



LEGAL ANALYSIS OF THE SUSTAINABLE DEVELOPMENT OF INDONESIA'S FOOD ESTATE PROGRAM AND ITS IMPACT ON FARMERS' WELFARE

Suyanto¹⁾, Dwi Wachidiyah Ningsih^{2)*}, Pihatin Effendi³⁾

^{1,2,3)} Faculty of Law, University of Gresik, Indonesia

*Corresponding Author, E-mail: dwiwachidiyahningsih@gmail.com

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ABSTRACT

Background. Food security is crucial for countries facing climate change, population growth, and supply chain issues. Indonesia's Food Estate Program seeks to improve food security and agricultural productivity while reducing food imports. However, it has raised concerns related to its sustainability and effects on farmers' welfare. This study aimed to analyze the legal sustainability of the Food Estate Program and evaluate its implications for farmers' welfare from the perspective of agricultural law, environmental law, and sustainable development principles.

Research Methods. Normative juridical research design, the statutory approach analyzes key legal documents, including Indonesia's 1945 Constitution and several laws regarding food, farmer protection, and agricultural land sustainability. The conceptual approach applies theories related to sustainable development and agrarian justice. The comparative approach assesses international standards on sustainable agriculture and food security within global development frameworks.

Findings. Although the Food Estate Program is supported by a substantial regulatory framework, significant challenges remain regarding land governance, environmental protection, indigenous rights, community participation, and equitable distribution of economic benefits. Sustainable food estate development requires a transition from a production-oriented approach toward a farmer-centered legal framework emphasizing social justice, environmental sustainability, and participatory governance. Such reforms are essential to ensure that food security policies contribute not only to national food production but also to the long-term welfare of farming communities.

Conclusion. Achieving sustainable development necessitates a shift to a farmer-centered legal framework that prioritizes social justice and participatory governance, ensuring food security policies enhance both national food production and the long-term welfare of farming communities.

Keywords: Food Estate, Farmers' Welfare, Food Security, Agricultural Law, Sustainable Development, Indonesia.

BACKGROUND

Food security has become one of the most important policy challenges in the twenty-first century. Rapid population growth, climate change, geopolitical instability, and disruptions in global food supply chains have increased concerns regarding the availability and accessibility of food resources. Governments worldwide are therefore seeking innovative strategies to strengthen domestic agricultural production while ensuring long-term sustainability. Within this context, Indonesia has introduced the Food Estate Program as a large-scale agricultural development initiative intended to enhance national food resilience and reduce vulnerability to future food crises [1].

The Food Estate Program emerged as part of Indonesia's broader strategy to achieve food self-sufficiency and strengthen national food reserves. The program involves the development of integrated agricultural areas through large-scale land utilization, modernization

of agricultural practices, and investment in agricultural infrastructure. The government views food estates as strategic instruments capable of increasing agricultural productivity, supporting rural development, and contributing to national economic growth [2].

From a policy perspective, the Food Estate Program is closely linked to Indonesia's constitutional obligation to ensure food availability and improve public welfare. Article 33 of the Indonesian Constitution emphasizes state responsibility in managing natural resources for the greatest benefit of the people. Furthermore, food security has been recognized as an essential component of national resilience and sustainable development. Consequently, the government has justified food estate development as a necessary response to anticipated food shortages and increasing global uncertainties [3].

Despite these objectives, the implementation of food estate projects has generated significant controversy among academics, civil society organizations, environmental groups, and farming communities. Critics argue that several food estate projects have prioritized production targets over environmental sustainability, social justice, and farmer empowerment. Concerns have been raised regarding land conversion, deforestation, ecological degradation, indigenous land rights, and the limited participation of local farmers in decision-making processes [4,5]. In several regions, questions have also emerged regarding whether the program genuinely improves farmers' welfare or primarily benefits corporate actors and large-scale investors [6].

The debate surrounding food estate development reflects a broader tension between food security objectives and sustainable development principles. While increasing agricultural production is undeniably important, contemporary agricultural policies are increasingly expected to balance economic efficiency, environmental protection, and social equity. Sustainable agricultural development requires not only higher production levels but also the protection of farmers' rights, preservation of ecosystems, and equitable distribution of economic benefits. Therefore, evaluating the legal sustainability of the Food Estate Program is essential to determine whether the initiative effectively contributes to long-term farmer welfare and sustainable development goals.

