

Community Participation In Mangrove Forest Management In Mojo Village, Ulujami District, Pemalang Regency

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Abstract- Mangrove forest in Mojo Village, Ulujami District, Pemalang Regency has an area used for nature tourism in coastal areas which provide protection the macro climate balance in Pemalang. The Regulation No.3/2011 about Pemalang Spatial Planning Year 2011-2031 have been discussing the mangrove forest development. Management of Mangrove forest in Mojo villages empowering by the local communities through farmer groups in cooperation with Local Governments and Institutions that called OISCA (The Organization for Industrial, Spiritual and Cultural Advancement-International). The research problem is want to know the forms of community involvement in the management of mangrove forests in Mojo Village.

This research was conducted with the aim of measuring the level of community participation in the management of mangrove forest in the Mojo village, District Ulujami, Pemalang City through 3 Arnsteins' variables of participation with 8 indicators ranging from levels manipulation to citizen power. The methodology used is mixed methods (quantitative and qualitative) with descriptive methods through rationalistic approach and logical deductive thinking.

The result is level of community participation in the management of Mojo villages' mangrove forest located on the 6th floor of participation stair, it is partnership with the lowest level and still under the influence of the 5th participation "Placation". Mojo's community activities still relies on Government dan OISCA funding. There are no improvement of initiative and willingness to develop activities independently.

Keywords: *Participation, Management, Forest, Mangrove*

1. Introduction

Pemalang is one of the coastal areas which have quite extensive mangrove forests. Development of mangrove forests in Pemalang has been discussed in Regulation No. 3 of 2011 about Pemalang Spatial Planning Year 2011-2031. One of the mangrove forest areas mentioned herein are the mangrove forest in Mojo village, Ulujami District defined as one strategic area which provide protection the macro climate balance in Pemalang.

Of the legal basis for the above, it can be seen that the management of mangrove forest in Mojo Village should be done in a transparent and organized within the specified limits. The local government efforts in the preservation of mangrove has been stated in the Draft of Mangrove/Coastal Rehabilitation Program year 2013 conducted by the Department of Agriculture and Forestry Pemalang that taken place mangrove forest in Mojo Village. Community in Mojo Village is an agrarian society that is judged to have a fairly high awareness of the reforestation importance. It became one of the factors driving the local Department to engage the community in the program implemented.

From the description that has been submitted, it is necessary to a deeper understanding of the position of the community in an effort management of mangrove

forest in Mojo Village how many Mojo villagers contribute to the existence of the existing mangrove forests, to excuse the people who have been willing to participate preserve the mangrove forest. These factors need to be known as a form of analysis to increase community participation leading to a better level so as not to negatively impact the environment sustainability.

2. Problem Formulation

Management of mangrove forest in Mojo Village is set in the regulation of local government and certainly not immune from interference by the local community. Public participation in this case need further study to determine the advantages and disadvantages that can be the basis of conservation function optimization runs. The focus of this research is *“How the community participation in the management of mangrove forest in Mojo Village ?”*.

3. Research Aim and Targets

- **The Aim:**
Measuring the level of public participation in the management of mangrove forest in Mojo Village, Ulujami District, Pemalang Regency.
- **Targets :**
 1. Assessing the activity or program management of mangrove forest in Mojo Village.
 2. Assessing the characteristics of mangrove forest in Mojo Village.
 3. Assessing the characteristics of public participation in the management of mangrove forest in Mojo Village.
 4. Measure the level of public participation in the management of the mangrove forest.
 5. Provide conclusions and recommendations.

