

# ENGAGING STAKEHOLDERS IN POLICY DECISION-MAKING FOR FOOD SECURITY GOVERNANCE: IDENTIFICATION, PERCEPTION, AND CONTRIBUTION

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## Abstract

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Governance of food systems is a poorly understood determinant of food security (Delaney et al., 2018). This article tackles the intricate issue of understanding stakeholders in public policy for enhancing food security in Papua. The primary purpose is to pinpoint key stakeholders, delve into their perspectives, and advocate for holistic policies integrating production, distribution, environmental impact, and social considerations. The qualitative approach, employing interviews, observations, and document analysis, allows a comprehensive exploration of stakeholder perspectives shaped by diverse backgrounds. Advocating for an integrated policy-making approach, the paper emphasizes addressing production, distribution, environmental impact, and social considerations for long-term food security in Papua. The conclusion underscores collaboration's imperative for holistic and sustainable policies, addressing communication challenges and balancing diverse stakeholder interests. The paper's relevance lies in contributing insights to navigate the complexities of stakeholder involvement in food security policy, informing the development of more effective, inclusive policies for enduring and sustainable food security in Papua.

**Keywords:** Stakeholders, Public Policy, Food Security, Decision-Making

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## 1. INTRODUCTION

The acknowledgment of the significance of food security in Papua (Hadiprayitno, 2015) is apparent, as this province encounters substantial obstacles in attaining sufficient food availability for its populace. The attainment of sustainable food security in Papua is impeded by a multitude of intricate factors, encompassing its abundant natural resources alongside topographical, socio-economic, and political hurdles (Van Ginkel et al., 2020). The process of making decisions regarding public policy in relation to food security in Papua is heavily dependent on a thorough comprehension of the parties involved in this undertaking. According to Campos and Reich (2019), stakeholders refer to persons, groups, or organizations that possess interests and exert influence over public policies. The efficacy of food security programs relies on the active engagement and cooperative efforts of these stakeholders.

The fundamental issues related to stakeholders in the decision-making process of public policy for food security revolve around several key points. Firstly, there's a lack of engagement by the local community in the decision-making process of public policy for food security. Stakeholders in these decisions often inadequately involve local communities, particularly farmers, fishermen, and indigenous groups. Their limited involvement results in policies that do not align with local needs, aspirations, and knowledge, thus reducing the effectiveness of policy implementation. Secondly, power imbalances and resource access disparities among stakeholders are significant concerns in the decision-making process of public policy for food security (Bapuji et al., 2020). Those with greater political and economic power tend to dominate the decision-making process, while weaker parties often lack sufficient access to the resources and information necessary for effective participation.

Conflicting interests among various stakeholders present another fundamental issue (Bapuji et al., 2020). For instance, the interests of large corporations investing in extensive agriculture might contradict the interests of local communities seeking to preserve their traditional land use. Such conflicts can hinder decision-making processes and undermine the accountability of resulting policies. Lack of coordination and synergy among stakeholders is identified as a major obstacle. The inability to collaborate effectively among local government, relevant institutions, the private sector, and civil society can impede policy implementation and hinder the achievement of food security goals. Limited understanding of local conditions in Merauke, including geographical, social, and cultural factors, can hinder evidence-based and contextual decision-making.

Insufficient insight into the specific potential and challenges of the region can lead to policies that are detached from on-the-ground realities, thus compromising their effectiveness in achieving sustainable food security. Another underlying issue is the lack of comprehensive stakeholder identification in the decision-making process (Hargrove & Heyman, 2020). Inaccurate or incomplete identification of stakeholders can lead to important groups being overlooked, resulting in policies that don't consider their needs, issues, or aspirations. Stakeholders' diverse perceptions regarding food

security issues can also hinder effective dialogue and cooperation (Arroyo et al., 2013). These differences in perception can make it difficult to reach comprehensive and sustainable agreements in policy decision-making.

Comprehensive stakeholder identification is crucial for policy decisions (Hargrove & Heyman, 2020). Research focused on this identification provides a better understanding of who is involved and can potentially influence the policy. This is urgent, as poorly identified stakeholders may experience underrepresentation, leading to ineffective or unsustainable policies. Research on stakeholders' perceptions regarding food security policies is also urgent. Diverse perceptions can impede collaboration and the shared understanding necessary for formulating holistic and sustainable policies. Understanding these differences and finding mutually beneficial common ground allows for more inclusive policy formulation, encouraging active participation from all involved parties.

The urgency of researching stakeholders' contributions to policy decision-making is crucial to ensuring all voices are heard and respected. This research will help identify the unique contributions each stakeholder can make, clarify their roles and responsibilities, and ensure their participation isn't just a formality. Strengthening equal stakeholder contributions will result in policies that better represent the needs and aspirations of all involved in Merauke's food security. In this context, researching stakeholders in the decision-making process for food security policies in Merauke is urgent to ensure policies are sustainable, inclusive, and responsive to the needs of local communities and the environment. This research will provide a better understanding of the involved stakeholders, their diverse perceptions, and the contributions they can provide. Ultimately, this will strengthen the policy decision-making process and enhance the implementation of food security policies in Merauke.

