P-ISSN: 2338-8617
E-ISSN: 2443-2067

Jurnal Ilmiah

PEURADEUN

Vol. 13, No. 2, May 2025

SCAD Independent
Accreditation by IAO since 2014

JIP
The Indonesian Journal of the Social Sciences
www.journal.scadindependent.org
DOI Prefix Number: 10.26811

INDEX COPERNICUS INTERNATIONAL

sinta 1
Science and Technology Index
Accredited "Sinta 1" by Decree No. 72/E/KPT/2024
Valid Until the May 2027 Edition

ELSEVIER Scopus

Clarivate Analytics
WEB OF SCIENCE™

JURNAL ILMIAH PEURADEUN
The Indonesian Journal of the Social Sciences
p-ISSN: 2338-8617/ e-ISSN: 2443-2067
www.journal.scadindependent.org

Vol. 13, No. 2, May 2025
Pages: 813-846

Land Politics and Food Security: A New Perspective on Land Degradation in Indonesia

Vellayati Hajad[1]; Sri Wahyu Handayani[2]; Ikhsan Ikhsan[3]; Deni Setiawan[4]; Zuhrizal Fadhly[5]; Herizal Herizal[6]
[1,2,3,5]Public Administration, Universitas Teuku Umar, Aceh, Indonesia
[4]Public Administration, Universitas Al Washliyah Darussalam Banda Aceh, Indonesia
[6]Department of Political Science and Public Administration, Erciyes University, Türkiye

Article *in* Jurnal Ilmiah Peuradeun
Available at : https://journal.scadindependent.org/index.php/jipeuradeun/article/view/1304
DOI : https://doi.org/ 10.26811/peuradeun.v13i2.1304

How to Cite this Article
APA : Hajad, V., Handayani, S. W., Ikhsan, I., Setiawan, D., Fadhly, Z., & Herizal, H. (2025). Land Politics and Food Security: A New Perspective on Land Degradation in Indonesia. *Jurnal Ilmiah Peuradeun, 13*(2), 813-846. https://doi.org/10.26811/peuradeun.v13i2.1304

Others Visit : https://journal.scadindependent.org/index.php/jipeuradeun

Jurnal Ilmiah Peuradeun
The Indonesian Journal of the Social Sciences
doi: 10.26811/peuradeun.v13i2.1304

Publisher: SCAD Independent
Printed in Indonesia

Jurnal Ilmiah Peuradeun
Vol. 13, No. 2, May 2025
Pages: 813-846

LAND POLITICS AND FOOD SECURITY: A NEW PERSPECTIVE ON LAND DEGRADATION IN INDONESIA

Vellayati Hajad[1]; Sri Wahyu Handayani[2]; Ikhsan Ikhsan[3]; Deni Setiawan[4]; Zuhrizal Fadhly[5]; Herizal Herizal[6]
[1,2,3,5]Public Administration, Universitas Teuku Umar, Aceh, Indonesia
[4]Public Administration, Universitas Al Washliyah Darussalam Banda Aceh, Indonesia
[6]Department of Political Science and Public Administration, Erciyes University, Türkiye
[1]Correspondence Email: vellayati.hajad@utu.ac.id

Received: February 1, 2024	**Accepted:** December 31, 2024	**Published:** May 30, 2025
Article Url: https://journal.scadindependent.org/index.php/jipeuradeun/article/view/1304		

Abstract

Land degradation has emerged as a critical global issue, with significant implications for food security, agricultural productivity, and environmental sustainability. In Indonesia, this problem is deeply intertwined with land politics, where land ownership and access inequities exacerbate the challenges posed by soil erosion, unsustainable agricultural practices, and socio-economic transitions. This study examines the relationship between land degradation and food security, focusing on how agrarian politics influence these dynamics. Through a qualitative approach systematic literature review, we analyzed articles from the Scopus database using VOSviewer to identify critical patterns and themes. The findings highlight that dryland farming areas in Indonesia are particularly vulnerable, with land degradation being aggravated by urbanization, economic pressures, and socio-political factors such as unequal land ownership and inadequate policy implementation. While agrarian reform initiatives have been proposed to address disparities in land access and improve resource distribution, their effectiveness remains limited due to insufficient community involvement and a lack of integration between local socio-ecological knowledge and policy frameworks. This research underscores the need for a comprehensive approach to land management that integrates equitable land policies, community participation, and sustainable agricultural practices. By addressing the socio-political dimensions of land use and degradation, Indonesia can enhance food security and create a more resilient agricultural sector.

Keywords: *Land Degradation; Food Security; Agrarian Reform; Land Politics; Sustainable Agriculture.*

A. Introduction

The issue of food security is a primary global concern as countries increasingly rely on food imports to meet the needs of growing populations (Olabisi et al., 2021). However, inappropriate land use intensification has led to widespread land degradation, negatively impacting agricultural productivity and contributing to socio-economic inequalities (Bucała-Hrabia, 2017; Rahman et al., 2022). This research explores the complex relationship between land degradation and land tenure dynamics. It focuses on how land ownership influences decisions and policies related to sustainable land management, emphasizing the critical perspective of farmers as the primary caretakers of the land. The study also highlights the role of land politics in shaping land-use practices and food security.

Compared to previous research, which has mainly focused on agricultural productivity (Holden & Ghebru, 2016), this study identifies a significant gap in understanding the intrinsic connection between food security, land ownership, and tenure (Hadi et al., 2024). By delving into these dimensions, the research aims to provide insights into addressing land degradation and promoting sustainable land management practices to improve food security ultimately. This study examines the political dynamics of land use within the broader debates on poverty alleviation and food security, focusing on how land degradation exacerbates socio-economic vulnerabilities.

Land degradation, defined as the reduction or loss of biological productivity, ecological integrity, or the long-term value of land for human use (Andersson et al., 2011; Hermans et al., 2023; Mariane et al., 2024), remains a critical global issue, particularly in developing countries. The agricultural sectors of nations such as Kazakhstan, Uzbekistan, and Indonesia have witnessed significant land degradation, leading to reduced farm profitability and creating formidable barriers to poverty alleviation and food security (Angaman et al., 2024; Kirui et al., 2021; Le & Le, 2023; Mirzabaev, 2016).

Historically, food security research has primarily focused on increasing agricultural productivity through interventions such as fertilizer

subsidies (Ragasa & Chapoto, 2017), providing modern agricultural equipment (Obayelu et al., 2020), and establishing open markets (Reardon, 2018; Saputra et al., 2022). However, there remains to be a significant research gap in examining the critical relationship between food security and land ownership, particularly in the context of farmers. This study addresses this gap by linking land degradation to political and socio-economic factors, focusing on land tenure security and its impact on sustainable farming practices in Indonesia.

