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Implementation of Agricultural Land Protection Policy in Barru Regency: A Systematic Literature Review (SLR)

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ABSTRACT

This study aims to analyze the implementation of the Sustainable Food Crop Land Protection (LP2B) policy in Barru Regency using a Systematic Literature Review (SLR) approach. The background of this study stems from the increasing conversion of agricultural land to non-agricultural sectors, which has resulted in reduced food production capacity and threatens regional and national food security. Although Law Number 41 of 2009 concerning LP2B provides a strong legal basis, various studies indicate that its implementation still faces several challenges, such as weak oversight, a lack of synchronization between central and regional policies, and a lack of stakeholder understanding of the importance of agricultural land protection. Using the SLR method, this study examines and synthesizes empirical findings from scientific articles, books, policy reports, and research results related to LP2B published in the last five to ten years. The selection process involved keyword identification, screening based on inclusion-exclusion criteria, and thematic analysis to identify patterns, gaps, and factors influencing successful policy implementation. The study's findings indicate that the effectiveness of the LP2B is significantly influenced by local government commitment, the quality of spatial planning, the availability of agricultural land spatial data, and community and farmer participation. Furthermore, local economic dynamics and development pressures are external factors that often drive land conversion, despite existing regulations prohibiting it. This study concludes that the implementation of LP2B in the regions still requires strengthening bureaucratic capacity, strengthening derivative regulations, multi-stakeholder collaboration, and a more intensive public communication strategy to ensure consistent policy implementation. These research recommendations can serve as a basis for local governments and future researchers in formulating more effective and sustainable land protection strategies.

Keywords: LP2B, land protection, agricultural policy, SLR, land conversion



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A. INTRODUCTION

As an agrarian country, Indonesia has long positioned the agricultural sector as the primary foundation of food security and public welfare. Agricultural land, particularly rice paddies, plays a vital role in the production of strategic commodities such as rice. However, over the past two decades, agricultural land has continued to shrink due to land conversion to non-agricultural sectors such as residential, industrial, and infrastructure, significantly reducing food production capacity (Mulyani et al., 2023). This situation poses a serious threat to national food security because the loss of productive land is disproportionate to the increasing demand for food, which continues to grow with population growth. This phenomenon also triggers agrarian inequality and undermines the sustainability of community-based food systems. Therefore, agricultural land protection is an urgent need in the national development strategy.

Various studies show that the intensity of land conversion is increasing year after year, especially in areas experiencing rapid economic growth and expanding spatial needs. Recent studies confirm that development dynamics and demographic growth are the main drivers of land use changes from agriculture to non-agriculture in various regions of Indonesia (Gafuraningtyas, 2022). In some cases, massive residential and industrial expansion has occurred without adequate spatial planning controls, threatening the sustainability of food production. This situation demonstrates that without strong land protection policy instruments, agricultural land will continue to erode, making it difficult to achieve sustainable development goals. Therefore, the need for land protection policies is increasingly urgent.

In response to this challenge, the government enacted Law Number 41 of 2009 concerning the Protection of Sustainable Food Agricultural Land (LP2B) as the national legal basis for safeguarding the sustainability of agricultural land and preventing uncontrolled conversion (Pitaloka, 2021). This regulation governs various important aspects, from designating protected land, prohibiting unauthorized conversion, to mechanisms for providing replacement land if conversion cannot be avoided. Normatively, the LP2B Law is expected to provide a strong foundation for maintaining long-term food land availability and ensuring the fulfillment of the right to food. Furthermore, this law also strengthens the position of local governments in planning

spatial planning oriented toward food security. However, its implementation is often not as straightforward as its normative design.

From a theoretical perspective, agricultural land protection is a multidimensional issue involving legal, spatial planning, agrarian, economic, environmental, and social aspects. The literature indicates that well-maintained agricultural land plays a direct role in increasing agricultural production capacity, maintaining food price stability, and protecting ecosystems and the ecological functions of rural landscapes (Rahman, 2020). Furthermore, land protection is closely linked to food sovereignty, which emphasizes strengthening the role of local farmers as key actors in food production. If implemented consistently, the LP2B (Finance and Development Assistance) can generate broad benefits, not only for food security but also for farmer welfare, ecological sustainability, and social stability in rural areas.

