

# Empowering Livestock Development: Unveiling Stakeholders' Impact in Besowo Village, Indonesia's Nature Reserve Buffer Zone

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## Abstract

**Objective:** The objective of this research was to identify stakeholders contributing to the advancement of livestock business in Besowo Village, ascertain the nature of stakeholder interactions, and propose strategies for livestock business growth based on stakeholder decision-making approaches.

**Method:** The study utilized a three-step stakeholder analysis process: initial identification through semi-structured interviews, stakeholder categorization via an interest-influence matrix, and assessment of stakeholder relationships using an actor linkage matrix.

**Results:** The investigation revealed sixteen stakeholders involved in livestock development, categorized into primary and secondary groups. Stakeholders were further classified based on their influence and significance into context setters, subjects, crowds, and key players. Interactions among stakeholders predominantly involved communication, coordination, and cooperation. The consensus decision-making method emerged as the most suitable, ensuring inclusivity of stakeholder interests and participation.

**Limitations:** This study is confined to examining stakeholder roles in livestock business development specifically within Besowo Village.

**Significance:** By offering a stakeholder analysis of livestock business development in rural buffer zones, this research contributes novel insights and proposes effective decision-making approaches.

**Keywords:** *buffer zone, livestock development, stakeholder analysis*

## Introduction

Developing livestock businesses in rural areas, especially those around nature conservation areas, is a complex challenge. One example is Besowo Village which is located around the Besowo Nature Reserve Buffer Area, Indonesia. This area has high natural wealth and biodiversity that needs to be protected, while local people also rely on livestock as one of their main sources of livelihood. Therefore, it is important to understand the role of stakeholders in developing livestock businesses in Besowo Village to achieve a balance between nature conservation and economic sustainability.

### The Role of Stakeholders in Livestock Business Development

#### 1) Regional Government

Regional governments have an important role in formulating policies and regulations that support the development of sustainable livestock businesses. Providing technical assistance and resources to farmers to improve livestock quality and productivity.

2) Local Community

Local communities, including livestock farmers, have valuable knowledge and experience about the environment and traditional livestock practices. Communities can become partners in implementing sustainable livestock development programs, such as the use of environmentally friendly technology and business diversification.

3) Non-Governmental Organizations (NGOs) and Environmental Communities. NGOs and environmental communities can become advocates for environmental sustainability and support environmentally friendly livestock farming. Provide training and education to livestock farmers on sustainable practices and environmental protection.

4) Industry and Market. Industry and markets have a role in determining demand and market trends related to livestock products. Can provide economic incentives for breeders to produce products that comply with sustainability and quality standards.

5) Researchers and Academics. Researchers and academics can conduct research on sustainable livestock practices and provide recommendations to other stakeholders. Act as a source of knowledge and innovation for livestock business development.

Livestock enterprises managed by rural communities have enhanced household well-being. The livestock products they generate serve as valuable sources of nutritious food, indirectly bolstering food security and serving as income generators (Collishaw et al., 2023). A buffer zone denotes an area where human activities coexist with ecological dynamics, offering vital complementary roles (Van Schalkwyk et al., 2019). The objective of stakeholder analysis is to furnish insights into the individuals or groups involved and their interactions, thereby enhancing the structural and functional contributions of stakeholders (Rahimi-Feyzabad et al., 2022).

## **2. Method**

This research uses a qualitative approach with data collection techniques in the form of semi-structured interviews, observations, and open questionnaires. Research information was divided into three categories based on the level of stakeholder involvement: key informants (19 people), main informants (16 people), and supporting informants (2 people). Stakeholder analysis was carried out using the stakeholder analysis method developed by Reed et al. (2009). Analysis steps include:

- 1) Identification of Stakeholders: The initial stage is to identify stakeholders involved in developing livestock businesses in Besowo Village. This includes local ranchers, landowners, local governments, financial institutions, non-governmental organizations, and local communities.
- 2) Classification of Interest and Influence: Each stakeholder is classified based on their interest and influence on the development of livestock businesses. Factors such as financial returns, environmental sustainability, and social impact are evaluated.
- 3) Stakeholder Interaction Analysis: Through interviews and observations, interactions between stakeholders are explored. This includes cooperation, conflict, and relational roles in decision-making related to livestock business development.
- 4) Assessment of Potential Contribution: Each stakeholder is evaluated for their potential contribution to developing livestock businesses. This includes the resources they have, the support they provide, and the barriers they face.

