

## *Stakeholder Analysis in The Development of Natural Silk Agribusiness in South Sulawesi Province*

**Nurul Magfirah Ashar\*, Rita Nurmalina, Yanti Nuraeni Muflikh**

*Department of Agribusiness, Faculty of Economics and Management, IPB University, Indonesia.*

\* Corresponding author's e-mail: [nmagfirah63@yahoo.co.id](mailto:nmagfirah63@yahoo.co.id)

---

**How to Cite:** Ashar, N.M., R. Nurmalina, and Y.N. Muflikh. (2024). Stakeholder analysis in the development of natural silk agribusiness in south Sulawesi Province. *Int. J. Agr. Syst.* 12(2): 111-129.

---

### **ABSTRACT**

Natural silk is an agribusiness activity that consists of a whole series of interconnected and interrelated upstream to downstream sub-systems. The government has intensified the natural silk development policy program in South Sulawesi Province through the regional superior industrial development plan. As a form of superior industrial development as stipulated in the 2018-2038 South Sulawesi Provincial Industrial Development Plan, the involvement of several stakeholders. This research aims to find out all stakeholders involved in policy-making and decision-making in the agricultural and industrial sectors, which are directly related to the development of natural silk agribusiness in South Sulawesi Province. This research was located in South Sulawesi Province, with a regional focus on Soppeng Regency and Wajo Regency, and was carried out for three months, namely February – April 2024. The data obtained was analyzed using the analytical method stakeholder, which was done to interpret interest and influence. Twenty-four stakeholders are involved in developing natural silk agribusiness in South Sulawesi Province. Mapping stakeholders based on importance and influence makes eight stakeholders in quadrants subject (high interest but low influence), five stakeholders in quadrants as key players (high influence and high importance), ten stakeholders in quadrants context setter (high influence but low interest), and one stakeholder in quadrants crowd (low influence and low interest). Stakeholders must coordinate and synergize effectively, establishing good cooperation for the continued development of natural silk agribusiness in South Sulawesi Province in the future. The relationships between stakeholders in the natural silk development policy program in South Sulawesi Province consist of (1) communication, (2) coordination, and (3) cooperation.

*Copyright ©2024 IJAS. All rights reserved.*

**Keywords:** *Agribusiness development; natural silk; stakeholders analysis.*

### **1. Introduction**

Natural silk is an agribusiness activity comprising a whole series of interconnected and interrelated upstream to downstream sub-systems. The core process in natural silk consists of an upstream sub-system in the form of business activities for planting mulberries as caterpillar feed and silkworm breeding. At the same time, on-farm or production activities are rearing caterpillars to form cocoons that are ready to harvest. Activities in the downstream sub-system consist of spinning cocoons into silk thread, weaving them into silk cloth, and marketing the product to the end user. There are also supporting sub-systems that help the continuity of the process in aspects of cultivation and aspects of the natural silk industry, such as credit institutions, research and

development institutions, and extension institutions (Tenriawaru et al., 2021). The process from mulberry cultivation to finished silk products and product marketing to final consumers combines actors from farmers, spinners, weavers, weaving entrepreneurs, cloth and sarong traders, caterpillar egg importers, as well as government stakeholders, including the Environment and Forestry Service, as well as the Industry, Trade and Cooperatives (Mardia et al., 2017; Sadapotto et al., 2021).

South Sulawesi Province is one of the national producers of natural silk, contributing around 90% of silk thread production for all of Indonesia (Iwang, 2020; Nurhaedah and Bisjoe, 2013). This is in line with the stipulation of South Sulawesi Province Regional Regulation Number 7 of 2018 concerning the South Sulawesi Province Industrial Development Plan for 2018-2038, as regulated in Article 6, it is stipulated that one of the leading industries of South Sulawesi Province is the textile and silk processing industry. Consists of the spinning, weaving, and natural silk finished product industries.

The government has intensified the natural silk development policy program in South Sulawesi Province through the regional superior industrial development plan. As a form of superior industrial development as stipulated in the 2018-2038 South Sulawesi Provincial Industrial Development Plan, the natural silk development strategy that has been developed to date takes the form of utilizing production forests, developing mulberry cultivation technology and methodology, building natural silk regional technical service units, strengthening the capacity and institutions of silkworm distributors, promoting investment in the silk spinning and weaving industry, developing and managing human resource capacity, implementing and innovating technology, as well as developing natural silk MSMEs (Sadapotto et al., 2021).

However, the government has launched various development programs and policies to increase natural silk production in South Sulawesi Province but has not achieved the expected targets. The policy never met the target because various reasons influenced it. The condition of each local silk sub-system in Soppeng Regency has several problems that require more attention to survive and operate (Sadapotto et al., 2021). To develop the natural silk industry in the Industrial Development Plan for South Sulawesi Province, the involvement of several parties is needed stakeholder come from provincial and district governments, research and development departments, universities, financial institutions, entrepreneurs, non-governmental organizations, and farmers (Tarigan et al., 2010; Ramdhana et al., 2021). However, the performance and role of each stakeholder often encounter obstacles that impact the industry as a whole (Nuraeni, 2017). Therefore, this research is needed to identify and classify roles based on the interests and influence of actors in natural silk agribusiness who can assist stakeholders in policy-making and decision-making in the agricultural and industrial sectors, which are directly related to the development of natural silk agribusiness in South Sulawesi Province.

## **2. Materials and Methods**

### ***2.1 Location and Time***

This research was located in South Sulawesi Province, with a regional focus on Soppeng Regency and Wajo Regency. The location selection is done by purposive sampling, considering that this area is the main priority for developing silk in South Sulawesi Province. Time This research was carried out for three months, namely in February - April 2024.

## **2.2 Data Analysis**

Data and information were collected in this research using direct observation in the field, in-depth interviews, and a literature study (Idrus, 2009). The data obtained was analyzed using analytical methods stakeholder Which were carried out for the interpretation of interests and influences, as well as relationships between stakeholders. Analysis of stakeholders is carried out based on the stages carried out by (Abbas, 2005; Reed et al., 2009), which includes identification of stakeholders and classification and categorization of influences and interests.

