Vol. 10(3): 439-456, September 2022 DOI: https://doi.org/10.23960/jsl.v10i3.611

Jurnal Sylva Lestari

P-ISSN: 2339-0913
E-ISSN: 2549-5747

Journal homepage: https://sylvalestari.fp.unila.ac.id

Full Length Research Article

The Level of Beef Cattle Farmers' Readiness for Livestock Intensification Program Surrounding Baluran National Park Area

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ARTICLE HISTORY:

Received: 19 June 2022
Peer review completed: 13 July 2022
Received in revised form: 16 July 2022
Accepted: 18 July 2022

KEYWORDS:

Baluran National Park
Community Readiness Model
Conservation
Wild grazing

ABSTRACT

Wild grazing is the main problem faced by Baluran National Park (BNP) management. Sidomulyo Hamlet contributed to wild grazing by the cattle number of 2,220 heads. The research aims to assess the community readiness for the intensification program to reduce wild grazing in BNP and formulate alternative strategies to program successfully. The study was conducted in Sidomulyo Hamlet, Sumberwaru Village, Situbondo Regency, from June to October 2021. The location was chosen purposively, considering that it is one of the hamlets directly adjacent to the BNP. The method used a qualitative approach using Community Readiness Model by interviewing 12 key informants, consisting of the representative of BNP management, local government, and local farmers. Data were collected through interviews using a semi-structured questionnaire under Community Readiness Model Handbook. Data were analyzed using Community Readiness Assessment. The results showed that the community readiness score related to the livestock intensification program was 4.43. The level of beef cattle community readiness at the preplanning stage, the program is still in the initial planning stage, aiming to increase awareness of the farmer community with ideas that can reduce the problem. Alternative strategies that should be carried out are: introducing information about the problem, communicating with community leaders, reviewing the efforts made to determine targets and success rates, conducting focus group discussions to discuss the problem and develop strategies, and increasing media exposure.

1. Introduction

The Baluran National Park (BNP) management reported threats and forest disturbances due to forest fires, land clearing activities for agriculture, timber theft, and wild grazing (BTNB 2014). Wild grazing is the main problem faced by BNP. Farmers in Sumberwaru Village are the main contributors to wild grazing in BNP. Wild grazing negatively impacts BNP conservation on social, economic, and ecological aspects. The social impacts happened because the farmers and BNP management were vulnerable to conflict due to wild grazing. The economic impacts are due to farmers getting more benefits because they do not have to pay for animal feed, and BNP suffers losses from wild grazing. The ecological impacts are due to farmers' grazing activities resulting in fragmentation of wild animal habitats and soil compaction, threatening the originality of wild cattle as germplasm and natural vegetation (Azizah and Kawedar 2020).

National park suffers losses if wild grazing in the conservation area is allowed (Bonaudo et al. 2021). Conservation forests should be a place for protected flora and fauna. Ideally, the buffer village is designed to preserve ecological integrity and ensure community participation in conservation (Lamichhane et al. 2019). Communities carry out extensive and semi-extensive rearing by releasing livestock to pasture as a source of feed needs. Ideally, in extensive and semi-extensive rearing systems, pastures are planted with forage as a feed source. Extensive rearing interferes with the conservation zone of BNP. An Intensification program can reduce the damage to conservation caused by wild grazing (Bonaudo et al. 2021). Identifying the ability of farmers to solve problems needs to be done first before starting a livestock intensification program (Kamalikhah et al. 2021)

In recent years, methods have been developed to assess community readiness, one of which is the community readiness model (CRM) (Ahmed et al. 2021). The CRM addresses a societal problem by combining culture, resources, and readiness to accommodate a societal change (Kamalikhah et al. 2021). CRM has six dimensions including community efforts, community knowledge of efforts, leadership, community climate, community knowledge about the issue, and resources related to the issue; there are nine stage of community readiness: (1) no awareness (problem is not identified as a problem by community members); (2) denial (problem recognized by a few members of the community, but the overall community belief is not accompanied by addressing this problem); (3) vague awareness (some people believe that there is a problem to be addressed, but they do not have immediate motivation to start changes); (4) preplanning (some community members and leaders believe a problem exists and actions should be considered); (5) preparation (active planning to address the problem has been done with the participation of the community members); (6) initiation (activities and programs are implemented); (7) stabilization (programs and policies are running and stable); (8) confirmation/expansion (community members value the implementation of programs and policies and decision make support them); and (9) a high level of community ownership (program evaluation is done) (Ahmed et al. 2021; Kamalikhah et al. 2021; Plested et al. 2006).

