

LEADERSHIP OF INFORMAL LEADERS SURROUNDING GUNUNG CIREMAI NATIONAL PARK WEST JAVA PROVINCE

Suyadi¹, Sumardjo², Zaim Uchrowi², Prabowo Tjitropranoto²

¹Education and Training Center for Environment and Forestry of Makassar,
Jalan Perintis Kemerdekaan Km 17.5 Makassar, South Sulawesi Indonesia

²Department of Communication Science and Community Development, Faculty of Human Ecology, Bogor
Agricultural University, FEMA building Wing 1 Level 5, Dramaga Bogor, West Java Indonesia

ABSTRACT

Agroforestry farmers surrounding national park are generally less empowered and poor. This is due to the low capacity and less effective forestry extension. Informal leader is one of the driving factors to improve farmers' capacity and empowerment. This study was aimed to analyze: (1) the leadership roles of informal leaders surrounding Gunung Ciremai National Park, and (2) the factors influencing the leadership role of informal leaders surrounding Gunung Ciremai National Park. This study was conducted in Kuningan and Majalengka districts West Java Province Indonesia for four months, from July to October 2017. Sampling technique used was cluster random sampling in which cluster location of agroforestry farmer group was conducted in the buffer zone surrounding Gunung Ciremai National Park. Sample size in this study was 310 agroforestry famers. Results showed that: (1) the leadership roles of informal leaders (interpersonal, informational and decision making roles) surrounding Gunung Ciremai National Park was weak, and (2) factor influencing the weak leadership of informal leaders surrounding Gunung Ciremai National Park was the lack of supports for forestry extension activities and environment. The results of this study are expected to be a consideration for government agencies in the implementation of forestry extension by involving informal leaders.

Keywords: agroforestry, forestry extension, informal leaders, leadership, national parks

INTRODUCTION

The rural communities who live surrounding national park are generally less empowered and poor. They work mostly as farmers with agroforestry farming. Low capacity of farmers and ineffective implementation of forestry extension are major factors causing less empowerment and poverty in the rural communities. Forest resources support is not well utilized to achieve

community welfare in the forest areas, including Gunung Ciremai National Park where rural communities are still poor. Based on this phenomenon, it indicates that forest resources have less significant effect on the community welfare in the forest areas. This is confirmed by data from BPS (2017) which shows as many as 17.28 million people or 62.25 percent of 27.76 million poor people live in rural areas in and around forest areas. The villages bordering the forest area are generally pockets of poverty. This condition is partly caused by the lack of access to forest resources to support their welfare. This is in line with Puspitojati *et al.* (2012) and Langat *et al.* (2016) explaining that rural communities are heavily dependent on forest resources. People who live near forests commonly collect forest products for self-consumption or work in forest areas.

In general, forests are very important for human life both for the present and future generations (Hidayat 2015). The sustainability of forest resources is a shared responsibility, including farming communities around the forest. Responsibility for the sustainability of forest resources and the motivation of farmers in the farming requires a driver or someone who is able to influence them. One of the driving factors for farmers around the forest area is informal leader who has influence as a leader in the community. Involvement of informal leader is very important in improving the independence of forest communities, particularly forest farmers in agroforestry farming. The independence of farmers in agroforestry may improve farmers' welfare as well as their families. The realization of the welfare of farmers and their families will certainly also influence the sustainability of forest resources because it is free from the threat of damage. This is one of the roles of informal leaders in supporting the successful development of the forestry sector.

Informal leaders are individuals in the community who have advantages such as knowledge, wealth, descent, or position in the middle of community, are recognized and acknowledged by the community as respected and obeyed figures. These informal leaders have a strong influence on the community. The advantages owned by informal leaders that show a strong influence, should be able to move and motivate agroforestry farmers surrounding Gunung Ciremai National Park to change farmers' behavior in order to achieve better life goals. Involvement of informal leaders to show their role becomes very important in increasing the capacity of agroforestry farmers in the Park environment.

Agroforestry farmers who live surrounding Gunung Ciremai National Park (TNGC) are generally still obedient to their leaders, both formally and informally. This can be seen from the high respect for the figures in various aspects of the activity. What their leaders command, suggest, or expect, is generally obeyed and implemented by those farmers. In this condition, informal leaders have an important role in the process of developing an independent forestry human resource. In addition, informal leaders are able to play a role in facilitating

communication between local community and the government or the private sector. Informal leaders are required to be a driver for their communities in managing the forest so as not to damage forest resources and encourage the government to pay attention to community will and interests. Moreover, informal leaders are also able to play the role as spokespersons or community representatives in conveying expectation to the government, and vice versa. This is in line with the study conducted by Suprayitno *et al.* (2011) that community leaders around the candlenut forest play a significant role in motivating communities or farmers to conserve the forest.

Suhendi (2013) explained that community leaders usually have exemplary character. This means that good qualities of community leaders can be imitated. Therefore, in leadership teachings delivered by Ki Hajar Dewantara, it is said that a good leader must have three main properties namely *ing ngarsa sung tuladha*, *ing madya mangun karsa*, and *tut wuri handayani*. Such things must also be owned by those figures who are respected by the community. Many reasons why a person is considered a figure in society, such as education, work, wealth, skills, descent, and others. However, these attribute will be useless if the figure does not have a leadership spirit. Therefore, the ability to influence others is a good mix if combined with these factors. The more a person has these attributes plus the soul of leadership and exemplary, the person will be further strengthened.