Identifying stakeholders is done to find stakeholders involved in developing natural silk in South Sulawesi Province. The identification of stakeholders and their importance is carried out by field observations and interviews using purposive and snowball sampling methods. Stakeholders are selected considering the person concerned has interests, experience, and knowledge following the research focus. Furthermore, based on data and information obtained from stakeholders beforehand, researchers can determine stakeholders others considered may provide more complete data. Stakeholders consist of elements of the academy, business, and government community (Dwyer and Edwards, 2000).

Measuring the level of importance of stakeholders uses four aspects: involvement stakeholders, authority/stakeholders, engagement goals stakeholders, and level of dependency stakeholders in developing natural silk. In measuring the level of influence, stakeholders use four aspects, which include condition strength, compensation strength, individual strength, and organizational strength (Reed et al., 2009) referred to in (Jayanti and Muksin, 2015; Ramadhita et al., 2016)

An analysis of stakeholders was carried out by interpreting the interest and influence matrix stakeholders' attitudes towards the development of natural silk agribusiness using a stakeholder grid with the help of Microsoft Excel. The score values are added by calculating the criteria for measuring importance and influence. Then, the scoring results are based on each stakeholder's level of importance and influence, grouped according to the type of indicator, and juxtaposed to form coordinates. The coordinate positions can illustrate the illustration and the role played by each stakeholder. Classification results in stakeholders. Based on their influence and interests, they are divided into four groups, namely Key Player, Subject, Context Setter, and Crowd (Bryson, 2004); (Reed et al., 2009).

Relationships between stakeholders are mapped based on documents and interviews with respondents. Mapping relationships between stakeholders illustrates the relationship between stakeholders, both written in documents and carried out in the field based on the description method. The relationship between stakeholders is grouped into three, namely communication, coordination, and cooperation (Widodo et al., 2018).

## **3. Results and Discussion**

### **3.1 Identification of Natural Silk Development Stakeholders**

Stakeholder identification is fundamental in stakeholder analysis in developing natural silk agribusiness in South Sulawesi Province. Stakeholder identification is carried out using document tracing and field observation. The identification results obtained 24 stakeholders involved in developing natural silk agribusiness in South Sulawesi Province. The stakeholders are grouped into seven groups, namely Government Agencies, Government Organizations, BUMN, Universities, Private Sector, Community Groups and Society. The grouping is based on the Pentahelix theory, which is based on

the grouping in academia, industry, government, society, and media (Hernanda et al., 2018).

### *3.1.1. Government Agencies*

Provincial Development Planning, Research and Development Agency South Sulawesi (Provincial Regional Research and Development Planning Agency South Sulawesi) is an agency that has the authority to carry out research and development. Study and engineering, including the development of natural silk, because natural silk is one of the priority programs of the Governor of South Sulawesi for the 2018-2023 period regarding restoring the glory of silk in South Sulawesi Province. The role of the Provincial Development Planning, Research and Development Agency South Sulawesi's natural silk development program is based on South Sulawesi Province Regional Regulation Number 7 of 2018 concerning the South Sulawesi Province Industrial Development Plan for 2018-2038.

The South Sulawesi Provincial Environment and Forestry Service (DLHK South Sulawesi Prov.) is a government agency that plays a role in upstreaming natural silk and is responsible for feeding silkworms, namely mulberry plants and silkworms. The role of DLHK Provincial South Sulawesi is listed in the Minister of Forestry Regulation Number: P.56/Menhut-II/2007 concerning the Procurement and Distribution of Silkworm Eggs; Regulation of the Minister of Environment and Forestry Number P.37/MENLHK/Setjen/Kum.1/6/2017 concerning Procurement and Distribution of Silkworm Eggs; and Regulation of the Minister of Forestry of the Republic of Indonesia Number: P.21/Menhut-II/2009 concerning Criteria and Indicators for Determining Types of Featured Non-Timber Forest Products. DLHK Provincial South Sulawesi has a major role in assisting with facilities and infrastructure for the upstream natural silk system. This is then given to the district office for follow-up according to the required circumstances.

The South Sulawesi Provincial Industry and Trade Service (Disperindag South Sulawesi Prov.) is a government agency responsible for processing raw silk materials into finished silk products and marketing silk typical of South Sulawesi Province. The role of the Provincial Industry and Trade Department of South Sulawesi in developing natural silk is in line with the Strategic Plan (RENSTRA) for 2018-2023, which refers to the RPJMD of South Sulawesi Province for 2018-2023.

The South Sulawesi Provincial Social Forestry and Environmental Partnership Center (BPSKL South Sulawesi Prov.) is an agency that provides and produces spare silkworm seeds that farmers can use. The BPSKL work program currently does not focus on natural silk and is based on PERMENHUT No. P.35/MENHUT-II/2007 concerning Non-Timber Forest Products, which is the business of the Ministry of Forestry, so that silk is no longer the main focus of BPSKL, which has caused a transition to change agencies from the Natural Silk Center (BPA) to BPSKL Prov. South Sulawesi.

The Wajo Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Wajo Regency) is an agency that plays a role in the development of natural silk by Wajo Regency Regional Regulation Number 2 of 2019 concerning the Wajo Regency Industrial Development Plan for 2019-2039 which makes natural silk a leading industry Wajo Regency, one of which is the Natural Silk Industry which consists of the Spinning, Weaving and Natural Silk Products Industry. Bappelitbangda Wajo Regency plays a role as an implementer in compiling and proposing programs related

to natural silk in the Wajo Regency and developing programs proposed by the provincial government.

The Department of Industry, Trade, Cooperatives, Small and Medium Enterprises of Wajo Regency (Disperindagkop Wajo Regency) is a district government agency that plays a role in developing literature by the Regulation of the Minister of Industry of the Republic of Indonesia No. 141/M-Ind/Per/12/2012 Concerning the Guide Map for the Development of KLID for Wajo Regency, namely the Silk Weaving Industry. Disperindagkop Wajo Regency is fully responsible for the natural silk development program from upstream to downstream in Wajo Regency.

The Soppeng Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Soppeng Regency) is a district government agency that designs natural silk development programs focusing on the Soppeng Regency. The preparation of strategies and programs carried out by Bappelitbangda is based on Article 11 of Law Number 3 of 2014, Soppeng Regency Industrial Development Plan 2019-2039, concerning the leading industries of Soppeng Regency in the form of the Spinning Industry, Weaving Industry, and Silk Crafts.