However, the activity's success is primarily determined by the accuracy of program planning and the participation of farmers. Farmer's participation in the intensification program plan can affect the program's success rate. A community readiness assessment is a fundamental step in preparing several actions to take approaches that follow the socioeconomic aspect (Ghahremani et al. 2021). The study assessed the community readiness for the intensification program to reduce wild grazing in BNP. The level of the beef cattle farmer in Sidomulyo Hamlet for livestock intensification can provide information to stakeholders to describe perceptions, attitudes, and community efforts regarding wild grazing in the BNP area. The description and several new approaches to managerial implications can be applied to reduce wild grazing in Sidomulyo Hamlet.

2. Materials and Methods

2.1. Research Location

The research was conducted in Sidomulyo Hamlet, Sumberwaru Village, Situbondo Regency, East Java Province, Indonesia, from 1 June–18 October 2021. The location was purposively chosen because it has a significant number of cattle of 2,220 heads (Puskeswan 2021). In addition, the location is directly adjacent to the Baluran National Park (BNP) conservation area.

2.2. Sampling Determination

Key respondents for community readiness were 4-5 persons (Plested et al. 2006). This study used qualitative methods with 12 respondents, consisting of the representative of BNP management (Head of National Park Management Section and BNP extension officer), local government (Head of Sumberwaru Village), and local farmers (farmers members of the Lembu Brawijaya Group that grazed in BNP area). The purpose of adding respondents was to obtain a variety of data to support research on assessing the level of community readiness (Muellmann et al. 2021).

2.3. Data Collection Techniques

Data were collected using in-depth interviews, focus group discussion (FGD), observation, and documentation. FGD was conducted before the interview was carried out at the farmers' house on 4 June 4 2022. Hennink (2014) stated that FGD is aimed to define the main characteristics of a particular problem by involving a predetermined group of people participating in an interactive discussion. The in-depth interview used a semi-structured questionnaire from the Community Readiness Model handbook (Plested et al. 2006) with 36 questions. The questionnaire covered six variables of community readiness consisting of (1) community effort (what efforts or programs and policies have been carried out to reduce wild grazing in the BNP?), (2) community knowledge regarding efforts (how much knowledge and awareness are people in your community about efforts or program and policies to reduce wild grazing?), (3) leadership (how the influence, involvement, and leaders support to reduce wild grazing?), (4) community support, obstacles, and attitudes (what are the support, obstacles, and attitudes of regarding the intensification program to reduce wild grazing?), (5) knowledge about the problem (how the availability of information, data, and the level of quickly accessing data related intensification program?), (6) community resources related to the program (how are the attitudes and support of the community in the intensification program?).

2.4. Data Analysis

The community readiness analysis was conducted following the Community Readiness Assessment by Plested et al. (2006). The steps of the assessment were as follows: (1) two assessments should participate in the scoring process to ensure valid results on data, (2) both scorers should read through each interview in its entirety before scoring any of the dimensions to get a general feeling and impression from the interview, (3) the scorers should read the anchored rating scale for the dimension being scored, go through each dimension separately and highlight or underline statements that refer to the anchored rating statements, (4) each scorer puts independent scores (the score from 1 with no awareness to 9 with high community ownership) in the table labeled individual scores using the scores for each dimension, (5) when independent scoring completed, the two scorers discuss the final score assigned, (6) to find the calculated scores for each dimension, the total for that dimension and divide by the number of interviews, (7) to find the overall stage of readiness, a total of all calculated score and divide by the number of dimensions, (8) the result will be the overall stage of readiness the community.

3. Results and Discussion

3.1. Overview of Research Location

Sumberwaru Village covers an area of 111,270 km^2. **Fig. 1** shows the zoning boundary layout of Baluran National Park. The astronomical location is 7.777285 south longitude–114.388842 east longitude (BPS 2022). Sumberwaru Village is located at an altitude of 258 m.a.s.l with a tropical climate and temperatures ranging from 27-30°C). It is considered an agricultural area with sugarcane as the main crop. In 2019, the population in Sumberwaru Village was 8,252 people with a livelihood as farmers, ranchers, and factory workers. Sidomulyo is one of the hamlets in Sumberwaru, and most residents are the Madurese. Sidomulyo Hamlet has 247 farmers with a total of 2,220 heads of cattle (1,611 animal units). Sidomulyo Hamlet is located near entrance STPNW 2 Karangtekok.