Karl Marx's perspective on land ownership as a determinant of class—defining individuals as either bourgeois or proletarian—highlights the socio-political importance of land (1975). Beyond this, in many cultures, land serves as social capital, symbolizing social acceptance and economic stability. In Indonesia, land ownership influences socio-economic status, dictating resource access and agricultural productivity. Research by Barbier (2010), underscores how the lack of assets, particularly land, creates a vicious cycle of poverty and land degradation. Farmers in developing countries, including Indonesia, often face this cycle, struggling to escape perpetual poverty due to insecure land tenure and limited resources.

Land degradation significantly reduces agricultural income by diminishing crop yields Aleminew (2023) decreasing livestock productivity (Gomiero, 2016), and increasing the costs of agricultural inputs (Botah, 2024; Gerber et al., 2014; Nkonya et al., 2015). While sustainable land management practices have been identified as a solution, their adoption remains limited in many developing countries such as Indonesia due to high implementation costs, delays in realizing economic benefits (which often take three to ten years), and institutional barriers such as insecure land tenure and restricted access to markets and extension services (Djanibekov & Finger, 2018; Giger & Musselli, 2023). These constraints hinder progress toward Sustainable Development Goal (SDG) 15, which aims to combat land degradation and restore degraded ecosystems (Jerneck & Olsson, 2013; Mwaijande & Mwakalikamo, 2024; Zanabazar et al., 2017).

The global implications of land degradation are profound, intersecting with climate change, biodiversity loss, and food insecurity. Approximately 25% of the world's total land area is already degraded, leading to significant releases of soil carbon and nitrous oxide, exacerbating global warming (Olsson & Jerneck, 2010; Prihatin et al., 2024). If left unaddressed, projections indicate that by 2050, up to 95% of the earth's land could experience degradation, posing severe threats to global agricultural systems and human livelihoods, such as socio-economic communities (Singh, 2023; Muttaqin et al., 2023; Naisabur et al., 2024; Pauzi et al., 2024).

The socio-economic impacts of land degradation are most acutely felt by rural communities, particularly small-scale farmers and marginalized groups who depend heavily on natural resources (Bansah et al., 2024; Ramamurthy et al., 2017). These communities, already vulnerable, face even more significant challenges and hardships due to the harmful consequences of land degradation. Globally, an alarming number of over 3.2 billion people feel the direct repercussions of this devastating issue. The relentless rise in demand for agricultural products, such as food, fiber, and biofuels, relentlessly contributes to the escalation of land degradation (Shah, 2023; Mokhomole, 2023; Bello, 2024).

In their comprehensive research Barbier & Hochard (2018), illuminate the distressing truth that land degradation overwhelmingly impacts the rural poor, aggravating their dire conditions. These disadvantaged individuals, lacking the necessary resources and means, cannot cope with the decline in soil fertility and biodiversity loss. The weight of this burden falls disproportionately on their shoulders, further exacerbating the gap between the socio-economic classes and highlighting the urgent need for intervention and support (Aryatama & Lesmana, 2022; Suryani et al., 2023; Laila & Abdullah, 2022). It highlights the socio-economic impacts of land degradation on global agricultural productivity; this paper focuses on contextualizing these findings within Indonesia's unique challenges. In particular, the compounded pressures of population

growth, unequal land distribution, and unsustainable resource extraction in Indonesia demand a nuanced understanding of land degradation's multi-dimensional impacts.

In Indonesia, rural farmers face amplified vulnerabilities due to the interplay of degraded lands and climate variability, such as dryland, which causes a loss of biodiversity and ecosystem services that diminish crop resilience and agricultural productivity. Studies by Soeprobowati et al., (2020), highlight that degraded lands in Indonesia contribute significantly to rural poverty and food insecurity, necessitating targeted policy interventions to improve soil health and sustainable land use practices. Indonesia faces this unique challenge because its dryland farming systems are highly vulnerable to unsustainable intensification practices (Pratama et al., 2020). Furthermore, population pressures and the expansion of industrial-scale agriculture have exacerbated degradation in areas such as Java and Sumatra, reflecting a broader trend of prioritizing short-term economic gains over long-term sustainability (Santantonio & Robbins, 2020; Thierfelder & Mhlanga, 2022).

Land degradation in Indonesia can only be fully understood by addressing systemic issues such as land ownership inequality. According to the Agrarian Reform Consortium (2021), just 1% of Indonesians control 68% of the nation's land, a disparity exacerbated by policies favoring large-scale plantations and industrial mining. The Basic Agrarian Law of 1960, originally intended to reduce inequality, has often been sidelined by corporate interests in palm oil, forestry, and mining sectors (Akhmadi & Januarsi, 2021; Chosiah et al., 2019). This inequity has far-reaching implications for rural farmers, 16 million of whom operate on plots smaller than 0.5 hectares.

Smallholders are often locked out of formal land markets and face limited access to credit and agricultural inputs, further entrenching poverty and limiting their capacity to combat land degradation effectively. Figure 1 shows the number of small farmers in Indonesia (2013-2023).

p-ISSN: 2338-8617
e-ISSN: 2443-2067

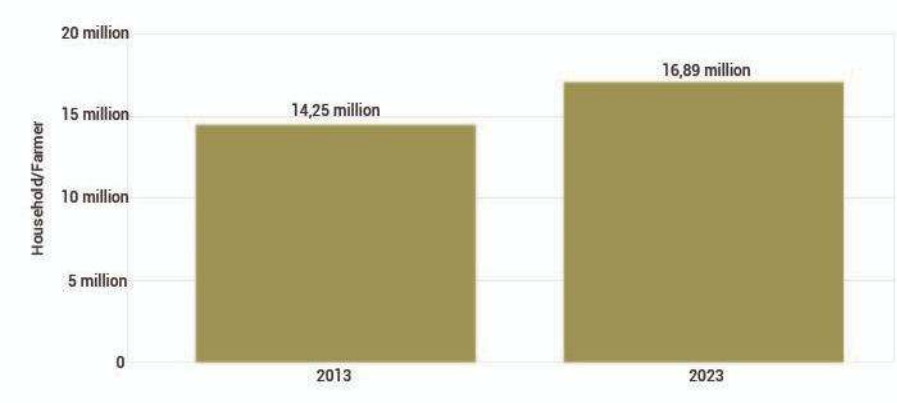

Figure 1. Number of small farmer in Indonesia (2013-2023)
Source: Central Statistics Agency (2024)

Land politics offers a crucial perspective for examining the complexities of land degradation and governance. Globally, conflicts over land involve issues such as indigenous rights in North America (King, 2013), land resistance movements in Europe (Stierl, 2018), and agricultural land confiscation in Asia and Africa (Azadi & Vanhaute, 2019; Martin & Palat, 2014). These disputes often underscore the interaction between power, governance, and community rights. In Indonesia, land politics exposes the intersection of policy, power, and socio-economic outcomes. Land is not simply an economic commodity but a socio-political asset linked to identity, culture, and community solidarity (Zwarteveen & Boelens, 2014).