The Soppeng Regency Food Crops, Horticulture, Plantation and Food Security Service (DTPHPKP Soppeng Regency) is an agency that plays a role in developing the upstream sector of natural silk which focuses on programs to increase the area of natural silk and natural silk development training for silk farmers. DTPHPKP District work program. Soppeng on natural silk is based on Soppeng Regency Regional Regulation Number 2 of 2021 concerning the Regional Medium Term Development Plan (RPJMD) of Soppeng Regency for 2021-2026.

The Soppeng Regency Small and Medium Enterprise Cooperative Trade Industry Service (DPPK-UKM Soppeng Regency) is a district government agency that develops downstream natural silk. The program focuses on the DPPK-UKM Soppeng Regency, which advances the spinning, weaving, and silk crafts industry and achieves Soppeng Regency's demand for silk. DPPK-UKM Soppeng Regency is based on Soppeng Regent Regulation Number 61 of 2022 concerning the Roadmap for the Development of the Natural Silk Industry for 2022-2031, which is in line with Article 11 of Law Number 3 of 2014, Soppeng Regency Industrial Development Plan for 2019-2039 concerning Soppeng Regency's leading industry in the form of the Spinning Industry, Weaving and Silk Crafts Industry.

### 3.1.2. *BUMN*

Bank Negara Indonesia (BNI) is a financial institution that has supported the development of natural silk in South Sulawesi Province since its inception. Memorandum of Understanding (MoU) in 2017 with the South Sulawesi Province Department of Industry and Trade at the encouragement of the Governor of South Sulawesi Province.

### 3.1.3. *Government Organization*

Silk Solution Center (SSC) is an organization formed based on the National Silk Development Master Plan as attached to the Joint Regulation of the Minister of Forestry, Minister of Industry, and Minister of State for Cooperatives and Small and Medium

Enterprises Number: 47/MENHUT-II/2006; Number 29/M-IND/PER/6/2006; and Number 07/PER/M.UKM/VI/2006 concerning the guidance and development of national natural literature using a cluster approach. SSC was formed to accelerate the development of national natural silk in potential areas.

KPH Walanae is a technical implementation unit for forest management in the Wajo Regency and Soppeng Regency areas. KPH Walanae also represents the budget allocation for the South Sulawesi Provincial Environment and Forestry Service (DLHK South Sulawesi Prov.) for silk development because it focuses on developing Natural Silk according to its main program mandate. The KPH Walanae program in developing natural silk is prepared in the RPHJP KPHL UNIT.

Intermediate PS Extension is an organization under the auspices of the South Sulawesi Provincial Environment and Forestry Service (DLHK South Sulawesi Prov.) that provides training and counseling to silk farmers to develop their information and abilities. Intermediate PS instructors provide assistance in HR aspects, the use of facilities and infrastructure, and institutional aspects. The basic basis for Intermediate PS Extension Officers in developing natural silk is the Decree of the Minister of Forestry of the Republic of Indonesia Number: 02/Menhut-II/86 establishing the Crash Program for Handling Natural Silk in South Sulawesi.

#### *3.1.4. Private*

The Cantika Sabbena brand is one of the KKI MSMEs in Soppeng Regency, which has been engaged in the natural silk industry since 2007. The Cantika Sabbena brand has quite a significant involvement in making the government's program a success, namely Restoring the Glory of Silk in Soppeng Regency. The Cantika brand focuses on producing environmentally friendly silk (Ecoprint) and has access to the international market.

The Losari Silk brand is one of the KKI MSMEs in Wajo Regency, founded in 1999. The vision of the Losari Silk Creative House is to preserve and grow the Wajo silk weaving tradition, an effort to improve the welfare of the Wajo Regency silk community and develop the Indonesian traditional silk weaving industry with the motto "From the Nation's Cultural Traditions, We Create a Million Charms of Elegant and Exclusive Woven Fabrics." The Losari Silk brand is an MSME that provides various finished silk products with the advantages of Export MSMEs and Women's MSMEs by empowering women in the surrounding environment.

#### *3.1.5. Community Groups*

The Tosora Weaving Group is a craftsmen group under the auspices of the Wajo Regency government. The formation of the group is based on the Decree on the Formation of Tosora Weaving Group Management, Tosora Village, Majauleng District, Wajo Regency Number 634/XI/2023, which was formed based on Wajo Regency Regional Regulation Number 2 of 2019 concerning the 2019-2039 Industrial Development Plan. The Tosora Weaving Group has the task of planning activities, implementing activities and partnerships, creating jobs, and expanding markets through the Sengkang Silk Weaving Center.

The Seppang Riawo Farmers Group, the Sabbeta Farmers Group, and the Batu Tungke Farmers Group are farmer groups in Soppeng Regency that cultivate mulberry and silkworm cultivation. The Silk Farmers Group is under the auspices of the Soppeng Regency Food Crops, Horticulture, Plantation and Food Security Service (DTPHPKP

Soppeng Regency). Silk farmer groups were formed to increase the area of natural silk and natural silk development training for silk farmers to achieve the Soppeng Regency Strategy Plan for 2021-2026.

### 3.1.6. Public

The communities in question are actors who are directly involved and have an important role in developing natural silk in South Sulawesi Province. These actors are mulberry farmers, silkworm farmers, spinning craftsmen, weaver craftsmen, and consumers who use silk products.

### 3.1.7. College

The academics in question are experts and respondents from universities with expertise in natural silk. They can provide information and knowledge to participate in the development of natural silk in South Sulawesi Province.

## 3.2 Stakeholder Classification of Nature Silk Development

Assessment based on stakeholder interest and influence attributes is carried out in the stakeholder classification stage (Reed et al., 2009). The classification was carried out based on interviews with 24 representative stakeholders involved in the development of natural silk in South Sulawesi Province. Elements of assessment of important attributes include involvement stakeholders, Authority/Role stakeholders, engagement goals stakeholders, and dependency stakeholders related to the development of natural silk agribusiness in South Sulawesi Province. The assessment elements of the influence attribute include strength conditions, compensation conditions, conditions of organizational/institutional strength, and personality/individual conditions stakeholders in developing natural silk agribusiness in South Sulawesi Province. Preparation is expressed in quantitative measures or scores (Table 1).