This study examines the legal framework governing food estate development in Indonesia and analyzes its implications for farmers' welfare. By exploring the interaction between agricultural law, environmental law, and social justice principles, the research seeks to provide recommendations for improving the sustainability and inclusiveness of future food security policies. Previous studies have largely focused on the economic feasibility, agricultural productivity, and environmental consequences of food estate projects [4,6]. Other researchers have examined the program from political, governance, and food sovereignty perspectives [1,7].

Existing literature has not sufficiently explored the relationship between food estate regulations and farmers' welfare, the compatibility of food estate policies with sustainable development principles, legal sustainability of food estate governance, farmers' rights within large-scale agricultural development projects, the integration of environmental justice and agrarian justice in food estate regulations. This study contributes by examining food estate development through a legal sustainability perspective, linking food estate governance to farmers' welfare outcomes, integrating environmental law, agrarian law, and food security law into a unified analytical framework, and proposing a farmer-centered legal model for sustainable food estate governance.

RESEARCH METHOD

This study adopts a normative juridical research design, which focuses on examining legal norms, principles, doctrines, and regulatory frameworks governing food security and sustainable agricultural development in Indonesia. Normative legal research is particularly appropriate for this study because the central issue concerns the adequacy, coherence, and effectiveness of existing legal instruments in safeguarding food sovereignty, protecting agricultural land, and ensuring farmers' welfare within the broader context of sustainable development. The research employs three complementary approaches, namely the statutory approach, conceptual approach, and comparative approach.

The statutory approach is utilized to systematically analyze the hierarchy, consistency, and substantive provisions of relevant laws and regulations related to food security, agricultural sustainability, and farmers' rights. The legal instruments examined include the 1945 Constitution of the Republic of Indonesia as the fundamental legal basis for state obligations concerning social welfare and natural resource management; Law No. 18 of 2012 concerning Food, which establishes the national framework for food sovereignty, food independence, and food security; Law No. 19 of 2013 concerning the Protection and Empowerment of Farmers, which regulates state responsibilities in enhancing farmers' welfare and resilience; Law No. 41 of 2009 concerning Sustainable Agricultural Land Protection, which provides legal mechanisms for preserving agricultural land from conversion; and Presidential Regulation No. 109 of 2020 concerning National Strategic Projects, which is examined to assess the interaction between national development priorities and agricultural sustainability objectives. Through this approach, the study evaluates the extent to which these regulations are harmonized and capable of supporting sustainable food governance [8-10].

The conceptual approach is employed to provide a theoretical foundation for interpreting and assessing the legal norms under investigation. Several legal and interdisciplinary theories are applied in this study. The theory of sustainable development is used to evaluate whether existing legal frameworks adequately balance economic growth, environmental protection, and social equity. The concept of food sovereignty serves as an analytical lens to assess the state's commitment to ensuring people's rights to determine their own food systems and maintain control over agricultural resources. Agrarian justice theory is applied to examine issues related to equitable land distribution, access to agricultural resources, and protection of small-scale farmers. Furthermore, environmental governance theory assists in analyzing the role of institutions, regulatory mechanisms, and stakeholder participation in achieving sustainable agricultural management. Welfare state theory is also employed to evaluate the extent of governmental responsibility in guaranteeing social protection, economic security, and welfare enhancement for farming communities.

The comparative approach is used to compare Indonesia's regulatory framework with internationally recognized principles and global standards concerning sustainable agriculture, farmers' rights, and food security governance. This comparison draws upon international instruments, sustainable development agendas, and global best practices to identify normative gaps, strengths, and potential areas for legal reform. The comparative analysis also facilitates an assessment of Indonesia's compliance with international commitments related to sustainable development and food security.

The study relies exclusively on secondary legal materials and academic sources. Secondary data were collected through an extensive review of peer-reviewed international journal articles, legislation, government regulations, official policy reports, international organization publications, legal commentaries, and relevant academic literature. The collected materials were subsequently analyzed qualitatively using legal interpretation techniques, including statutory interpretation, conceptual analysis, and comparative legal analysis, to formulate comprehensive conclusions regarding the effectiveness and future direction of Indonesia's legal framework for sustainable food security governance [11-14].

