Participation of Informal Institutions in Ecotourism Management at Clungup Beach in Southern Malang

*Harsuko Riniwati, Nuddin Harahab and Zaenal Abidin

Socio-Economic of Fisheries Study Program, Faculty of Fisheries and Marine Sciences, Brawijaya University Malang City, Indonesia;

*Corresponding author: riniwatisepk@gmail.com

Abstract

Research question on how informal institutions should participate in ecotourism development motivated the researchers to conduct this study. This research was aimed to analyze the informal institutions participation in ecotourism management at Clungup Beach, Southern Malang Regency. Has the participation of informal institutions been maximum? How informal institutions should increase their participation in achieving ecotourism goals at Clungup beach? The data were obtained from structured questionnaires which were distributed to all ecotourism managers at Clungup beach. The research variables consisted of four dimensions: attendance frequency in meeting, group participation in discussion, involvement in physical activity and willingness to contribute or donate. Then, the data were analyzed by using MDS (Multidimensional Scaling). The results showed that the participation of informal institutions in ecotourism management at Clungup beach has not been optimal. Thus improvements to all dimensions are needed: attendance at meetings, group participation in discussions, involvement in physical activities and willingness to contribute or donate. Suggestions based on this research are increasing the participation of informal institutions in ecotourism management by giving equal responsibility, freedom in decision making, authority in proposing idea and compulsion with positive aims such as imposing ideas and demanding them to participate in discussions and other activities.

Keywords: informal institutions, participation and ecotourism.

Introduction

Participation definition means the participation of a person either as an individual or a group within a particular activity. Participation occurs because of the interaction between individuals and members of the community. The purpose of community’s participation within activities is to get benefits. Community participation is a form of awareness, caring, and community’s responsibility towards the importance of development that aims to improve the quality of life (enhancement). Thus, developmental phase does not solely belong to government’s duty. It requires community involvement during the process of quality improvement (Theresia, et al, 2015).

Research results in various countries about participation show the following findings: employee participation is positively influenced by the supervisor's participation style and the benefit / usefulness of the program. The supervisor's participation style is as
follows: trustworthy; able to represent the voice of the community; competent, balanced and fair (Coyle-Shapiro, 1999; Lopez, 2015). Communities can leverage the participation level on CBC (Community Based Conservation) programs if there is a balance between economic, social and conservation benefits (Nkambule et al., 2016).

Ecotourism management involves several things: observing local/ global-level conventions; maintaining natural resource wealth; anthropic culture and heritage; management in terms of environmental protection; waste management; use of energy sources and the sustainability of the utilization of existing areas (Popşa, 2015). To maintain a sustainable tourism, a certification should be carried out, for example like ecotourism and sport tourism certification (EST). It should cover vacation, green, and action oriented, Bowman (2011). The results indicate that sustainable tourism certification must meet several conditions: performance should be set as a primary base; sustainability attributes should be personalized with local conditions; programs and logos used must contain local essence and concentrate on national branding; and the program should not be initiated ambitiously.

Understanding the power of certification is critical since it promotes the concept of sustainable tourism development in order to minimize environmental and socio-cultural impacts as well as maximizing economic benefits (Singh, Dash et al., 2016). Ecotourism development in Jatiluwih Village has positively affected the economic, social, cultural and environmental aspects of the surrounding community (Agung et al., 2015; Kayat & Zainuddin, 2016). On economic aspect, especially, the influence of ecotourism is at medium level, or in other words the effect is not too large. Therefore, ecotourism administrators are recommended to continue to develop this tourism sector because it has positive influence for economic, social, cultural and environmental aspects. On the other hand, to overcome the low influence in the economic aspects, it is advisable to develop empowerment programs for local communities.

To have similar impact on economic, social and environmental factors, the development of ecotourism could refer to research results that biological diversity and the presence of endemic species are major forces. For example, the existence of natural area around SNPA regard as chances (opportunity). On the contrary, the lack of infrastructure and ecotourism regulation are considered to be weaknesses, as well as the lack of management planning which is believe as the main threat (Öztürk, 2015). Other major attractions based on research results in Jatiluwih Village are including rice field terrace views, mountainous forest, fresh air, and traditional water management systems. In addition, it is also supported by the distinctiveness of social culture in the unique village of Jatiluwih (Agung et al., 2015).