**Table 1.** Level of stakeholder importance and influence

No	Stakeholders	Important				Total	Influence				Total
		IM1	IM2	IM3	IM4		IN1	IN2	IN3	IN4	
1.	Provincial Development Planning, Research and Development Agency South Sulawesi (Bappelitbangda Prov. South Sulawesi)	4	3	3	1	11	4	2	3	3	12
2.	South Sulawesi Provincial Environment and Forestry Service (DLHK South Sulawesi Prov.)	5	4	3	1	13	5	4	4	3	16
3.	South Sulawesi Provincial Industry and Trade Service (Disperindag Prov. South Sulawesi)	5	4	3	2	14	5	4	4	3	16
4.	South Sulawesi Provincial Social Forestry and Environmental Partnership Center (BPSKL South Sulawesi Prov.)	2	2	2	2	8	1	2	3	2	8
5.	Wajo Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Kab. Wajo)	5	3	3	1	12	4	2	3	3	13
6.	Department of Industry, Trade, Cooperatives, Small and Medium Enterprises of Wajo Regency (Disperindagkop Kab. Wajo)	5	5	3	3	16	5	4	5	3	17

7.	Soppeng Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Kab. Soppeng)	2	2	3	2	<b>9</b>	3	2	3	3	<b>11</b>
8.	Soppeng Regency Food Crops, Horticulture, Plantation and Food Security Service (DTPHPKP Soppeng Regency)	5	5	3	1	<b>14</b>	5	4	5	3	<b>17</b>
9.	Soppeng Regency Small and Medium Enterprise Cooperative Trade Industry Service (DPPK-UKM Soppeng Regency)	5	5	3	3	<b>16</b>	5	4	5	3	<b>17</b>
10.	Bank Negara Indonesia (BNI)	2	2	2	1	<b>7</b>	1	2	1	2	<b>6</b>
11.	Silk Solution Center (SSC)	3	4	3	4	<b>14</b>	2	3	4	3	<b>12</b>
12.	KPH Walanae	2	2	3	1	<b>8</b>	1	2	3	2	<b>8</b>
13.	PS Madya Extension	2	2	4	1	<b>9</b>	1	2	3	2	<b>8</b>
14.	Losari Silk Brand	2	3	4	5	<b>14</b>	1	4	4	3	<b>12</b>
15.	Cantika Sabbena Brand	2	3	4	5	<b>14</b>	1	4	4	3	<b>12</b>
16.	Tosora Weaving Group	2	4	4	5	<b>15</b>	1	4	4	2	<b>11</b>
17.	Seppang Riawo Farmers Group	2	4	4	5	<b>15</b>	1	4	4	2	<b>11</b>
18.	Sabbeta Farmers Group	2	4	4	5	<b>15</b>	1	4	4	2	<b>11</b>
19.	Batu Tungke Farmers Group	2	4	4	5	<b>15</b>	1	4	4	2	<b>11</b>
20.	Mulberry and Silkworm Farmers	2	2	4	3	<b>11</b>	1	2	2	2	<b>7</b>
21.	Spinner	2	2	4	4	<b>12</b>	1	2	2	2	<b>7</b>
22.	Weavers	2	2	4	5	<b>13</b>	1	2	2	2	<b>7</b>
23.	Consumer	1	1	2	1	<b>5</b>	1	1	2	1	<b>5</b>
24.	Academics	1	2	2	1	<b>6</b>	1	1	2	2	<b>6</b>

Source: Primary data processed, 2024

Information:

5: Very high; 4: High; 3: High enough; 2: less high; 1: Low

IM1: Stakeholder Involvement

IN1: Power State

IM2: Authority/Role of Stakeholders

IN2: Compensation Conditions

IM3: Objectives of Stakeholder Engagement

IN3: Conditions of

IM4: Stakeholder Dependency

Organizational/Institutional Strength

IN4: Personality Condition/Individual Stakeholder

Influence and importance stakeholders in formulating development policies for activities, including monitoring decisions that have been made and facilitating the implementation of activities while dealing with negative impacts. The influence and importance of stakeholders can be seen from the input provided when preparing policies and programs for each stakeholder (Lestari et al., 2022).

Analysis results in stakeholders being classified according to the level of importance and influence using a matrix, according to Reed et al. (2009), which can be seen in Figure 1. Matrix of importance and influence stakeholder This shows that each stakeholder has different classifications of roles in the development of natural literature in South Sulawesi Province according to their interests (interest/concern) and level of influence (authority/ability/strength) (Bryson, 2004; Fran and Colin, 2011; Reed et al., 2009).