However, the implementation of land protection policies in Indonesia faces various obstacles. Research findings indicate that the existence of regulations does not automatically guarantee the success of land protection practices in the regions (Rahman, 2020). Frequent challenges include weak law enforcement, misalignment between central and regional policies, short-term economic interests, and a lack of understanding among officials and stakeholders regarding the importance of land protection (Akadir et al., 2019). In some regions, local governments have not demonstrated a strong commitment to controlling agricultural land conversion, resulting in suboptimal land conservation agendas. These implementation obstacles highlight the gap between policy ideas and their implementation.

Beyond governance and institutional issues, empirical data demonstrates the significant impact of land conversion on agricultural land area and food productivity. For example, research shows that in urban and peri-urban areas, rice paddy fields are shrinking by 3-6% per year due to development pressures (Ramadhan & Murti, 2023). Land conversion not only reduces rice production but also creates social problems such as the loss of farmers' livelihoods, increased underemployment, and the emergence of inequality in land tenure. These impacts demonstrate that land conversion is not merely a physical issue, but also concerns the social and economic sustainability of agricultural communities.

Given these dynamics, a comprehensive and systematic study of the implementation of agricultural land protection policies is essential. The Systematic Literature Review (SLR) approach is relevant in this context because it allows researchers to collect, evaluate, and synthesize various research findings conducted in various regions (Pitaloka, 2021). Through an SLR, a comprehensive overview of policy effectiveness, implementation patterns, inhibiting and supporting factors, and a map of remaining research gaps can be obtained. This approach also allows for cross-regional comparisons to understand variations in policy implementation at the regional level.

The SLR also serves to identify crucial variables determining the success of agricultural land protection policy implementation, such as regulatory consistency, local government capacity, spatial data availability, inter-agency coordination, and socio-economic factors within farming communities. By analyzing these factors, the SLR can produce more precise, evidence-based, and contextualized policy recommendations. In the context of limited resources and increasing development pressures, the SLR results can serve as an important reference for formulating land protection policies that are more responsive to regional characteristics.

Finally, the focus of this SLR study is on the context of Barru Regency, an agrarian region in South Sulawesi with strategic agricultural potential. Although various studies related to agricultural land protection have been conducted in Java, Sumatra, and other high-growth regions, there are few comprehensive studies specifically examining the implementation of LP2B in Barru Regency. Therefore, this study seeks to fill this gap in the literature by examining the implementation dynamics, challenges, and opportunities in agricultural land protection in Barru. By referring to national regulations and lessons learned from various regions, the results of this study are expected to provide relevant and applicable policy recommendations for local governments and stakeholders to strengthen agricultural land protection in Barru Regency.

B. RESEARCH METHODS

This research uses a qualitative approach using the Systematic Literature Review (SLR) method to identify, evaluate, and synthesize scientific findings, as described by Kitchenham (2007) as a method oriented towards a systematic, transparent, and structured literature review process.

This approach also aligns with modern SLR guidelines outlined by Snyder (2019), which emphasize the importance of methodological rigor in screening, assessing, and integrating various previous studies. This study uses the Systematic Literature Review (SLR) method within a qualitative research framework to identify, examine, and integrate scientific evidence from various academic sources related to the implementation of agricultural land protection policies in Indonesia, particularly those relevant to the context of Barru Regency. The SLR method was chosen because it provides a comprehensive overview of previous research developments through a structured, transparent, and replicable literature search process. This approach allows the research to focus more on general patterns, drivers and barriers to LP2B policy implementation, and research gaps that have not been widely studied in various regions.

The SLR implementation stages in this study followed general standards as developed in the PRISMA guidelines, encompassing planning, search, selection, quality evaluation, and data synthesis from scientific articles that met the criteria. A literature search was conducted in credible national and international databases such as Google Scholar, DOAJ, Sinta, ScienceDirect, and Garuda using the keywords "agricultural land protection," "LP2B," "land conversion," "agricultural policy implementation," and "spatial planning and food land." The search period focused on publications from the last 10 years to ensure relevance to policy dynamics in Indonesia. Articles were then selected based on the relevance of their titles, abstracts, and overall content.