**Literature Review**

The results of Barić et al. (2016), the success of ecotourism development is also required a good cooperation between ecotourism managers, environmental conservation and local communities. Furthermore, Hounaklang (2016) states that an alternative to tourism management in Thailand is a participatory process of local communities. It relates to the constraints and factors contributing to management problems; owner perceptions and awareness of the impact of tourism on social; economic and environmental dimensions; visitor motivation; travel types; and process of taking decisions and other aspects that determine the sustainability of tourism. This study concludes that Pong Pang homestay visitors provide positive feedback on alternative tourism management in the region.
Kayat and Zainuddin (2016) add that from the result of the research, there are two groups of criteria that determine the success of program. Competitive criteria include several items: the uniqueness and satisfaction of provided facilities; products and services; effective marketing; and entrepreneurship. The sustainability criteria are the capability of generating profit; participation and community support; as well as conservation efforts. Moreover, State and Bulin (2016) say this study has led to the conclusion that responsible tourism is defined as a tourism that has an orientation towards nature conservation and minimize the negative impacts of tourism on the environment. In addition to being educative, it should be also knowledgeable and informative and is able to promote local culture behavior and ethics to all of parties involved.

Ogbeide and Harrington (2011) imply that the results show that larger organizational structures (multi-unit companies) do not require higher levels of engagement at all hierarchical / departmental levels than smaller organizational structures (single unit company). However, larger organizational structures require a higher level of engagement at the middle and lower levels of management to successfully maximize the strategic process. A research will be administered to analyze how the middle and lower level management conditions may have high involvement in order to maximize the strategic process. Therefore, it is necessary to conduct further research.

Pellel et al. (2012), affirm that a greater perception of participation can lead to dissemination of organizational strategies and improve policy effectiveness. Next, Stevens et al. (2010), declare that choice and planning orientation will help to determine the level of community participation during the site planning review.

Mohd-Shahwahid et al. (2016), say that local communities have a greater role. But it does not mean that they will threaten other stakeholders; the government especially. Sadly, policy-making remains made by the government and local communities are not highly involved in decision-making practice. Therefore, the researcher suggests that all of management elements; including local people; should be involved in the decision-making process so that ecotourism management can run toward a betterment. In implementing environmental development, Indonesia needs more community participation in ecotourism management. One of the ecotourism examples is at Sendang Biru Beach, particularly in Clungup Beach; it is managed by a non-governmental organization called Bhakti Alam. To improve the sustainability of Bhakti Alam institution's participation in ecotourism management, it is necessary to analyze the dimensions of sustainability management institution's participation. It is applied due to the needs of finding out the strengths and weaknesses that later on will be utilized as materials to improve the institution's sustainability status in ecotourism management.

Research objectives:
1. Analyze the sustainability status of each dimension of group participation rate (non-governmental organization) in ecotourism management
2. Analyze the attribute sensitivity of each dimension of group participation rate (non-governmental organizations) in ecotourism management
3. Analyze the sustainability status of the participation rate of non-governmental groups in ecotourism management.

Research Method
The used research of informal institutions participation was a quantitative study by using MDS (Multidimensional Scaling) method. An analysis of the sustainability of informal institution participation in ecotourism management in Clungup Beach of Malang Selatan using Rapfish or Rapid Appraisal for Fisheries method which was
modified according to the needs of this research. In this analysis, four dimensions were used for sustainability measurement: the attendance frequency dimension in the meeting; group activity dimension in discussions; dimension of involvement in physical activity; and dimension of willingness to pay contribution or donation. Each dimension used 8 attributes. Each dimension ought to be determined by each of its attributes, in which the number of attributes per dimension was customized to the needs of sustainability research. The selected attribute reflected the level of sustainability in each dimension, and was modified to the availability of information that could be obtained from the character of resource reviewed in the research area. When any attribute was already determined, then each attribute was given a scale of 1 to 3. Scale 1 showed an ugly / poor sustainability measurement, while a maximum scale of 3 meant a good / high sustainability measurement. The number of attributes used in the study can be seen in Table 1.

Table 1. Attributes number of each sustainability dimension of informal institution participation level of ecotourism management.