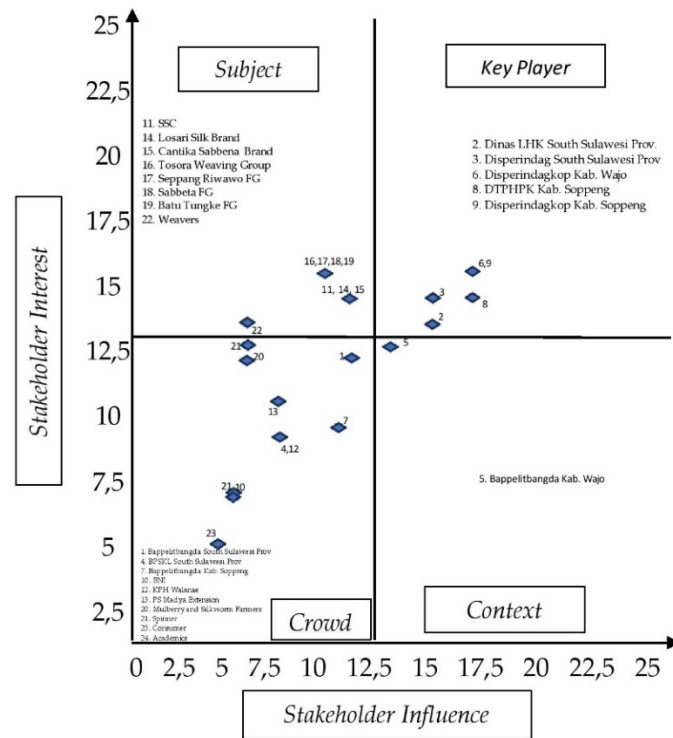


Figure 1. Stakeholder important and influence matrix

**Information:**

1) Provincial Development Planning, Research and Development Agency South Sulawesi (Bappelitbangda Prov. South Sulawesi); 2) South Sulawesi Provincial Environment and Forestry Service (DLHK South Sulawesi Prov.); 3) South Sulawesi Provincial Industry and Trade Service (Disperindag Prov. South Sulawesi); 4) South Sulawesi Provincial Social Forestry and Environmental Partnership Center (BPSKL South Sulawesi Prov.); 5) Wajo Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Wajo Regency); 6) Department of Industry, Trade, Cooperatives, Small and Medium Enterprises of Wajo Regency (Disperindagkop Wajo Regency); 7) Soppeng Regency Regional Development Planning, Research and Development Agency (Bappelitbangda Soppeng Regency); 8) Soppeng Regency Food Crops, Horticulture, Plantation and Food Security Service (DTPHPKP Soppeng Regency); 9) Soppeng Regency Small and Medium Enterprise Cooperative Trade Industry Service (DPPK-UKM Soppeng Regency); 10) Bank Negara Indonesia (BNI); 11) *Silk Solution Center* (SSC); 12) KPH Walanae; 13) PS Madya Extension; 14) Losari Silk Brand; 15) Cantika Sabberna Brand; 16) Tosora Weaving Group; 17) Seppang Riawawo Farmers Group; 18) Sabbeta Farmers Group; 19) Batu Tungke Farmers Group; 20) Mulberry and Silkworm Farmers; 21) Spinner; 22) Weavers; 23) Consumer; and 24) Academics.

The quadrant position can describe the position and role played by each stakeholder related to the development of natural silk agribusiness in South Sulawesi Province, namely: (1) Subject meaning high importance but low influence; (2) Key Player meaning high importance and influence; (3) Context setter meaning low importance but high influence, and (4) Crowd meaning its importance and influence are low.

**1) Key Players**

Stakeholders included in the classification key players namely the Environment and Forestry Service of South Sulawesi Province, the South Sulawesi Province Department of Industry and Trade, the Department of Industry, Trade, Cooperatives, Small and Medium Enterprises of Wajo Regency, the Department of Food Crops, Horticulture, Plantations and Food Security of Soppeng Regency and the Department of Industry and Trade of Business Cooperatives Small and Medium Enterprises in Soppeng Regency. Stakeholder, which are in the quadrant key players, has an important role in the development of natural silk agribusiness, including government agencies, both provincial and district, which have the authority to create and formulate policies related to development and have involvement from planning to evaluation of development programs. The stakeholders that become key players have high influence and importance because they have the power to influence other parties.

### **2) Subject**

The stakeholder included in the classification subject is Silk Solution Center (SSC), which has a role in coordinating and being a facilitator in providing information from and to all stakeholders who are involved in developing, providing, and formulating an overview of programs that are good for developing natural silk agribusiness. The Losari Silk Brand and the Cantika Sabbena Brand have a role in creating, distributing, and selling finished silk products that can attract interest from consumers so that they can reach and introduce typical South Sulawesi silk to the international market. The Tosora Weaving Group, Seppang Riawo Farmers Group, Sabbeta Farmers Group, and Batu Tungke Farmers Group are community groups that have a role as a forum for silk farmers and silk craftsmen in carrying out their cultivation activities, both in obtaining information, training, and distributing government assistance. Weavers play a role in creating quality silk and are the most important actors in creating finished silk products.

### **3) Context Setter**

The stakeholder included in the classification context setter is the Wajo Regency Regional Development Planning, Research and Development Agency, a district government agency with a small interest but an important role in development. Bappelitbangda Wajo Regency plays a role in preparing and planning development programs that are coordinated with Bappelitbangda Province but adapt to the problems and conditions of each district area. It plays an important role because the results of the preparation and planning prepared by the Bappelitbangda of Wajo Regency influence the policies that will be formed by the Provincial and Regency Central Government Services involved in the development of natural silk.

### **4) Crowd**

Stakeholder Those included in the crowd classification are the Provincial Regional Development Planning, Research and Development Agency and the Provincial BPSKL, which are government agencies that have little interest and influence in the development of natural silk because natural silk is not a commodity that is made a priority in agency programs. The Soppeng Regency Regional Development Planning, Research and Development Agency is also included in the classification, which has little interest and influence on the development of natural silk because the Soppeng Regency Bappelitbangda does not make natural silk a development priority, the role of the Soppeng Regency Bappelitbangda in natural silk is as an agency that coordinates stakeholder who is involved in the development of natural silk in Soppeng Regency.

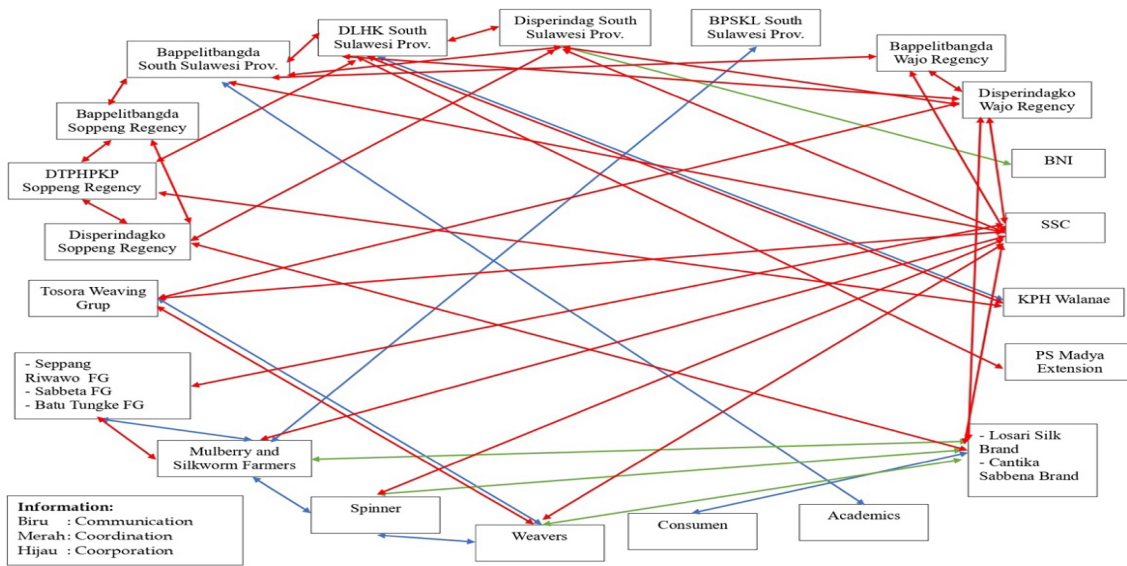
KPH Walanae and Intermediate PS Extension are government organizations that also have a small interest and role in the development of natural silk because, currently, natural silk is not a priority commodity for providing training. Meanwhile, mulberry and silkworm farmers and spinners are important actors in the upstream sector who provide and produce the main raw material for silk. However, they have a small role and importance because they are only field implementers in the development of natural silk. The financial institution of Bank Nasional Indonesia (BNI) has little interest and influence in the development of silk because it only focuses on providing capital in the form of facilities and infrastructure.