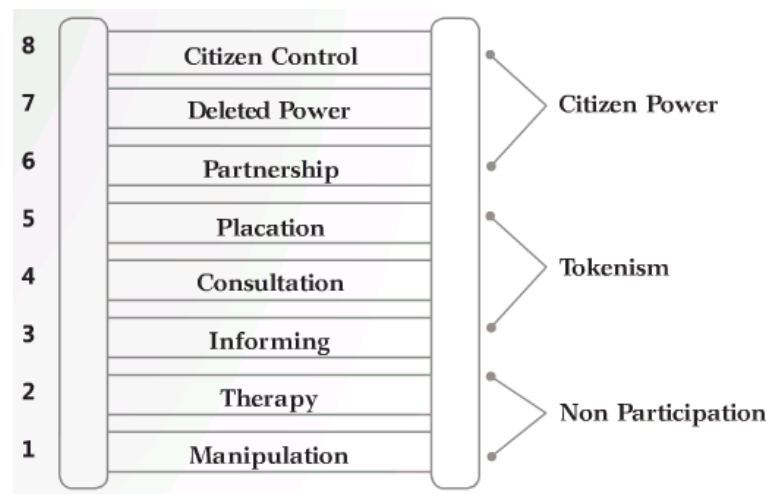
4. Research Methodology

The method used in this research is mixed methods (Quantitative and Qualitative) with descriptive rationalistic approach and deductive logical reasoning. The main purpose of quantitative methodology is not explain a problem but produces a generalization (Sumanto, 2002). The existence of qualitative methods in this research is to support the determination of the results of research with the aim of emphasizing that knowledge comes from intellectual understanding in the wake of the ability of a logical argument that has been adapted to the existing theories.

5. Theoretical Review

5.1. Public Participation

The meaning of public participation is the participation of a person or a group of community members in an activity (Mardikanto and Soebianto, 2012). Arnstein (1969) in Abiyoso (2009) initiated the "ladder of participation" with regard to the involvement of the public to decipher the type of participation in decision-making levels.



Source : Abiyoso, 2009

Figure 1. Arstein's Participation Ladder

5.2. Mangrove Forest

Harahab (2010) mentions that mangrove forests are tropical coastal vegetation communities that live in damp and muddy areas and is influenced by the tide. Ecologically, mangrove forests act as coastal protection from the tsunami hazard, erosion and trap sediment retention, nutrient recycling, maintaining fisheries productivity, speed reducer intrusion of sea water, health support, maintain biodiversity, and sustain the other coastal ecosystems (Nybakken; Tomascik et. al; Rochana; Noor in Tuwo et.al, 2011).

There are many ways to utilize sustainable mangrove, among which: (a) the pond polyculture, by combining pond with mangrove planting; (b) private forests, the sustainable management of the cutting cycle or 15-30 years depending on the purpose of planting; (c) culture utilize mangrove to get from the forest; (d) Silvofishery (fishery-forest); and (e) the form of a combination of simultaneous utilization of mangrove (Purnobasuki 2012 in Eddy and Rahim, 2013).

6. General Reviess Of Mangrove Forest In Mojo Village

6.1. Mangrove Forest Management Policy Mojo Village

Management of mangrove forest in Mojo Village has been mentioned in Regulation No. 3 of 2011 about Pematang Spatial Planning Year 2011-2031 in which discussed:

1. Article 102 of the Strategic Areas and Function Division of Environmental Carrying Capacity mentioned that the area of mangrove conservation and land arise in the Comal River estuary (Mojo and Pesantren Village) is one of the mangrove areas which provide protection against macro climate balance in Pematang.
2. Article 151 paragraph 5 of the General Provisions relating to the Strategic Area Zoning Regulations.

Forest management strategies in Pematang which has been submitted by the Department of Agriculture and Forestry in Forest Community Empowerment Workshop on April 15th 2014 is to (1) lower the critical lands through the development of self-reliance in forest community management and (2) engagement forest communities in the utilization of forest areas.

6.2. Physical Condition Of the Mangrove Forest in Mojo Village

Mangrove forest in Mojo Village is in the administrative of Mojo Village, Ulujami District, Pemalang Regency with administrative boundaries of the village as follows :

- North : Java Sea
- East : Limbangan Village
- South : Wonokromo Village
- West : Pesantren Village