Policies governing land use frequently create conflicts between state goals and community acceptance, leading to tension and disputes (Ellickson et al., 2020; Hunsberger et al., 2017). By utilizing the perspective of land politics, this research builds on existing literature to unpack Indonesia's socio-political dimensions of land degradation. Unlike prior studies focusing on technical or environmental aspects, this research integrates governance and community rights, providing a more comprehensive understanding of the underlying drivers of land degradation.

This paper contributes a novel perspective by linking land degradation with Indonesia's under-explored concept of land politics. While

studies like those of Olsson & Jerneck (2010), highlight global trends, this research underscores the unique socio-political dynamics in Indonesia, where historical inequalities and modern governance challenges intersect. For instance, Raharjo et al., (2023), argue that inclusive land policies and equitable resource distribution are critical to achieving food security and resilience in degraded landscapes. This study identifies governance gaps and proposes pathways for equitable and sustainable land management by situating land degradation within the broader framework of land politics. For instance, community-based approaches prioritizing local knowledge and participatory governance have proven effective in offering scalable models for other parts of Indonesia.

B. Method

This research employs a qualitative approach combining systematic literature review, thematic analysis, and data visualization to explore the interconnections between farmer poverty, land degradation, and food security in Indonesia (Bernard et al., 2016). The methodology is designed to understand these complex issues and their interrelationships comprehensively. The systematic literature review forms the foundation of the study, analyzing articles from Scopus published between 2014 and 2024. This ensures the inclusion of the most current research on land degradation, its socio-economic consequences for farmers, and broader implications for food security in Indonesia.

The review process involves an in-depth analysis of each article to extract relevant findings, theoretical frameworks, and methodologies. VOSviewer software analyzes and visualizes the network of keywords and research topics from the extracted articles. This tool highlights key themes, research gaps, and relationships between study areas, focusing on the link between land degradation and food security. The network visualization feature maps connections between publications based on shared references, identifying distinct research clusters and key themes. Thresholds and clustering resolution are applied to ensure focus on impactful studies, while

density visualization provides a heatmap-like view of well-established themes and potential research gaps.

To complement the academic literature, supplementary data is gathered from online news sources, reports, and other grey literature covering current issues related to land degradation, farmer poverty, and food security in Indonesia. This integration ensures a comprehensive understanding of Indonesian farmers' real-world challenges, complementing academic findings with up-to-date information on policy developments, local responses, and socio-political context. Thematic analysis is employed to systematically categorize and interpret the data from academic and supplementary sources.

This approach allows for the identification of recurring patterns and themes across various data sources, such as the role of land ownership in food security, the impact of land degradation on agricultural productivity, and the socio-economic vulnerabilities of farmers. The findings are organized into a data display using VOSviewer, presenting key results and patterns identified during the review process. A summary table is created to visually represent the distribution of main themes, research methodologies, and critical results in the literature. This facilitates an easier understanding of dominant research topics and methodologies and areas requiring further investigation.

The final stage involves data verification, where results are cross-checked for accuracy and consistency with the sources. Once verified, the findings are synthesized to comprehensively understand the relationship between land degradation, farmer poverty, and food security in Indonesia. The conclusions drawn address identified gaps in the literature and offer insights into how land degradation contributes to food insecurity and exacerbates farmer poverty in the Indonesian context.

This methodological approach combines rigorous academic analysis with real-world data, providing a structured and comprehensive examination of the complex issue of land degradation and its socio-economic implications for farmers in Indonesia. By integrating various

qualitative methods and visualization tools, the study aims to offer a nuanced understanding of these interconnected challenges and contribute to informed policy-making and future research directions.

C. Results and Discussion

This study examines the impact of land politics on food security in Indonesia, using a qualitative approach through a systematic literature review. By This study examines the impact of land politics on food security in Indonesia, using a qualitative approach through a systematic literature review. By identifying and analyzing patterns in the collected data, the study reveals how land ownership dynamics influence sustainable land management practices and food security. The results presented reflect the complexity of the interaction between agrarian policies and the socio-economic realities faced by farmers, not only highlighting their vulnerabilities but also providing insights into the effects of policies on the stability of food production. This sets the stage for further discussion on specific findings that will be explained in the results section.

1. Results

a. Land politics and food security

A thorough investigation using the renowned Scopus.com database uncovered interesting findings. Specifically, a total of 137 scholarly articles were found to be closely related to the keywords "land", "politics", "food", and "security". In comparison, a substantial 12,775 articles were discovered when using the keywords "land", "food", and "security" together. This significant difference highlights the need for extensive research into the complex relationship between land politics and food security. The Scopus.com database revealed a fluctuating pattern of research on land politics and food security. Table 1 shows this fluctuating pattern.

Table 1. Development of research publications on land politics and food security

No.	Publication Year	Total
1.	2014	8
2.	2015	8

No.	Publication Year	Total
3.	2016	9
4.	2017	11
5.	2018	9
6.	2019	10
7.	2020	10
8.	2021	10
9.	2022	5
10.	2023	8
11.	2024	10

Source: Scopus.com (2024)

Data analysis from 2014 to 2024 showed a notable increase in research efforts in 2017, indicating a growing recognition of the importance of this area. However, a slight decline was observed in 2022, followed by another significant increase in 2024. Figure 2 shows the fluctuation of research on land politics and food security.

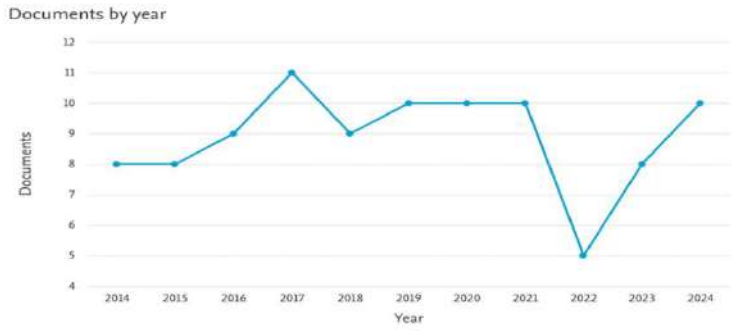

Figure 2. The fluctuation of research on land politics and food security
Source: Scopus.com (2024)

The VOSviewer analysis demonstrates the interconnected themes of land politics and critically assesses current methods for addressing land degradation. It underscores the interplay of Sustainable Development Goals (SDGs), land usage, and governance, highlighting the conflicting priorities between economic expansion and sustainable practices. The prominence of "land politics" and "land resource utilization" highlights Sustainable Development Goals (SDGs) implementation complexities. Additionally, the analysis highlights the issues of land degradation and soil erosion, with

terms like "soil fertility" and "water retention" clustering together. The importance of "food security" in land politics and its connection to "agricultural sustainability" is also emphasized. Figure 3 shows the most cited land politics and food security articles.

