

Strategy to Increase Public Participation in Forest Management Based On Internal and External Variables (Study on Baluran National Park, Situbondo, East Java)

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ABSTRACT: *Baluran National Park as a conservation area has a wide variety of flora and fauna. But this time Baluran National Park to experience a variety of threats, interruptions and damage to ecosystems. Based on information from the Baluran office (2014) damage incurred includes: (i) Forest fires reached ± 946.75 ha, or about 4% of the total land area is due in large part caused by the irresponsible and not because of natural factors; (ii) Activities ± 400 ha of land clearing for agriculture plants business; (iii) timber theft, especially in resort Labuhan Peacock; (iv) Pastoral wild is a problem that is quite prominent, especially in the area Karangtekok, Labuhan Merak, and Balanan with an area of 3,450 ha. Cattle grazing types, namely cows and goats with an average of 1,447 head of cattle per day; (v) Local Trasmigrasi Settlements (Translok) since 1976, covering an area of 57 ha in Pandean area, Wonorejo village; (vi) illegal encroachment and the tilling of the soil; and (vii) hunting of wildlife by people with firearms, snares, poison and sap that often occur during the dry season. This study is a non-laboratory scale with the purpose of: (i) to analyze and explain the effect of each variable system of institutions, incentives, social capital, the socio-demographic, and social learning to the level of community participation; (ii) to analyze and explain whether the public welfare mediates the effect of variable incentives on the level of community participation; (iii) to analyze and explain whether the public welfare mediates the influence of social capital on the level of community participation. The study population includes: (i) the entire village communities buffer consisting of: public Randu Agung, Wonorejo, Bajulmati, Bimorejo, Kalianyar, Watu Kebo and Resources Waru; (ii) the people occupying forest land TNB illegally consisting of: (a) SPTNW 1 Bekol include: block Balanan, Kakapa, Simacan and Mesigit, and (b) SPTNW II Karangtekok include: block Merak, Shell, Lempuyang, and Sirondo. By using cluster sampling based group / region relating to the location of the existing research in Baluran National Park 60 respondents. It is based on a number of variables used in this study were 6 to 39 indicator variables by using Equation Model Structural analysis.*

Keywords: *Forest Management, Internal and External Environment, Participation.*

I. INTRODUCTION

National park as conservation areas have different types of flora and fauna as well as with all its uniqueness is one of the natural resources that can be relied upon to ensure the survival of humans either in the present or in the future. Based on information from the Director General of Nature Conservation, almost all the protected areas face threats and interference in the form of encroachment and illegal cultivation continues to increase over time.

Causes of threats and disturbances in the conservation area, caused by various factors, among others: (i) on the role of institutions / managers / other relevant institutions on the management of protected areas which are still not optimal in an effort to improve the role and participation of local communities living around the forest; (ii) on the side of the community that the level of awareness of the values of environmental conservation is still very low; (iii) the level of education / knowledge of local communities; (iv) lack of agricultural land; and (v) terisolirnya villages surrounding conservation area (Muntasib, 1999; PHKA, 2008).

Participation (participation) are taking part or participation. Community participation is a society that actively participate in the process and monitoring stages of the program, ranging from the stage of socialization, planning, implementation and preservation activities by donating labor and mind in the form of material (Turindra, 2009). Based on this understanding, one can participate if you can share with others in terms of values, traditions, feelings, loyalty, obedience and mutual responsibility. Community participation invites people to participate in the planning, implementation and management of the local environment. Community participation means the readiness of the local government and the community to accept the same responsibilities

and activities in environmental management around it. Participation also means a commitment to maintain the resources, skills, knowledge, ability and capacity of all partners (UNEP, 2004).