The remaining sections of the paper are structured as follows. Section 2 reviews the relevant literature. Section 3 analyses the research methodology that has been used to conduct empirical research. Section 4 refers to research results and Section 5 discusses various stakeholders' discussions on enhancing food security. Section 6 presents the conclusions and some recommendations for future research and the limitations of the study.

## 2. LITERATURE REVIEW

Food security in Papua, Indonesia, is a matter of paramount concern due to its unique geographical and socio-economic challenges. Ensuring a consistent and adequate food supply in this region is complicated by its isolation and cultural diversity. In this context, stakeholder engagement plays a pivotal role in shaping public policies aimed at addressing food security issues (Campbell et al., 2016). The purpose of this literature review is to examine the role of stakeholder engagement in public policy decision-making concerning food security (Candel, 2014). By exploring how stakeholders are identified, understanding their perceptions, and assessing their contributions, we aim to shed light on the dynamics that underpin effective governance and food security initiatives.

Papua faces significant food security challenges. Its rugged terrain and lack of transportation infrastructure make it difficult to access remote areas, hindering the distribution of food supplies, as is the case in high mountain areas (Sidle et al., 2023). Moreover, the region's cultural diversity presents complexities in terms of dietary preferences and farming practices (Wang et al., 2023). These challenges emphasize the critical importance of well-informed public policies that can mitigate food insecurity and promote sustainable agriculture and nutrition (Gaijre et al., 2019). Stakeholder engagement is a fundamental aspect of effective public policymaking (Marcon Nora et al., 2023). It involves actively involving various groups and individuals who have a stake or interest in a particular issue. In the context of food security in Papua, engaging stakeholders is crucial because their input can lead to more inclusive and comprehensive policy solutions. Different models of stakeholder engagement exist, ranging from consultative processes to collaborative decision-making, all of which aim to ensure that the voices and perspectives of those affected by the policies are considered (Levkoe et al., 2023).

Identifying the key stakeholders in food security policymaking in Papua is a fundamental step in the policymaking process. Stakeholders can include government agencies, non-governmental organizations (NGOs), local communities, farmers, and businesses involved in the food supply chain. Each stakeholder group brings unique expertise, interests, and perspectives to the table (Domingo et al., 2023). Effective identification and categorization of these stakeholders are essential for fostering an inclusive and informed decision-making process (Martinez-Peláez et al., 2023). Stakeholder perceptions regarding food security in Papua vary widely, reflecting diverse interests and concerns. Some stakeholders may prioritize economic development, while others may emphasize environmental sustainability or cultural preservation (Cao & Solangi, 2023). Understanding these differing perceptions is vital for policymakers as it allows them to tailor policies that accommodate a range of viewpoints, ultimately leading to more effective and accepted solutions. Stakeholders in Papua play a significant role in shaping food security policies. They contribute through various means, such as providing data, expertise, or financial support, and by advocating for specific policies that align with their interests. Successful examples of stakeholder-driven initiatives or policies can serve as valuable case studies for understanding the impact of their contributions.

Stakeholder engagement can provide valuable insights for policymakers and practitioners in Papua. Lessons learned from successful cases in Papua or similar regions can inform strategies for enhancing stakeholder engagement in food security policymaking (Songsermsawas et al., 2023). These best practices can include transparent communication, collaboration, and mechanisms for resolving conflicts among stakeholders. Despite the importance of stakeholder engagement in food security policymaking, there are notable gaps in the existing literature. These gaps may relate to specific stakeholder groups that have been underrepresented, limited research on the effectiveness of certain engagement models, or a lack of studies that consider the unique challenges of Papua. Identifying these gaps can guide future research and policy development in this area.

### 3. METHODS

In this research, a qualitative methodology will be employed to obtain a profound and contextual understanding of the roles and perceptions of stakeholders involved in the decision-making processes of public policies concerning food security in Papua. This qualitative approach facilitates a nuanced comprehension of the intricate and contextual aspects within the field, achieved through direct engagement with stakeholders. The primary emphasis of the study is to provide comprehensive insights into stakeholders' perspectives, motivations, and influential factors contributing to the development of food security policies. The geographical, social, and cultural uniqueness of the Papua region will be a central focus, adding depth to the study. Various stakeholders connected to food security in Papua will be examined, including: 1) local government bodies shaping food policies, 2) local farmers crucial to food production, 3) community organizations involved in food distribution, 4) academics, and 5) potentially international donor organizations or aid agencies contributing to food security programs. The systematic selection of these diverse research subjects aims to capture a holistic view of the complex dynamics involved in shaping and implementing food security policies in Papua. Research related to food security in Papua can use a mixed methods approach, combining qualitative and quantitative methods. In addition to gaining in-depth insights through interviews and participatory observation, the research can involve surveys to obtain a broader perspective through statistical data. Structured questions in the survey will address satisfaction with policies, effectiveness of interventions, and demographic information. The integration of focused group discussions will provide a further understanding of collective perspectives. Through this approach, the research can yield robust and comprehensive findings on the roles and perceptions of stakeholders in the decision-making process of food policies in Papua.