Informal leader in the paternalistic community have a great potential to play their leadership roles. This is considering that the basic concept of leadership is the ability to influence others to be his followers. Soekanto (2013) revealed that leadership is defined as the ability of a person (ie leader) to influence others (ie followers) so that the others act as the leader wants them to. Through the leadership of informal leaders, the potential to change the community behavior towards the better direction is greater. Informal leaders are those who are highly adored and obeyed by the community members in an area.

Based on the above description, this study was aimed to analyze: (1) the leadership roles of informal leaders surrounding Gunung Ciremai National Park, and (3) factors influencing the leadership roles of informal leaders surrounding Gunung Ciremai National Park. This study is expected to be useful to the government agencies in charge of forestry extension that is giving inputs for consideration in the implementation of forestry extension to informal leaders.

METHODOLOGY

The study was conducted from July to October 2017 using survey design. Research was located in Kuningan and Majalengka districts of West Java Province based on its existence surrounding Gunung Ciremai National Park which is a unit of Forest Management Unit (KPH) Conservation.

The unit of analysis in this study was agroforestry farmers. The total population in this study was 1043 agroforestry farmers. The population is a member of agroforestry farmers group (FFG) living in the buffer villages of Gunung Ciremai National Park. Cluster random sampling technique was performed by cluster location of agroforestry farmer group. The number of respondents of this study were 310 respondents consisting of 191 respondents in Kuningan District and 119 respondents in Majalengka District.

Primary data collection was carried out by making questionnaires, performing direct observations in the field and in-depth interviews with farmers and other informants. Secondary data were obtained from various agencies concerned. The collected data were then analyzed by regression analysis. Data were analyzed using SPSS (Statistical Product and Service Solution) program version 22.

The independent variables of this study are Individual Characteristics of Agroforestry Farmers (X1) including indicators of age (X1.1), formal education level (X1.2), land tenure level (X1.3), farming experience level (X1.4), and the cosmopolitan level of farmers (X1.5). Forestry Extension Supports (X2) include indicators of forestry extension activities (X2.1), competence of forestry extension agents (X2.2), forestry extension methods (X2.3), forestry extension materials (X2.4), and intensity of forestry extension activities (X2.5). Environmental Supports (X.3) include indicators of economic accessibility (X3.1), ecological conditions (X3.1), and FFG role (X3.3). Whereas, independent variable are leadership roles of informal leader (Y) including indicators of interpersonal role (Y1), the informational role (Y2), and decision making role (Y3).

RESULTS AND DISCUSSION

Description of Determinants of Leadership Leaders Informal

Individual Characteristics of Farmers

Individual characteristics of agroforestry farmers surrounding Gunung Ciremai National Park are indicated by age, formal education, land tenure, farming experience and cosmopolitan level. Agroforestry farmers surrounding Gunung Ciremai National Park (TNGC) are classified as productive age, low-educated, low farming experience, and low cosmopolitan level. Detailed research variables are presented in Table 1.

Table 1: Description of research variables based on the average score in Kuningan and Majalengka Districts of 2017

Determinant	Average Score*		
	Kuningan	Majalengka	Total
Individual Characteristics of Farmer:			
Age	49.0	51.0	50.0
Formal education	8.0	7.0	8.0
Land Tenure	0.5	0.4	0.5
Agroforestry Farming Experience	20.0	23.0	21.0
Level of Cosmopolitan Farmer	38.6	37.0	38.6
Forestry Extension Support:			
Forestry Extension Activity	37.6	40.9	36.8
Competence of Forestry Extension Agent	45.1	45.9	44.8
Forestry Extension Method	34.0	34.9	34.3
Forestry Extension Material	49.2	56.4	53.9
Intensity of Forestry Extension Activity	32.5	24.4	29.4
Environmental Supports:			
Economic accessibility	33.3	40.3	32.1
Ecological Condition	73.8	69.8	72.2
FFG Role	40.8	41.4	41.1

Description *:

Age: 18-35 years (early adulthood), 36-50 years (middle adulthood), >50 years (late adulthood)

Formal Education: ≤ 6 years (elementary school), 7-9 years (junior high school), 10-12 years (senior high school), >12 years (Bachelor)

Land tenure: ≤ 0.5 ha (very narrow), 0.6 -1 ha (narrow), 1-5 ha (area), > 5 ha (very wide)

Agroforestry Farming Experience: 1 -15 years (very low), 16 -30 years (low), 31- 45 years (high), > 45 years (very high)

Interval score: category 0-25 (very low), 26-50 (low), 51-75 (high), 76-100 (very high)

The productive age of agroforestry farmers surrounding Gunung Ciremai National Park of Kuningan and Majalengka districts was in the early and middle adulthood categories, which was around 18-50 years old (55.16 percent). While approximately 44.84 percent of the farmers tended to be unproductive due to the old age or classified as late adulthoodhood who aged more than 50 years. Farmers’ ability to work in managing the land with the agroforestry system is affected by age. In agroforestry land management, it is required the age in the productive stage due to intensive workload. Physically, agroforestry farming requires farmers who are still in the

productive age ranging from 18-50 years (Hudiyani, 2013); (Premono & Lestari, 2013); (Suherdi *et al.* 2014). Furthermore, Suherdi *et al.* (2014) reinforces that in productive age, farmers have a strong physical, adequate knowledge and ability and good social relations so as to be able to farm well.

