

# Psychodynamic of Forest Conserving Behavior in Muria Forest Community

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**Abstract:** *Muria Mountains that extends into Kudus, Jepara and Pati districts have a primary function as a buffer for plant and wildlife ecosystems. It also effects the Muria forest's people living because it is the clean water supply for the surrounding area. This study aims to analyze and discover the psychodynamic of forest conserving behavior in Muria forest community. This research uses qualitative approach with grounded theory. There were seven informants involved in this study. The researcher uses in-depth interviews and observations in the process of extracting data and analyzing. The integrated ecological behavior model, that is based on the combination of Kurt Lewin field theory and Kaiser's ecological behavior, is a research finding which can examine the psychodynamic of forest conserving behavior in Muria forest community. It is based on the informants' expectation in maintaining the Muria forest as a sense of responsibility for Muria's damage, so that it brings environmental values to maintain the Muria forest. Besides, there is an awareness on the need of water for farmer based on the knowledge of the informant in maintaining the Muria forest, the emergence of encouragement to maintain the Muria forest after the disaster and barrier in conserving the Muria forest. It is undeniable that there is an economic need that encourages informants in maintaining the Muria forest and conserving the Muria forest from others and related to the land ownership which is part of the responsibility of maintaining the Muria forest. At last, the emergence of caring for the Muria forest becomes an environmental value.*

**Keywords:** *field theory, ecological behavior, integrated ecological behavior*

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## I. INTRODUCTION

The depletion of natural resources, including deforestation, and the appearance of landfills, the depletion of the ozone layer and the greenhouse effect became a challenge for human life. Since the environment is shared for everyone, the use of one's natural resources affects others. Several surveys show that a less environmentally conscious human attitude is increasingly common. The relationship between ecological behavior and environmental attitudes appears to be the best solution in various studies (Kaiser, Ranney, Hartig & Bowler, 1999).

Ecological behavior seems to be vulnerable to influences beyond one's control. For example, political policies that facilitate recycling or forcing people to pay for landfills. Eventually it reduces waste and promotes recycling. Socio-cultural constraints determine to some extent which ecological behavior is easier and more difficult to do. Consequently, people seem to behave inconsistently, even someone who claims to be ecologically oriented may behave ecologically in one place and unecologically in another (Kaiser, F. G., Wolfing, S. ; Fuhrer, U, 1999)

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Environmental degradation in many developing countries, including Indonesia, is in a dangerous situation. If Indonesia is unable to invest sufficient resources, nurture the forest ecosystem, improve energy efficiency, the living system of Indonesian people will suffer environmental damage and can be irreparably restored.

Increasingly widespread environmental problems and increasingly prominent attention of various circles shows awareness of the importance of environmental maintenance so that the society are able to live sustainably. This kind of awareness arises in part because of the relatively rapid population growth (Muscat in Faturochman and Himam, 1995).

In fact, the development is rapidly to do for the needs of the population can be achieved. Both of these things will not really cause problems if the exploitation of the environment can be controlled. The reality often happens that the orientation of development in the past seemed to sacrifice the environment for the sake of human beings. In the next stage comes a concept that reflects the amount of attention to environmental problems. Among them are the concept of carrying capacity and environmental capacity, harmony of population interaction with the environment, and sustainable development. These concepts place the importance of human awareness of the environment and must be implemented into various forms of human behavior (Faturochman and Himam, 1995).

Muria forest, facing various environmental problems. Biophysically the problem in this area is destruction and encroachment of protected forest and agricultural land as a result of unsustainable land-use practices. The destruction to environmental resources, the increased intensity and quality of disasters such as floods, landslides and droughts in two decades present a serious threat to societies in Jepara, Pati and Kudus districts. Muria Mountain has a primary function as a buffer of plant and animal life ecosystems and providers of clean water for the surrounding area.

There are several changes in regional planning, such as illegal logging in protected forests and exploitation of cultivated land into corn fields, cassava plants and the many trees that are scoured, namely trees are injured by making holes in the bottom and then given fire, which will eventually withered, dead and many open bare areas are the real changes in ecosystems in the Muria forest (Widjanarko, 2006).

There are around 12 point C excavation in Bungu Village, Mayong District, Jepara District which have the potential to damage the landscape and trigger landslides. Related parties such as village officials, district authorities and law enforcement officials, such as the forest police and PP Satpol cannot do anything, let point C excavation take place continuously (Widjanarko and Nugroho, 2010).