The research employs a multifaceted approach to data collection, incorporating various techniques for a comprehensive understanding. Firstly, comprehensive interviews will be carried out with stakeholders actively engaged in shaping food security policies. These interviews serve as a crucial avenue for researchers to delve deeply into stakeholders' perceptions, motivations, and personal experiences. Additionally, participatory observation will be implemented to elucidate the dynamic interactions among stakeholders within their environmental context, particularly in the realm of food security. Furthermore, a comprehensive examination of policy-related documents, reports, and meeting minutes will be conducted to enhance understanding of decision-making processes. Qualitative data derived from interviews, observations, and document analyses will undergo meticulous scrutiny using content analysis techniques. The early stages involve organizing data, identifying key themes, and coding data to recognize patterns in stakeholders' viewpoints and contributions. This analytical process aims to provide a comprehensive panorama of stakeholders' views and roles in shaping food security policies in Papua. The analysis of results will be carried out by comparing findings with the previously established theoretical framework, ensuring conclusions are rooted in empirical data and remain pertinent within a theoretical framework.

**4. RESULTS**

The findings of the research related to stakeholder studies in public policy decision-making for food security reveal valuable insights into the decision-making process concerning food security. This research highlights the roles played by various stakeholders, such as the government, farmers, consumers, and the food industry, in shaping and implementing public policies that impact food

security. The research findings provide a deeper understanding of how collaboration and coordination among different stakeholders can influence the effectiveness of food security policies. With this understanding, policymakers can better design strategies to ensure adequate food availability, affordability, and food safety for the entire population, making food security a priority in public policy development.

**Table 1.** The main factors influencing the success or failure of food security policies

<i>Stakeholders</i>	<i>Key factors</i>
Government	1. Adequate budget to support policy implementation.
	2. Capabilities in planning and executing food policy.
	3. Effective cross-sectoral engagement and coordination.
Farmers	1. Access to agricultural resources such as land and water.
	2. Availability of appropriate agricultural technology and education.
	3. Fair pricing support and market stability.
Consumers	1. Economically affordable access to food.
	2. Awareness of nutrition and healthy food choices.
	3. Access to information about food safety.
Food industry	1. Compliance with food safety and quality standards.
	2. Investment in storage and distribution infrastructure.
	3. Adaptability to changing consumer demand.
NGOs and community organizations	1. Ability to influence policy planning and implementation.
	2. Resources and support for monitoring and evaluation.
	3. Community involvement in policy-making and behavioral change.
Academics and researchers	1. Research and analysis supporting data-driven policymaking.
	2. Identification of long-term trends and challenges in food security.
	3. Ability to provide innovative solutions based on research and analysis.

Table 1 emphasizes the importance of various stakeholders in supporting the success of food policies. The government needs to ensure adequate budgeting, planning capabilities, and effective cross-sector coordination. Farmers require access to agricultural resources and fair pricing support. Consumers should have economically affordable access, nutrition awareness, and food safety information. The food industry needs to adhere to quality standards, invest in infrastructure, and adapt to changing demands. NGOs need policy influence, monitoring capabilities, and community participation. Meanwhile, academics require data-driven research, long-term trend identification, and innovative solutions. With the involvement of all parties, efforts to enhance food security can become more effective and sustainable.

various stakeholders and domains. One of the pivotal factors lies in the government's ability to allocate adequate budgetary resources to support the implementation of these policies effectively. Furthermore, the government's proficiency in strategic planning and execution plays a crucial role in ensuring that food security measures are implemented comprehensively. Additionally, the degree of cross-sectoral engagement and coordination within the government apparatus can significantly impact the outcomes of these policies. The commitment to fair pricing support for farmers and maintaining market stability also contributes significantly to the success of food security policies. Conversely, the absence of these factors or their misalignment can lead to shortcomings in achieving food security goals.

The success or failure of food security policies is influenced by a myriad of factors that span

**Table 2.** The role or responsibilities of stakeholders in food security

<i>Stakeholders</i>	<i>Description of role/responsibilities</i>
Government	1. Formulating and implementing policies to ensure food availability, affordability, and safety.
	2. Establishing regulatory frameworks for food production and distribution.
	3. Allocating resources for research and development in agriculture.
Farmers	1. Increasing food production through sustainable and efficient farming practices.
	2. Adhering to safety and quality standards in food production.
	3. Collaborating with the government to access resources and support.
Consumers	1. Making informed choices about food consumption for nutrition and health.
	2. Reducing food waste and practicing responsible consumption.
	3. Advocating for food safety and affordable access to nutritious food.
Food industry	1. Ensuring the quality and safety of food products through compliance with regulations.
	2. Innovating to improve food preservation and distribution systems.
	3. Collaborating with farmers and the government for a stable supply chain.
NGOs and community organizations	1. Raising awareness about food security issues among the public and policymakers.
	2. Providing support and resources to vulnerable communities.
	3. Advocating for policies that prioritize food security and equity.