The formal education of agroforestry farmers surrounding Gunung Ciremai National Park of Kuningan and Majalengka was dominated by elementary and junior high school education (78.71 percent). This will have an impact on efforts to increase the capacity of farmers. This condition is in line with Kusumedi & Jariyah (2010); Premono & Lestari (2013); and Suherdi *et al.* (2014) explaining that forest farmers generally have elementary and junior secondary education levels whose main job is as a farmer. This is also in line with Winata & Yuliana (2012) who states that in forestry, forest farmers commonly do not have formal education, yet they only have farming experience that has been occupied since a young age. However, low levels of formal education do not prevent forest farmers from gaining knowledge for their advancement, particularly in farming. Low level of formal education influences the level of knowledge of forest farmers. Knowledge level of the farming community is related to its role in an activity program.

All lands used by farmers for agroforestry farming surrounding Gunung Ciremai National Park of Kuningan and Majalengka districts was in narrow and very narrow categories. Farmers' land area for agroforestry farming ranged from 0.01-2 Hectares. Land area will greatly determine the volume of trees to be produced in agroforestry farming. Agroforestry is a farming system that maximizes land use. Therefore, land tenure including land area becomes very important thing for agroforestry farmers. The area of land owned by the farmers will influence the selection of plant species to plant. The broader land owned by the farmers, they tend to plant monoculture plants, whereas the narrower land owned by farmers, they prefer to plant various types of plants (intercropping) in order to meet the needs and at the same time have savings. The land area may obtained from their own land, rent or work on others' land with a profit-sharing system. These three land tenure systems will have an effect on their management, particularly land used to cultivate annual crops or long-term crops. In harmony with land tenure, Hudiyani (2013) and Salampessy *et al.* (2012) explain that the area of land controlled by farmers for farming has a significant relationship to the participation of farmers.

Farming experience for agroforestry farmers surrounding Gunung Ciremai National Park of Kuningan and Majalengka districts was low (82.58 percent). These agroforestry farmers are generally native in their villages so that farming has been done for generations. Experience in agroforestry farming may support the process of capacity building for farmers. According to Padmowiharjo (1994), experience is a knowledge that the person experiences in an unspecified

period. The arrangement of experience possessed by a person as a result of learning during his lifetime can be described in the human brain. A person usually tries to connect the things learned with experience gained in the learning process. A pleasant and satisfying experience will have a positive impact on the same behavior and can be applied to the further situation.

The cosmopolitan level of agroforestry farmers surrounding Gunung Ciremai National Park of Kuningan and Majalengka districts was in low category (74.19 percent). This condition indicates that the agroforestry farmers in Gunung Ciremai National Park are less open with information from outside. They see that information from outside can not increase their capacity. Suprayitno *et al.*(2011) in his study reported that cosmopolitan level that is reflected by farmers' accessibility on the information of candlenut forest management is influencing farmer's capacity in managing the candlenut forest. The wider the farmers' access to various information on candlenut forest management, it will increase their capacity to manage the candlenut forest. Farmers who have wide access to various sources of information will have more information, broader knowledge and insight, better attitudes, and improved skills. Similarly, Herman *et al.* (2008) in his study explained that the cosmopolitan level significantly influence the capacity of vegetable farmers, both in Pasuruan and Malang districts. This means that the increase in cosmopolitan level may also increase the capacity of farmers.

Forestry Extension Support

Forestry extension surrounding Gunung Ciremai National Park is indicated by forestry extension activities, forestry extension competence, forestry extension methods, forestry extension materials and intensity of forestry extension activities. The benefit of forestry extension activities for agroforestry farmers was in low and very low categories (73.9 percent). Forestry extension activities organized by the government in general are still project-oriented and merely pursuing government program targets. Forestry extension activities held have not been suitable with the needs of farmers in the development of agroforestry farming. In principle, these activities are accepted and well responded by agroforestry farmers surrounding Gunung Ciremai National Parks in Kuningan and Majalengka districts, yet agroforestry farmers have not been able to gain benefit from extension activities that have been followed by forest farmer groups, vocational training, extension films, or comparative study. These activities tend to be rarely done.

Forestry Extension Competence in carrying out duties and functions surrounding Gunung Ciremai National Park was in low and very low categories (58.4 percent). Forestry extension competence is evidenced by the ability of extension agents in digging information or problems faced by farmers. It is also proven through its ability to provide knowledge and skills according to the needs of farmers, the capability of solving problems, and provide information that is beneficial to farmers.

The accuracy of forestry extension methods used by forestry extension was in low and very low categories (76.1 percent). The accuracy of the forestry extension methods used is measured by forestry extension activities including lectures, discussions, field visits/comparative studies, field schools, book or magazines.

The suitability of forest extension materials submitted to agroforestry farmers surrounding Gunung Ciremai National Park was in high and very high categories (52.6 percent). This is evidenced through the suitability of forestry extension materials including the needs of agroforestry farmers, new knowledge gained by farmers, skills and knowledge applied by farmers.

The intensity of forestry extension conducted by extension agents was in low and very low categories (85.5 percent). This low intensity means that forestry extension activities are rarely done. This can be seen through the meeting between forest farmer groups, farmers' involvement in extension activities outside their village, and the presence of forestry extension agents at the farming location.

Agroforestry farmers are domiciled in the buffer villages of Gunung Ciremai National Park in Kuningan and Majalengka districts. Management institutions surrounding Gunung Ciremai National Park, in this case Gunung Ciremai National Park Hall and the local government, have an important role in the implementation of forestry extension activities. Based on the results of in-depth interviews, it was obtained that the intensity of forestry extension was in low category because there is not established optimum coordination and cooperation between the institutions of Gunung Ciremai National Park with local government extension agencies. Forestry extension agents of local government state that the implementation of forestry extension surrounding Gunung Ciremai National Park is the responsibility of the national park management institutions. While the number of extension agents surrounding National Park Hall is relatively very little of which there are only 3 extension agents for the work area of Kuningan, Majalengka and Cirebon districts.