Participation as taking part in joint activities (Ndraha, 1990). Participation shows local community can really influence the decisions and taking part in decision making processes (Gibbon, 1993). Community participation as a willingness to help the success of each program according to the ability of each person (Mubiyarto, 1984). There are two kinds of public participation, that participation horizontal (between fellow citizens or members of the association) and vertical participation (among subordinates to superiors or the public by the government). Public participation is a beginning of a growing community that is able to develop independently (Bryant, 1982). The creation of community participation in forest management is in the process when the management has the positive conditions that can encourage a willingness to engage in social responsibility programs. Public participation is an important element in the development that is being or will be implemented; without the active participation of society, the development will not go well, as expected. The public involved in forestry as the assumption that rural communities are part of the problem because they are trying to meet the needs of the products of forest resources, as well as by involving communities in forest management is part of the solution (F. Robert, 2007).

Community involvement in forest management is not new in Indonesia, even the term "Forests for People" was appointed as the theme of the World Forestry Congress to VIII, in Jakarta in 1978. Although the system of community involvement at that time still felt not perfect and optimal, due to the lack of attention from the aspect of equality and justice, but the forest at that time still relatively good condition. But in this era, a fact that can be seen is on one side of the forest became damaged, but the other forest management has not been able to create a welfare society (Kartodihardjo, 2013).

Similarly happened in the forest Baluran National Park (BNP), which is currently his condition is getting damaged due to excessive exploitation of forest resources that often cause harm to other beings and society itself. TNB suffered threats and harassment in the form of illegal cultivation, encroachment, theft of animals and even forest fires occur almost every year as a result of the lack of public awareness of conservation values and the lack of involvement or participation in sustainable forest management. According Djufri (2001) stated that the motivation of people utilize forest products TNB, as a place to find the source of our daily lives that is based on economic needs. The economic situation is not good, causing the attitude of dependency on the forest TNB. Forest will regarded as a guarantee of the community by providing a source life. The function for forest products in the form of non-timber forest benefits that should not be taken in excess. Basic consideration is also happening in the forest food chain process for various forest animals; when one is lost, the food chain of animals living in the forest will become extinct. As a conservation area compiled by the zoning system, Baluran National Park is located directly adjacent to several villages called buffer villages. Supporting rural communities often utilize the forest resources as a source of livelihood and cause dependence forest to higher and decrease the preservation of forests (Arief, 1994).

Based on the order of social, economic, political and cultural different this time, needed a new approach in forest management, especially relating to public participation. Increasing the role of the community is a must in the forest management paradigm, because there are at least four (4) reasons, according Darusman (2002), namely: (i) the community is an integral part of the forest ecosystem; (ii) community as a very large part of the subject and object of development in Indonesia; (iii) community as the parties have been marginalized in development; and (iv) the community is enormous powers and significant either positively or negatively to the presence of the forest. During the period 2000-2005, the forest is converted both planned and unplanned reach the level of deforestation of 1.08956 million ha with a total area of deforestation is estimated to reach 21% (Kartodihardjo, 2011). Indonesia is the third tropical rain forest owners in the world with a total area reached 130.68 million ha, but as many as 72% have been lost. Forest damage also occurred in the forest of society (HKM), which is about 10 km from the edge of the forest area (Adi Nugroho, 2008). The destruction of forests was 3.8 million hectares per year, or a mean of 7.2 ha per minute. The destruction of forests has an impact such as landslides, droughts, floods, global warming and ozone layer destruction and the extinction of flora and fauna richness.

Baluran National Park designated as a National Park since 1980 with a land area of about 25,000 ha. It also has the Rural Forestry Extension Center Organization (SPKP) formed on the basis of cooperation between the forest with their respective village heads buffer. The initial purpose of the establishment of this organization is to assist local people in employment, improve their quality of life, reduce dependence on the forest park that resulted in the interruption region consisting of: wild grazing, grazing, theft of animals, flora and other forest products. But, in the reality these organizations cannot operate in accordance with the goals and expectations. Forest destruction in Baluran National Park, based on the research of Shafi (2013) includes: (i) The forest fires covering an area of 659 ha (period 1999-2000). The period 2000 through 2016 a forest fire with 54 fires with an area of burned areas around 287.75 ha, bringing the total forest land damaged by fire is ± 946.75 ha, or about 4% of the total land area of the park. The cause of the majority of forest fires caused by people who are not