From Table 2, it can be concluded that each stakeholder has important roles and responsibilities in food security policy. The government is responsible for formulating and implementing policies to ensure the availability, affordability, and safety of food, as well as allocating resources for research and development in agriculture. Farmers play a crucial role in increasing food production through sustainable and efficient farming practices, as well as collaborating with the government to access resources and support. Consumers have the responsibility to make informed choices about food consumption for nutrition and health, as well as reducing food waste and adopting responsible consumption practices. The food industry is accountable for ensuring the quality and safety of food products through compliance with regulations, as well as innovating to improve food preservation and distribution systems. NGOs and advocates have a role in raising awareness about food security issues among the public and policymakers, providing support and resources to vulnerable communities and advocating for policies that prioritize food security and equity. With the cooperation of all these stakeholders, it is hoped that a more sustainable, safe, and equitable food system can be created.

The roles and responsibilities of stakeholders in food security are diverse and essential for ensuring the availability, accessibility, and sustainability of a secure food supply. Farmers are responsible for increasing food production through sustainable agricultural practices and adhering to safety and quality standards. Consumers, on the other hand, have a crucial role in making informed choices about their food consumption, reducing food waste, and advocating for food safety and affordability. The food industry is accountable for maintaining the quality and safety of food products, innovating in food preservation and distribution, and collaborating with farmers and the government for a stable supply chain. NGOs and community organizations work to raise awareness, provide support to vulnerable communities, and advocate for policies prioritizing food security and equity. Additionally, academics and researchers contribute by providing data, conducting research, and offering innovative solutions to enhance food security. Together, these stakeholders form a collaborative network aimed at achieving food security for all.

**Table 3.** The role of government in ensuring food security

<i>Stakeholders</i>	<i>Expectations from the Government in Ensuring Food Security</i>
Farmers	1. Promoting policies that support sustainable agriculture.
	2. Providing easy access to agricultural resources such as land and fertilizers.
	3. Offering training and improved agricultural technologies.
Consumers	1. Ensuring stable and affordable food prices.
	2. Ensuring the safety and quality of consumed food.
	3. Supporting educational campaigns on nutrition and healthy eating habits.
Food industry	1. Providing regulations that support food safety and quality.
	2. Offering incentives for investments in food infrastructure.
	3. Ensuring access to quality agricultural raw materials.
Local government	1. Developing effective local food security plans.
	2. Supporting local farmers and traditional markets.
	3. Building food storage and distribution infrastructure.
NGOs and community organizations	1. Advocating for community interests in food policies.
	2. Monitoring and overseeing the implementation of food security programs.
	3. Providing training and support to communities related to food.
Academics and researchers	1. Providing data and research to support food policies.
	2. Developing innovative solutions to increase food production.
	3. Assisting in the formulation of sustainable agriculture development plans.

Table 3 outlines the stakeholders' expectations of the government in ensuring food security. Farmers demand policies that support sustainable agriculture, easy access to agricultural resources such as land and fertilizers, as well as enhanced training and agricultural technology. Consumers seek stable and affordable food prices, safety and quality of consumed food, and support for educational campaigns on nutrition and healthy eating habits. The food industry emphasizes the need for regulations supporting food safety and quality, incentives for investment in food infrastructure, and access to quality agricultural raw materials. Local governments are expected to develop effective local food security plans, support local farmers and traditional markets, and build food storage and distribution infrastructure. NGOs and civil society organizations are tasked with advocating for community interests in food policies, monitoring and overseeing the implementation of food security programs, and providing training and support to communities related to food. Meanwhile,

academics and researchers are expected to provide data and research to support food policies, develop innovative solutions to increase food production and assist in the formulation of sustainable agriculture development plans. Thus, through collaboration among various stakeholders, the government can play a key role in meeting the holistic and sustainable food security needs of the community.

The role of government in ensuring food security is multifaceted and critical for the well-being of a nation's population. Governments play a pivotal role in formulating and implementing policies that aim to guarantee a stable and sufficient food supply. They are responsible for establishing regulatory frameworks that ensure the safety and quality of food production and distribution. Additionally, governments allocate resources for research and development in agriculture, which helps enhance agricultural productivity and resilience to various challenges such as climate change and pests. Furthermore, they must foster effective cross-sectoral coordination to address

issues related to food access, affordability, and nutrition. In essence, the government’s role in food security is instrumental in safeguarding the health

and livelihoods of its citizens while promoting sustainable agricultural practices and equitable access to food resources.