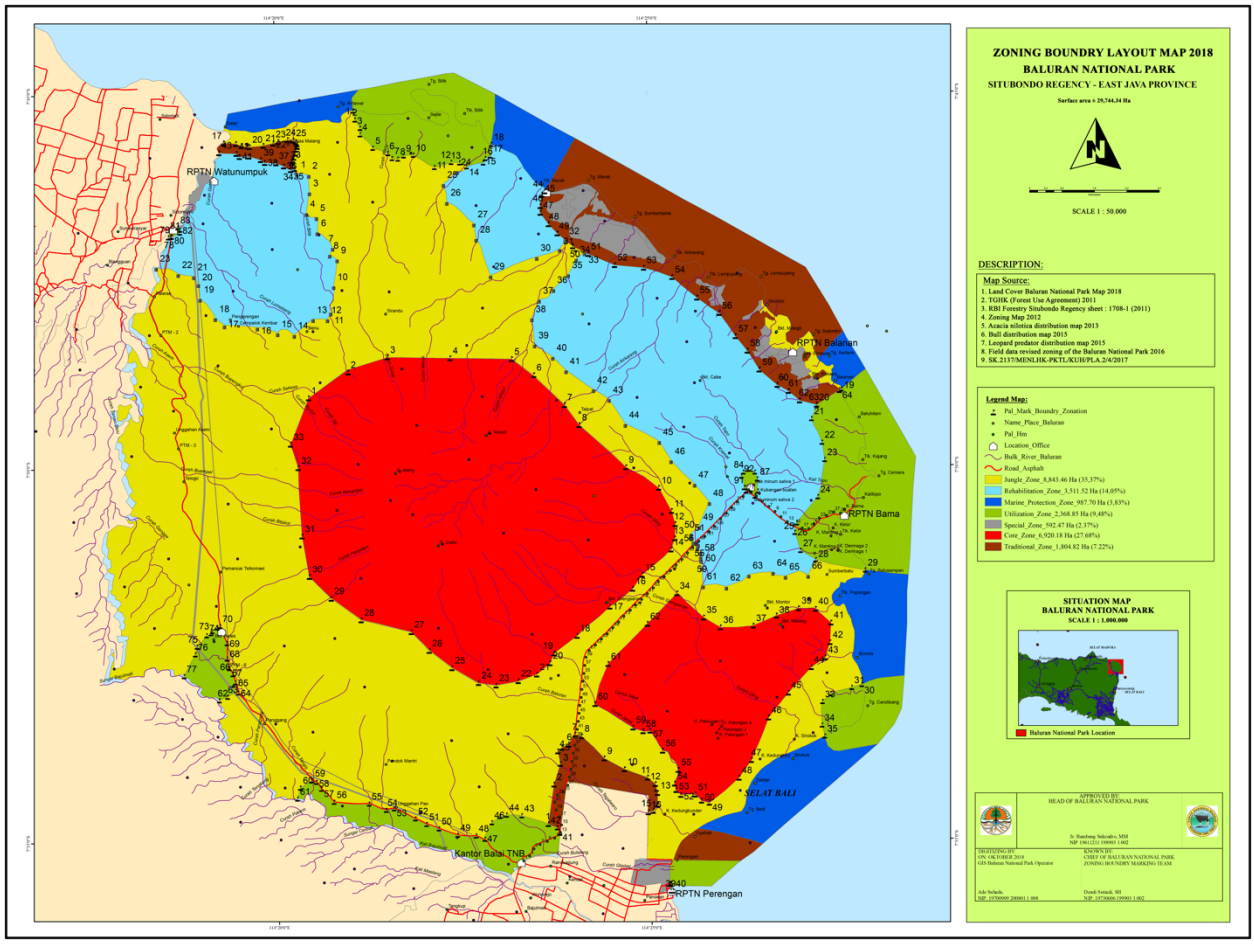

Fig. 1. Baluran National Park zoning map.

3.2. Characteristics of Respondent

All respondents participated in this study were male (**Table 1**). The last education of university respondents (bachelor and master) was 25% or three respondents, senior high school 16.7% or two respondents, junior high school 33.3% or four respondents, and elementary school 25% or three respondents. Respondents' age ranged from 27-70 years, with details of the youngest respondents at 27 years old and the oldest respondents at 70 years old.