responsible, not because of the forest nature. This adversely affects the flora and fauna. Public disturbances on forests also affect forest sustainability, among others (ii) Activities clearing an area of approximately 400 ha of agricultural plants business; (Iii) timber theft, especially in resort Labuhan Merak, such as firewood and firewood cutting grass, yam, fruit tart, hazelnut, gebang and ornamental fish; (Iv) Pastoral wild is a problem that is quite prominent, especially in the area Karangtekok, Labuhan Merak, and Balanan with an area of 3,450 ha. Cattle grazing types, namely cows and goats with an average of 1,447 head of cattle per day. As a result of this illegal grazing, the soil becomes solid, harmful to plants and vegetation that could potentially be competition for the park as well as food for deer, antelope and bison which is a unique wildlife park; (Iv) Local Trasmigrasi Settlements (Translok) since 1976, covering an area of 57 ha in daerah Pandean, Wonorejo village; (V) illegal encroachment and the tilling of the soil; (Vi) hunting of wildlife by people with firearms, snares, poison and sap that often occur during the dry season. Various factors affect the behavior and movement patterns of animals, including a limited source of drinking water of animals in the dry season.

Variables of internal and external, although each significant effect on community participation (conducted in association model separately), then the question remains unanswered: (i) Does each predictor variable that remained significant effect if these variables are built into a single entity relationship model more completely?. (Ii) How significant is the order of each variable to link community participation?. Those questions have not been answered because they have not studied, so that a gap (gap) study to investigate further; and (iii) research gap arises because some researchers use the same variables, but the measurement is not the same, as an example of the use of social capital variables, incentives, and socio-demographics. The occurrence of these variations show that there is no consensus among scientists to establish the elements of the same variables and the effect on community participation. By entering all the variables that had been used earlier researchers in a model that is more complete, so the contribution of each variable on community participation can be studied more in depth, and if all six predictor variables were compiled into a single model that is more complete, then the role or influence on community participation can be seen more clearly. The paper considers a variety of sizes used for the same variables, so that the right elements are known as proxy variables.

The role of the institutional system as a facilitator is expected to encourage the revival of forestry businesses to work together in rhythm and harmony towards sustainable forest-based community participation. Forestry in particular organizational professionalism include: the ability and willingness to implement science, technology and arts / management effective and efficient to ensure the effectiveness of sustainable forest management based on economic, social and environmental. Research related to the role of institutional systems on the level of participation has been done by Kasim (2007) says that one of the important things that need to be considered in forest management efforts (rainforest) is the institutional factors. Institutions essentially function as social control have the right to supervise, suppress, punish and impose sanctions against citizens who break the rules. Furthermore, it is said that the system of legal umbrella weak forestry institutions in the management of protected areas that cannot prevent disturbances and threats.

Based on the above phenomenon, the paper focuses on the forest Baluran National Park (BNP) related to factor that predicted affect the level of participation of local communities in forest management TNB to create a sustainable forest that can provide a benefit for the people's welfare and prevent the disruption and threat against the destruction of forests is prolonged. TNB forest management efforts based on community participation is the urgency of forestry development and community development of village. Some community is expected to portray indigenous knowledge in forest management, providing ample opportunity to participate.