Inclusion criteria for this study included articles discussing the implementation of agricultural land protection policies, land conversion, spatial planning policies, and agrarian dynamics directly related to LP2B. Exclusion criteria included articles that only discussed technical aspects of agriculture without policy analysis, unscientific reports, mass media news, and publications that lacked open access for content verification. The selected articles were then analyzed in-depth using thematic coding techniques to identify key patterns, crucial findings, and key factors influencing the effectiveness of agricultural land protection policy implementation in various regions.

The final stage of this method was to synthesize findings from various studies to understand how LP2B policies are implemented in different contexts, including their successes, failures, obstacles, and opportunities. The synthesis was conducted narratively, combining various

perspectives from previous research to produce new, integrated insights. The SLR approach in this research not only provides a strong theoretical foundation but also supports a contextual analysis of the conditions in Barru Regency, enabling the results to inform more targeted and evidence-based policy recommendations.

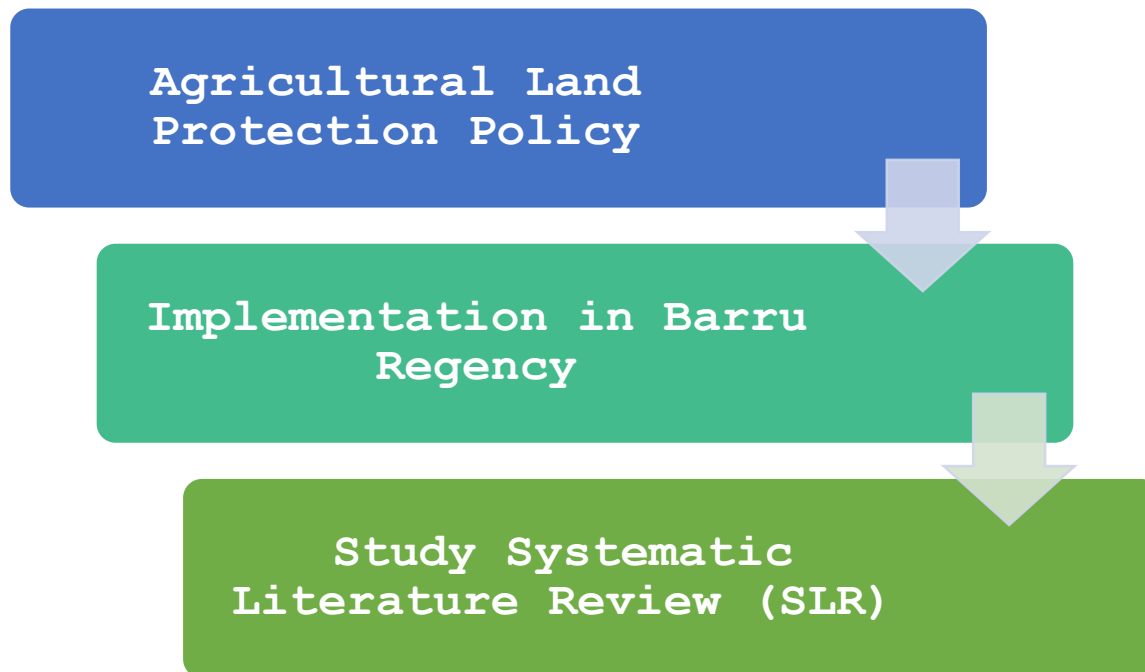


Figure 1 Thinking Framework Diagram

C. RESEARCH RESULTS AND DISCUSSION

➤ Research Results

Observations indicate that the utilization of productive land resources in Barru Regency is not yet optimal. Productive agricultural land is shrinking due to the increasing development of housing and business areas on fertile land. This phenomenon indicates strong pressure on agricultural space, which previously served as the primary support for community food production. This condition aligns with national research findings that recorded a trend of massive land conversion in various regions (Gafuraningtyas, 2022). The imbalance between the need for development space and the preservation of productive land is a major challenge that requires

serious attention. This situation illustrates the urgency of land protection policies to ensure sustainable food production.

Based on field observations, the local government has actually attempted to maximize the use of available wetlands and drylands. Idle and potential land has been utilized through various productive land clearing programs. This optimization is carried out to increase farmer incomes and maintain regional food security. The community also utilizes wetlands for food crops that require a stable water supply. This effort aligns with previous research recommendations that encourage the intensification of existing land before opening up new space (Mulyani et al., 2023). However, land constraints remain a strategic issue requiring more integrated governance through robust spatial policies.