<table>
<thead>
<tr>
<th>No.</th>
<th>Dimensions</th>
<th>Attribute Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Frequency of attendance at meetings</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Group activity during discussion session</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Involvement of physical activity</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>Willingness to pay dues / giving donations</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>32</td>
</tr>
</tbody>
</table>

List of attributes used by each dimension is as follows:

a. The frequency dimension of attendance at meetings
   1. Unwillingness attendance
   2. Attend simply to fulfill the invitation
   3. Attend to obtain information without expressing an opinion
   4. Attend to obtain information and express opinions, but opinions are not taken into account
   5. Attend and give an opinion, but only a few are taken into account
   6. Attend and receive equal liability sharing
   7. Attend and have the authority to make a decision
   8. Attend and able to make a decision

b. Group activity during discussion session
   1. Unwillingness discussion engagement
   2. Rudimentary discussions
   3. Gain an information and does not get discussion opportunities
   4. Gain an information and allow to discuss but the results are not taken into account
   5. Discuss actively but the results of the discussion only a few are taken into account
   6. Discuss actively and getting equal share of responsibilities
   7. Discuss actively and have the authority to make decisions
   8. Discuss actively and able to make decisions
   9. Ecosystems understanding

c. Physical activity engagement dimension
   1. Unwillingness engagement
   2. Rudimentary engagement
   3. Getting engaged without having the opportunity to convey ideas
   4. Getting engaged and have the opportunity to convey ideas but the ideas are not taken into account
   5. Getting engaged and have an opportunity to convey ideas but few are taken into account
   6. Getting engaged and share the same responsibilities
7. Getting engaged and get the authority to implement the idea
8. Getting engaged and be able to make decisions and access external funds
d. The dimension of willingness to pay dues
   1. Unwillingness to pay dues
   2. Rudimentary dues payment
   3. Paying dues and does not have the opportunity to convey the idea of utilization
   4. Paying dues and have the opportunity to convey ideas, but the ideas are not taken into account
   4. Paying dues and have an opportunity to convey ideas, but few are taken into account
   5. Paying dues and get equal share of responsibilities
   6. Paying dues and have the authority to implement the idea
   7. Paying dues and able to make decisions and access funds from outside

Basically, the Rapfish method used MDS or Multidimensional Scaling statistics techniques. MDS was a method commonly used for problems involving attribute components or dimensions to evaluate the effect of each component on the observed problem based on data from a group of subjects (Wickelmaier, 2003). The value for each of these attributes was obtained from both primary and secondary data. After the data was collected, the analysis process was continued using the help of Microsoft Excel 2003 software with additional RAPFISH Add-ins.

The tests relating to Rapfish MDS were as follows: feasibility and significance tests; and assessment of sustainability status.

**Feasibility of Sustainability Model**
The feasibility of sustainability model was performed by measuring the level of goodness or goodness of fit between the distance of the estimation point with the origin point through the calculation of S-stress. The technique used to determine the goodness of fit was conducted by using least square method based on the root of Euclidian distance (squared distance) or commonly called as algorithm of scale method (ALSCAL). This ALSCAL method optimized the squared distance to the square data of the origin (Oijk). The S-Stress value was calculated by the following formula:

\[
S\text{-stress} = \sqrt{\frac{1}{m} \sum_{i=1}^{m} \sum_{j=1}^{m} \frac{(d_{ij}^2 - O_{ij}^2)^2}{\sum \sum O_{ij}^4}}
\]

Low S-stress values indicated high accuracy (good fit), while high S-stress values indicated poor accuracy (poor fit). The measurement commonly used as a reference was if the value of S-Stress less than from 0.25, then the model of sustainability was considered to be good fit. However, if it was more than 0.25. It had a meaning that the model was poor fit.

**Assessment of Sustainability Status**
Pitcher and Preikshot (2001) classified the results of sustainability measurements of each attributes dimension. They were mapped into two points; bad-down point and good-up point. Classification or assessment of sustainability status was divided into four kinds and shown in Table 2.
Table 2. Category of Sustainability Status.

<table>
<thead>
<tr>
<th>No.</th>
<th>Dimension Index Value</th>
<th>Category</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>00,00 - 24,99</td>
<td>Bad</td>
<td>Unsustainable</td>
</tr>
<tr>
<td>2</td>
<td>25,00 – 49,99</td>
<td>Less</td>
<td>Less sustainable</td>
</tr>
<tr>
<td>3</td>
<td>50,00 – 74,99</td>
<td>Fair/Enough</td>
<td>Simply sustainable</td>
</tr>
<tr>
<td>4</td>
<td>75,00 – 100,00</td>
<td>Good</td>
<td>Sustainable</td>
</tr>
</tbody>
</table>


Results and Discussion

The summary of MDS-Rapfish analysis results for these four dimensions is presented in Table 3.