Based on theories of participation that have been described, it can be argued slit (gap) the theory of participation as follows; (I) the difference in the definition of public participation; (Ii) the difference in participation indicators, so it raises the question that there has been no agreement between researchers indicators for community participation that affect the success of a program planning and implementation; (Iii) public participation will not run, if there is no commitment between local communities and local governments to maintain the local resources. The novelty of this study is to develop a theory of community participation, especially the participation of communities in forest management that is based on the analysis of internal and external environment. Research linking the importance of participation or community involvement in forest management consists of: (1) institutional system with the level of participation by Kasim (2007); Akamani (2015); Baynes (2015); Muro (2015), (2) Incentive to the level of participation by Adhikari (2014); Lestari (2015); Djambhuri (2012), (3) Social Capital with participation by the level of welfare and Grootaet (1999); Krishna (1999); Kawachi (1997); Narayan and Cassidy (2001); Cramb (2005); Wu (2004); Rupasingha (2006), (4) Socio-Demographic by the level of participation, Ristianasari (2013); Akamani (2015); Muro (2015); Mazunda (2015), (5) social learning (social learning) with the level of participation by Berkes (2009); Vultarius (2015), and (6) Welfare with the level of participation, performed by Rahut (2015); and Akamani (2015). Predictor variables which affect the level of public participation is divided into two groups: (1) Environmental Factors consist of: (i) social capital, (ii) the socio-demographic, (iii) welfare, and (iv) social learning; (2) external environmental factors consist of: (i) the institutional system, and (ii) incentive.

II. THEORETICAL FRAMEWORK

Environmental Sustainable Development (Environmental Sustainability Development) Environmental sustainable development (Environmental Sustainability Development), has become the government's commitment in various countries of the world, so that development activities in Indonesia must also be oriented on environmentally sound development.

There are three (3) relating to sustainable development, namely: (i) Decision of the Earth Summit in Rio de Janeiro 1992 which states that the general world countries agreed to take an active role in the preservation of the environment through the reduction of industrial waste and exploitation of resources nature responsibly. The summit decision is a reflection of the desire of the world community to assume that the earth is a common good, not the property of their respective countries. In fact, until now, there are many developed countries that make investments and exploitation of natural resources in developing countries at the expense of environmental sustainability; (ii) The improvement in the economic prosperity of the world community in comparison with the condition 25 years ago so that the public is increasingly aware of the quality of life. Indicators of well-being can be seen from the increase in per capita income of each country, especially developing countries, the increase is significant. Increasing prosperity is reflected in the improved quality of life and lifestyle, among others regarding diet, fashion, style of the house and so on. One challenge is how to increase the welfare of life is supported by still maintain the quality of the environment healthy and clean; and (iii) people are increasingly aware of the importance of health so very concerned about food products and beverages consumed, both from the production process as well as the nutritional content. Lately, the community of developed countries only require agricultural commodities that are environmentally friendly or what is known as a product that has ecolabel (Salim, 2004).

Sustainable Forest Resource Management

WCED (1987) defines sustainable development or sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development is a frame of mind that has become an international discourse. The frame of the 1992 Earth Summit in Rio de Janeiro dei agreed upon by all countries in the world including Indonesia, to be used as a guide. World action program results are known as the Rio Conference Agenda 21. Meanwhile, Marten (2001) argues that sustainable development can be defined as meeting the needs of the present without compromising the needs of future generations adequacy. Sustainable development means continued economic growth, because it is not possible in the context of growing economic development if it depends on the limited capacity of the existing natural resources (Salim, 2004). A prerequisite for the achievement of sustainable development is that any development process includes three major aspects of the ecological, economic and social. Three aspects in the development should be in a balance without dominating each other.

Principles of Community-Based on Forestry

According Jungwirth (2002) on the occasion of the 7th American Forest Congress, said that the principles of community-based forestry (Community Based Forestry) includes: (i) the community as decision makers on natural resources better, to be honest, open, inclusive and transparent as well that a fair decision in the case of profit-sharing on the results of forest benefits. The process of restructuring the relationship of active cooperation between government and private organizations with diverse interests; (ii) groups of people were able to find a common service sustainable future depends on its ability to integrate, imbalance of social, economic and ecological; (iii) communities recognize that the system to maintain itself, it must continue to reinvest in itself; and (iv) establish community monitoring system for development projects for several reasons, one of which is no good system for accountability. Monitoring is very important to make sure that we learn from the successes and mistakes and take corrective action. Monitoring activities should be financed and carried out to collect information in ways that build trust, promote learning and ensure accountability, including taking corrective measures immediately to inform future actions.