Academics indirectly play a role in research and advocacy activities that lead to the development of natural resources through new technological discoveries and agricultural research suggestions that students and lecturers have carried out. However, innovations resulting from research have never been adopted well after stakeholders are involved. The low role of universities is also due to the lack of research related to innovation in the development of natural silk. As the final chain of natural silk agribusiness, consumers are more interested in meeting consumer needs than other interests. Hence, the demand for silk by consumers influences the sustainability of natural silk agribusiness even though it is lower than that of stakeholders.

According to Reed et al. (2009), the matrix of influence and importance is dynamic. The impact of these changes must be considered and used as material for formulating strategies to overcome the problems that occur. Bryson (2004) states that the influence and interest matrix can help determine the interests and influence of which stakeholders should be considered to overcome the problems that occur. Apart from that, this matrix can highlight cooperation that needs to be strengthened or weakened, what behavior must be maintained, and provide information to convince parties to change their views. Based on the analysis results, stakeholder regulatory strategies can be formulated for stakeholders in developing natural silk agribusiness based on a matrix of stakeholder categories.

### ***3.3 Stakeholder Relations***

The description of the relationship between stakeholders shows the flow of relations between stakeholders, both written in the document and carried out in the field. The establishment of relationships between stakeholders formed an agreement and understanding regarding the development of natural silk agribusiness in South Sulawesi Province. The relationship between 24 stakeholders involved in the development of natural silk agribusiness in South Sulawesi Province was mapped (Figure 2) based on the results of interviews identified in 3 relationships, namely communication, coordination, and cooperation (Widodo et al., 2018).



**Figure 2.** Map of relationships between stakeholders  
 Source: Primary data processed, 2024

3.3.1. Communication

Communication refers to sharing information, ideas, or opinions from every stakeholder involved to achieve common meaning (Widodo et al., 2018). In communication related to the development of natural silk in South Sulawesi Province, there are elements of information sources, media, and information recipients. An explanation of the communication relationship between stakeholders can be seen in Table 2.

Communication between stakeholders is an important factor in the synergy of development program implementation. The existence of communication provides information to stakeholders involved in conveying their interests in supporting development, as well as the amount of influence that can be given by stakeholders so that the involvement of these stakeholders can be maximized in the development of natural silk agribusiness as their role, as well as accommodating the desired results of the communication based on their interests.

**Table 2.** Communication relationship between stakeholders

No.	Stakeholder	Information
1	A 1, 24	BappeLitbangda Provincial South Sulawesi communicates with academics regarding the research results on natural silk that can support development.
2	A 2, 12	KPH Walanae provides information to DLHK Prov. South Sulawesi regarding data on the number of mulbey and silkworm production that have been successfully cultivated.
3	A 4, 20	BPSKL Provincial South Sulawesi provides information to mulbey and silkworm farmers regarding the availability of locally produced seeds that farmers can use in their cultivation efforts.

4	A 16, 22	Communication between the Tosora Weaving Group and Weavers is related to assistance from the government, the price of thread on the market, and the demand for silk products by the market.
5	A 20 (17, 18, 19)	Mulbey and Silkworm Farmers communicate with the Silk Farmers Group by exchanging information regarding assistance provided by the government, how the aid distribution system works, how to control the supply of caterpillar seeds to be used, and the latest prices for seeds and cocoons.
6	A 20, 21	Mulbey and Silkworm farmers exchange information with spinners regarding the availability of the number of cocoons to be used by spinners.
7	A 21, 22	The spinner exchanges information with the weaver regarding the amount of production and the price of the yarn he will sell to the weaver.
8	A 23 (14, 15)	Consumers get information about the availability of silk products and the prices of silk products purchased or used from the Silk Business Brand.

Source: Primary data processed, 2024

### 3.3.2. Coordination

Coordination is a collaborative effort between agencies, agencies, and units in the implementation of certain tasks in such a way that there is mutual complementarity, mutual assistance, and complementarity to achieve the same goal. An explanation of the coordination relationship between stakeholders can be seen in Table 3.

Coordination is the relationship between stakeholders that is most commonly found in the field. Coordination between stakeholders is needed so that the development to be achieved can run effectively and there is no overlap in its implementation (Widodo et al., 2018).

**Table 3.** Coordination relationship among stakeholders

No.	Stakeholder	Information
1	B 1 (2,3,5,7)	Bappelitbangda Provincial South Sulawesi researched the condition of natural silk and then provided information and policy suggestions based on the research results to the Provincial DLHK. South Sulawesi, Disperindag Prov. South Sulawesi, Bappelitbanda District. Wajo and Bappalitbangda Soppeng Regency so that coordination can be carried out regarding the preparation of policies for natural silk development programs