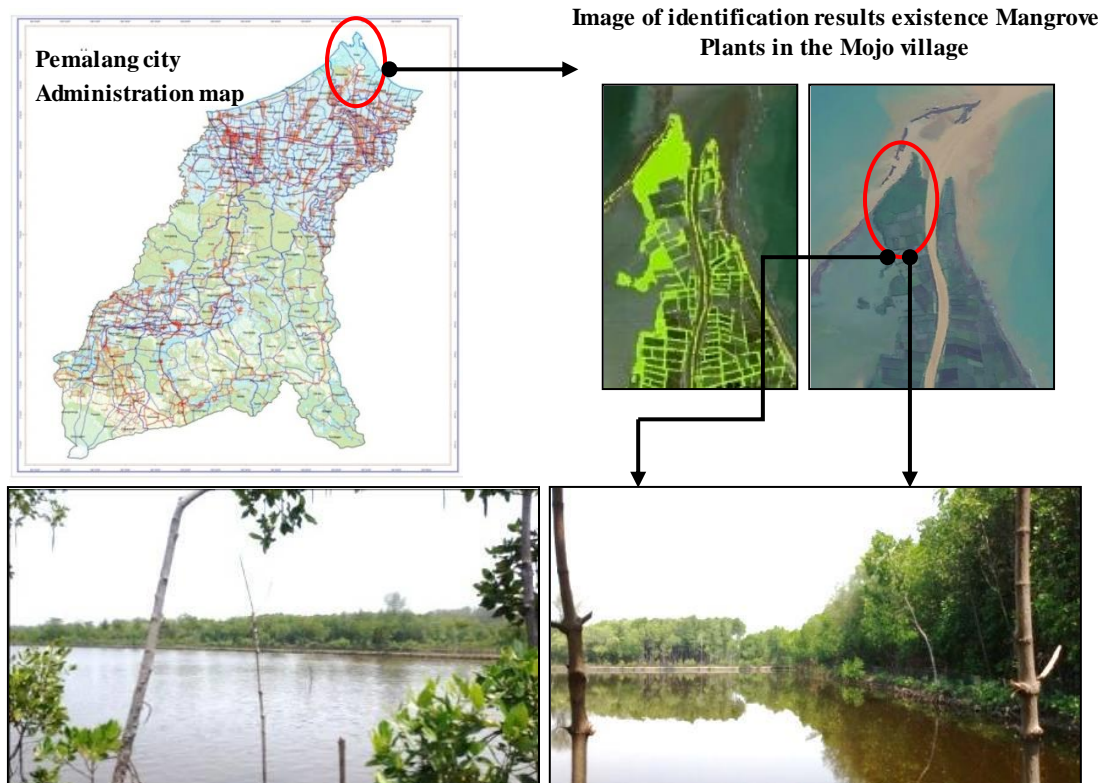


Figure 2. Regional Links of Pemalang with The Mangrove Forest

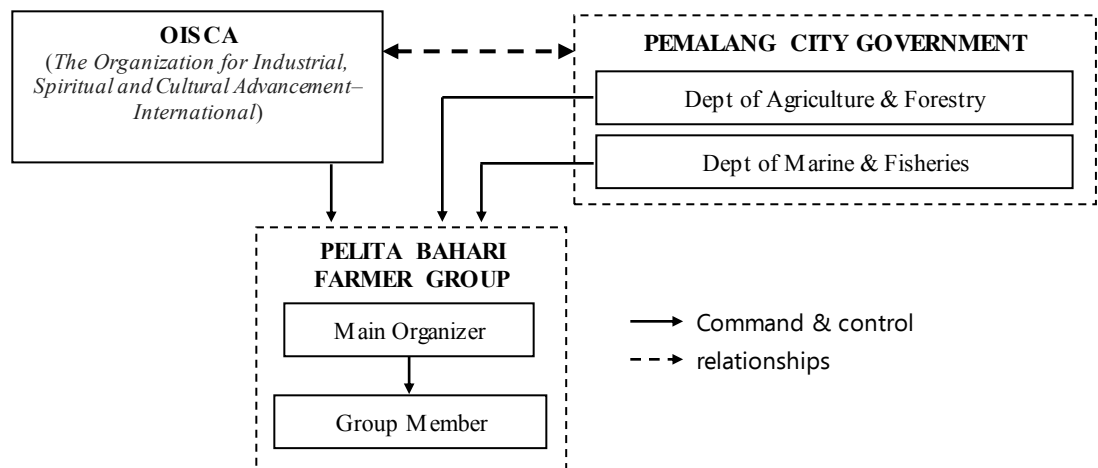
Mangrove forest area to be used as a study is in accordance with an area of 55 hectares of mangrove forest which is a public space and serves as a conservation area in the district Ulujami coast. The location is in the most northern part in Pemalang and a conservation area managed by the Department of Agriculture and Forestry Pemalang in cooperation with farmer groups Pelita Bahari.

7. Level Of Public Participation In Management Of Mangrove Forest In Mojo Village

7.1. Activity or Management Program in Mangrove Forest in Mojo Village

There are 3 main things discussed in this case, namely the Structure, Conduct, Performance are taken from theory approach SCP adapted from Erlinda Muslim et al (2008).