**Table 4.** Results of interviews with stakeholders involved in food security policy in Papua

Stakeholder	Discussed aspects	Key findings
Department of Agriculture	Food production enhancement programs	Low adoption of agricultural technologies in some regions. Limited access to agricultural facilities and infrastructure.
Local communities	Involvement in policy programs	High demand for education and training in agriculture. Desire to market local products nationally.
Local government	Policies and budget	Budget constraints for agricultural infrastructure development. Efforts to improve coordination among relevant agencies.
Environmental NGOs	Environmental impact	Environmental sustainability is a crucial focus. Support for sustainable agricultural practices.
Universities	Research and innovation	Involvement in research to enhance crop varieties resilient to local climates. Collaboration with farmers in implementing agricultural innovations.

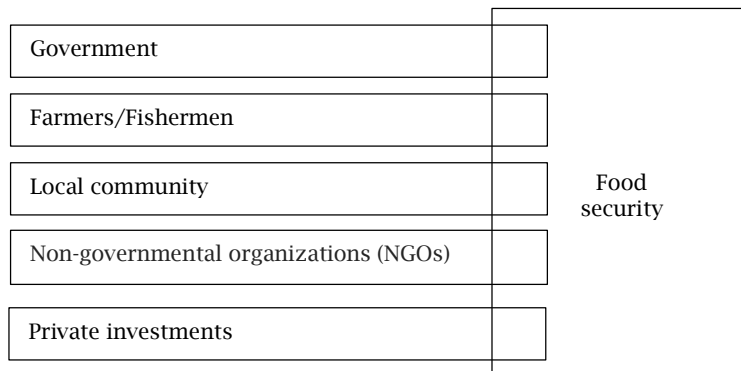
Source: Authors’ elaboration.

Table 4 reveals the findings of interviews with stakeholders involved in food security policy in Papua, highlighting key aspects discussed. The Department of Agriculture notes the low adoption of agricultural technology in some areas and limited access to agricultural facilities and infrastructure. Local communities express a high demand for education and training in agriculture, as well as a desire to market local products nationally. Local government faces budget constraints for agricultural infrastructure development but is also making efforts to improve coordination among relevant agencies. Environmental NGOs emphasize the importance of environmental sustainability, supporting sustainable agricultural practices. Universities engage in research to enhance crop varieties resilient to local climates and collaborate with farmers in implementing agricultural innovations. In conclusion, collaboration among various stakeholders is necessary to address challenges and achieve food security goals in Papua.

The interview results with stakeholders involved in food security policy in Papua delineate various challenges and aspects that require attention in efforts to enhance food security in the region. The Department of Agriculture underscores challenges in boosting food production, such as the low

adoption of agricultural technologies and limited access to agricultural facilities and infrastructure in certain areas. On the other hand, local communities emphasize the need for education and training in agriculture while expressing aspirations to market their local products nationally. Local governments face budget constraints for agricultural infrastructure development, while simultaneously striving to improve coordination among relevant agencies. Environmental NGOs highlight the importance of environmental sustainability in the context of food security policy, providing support for sustainable agricultural practices. Universities actively engage in research and innovation, focusing on improving crop varieties resilient to local climates and collaborating with farmers to implement agricultural innovations. Overall, the interview results indicate that to enhance food security in Papua, close collaboration is needed among government entities, local communities, environmental institutions, and educational institutions. Concrete steps, such as increasing the adoption of agricultural technologies, improving access to agricultural infrastructure, and adopting sustainable approaches, should be considered when designing effective policies to address these challenges.

**Figure 1.** Stakeholder collaboration map



The collaboration map of stakeholders in the context of food security (see Figure 1) represents a complex network involving various parties with different roles and interests. The government acts as the primary regulator, overseeing policies and providing infrastructure support for the agriculture and fisheries sectors. Farmers and fishermen are

the major producers in the food supply chain, requiring technical support, training, and access to fair markets. Local communities are end consumers who also play a significant role in ensuring food security sustainability by supporting local products and sustainable farming practices. NGOs play a crucial role in monitoring and providing

independent insights into food security issues, as well as mobilizing communities to participate in sustainable food initiatives. Private investments hold great potential in providing capital and technology to enhance agricultural and fisheries productivity and develop efficient supply chains. The key to this collaboration map is ensuring that all parties work together, communicate, and understand their respective roles in achieving the common goal of sustainable food security. The government needs to create policies that support private investment, offer incentives to farmers and fishermen, and listen to the aspirations of local communities. NGOs can act as intermediaries and independent monitors, while local communities can actively participate in influencing policies and choosing sustainable food products.