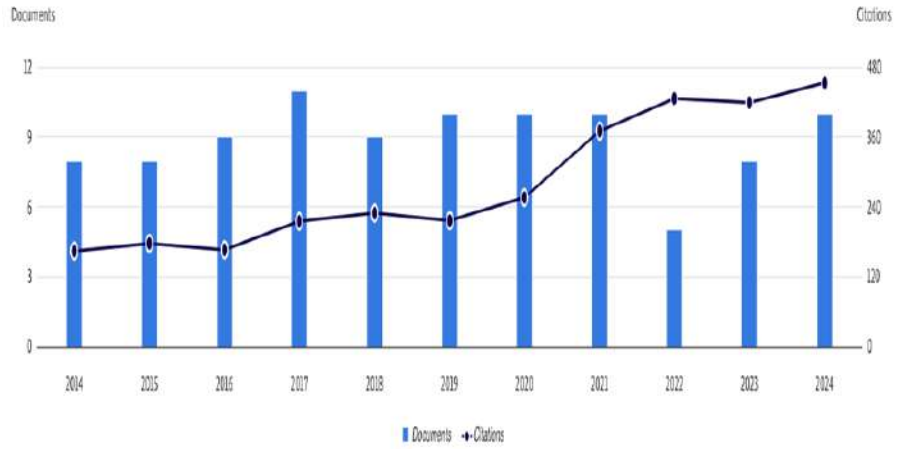

Figure 3. The most cited land politics and food security articles
Source: Scopus.com (2024)

VOSviewer analysis reveals key thematic clusters in land politics and degradation, highlighting their importance in local contexts like rice farming communities. The visualized networks underscore the centrality of terms such as "food security", "food sovereignty", and "traditional farming systems" in land management discourse. These findings indicate a strong link between food sovereignty and local agricultural autonomy, which is tied to preserving traditional practices. The analysis identifies physical, chemical, and socioeconomic dimensions in land degradation discourse, capturing the interconnected impacts of issues like soil erosion on agricultural productivity and off-site effects.

The socioeconomic dimension is strongly associated with poverty and livelihoods, suggesting that land degradation exacerbates rural poverty. Network analysis links these challenges to inequitable land ownership and unsustainable practices, indicating structural drivers of degradation. Terms like "climate change" and "soil degradation" form an

interlinked cluster, showing how environmental factors compound vulnerabilities. The co-occurrence of "food insecurity" underscores the multidimensional relationship between environmental degradation, socioeconomic inequality, and food systems.

These patterns highlight the need for integrated, multidisciplinary approaches to address land politics and degradation, emphasizing the complex interplay of environmental, social, and economic factors in land management and sustainability. Figure 4 shows a map of studies on land degradation collected from Scopus articles using VOSviewer Software (2024).

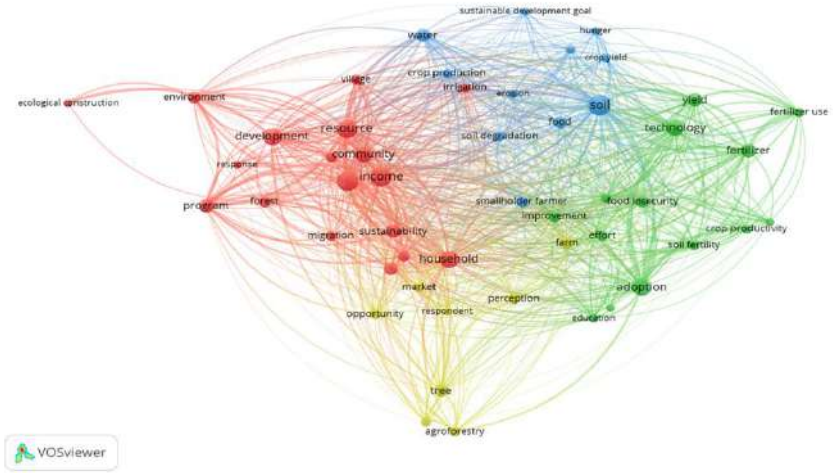

Figure 4. Map of studies on land degradation, poverty and food security
Source: VOSviewer software (2024)

The link between land degradation and food security is also critical. As agricultural productivity declines, food availability diminishes, exacerbating food insecurity in vulnerable regions. This dynamic compels policymakers to devise strategies that balance the need for increased food production with the realities of land degradation and climate change. Promoting sustainable agricultural practices, investing in land restoration, and addressing socioeconomic inequalities are vital measures to mitigate the impacts of land degradation.

Reducing poverty among farmers is an essential component of these efforts, by providing financial support, access to education, and training on sustainable land management can empower farmers to adopt practices that enhance soil quality and productivity. Policies prioritizing equitable land distribution and protecting agricultural land from urban encroachment are also crucial (Hajad & Ikhsan, 2024). Moreover, international frameworks such as the SDGs must integrate localised approaches to address smallholder farmers' unique challenges in diverse contexts.

Land politics and food security are deeply intertwined, reflecting the complex interplay of environmental, socioeconomic, and political factors (Hajad, 2021). The multidimensional impacts of land degradation highlight the urgent need for integrated strategies that address local and global challenges. Policymakers can work toward a more equitable and resilient food system by promoting sustainable agricultural practices, addressing socioeconomic inequalities, and fostering inclusive governance. Ultimately, achieving food security requires protecting agricultural lands and empowering farming communities to sustain their livelihoods amidst a rapidly changing global landscape (Botah, 2024).

b. Land degradation in Indonesia

Land degradation represents one of Indonesia's most critical challenges, significantly undermining the sustainable management of its land resources. In a nation where agriculture plays a pivotal role, with over 90 million people—50.8% of the population—engaged in agricultural activities, the widespread issue of land degradation poses serious threats to productivity, food security, and environmental sustainability. Addressing this challenge requires a deeper understanding of its root causes, socioeconomic impacts, and potential solutions. Figure 5 shows land degradation in Indonesia.