- **Structure with respect to the pattern of functional relationships in which:**
 - Motivation is the emergence of institutional development and rehabilitation of forest conservation as a form of devotion to the community.
 - The foundation of the existence of institutional legalization using Regent Decree 188.4/205.B/DIPERTANHUT of 12 November 2008 on the Establishment of Farmers Group Management of the Mangrove Forest.
 - Determination of the personal position in the institutional structure of mangrove forest there are OISCA program coordinator, chairman, secretary, treasurer, maintenance subdivision, conservation subdivision, public relations and cooperation subdivision, public servant and member of the group.
 - In general, the authority Pelita Bahari in mangrove forest management is continuous cooperation scope: (1) utilization of fishing activities and marine tidal area; (2) self-help activities in mangrove rehabilitation through planting mangrove from propagules; and (3) monitoring activities and the protection of mangrove forest areas of public disorder/individuals who want to make a change in land use into ponds.



Source: Analysis Results, 2015

Figure 3. Relationship of 3 Main Stakeholders in Mangrove Forest Management

- **Conduct with regard the behavior of individuals & access to the institutional are:**
Government policies and regulations that apply already open because it provides opportunities for outside parties involved cooperate example Wetlands International-Indonesia Programme, University of Gadjah Mada, NGO Friends of Nature etc.
- **Performance with respect to the form of the activities that have been implemented:**
Programs that have successfully done are :
 - Local Government Program such as (1) the tracks built from 2010-2014 and (2) rehabilitation of mangrove forests in the scope of watershed management area BP Pemali Jratun in 2013 by the Department of Agriculture and Forestry, and (3) the rehabilitation of infrastructures of aquaculture in tracks, gazebo and viewpoint tower built by the Department of Marine and Fisheries in 2013.
 - OISCA forming mangrove planting program through the Children's Forest Program and the Environmental Conservation Program conducted since 1990.

- Other programs include: (1) Workshop on Mitigation and Adaptation To Climate Change; (2) Socialization and Training of Farmers Group Pelita Bahari and local governments Pemalang in collaboration with environmental NGOs; and (3) Plan of Program CSR (Corporate Social Responsibility).



Source: Dept. of Agriculture & Forestry (2013-2014), Pelita Bahari (2007), Observation (2014)

Figure 4. The Activities of the Mangrove Forest Management Program

7.2. Characteristics of Mangrove Forest in Mojo Village

- mangrove forest area in Mojo Villages located in the Watershed Pemali Jratun and right in the Comal river estuary.
- The forest area is 55 hectares with 18 kinds of mangrove plants ranging from the type of *Avicennia*, *Bruguiera*, *Ceriops*, *Nypa*, *Rhizophora*, *Xylocarpus*, *Acanthus* etc.
- Infrastructure Support Area from the dock entrance, entrance, along the 659-meter track, 1 gazebo, 1 viewpoint tower and information boards.
- Supporting transport just a boat, canoe or raft down the Comal river with for 45-60 minutes through 2 dock at Mojo.
- Development potential area in the form of location of bird watching and water tourist travel to the location of mangrove forests.

7.3. Characteristics of Community Participation

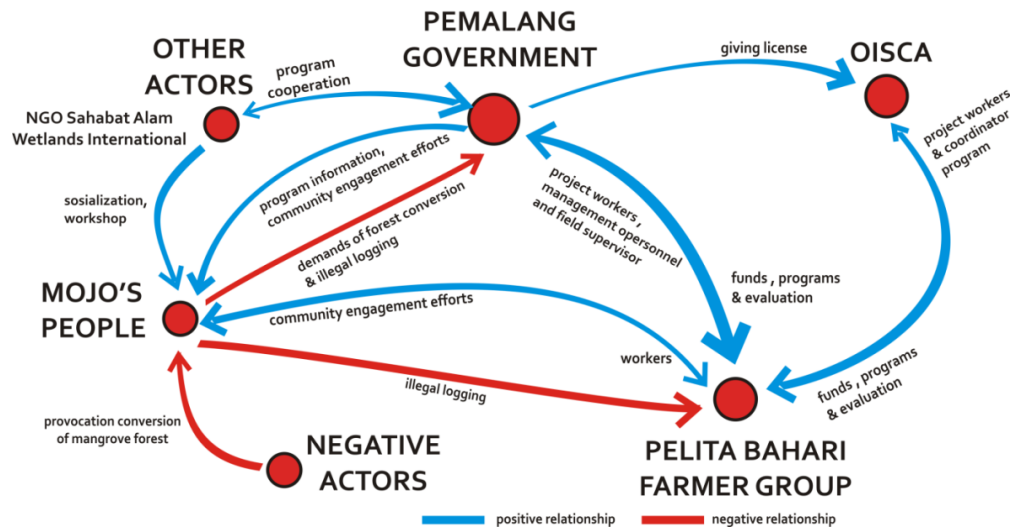
- Forms of Public Participation of Mangrove Forest in Mojo Villageranging from mangrove nurseries, transporting mangrove seedlings, planting, construction of facilities, to the maintenance and condition monitoring of mangrove forests.
- Other Participation is ecotourism recreation, became the object/respondents of the researchers, accompany the researchers conducting research, providing shelter for researchers who need lodging & provide services for visitors and search for fish/crabs.