## **3. Results**

### ***Identification of Stakeholder***

The process of identifying stakeholders involves classifying them into three groups: primary stakeholders with direct impact, secondary stakeholders with indirect impact, and key stakeholders involved in decision-making and management (Mbabu et al., 2014). In Besowo Village, Besowo Natural Reserve Buffer Zone, Kediri District, Table 01 outlines the primary and secondary stakeholders. The study identifies 7 primary stakeholders, representing farmer groups directly involved in livestock businesses, and 9 secondary stakeholders comprising

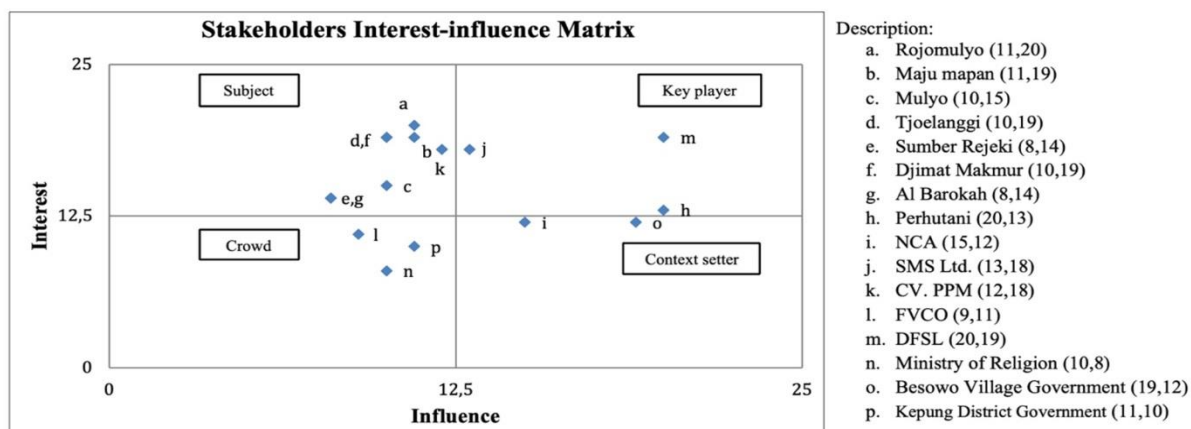
government organizations, private companies, community groups, and state-owned enterprises, which have an indirect or supporting impact on livestock business development. However, the key stakeholders remain unidentified.

**Table 1. Primary and Secondary Stakeholders**

Primary stakeholders				
No	Stakeholder	Description	Role	Contribution
1	RF Group	Residents	Operator	Strengthening team members through regular meetings and other collectively planned activities
2	TjF	Residents	Operator	As a platform for the association of Klanceng honey beekeepers
3	MF Group	Residents	Operator	Conduct initiatives focused on strengthening members of livestock groups
4	DMF Group	Residents	Operator	Strengthening team members through the conduct of regular meetings
5	SRF Group	Residents	Operator	Strengthening team members through the conduct of regular meetings
6	MMF Group	Residents	Operator	Enhancing the capabilities of members belonging to the Goat Farmers Association in Sidodadi Hamlet
7	ABF Group	Residents	Operator	Hold consistent meetings and oversee the progress of livestock development
Secondary Stakeholders				
8	Kepung District Government	Local Government	Organizer	Assisting farmers and directing aid from external sources.
			Promoter	Contributes to expediting the management of foot and mouth disease
9	Besowo Village Government	Local Government	Supervisor	Acts as an intermediary among all stakeholders
			Promoter	Participates in the prevention of foot and mouth disease alongside fellow stakeholders within the task force.
10	Perhutani	State Owned Enterprises	Organizer	Offers land for cultivating feed crops through a profit-sharing arrangement
11	Badan Konservasi Alam (NCA)	Government Institutions	Organizer	Supporting the Tjoelanggi group, which receives assistance from NCA
12	SMS Ltd.	Private	Organizer	Supplying broiler chicken livestock facilities and technical service personnel through a partnership system
13	CV. PPM	private	Organizer	Offering duck-pecking livestock facilities and field extension officers through a partnership system
14	(FSLO) Kediri	Government Agencies	Organizer	Supplying livestock technical officers within the sub-district area
			Policy maker	Formulate regulations pertaining to the livestock industry
			Promoter	Disseminate aid in the form of goods to proactively prevent foot and mouth disease
15	Kementerian Agama (Ministry of Religious Affairs) Kediri	Government Agencies	Organizer	Extend support in the Zakat village program by providing 10 sheep to the Al-Barokah livestock group
16	FVCO Wonoasri	Residents	Supervisor	Act as an intermediary and community representative for the State Forestry Public Company

### **Classification of Stakeholder**

The stakeholder analysis methodology is a structured approach intended to identify, comprehend, and examine the various individuals, groups, or entities intricately linked to or exerting influence over a particular project, decision, or endeavor (Missonier and Loufrani-Fedida, 2014). The main goal of stakeholder analysis is to collect information about these stakeholders to effectively engage and manage their expectations, requirements, concerns, and contributions (Schmidt et al., 2020). Figure 01 illustrates the stakeholder interest-influence matrix, wherein four quadrants categorize stakeholders based on their levels of interest and influence in the given context.