## 5. DISCUSSION

Stakeholder identification helps pinpoint various groups or individuals with interests related to public policy on food security (Vandenbrink et al., 2020). For example, these groups could include farmers, fishermen, local government bodies, agricultural companies, indigenous communities, research institutions, civil society organizations, and the private sector. Knowing who is involved ensures that the interests of relevant parties are represented and considered in the policy decision-making process. Through stakeholder identification, research can gain a deeper understanding of the needs and aspirations of each party related to public policies on food security. For instance, farmers might have needs related to access to affordable land and agricultural inputs, while indigenous communities might aim to maintain environmental sustainability and local wisdom (Swiderska et al., 2022). Understanding these needs and aspirations helps formulate more responsive and sustainable policies.

Research on stakeholder identification helps reveal the strengths and relationships among the various parties involved (Martín et al., 2020). For example, large agricultural corporations might wield strong political and economic influence, whereas local farmers may possess direct knowledge and experience of local farming conditions. Recognizing these dynamics aids in understanding power dynamics and ensuring a balance in the policy decision-making process (Bateman & Mace, 2020). Comprehensive stakeholder identification enhances participation and accountability in policy decision-making. By knowing who is involved, efforts can be made to actively engage them in the decision-making process through mechanisms like consultation or open dialogues. Furthermore, by clearly identifying stakeholders, it becomes easier to understand who is responsible for specific policies, enhancing accountability in policy implementation and evaluation (AEA Evaluation Policy Task Force, 2022). The outcomes of stakeholder identification research will provide a better understanding of those involved in and potentially influencing public policies on food security in Merauke (Nayak & Waterson, 2019). This is crucial to ensuring sustainability, effectiveness, and fairness in policy decision-making and the implementation of food security programs in the region.

Stakeholders' perceptions provide deep insights into the challenges and needs faced by various parties related to food security in Merauke. Different stakeholders, such as farmers, fishermen, local government bodies, and indigenous communities, may have varying perceptions of the issues they encounter in achieving food security. Understanding these perceptions helps design policies and programs that align more with the local context and address actual challenges. Diverse perceptions among stakeholders can impede effective dialogue and collaboration. This research provides an opportunity for all parties involved to share their views, experiences, and knowledge regarding public policies on food security. By understanding each stakeholder's perspective, a shared understanding can be built, and better solutions can be sought through more productive dialogues and collaborations.

Stakeholders' perceptions can also aid in identifying differing interests and priorities within the context of food security in Merauke. Some stakeholders might focus more on agricultural production aspects, while others might prioritize community access to quality food. Understanding these perceptions allows for policy and program adjustments that cater to diverse interests and achieve holistic food security goals. Research on stakeholders' perceptions can help ensure broad acceptance and support for public policies on food security (Liu et al., 2019). By comprehending stakeholders' perceptions and needs, formulated policies and programs can be more relevant, acceptable, and supported by the general population. This is essential for achieving effective and sustainable implementation of food security policies in Merauke. Hence, it's crucial to conduct research on how people in Merauke view public policies about food security. This will help create better policies and programs, encourage discussions and teamwork, and make sure the whole community is on board. This will contribute to enhancing food security in Merauke by considering the interests, needs, and perceptions of the various stakeholders involved.

Through a comprehensive approach, researchers conduct in-depth analyses of various aspects related to food security in the region. Data collection methods involve interviews with various stakeholders, such as local farmers, representatives from local government bodies, NGOs, and agribusiness entities. Furthermore, secondary data including government reports and literature studies are utilized to enhance comprehension of the food security framework in Papua. These government reports specifically refer to unpublished local government documents obtained through field observations. The results of this study identify several key stakeholders in the food security sector in Papua. Local government bodies play a central role in formulating policies and resource allocations to support local food production. Local farmers also emerge as crucial stakeholders, being the main producers contributing to the food supply in the region. NGOs have a role in providing training and technical support to farmers, as well as advocating for food security-related issues. Furthermore, agribusiness entities play a role in developing distribution and marketing channels to ensure efficient food delivery to consumers. Thus, a deep understanding of these key stakeholders is expected to provide guidance for improving and

developing the food security sector in Papua to achieve societal well-being and sustainable food security goals.

In the study of stakeholders in the decision-making process related to food security policy in Papua, the roles of each stakeholder in the aspects of fertilizers, soil fertility, and agricultural marketing are crucial to understand. Understanding the roles of stakeholders in fertilizers, soil fertility, and agricultural marketing is vital for effective agricultural management. The government regulates policies and implements programs, while fertilizer companies provide products and information. Farmers apply fertilizers and manage soil, aided by extension services. Researchers innovate practices, and market intermediaries facilitate transactions. NGOs advocate sustainability, and consumers influence market demand. This comprehensive understanding ensures efficient and sustainable agricultural systems. Local government bodies play a central role in decisions regarding fertilizer allocation and distribution, as well as the development of soil fertility policies. Through appropriate policies, the government can ensure an adequate supply of fertilizers to farmers and promote sustainable farming practices that consider soil fertility. NGOs also contribute by providing technical information to farmers about fertilizer use and sustainable soil management.