Table 1. Characteristics of respondents

No.	Occupation	Gender	Education	Age (year old)
1	Head of STPN 2 of BNP	Male	College (S2)	45
2	Head of Sumberwaru Village	Male	College (S1)	40
3	BNP extension officer	Male	Senior high school	59
4	Research student	Male	College (S1)	27
5	Farmer	Male	Senior high school	31
6	Farmer	Male	Elementary school	43
7	Farmer	Male	Elementary school	70
8	Farmer	Male	Junior high school	43
9	Farmer	Male	Junior high school	31
10	Farmer	Male	Junior high school	43
11	Farmer	Male	Junior high school	45
12	Farmer	Male	Elementary school	27

3.3. Community Efforts to Reduce Wild Grazing

The community effort variable is to find out several things related to the level of community readiness, including community awareness, community understanding, and the efforts to reduce wild grazing. The community farmers conduct wild grazing in Baluran National Park is shown in **Fig. 2**.

Fig. 2. Wild grazing in Baluran National Park.

Baluran National Park (BNP) management prohibits all efforts that can interfere with conservation. Forest-dependent communities in the tropic usually rank lower in socioeconomic status than agricultural and urban communities (Chechina et al. 2018). Several efforts to reduce wild grazing have been made but failed. The stability and sustainability of conservation could be maintained if community members are obedient and preserve forest ecosystems (Hijjang 2014). BNP management has prevented livestock from entering the conservation area by the military to guard livestock entrance into the conservation area. Mushonga (2021) found that in implementing conservation practices by bringing in the military, personnel will become targets of violence by the local community. The blocking of cattle entrances to be grazed in BNP was carried out for only a few days because it was ineffective. Farmers continued to do wild grazing as usual without heeding obstructions. **Fig. 3** shows the entrance to the BNP area.

Fig. 3. The entrance to the Baluran National Park area.

BNP management developed other prevention efforts through counseling. Through counseling, farmers are given information about the effects that wild grazing will cause. Yousefpour et al. (2022) reported that revenue-sharing schemes focusing on material benefits and alternative livelihoods might approach the participation communities. Therefore, a persuasive approach is needed to increase the knowledge possessed by farmers. In addition, BNP cooperates formally and informally with several stakeholders to reduce wild grazing. The BNP management recognizes that farmer participation is critical to the program's success. However, Murniati et al. (2022) explained that several schemes to restore conservation had been implemented without involving the community, and the results were not optimal.

The village government worried about the wild grazing by farmers. The village government was interested in facilitating farmers to reduce wild grazing in the conservation area. However, the village government realized that farmers in Sidomulyo Hamlet were very vulnerable to poverty, so the village government could not do much to prohibit them. The village government understands that wild grazing can not only damage the forest but can also be the cause of social conflict. Jitea et al. (2021) stated that although local stakeholders are aware of innovative approaches, they can fail in their deployment mainly due to a lack of collective action. Therefore, cooperation between all stakeholders can increase the chances of program success.

The village government made several efforts to reduce wild grazing by collaborating and assisting related parties such as BNP, district, and local livestock services. Collaboration between all parties is a catalyst in reducing wild grazing. Shu and Wang (2021) added that collaborative leadership can achieve common goals, especially with effectively integrated community knowledge.

Farmers are the beneficiaries of wild grazing, which has a low concern value. Farmers are worried that wild grazing can disturb conservation. Farmers have the lowest average awareness score. Maulana et al. (2022) added that protecting the forest is a must for the community because the forest acts as a provider of various needs. In contrast, farmers in Sidomulyo Hamlet view the forest as a provider of various needs that can be exploited. Farmers have been carrying out wild grazing for generations since 1923. Wild grazing has become a culture and is even taught to their children. Farmers do not have to bother to feed their livestock because they think that forage in the

forest will never run out. Beef cattle farming is a side job for the farmers, so they do not have much time to take care of their livestock.

Farmers have an understanding that wild grazing can damage forests. Efforts made by farmers to reduce wild grazing are by holding private cattle in the stall, while cattle owned by investors are still grazed in BNP. Some farmers have intensified their cattle. Intensified their cattle carried out for calves, sick cattle, and cattle with imported blood, such as limousine and Simmental cattle. Farmers have a reason for stalls because these cattle have weak resistance to the environment.