Khasan's research (2015) stated that environmental damage in Muria Mountains occurred in the form of water sales in Colo Village, Dawe District, Kudus Regency. The water sold by one of the water entrepreneurs which is per 5,000 liters tank is priced Rp. 20,000, - while 7,000 liters is Rp. 25,000. The dry season per day is sixteen rits (1 rit = 5,000 liters) if the rainy season is six - eight rit. Then the net profit in selling water around five to six million per month.

Muria forest damage caused by human behavior in the form of land changes, point C excavation, timber theft and water sales is in contrast to the research conclusion of Widjanarko (2008) who said that there were environmental protection efforts which included land areas on property rights and protected areas of Mount Muria has been carried out by many parties, especially by related individuals who are included in the ranks of the village bureaucracy, namely the Colo Village government and village community leaders who are on the edge of the Muria forest. They have played an active role to advocate for protection of areas that have the potential to be damaged and protect areas that are still not damaged.

It has been noted that some of Muria's forest conservation activities have been undertaken by many parties, one of them is the Colo Village Government, Kudus Regency and the Muria Forest Protector Society (PMPH) that has put up a sign for individuals or groups to not be allowed exploring, cutting down trees, hunting animals, orchids and picking ferns in the

Muriaprotected forest. Another Muria forest conservation activity is the release of birds in Tempur Village, Jepara District, conducted by the TempurVillage Government and KarangTaruna Argo Mulyo.

In addition to environmental conservation efforts in the form of marking and wildlife releasing, awareness activities of the environment in the Muriaarea and its surroundings also have been done by Muria Research Center (MRC) Indonesia in cooperation with many parties, such as Aura theatre and Dr Do, Qisanak and Black Shadowmusic group by holding an environmental festival on 26-28 March 2013 in the hall and yard of the Kudus arts council themed "Water For Life" and involving elementary school children for drawing and coloring competitions and other activities such as environmental discussions, book review and environmental music (MRC Indonesia, 2015).

One of the great theories that emphasizes human-environmental interaction in psychology is the field theory of Kurt Lewin. His theory explaining that behavior is a function of one's role in dealing with the environment. This is known as the formula  $B = f(P, E)$  that behavior (Behavior) should be understood as a function of the interaction between *Person* and the *Environment* both physical and social. The researchers chose Lewin's approach as the field orientation representation in the study of social psychology.

The theory of ecological behavior was popularized by Kaiser by developing the measurements of ecological behavior called the General Ecological Behavior (GEB). The study of ecological behavior begins to consider the morality and prosocial behavior, that ecological behavior is not merely a rational consideration. But it also includes the variable of responsibility feeling, the study of ecological behavior also considers the environmental ethics.

A sense of responsibility is defined as a sense of belonging certain circumstances. The more people feel responsible for the environment and the problems that exist, the more likely it is that a person raises eco-friendly behavior (Kaiser and Shimoda, 1999).

Based on this, the researcher uses the Kurt Lewin macro theory and ecological behavior theory as a micro theory. Then the question of the study is that how the psychodynamic of the forest nurturing behavior of the Muria marginal society is.

## **I. METHODS**

This research uses qualitative approach with grounded theory strategy from Strauss and Corbin (2003). There were seven informants involved in this study. The criteria are the informants living in the Muria forest edge village who experienced the disaster in 2006 and 2014, in Rahtawu village, Gebog District, Kudus Regency, Central Java and Tempur Village, Keling District, Jepara Regency, Central Java. Second, the informants had various background; there were community leaders, young people who were concerned about preserving the Muria forest and one had experience in engaging in timber theft.

The researcher uses in-depth interviews and observations in the process of extracting data and analyzing them with constant comparative analysis techniques using three stages of coding, i.e. open, axial and selective.

## **II. RESULTS**

The integrated ecological behavior model, that is based on the combination of Kurt Lewin field theory and Kaiser's ecological behavior, is a research finding which can examine the psychodynamic of forest conserving behavior in Muria forest community. It is based on the informants' expectation in maintaining the Muria forest as a sense of responsibility for Muria's damage, so that it brings environmental values to maintain the Muria forest.

This was stated by STRN as follows:

"To maintain the forest, I don't think it is useless for the village. If the forest is maintained, the benefits of the forest are for us too, the air feels cool"

Not much different from the STY opinion as below:

"Our hope is that the nature of this Tempur Village can return to what it was when I was a child. Many trees are still lush, the air is also cool and the water source is also smooth"

Added again by the KWT which said:

"If forests are well maintained, water needs are sufficient, landslides is minimized, cool air and community needs are met"

Besides, there is an awareness on the need of water for farmer based on the knowledge of the informant in maintaining the Muria forest. Here's the story of STRN from Dukuh Wetan Kali, Rahtawu Village, Kudus Regency:

"About the drought that people lack of water, thank God, it never existed. But the water debit will decreases if it got dried. We cannot do any activities. That's the one of the effects of forest destruction."