Table 3. Summary of MDS-Rapfish analysis results.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Stress (S)</th>
<th>R-Square (R)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency of attendance at meetings</td>
<td>0.0623</td>
<td>0.9636</td>
</tr>
<tr>
<td>Group activity during discussion session</td>
<td>0.0600</td>
<td>0.9634</td>
</tr>
<tr>
<td>Involvement of physical activity</td>
<td>0.0615</td>
<td>0.9631</td>
</tr>
<tr>
<td>Willingness to pay dues / giving donations</td>
<td>0.1684</td>
<td>0.9612</td>
</tr>
</tbody>
</table>

Source: Primary data processed 2016.

Dimension of Frequency of Attendance at Meeting

The result of MDS analysis for the sustainability status of the attendance frequency dimension in the meeting could be seen in Figure 1, while the leverage of each attribute of attendance frequency dimension in meeting was shown in Figure 2.

From Figure 1, it could be seen that the index of sustainability status dimension of attendance frequency at meetings was 26.95. This value was in the range 25-49.99 which meant it was less sustainable. In other words, the frequency of attendance of group members in meetings in the study area was less supportive for sustainability. According to Figure 2, the dimension attributes of attendance frequency at meetings that greatly affected the sustainability of this dimension were the attendance of members; given the equal share of responsibilities; and the attendance of members who were giving opinions but only few were taken into account. This was indicated by the leverage values of those attributes which were larger than the other attributes. From these attributes, it could be said that in order to improve the sustainability of the frequency dimension of attendance, it was necessary to consider the division of responsibilities among members and took into account the opinions expressed by them.
Dimensions of Group Activity in Discussion
Sustainability status dimension of group activity during discussion session was shown in Figure 3. The influence of each attribute of group activity during discussion session toward sustainability dimension of group activity within discussion phase was shown in Figure 4.

Figure 3. Sustainability Status of Group Activity Dimension during Discussion Session

Figure 4. Sensitivity Attribute of Group Activity during Discussion Session Dimensions

Source: Primary data processed, 2016

Figure 3 showed that the index of sustainability status dimension group activity during the discussion session was 25.14, where this value was in the range of 25-49.99, or in other words it was less sustainable. It had a meaning that, the participated groups in the discussion session were less active. Based on Figure 4, attributes that had high sensitivity to the dimensions of group activity during discussion session was a rudimentary discussion and because it was forced (unwillingness discussion engagement). Hence, most of the group members who participated in the discussion were not very active because their participation within the discussion session was due to a compulsory and perfunctory form of discussion.

Physical Activity Involvement Dimension
The result of MDS analysis for sustainability dimension status of physical activity involvement could be seen in Figure 5, while the leverage of each dimension attribute of Physical activity involvement was shown in Figure 6.

Figure 5. Sustainability Status of Physical Activity Involvement Dimension

Figure 6. Sensitivity Attribute of Physical Activity Involvement Dimension

Source: Primary data processed, 2016
From Figure 5, the index of sustainability status of physical activity involvement dimension was 26.14. This index was in the range of 25 - 49.99. It meant that it was less sustainable. In other words, group involvement on physical activity in the research area was low.

From Figure 6 it could be seen that the attributes that greatly influenced the sustainability of physical activity involvement dimension were the authority of enforcing the idea and unwillingness engagement. It could be said that the low participation of groups in physical activity was caused by the lack of division of authority to implement ideas and compulsion.

3. Dimensions of willingness to pay contributions / donations
The MDS analysis results for the sustainability status dimension the willingness to pay contributions / donations can be seen in Figure 7, while the leverage of each dimension attribute. The willingness to pay contributions / donations is shown in Figure 8.

From Figure 7, the index of sustainability status of willingness to pay dues / donations dimensions was 21.63. This index was in the range 0 - 24.99. It meant that it was very less sustainable. In other words, the willingness of the group to pay contributions / contributions was still very low.

From Figure 6 it could be seen that the attributes that greatly affected the sustainability dimension of willingness to pay dues / donations were rudimentary payment and authority in implementing the idea. The lack of willingness of group’s contribution payment was because the payment was considered only as rudimentary payment and after the dues / donations were collected, they felt less authorized to implement the idea of utilization.

Figure 9 below depicts a combination of the four dimensions of group sustainability participation rates. On average, the sustainability index value of the four dimensions was 24.97. This value indicated that in general the frequency of attendance, liveliness during discussions session, involvement in physical activity and willingness to pay group dues / contributions were lacking. Based on this diagram, if the index was getting out or close to 100, it indicated a better sustainability status. On the contrary if it went deeper or closer to the value 0, it indicated the worsening sustainability status. From the existing of four dimensions, the dimension that had the worst sustainability index value was the willingness to pay dues / contributions.
Although, in general, the value difference of the four-dimensional sustainability index was not quite different.