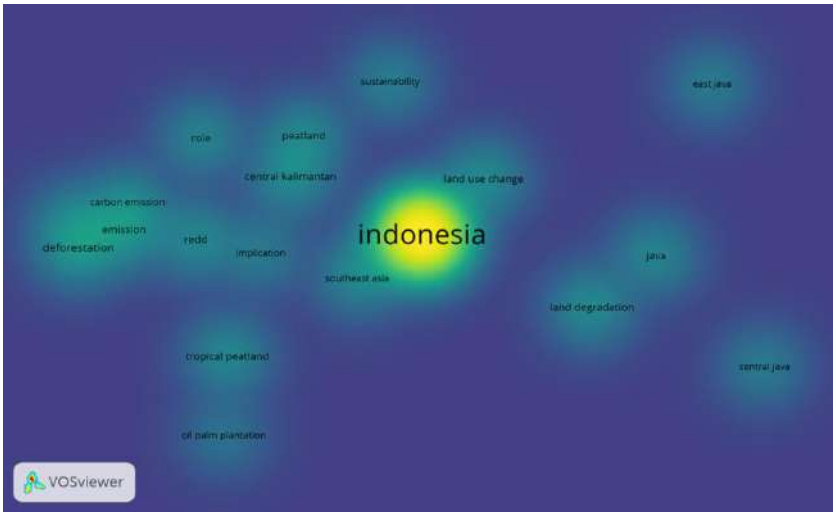

Figure 5. Land degradation in Indonesia
Source: VOSviewer software (2024)

Figure 5 shows the density display mode of research related to land degradation in Indonesia. Research on land use change, climate change, deforestation, and land degradation are marked with a bright yellow colour. The more colourful the colour, the more research has been done. Conversely, less research is marked with a colour that needs to light up and provide opportunities for further exploration. Land degradation in Indonesia has reached alarming levels. Approximately 48.2 million hectares, or 25.1% of the nation's total land area, are classified as critically degraded. Provinces like East Kalimantan, West Kalimantan, Riau, and North Sumatra bear the brunt of this issue, each with over 3 million hectares of severely degraded land.

This widespread degradation is characterized by declining soil quality and productivity, deforestation, unsustainable agricultural practices, and expanding urban settlements. A recent report by the National Land Agency (2022) highlights the stark reduction of 287,000 hectares of agricultural land over the last seven years. According to Auriga data, the area of Indonesian rice fields is 9.97 hectares (2014), 9.96 hectares (2015), 9.94 hectares (2016), 10 (2018), 10 (2019), 9.95 (2020), 9.93 (2021), and 9.88 (2022). Figure 6 show the area of rice fields in Indonesia.

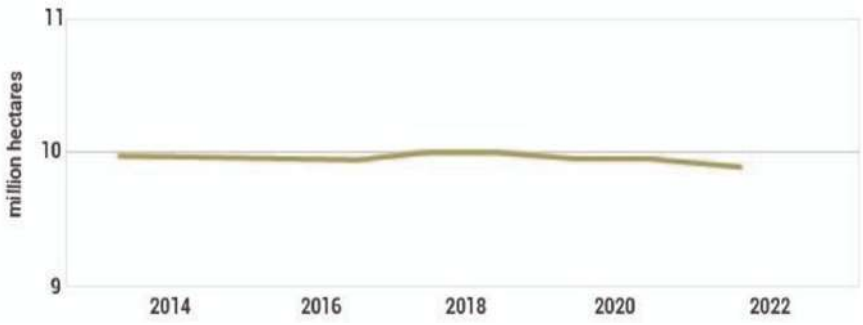

Figure 6. The area of rice fields in Indonesia according to auriga (2014-2022)
Source: Agrarian reform consortium (2022)

This trend reflects a confluence of natural and anthropogenic factors. For instance, rapid urban expansion prioritizes economic development at the expense of environmental conservation (Gotham, 2001). Similarly, unsustainable farming practices in sloping drylands have led to significant erosion and soil nutrient depletion, reducing agricultural viability. Population pressures and the need for expanded settlements in ecologically sensitive areas further exacerbate this degradation, creating a dangerous cycle of environmental harm and socioeconomic vulnerability.

The direct relationship between land degradation and food insecurity in Indonesia is undeniable (Larsen & Lilleør, 2014). As agricultural land decreases, the nation's ability to meet the food needs of its growing population is significantly threatened. According to the National Land Agency, Indonesia's rice fields have declined from 9.97 million hectares in 2014 to 9.88 million in 2022. This decline undermines national food security, particularly as population growth outpaces agricultural output.

c. Land reform policy in Indonesia

Presidential Regulation Number 2 of 2005 outlines the key components essential for successful agrarian reform policy such as asset legalisation, land redistribution, and social forestry. These components serve as the guiding framework for the Medium Term Development Plan (2015-2019) and Medium Term Development Plan (2020-2024), which addresses

the challenges and opportunities in Indonesia's rural landscape. Table 2 shows Land Reform Policy in Indonesia.

Table 2. Land reform policy in Indonesia

No.	Land Reform Target	Details	Scheme	Description
1.	9 Million Hectares	4.5 Million Hectares	Asset Legalisation	Legalisation of uncertified transmigration land (600.000 hectares) Legalisation of land under community control (3.9 million hectares)
		4.5 Million Hectares	Land Retribution	Expired Cultivation Right, abandoned land, and other State land Land originating from the release of forest areas (4.1 million hectares)
2.	12.7 Million Hectares	12.7 Million Hectares	Social Forestry	Village Forests, Community Forests, Community Plantation Forests, and partnership patterns.

Source: Medium term development plan (2015-2024)

Our study reveals that land reform in Indonesia faces significant challenges, primarily due to disorganized regulation and supervision across government divisions, leading to conflicting policies and sectoral conflicts. Unlike successful land reforms in countries such as Japan, South Korea, and Taiwan, Indonesia's initiatives have been less effective in addressing agricultural land deterioration. The research highlights several key findings. The National Agrarian Reform Program (2007) and subsequent National Priority Program encountered implementation hurdles due to unclear policy specifics and strategies. The transmigration program, while aimed at providing property rights to reduce poverty and promote equality, faced issues with unresolved land certificates and disputes with local communities. However, the National Land Agency's Complete Systematic Land Registration program has successfully provided land certificates and addressed land degradation.

Additionally, new regulations introduced by PP No. 18 of 2021 aim to offer legal certainty for farmers and support agricultural development. This research contributes to existing knowledge by emphasizing the need for a more consistent and cohesive approach to land reform policies in Indonesia. It underscores the importance of strengthening policy coherence, improving inter-sectoral coordination, and focusing on empowering local farmers. Practical implications for policy and practice include enhancing regulatory clarity and coordination between government divisions, addressing unresolved land certificate issues and disputes with local communities, and implementing more effective strategies for land redistribution and agricultural development support. These findings provide a foundation for policymakers and practitioners to develop more effective land reform strategies that address environmental and social concerns, ultimately contributing to improved food security and sustainable agricultural practices in Indonesia.

2. Discussion

a. Integrating policy and community in land politics

Integrating policy and community in land politics is crucial for fostering sustainable land management practices that align with local needs and broader governance frameworks. By examining the interplay between top-down policies and bottom-up community engagement, this section explores how effective land governance can be achieved through collaborative efforts that respect local knowledge, promote food sovereignty, and ensure equitable resource distribution. This approach underscores the need for policies that address global sustainability goals and empower local communities to actively shape the future of their land use and agricultural practices (Ayunatasya et al., 2024; Rahmah et al., 2024).

