
- Sugiyono. (2018). *Quantitative Research Methods*. Alfabeta.
- Surotinojo, I. (2009). *Community Participation in Sanitation Infrastructure Maintenance in Bajo Village, Tilamuta District, Boalemo Regency, Gorontalo (Dissertation)*. Diponegoro University.