Confirmed by AWR, one of the informants from Tempur Village, Jepara District that:

"Water shortages during the dry season are caused by forest damage"

The emergence of encouragement to maintain the Muria forest after the disaster and barrier in conserving the Muria forest. It is undeniable that there is an economic need that encourages informants in maintaining the Muria forest and conserving the Muria forest from others and related to the land ownership which is part of the responsibility of maintaining the Muria forest. At last, the emergence of caring for the Muria forest becomes an environmental value.

As revealed by the SKN which openly reveals the economic needs in maintaining forests, this is the expression:

"For example, we have one hectare of land. If we plant corn at most, the yield is only 3 million to 5 million per year. It is different if we learn more from another place. Like you own coffee, the income per harvest can reach 30 million per year"

Explained again by the SKN informants as follows:

"I have given an example for the community. I have 1 hectare of coffee. I planted only 8 quintals and maximum 12 quintals. When it got 80 cm height, the shoot is cuttings, and got seeds from Jolong, Pati. In this first season connection (continues) until next year, it has got 4 quintals. Finally, the next 2-3 years will get 700 quintals. Besides earning income, it is also more useful for the environment"

The results of this study give several recommendations, there are: first, contributing psychological theories, especially social psychology related to the psychodynamic of the forest nurturing behavior of the Muriamarginal society with the theory of integration of ecological psychology and the development of environmental psychology studies among scientists and academics of psychology. Second, providing important information for the Muria marginal societyrelated to the psychodynamic of the Muriaforest nurturing behavior. Third, providing policy contributions to the Kudus, Jepara and Pati regencies related to land use and forest conservation of Muria. Forth, providing a clear understanding of the psychodynamic of the forest nurturing behavior of the Muriamarginal society associated with land managed by Unit 1 State Forest Public Company of Central Java in Muriamountain area. Fifth, providing the latest information on companies that have been involved in afforestation in Muria mountain area related to the psychodynamic of the forest nurturing behavior of the Muria marginal society.

### **III. DISCUSSION**

Various experiences of informants in dealing with forest destroyers have their own reasons for dealing with them. The three informants from Rahtawu Village, Kudus Regency had different opinions, one informant was not comfortable to reprimand if the doer was his neighbor and one informant would reprimand if he met with the forest destroyer and suggested

the existence of a village regulation that regulates and confirms if it is not another illegal logging in the protected forest after the doer is arrested by one of the informants.

There was one informant who told me about illegal logging. Two informants from Tempur Village, Jepara District emphasized the need for village regulations to anticipate forest destruction, two informants said that there were no more forest destroyers after the 2006 flash floods.

To further elaborate on the results of research on forest maintenance behavior in the forest edge community of Muria, it has two elements that go hand in hand: the positive behavior of maintaining Muria forest with the expectation of informants to maintain the Muria forest as a sense of responsibility towards Muria damage and create environmental values in maintaining Muria forest and the awareness of the need for informants for water in living their lives as farmers related to the knowledge of informants in maintaining the Muria forest. Then, the emergence of the urge to maintain the Muria forest in the aftermath of the disaster and the concern for maintaining the Muria forest as an environmental value in maintaining the Muria forest arises.

While the negative behavior of maintaining the Muria forest, the barriers in conserving the Muria forest arise the form of emerging economic needs that encourage informants to maintain the Muria forest and the urge to maintain the Muria forest from other people and relate to land ownership that is part of the responsibility in maintaining the Muria forest even there are behaviors that damage the Muria forest.

#### IV. CONCLUSION

This study examines the psychodynamics of the behavior of maintaining forests in the marginalized communities of the Muria forest. The study of the results of the study is based on Kurt Lewin's macro theory, namely the field of life, behavior and locomotion, power (the driving force, inhibiting power, power derived from one's own needs, the power that comes from others, the power that is not from one's own will or someone else's ) and the tension of analyzing that the field of life analysis raises hope in maintaining the Muria forest, for behavior and locomotion manifests itself in awareness of water needs in maintaining the Muria forest, while the driving force comes from post-disaster which encourages informants to maintain the Muria forest, the power inhibit the presence of barriers experienced by informants in maintaining the Muria forest, while the power of their own needs raises economic needs in maintaining the Muria forest.