Van den Ban & Hawkins (1999) explains that counseling is one's involvement to communicate information consciously with the aim of helping others to give opinions so as to make correct decisions. In the general, extension is a social science which studies better system and process of changes as expected. Extension can be interpreted as a non-formal education system beyond the usual school system (Setiana2012). According to Sumardjo in Anwas (2013), the philosophy and principles of extension in the true sense are participatory, dialogical, convergent and democratic, so as not only as top-down and linear extension practices which are contrary to the philosophy of human development, yet it serves to empower community. Extension should be able to grow the

ideals to always think creative and dynamic, referring to the reality found in the field or should always be adapted to the circumstances in the field.

Extension activity is an educational activity (Asngari 2001), therefore, the extension agent should be able to act as an educator to change the behavior of the targeted community. There are three main roles of extension agents in farm management, namely educators, facilitators and mediators. The role of extension agent as educator is emphasized on improving the capacity of farmers in the management of farming, both for managerial, social and technical capacities through the learning process. The facilitator plays a role in encouraging and assisting farmers in making effective and efficient farming decisions. The role of extension agent as mediator in extension activities is intended to mediate the parties involved the management of farming by giving advice, consideration and understanding to the problems faced (Suprayitno *et al.* 2012).

Concerning with the role of forestry extension in the effort to change the behavior of farmers, forestry agents should have good quality. The quality of forestry extension agents can be measured through their competencies. A qualified forestry extension is a competent forestry worker in his field. Forestry Extension Competencies can be seen through the mastery of material related to knowledge and skills. Furthermore, it can also be seen through the accuracy of extension methods, the intensity of forestry extension activities, communication techniques and extension approaches.

Environmental Support

The environmental support in this study is indicated by economic accessibility, ecological conditions, and FFG role. Economic accessibility and FFG role of agroforestry farmers surrounding Gunung Ciremai National Park were in low category, while the ecological condition was in high category. Meanwhile, economic accessibility surrounding Gunung Ciremai National Park in Kuningan and Majalengka districts was in low and very low categories (85.16 percent). This condition proves that agroforestry farmers still depend on the strength of personal or family capital in developing their farming. They still do not rely on capital support from public, private, and/or cooperative financial institutions. The result of the in-depth interviews confirmed that they are not interested in financial institutions (Banks) that offer loans of venture capital. Such disinterest is due to the interest factor of the bank. Their agroforestry farms are like gambling. If they have good luck, they will be able to profit big, vice versa. This is due to an uncertain product price.

Ruhimat (2015) explains that there are seven attributes on the economic dimension that have the potential to influence the sustainability of agroforestry farming, namely the level of economic effectiveness, the stability of the selling price of harvest, the source of farming capital, the place

of sale, the diversification of income sources, the system of crop sales and the contribution of agroforestry farming to total income of farmers. Sustainability for the economic dimension lies in a less sustainable state. The leverage factors on the economic dimension that influences the sustainability level consist of the contribution of agroforestry farming to the total income of farmers and the sale system of harvest. Certainty of market price for agroforestry yields becomes important for farmers in the framework of continuity of agroforestry farming. This is in harmony with Suherdi *et al.* (2014) who reveals that the ease of marketing has a very significant relationship with community forest business motivation.

Market certainty is the next aspect influencing the level of motivation of farmers around the forest area to participate in the management of candlenut forest. The ultimate goal of a farm is, in addition to fulfilling household needs, the yields can be sold or provide financial benefits. In For example in Maros district, it generally does not encounter many obstacles because there are already parties who are ready to accommodate or buy agricultural products whenever the farmer sells it. This provides a guarantee for the financial sustainability of farmers' households (Suprayitno *et al.* 2011).

The ecological conditions of agroforestry farms in Gunung Ciremai National Park were in good category (80 percent). Land topography of Gunung Ciremai National Park is generally hilly, yet road access is relatively good, thus it is easily accessible by various modes of up to 4-wheeled vehicles. This condition makes it easier for farmers to perform their farming activities such as the transportation of seeds, fertilizers, and agricultural products. Agroforestry is a form of land use that combines forestry crops with agricultural crops and or livestock on the same land to optimize economic, ecological and social functions. Farmers' land is strongly supported by regional access. The difficulty level of the scope of business may influence the motivation of farmers in the agroforestry business, including in the selection of their business commodities. The topographical condition of the agroforestry area is also crucial in the selection of business commodities. In addition, the access of agroforestry areas to the market will also be considered by the farmers. Access to the market can influence market price and this will certainly have an impact on the sustainability of agroforestry farming. Similarly, soil fertility will also determine the pattern of farming.

The FFG agroforestry in playing its role is still less optimum which belongs to low and very low categories (65,48 percent). The farmers form groups in land management with agroforestry system to achieve common goals. The goals of the group should be in harmony with the goals of the group members, thus the group will be dynamic and maintain each other. In addition, group benefits are helpful in facilitating the transfer of experience and information. Therefore, grouping allows learning process among fellow group members. Ruhimat (2015) explains that the

optimization of the existence of farmer groups can be done by optimizing the role of farmer groups in agroforestry farming. There are three main roles of farmer groups in the process of agroforestry farming, namely teaching and learning class, production unit, and cooperation vehicle. As teaching and learning class, farmer groups become a forum for members to improve their knowledge, skills as well as attitudes and develop the independence of members in farming. As a unit of production, farmer groups are a unit of farming in achieving a more profitable economic scale, both in terms of quantity, quality and continuity. As cooperation vehicle, farmer groups are a place to strengthen relationships among group members and relationships with outside parties so that group members can deal with all threats, challenges, obstacles and disturbances in agroforestry farming. Furthermore, Ruhimat (2015) states that the existence of farmer groups is one of the key factors determining the sustainability of agroforestry farming. The existence factor of the farmer group must be managed and accommodated in the development of sustainable agroforestry farming policies.