FINDINGS

Legal Framework of the Food Estate Program in Indonesia

The Food Estate Program is supported by a series of legal instruments designed to strengthen national food security and increase agricultural productivity. The regulatory framework reflects the government's effort to respond proactively to concerns regarding future food shortages and global food crises. The program is incorporated into Indonesia's National Strategic Projects and is supported by various regulations governing agricultural development, land use, forestry management, and food security policies [15,8].

From a legal perspective, the Food Estate Program is rooted in the constitutional obligation of the state to utilize natural resources for public welfare. The government argues that large-scale agricultural development can contribute to national food resilience, reduce

dependence on imports, and create economic opportunities in rural areas. In principle, the legal framework seeks to integrate agricultural development, infrastructure investment, and regional economic growth within a single policy mechanism [16].

However, the rapid development of food estate projects has also revealed regulatory inconsistencies and governance challenges. Several scholars have identified tensions between food estate regulations and existing environmental protection laws, forestry regulations, and sustainable land management principles [1,4]. In some cases, regulatory adjustments intended to accelerate project implementation have generated concerns regarding weakened environmental safeguards and reduced public participation. These legal tensions demonstrate the difficulty of balancing food security objectives with broader sustainability commitments.

The complexity of food estate governance is further increased by the involvement of multiple governmental institutions responsible for agriculture, environment, forestry, spatial planning, and regional development. Without effective coordination, overlapping authority and inconsistent policy implementation may reduce regulatory effectiveness and create uncertainty for local communities and farmers. Therefore, legal harmonization remains essential for ensuring that food estate development aligns with constitutional principles, environmental sustainability, and social justice objectives [17].

Food Estate and Farmers' Welfare: Between Opportunity and Vulnerability

One of the primary justifications for food estate development is its potential contribution to improving farmers' welfare. The government frequently emphasizes that increased agricultural productivity, improved infrastructure, and expanded market access will create new economic opportunities for farming communities. In theory, large-scale agricultural development can generate employment, enhance rural incomes, improve access to technology, and stimulate local economic growth [3].

From a welfare perspective, food estates may provide farmers with access to agricultural inputs, irrigation systems, modern cultivation techniques, and integrated supply chains that are often unavailable in conventional farming systems. Such support has the potential to increase productivity and improve farmers' bargaining positions within agricultural markets. In addition, food estate projects can attract public and private investment that contributes to rural development and agricultural modernization [18].

Nevertheless, the relationship between food estate development and farmers' welfare is far more complex than often assumed. Several studies indicate that the benefits of food estate projects are not always distributed equally among stakeholders [6]. In some cases, local farmers have experienced difficulties accessing land, participating in decision-making processes, or benefiting from project-related investments. The concentration of resources and decision-making authority among large institutional actors may limit the participation of smallholder farmers and reduce their ability to influence agricultural policies affecting their livelihoods [3,19,20].

Another important concern involves economic dependency. While food estates may initially increase agricultural production, farmers can become dependent on externally supplied technologies, inputs, and production systems controlled by larger institutions. Such dependency may reduce local autonomy and increase farmers' vulnerability to market fluctuations, policy changes, and corporate interests. Consequently, welfare improvements cannot be measured solely through production indicators but must also consider issues of empowerment, participation, and long-term economic resilience.

Furthermore, welfare outcomes are influenced by the broader structure of agricultural markets. Increased production does not automatically translate into higher farmer incomes if market access remains unequal or if farmers continue to face unfavorable pricing mechanisms. Therefore, achieving meaningful welfare improvements requires not only increased agricultural output but also institutional support mechanisms that strengthen farmers' economic positions within agricultural value chains.

DISCUSSIONS

Environmental Sustainability and Long-Term Agricultural Viability

The sustainability of food estate development cannot be separated from environmental considerations. Agricultural productivity depends fundamentally on the health of ecosystems, including soil fertility, water availability, biodiversity, and climate stability. Consequently, environmental degradation may undermine the long-term success of food estate initiatives regardless of short-term production gains.

Several food estates projects have faced criticism regarding land conversion, deforestation, peatland degradation, and ecological disruption [4,5]. Environmental scholars argue that large-scale agricultural expansion may generate significant environmental costs if implemented without adequate ecological assessments and safeguards. Such concerns are particularly relevant in areas containing sensitive ecosystems, including peatlands, forests, and indigenous territories.