Then the study of the power derived from others implementation in maintaining the Muria forest with the support of others and continue on the impersonal power associated with land ownership in maintaining the Muria forest. Land is a major supporting factor in people's lives and welfare. The function of land is not only limited to housing needs but also the place of social, political and cultural growth of a person or a community. The proverbial expression of Javanese *sadumuk bathuk senyari bumi dentohi pati ruping ludi* (land and honor or self-esteem) for the Javanese is very important, even people are able to defend it all by betting their lives. It indicates how valuable land values are.

The land where the individual is located make the individual have an existence in themselves, meaning in life. Frankl (2003) said that meaningfulness of life is a condition that shows the extent to which a person has experienced and lived the interests of his existence according to his own point of view. In this case farmers can understand ownership of their rights as private land and the existence of forests as state land that must be protected.

The Muria mountainous area is a limited protected forest area managed by Perhutani Unit I, Central Java, which is factually called state land, this is different from the ownership of land that is managed by people who live around forest forests which are then called by community as forests.

Finally, for the analysis related to tension, the informants care about the Muria forest. Explained by Brigman (1991) that self-awareness is a condition in humans when directing their attention inward to focus on the content of themselves or the degree of attention directed inward to focus attention on aspects of oneself. Self-awareness consists of two types: first, self-awareness, focusing on the relative aspects of oneself such as mood, perception and feelings. People who have this type of awareness who are dominant will process information that refers to themselves more quickly and have a more consistent representation of themselves.

Second, public self-awareness, attention directed at aspects of oneself that appear or seem to others such as physical appearance and social actions. People who have high public self-awareness will tend to pay attention to their social identity and other people's reactions to themselves.

Self-awareness is the ability to recognize or know ourselves feelings or circumstances in which a person can understand himself and is also a condition to work with others effectively.

People who live on the edge of the Muria forest every day are in the Muria forest, can enjoy the scenery and the fresh morning air from the existing trees, can grab water from water sources that come from the Muria forest, also enjoy the harvest from the rice fields which are drained by forest water Muria. The connection will always be remembered by each individual and finally raises awareness to maintain the Muria forest.

Community ecological behavior and human impact on the natural environment are problems that becomes public concern and subject to considerable psychological research. Given the character that motivates this research, the main results must be in the form of ecological behavior itself (Scott & Willits, 1994), namely actions that contribute to preserving the environment or conservation (Axelrod & Lehman, 1993). This refers to the micro theory of ecological behavior which includes environmental knowledge, environmental values and a sense of environmental responsibility (Kaiser, Ranney, Hartig & Bowler, 1999).

It cannot be denied that the Muria forest has provided its natural resources for the needs of humans who live surrounding. For people who live on the edge of the Muria forest, knowledge of the benefits of the Muria forest provides great benefits to humans is something that is commonly understood by informants. If the forest is maintained, the air becomes cool, healthy, and the spring flows continuously and the forest can prevent landslides.

Whereas in the environmental value in maintaining the Muria forest all informants are aware of the need for reforestation around their homes. However, there are also those who find difficulties if the reforestation is carried out on private land and no one controlled.

The findings show a sense of responsibility in maintaining the Muria forest. It was explained that a sense of responsibility is defined as a feeling of having obligations regarding certain circumstances. The more a person feels responsible for the environment and the problems that exist, the more likely that someone will emerge environmentally friendly behavior (Kaiser and Shimoda, 1999).

It was further explained that the feeling of responsibility can arise in at least two ways, the first refers to aspects of morality and the other refers to aspects of conformity with social expectations. Feelings of responsibility related to moral concepts such as welfare, rights of others and consideration of justice. While the feeling of responsibility is related to aspects of conformity with social expectations based on social habits or traditions and laws of the social environment. Both types of responsibility cause different emotions, shame is felt when social standards are violated and guilt is experienced when it hits moral standards (Kaiser & Shimoda, 1999).