Sustainable Forestry Management

According Murniningtyas (2015) Ministry of Planning / National Development Planning Agency in the field of forestry technical said that the policy of sustainable forestry development includes three (3) pillars of development and accountable governance. The three pillars of development are includes: (i) social pillars (people) are consisting of: equalization; health; education; security; housing, and population, (ii) the economic pillar (profit) are consists of: the economic structure; consumption and production patterns; food security; energy security; and infrastructure / connectivity, (iii) the environmental pillar are consists of: the atmosphere; soil; coastal and marine; clean water; and biodiversity, (iv) the pillars of governance are consisting of: institutional; capacity; institutions and actors. Sustainable business in the field of natural resources and the environment should be based on: (i) attention to the "planet" clean technology, efficient use of materials

(recycling, saving materials and energy), zero waste, use of renewable materials; (Ii) profit growth continues to rise and is performed by many actors / inclusive; (Iii) socially acceptable / unacceptable in line with the social conditions of the community, especially the surrounding community.

Institutional System

According to Hayami (1984) institutions are the rules within a community or organization that facilitates coordination among its members to assist them with the hope where everyone can work together or relative to one another to achieve a common goal that is desired.

According Djogo (2003) that the policies and institutions (institutions) are difficult to separate, like two sides of a coin. A good policy is based on institutional ugly but would not bring the development process achieve maximum results. Vice versa, institutional nice but does not support his policy also makes it difficult to achieve the development goals as expected. Experience shows that the failure of development has often been based on the failure of the state and the government in making and implementing the right policies and ignoring the institutional development should be the basis of the entire process of building social, economic, political, technological and natural resources management.

Incentive

In the beginning all forms of business done by each employee must have the intent and purpose, for example, the desire for more progress and achievement and want to get greater results than ever before. To be able to carry out the purposes and objectives necessary to have an impulse that comes from within the employees themselves as well as encouragement from outside. The encouragement that comes from outside, either from the head of the company, for example, with the additional provision that could be money, goods and so on. Where it is referred to as an incentive. Some experts give different definitions to the term incentives. Agency theory according to Jensen (1976) and compensation study by Gomez (1992); Gerhart (1995) says that "The incentives are used to encourage employees to improve the quality and quantity of their work". In a large dictionary, Indonesian stated that the incentive is the "extra revenue (money, goods, etc.) is given as an incentive morale". In the opinion of Hasibuan & Parlagua (2000); and Hasibuan (2005) there are two forms of incentives, namely (i) the material incentive and (ii) non-material incentives. Material incentives is a material reward achievement was given, which was included in the material incentives are wages, goods and the like. The kinds of non material incentives are motivational shaped material, which includes non-material incentives is the proper placement, training, systematic, objective promotion, guaranteed jobs, the program awards, decorations, fair treatment and the like.

Social Capital

Social capital by Hanifan in 1916 in context to increase a society condition by a action in community, goodwill and other social attributes in the neighbors. In these works, appears characteristic about capital.

Characteristics of Social Capital.

Social capital has two characteristics of an aspect of the social structure and facilitate the actions of individuals in the social structure. In this sense forms of social capital in the form of obligations and expectations, information potential, norms and effective sanctions, authority relations, and social organization that can be used appropriately and gave birth to the social contract. It is almost identical to those expressed by Fukuyama (1999) on social capital in the range of value or informal norms shared among members of a community group allows the cooperation between them. Social capital can be either a mechanism that is capable of processing the potential to be a real force to support the development of a region.