Identified stakeholders categorized based on their interest and influence

**Figure 1. The matric of stakeholders’ interest-influence**

*Actor*

Organizations displaying significant interest yet limited influence should engage in collaboration with other stakeholders and form alliances to amplify their impact, as suggested by (Heslinga et al., 2019). In this quadrant, farmer groups like the Rojomulyo farmer group, Tjoelanggi Besowo, Maju Mapan breeder association, Al-Barokah livestock group, Mulyo farmer group, Sumber Rejeki farmer group, Maju Mapan farmer group, Djimat Makmur farmer group, and CV. PPM, holds notable importance, as the livestock business serves as an additional source of livelihood for their members

*Key Actor*

Stakeholders categorized as key players are essential for program implementation, requiring active engagement in consultations and the maintenance of positive relationships (Samset, 2010). In this quadrant, the State Forestry Public Company (Perhutani), SMS Ltd., and DFSL hold significant influence and importance in the livestock business development of Besowo Village. The State Forestry Public Company wields considerable influence due to its production and protected forests in Besowo village, vital for community farming and ranchers seeking animal feed. SMS Ltd., despite having only two partner breeders, is a major supplier of livestock facilities, and partner breeders heavily depend on its partnership system. DFSL stands out in quadrant II with the highest influence and importance, playing a crucial role in livestock development by supplying technical personnel, disseminating medications and vitamins, and providing assistance for livestock production equipment in Besowo.

*Crowd*

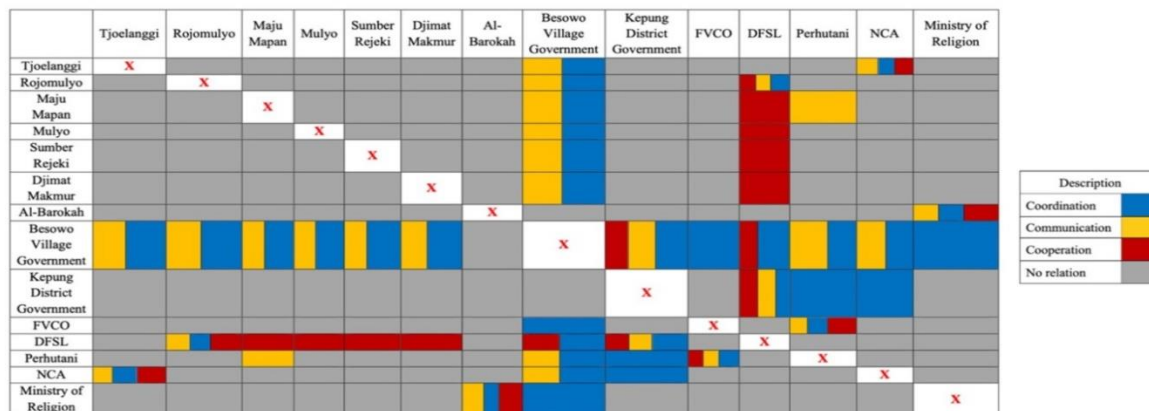
Stakeholders categorized as belonging to the crowd group lack considerable importance for a program and have a moderate impact on decision-making, as indicated by Nared and Bole (2020). In this quadrant, entities like the Kementerian Agama of Kediri Regency, FVCO Wonoasri, and the Government of Kepung District are placed in this category

*Context setter*

Context setters exhibit substantial influence with minimal interest; stakeholders in this category hold significant power and have the potential to play a more pivotal role in a program, according to Pidd (2012). Entities falling into this category encompass the Besowo Village Government and NCA. NCA exerts significant influence through its operational activities in Besowo nature reserves but has limited relevance in the context of livestock development