Several other parties have tried to reduce wild grazing in BNP, namely the District Livestock Service and local universities. The district livestock service has counseling regarding the impacts caused by wild grazing. However, the counseling is only for a built group of livestock services, so farmers who are not members group do not join. Counseling by the livestock service is vital because farmers do not have sufficient knowledge of the negative impact caused by wild grazing. Khan et al. (2018) added that livestock extension could accelerate the application of innovative technologies that aim to increase income and farmers' standard of living. Apart from the livestock service, local universities have conducted a program introducing Bali cattle and making communal stalls. The program did not last long because it only benefited one party. Farmers regret that the program has other purposes than to solve problems. Inzlicht et al. (2018) stated that cooperation should be carried out by respecting the agreement that has been made is very important so that it can influence other communities to join for solving a problem together. Farmers are worried that the intensification program does not continue because the farmers have experienced past trauma with local universities. People are reluctant to trust and partner with university researchers because they have terrible past collaboration experiences (Parker et al. 2018). Therefore, it takes a gradual time the delivery the program plan.

3.4. Community Knowledge about Efforts to Reduce Wild Grazing

The variable of community knowledge about efforts is to determine the level of community knowledge by using two indicators: community awareness of the program and community knowledge related to the program.

BNP management strongly supports the livestock intensification program that will be carried out so that the level of knowledge and awareness regarding the program plan is high. A high score is a form of BNP responsibility for the conservation program. Sustainable management of nature, in reality, often contradicts the economic principle that wants maximum output with minimal input (Purwanto 2014). Therefore, it is necessary to deliver messages related to program knowledge and the benefits that farmers will obtain.

The village government has good knowledge regarding program plans. The Head of Sumberwaru Village is a university graduate with an animal husbandry major, so he has knowledge and awareness that an intensification program can reduce wild grazing. Generally, farmers in Indonesia do not have adequate facilities to manage commodities and added value (Ford 2006). Therefore, the Head of Sumberwaru Village proposed planting forage as an alternative solution to the lack of forage.

Some farmers have good knowledge of the intensification program plan. The farmers do not release livestock in the conservation area. **Fig. 4** shows the cattle of farmers in the stall. However, only a few farmers practice this. The level of awareness of farmers that wild grazing can damage

conservation is still lacking. The level of awareness correlates with the last education of farmers. The higher education of farmers correlates with knowledge and awareness that wild grazing is detrimental to conservation. Education is an important variable that can affect the level of community readiness in the program (Maryani et al. 2022).

Fig. 4. Cattle in the stall.

3.5. Leadership

Leadership in society has a crucial role because, with a leader, the community will be easily coordinated in the change process. Therefore, the leadership variables included in the level of community readiness are to determine leaders' roles, involvement, and support from leaders to solve problems.

The BNP management said that the cooperation of all stakeholders is essential. BNP believes that all parties have their respective roles in solving problems. Collaborative activities require various strategies and innovations to maintain the sustainability of the cooperation (Drasospolino 2022). Formal and informal cooperation with all parties involved. BNP chooses a persuasive approach to reduce problems. Counseling cooperation is related to collaboration with the related department and several universities. Collaboration with other disciplines' knowledge, stakeholder involvement, and adoption of a more systemic approach proved to solve the problem (Fresco et al. 2021).

The village government desired to make farmers prosperous by utilizing local resources without entering the conservation area. However, it is regrettable that the Sumberwaru Village government is not yet willing to make village regulations to support the success of the intensification program in the administrative area. Authority holders can make administrative rules that manipulate managed resources, knowledge, and information for the common good (Robinson and Green 2011). The village government does not want to take a non-populist policy because it does not want to take the risk of not being re-elected in the next election. Because the majority of Sumberwaru residents are farmers or have Grazing cattle in BNP.

BNP and Sumberwaru Village government need a third party's role for coordination to run well. Cooperation between one party and another can create several forms of interaction, namely between individuals in one group, between individuals in different groups, and between individuals and groups that can benefit from the cooperation carried out (Oktadiyani et al. 2016).

Farmers have more confidence in BNP resolving wild grazing than in the Village Government. Sunkar and Santosa (2018) found that the level of public trust in National Park authorities was influenced by access to these natural resources. On the other hand, farmers feel that the Village Government is not transparent in managing aid funds from other parties.