Leadership Roles of Informal Leaders

Leadership role of informal leaders in Gunung Ciremai National Park (TNGC) was in low cvcategory. The leadership of informal leaders is indicated by interpersonal, informational, and decision making roles. It is seen from the average score of each indicator that was below 50 (Table 3). Distribution of agroforestry farmers according to the leadership roles of informal leaders around the TNGC area in 2017 is detailed in Table 2.

Table 2: Distribution of agroforestry farmers according to the leadership role of informal leaders and the categories in the TNGC area of 2017

Leadership Role of Informal Leader	Category*	Sample Size	%
Interpersonal Role	Very low	50	16.1
	Low	124	40.0
	High	94	30.3
Average Score : 47.2	Very high	42	13.5
Informational Role	Very low	75	24.2
	Low	137	44.2
	High	66	21.3
Average Score: 45.1	Very high	32	10.3
Decision Making Role	Very low	66	21.3
	Low	130	41.9
	High	95	30.6
Average Score: 43.7	Very high	19	6.1

Description: score 0-100. *) category of 0-25 (very low), 26-50 (low), 51-75 (high), 76-100 (very high)
Informal leader in the paternalistic village community have great potential to play their leadership roles. It is considering that the basic concept of leadership is the ability to influence others to be his followers. According to Soekanto (2013), leadership is defined as the ability of a person (namely leader) to influence others (ie followers), thus the others behave as expected by the leader. Through the leadership of informal leaders, the potential to change the community behavior around the forest area towards the better direction is greater.

Leadership is an interaction between leaders and followers who influence each other in order to achieve an organizational goals (Avolio *et al.*, 2014; Cameron 2011; Raharjo and Nafisah 2006; Brahmasari and Suprayetno 2008). Furthermore, leadership is a process of influencing or directing by leaders and followers to consciously follow the direction of the leader because of his authority in working through the provision of vision, encouragement, enthusiasm, love, trust, activities, obsession, consistency, use of symbols, and attention to achieve organizational goals (Meitha dan Sasmito 2016). Moreover, Sudarwan in Sudaryono (2014) explains that leadership is defined as the degree of persistence, while the leader is the person with the greatest potential to give influence. Main factors in leadership are leaders, followers, situations, and communication. Mintzberg (Arifin 2015), (Sudaryono 2014) and (Sillong *et al.* 2008) grouped ten roles of leaders into three categories, namely interpersonal, informational, and decision making roles.

Interpersonal Role

The interpersonal role of informal leaders was relatively low and very low (56.1 percent). It is seen from the presence of figures on community events that can be role models for the community. It is also seen from the ability to share tasks, lead and mobilize the community, and foster good relationships with extension agents or other parties for the benefit of the community, particularly agroforestry farmers.

Informal leaders play a role in facilitating between the wishes of the local community and the government or the private sector. Informal leaders become the movers for their community to manage the forest so as not to damage and encourage the government to pay attention to the will and interests of farmers. In addition, informal leaders also serve as spokespersons or community representatives in conveying expectation to the government, and vice versa. This is in line with Suprayitno *et al.* (2011) who reveals that community leaders around the forest area can play an important role in motivating communities or farmers around the forest area to preserve the forest.

Suhendi (2013) states that a leader usually has exemplary nature. This means that a leader can be exemplified. Therefore, in the teachings of leadership delivered by Ki Hajar Dewantara, it is explained that a good leader must have three main properties namely *ing ngarsa sung tuladha*, *ing madya mangun karsa*, and *tut wuri handayani*. Such a thing must also be owned by those

acknowledged by the community. Many reasons why a person is considered a leader in society, such as education, work, wealth, skills, descent, and others. However, these attributes will be useless if the figure itself does not have leadership spirit. Therefore, the ability to influence others is a good mix if combined with the factors of characterization of education, employment, wealth, skill, or descent. The more a person has these attributes plus the soul of leadership and exemplary, the person will be further acknowledged.

Informational Role

Informational role of informal leaders was in low and very low categories (68.4 percent). This can be seen from the ability of informal leaders in finding information in accordance with the needs of farmers. Informal leaders are also an informal source for farmers, where to ask and discuss and as spokespersons on farmer issues. It is also proven through its ability to provide knowledge and skills according to the needs of farmers, the ability to solve problems faced by farmers, and by providing information that is beneficial to farmers.

Van den Ban dan Hawkins (1999) argue that community leaders have a great influence on the way community think and farm. Influential leader in his community acts as: (a) the successor of information from outside the community, (b) the interpreter of information from outside on the basis of his own opinions and experiences; (c) role model for surrounding community; d) reinforcement or repudiation of an external change or legitimization of a change, (e) and influential in changing the norms of the community.

Decision Making Role

The role of decision making of informal leaders was is in low and very low categories (63.2 percent). The role of decision making is measured by business activities undertaken by informal leaders, the ability to resolve community disputes and solving problems faced by farmers, the ability to find business capital facilities, activities in the development of farming. and the ability to negotiate with other parties for the interests of farmers.