**Stakeholder Relationship**

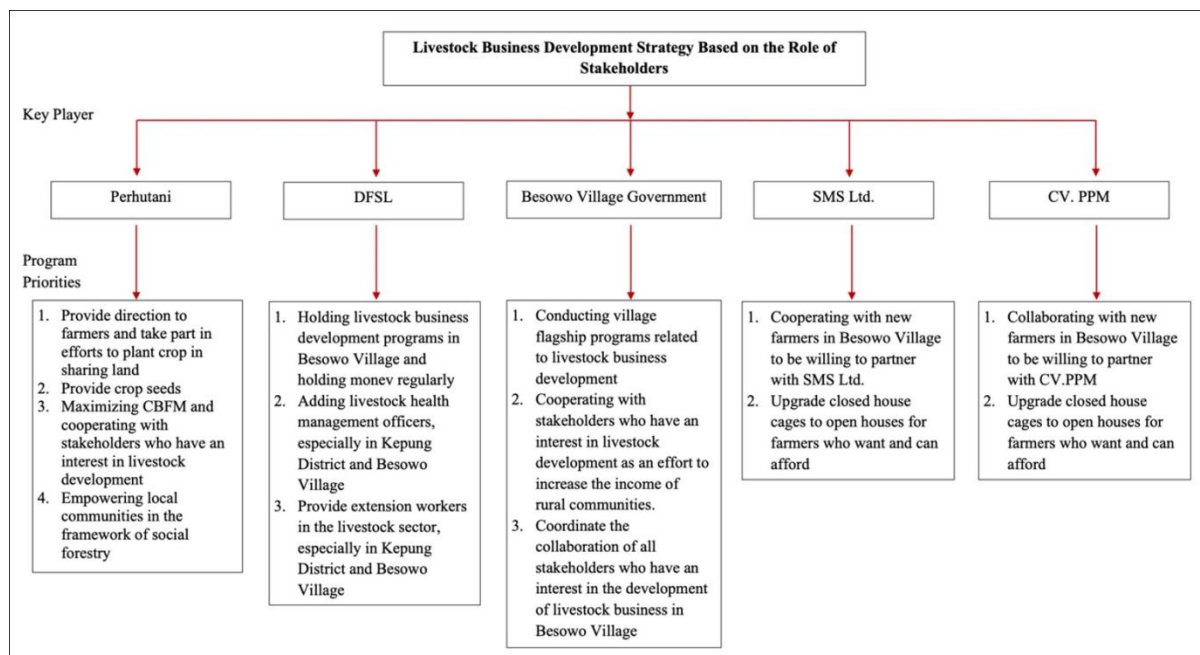
Ineffective management strength, a lack of clear role understanding and responsibilities, along insufficient analysis of each stakeholder's strength and legitimacy, give rise to coordination and communication challenges (Longart et al., 2017). Figure 02 illustrates the interconnected relationships among stakeholders.



**Figure 2. The interlinked relationship between stakeholders**

**Strategy for Advancing Livestock Business Through Stakeholder Engagement**

The lack of livestock development programs implemented by the village government hinders effective collaboration among stakeholders. Suboptimal conditions arise as the Besowo Village Government, expected to be a primary stakeholder, is categorized as a secondary stakeholder with a supporting role.



**Figure 3. Strategy for the Advancement of Livestock Business Through Stakeholder Involvement**

The establishment of a multi-stakeholder working group presents itself as an alternative strategy to boost stakeholder engagement. Its formation should meticulously consider the interests, needs, positions, and target groups, garnering support for the enhancement of stakeholder performance(Schmeer, 2000; Saadi et al., 2021).

Effective cooperation among all stakeholders requires a decision-making mechanism that is mutually advantageous, ensuring the realization of stakeholders' interests. Decision-making is a cognitive process integral to social interactions; in this context, the social process in decision-making pertains to the extent to which group



members are permitted to participate and influence the decisions to be made (Chelladurai, 2014). When approaching strategy as problem-solving, the optimal method depends on the specific issue at hand (Reeves et al., 2015). According to Conroy and Peterson (2013), decision-making in stakeholder governance encompasses four types: autocratic, democratic, consultative, and consensus.

Considering the circumstances at the research site, the consensus decision-making approach is deemed most suitable for fostering collaboration among all stakeholders involved in the progression of the livestock industry in Besowo Village, applying the consensus approach also functions to diminish the probability of future conflicts, especially those related to the potential mismanagement of Besowo nature reserves and land-sharing. Considering that the Besowo Village area acts as a buffer zone for the Besowo Nature Reserve, community activities within this zone should conform to the conservation goals of the Besowo Nature Reserves

## 5. Conclusion

The role of stakeholders is very important in developing livestock businesses in Besowo Village and the surrounding area. Collaboration between local governments, local communities, NGOs, industry, researchers, and academics is needed to achieve a balance between nature conservation and economic sustainability. Through strong cooperation and strong commitment, sustainable livestock business development can be achieved, preserving the environment while improving the welfare of local communities.

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