Source : Pelita Bahari , 2012

Figure 5. The Fact of Public Participation in Mangrove Forest Management

Here is a visualization of the relationship of actors who are in some important processes carried out in the village of mangrove forest management activities :



Source : Analysis Results, 2015

Figure 6. Relationship between actors in Mangrove Forest Management

7.4. Public Participation Level Measurement

- Measurement is done by distributing questionnaires to 100 respondents with 8 exploration questions and 16 measurements questions that have been given 3 choice with different weight value. Every two questions represent the characteristics of one participation level from 8 kinds of Arnstein ladder .
- Characteristics of the respondents involved in the distribution of the questionnaire, the majority aged 41-60 years, working as a farmer, had the highest education Junior High School and income < 1 million/month.

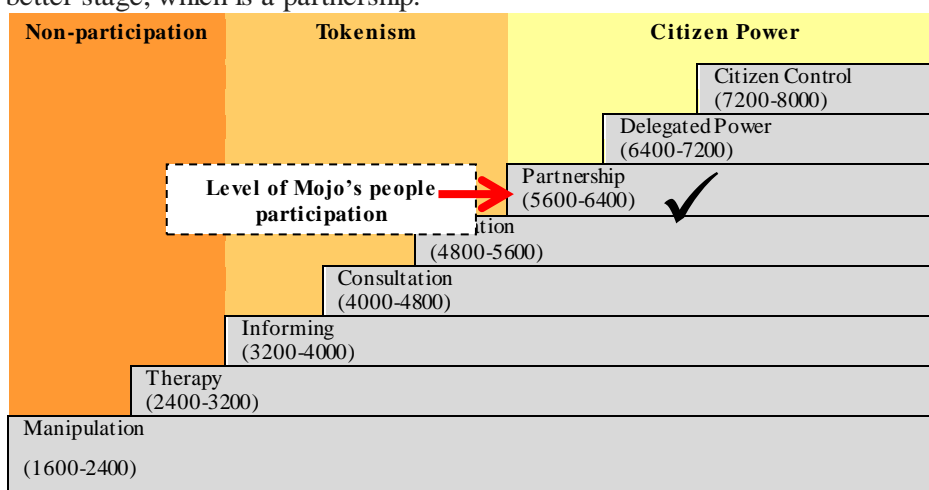
Table 1. Respondents Answer Domination

No	Domination (%)	Answer
1	91 %	Pemalang government already told and invites the public to participate in activities that will be carried out in the mangrove forest.
2	79%	Government has given people an opportunity to express their opinion freely in adding inputs to mangrove forest management.
3	92%	Pemalang government always give information every will implement the program.
4	72%	The delivery of government information to the public considered detail

No	Domination (%)	Answer
5	70%	Local government always asking for public opinions and input.
6	68%	Government provides information and ask for the opinion of the community through the provision of conference/meeting certain limited that invites people who are considered to have a relationship with the program .
7	56%	Parties are invited to discussions are rural communities, NGOs, environmentalists, academics etc
8	87%	During the meeting there was discussion between the government and residents .
9	80%	Local government just put some representatives of communities that are considered to participate in managing the mangrove forest.
10	72%	People stated that sometimes they get a reward or fee from the manufacturer project in mangrove forest.
11	70%	Deliberation together not only in the management organization , but also involve rural communities in Mojo.
12	46%	Local government is enough trust because the control activities carried out are not always. They trust the routine and reports from Pelita Bahari.
13	98%	If the farmer groups have creative ideas they can submit it prior to Pemalang government for approval .
14	82%	Sustainability of mangrove forest in Mojo Village is a shared responsibility between the farmer and the local government.
15	95%	Farmer groups are allowed to cooperate with the other parties in addition to the requirement to consult the district government and prior approval .
16	78%	Operational and management fund of mangrove forest in Mojo Village comes from the Pemalang budget funds.