Oktadiyani et al. (2016) added that the low-level public trust in an institution could be influenced by the program promised by the institution that was not implemented. Therefore, transparency of information in the management of aid funds is vital.

Leadership in farmers is still not strong. It is known that several livestock groups have been formed but are not running well. Teshome et al. (2021) stated that community leaders must be able to operate and manage communities effectively and can inspire residents to participate in the program. Existing livestock groups are still not effective in reducing wild grazing. Livestock groups need to be restructured to carry out their functions properly. Salcinovic et al. (2022) added that leadership style and communication are the main variables related to team function and performance.

3.6. Community Support, Obstacles, and Attitudes

The community climate variable determines the condition of community readiness consisting of the level of community contribution, community attitudes, and perceived barriers to the intensification program. BNP supports funding for the program plan and is willing to provide counseling about the program plan. BNP management has a positive attitude regarding the program plan. Paudyal et al. (2018) stated that ensuring equitable access is essential for the community. So, it is essential for the community to participate in the programs that provide alternative resource use options, skill development, and training for valuable activities. BNP management believes the program can develop farmer skills and increase income using alternative resources.

The village government contributes by connecting to relevant agencies to make the program successful. As a state institution, the village government should have a proactive attitude in supervising conservation practices. Marambanyika et al. (2017) stated that local institutional regulations in supervising the implementation of conservation practices could effectively increase community productivity and protect ecosystems. Therefore, village regulation has an essential role in the intensification program.

Farmers contribute to the program's success by attending counseling and providing input in program planning. Ngoka and Lameed (2012) added that community participation in conservation programs could resolve socioeconomic and political conflict. Farmers hope the intensification program that will be carried out can provide benefits to improve their welfare. Farmers reject intensification with all their cattle held in the stall. The Head of Sumberwaru Village suggested the need for an example with one or two cattle in stalls. All farmers agree that this amount is reasonable compared to all cattle owned.

Barriers to reducing wild grazing are discussed as follows:

1. Wild grazing was done from generation to generation: farmers in the BNP area have carried out wild grazing since 1923. Wild grazing in the conservation area has entered it is third generation. Farmers do not need to bother to feed their cattle because they think that the resources in the forest will never run. Rangkuti et al. (2021) stated that community dependence on forest products is due to public perceptions of these.
2. Farmers refused to look for feed: farmers refused to look for feed because they worked in other fields, such as farm laborers, fishers, and traders. So they do not have time to look to feed their cows. In addition, farmers have difficulty finding feed during the dry season. Thus, the cattle are looking for feed until they enter the core zone conservation. Then, cattle will compete to

find a feed with wild animals in the conservation area. In addition, cattle sometimes stay in forest areas because they get lost to go stall. Therefore, farmers buy feed at prices starting from IDR 1,000/kg. Anderies et al. (2002) explained that the cost of purchasing feed to meet livestock needs is a managerial decision made by farmers. The decision was taken out of fear of the cows being dead by wild animals while staying in the forest.

3. Increasing cattle population due to *gaduhan* (profit sharing) scheme: *gaduhan* scheme is that farmers receive cows from investors for breeding. If a cow gives birth, the calves will be given to the farmers as wages for caring for their cows. Farmers receive livestock from residents inside and outside the village. The disputed agreement is made based on trust between the farmers and investors. The average private cattle ownership of farmers is not more than five heads. So that most of the cattle are owned by investors who are kept to farmers.
4. Involvement of "person" in related institutions: the person's involvement in an affiliated institution includes the village government officer, BNP officer, and military. The facts showed that several elements of the institution make *gaduhan* to farmers in Sidomulyo Hamlet. The number of *gaduhan* cattle belonging to this person reaches 500 heads kept and raised by farmers in Sidomulyo Hamlet. This tendency is a significant number because the value of the cow has reached billions. The BNP management is unaware of the person's involvement in the affiliated institution, making it difficult to detect their involvement in this problem. Winarno (2007) explained that policy implementation would be problematic if the implementers were interested in the policy implementation process. Therefore, the person's involvement in the affiliated institution can affect the implementation of the program plan.