The economic impact of mining and industrial development is substantial. However, it often leads to the degradation of natural ecosystems and environmental injustice, particularly for rural communities reliant on agriculture (Hajad et al., 2023). These challenges are further exacerbated by natural disasters, which worsen the situation in areas lacking effective land

management policies (Meckelburg & Wardana, 2024). Land degradation affects smallholder farmers, divided into three vulnerable groups: farmers with small landholdings, landless farmers, and those with limited access to agricultural inputs (Mirzabaev & Braun, 2022; Balynska et al., 2024).

Inequitable land ownership compounds these issues, leading to social and economic problems such as land disputes, income inequality, and increased poverty (Charoenratana & Shinohara, 2018; Fahad & Wang, 2018). As a result, displaced farmers often migrate to urban areas in search of alternative livelihoods, disrupting traditional farming communities and perpetuating a cycle of poverty and social instability (Hermans et al., 2023; Lapola et al., 2023; Sachs & McCord, 2018; Schwartzman, 2022). The causes of land degradation in Indonesia are rooted in complex interactions between natural and anthropogenic factors, as illustrated in Figure 7.

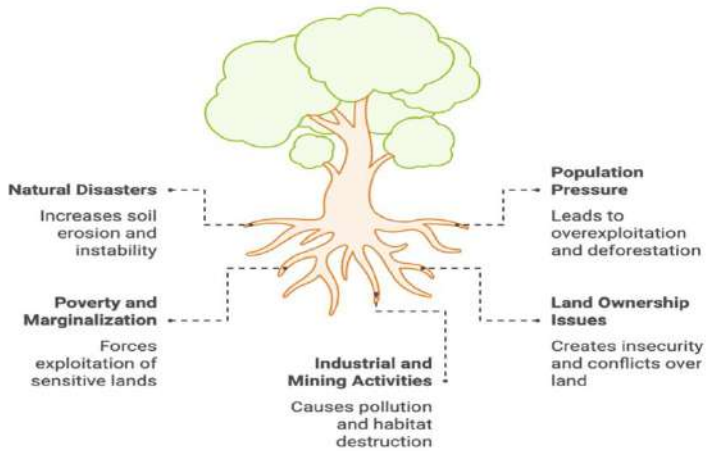

Figure 7. Causes of land degradation in Indonesia
Source: Processed by authors (2024)

A systematic literature review using VOSviewer reveals key insights on land degradation and governance, highlighting the intersection of policy frameworks, drivers of degradation, and community practices in shaping land management strategies. The analysis identifies three main policy approaches: classical, populist, and neoliberal (Clay & Zimmerer, 2020; Lapola et al., 2023). The classical approach emphasizes technological solutions but often neglects socio-cultural aspects. The populist approach

focuses on community participation and indigenous knowledge, while the neoliberal approach seeks to balance market mechanisms with social equity. Key drivers of degradation include institutional failures, weak governance, and socio-economic pressures. First, institutional failures, such as fragmented policies and overlapping jurisdictions, can hinder effective governance. Second, socio-economic pressures, such as poverty and land scarcity, can exacerbate unsustainable land use.

However, community practices, particularly indigenous and traditional knowledge systems, offer an essential counterpoint to top-down approaches and provide context-specific, sustainable solutions that are attuned to local ecological conditions for food security (Walker et al., 2020). However, these practices are often marginalized in favor of technocratic interventions. The VOSviewer co-emergence network visualizes the interactions between these themes, revealing underlying relationships in the land degradation discourse. For example, the classical approach is strongly associated with technological interventions, while the populist approach aligns with local knowledge and community participation concepts.

The findings of this study emphasize the need for a multidimensional perspective on land governance that recognizes the strengths and limitations of each policy approach while addressing the structural drivers of degradation. Thus, future research and policy interventions focusing on integrating technology, community participation, and policy coherence relevant to local needs to address land degradation will emerge.

b. Policy Failures and Escalating Land Degradation in Indonesia

The escalating land degradation in Indonesia is deeply intertwined with policy failures that have failed to address the root causes of environmental deterioration. Despite efforts to promote sustainable land use practices, the lack of effective enforcement and coordination among various levels of government, combined with insufficient land management strategies, has prevented destructive agricultural practices, deforestation, and industrial activities from continuing unchecked. These policy

shortcomings have led to a vicious cycle of land degradation, threatening the livelihoods of millions, particularly those in rural and agricultural communities, and exacerbating socio-economic inequalities across the country (Zainal et al., 2024; Haryanto et al., 2023).

This is exacerbated by the high cost of rehabilitating degraded land, which far exceeds the cost of prevention. When fertile land becomes unproductive, food security is compromised, especially in areas such as East Nusa Tenggara, where agriculture is the main source of livelihood. In addition, soil erosion, land depletion, increasing poverty, and food insecurity weigh on the national economy (Duhriah et al., 2024; Hasanudin et al., 2024; Hidayah, 2023). On the other hand, industrial growth and urban expansion also contribute to environmental degradation due to industrial encroachment on agricultural and forest lands, leading to pollution, habitat destruction, and land conversion. In Jakarta, this has resulted in reduced green open spaces, agricultural land, reduced biodiversity, and worsened air quality. Population growth also increases demand for agricultural land, leading to unsustainable farming practices.

The Indonesian government needs a new perspective to address the root causes of land degradation while promoting sustainable agricultural practices. For example, stronger policy frameworks and increased community engagement can be achieved, such as the agroforestry and organic farming programs adopted by local governments in West Sumatra. It is also essential to undertake land tenure reforms to address the underlying causes of land degradation, such as clarifying land rights, providing land certificates, encouraging conservation practices, and engaging local communities to ensure policies are responsive to local needs, as demonstrated by the Bali land use planning project (Iska et al., 2022; Syufa'at et al., 2023; Dahlan et al., 2024).

Figure 8. Strategies for addresing land degradation in Indonesia
Source: Processed by authors (2024)

Addressing land degradation in Indonesia requires a comprehensive strategy that combines policy reform, sustainable land management, and active community participation. By strengthening land tenure systems, promoting sustainable agricultural practices, and improving governance, Indonesia can mitigate the impacts of land degradation, safeguard its natural resources, and ensure food security for future generations. The country can set a course for a more resilient and prosperous future through coordinated efforts and a commitment to long-term sustainability.

c. Global Implications of Land Degradation and Agrarian Politics in Indonesia

Globally, the issue of land degradation in Indonesia reflects structural challenges also faced by many developing countries, particularly in relation to land ownership inequality, overexploitation of natural resources, and the weak legal protection of smallholder farmers. This condition not only threatens national food security but also directly impacts the stability of the international food system, especially considering Indonesia's position as one of the major agricultural commodity producers in Southeast Asia. As emphasized by Muttaqin et al. (2023), the global economic system that fails to uphold the principles of

maqāsid shari'ah—namely the protection of life, property, and environmental sustainability—tends to exacerbate socio-economic disparities and environmental crises. In this context, land degradation constitutes a multidimensional threat that should not be viewed merely as a technical problem, but rather as a multidisciplinary crisis rooted in global social, political, and economic structures.

