Community Empowerment in Agribusiness Governance at the Citarik Sub Watershed in Tanjungwangi Village, Cicalengka District, Bandung Regency. West Java, Indonesia

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ABSTRACT

Community empowerment is an effort to enable and make people independent so that they can fulfill their life needs and interests, as well as improve their standard of living by utilizing the resources they have. Agricultural activities in highland areas must wisely consider the balance of nature while maintaining conservation areas and not destroying productive agricultural regions. This research was conducted using quantitative methods and descriptive statistics with survey methods. The study was carried out in the upstream area of the Citarik sub-watershed, Tanjungwangi Village, Cicalengka District, Bandung Regency. The research location was chosen purposively with the consideration that apart from having great economic potential, its primary function is as a buffer area to store water reserves through the existence of conservation forests. Primary data was obtained through in-depth interview techniques, focused discussions, observation, and process documentation. Interviews using questionnaires were conducted with respondents selected randomly proportionally with a sample size of 120 farmers. The design used in this research is descriptive quantitative. The data analysis technique uses different test analyses intending to connect changes in awareness and ability to act after empowering farmers on conservation land in the Upstream Sub Watershed of Citarik. Research result showed the change in awareness has been good, but there is a need for continued education related to specific issues upstream of watershed Citarik regarding preserving conservation areas and keeping the production landscape sustainable. Farmers' ability to act has also increased towards improvement, but one aspect that still needs to be stronger is action to carry out environmentally friendly agricultural businesses. Empowering farmers on conservation land in the upper reaches of the Citarik watershed shows that changes in awareness have a significant influence on farmers' ability to act in protecting the environment of conservation land.

Keywords: *empowerment, change in awareness, ability to act, upstream sub-watershed, conservation land*

INTRODUCTION

A watershed applies the bioregion principle by following a line of ridges as the initial place where water falls to the earth's surface. Therefore, watersheds can be an appropriate unit of analysis in developing natural resource management concepts to ensure that water quality is maintained and the amount of water is distributed optimally. So water is still available during the dry season, but the amount is reasonable during the rainy season. According to Salampessy and Lidiawati (2017), the upstream area of the watershed has the function of preventing runoff to downstream areas so that flooding can be controlled, increasing infiltration capacity so that an area has good quality groundwater reserves, and being the primary source of landscape services.

A watershed is a natural resource that is a common pool resource determined by hydrological relationships, where optimal management requires coordination in the use of resources by all users. Achieving this requires coordinated management of various resources in watersheds, including forests, livestock, agricultural land, surface water, and underground water through hydrological processes (Suwarno, 2011).

Rivers have a strategic role as a natural resource that supports people's lives. The role of rivers in the urban context is critical, especially in efforts to maintain sustainable water resources. Watershed Management is one aspect of Water Resources Management (WRM) in a Water Resources Development Area (WRD), which is an effort to utilize water resources in an integrated manner with efforts to control and preserve them (Suganda et al., 2009).

The change in the natural resources (NR) management system from central to regional autonomy has impacted changes in community behavior. Land ownership, like common properties, is starting to be used as a reason for individuals to exploit land freely without paying attention to the impact of environmental damage, the long-term economic value of the land, the condition and correct land use, apart from that, as a result of this change in management, there are many forests in the Sub watershed area which is denuded and has been converted into agricultural land and housing (Harini et al., 2012).

Community empowerment in managing river watersheds (hereafter referred to as watersheds) is increasingly receiving attention, as seen by the number of authors who state the importance of community participation and independence in managing watersheds (Ohno, 2010). Community empowerment in managing watersheds is also the government's concern. This empowerment is proven by including articles regarding community empowerment in the management of watersheds in the laws and regulations relating to watershed management, such as Law No. 37 of 2014 concerning Soil and Water Conservation, as well as Government Regulation No. 37 of 2012 concerning watershed Management. Then, in 2014, the Minister of Forestry also issued Minister of Forestry Regulation No. P.17/Menhut-II/2014, which explicitly regulates procedures for community empowerment in watershed management activities. Even before the issuance of these regulations, the government had also carried out watershed management activities, which placed community empowerment as one of the main activities. These activities include Forest and Land Rehabilitation (RHL), the National Water Saving Partnership Movement (NWSPM), the Development of Integrated Land Conservation Farming (DILCF), and the construction of a Micro Watershed Model Area (MWMA).