On the other hand, in terms of agricultural marketing, agribusiness entities have a significant role (Weerabahu et al., 2022). They help bridge the gap between farmers and consumers by providing distribution channels, managing the supply chain, and ensuring that agricultural products reach the market in good condition. Additionally, agribusiness entities can provide information about market preferences that assist farmers in determining suitable crops and production according to consumer demand (Anggraeni et al., 2022). A profound understanding of these roles in the context of public policy decision-making provides valuable guidance for formulating holistic and sustainable food security policies in Papua.

In the context of Merauke, analysing stakeholders' perceptions of food security policies is a key aspect of understanding the effectiveness and impact of policy implementation. Through interviews and extensive discussions with a range of stakeholders, including local farmers, representatives from local government, community organizations, and the private sector, it's possible to uncover the fundamental frameworks influencing their perspectives on food security policies. Government stakeholders might hold views on budget allocation, regulations, and support mechanisms that have been implemented, as well as the effectiveness of interagency coordination. Meanwhile, local farmers may assess the effects of the policies on their availability of fertilizers, improved seeds, and agricultural training. Community organizations and the private sector might have views on local community involvement, business opportunities, and the socio-economic impact of these policies. An in-depth analysis of these stakeholders' perceptions provides valuable insights into the success, obstacles, and potential improvements of food security policies implemented in Merauke.

Availability, soil fertility, and agricultural marketing, a comprehensive approach is needed to

understand the diverse perspectives that may arise from various stakeholder groups. Stakeholders such as farmers, the government, NGOs, and agribusiness entities may hold differing views on these three aspects. Local farmers' views are likely closely related to their experiences in the agricultural sector. They can provide assessments of fertilizer availability, accessibility, and their impact on harvest yields. Their perspectives may also involve evaluating government efforts in providing fertilizers and technical support to enhance soil fertility, and whether these efforts have genuinely benefited their agricultural production. Regarding marketing, farmers' views encompass factors such as market access, fair pricing, and efficient distribution channels.

From the government's perspective, their views on fertilizer availability encompass the success of implementing fertilizer subsidy programs, equitable distribution, and their influence on overall agricultural productivity (Pauw, 2022). The government can also evaluate the policy's effectiveness in encouraging sustainable and environmentally friendly fertilizer use, as well as steps taken to enhance soil fertility. Their views on marketing relate to efforts to optimize the value of agricultural products and ensure a stable market supply. NGOs' views likely involve training, education, and technical support to farmers on proper fertilizer use and sustainable soil practices. They can also assess whether these programs have achieved their objectives in enhancing farmers' productivity and well-being. In terms of marketing, NGOs' views would encompass their efforts to help farmers access broader markets and develop marketing skills (Duarte et al., 2022).

Agribusiness entities' perspectives would revolve around fertilizer availability and quality from the perspective of raw material supply. They, referring to stakeholders, would also evaluate the reliability of distribution channels and the availability of agricultural products to meet market demand. Their views would involve stakeholders concerned with efficiency aspects, product development, and business opportunities related to agricultural marketing. Through a comprehensive analysis of stakeholder perspectives, deeper insights can be obtained into the challenges, potentials, and directions for improvement in fertilizer availability, soil fertility, and agricultural marketing aspects (Leippert et al., 2020). In looking back at the tangible contributions of each stakeholder to food security policy in Merauke, a collaborative framework influencing the success of policy implementation and impact becomes apparent. Local government bodies, as primary stakeholders, contribute crucially through policy formulation and implementation, budget allocation, and cross-sector coordination that affects the entire food security chain. Their efforts in optimizing fertilizer distribution, promoting sustainable farming practices, and regulating soil fertility became pillars for sustainable food security. Local farmers, as primary producers, contribute significantly through agricultural production and land management. They not only supply food but also implement sustainable farming practices, such as efficient fertilizer use and soil fertility maintenance. In terms of marketing, they also play a role in selling their products and entering the distribution chain, impacting their local economy and food availability.



NGOs, with their focus on training, education, and technical support, contribute to enhancing farmers' capacity and encouraging better agricultural practices. They act as mediators between farmers and relevant technical information, supporting local innovations that contribute to productivity and agricultural sustainability. On the other hand, agribusiness entities contribute to connecting agricultural production to the market (Klerkx et al., 2019). Through efficient distribution channels, they help ensure agricultural products reach consumers in a timely and quality manner. Their contribution isn't limited to marketing aspects; they can also assist in providing agricultural inputs like fertilizers and agricultural technology. In the entire stakeholder framework, it's evident that the tangible contributions of each stakeholder cannot be separated from one another.

Collaboration and synergy among the government, farmers, NGOs, and agribusiness entities are the keys to success in addressing the complex challenges of food security (Leão et al., 2023). Through these diverse roles and efforts, a sustainable system is formed, holistically contributing to food security, community well-being, and overall regional development. In an effort to contribute to food security in Merauke, a number of barriers and challenges have been identified facing various stakeholders. Local farmers encounter challenges in accessing agricultural inputs such as fertilizers and superior seeds, as well as obstacles in adopting sustainable farming practices due to limited knowledge and resources. Dependence on weather and climate change is also a risk factor in agricultural production. NGOs face barriers in reaching a wide enough scale to provide training and technical support to all farmers, as well as creating greater awareness about the importance of sustainable farming practices.