2	B 2 (3,6,8,12,13)	DLHK Provincial South Sulawesi coordinates with the Provincial Department of Industry and Trade. South Sulawesi regarding policies for developing natural silk from upstream to downstream so that they can be in line – meanwhile, DLHK Provincial. South Sulawesi also coordinates with district agencies, namely Disperindag Wajo and Regency DTHPK Soppeng Regency, regarding the availability of mulbey seeds and silkworm seeds as well as regarding assistance from the Province that will be given to the District in accordance with their respective policy programs. Apart from that, DLHK Prov. South Sulawesi is coordinating with KPH Walanae and Intermediate PS Supervisors regarding the extension assistance provided to mulbey and silkworm farmers.
3	B 3 (6,9,11)	Provincial Department of Industry and Trade. South Sulawesi coordinates with Disperindagkop Wajo Regency and Disperindagkop. Soppeng Regency regarding downstream policies for natural silk according to the conditions of each region so that aid from the Province can be distributed, then also coordinating with SSC regarding downstream obstacles in natural silk and solving these obstacles.
4	B 5 (6,11)	Bappelitbangda Wajo Regency coordinates with Disperindagkop Wajo Regency and SSC regarding preparing policies and programs to achieve the development of natural silk in the Wajo Regency.
5	B 6 (11,14,15,16)	Disperindagkop Wajo Regency coordinates with SSC regarding the preparation of policies that can help solve problems downstream of natural silk in the Wajo Regency. Meanwhile, Disperindagkop Wajo Regency and the Natural Silk Business Brand coordinate with each other to discuss the production of typical Wajo silk products and the sale and introduction of typical Wajo silk products to the international market.
6	B 7 (8,9)	Bappelitbangda Soppeng Regency coordinates with DTPHPK Soppeng Regency and Disperindagkop Soppeng Regency regarding the preparation of policies and programs aimed at achieving the development of natural silk from upstream to downstream in Soppeng Regency.
7	B 8 (9,12)	DTPHPK Soppeng Regency coordinates with Disperindagkop Soppeng Regency regarding policy programs that can achieve demand targets in the natural silk downstream sector in Soppeng Regency. As well as DTPHPK Soppeng Regency coordinates with KPH Walanae regarding the productivity and quality of mubey and silkworms produced by farmers in Soppeng Regency which can support the demand for natural silk in Soppeng Regency.

8	B 9 (14, 15)	Disperindagkop Soppeng Regency and the Natural Silk Business Brand coordinate with each other regarding the production of typical Soppeng silk products and the sale and introduction of typical Soppeng silk products to the international market.
9	B 11 (14,15,16, 17,18,19, 20,21,22)	Apart from related government agencies, the SSC has a role in coordinating all the main actors involved in natural silk production in the Province. South Sulawesi, namely mulbey and silkworm farmers, spinners, weavers, silk business actors, silk farmer groups, and tosora weaving groups. This coordination is carried out in order to resolve the obstacles that exist in all existing sub-systems and achieve the goals of developing natural silk.
10	B 16 (22)	The Tosora weaving group coordinates with weavers regarding producing natural silk and distributing assistance from the government in the weaving sector.
11	B 20 (17,18,19)	Silk farmer groups and mulbey and silk worm farmers coordinate with each other regarding problems in the upstream sub-system of natural silk, especially regarding the supply of mulbey and silk worm seeds. The role of farmer groups is to help all their members obtain mulbey and silkworm seeds and carry out cultivation. Apart from that, farmers who are members of silk farmer groups find it easier to obtain information about the cultivation of natural silk upstream and information about government assistance.

Source: Primary data processed, 2024

### 3.3.3. Cooperation

Cooperation is a joint effort between individual groups to achieve common goals (Bungin, 2008). Cooperation is based on whether individuals or certain groups realize that there are common interests and threats. An explanation of the cooperative relationship between stakeholders can be seen in Table 4.

**Table 4.** Cooperative relations between stakeholders

No.	Stakeholder	Information
1	C 3, 10	Provincial Department of Industry and Trade. South Sulawesi collaborates with BNI in realizing the development of natural silk in South Sulawesi Province through the BNI Silk Village program, located in Wajo Regency as a city known as "Silk City". This collaboration is based on an MoU between the two parties in 2017.

---

2	C 14,15 (20, 21, 22)	The Natural Silk Business Brand collaborates with natural silk actors from upstream to downstream through contractual cooperation. With this collaboration, Business Brands can produce their silk products from raw materials received from actors who collaborate with them so that they can minimize the small amount of their brand's silk production. Farmers, Spinners, and Weavers who are bound by contracts are obliged to provide their production results to the Business Brand so that the market for their products is clear and they get definite profits.
---	----------------------	--

---

Source: Primary data processed, 2024

#### **4. Conclusion**

There are 24 stakeholders involved in the development of natural silk agribusiness in South Sulawesi Province who are positioned as Subject, Key Players, Context Setter, and Crowd based on their importance and influence. Stakeholders in the Key players and context setter quadrants are the main actors in implementing natural silk agribusiness development in South Sulawesi Province, and stakeholders in the subject and crowd quadrants have a low role, importance, and influence, so increased stakeholder involvement is needed. The relationships between stakeholders in development consist of (1) communication, (2) coordination, and (3) cooperation. Stakeholders are needed to coordinate and synergize effectively and establish good cooperation for the sustainability of natural silk agribusiness development in South Sulawesi Province in the future. There are 24 stakeholders involved in the development of natural silk agribusiness in South Sulawesi Province who are positioned as Subject, Key Players, Context Setter, and Crowd based on their importance and influence. Stakeholders in the Key players and context setter quadrants are the main actors in the implementation of natural silk agribusiness development in South Sulawesi Province, and stakeholders in the subject and crowd quadrants have a low role, importance, and influence, so increased stakeholder involvement is needed. The relationships between stakeholders in development consist of (1) communication, (2) coordination, and (3) cooperation. Stakeholders are needed to coordinate and synergize effectively and establish good cooperation for the sustainability of natural silk agribusiness development in South Sulawesi Province in the future.

#### **Acknowledgments**

Thanks to the South Sulawesi Province, Wajo Regency, and Soppeng Regency Government for allowing the authors to research the area and provide additional secondary data. Thank you to all the actors in the natural silk agribusiness business in Wajo and Soppeng Regency who have been willing to be respondents in this study so that researchers can get data and research results. Thank you to the lecturers who provided guidance and direction to the author in compiling the results of this research.