Community empowerment is an effort to enable and make people independent so that they can fulfill their needs and interests, as well as improve their standard of living by utilizing the resources they have (Awang, 2008; Wrihatnolo & Dwijowijoto, 2007; Subejo & Supriyanto, 2004). Thus, community empowerment emphasizes initiative and autonomy in decision-making by the community. Therefore, Ife

and Tesoriero (2006) emphasize the importance of the learning process in empowerment to equip society towards sustainable change.

Apart from that, to achieve an empowered society, several efforts also need attention (Kartasasmita, 1997), such as 1) Creating an atmosphere or climate that allows the community's potential to develop. Community empowerment requires a strong commitment from the government and other related parties. These parties must create a supportive atmosphere or climate so that the community's potential develops. Community participation must be encouraged as widely as possible through mentoring programs towards their independence, and 2) Strengthening the potential or power possessed by society (empowering). This strengthening includes concrete steps and involves providing various inputs, as well as opening access to various opportunities that will make society more empowered, such as information, markets, and capital.

The essence of community empowerment is to enable and make the community independent so that it places greater emphasis on the decision-making autonomy of a community group, which is based on the resources they have (Wrihatnolo & Dwijowijoto, 2007). Thus, community empowerment should emphasize the process of positive change that occurs, as well as increasing and sustaining community empowerment. Empowerment means the transfer of power from those who have power (subjects) to those who are weak (objects), who initially become objects of development and become subjects. So that after being empowered, it becomes a subject-subject relationship. The creation of this situation will build a participative attitude to achieve independence. Intellectual independence, intellectual independence, and management (Fredian, 2014). Individuals or groups in the community can carry out empowerment efforts. Carried out by individuals in the same boat who join together and develop a critical awareness of their fate, this is the most effective step.

Empowerment in Tanjungwangi Village, Cicalengkan District, Bandung Regency, is carried out by several parties. Watershed shared observations of empowerment carried out by farmer groups. The role of an active farmer group leader provides awareness to members. The role and empowerment are also carried out by the MDK Tanjungwangi Foundation, Non-Governmental Organizations, Water Management of Tanjungwangi Lestari, and educational institutions, one of which is the Djuantika People's School Middle School (Frekuensi). Activities carried out by the MDK Tanjungwangi Foundation include making a master plan with the community, annual work meetings, education, and training for members, including training in making compost, training in making nurseries, and reforesting critical land. Activities carried out by farmer groups consist of regular and organic education to members in their daily lives with farmers.

In practice, many community empowerment activities are outside the concept of community empowerment. Community empowerment is often trapped in the logic of "projects," which emphasizes results and administrative accountability, such as the budget size, the number of activities carried out, and the assistance provided (Ife & Tesoriero, 2006; Firmansyah, 2012). The assistance makes community empowerment efforts tend to become participation mobilized by material incentives, so that often, instead of creating community independence, it causes community dependence on the government and other outside parties (help my mentality). Based on this reality, this research aims to examine the empowerment of the people of Tajnungwangi Village, Cicalengka District, Bandung Regency, towards changes in farmers' awareness and ability to act in agribusiness governance in the Hulu Sud Watershed of Citarik.

METHODS

This research was conducted using quantitative methods and descriptive statistics with survey methods. The research was carried out in the upstream area of the Citarik sub-watershed, Tanjungwangi Village, Cicalengka District, Bandung Regency. The research location was chosen purposively with the

consideration that apart from having great economic potential, its primary function is as a buffer area to store water reserves through the existence of conservation forests. With the abundance of water in the highland areas and the agri-climatology that supports agricultural businesses, the Upper Citarik sub-watershed has the potential for agribusiness development. Primary data was obtained through field research from informants or community members who have lived in the research area for a long time.
Meanwhile, secondary data was obtained by searching library materials (books, documentation, and report materials) in communities, groups, institutions, agencies, and regional apparatus related to this research. Secondary data covers various things, including geographical and demographic conditions, socioeconomic and cultural conditions of the research area, and conditions of ecosystems, socio-systems, and geosystems. Primary data was obtained through in-depth interview techniques, focused discussions, observation, and process documentation. Interviews using questionnaires were conducted with respondents selected randomly proportionally with a sample size of 120 farmers. The design used in this research is descriptive quantitative. Descriptive research is data in the form of numbers or quantitative data in the form of scoring (Sugiyono, 2006). The data analysis technique uses different test analyses intending to connect changes in awareness and ability to act after empowering farmers on conservation land in the Hulu Sub Watershed of Citarik.