Local governments are challenged with allocating sufficient budgets to support comprehensive and equitable food security programs. Cross-sector coordination is also a challenge in ensuring the integration of various policies related to agriculture, the environment, and the economy. Agribusiness entities are confronted with difficulties in achieving operational efficiency and distribution due to limited infrastructure, as well as price fluctuations affecting the economic balance of their business (Chen et al., 2023). Furthermore, social and cultural dimensions are also significant factors in overcoming barriers. Some local communities may possess valuable traditional knowledge that doesn't always align with modern farming practices or government policies. Understanding and adapting to local values and indigenous wisdom pose their own challenges. Overall, these barriers and challenges reflect the complexity associated with efforts to enhance food security in Merauke. Sustainable solutions will require collaboration among all stakeholders, innovation in farming approaches and practices, as well as strong governmental infrastructure and policy support. In addressing each of these barriers, a deep understanding of the local context and community needs will be key to developing effective and sustainable strategies. In tackling obstacles, the principles of agency theory underscore the importance of harmonizing the interests and conduct of agents with those of

the principal to attain desired results. In this case, the local context and community needs can be viewed as crucial components in the principal-agent relationship. The local government, acting as the principal, must rely on various agents, including community organizations and government departments, to implement strategies that promote food security. Just as agency theory highlights the importance of monitoring and aligning the interests of agents to prevent conflicts of interest, a deep understanding of the local context and community needs is essential to ensure that these agents effectively carry out strategies aimed at overcoming barriers to food security. By considering local dynamics and community requirements, the local government can establish mechanisms that incentivize agents to work in harmony with the overarching goal of sustainable and effective food security strategies.

Agency theory can be used as a relevant framework in the context of food security policymaking by local governments. In this theory, the local government is considered the principal responsible for making decisions that impact the food security of its region. This local government must rely on related departments such as the Department of Agriculture, the Department of Fisheries, and others as agents to gather the necessary information to formulate effective policies. However, the key concept in agency theory is the principal-agent problem, where agents (related departments) may have incentives to pursue their own interests rather than the principal's interests (the local government) in terms of food security. Therefore, it is crucial for local governments to develop appropriate oversight mechanisms and incentives to ensure that the related departments provide accurate information and perform their duties with integrity, so that food security policies can effectively achieve their goals.

## 6. CONCLUSION

The conclusion of this research highlights the pivotal importance of recognizing and leveraging the roles and contributions of a diverse range of stakeholders in the decision-making processes of public policies concerning food security in the Papua region, Indonesia. Given the intricate and varied nature of this context, gaining a nuanced understanding of the disparities in perceptions and objectives among stakeholders are imperative for formulating policies that are not only effective but also sustainable and resilient. It is crucial for governments to play a facilitative role in fostering cross-sector collaboration, ensuring the active involvement of indigenous communities, local farmers, NGOs, and the private sector in the policymaking discourse. The active engagement of these stakeholders can lead to the development of more comprehensive and integrated policies that consider various facets, including production, distribution, environmental impact, and social factors, thereby contributing to the establishment of long-term food security in Papua. However, achieving optimal synergy among diverse stakeholders is not without its challenges. Communication gaps, the need to balance conflicting interests, and the resolution of potential conflicts are critical issues that must be

carefully addressed. Overcoming these challenges is essential for effective collaboration and the successful implementation of policies that truly address the complex dynamics of food security in the Papua region. The implications underscore the necessity of actively involving diverse stakeholders in decision-making processes to ensure the comprehensiveness and effectiveness of food security governance. The identification of stakeholders, understanding their perceptions, and acknowledging their contributions are critical components for formulating policies that are not only inclusive but also reflective of the unique challenges and opportunities in the Papua region. Therefore, the article emphasizes that stakeholder engagement is not merely a procedural aspect but a fundamental element in shaping policies that can genuinely address the complexities of food security governance.

This research holds significant relevance for the development of future research in the context of public policy and food security. By exploring stakeholder engagement in the decision-making

process of food policy, the study deepens the understanding of the roles played by various entities, including the government, private sector, civil society, and research institutions. Insights gained into stakeholder identification, perception, and contribution can assist policy designers in developing more effective strategies to involve all relevant parties, promote transparency, and ensure decisions reflect their needs and perspectives. However, the research has limitations, such as methodological constraints or the influence of external factors, which need to be acknowledged. Therefore, careful interpretation of results and further research are required to confirm and expand findings. Understanding these challenges, this research is considered a crucial milestone in guiding further studies to enhance stakeholder participation in food policy decision-making, providing practical contributions to food security governance, and laying the foundation for a better understanding of stakeholder interactions in the context of public policy.

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