The distribution of agroforestry farmers based on the leadership role of informal leaders reinforces an opinion (Liow *et al.*, 2015) that informal leaders can be found easily in every community. Although it does not have an official appointment letter like most formal leaders in private or government institutions, yet informal leaders are very effective in carrying out their leadership, particularly the ability to influence others to act in accordance with their expectation. The strong influence owned by informal leaders is related to their existence based on the willingness of the group members due to certain advantages owned by informal leaders and are oriented towards the interests of the group members. Thus, it is only natural that the loyalty of group members is not in doubt. It is also consistent with Mutmainah and Sumardjo (2014) who

state that group leaders have a very important role in managing their farming groups. The role of group leader includes the ability to provide direction and guidance for group members, ability to facilitate achievement of common goals, ability to encourage members to be active, and ability to accommodate the aspirations of the group members.

Factors Influencing Leadership of Informal Leaders

Leadership role of informal leaders surrounding Gunung Ciremai National Park was relatively weak (Table 2). Factors that have a significant effect on the weak leadership of informal leaders are forestry extension support and environmental support (Table 4). For forestry extension support, the aspects which heavily influenced the leadership of informal leaders were the competence of forestry extension agents and intensity of forestry extension activities. While for the aspect of environmental support, all variables (economic accessibility, ecological condition, and FFG role) had significant difference on the leadership role of informal leaders, both interpersonal, informational and decision making roles. The regression equation is as follows:

$$Y_1 = 13,533 + 0,458X_{2.2} + 0,783X_{2.5} + 0,546X_{3.1} + 0,643X_{3.2} + 0,523X_{3.3} ; R^2 = 0,502.$$

Contribution of forestry extension support (competence of forestry extension agents and intensity of forestry extension activities) and environmental support (economic accessibility, ecological condition and FFG role) to the leadership of informal leaders in Gunung Ciremai National Park was 50.2 percent. This indicates that the higher the competence of forestry extension agents, the intensity of forestry extension activities, the economic accessibility, the ecological conditions and the role of FFG, the leadership role of informal leaders in Gunung Ciremai National Park will increase.

The assumption that the leadership of informal leaders in the Park is significantly influenced by individual characteristics of farmers, forestry extension support, and environmental support is not entirely correct. The leadership of informal leaders surrounding Gunung Ciremai National Park was not significantly influenced by the individual characteristics of the farmers, which includes aspects of age, formal education, land tenure, farming experience, and cosmopolitan level of farmers.

The increase in the role of forestry extension support particularly on the competence of forestry extension agents and intensity of forestry extension activities is able to increase leadership roles of informal leaders. During this time, the role of forestry extension support surrounding Gunung Ciremai National Park was relatively weak, thus leadership roles of informal leaders was also weak. Informal leaders were less able to be exemplary figures in terms of agroforestry farming development. Furthermore, informal leaders were also less able to be a source of information, a place to ask questions, discussions and as spokespersons in the various problems faced by

farmers, particularly concerning with agroforestry farming. Similarly with decision making role, informal leaders did not have an entrepreneurial spirit, so the instincts in entrepreneurship are less visible. Moreover, informal leaders were less effective in resolving conflicts, allocating resources, and negotiating with other parties. The regression coefficient value of factors influencing the leadership of informal leaders in TNGC area of 2017 is detailed in Table 3.

Table 3: Regression coefficient value of of factors influencing leadership of informal Leader round the TNGC area of 2017

Factor Influencing Leadership of Informal Leader	Regression Coefficient	Significance
Constant	13.533	0.525
Age	-0.121	0.698
Formal education	-0.756	0.427
Land Tenure	0.000	0.692
Agroforestry Farming Experience	0.141	0.606
Cosmopolitan Level of Farmer	0.244	0.222
Forestry Extension Activity	-0.064	0.749
Competence of Forestry Extension Agent	0.458	0.028*
Forestry Extension Method	-0.255	0.327
Forestry Extension Material	0.097	0.562
Intensity of Forestry Extension Activity	0.783	0.000**
Economic Accessibility	0.546	0.001**
Ecological Condition	0.643	0.000**
FFG Role	0.523	0.000**
R Value: 0.709		
R ² Value:: 0.502		

Description: *) significantly different at a level α : 0.05 **) significantly different at a level α : 0.01

Forestry extension support is indicated through forestry counseling, forestry extension competence, forestry extension methods, forestry extension materials and intensity of forestry extension. Based on the results of regression I (Table 4), the most influential variable on the leadership of informal leaders surrounding Gunung Ciremai National Park is the competence of forestry extension workers and the intensity of forestry extension. Reliable forestry agents will be trusted and preferred by informal leaders. Informal leaders are more excited and eager to discuss with competent forestry instructors. Informal leaders are able to absorb a lot of quality

information, knowledge and skills from a competent forestry instructor. High intensity of forestry extension either with visiting (home/farming), training, non-formal discussion, or comparative studies can strengthen the capacity of informal leaders. These two aspects are more dominant in increasing leadership roles of informal leaders, both in interpersonal, informational and decision making roles.

Environmental support factors are indicated through aspects of economic accessibility, ecological conditions and the role of FFG strongly influence the role of informal leader leadership (interpersonal, informational and decision making roles). This indicates that the better economic accessibility, ecological conditions and the role of FFG, it will increase leadership roles of informal leaders. The ease in building partnership with financial institutions, ease of access to farm roads, and active role of FFG can enhance leadership roles of informal leaders.