Agrarian inequality in Indonesia, characterized by large-scale land control by corporations and the marginalization of small farmers, mirrors global trends occurring in various regions of Africa and Asia, where land disputes are frequently triggered by the expansion of extractive industries and the lack of legal safeguards for local communities (Syufa'at et al., 2023; Duhriah et al., 2024; Pauzi et al., 2024). This situation is further worsened by unjust mechanisms of global trade liberalization, where economically powerful actors have broader access to land and markets, while traditional farming communities are marginalized from sustainable production and food distribution chains. In this context, Hasanudin et al. (2024) argue that the weakness of legal foundations and institutional coordination in resolving Islamic economic disputes can also hinder socially and legally equitable development. Moreover, the limitations of dispute resolution mechanisms at the grassroots level often result in prolonged uncertainty, discouraging long-term investment in land rehabilitation and sustainable agriculture (Haryanto et al., 2023).

The global implications of land degradation are also evident in the relationship between environmental stress and human migration. As explained by Balynska et al. (2024), resource conflicts driven by land degradation frequently trigger internal and cross-border migration, creating new challenges in protecting the rights of environmental refugees and managing sustainable development. These dynamics are consistent with findings by Mokhomole (2023), who illustrated how weak governance and institutional corruption in South Africa intensified environmental injustice and social instability, with ripple effects across the political and economic spectrum. Indonesia's experience in this regard can

serve as a critical case study for formulating global policies that integrate social justice, natural resource governance, and environmental protection.

Furthermore, the recurring patterns of land degradation in Indonesia suggest that fragmented and short-term agrarian reform strategies have resulted in misalignments between national development goals and global commitments to the Sustainable Development Goals (SDGs). Suryani et al. (2023) emphasize the necessity of integrating Islamic legal perspectives into regional development strategies to ensure equitable land distribution and resource allocation. In a broader sense, this integration may contribute to global sustainability efforts anchored in environmental and social justice values. This is further supported by Rahmah et al. (2024), who explored the legal dilemmas faced by agrarian officials in the context of land title transfer within the framework of Indonesia's agrarian reform, illustrating how legal ambiguities can obstruct progressive land governance efforts.

Thus, Indonesia is not only confronted with domestic challenges in restructuring land tenure and land-use governance but also holds a strategic role in contributing normative perspectives to global land governance discourse. Approaches that integrate local wisdom, Islamic justice principles, and participatory policymaking processes could serve as relevant models for other developing countries grappling with similar pressures. As Naisabur et al. (2024) assert, the pursuit of economic justice in the digital era must be accompanied by structural reforms in land ownership and resource distribution to prevent the reemergence of inequalities in new forms. In this light, the present study not only contributes to the national discourse but also expands the global understanding of how interdisciplinary approaches are essential to tackling land degradation and fostering inclusive and equitable food security. The Indonesian case offers critical insights for global policymakers aiming to reconcile ecological sustainability with social equity, particularly in the context of rural transformation and agricultural resilience (Laila & Abdullah, 2022; Bello, 2024).

D. Conclusion

This study uncovers the deep connection between land degradation, land politics, and food security in Indonesia. Unequal access to land, unsustainable farming practices, and poorly designed policies are key drivers that worsen land degradation, poverty, and food insecurity among farmers. Although the government has introduced various policies, their effectiveness is limited by the failure to incorporate indigenous knowledge. The study offers a fresh perspective on how socio-political factors shape land use and its consequences. It emphasizes the need for comprehensive agrarian reform that integrates ecological, social, and economic considerations. It underscores the critical role of Indigenous knowledge, often neglected in past approaches, in crafting effective policies.

The findings carry significant implications for policy and practice. First, policymakers must address structural inequalities in land ownership to ensure fair access for marginalized farmers. Second, land management strategies should actively incorporate Indigenous knowledge to enhance their impact. Third, adopting a participatory approach that involves local communities in land reform efforts is essential for long-term success.

Acknowledgment

The authors would like to thank Universitas Teuku Umar for funding this research through the Associate Professor research scheme number 160/UN59.7/SPK-PPK/2024.

Bibliography

Akhmadi, A., & Januarsi, Y. (2021). Profitability and Firm Value: Does Dividend Policy Matter for Indonesian Sustainable and Responsible Investment (SRI)-KEHATI Listed Firms? *Economies*, *9*(4), 163. https://doi.org/10.3390/economies9040163.

Aleminew, A. (2023). Impacts of Land Degradation on Crop Yields and its Management Options: A Review. *Agricultural Reviews*, *45*(1), 127. https://doi.org/10.18805/ag.rf-263.

Andersson, E., Brogaard, S., & Olsson, L. (2011). The Political Ecology of Land Degradation. *Annual Review of Environment and Resources*, *36*(1), 295–319. https://doi.org/10.1146/annurev-environ-033110-092827.

Angaman, K. V., Mirzabaev, A., & Niang, B. B. (2024). Economic Impacts of Land Degradation: Evidence from Côte d'Ivoire. *Land Degradation & Development*, *35*(4), 1541–1552. https://doi.org/10.1002/ldr.5004.

Aryatama, D. S., & Lesmana, R. M. (2022). The Legal Consequences of the Forgive Deed Bringed by the Prisoner to the Notary. *Khazanah Hukum*, *4*(2), 101–105. https://doi.org/10.15575/kh.v4i2.14891.

Ayunatasya, Safitri, D. P., & Firman, F. (2024). Analisis Jejaring Kebijakan dalam Program Sertifikasi Permukiman di Atas Air di Kelurahan Kawal Kecamatan Gunung Kijang Kabupaten Bintan. *Journal of Social and Policy Issues, 4*(2), 60–65. https://doi.org/10.58835/jspi.v4i2.330.

Azadi, H., & Vanhaute, E. (2019). Mutual Effects of Land Distribution and Economic Development: Evidence from Asia, Africa, and Latin America. *Land*, *8*(6), 1–15. https://doi.org/10.3390/land8060096.

Balynska, O., Korniienko, M., Martseliak, O., Halunko, V., & Mahnovskyi, I. (2024). Constitutional, Administrative and Criminal Law Regulation of Protecting Rights of Internally Displaced Persons: Foreign Experience and Directions for Improvement. *Khazanah Hukum*, *6*(1), 1–10. https://doi.org/10.15575/kh.v6i1.33775.