## References

- Abbas, R. (2005). Stakeholder Participation Planning Mechanism for Mount Rinjani National Park. Dissertation, IPB University, Bogor.
- Bryson, J.M. (2004). What to do when stakeholders matter: stakeholder identification and analysis Techniques. *Public Management Review*, 6, pp. 21-53.
- Bungin, B. (2008). *Sociology of Communication*. 3rd Printing. Kencana, Jakarta
- Dwyer, L. and D. Edwards. (2000). Nature-based tourism on the edge of urban development. *Journal of Sustainable Tourism*, 8(4), pp.267-287.
- Fran, A. and E. Colin. (2011). Strategic Management of Stakeholders: Theory and Practice. *Long Range Planning*, 44(3), 179-196.
- Hernanda, D. W., L.I. Mindarti, R. Riyanto. (2018). Community empowerment based on good tourism governance in the development of tourism destination (Case study of Kawah Ijen tourism buffer zone" Kampung Kopi" Gombongsari Village, Kalipuro District, Banyuwangi Regency). *Journal of Indonesian Tourism and Development Studies*, 6(2), 126-135.
- Idrus, M. (2009). *Social Science Research Methods: Qualitative and Quantitative Approaches*. Erlangga, Jakarta.
- Iwang, B. (2020). Peranan Pemerintah dalam Memajukan Perusahaan Sutera di Sulawesi Selatan, Indonesia. *Southeast Asian Social Science Review*, 5(1), 103-132.
- Jayanti, A.L., and Muksin. (2015). Stakeholder analysis in dragon fruit agribusiness in Bangorejo District, Banyuwangi Regency. *Innovation Scientific Journal*, 15(3):99-106.
- Lestari, R., R. Nugroho, J. Juwandi, and S.A. Afandi. (2022). Stakeholder Analysis in Formulating River Watershed Management Policy in Riau Province. *Academia Praja: Journal of Political Science, Government and Public Administration*, 5(2), 250-261.
- Mardia, M., N. Iriani, M. Kamaluddin. (2017). The Agribusiness Model of Natural Silk System in Soppeng Regency. In *2nd International Conference on Education, Science, and Technology (ICEST 2017)*; 11-12 MAR; Makassar (ID): Atlantis Press. hlm 22-24
- Nuraeni, S. (2017). Gaps in The Thread: Disease, Production, And Opportunity in The Failing Silk Industry of South Sulawesi. *Forest And Society*, 1(2):110-120.
- Nurhaedah, M., and A.R.H. Bisjoe. (2013). Silkworm Cultivation in Sudu Village, Alla District, Enrekang Regency, South Sulawesi. *Jurnal Penelitian Hutan Tanaman*. 10(4):229-239
- Ramadhita, A.N., R. Soekmadi, and A.P. Kartono. (2016). Analysis of the Role of Stakeholders in the Javan Gibbon (*Hylobates Moloch*) Conservation Program at the Javan Gibbon Center. Bogor Agricultural Institute.
- Ramdhana, F., J. Usman, A. Mone. (2021). Village Government's Strategy in Developing Sabbeta Village, Pising Village, Donri-Donri District, Soppeng Regency. *Kajian Ilmiah Mahasiswa Administrasi Publik (KIMAP)*, 2(5):1578-1594.
- Reed, S.M., A. Graves, N. Dandy, H. Posthumus, K. Hu- back, J. Morris, C. Prell, C.H. Quin, L.C. Stringer. (2009). Who's in and why? w typology of stakeholder analysis methods for natural resource management. *Journal of Environmental Management*, 90, pp. 1933-1949.

- Sadapotto, A., L. Palulungan, M. Riwu, M.A.K. Sahide, N. Sirimorok, S.M. Parenreng, Y.M. Salindehi, A.F. Yahya, A. Mulyani, R.D. Said, S. Suryani, Y. Rauf, Y.F. Pratama. (2021). South Sulawesi Silk Commodity Value Chain Study Report. Regional Research and Development Planning Agency South Sulawesi: Makassar.
- Tarigan, D., A.M.F. Sukardi, A. Suryani, M. Kaomini. (2010). A Strategy For The Development Of Silk Agroindustry. *Jurnal Teknologi Industri Pertanian*, 20(1):39-47.
- Tenriawaru, A.N., L. Fudjaja, M.H. Jamil, R.M. Rukka, A. Anisa. (2021). Natural silk agroindustry in Wajo Regency. In *IOP Conf. Series: Earth and Environmental Science*; 8-9 JAN; Makassar, Indonesia; IOP Publishing. page 1-9
- Widodo, M.L., R. Soekmadi, and H.S. Arifin. (2018). Analysis of stakeholders in the development of ecotourism in the Betung Kerihun national park, Kapuas Hulu Regency. *Journal of Natural Resources and Environmental Management*, 8(1), 55-61.

### **Laws and Regulations**

Article 11 of Law Number 3 of 2014, Soppeng Regency Industrial Development Plan 2019-2039, concerning the leading industries of Soppeng Regency in the form of the Spinning Industry, Weaving Industry and Silk Crafts

Decree of the Minister of Forestry of the Republic of Indonesia Number: 02/Menhut-II/86 stipulates the Crash Program for Handling Natural Forests in South Sulawesi.

Decree on the Establishment of Tosora Weaving Group Management, Tosora Village, Majauleng District, Wajo Regency Number 634/XI/2023

Joint Regulation of the Minister of Forestry, Minister of Industry and Minister of State for Cooperatives and Small and Medium Enterprises Number: 47/MENHUT-II/2006; Number 29/M-IND/PER/6/2006; and Number 07/PER/M.UKM/VI/2006 concerning the guidance and development of national natural literature using a cluster approach.

Minister of Forestry Regulation Number: P.56/Menhut-II/2007 concerning Procurement and Distribution of Silkworm Eggs;

PERMENHUT No. P.35/MENHUT-II/2007 concerning Non-Timber Forest Products

Regulation of the Minister of Environment and Forestry Number P.37/MENLHK/Setjen/Kum.1/6/2017 concerning Procurement and Distribution of Silkworm Eggs;

Regulation of the Minister of Forestry of the Republic of Indonesia Number: P.21/Menhut-II/2009 concerning Criteria and Indicators for Determining Types of Featured Non-Timber Forest Products.

Republic of Indonesia Minister of Industry Regulation No. 141/M-Ind/Per/12/2012 Concerning Wajo Regency KLID Development Guide Map

RPHJP KPHL UNIT XII AT UPT KPH WALANAE 2019 - 2028

Soppeng Regency Regional Regulation Number 2 of 2021 concerning the Regional Medium Term Development Plan (RPJMD) of Soppeng Regency for 2021-2026.

Soppeng Regent Regulation Number 61 of 2022 concerning Roadmap for the Development of the Natural Silk Industry for 2022-2031

South Sulawesi Province Regional Regulation Number 7 of 2018 concerning South Sulawesi Province Industrial Development Plan for 2018-2038

Wajo Regency Regional Regulation Number 2 of 2019 concerning Wajo Regency Industrial Development Plan for 2019-2039