RESULT AND DISCUSSION

Change of awareness

Empowerment is carried out continuously and consistently among the community to increase their awareness of the potential within the farming community and its environment. This consistency means that farmers will get an example from the empowerer so that it will leave a strong impression of habituation towards the object of empowerment. Awakening is an educational or learning process that requires patience, seriousness, and sincerity. Need to instill confidence that they can change. Environmental improvements will provide benefits in the future (Nasdian, 2014).

Indicators that reflect changes in awareness include awareness about community poverty, awareness that farmers are prone to land degradation, awareness of preserving the environment, awareness of the dangers of littering, and awareness of the effects of building buildings in conservation areas. Table 1.1 shows indicators of farmer awareness regarding the effects of clearing land by cutting down trees. The level of awareness is relatively high at 69.83%. Awareness regarding the dangerous effects of littering is also relatively high at 69.17%. The Farmers also understand the problems in the Citarik watershed Sub with a reasonably high level of awareness of 50.00%. Awareness of one's problems is essential as capital for farmers to want to solve their problems.

There still needs to be a more vital awareness regarding problems in the upstream area of the Citarik watershed Sub that farmers still need to be educated about specific problems, especially in the upstream area of the Citarik watershed Sub. The value of the level of awareness, in this case, farmers are at an unaware level of 1.67%. However, overall, the level of farmer awareness was very high, with an index value of 99.77%. This condition must continue to be maintained so that this awareness becomes a habit in farmers' wise attitude towards the environment.

Table 1. 1 Changes in Farmers' Awareness in Upstream Sub Watershed Citarik

Indicator	Farmers' response (%)			
	SA	A	D	SD

Indicator		Farmers' response (%)			
		SA	A	D	SD
PK01	I am aware of the root of the problem of poverty in my area	45,83	54,17	0,00	0,00
PK02	Be aware of the root of the problem in Sub watershed Citarik	40,00	60,00	0,00	0,00
PK03	Aware of problems upstream of the Citarik watershed Sub	50,00	48,33	1,67	0,00
PK04	Aware of the importance of preserving the environment	61,67	38,33	0,00	0,00
PK05	Be aware of the effects of clearing land by cutting down trees	69,17	30,83	0,00	0,00
PK06	Be aware of the effects of throwing rubbish into the river	65,83	34,17	0,00	0,00
PK07	Be aware of the effects of constructing buildings in conservation areas	46,67	53,33	0,00	0,00
	Average	379,17	319,17	1,67	0,00
Level of Change in Awareness (Y1)		**54,17**	**45,60**	**0,24**	**0,00**

Note: SA = strongly Agree, A = Agree, = D = Disagree, SD = Strongly dDisagree

Action Ability

The process of empowering farmers hopes that there will be changes in actions within farmers ultimately. At first, it was forced, then it started getting used to it and finally got used to it. These actions are undoubtedly positive for self-improvement, business, and the environment. Self-improvement in the paradigm aspect of farming is not only about meeting one's own needs, but one must also think about the good of the next generation. Improving the farming business will, of course, involve changes in planning, organizing, implementing, and evaluating the farming business. Environmental changes include attitudes and treatment in preserving the environmental ecosystem around farmers.

Table 1.2 showed that farmers are braver in farming without opening new land in conservation areas. The approval value was 78.33% for the very brave category. This indicator is undoubtedly easier for farmers who are used to farming in production areas and understand how to maintain conservation land.