In the context of public participation in forest management of the park, the social capital is seen is a series of both values and norms play a role in community interaction that allows to establish a mechanism of mutual benefit between the parties concerned. It is learned that social capital is capital that grew from the community to strengthen joint activities that benefit all side. Robert. D Putnam (1993) defines social capital as a phenomenon that grows from the bottom, comes from people who form social connections and networks (network) that is based on the principles of trust, mutual reciprocity, and the norm of action are present for their social contract that approval between fellow citizens or groups on certain principles with regard to life together in society. Further, he said that economic growth is highly correlated with the presence of social capital that suit undeniable the role of social capital also determined by a success of the transaction and economic growth, although of course it should be realized that the shape and role of social capital is varied depending on the social conditions in which social capital is growing.

Basic Elements of Social Capital.

That power would be maximized if it is supported by the proactive spirit of the make of the association over the following principles:

- a. Norm
- b. Values
- c. Trust
- d. Reciprocity
- e. Participation

Socio-Demographics

According to John Graunt in 1662 that demographic covers several aspects such as: (i) The resident population, (ii) Classification of the population, and (iii) Distribution of population. Studying population means it will deal with the aspect of quantity or amount of the population. Each country has its own policy regarding the calculation of the number of population. Di Indonesia calculation of the number of people held once every ten years. The number of this population will be analyzed by the government to determine the direction of population policy in the future. Grouping the population is an effort sorting / composition of the population based on certain variables such as age, gender, marital status, religion, caste and others. Distribution of the population is basically concerned by aspects of geography or region where stay based on a population distribution that include population density and the percentage of the population per region. Factors affecting the distribution of population among others geographical location, economic, social and political.

Social Learning

According Kusumanto (2005) that the social dimension of learning is: (i) a collection of development knowledge among members of the group; (ii) the sharing of knowledge and information between stakeholders different, (iii) establish communication and relationships among stakeholders; and (iv) capacity building strategy. Social learning theory of Bandura is based on reciprocal determinism (determinist reciprocal or complementary concepts define), beyond reinforcement (without reinforcement), and self-regulation and cognition. This explains the relationship between behavior, personality, and the environment where someone life. Based on social learning theory, these three aspects affect each other in shaping the attitudes of social learning. Theory stated that factors social / environmental, cognitive, and behavior plays an important role in learning.

Society Participation.

Mubiyarto (1984) defines participation as a willingness to help the success of any program according to each person's ability without means sacrificing self-interest. While Tjondronegoro (1996) states that a person's participation is influenced by the needs, motivations, structure, and social stratification in society. Someone will participate if it can meet the demand for satisfaction, benefit and improve their status. Sastropetro (1988) argued that the kind of participation will vary as follows: (1) participation in mind, (2) force participation, (3) Participation mind and force or active participation, (4) Participation with expertise, (5) Participation goods, (6) participation by the public, and (7) Participation services. Furthermore Sastropetro (1988) defines participation as mental involvement or thoughts and feelings in a group situation is encouraging to contribute to the group in order to achieve certain objectives and co-responsible for sustainable business.

Factors Affecting to Public Participation

According to Pangestu (1995) explains that the internal factors that influence community involvement in a program is anything that covers the characteristics of individuals who can influence these individuals to participate in an activity. The individual characteristics include: age, education level, number of family burden, the amount of revenue as well as a group experience. Silaen (1998) stated that the older the person, the acceptance of new things is getting low. It is because people who are in the elderly, tend to stick with the old values that are expected difficulty accepting things that are new. Slamet (1994), also argued that age is a factor that affects the level of participation, the older the person's physical abilities and the relative decrease of the state effect to physical. So, it because a younger person, the higher the level of participation in a particular activity or program development.