3.7. Community Knowledge of Wild Grazing

The measurement of the variable uses several indicators, including the availability of information and data, knowledge about activities, and ease of obtaining information. The BNP Management has no problem with the availability of data and information regarding wild grazing. BNP management has a total number of cattle herding in the conservation area. Data from BNP in 2014 shows that the number of wild grazing in conservation areas occurs in Sidomulyo, Labuhan Merak, and Balanan, with an area of 3,450 ha was 1,447 heads/day. The number of livestock was believed to be increasing because, according to data from Animal Health Care Sumberwaru in 2021, the number of livestock owned by farmers in Sidomulyo Hamlet is 2,220. Therefore, a better conservation is obtained at the expense of decreasing people's livelihoods because they have to reduce the use of conservation areas for hunting and farming (Aldashev and Vallino 2019).

The village government has no problems accessing information related to wild grazing. Murniati et al. (2022) stated that applying the agroforestry system by changing regulations on conservation forest management to involve the community and provide legal permits from forest Management was more rational. The village government can coordinate with BNP to use vacant land to plant forage to provide animal feed.

The farmer has difficulty finding information related to wild grazing. Paudyal et al. (2018) stated that providing fair access to information is very important for the community to participate in the program. Farmers who do not know the aims and how to conduct an intensification program will not be interested in the program plan. Therefore, farmers should be able to access information to participate in the program. Unfortunately, the availability of information related to the intensification program is lacking. Farmers only understand that intensification is carried out by

holding cattle in stalls. Meanwhile, the livestock intensification program that will be carried out is to introduce forage, feed processing, feed storage, and management to increase the productivity of livestock. According to Khaerunnisa et al. (2022), the success of seeking information affects the attitude of continuity of activities. Knowledge of farmers regarding the negative impact that wild grazing will cause is lacking. Farmer's difficulty was getting information related to problems and program plans. So, it is necessary to hold outreach to socialize the program. Cook and Hunsaker (2007) explained that communication aims to improve coordination, sharing of information, and satisfying social needs. Therefore, communication with extension is one of the efforts to support the program.

3.8. Community Resources for Prevention Efforts to Reduce Wild Grazing

The indicator used in the resources for prevention efforts is the level of community support and program evaluation plan. BNP management has a plan to build a communal stall. The construction of the communal stall is funded by an annual budget plan and cooperation with third parties. Cooperation with third parties, such as universities, will significantly impact program plans. Mohamed et al. (2021) stated that a carefully designed university-industry-government partnership will enable the development of promising innovations, professionals, and skills within the local community. The program evaluation plan must be evaluated periodically by involving a third party; the involvement of a third party in evaluating the program is a wise way because it will provide some neutral input in the program's success.

The village government agreed to support the program plan according to its capacity. The village government provides easy access for researchers in designing program plans. Program planning and evaluation are carried out based on the mutual agreement of all parties. Program evaluation is carried out regularly by involving the community.

Farmers provide moral support by providing facilities such as a house for regular meetings. Facilities such as a house for holding meetings are crucial in program planning actions, counseling, and evaluation. The plan to evaluate the intensification program is carried out to find out the progress and some of the obstacles that existed when the program was carried out. Farmers fully submit the evaluation plan to a mutual agreement between the BNP and village government. In addition, farmers ask for assistance and evaluation from related parties to provide maximum results from the program offered. Technical assistance in the program covers upstream to downstream beef cattle agribusiness.

3.9. Beef Cattle Farmers' Readiness Level

The community readiness score related to the livestock intensification program is 4.43, as shown in **Table 2**. Based on the score, the beef cattle farmers' readiness level is in the fourth position, namely at the preplanning stage. It means that the program is still in the initial planning stage, aiming to increase awareness of the farmer community with ideas that can reduce the problem. According to Kamalikhah et al. (2021), the preplanning stage refers to the stage when the community realizes that something needs to be done to overcome the existing problems, and the group has implemented it even though their efforts are not focused. In this case, all parties have efforts to reduce wild grazing in the conservation area.

Table 2. Beef cattle farmers' readiness score

Variable	Score
Community efforts	4.47
Community knowledge of efforts	4.42
Leadership	4.56
Community climate	4.69
Knowledge about the issue	3.97
Resources for prevention efforts	4.46
Community readiness value	4.43

3.10. Discussion

Alternative strategies are carried out to make the livestock intensification program a success. Bisong et al. (2018) recommended that the government design participatory, democratic, and bottom-up conservation programs by integrating local communities in conservation design planning and implementation. Plested et al. (2006) added the following are some alternative strategies that can be done at the preplanning stage:

1. Introducing information related to the problem: conducting extensions is the right way to introduce problems and programs. Consulting service for the farmer is essential, and this service helps the farmers face the sustainability environment challenge (Nettle et al. 2021). Chellappan and Sudha (2015) added that related institutions must guide community participation and involve stakeholders and beneficiaries in the program to achieve conservation goals. The program's introduction is carried out in stages so that farmers can understand it well and increase community participation in the program. Probosiwi (2016) explained that a village community empowerment program is a program in the form of a development process, where the village community has an initiative in starting social activities to improve their situation and conditions so that community participation in the program can determine its success. In addition, incentives have a significant role in the knowledge transfer process in the community (Sedighi et al. 2018).
2. Communication with the community leaders: identify some potential leaders to influence the community in Sumberwaru Village. According to Umayana and Cahyati (2015), community leaders or groups can support and mobilize the community to actively participate and support with the resources they have in implementing the program. Invest time in discussing and supporting the program to be carried out. The best communication strategy to help people understand the message is though community meeting (*musyawarah*), with the aim of convincing traditional leaders to support the program (Herawati et al. 2021). So, involving village community leaders can provide benefits to mobilize the community to participate in the program.
3. Reviewing existing efforts that the community has made to determine targets and levels of success: it evaluated and analyzed some of the community's efforts have made. Review efforts relevant to current conditions so they can be maximized. Angi et al. (2022) added that the implementation of social forestry could be used as an alternative solution to reduce several technical problems such as institutions, facilities, management plans, funding, human resources, and the potential for natural resource development.
4. Conducting FGD to discuss the problem to develop strategies: FGD was conducted to equalize the public perception of the problem. The problem discussed was wild grazing by farmers.

Ghahremani et al. (2021) stated that strategic development could be carried out by holding training programs, local media, and lectures in developing existing resources. As a result, farmers will get some information about the impact caused by wild grazing. Several strategies are carried out as follows:

1. Making a group Lembu Brawijaya: establishing a livestock group is the first step to being able to accommodate farmers to initiate significant changes in Sidomulyo Hamlet. According to Anantanyu (2011), effective farmer institutions are expected to make a real contribution to improving human resources, group independence, and farmer dignity to motivate farmers to participate in institutions. However, it is known that the existing livestock group has not been maximal in reducing wild grazing. Another problem is that the livestock group does not function properly if there is no assistance from the government. Irham et al. (2020) added that farmer groups in Indonesia are still very dependent on government funding to carry out organizational activities. Therefore, it is necessary to create a system that can support the independence of farmer groups.
2. Making a communal stall as a pilot project: the purpose of making a communal stall is to show the difference between cattle in the stall and cattle grazed in terms of productivity. Abukari and Mwalyosi (2018) added that any efforts to increase local community support must consider livelihood diversification, population control, and conservation education in the community. The communal stall aims to increase cattle productivity and farmers' income. The stall will be built in a location not far from the farmer stalls. Location selection aims to make it easier for farmers to control their cattle. Intensification farming could decrease deforestation and increase livestock production (Bonaudo et al. 2021). The communal stall builds as an effort to develop a conservation strategy and manage the resources based on spatial distribution awareness for the livestock and Wild animals (Sitters et al. 2009).
3. Making monitoring group: monitoring and evaluation were carried out for the program's success in an accountable and transparent way. The formation of this group was carried out with the aim of program sustainability. It is necessary to have program achievement indicators so the program can be monitored and evaluated correctly. If the program has problems in its implementation, this group will find a way out so that the program follows the achievement indicators that have been mutually agreed upon.
4. Increase media exposure: increasing media exposure was carried out by inviting local media, such as radio and television, to show several program activities. Chellappan and Sudha (2015) suggested that conservation technology should be heavily promoted to conserve natural resources and improve the community economy.

4. Conclusions

The score of community readiness related to the livestock intensification program is 4.43. the level of beef cattle farmers' readiness at preplanning, the program is still in the initial planning stage, aiming to increase awareness of the farmer community with ideas that can reduce the problem. Alternative strategies that should be carried out are: (1) introducing information about the problem, (2) visiting and investing time with community leaders, (3) reviewing the efforts that have been made to determine targets and success rates, (4) conducting a focus group discussion to discuss the problem and develop strategies, and (5) increasing the media exposure.

Acknowledgments

This study was supported by a grant from Institute for Research and Community Service, Brawijaya University, and Community and Livestock Studies Research Group, Animal Science Faculty, Brawijaya University.

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