Observations also indicate that local governments are urging communities to refrain from converting productive land to non-agricultural uses. This effort is being implemented through outreach and providing understanding of the importance of maintaining the sustainability of agricultural land. The government emphasizes that the conversion of productive land will directly impact long-term food production capacity. This aligns with the SLR findings that one of the causes of declining food security is uncontrolled land conversion (Ramadhan & Murti, 2023). Therefore, strengthening literacy and public outreach are crucial components to reducing pressure on productive agricultural land.

Interviews with relevant agencies revealed that agricultural land protection in Barru Regency is regulated by the law on sustainable food land protection. This policy emphasizes the importance of maintaining land existence to prevent uncontrolled land conversion. The government explained that the dynamics of housing needs and the development of business areas are the main drivers of increasing pressure on agricultural space. This finding is consistent with research by Akadir et al. (2019), which emphasized the crucial role of local governments in maintaining agricultural land sustainability through effective policy enforcement. However, policy implementation still faces various technical and social challenges.

Interviews also revealed that land conversion is not solely a policy issue, but also related to the economic needs of the community. Many landowners choose to convert their land because

the sale value is higher than the agricultural income. This situation makes it difficult for the government to control the rate of land conversion, even though prohibition regulations have been implemented. This is reinforced by Snyder (2019), who stated that policy implementation is highly dependent on the socio-economic context of the local community. This situation demands a more adaptive policy approach oriented toward the long-term interests of the region.

According to relevant agencies, the spatial planning policy framework already contains provisions regarding land use zones, including agricultural areas that must be protected. However, the effectiveness of control is still suboptimal because not all derivative regulations have been strictly implemented. The government is still in the preparation stage for establishing further policies, such as refining spatial plans and implementing sustainable agricultural land mapping. This finding aligns with Pitaloka (2021), who highlighted that many regions are not yet fully ready to implement LP2B comprehensively. Therefore, strengthening regulations and legal certainty is a crucial aspect of land protection.

Agricultural land protection efforts are implemented through a recommendation mechanism for land conversion applications. Local governments screen and reject applications targeting productive land, particularly strategically valuable rice paddies. This mechanism aims to prevent further shrinking of agricultural areas due to uncontrolled development. This approach aligns with the principles of sustainable land protection as discussed by Rahman (2020), which emphasizes The government's administrative role in ensuring land conversion remains under control. However, in the field, there is still a tendency for communities to begin development before obtaining permits.

Inter-agency coordination is a crucial instrument in implementing land protection. Local governments have established evaluation systems through survey teams and technical teams comprised of representatives from licensing, environmental, sub-district, and village departments. These teams conduct field verification to ensure that land to be converted truly meets the requirements. This coordination strengthens the decision-making process, making it more objective and data-driven. The SLR findings by Dayanti and Soetjipto (2025) support the importance of institutional integration to minimize overlapping land policies. However, the success of this system depends heavily on the commitment of all parties involved.

In addition to oversight, the government also provides incentive schemes for landowners to refrain from converting their agricultural assets. These incentives are designed to provide economic motivation for communities to maintain land function. However, the implementation of these incentives remains limited due to the lack of adequate reserves of replacement land. This situation has forced the government to be more cautious in issuing recommendations for land use changes. This paradigm aligns with research by Ramadhan and Murti (2023), which emphasizes the importance of incentives in curbing land conversion. Therefore, improving incentive mechanisms is a strategic necessity to strengthen land protection.

Potential land management is also a focus of government attention. The utilization of unproductive land is being improved through various agricultural programs, such as the provision of technology, production facilities, and community assistance. These efforts are expected to reduce community dependence on increasingly limited productive land. Research by Mulyani et al. (2023) emphasizes that increasing marginal land productivity is an adaptive strategy for maintaining regional food security. Therefore, optimizing potential land is a crucial part of the broader agricultural land protection strategy in Barru.

The findings of this study also indicate that social change and development dynamics are dominant factors in increasing pressure on agricultural land. Communities tend to prioritize short-term economic needs over long-term strategic land preservation. This creates a dilemma in implementing land protection policies. The SLR results indicate that this phenomenon is common in many regions and requires a stronger socio-spatial approach (Gafuraningtyas, 2022). Therefore, land protection strategies should not be solely based on regulations but must also involve changes in community social behavior.