III. CONCEPTUAL FRAMEWORK RESEARCH

In accordance with the formulation of the problem and research objectives to be achieved, this study seeks to examine and explain the relationship of the internal environment consists of variable social capital, socio-demographic, social learning and external welfare. The nature is consists of variable institutional and incentive system to rate public participation in forest management Baluran National Park. In improving community participation in forest management program TNB, the need for mastery and knowledge of the institutional system of factors, characteristics of community, social, cultural and rules / norms of the local community. Thus, the program increased participation and welfare of forest communities will take place in

parallel between government programs by strengthening the capacity of (character building) sourced from the institutional system, community characteristics, social, cultural and rules / norms of the local community, so that the design of the development of local communities remain rooted in society itself.

The values in the communities this is not another so-called social capital (social capital). Forms of social capital in this area of research relates to the management and conservation of forest resources and the economic activities of local people do. Besides the social capital that is found is related to the issue of climate change (climate change) is happening in the forest region Baluran National Park (BNP), so this aspect is very important to be maintained as a source of valuable social and cultural potential. Social capital is the mechanism and the relationship between trust, norms, and networking in a social setting in an area (Woolcock, 1998). These values can also be used in the management and protection of forest resources social TNB. Capital is a strong capital, if it was built by the local community and organizations that exist to protect the forest park that tends to be damaged.

IV. RESEARCH METHODS

In accordance with the formulation of the problem and research objectives, then this kind of research is explanatory research. A study is explanatory generally aim to explain the position of the variables that were analyzed and the relationship and influence of one variable to another variable (Sugiyono, 2008). This study was designed to address problems that have been formulated. The design of this study can be explained as follows:

- a) This study is a survey research, the primary data collection using a questionnaire containing questions orally and in writing (Indriantoro, 2002).
- b) The study also included an explanatory research (explanatory research), a study that sought to explain the relationship between the variables through hypothesis testing (Sugiyono, 2008).

This research was conducted in Forest Areas Baluran National Park (BNP) in Situbondo, East Java, by taking the focus area of the park forest areas that are currently prone to damage, especially on the potential resources and forest resources exploitation activity due to irresponsible. Indications cause by less optimally by the role of the institutional system, local community participation and awareness of the values of forest conservation area, so we need a study to analyze the Influence of Environmental Factors Against Internal and External Participation Community Forest Management. When the study between October 2015 through the month of July 2016. The population in this study include: (i) the entire village communities buffer consisting of: public Randu Agung, Wonorejo, Bajulmati, Bimorejo, Kalianyar, Watu Kebo and Resources Waru; (Ii) the people occupying forest land TNB illegally is consisting of: (a) SPTNW 1 Bekol include: block Balanan, Kakapa, Simacan and Mesigit, and (b) SPTNW II Karangtekok include: block Merak, Shell, Lempuyang, and Sirondo.

Determination of the sample size in this study refers to (Hair, 2006) and (Ghozali, 2008) stated that (the sample size that must be met in SEM models, the 100-200 and the absolute minimum is 50 and the ratio of the number of samples and the number of indicators is 5- 10 (SEM training modules, 2009: 54). In this study using six variables with 39 indicator. So, the large sample size $39 \times 5 = 195$ heads of households as samples. Sampling in this study used cluster sampling based on four (4) groups / regions with regard to research sites include: (i) the member organizations of rural forestry extension centers (SPKP); (Ii) a buffer villages include: the village of Randu Agung, Wonorejo, Bajulmati, Bimorejo, Kalianyar, Watu Kebo and Resources Waru; (Iii) those who occupy the forest land illegally park in SPTNW I Bekol, include: block Balanan, Kakapa, Simacan and Mesigit; and (iv) those occupying forest land illegally park in SPTNW II Karangtekok, are includes: Merak blocks, Shell, Lempuyang, and Sirondo. Respondents in this study based on socio-demographic characteristics include: (i) age; (Ii) training; (Iii) livelihood life; (Iv) land ownership; (V) the number of dependents; and (vi) the availability of information.

The unit of analysis in this research is all household of society, both being members of the organization center for forestry extension services to rural areas (SPKP) which amounted to 102 households or who are not members of organizations such as public buffer villages and communities who illegally occupied the territory SPTNW I Bekol and SPTNW II Karangtekok.