Interpersonally, informal leaders can be a figure who is more respected and obeyed. Informal leaders in the community act as role models for farmers by nurturing, division of tasks, leading and mobilizing communities, building good relationship with extension agents or other parties for the interests of community which those duties are a benchmark for the interpersonal role of informal leaders. This is in line with the results of the study (Suprayitno *et al.* 2012) who states that the effective model in increasing the participation of farmers is by improving the ability and providing the opportunity to participate forestry extension activities. Informal leaders in carrying out their functions and leadership roles need to be guarded and even upgraded. If informal leaders have sufficient ability, their interpersonal role will work better.

CONCLUSION

Leadership roles of informal leaders including the dimension of interpersonal, informational, and decision making roles surrounding Gunung Ciremai National Park was weak. In terms of the interpersonal role, informal leaders had not been able to become a figure that is respected and obeyed. Informal leaders were also less able to lead and mobilize members of agroforestry farmers, and less able to establish good relations with other parties. In term of the informational role, informal leaders had not been able to become a source of information for agroforestry farmers. Furthermore, informal leaders could not be a place to ask, discuss and spokesperson in various problems faced by agroforestry farmers. In terms of decision making role, informal leaders had not been able to overcome disputes and solving problems faced by agroforestry farmers. Moreover, informal leaders are less able to facilitate or find solutions for farming capital. In addition, informal leaders had not been able to facilitate the development of farming and negotiating with other parties for the interests of agroforestry farmers. Subsequently, informal leaders were lack of entrepreneurship spirit to bring forest farmer groups to be superior. Informal leader were not sharp and effective to allocate human resources in the farmer group.

The weak leadership of informal leaders surrounding Gunung Ciremai National Park is caused by the weak support of forestry extension and environmental support. Forestry extension supports which heavily influenced the leadership roles of informal leader were the competence of forestry extension agents and the intensity of forestry extension activities. The increase in the competence of forestry extension agents and the intensity of forestry extension activities will greatly increase the leadership roles of informal leaders. Aspects of environmental support including aspects of economic accessibility, ecological condition and the FFG role had a significant effect on the leadership of informal leaders around Gunung Ciremai National Park. This indicates that the better economy accessibility, ecological condition and also the FFG role, it will increase leadership roles of informal leaders around Gunung Ciremai National Park.

REFERENCES

1. [BPS] Badan Pusat Statistik. (2017). *Statistik Indonesia 2017*. (Subdirektorat Publikasi dan Kompilasi Statistik, Ed.). Jakarta (ID): BPS.
2. Anwas, O. M. (2013). *Pemberdayaan masyarakat di era global*. Bandung (ID): Alfabeta.
3. Arifin, B. S. (2015). *Psikologi sosial*. Bandung (ID): Pustaka Setia.
4. Asngari, P. S. (2001). *Peranan agen pembaruan/ penyuluh dalam usaha memberdayakan (empowerment) sumberdaya manusia pengelola agribisnis. Orasi ilmiah guru besar tetap ilmu sosial ekonomi*. Bogor (ID): Institut Pertanian Bogor.
5. Avolio, B. J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership : Re-examining transformations in leadership source and transmission. *The Leadership Quarterly*, 25(1), 105–131. <https://doi.org/10.1016/j.leaqua.2013.11.003>
6. Brahmasari, I. A., & Suprayetno, A. (2008). Pengaruh motivasi kerja , kepemimpinan dan budaya organisasi terhadap kepuasan kerja karyawan serta dampaknya pada kinerja perusahaan (Studi kasus pada PT . Pei Hai International Wiratama Indonesia). *Jurnal Manajemen Dan Kewirausahaan*, 10(2), 124–135.
7. Cameron, K. (2011). Responsible Leadership as Virtuous Leadership, (September), 25–35. <https://doi.org/10.1007/s10551-011-1023-6>
8. Herman, Sumardjo, Asngari, P. S., Tjitropranoto, P., & Susanto, D. (2008). Kapasitas petani dalam mewujudkan keberhasilan usaha pertanian: Kasus petani sayuran di kabupaten Pasuruan dan kabupaten Malang provinsi Jawa Timur. *Jurnal Penyuluhan*, 4(1), 11–20.
9. Hidayat, H. (2015). *Pengelolaan hutan lestari partisipasi, kolaborasi, dan konflik* (ed. 1). Jakarta (ID): Yayasan Pustaka Obor Indonesia.
10. Hudiyani, I. (2013). Partisipasi petani dalam pengelolaan hutan rakyat di desa benteng kabupaten Bogor provinsi Jawa Barat. *Jurnal Penyuluhan*, 9(2), 132–145.
11. Kusumedi, P., & Jariyah, N. A. (2010). Analisis Finansial Pengelolaan Agroforestri dengan Pola Sengon Kapulaga di Desa Tirip, Kecamatan Wadaslintang, Kabupaten Wonosobo.

- Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 7(2), 93–100.
12. Langat, D. K., Maranga, E. K., Aboud, A. A., & Cheboiwo, J. K. (2016). Role of forest resources to local livelihoods : The case of east mau forest ecosystem , Kenya. *International Journal of Forestry Reseach*, 2016(ID 4537354), 1–10. <https://doi.org/http://dx.doi.org/10.1155/2016/4537354>
 13. Liow, M. R., Laloma, A., & Pesoth, W. (2015). Peranan Pemimpin Informal dalam Meningkatkan Partisipasi Masyarakat dalam Pembangunan di Desa Malola. *JAP*, III(31), 1–9.
 14. Meitha, A., & Sasmito, C. (2016). Pengaruh kepemimpinan, Kedisiplinan dan Komunikasi terhadap Pelayanan Publik di Puskesmas Kabupaten Sambas. *Jurnal Ilmu Sosial Dan Ilmu Politik*, 5(3), 109–114.
 15. Mutmainah, R., & Sumardjo. (2014). Peran kepemimpinan kelompok tani dan efektivitas pemberdayaan petani. *Jurnal Sosiologi Pedesaan*, 2(3), 182–199.
 16. Padmowiharjo, S. (1994). *Psikologi belajar mengajar*. Jakarta (ID): Universitas Terbuka.
 17. Premono, B. T., & Lestari, S. (2013). Analisis finansial agroforestri kayu bawang (*Dysoxylum Mollissium Blume*) dan kebutuhan lahan minimum di provinsi Bengkulu. *Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 10(4), 211–223.
 18. Puspitojati, T., Darusman, D., Tarumingkeng, R. C., & Purnama, B. (2012). Pemangku kepentingan yang perlu diberdayakan dalam pengelolaan hutan produksi : Studi kasus di kesatuan pemangkuan hutan Bogor. *Jurnal Analisis Kebijakan Kehutanan*, 9(3), 190–204.
 19. Raharjo, S. T., & Nafisah, D. (2006). Analisis Pengaruh Gaya Kepemimpinan terhadap Kepuasan Kerja, Komitmen Organisasi dan Kinerja Karyawan (Studi Empiris pada Departemen Agama Kabupaten kendal dan Departemen Agama Kota Semarang). *Jurnal Studi Manajemen Dan Organisasi*, 3(2), 69–81.
 20. Ruhimat, I. S. (2013). Model peningkatan partisipasi masyarakat dalam implementasi kebijakan kesatuan pengelolaan hutan: Studi kasus di KPH model kabupaten Banjar, Kalimantan Selatan. *Jurnal Analisis Kebijakan Kehutanan*, 10(3), 255–267.
 21. Ruhimat, I. S. (2015). Model peningkatan kapasitas petani dalam pengelolaan hutan rakyat: Studi di desa Ranggung, Kalimantan Selatan. *Jurnal Penelitian Kehutanan Wallacea*, 4(1), 11–21.
 22. Ruhimat, I. S. (2015). Status keberlanjutan usahatani agroforestry pada lahan masyarakat : Studi kasus di kecamatan Rancah, kabupaten Ciamis, propinsi Jawa Barat. *Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 12(2), 99–110.
 23. Salampessy, M. L., Bramasto, N., & Purnomo, H. (2012). Hubungan Karakteristik Responden dengan Partisipasi Masyarakat dalam Kegiatan Pengelolaan Hutan Lindung Gunung Nona di Kota Ambon Propinsi Maluku. *Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 9(3), 149–159.

24. Sawerah, S., Muljono, P., & Tjitropranoto, P. (2016). Partisipasi masyarakat dalam pencegahan kebakaran lahan gambut di kabupaten Mempawah, provinsi Kalimantan Barat. *Jurnal Penyuluhan*, 12(1), 89–102.
25. Setiana, L. (2012). *Teknik Penyuluhan dan Pemberdayaan Masyarakat*. Bogor (ID): Ghalia Indonesia.
26. Sillong, A. D., Mohamad, D. M., Hassan, Z., & Ariff, I. (2008). Changing Roles and Competencies of Effective Public Sector Leadership. *Jurnal Pengurusan Awam*, (1), 27–46.
27. Soekanto, S. (2013). *Sosiologi Suatu Pengantar*. Jakarta (ID): Rajawali Pers.
28. Sudaryono. (2014). *Leaderships Teori dan Praktek Kepemimpinan*. Jakarta (ID): Lentera Ilmu Cendekia.
29. Suhendi, A. (2013). Peranan Tokoh Masyarakat Lokal dalam Pembangunan Kesejahteraan Sosial. *Informasi*, 18(2), 105–116.
30. Suherdi, Amanah, S., & Muljono, P. (2014). Motivasi petani dalam pengelolaan usaha hutan rakyat desa Cingambul, kecamatan Cingambul, Majalengka. *Jurnal Penyuluhan*, 10(1), 85–93.
31. Suprayitno, A. R., Gani, D. S., & Sugihen, B. G. (2011). Model peningkatan partisipasi petani sekitar hutan dalam pengelolaan hutan kemiri rakyat. *Jurnal Penelitian Sosial Dan Ekonomi Kehutanan*, 8(3), 176–195.
32. Suprayitno, A. R., Gani, D. S., & Sugihen, B. G. (2012). Motivasi dan partisipasi petani dalam pengelolaan hutan kemiri di kabupaten Maros provinsi Sulawesi Selatan. *Jurnal Penyuluhan*, 9(2), 182–196.
33. Van den Ban, A. W., & Hawkins, H. S. (1999). *Penyuluhan pertanian*. Yogyakarta (ID): Kanisius.
34. Wahyuni, S., Sumardjo, Lubis, D. P., & Sadono, D. (2017). Hubungan jaringan komunikasi dan dinamika kelompok dengan kapasitas petani dalam agribisnis padi organik di Jawa Barat. *Jurnal Penyuluhan*, 13(1), 110–120.
35. Winata, & Yuliana. (2012). Tingkat partisipasi petani hutan dalam program pengelolaan hutan bersama masyarakat (PHBM) perhutani. *MIMBAR*, 28(1), 65–76.