Overall, the research results indicate that agricultural land protection efforts in Barru Regency have been implemented through regulations, institutional coordination, field monitoring, and incentive schemes. However, various obstacles remain, such as limited replacement land, weak enforcement of regulations, and high economic pressure from the community. This situation demonstrates that land protection requires a comprehensive approach that integrates legal, social, economic, and spatial planning aspects. This finding aligns with the SLR principle that successful land protection depends on policy consistency and alignment between agencies (Kitchenham,

2007). Therefore, strengthening regulations and improving implementation are urgently needed for agricultural land sustainability.

➤ Discussion

The implementation of agricultural land protection policies in Barru Regency demonstrates the government's commitment to maintaining sustainable food production, despite still facing various structural and socio-economic challenges. Observational data shows that the conversion of agricultural land to residential and business areas continues to increase. This finding aligns with Gafuraningtyas (2022), who explained that development pressures—especially in coastal and urban areas—are the primary cause of shrinking agricultural land in Indonesia. This situation indicates that Barru Regency is inextricably linked to the national trend of productive land conversion.

The local government's policy of restricting recommendations for land conversion is a strategic step to maintain the existence of sustainable food crops. However, the implementation of this policy has not been reinforced by a final legal instrument, thus lacking optimal coercive power. This aligns with the findings of Pitaloka (2021), who emphasized that LP2B protection requires strong regulatory support in the form of a Regional Regulation; without it, the policy tends to be advisory and non-binding. The situation in Barru fully reflects this condition: the policy is in place, but lacks a clear legal framework.

Furthermore, the government's efforts to conduct field surveys and reject recommendations for land conversion in productive rice fields demonstrate the existence of a robust internal control mechanism. However, community compliance with permit requirements before land use remains low. The phenomenon of communities building before requesting permits is a common pattern also found in Rahman's (2020) research in other regions. This confirms that land protection is not solely a matter of policy, but also a matter of community legal culture.

The government has also provided incentive instruments and a land reserve mechanism as part of its agricultural land protection strategy. This concept aligns with Ramadhan and Murti's (2023) explanation, which argues that incentives for landowners are a crucial element in curbing the acceleration of land conversion. However, in Barru Regency, land reserve facilities are not yet

available, so when development pressure arises, the government lacks alternatives for land conversion, increasing pressure on productive land.

In terms of land management, observations indicate that communities have optimized wetlands and drylands quite effectively. This aligns with Mulyani et al.'s (2023) assertion that intensification and extensification are two key strategies for maintaining national food security. However, the increasing threat of development has made idle and marginal land increasingly important to be developed as alternative land. Thus, in general, the implementation of agricultural land protection policies in Barru has been moving in the right direction, but is still weak in terms of regulation, enforcement, public awareness, and the availability of reserve land that supports long-term sustainability.

D. CONCLUSIONS AND SUGGESTIONS

➤ Conclusion

This study concludes that efforts to protect sustainable agricultural land in Barru Regency have been implemented through various strategic measures, such as limiting recommended land conversions, increasing field surveys, and optimizing the use of wetlands and drylands. However, policy implementation has not been optimal due to the absence of a legally binding regulation on the Land Use Management System (LP2B).

Increasing development pressures have resulted in a significant reduction in productive land. Public awareness of maintaining land function is also still low, as evidenced by land use patterns that do not comply with regulatory licensing mechanisms. This demonstrates that protecting LP2B requires not only government policy but also active community participation. Regulatory strengthening, increased cross-sectoral coordination, incentives, and ongoing education are needed to maintain agricultural land sustainability and regional food security.

➤ Recommendations

1. Strengthen cross-sector coordination between the agricultural, licensing, environmental, sub-district, and village offices so that every land use application can be managed in an

integrated manner and reduce overlapping authority. Strengthen incentives for landowners, such as tax breaks, assistance with production facilities, and easier access to agricultural programs to discourage the desire to sell or convert productive land. Provide replacement land reserves to anticipate regional development needs, so that food crops are maintained without hindering regional development.

2. Increase education and outreach to the community to raise awareness of the importance of protecting agricultural land for long-term food security. Utilize information technology for land mapping, monitoring land use changes, and early warning systems for potential unauthorized land conversions.

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