Data analysis method

In this study aims to verify and analyze the influence of exogenous variables on endogenous variables. The effect is very complex as there are independent variables, variables and the dependent variable between. These variables are latent variables formed by several observed variables, therefore, to perform data analysis used in this study technical analysis of Structural Equation Model (SEM) using AMOS program package SPSS version 16.0 and 15.0.

Analysis of Structural Equation Model (SEM)

The use of SEM allows researchers to test the validity and reliability of research instrument. Confirmation by accuracy of the model, as well as test the influence of a variable against another. SEM can

examine together (Ghozali, 2005) include: (1) Model structurally constructs the relationship between independent and dependent; (2) measurement model, the relationship (loading value) between the indicator with the constructs (latent variables) Combined with the structural model testing and measurements enabled researchers to: (1) testing the measurement error (measurement error) as an integral part of SEM; (2) conduct a factor analysis in conjunction with hypothesis testing.

The steps in the method of SEM.

In the analysis using SEM methods, there are several steps that must be undertaken. There are seven steps to be taken in analyze, such as: (1) Development of model-based concepts and theories; (2) Eat the path diagram; (3) Conversion Path into the path of structural diagram; (4) select the input matrix; (5) select the problem identification; (6) Evaluation of goodness of fit; (7) the interpretation and modification of the model.

- 1) The development of this model is based on concepts and theory, requires two things to be done. The hypothesized relationship between the latent variables to be determined. The development phase of this model focuses on structural models and theoretical frameworks should consider being tested. Exogenous variables, endogenous should be clearly distinguishable, because the endogenous variable is not wholly influenced by the hypothesized variables in the research and there is still a possibility of endogenous variables is affected by other variables, then there is an error. Here error is also hypothesized to affect the endogenous variables in the model. Besides deciding directions between exogenous and endogenous. The role of theory and previous research was instrumental in that direction, because as a reference in determining the direction.
- 2) Confirmation by path diagram path (path diagram construction, path diagram is a description of how the variables in a model associated with each other, whether it has direct or indirect. Diagram that path also provides a holistic view of the structure of a model. By testing using SEM, viewable coefficient p-value SEM and that explains how the independent variables on the dependent variable.
- 3) Conversion to track the path to the structural model, the equation that was built in the path diagram was made to explain the relationship between variables in SEM examination.

The equation consists of:

- 1) The structural equations. Formulated to declare causal relationships between different variables.
- 2) Select Input Matrix, the input data used for SEM can be either a correlation matrix or covariance matrix, input data including the covariance matrix. When the purpose of the analysis was to test a model that has gained justification theory. While the appeal of the correlation matrix input can be used when the purpose of analysis would like to get an explanation of the pattern of causal relationships between variables in testing SEM (Ghozali, 2005).

Reliability testing, which is an index that shows the extent to which the measuring instrument is reliable or trustworthy. Reliability is a measure of the internal consist of construct indicators that show the degree to which each indicator that identifies a variable formation or latent factors are common. UJIA reliability that is used is the alpha cronbach. When alpha cronbach smaller than 0.6 (<0.6), then declared unreliable and instead that more than 0.6 (> 0.6) otherwise reliable. Results of measurement reliability of all variables showed by table below.

Table 1. Criteria Reliability Coefficient Index

No.	Interval	Criteria
1	< 0.200	Very low
2	0.200-0.399	Low
3	0.400-0.599	Adequate
4	0.600-0.799	High
5	0.800-1.00	Very high

Source: (Ghozali, 2005)

- 3) Assess the problem of identification, namely that the problems that often arise in the model structural equation modeling (SEM) is the estimation of the parameters, can be unidentified or under-identified which led to the solution over identified which resulted by the estimation does not produce a probe that is unique and the model cannot be trusted.
- 4) Evaluation goodness of fit
- 5) Interpretation and Modification Model

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