From a legal perspective, environmental sustainability constitutes a fundamental principle of contemporary development governance. Indonesian environmental law recognizes sustainable development as a guiding principle requiring economic growth to be balanced with ecological protection. Therefore, food estate regulations should ensure that agricultural expansion does not compromise environmental integrity or undermine future agricultural productivity [21].

The concept of legal sustainability requires policymakers to consider not only immediate production objectives but also long-term ecological consequences. Sustainable food systems depend on maintaining ecosystem services that support agricultural production over time. If environmental degradation reduces soil quality, water resources, or biodiversity, future generations of farmers may face greater challenges than those the program originally sought to address [22].

Consequently, food estate governance should incorporate rigorous environmental impact assessments, continuous ecological monitoring, and adaptive management strategies capable of responding to changing environmental conditions. Such measures are essential for ensuring that food security initiatives remain compatible with long-term sustainability objectives.

Agrarian Justice, Community Participation, and Farmers' Rights

Beyond economic and environmental concerns, the sustainability of food estate development also depends on the protection of farmers' rights and meaningful community participation. Modern development theory increasingly recognizes that sustainable policies must involve affected communities in decision-making processes rather than treating them merely as beneficiaries of government programs [23].

Several legal concerns have emerged regarding land governance, indigenous rights, and community participation within food estate projects [5,25-27]. In particular, scholars have highlighted the importance of ensuring that local communities are consulted and actively involved in decisions affecting their lands and livelihoods. Failure to respect these principles may generate social conflict, reduce public trust, and undermine the legitimacy of development initiatives.

The principle of agrarian justice emphasizes equitable access to land, resources, and economic opportunities. Within the context of food estate development, this principle requires that farmers benefit fairly from agricultural investments and retain meaningful control over their productive resources [28,29]. Agrarian justice also demands protection against displacement, exclusion, and unequal distribution of benefits.

Community participation contributes not only to social legitimacy but also to policy effectiveness. Local farmers possess valuable knowledge regarding agricultural conditions, environmental characteristics, and local food systems. Incorporating such knowledge into policy design can improve project outcomes while strengthening community ownership and long-term sustainability. Therefore, future food estate governance should adopt a participatory legal

framework that recognizes farmers as active stakeholders rather than passive recipients of development interventions [24,30].

This study has several limitations that should be acknowledged. As a normative juridical study, the analysis primarily relies on legal documents, statutory regulations, academic literature, and policy reports. Consequently, the findings do not directly capture the lived experiences, perceptions, and socio-economic realities of farmers and local communities affected by the Food Estate Program. Empirical evidence obtained through field observations or stakeholder interviews could provide a more comprehensive understanding of the program's actual implementation and impacts.

The study focuses predominantly on the legal and regulatory dimensions of the Food Estate Program. Although environmental sustainability and farmers' welfare are discussed, the research does not quantitatively assess environmental outcomes, economic performance, or social indicators across different Food Estate locations. The diverse geographical, ecological, and socio-cultural contexts of implementation areas may produce varying outcomes that are not fully reflected in this analysis.

Given the evolving nature of food security policies in Indonesia, the regulatory framework governing the Food Estate Program continues to develop. Changes in governmental priorities, policy adjustments, and future legal reforms may influence the relevance and applicability of the present findings over time. Future research is therefore recommended to adopt interdisciplinary and empirical approaches by integrating legal analysis with socio-economic, environmental, and participatory field studies. Such approaches would generate a more holistic evaluation of the Food Estate Program and provide stronger evidence to support sustainable and farmer-centered policy development.

CONCLUSION

The Food Estate Program represents an ambitious effort by the Indonesian government to strengthen national food security and enhance agricultural productivity. The program is supported by a substantial legal framework reflecting the state's constitutional responsibility to ensure food availability and promote public welfare. However, the sustainability of the program cannot be evaluated solely based on production outcomes. This study finds that significant legal challenges remain regarding environmental protection, land governance, farmers' participation, agrarian justice, and equitable distribution of economic benefits. While food estate development may contribute to increased agricultural production, its long-term success depends on whether it genuinely improves farmers' welfare and preserves environmental sustainability.

The study concludes that sustainable food estate governance requires a shift from a production-centered approach toward a farmer-centered legal framework emphasizing participation, environmental stewardship, social justice, and long-term resilience. Such reforms are essential to ensure that food security policies contribute not only to national food availability but also to the welfare and dignity of Indonesian farmers.

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