Source : Analysis Result, 2015

- Community participation in the mangrove forest management located on the 6th floor that is partnership with a total score 5732.
- The partnership participation is relatively lowest and still get the effect of the level of placation participation are included in the group of pseudo participation/tokenism and can be said as a transition or adaptation of placation participation began to increase to a better stage, which is a partnership.



Source : Analysis Results , 2015

Figure 7. Location of Public Participation in Management of Mangrove Forest in Mojo Village

7.5. The Similarities with Partnership Participation Characteristics

- The effectiveness of this participation can be seen from the Mojo citizens strength organized in a farmer groups Pelita Bahari.
- Authority Pelita Bahari is the result of negotiations between local residents and local government. Both agreed to share a role in through institutional structures.
- Mojo's people formed small groups to achieve project objectives. An example is the involvement of other farmer groups in implementing programs for government

and OISCA, because if only rely on the members of Pelita Bahari still not optimal in its completion.

- There is a bond of partnership in the management is still in government and OISCA power where people simply as passive implementers to wait command authority and funders .

7.6. The Similarities with Placation Participation Characteristics

- There is still a tendency tokenism/pseudo participation although local governments in Pemalang using a bottom-up approach in the rehabilitation of the mangrove forest.
- Placation strategy in the mangrove forest management participation is putting some representatives of the citizens/groups in public society which in this case is Pelita Bahari Farmer Group as mangrove forest area manager.
- Drivers community participation influenced their promised wages.
- There is a tendency in which people make sacrifices/services to obtain compensation in the form of incentives/rewards because of the existing activities in the form of project benefits are then managed by the group to split.
- Operational funds for the activity is derived from the cost of local government and OISCA and is not independent funds from Mojo's people.
- Local government and OISCA still hold a larger portion in the planning, implementation, evaluation of the success and sustainable use, but still there giving credence to Pelita Bahari step by step.
- Strength Farmer groups Pelita Bahari only in human resources are members of the group who already have knowledge and a conservative attitude is quite good.
- Once the basic rules established through the process together, then change the rules must be made through consensus but Pelita Bahari not have the power to give a decision because the control is still in the hands of the government.
- Mojo's people is still dependent on external parties in this case the government and OISCA especially in terms of funding and programming. Increased independence is not so obvious. Initiative and willingness of the community to develop activities independently as well not exist.
- People do not have the authority which is autonomic within the scope of the management of mangrove forest areas so that they can be said to have not been trained to be independent in the development of the program, despite the fact that the development of self-reliance can be done not only in the mangrove forests management.
- Points above are also related to the management of the group as a social group that does not have strict laws and rules. The whole cooperation made still determined by the level of willingness and profits.

8. Conclusion

The partnership participation in the management of mangrove forest in Mojo Village was included on the lowest level partnership and still get the effect of the placation level participation as a transitional or adapted form of placation participation began to rise to the stage of the partnership because of the lack of independence of the local communities to undertake other activities such as nurseries to raise its own operations. Cooperative relationship that exists between the local government, OISCA and Pelita Bahari very strongly related to the funding of all activities that farmer groups can not be said to have its own control. The existence of community placement in the mangrove forest

management group and the tendency of society make sacrifices/services to earn rewards in the form of incentive/reward is characteristic of placation participation encountered in the field .

9. Recommendations

- **Recommendations for Local Government in Pemalang City**
 - Keep holding of socialization, training and guidance on participation, environmental awareness and institutional strengthening.
 - Need for training and guidance to prepare the creative community in the development of Mojo ecotourism.
 - Must be increased real participation of the government's assertion of the law in terms of environmental conservation.
 - Need to takes a lot of planting programs in other coastal locations.
 - Keep the opening of a wider network of cooperation.
 - Need for special attention of the government to provide an opportunity for the public to actively participate in the activities held.
 - Need for supporting the formulation of regulations related to Corporate Social Responsibility (CSR).
- **Recommendations for Mojo's People**
 - People who already participate must continue to encourage they friends to be more active play role in the management of mangrove forests.
 - Need to be aware of the emergence of counter parties to the action of mangrove conservation.
 - Need for increased willingness of people to want to follow the training/socialization held by local governments.
 - Fellow Mojo community should be able to watch each other in coastal areas activities.
 - Keep looking for innovation and creativity to prepare for the development of Mojo ecotourism.

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