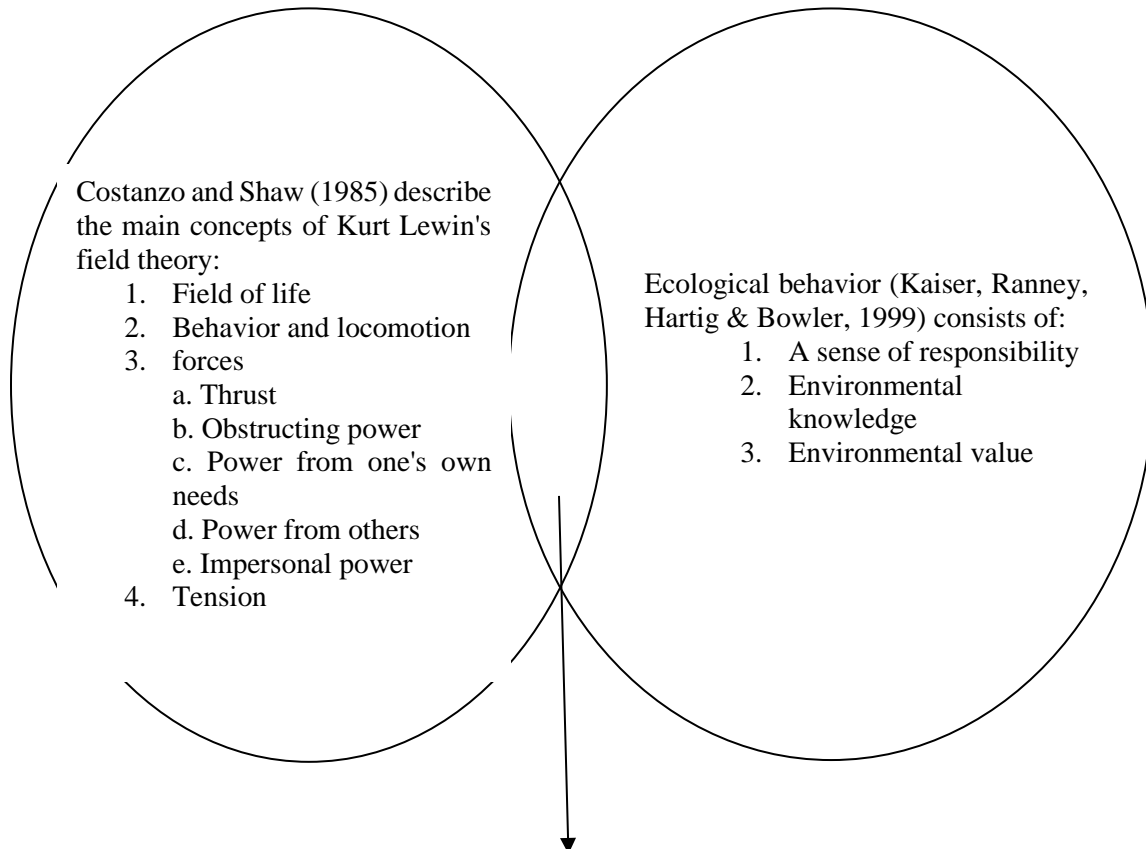
For this study, researchers found that a sense of responsibility for the destruction of the Muria forest that most informants stated that those responsible for forest damage were the people who were in the vicinity of the forest. There were also informants who stated that the one responsible was Perhutani, which had protected forest land.

This is consistent with the results of Thompson and Barton (1994) research showing that individuals who have an ecocentric attitude tend to pay more attention to environmental problems and are more involved in environmental conservation activities. Conversely individuals who have anthropocentric attitudes tend to have less attention to environmental problems and rarely carry out conservation or environmental protection activities. Their attention to the environment is more due to their interests. It can be said that the difference between ecocentric and anthropocentric lies in the individual's view of nature where ecocentric assesses in terms of spiritual or moral while anthropocentric assesses it as a resource that can be utilized (Farhati, 1995).

Refer to the results of research related to awareness of water needs in maintaining Muria forest, humans cannot escape from water, from being consumed to personal needs such as in bathrooms and household needs. For farmers in Rahtawu Village, Kudus Regency and farmers in Tempur Village, Jepara Regency, water is a primary object that is very much needed, what if the forest conditions are damaged and there is no more water?

In addition to awareness of the need for water, there is also an awareness of economic needs in maintaining the Muria forest as well as a form of concern in maintaining the Muria forest, can be started from the daily response experienced by individuals in feeling living side by side with the Muria forest. Various informants' needs include feeling the cool air with the trees around the house, abundant water, the sound of birds singing and not participating in logging in protected forests, thus raising awareness of the informants to maintain the Muria forest.

This is explained in Figure 2 below:



The Model of integrated ecological behavior  
(Widjanarko, 2018):

1. A hope to maintain the Muria forest
  - a. Responsibility
  - b. Environmental value
2. Water needs in maintaining the Muria forest
  - a. Environmental knowledge
3. Power
  - a. A. Thrust to maintain the Muria forest after the disaster
  - b. b. Barrier in maintaining the Muria forest
  - c. c. Economic needs in maintaining the Muria forest
  - d. d. Maintain Muria forest with other parties
  - e. e. Maintain the Muria forest to be associated with landowners
  - f. e. Sense of responsibility
4. Concern in maintaining the Muria forest
  - a. Environmental value

Figure 2. The Model of The *Integrated Ecological Behavior Psycodynamic*  
(Widjanarko, 2018)

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