![Sustainability Status Diagram of Group Participation Rate](image)

**Figure 9.** Sustainability Status Diagram of Group Participation Rate

Source: Primary data processed 2016.

In order to improve coastal ecosystem management, Clungup Beach management needed to pay attention to some world research findings which was also related to the topics of this research. The results could be taken into account as a consideration for further development of Clungup Beach ecotourism. They were as follows:

Wanie (2015), recommended the Ecotourism Management Triangle (EMT) as an alternative to build a sustainable ecotourism management system to address these issues. Saayman and Giampiccoli (2016) concluded that the best tourism method should holistically be able to improve social justice and reduce the gap. The researchers furthermore proposed PPT strategy combined with CBT. Edoun et al. (2015), suggests that the vast majority of people were still tied to informal responses and often ignore formal direction. Therefore, the handling of the impact of natural disasters should not only use formal mechanism but also the informal one. Romero-Brito et al. (2016), most cases in Asia and Latin America were initiated by NGOs and local communities, while in Africa it was conceived by the private sector.

On the other hand, the results of the analysis also portrayed that there was no significant influence of private managers' involvement on ecotourism success (Five (2015). Zulfitri et al. (2015), Scenario planning was one of the relevant approaches in this case, as it was able to accommodate the high complexity and uncertainty of ecotourism when it was compared to other conventional planning approaches such as Strategic Planning. Towner (2015), the presence of Melawai surfing tourism also affected the culture and lifestyle of local communities. Rawat et al. (2015), the results of this study, it could be concluded that the efforts of building non-formal education (NFE) in the suburbs / rural areas could increase the resilience / sustainability of socio-economic transformation. NFE was able to help expand the knowledge gained from formal school into other skills in the form of communication, business skills, as well as building entrepreneurial spirit equipped with the ability to use the latest technology needed to develop the tourism industry.

Alonso-Yanez et al. (2016), based on the results of research conducted, the researchers classified the community participation in conservation as coordinated participation and uncoordinated participation. Coordinated participation meant community participation was structured in its involvement in conservation efforts. While uncoordinated participation meant the involvement of the community was less
noted by the manager so that it often had unpredictable role, but instead providing new insights in nature conservation efforts.

Stapp et al. (2016), the results showed that there was a significant difference between the perceptions / behaviors of both groups observed, especially in terms of contribution and reaction to current forest conditions. In both groups, community participation was able to strengthen forest conservation support and there was a negative relationship between the level of economic status toward forest conservation support. Hunt et al. (2015). Based on the result of this research, it was concluded that the failure of leveraging the living standard of local people. In addition, the private sector also only paid attention to the benefits of the company alone without set up cooperation with local communities. This indicated that the taken management policy was not able to bridge and links the management program with the needs and social capital in the community. Therefore, the researchers recommended involving local people in the bottom-up decision-making process, so that the needs of the community were accomplished. Briones et al. (2017), the conclusion that based on the potential and current condition of GK enchanted farms; it was strongly support the development into a sustainable tourism. Rodriguez-Pineros and Mayett-Moreno (2015), the results of this study indicated that although ecotourism was expected to be one alternative source of income. Felicetti (2015) concluded that to achieve sustainable ecotourism management, all stakeholders must work together and head toward the same direction to achieve benefit from the existing destinations. It was meant to be to improve the socio-economic conditions of the surrounding communities and promote the conservation of natural resources so that they could be utilized for future generations. Elson and Hall (2016), the results of research had shown that donors became agents of change system in relation to public policy.

Conclusions and Suggestions
The conclusions of this research are:
1. The sustainability of each dimension (Frequency of attendance at meetings, Group activity in discussion and Willingness to pay dues / donations) of group participation level (non-governmental organization) in ecotourism management is less sustained
2. On average, the sustainability index value of these four dimensions is 24.97. In general, the frequency of attendance, liveliness in discussions, involvement in physical activity and willingness to pay group contributions / contributions are lacking. The dimension that has the worst sustainability index value is the willingness to pay contributions / donations.

Suggestions of this research is to pay attention to attributes that become the main driver in improving the sustainability, that are Attend and receive equal liability sharing, involved and authorized to implement the idea and Rudimentary payment

Acknowledgements
Thanks a lot to 1) ministry of the research and technology, 2) Brawijaya University for the opportunity given team to conduct this research.

References


Theresia, et al. 2015. *Development based on Community*. reference for practitioners, academics and community development observers. Afabeta Bandung Publisher