Table 1. 2 Farmers' Action Capabilities in the Upstream Sub Watershed of Citarik

Indicator		Farmers' responses (%)			
		SA	A	D	SD
KB01	Encourage to farm without opening new land	78,33	21,67	0,00	0,00
KB02	Encourage and reprimand other farmers who cut down trees without permission	39,17	60,83	0,00	0,00
KB03	Encourage and reprimand residents who throw rubbish into the river	55,00	45,00	0,00	0,00
KB04	Plant annual/food crops in an intercropping pattern with trees/shrubs (alley cropping/alley).	62,50	31,67	5,83	0,00
KB05	Carry out farming on land with a terracing pattern	22,50	69,17	8,33	0,00
KB06	Capable of carrying out conservation-friendly farming because it is quite cheap	0,83	46,67	52,50	0,00

Indicator	Farmers' responses (%)			
	SA	A	D	SD
Action Ability Level (Y2)	**43,06**	**45,83**	**11,11**	**0,00**

Note: SA = strongly Agree, A = Agree, = D = Disagree, SD = Strongly dDisagree

Then, the indicator for planting seasonal/food crops using an intercropping pattern with trees/shrubs (alley cropping/alley) is also huge with an index value of 62.50%, and the terracing indicator is also quite high with a value of 69.17%. This percentage means farmers are used to modifying land on slopes to control runoff through terracing. Indicators that reduce the ability to act are indicators of conservation-friendly agriculture because they are quite cheap. The percentage value of farmers' abilities of 52.50% is categorized as incapable. These results meant that farmers still believe that the allocation for independent conservation efforts is still considered expensive and requires costs, including purchasing wood, fruit, and plantation tree seeds.

Analysis of Differences in Changes in Awareness and Action Capability of Farmers in Upstream Watershed Citarik

The results of this t-test showed that the average value of change in awareness is 47.44, and the average ability to act is 19.92, the average value that has implemented farmer empowerment in changing awareness at the farmer level in protecting the environment in the region. Conservation means that there has been no increase in yield after empowering farmers to understand conservation land in Hulu Watershed Citarik. A step that is very complex and requires time to see actual results, changes in awareness and sustainable agricultural practices usually do not occur in a short time. Several factors may influence the lack of increase in yield after empowering farmers to understand conservation land in the watershed upstream.

Land degradation due to the low adoption of soil and water conservation technology is one of the environmental problems that still requires resolution, especially in watershed conservation efforts. Water and soil conservation technology is used to preserve the fertility of land productivity, and it is widely known by farmers (Nana, 2013). However, efforts to promote conservation technology so farming communities widely adopt it have yet to provide satisfactory results. The low success of efforts to expand conservation practices in farming communities, according to Shiferaw (2009) and Agrawal and Perrin (2008), is partly due to the weakness of social institutions related to the conservation of natural resources. Shifferaw (2009) explains that institutions can condition farmers to innovate, adopt, and adapt the water and soil conservation technology they choose. Therefore, Bromley (2008) believes that in farming communities that need better institutions, it is almost certain that investment in conservation tends to be very low or not even carried out.

Changes in farmers' awareness and practices require changes in culture and knowledge that may take a long time to implement. Farmers may need ongoing education and technical support to adopt sustainable practices indeed. Increasing sustainable agricultural yields requires initial investment, such as introducing new technology or more environmentally friendly farming methods. If farmers need more resources or economic constraints, it may be easier for them to make changes. It is essential to have support from the government, conservation institutions, and community organizations involved in efforts to empower farmers.

Includes providing training, access to resources, and incentives to encourage sustainable agricultural practices. It is essential to take a comprehensive and sustainable approach, which includes technical support, education, incentives, and ongoing monitoring to increase the effectiveness of empowering farmers in protecting the environment in conservation areas; in the long term, this can help increase agricultural yields while protecting the environment. These conditions encourage the importance of building public awareness of the dangers of the watershed on land in the future, so it is indispensable to know the concept and application of soil and water conservation to increase land productivity through socialization, education, and conservation training (Indraningsih, 2016; Masnang et al. l, 2019; Nasir et al. l, 2019; Nuraeni et al. l, 2012).

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Condition Changes	47,44	120	2,678	,244
	Action Ability	19,92	120	1,479	,135

The results of the paired sample correlation test showed that the significance value is 0.000, where the sig value is > 0.00. This value meant that changes in awareness and the ability to act have a significant relationship. Changes in awareness and ability to act had a close relationship in the context of individual development or social change. This relationship reflects the link between understanding and action, especially in the context of social and environmental change. Like environmental conservation, social change, or individual development, awareness and the ability to act are two complementary elements. Both work together to create positive and sustainable change. Therefore, in change efforts, it is crucial to consider both increasing awareness and developing the ability to act. Thus, environmental awareness can inspire a person's soul to love nature and the environment through concrete actions. This awareness could be realized by every society in general so that with their knowledge, they will be aware and be able to treat nature and the environment well, be friendly, and live in harmony with nature and the environment and not damage the environment (Neoloka, 2008; Jeni, 2021).

Awareness often drives individuals to seek information and learn more about issues they care about. This condition could help in increasing their knowledge and understanding, which in turn can improve their ability to act. People aware of environmental issues will find concrete ways to contribute to environmental conservation. Awareness and the ability to act are complementary components in social or individual change efforts. A change in awareness can trigger action, while action can strengthen awareness and motivation for further change.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Condition Changes & Action Ability	120	0.562	0.000

The t-test results in a paired sample test show that the significance value is 0.000, meaning it is less than 0.05, so Ho is rejected. These results meant that the results of farmer empowerment in the perception of changes in awareness in protecting the environment on conservation land and farmers' ability to preserve the environment are different. Empowering farmers in terms of increasing their

perception or awareness regarding protecting the environment and increasing farmers' ability to act to preserve the environment are two different aspects. However, they are interrelated in efforts to protect the environment. Farmer awareness regarding the environment and environmental issues is the first step in changing behavior. If farmers do not have awareness about the importance of protecting the environment or the negative impacts of their agricultural practices, they may not be motivated to change their behavior. Empowerment in terms of perception can involve education, communication, and awareness of environmental issues, as well as how to integrate them into daily agricultural practices. Action capability refers to the skills, knowledge, and resources farmers need to change their farming practices to be more sustainable. This capability might include technical understanding, access to environmentally friendly technologies, resource management, and adaptation skills to environmental changes. Empowerment regarding the ability to act can include training, technical support, and physical or financial resources.

The difference between the two is that awareness focuses more on understanding and recognizing environmental issues. In contrast, action capability focuses more on the concrete ability to change agricultural practices to be more sustainable. However, the two are interrelated in efforts to preserve the environment. Increased awareness can be a trigger to look for ways to act more sustainably. In contrast, the ability to act may require a deeper understanding of environmental issues to implement appropriate practices. Therefore, farmer empowerment should include these two aspects: increasing awareness and providing the ability to act needed to maintain environmental sustainability in agriculture and land conservation.

Thus, there is a significant difference between changes in awareness and the ability to act to empower farmers in preserving nature in the upper reaches of WATERSHED Citarik. Overall, the change in awareness has been good. However, there is a need for continued education related to specific issues upstream of WATERSHED Citarik regarding preserving conservation areas and keeping the production landscape sustainable. Farmers' ability to act has also improved so that farmers wisely consider the balance of nature by appropriately protecting conservation areas and not damaging productive agriculture.

When farmers wisely consider the balance between nature and productive agriculture, this is an essential step in supporting environmental sustainability in conservation areas. This condition would help minimize the negative impacts of agriculture on the environment, such as soil erosion, water pollution, or damage to natural habitats. In doing so, this will help maintain natural ecosystems, safeguard biodiversity, and ensure the sustainability of natural resources for future generations. Efforts to empower farmers in protecting the environment need to continue, and receive ongoing support to ensure that sustainable practices continue to be improved and implemented in agriculture. Improved awareness and ability to act is an essential first step towards sustainable environmental improvement.

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Condition Changes & Action Ability	27.517	2.215	0.202	27.116	27.917	136.071	119	0.000

CONCLUSION

1. Change in awareness of farmers in the upstream Citarik WATERSHED Sub-Watershed. They are aware of being in the Citarik WATERSHED and its problems, as well as the dangers of littering and the consequences of cutting down trees to clear agricultural land. Overall, the change in awareness has been good. However, there is a need for continued education related to specific issues upstream of WATERSHED Citarik regarding preserving conservation areas and keeping the production landscape sustainable.
2. Farmers' ability to act has also increased towards improvement, but one aspect that still needs to be stronger is action to carry out environmentally friendly agricultural businesses. Farmers still consider intercropping farming to be capital-intensive. The government should facilitate this by providing more plant seeds or training in making nurseries for woody/annual plants or fruit plants.
3. Empowering farmers on conservation land in the upper reaches of the Citarik watershed shows that changes in awareness have a significant influence on farmers' ability to act in protecting the conservation land environment. Apart from that, it also shows that farmer empowerment can increase farmer awareness in protecting the conservation land environment so that they can do it.

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