Bansah, K. J., Acquah, P. J., & Boafo, A. (2024). Land, water, and forest Degradation in Artisanal and Small-Scale Mining: Implications for Environmental Sustainability and Community Wellbeing. *Resources Policy*, *90*, 104795. https://doi.org/10.1016/j.resourpol.2024.104795.

Barbier, E. B. (2010). Poverty, Development, and Environment. *Environment and Development Economics*, *15*(6), 635–660. https://doi.org/10.1017/s1355770x1000032x.

Barbier, E. B., & Hochard, J. P. (2018). Land Degradation and Poverty. *Nature Sustainability*, *1*(11), 623–631. https://doi.org/10.1038/s41893-018-0155-4.

Bello, A. H. (2024). Islamic Law of Inheritance among the Yoruba of Southwest Nigeria: A Case Study of Dar ul-Qadha (Arbitration Panel). *Journal of Islamic Law*, *5*(1), 44–61. https://doi.org/10.24260/jil.v5i1.2058.

Bernard, H. R., Wutich, A., & Ryan, G. W. (2016). *Analyzing Qualitative data: Systematic Approaches.* SAGE Publications.

Botah, K. Y. (2024a). Why Institutions Matter: Analysis of Their Significance in Shaping Economic, Environmental, And Policy Transformation. *Journal of Social and Policy Issues*, *4*(2), 79–87. https://doi.org/10.58835/jspi.v4i2.246.

Bucała-Hrabia, A. (2017). Long-Term Impact of Socio-Economic Changes on Agricultural Land use in the Polish Carpathians. *Land Use Policy*, *64*, 391–404. https://doi.org/10.1016/j.landusepol.2017.03.013.

Charoenratana, S., & Shinohara, C. (2018). Rural Farmers in an Unequal World: Land Rights and Food Security for Sustainable Well-Being. *Land Use Policy*, *78*, 185–194. https://doi.org/10.1016/j.landusepol.2018.06.042.

Chosiah, C., Purwanto, B., & Ermawati, W. J. (2019). Dividend Policy, Investment Opportunity Set, Free Cash Flow, and Company Performance: Indonesian's Agricultural Sector. *Jurnal Keuangan Dan Perbankan*, *23*(3), 403-417. https://doi.org/10.26905/jkdp.v23i3.2517.

Clay, N., & Zimmerer, K. S. (2020). Who is Resilient in Africa's Green Revolution? Sustainable Intensification and Climate Smart Agriculture in Rwanda. *Land Use Policy*, *97*, 104558. https://doi.org/10.1016/j.landusepol.2020.104558.

Dahlan, A., Voak, A., Chin, J., Mariyani Squire, E., & Aprianto, N. E. K. (2024). Ethno-Political Dynamism and Its Role in the Development of Indonesian Islamic Banking Law. *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, *7*(2), 393–409. https://doi.org/10.24090/volksgeist.v7i2.11077.

Djanibekov, U., & Finger, R. (2018). Agricultural Risks and Farm Land Consolidation Process in Transition Countries: The Case of Cotton Production in Uzbekistan. *Agricultural Systems*, *164*, 223–235. https://doi.org/10.1016/j.agsy.2018.03.009.

Duhriah, Yati, F., Asmadia, T., Rahmat, A., Muslim, & Baharuddin, A. S. (2024). Institutionalization of Islam and Adat: The Legal System of Hak Langgeih in Aceh. *Juris: Jurnal Ilmiah Syariah*, *23*(1), 41–53. https://doi.org/10.31958/juris.v23i1.7482.

Ellickson, R. C., Been, V. L., Hills, R. M., & Serkin, C. (2020). *Land Use Controls: Cases and Materials*.

Fahad, S., & Wang, J. (2018). Farmers' Risk Perception, Vulnerability, and Adaptation to Climate Change in Rural Pakistan. *Land Use Policy*, *79*, 301–309. https://doi.org/10.1016/j.landusepol.2018.08.018.

Gerber, N., Nkonya, E., & Von Braun, J. (2014). Land Degradation, Poverty and Marginality. In *Marginality: Addressing the Nexus of Poverty, Exclusion and Ecology* (pp. 181–202). Springer Netherlands. https://doi.org/10.1007/978-94-007-7061-4_12.

Giger, M., & Musselli, I. (2023). Could Global Norms Enable Definition of Sustainable Farming Systems in a Transformative International Trade System? *Discover Sustainability*, *4*(1), 18. https://doi.org/10.1007/s43621-023-00130-0.

Gomiero, T. (2016). Soil Degradation, Land Scarcity and Food Security: Reviewing a Complex Challenge. *Sustainability (Switzerland)*, *8*(3), 281. https://doi.org/10.3390/su8030281.

Gotham, K. F. (2001). A City Without Slums: Urban Renewal, Public Housing, and Downtown Revitalization in Kansas City, Missouri. *American Journal of Economics and Sociology*, *60*(1), 285–316. https://doi.org/10.1111/1536-7150.00064.

Hajad, V. (2021). The Dilemma of Natural Resources: Economic Opportunities and Challenges Post-Conflict. *International Journal of Energy Economics and Policy*, *11*(1), 426–432. https://doi.org/10.32479/ijeep.10326.

Hajad, V., & Ikhsan, I. (2024). Ecofeminism as a Movement: Choosing between Economics and Nature Protection. *Theoretical and Practical Research in the Economic Fields*, *15*(1), 91–100. https://doi.org/10.14505/tpref.v15.1(29).09.

Hajad, V., Ikhsan, I., Herizal, H., Latif, I. R., & Marefanda, N. (2023). Poverty and the Curse of Natural Resources in Indonesia. *Journal of Contemporary Governance and Public Policy*, *4*(1), 41–58. https://doi.org/10.46507/jcgpp.v4i1.92.

Haryanto, R., Maufiroh, L., & Sulaiman, S. H. (2023). Waqf Land in Madura; Its Management and Typical Dispute Resolution. *Al-Ihkam: Jurnal Hukum Dan Pranata Sosial*, *18*(2), 496–518. https://doi.org/10.19105/al-lhkam.v18i2.7570.

Hasanudin, Kamsi, & Anshori, A. Y. (2024). The Contestation of Legal Foundations in the Resolution of Islamic Economic Disputes in Religious Courts. *Al-Manahij: Jurnal Kajian Hukum Islam*, *18*(2), 271–288. https://doi.org/10.24090/mnh.v18i2.11934.

Hermans, K., Müller, D., O'Byrne, D., Olsson, L., & Stringer, L. C. (2023).

Land Degradation and Migration. *Nature Sustainability*, *6*(12), 1503–1505. https://doi.org/10.1038/s41893-023-01231-4.

Hidayah, N. (2023). Gender, Economy, and the Law: Women Entrepreneurs in Indonesian and Islamic Legal Perspectives. *Samarah*, *7*(2), 1121–1143. https://doi.org/10.22373/sjhk.v7i2.17944.

Holden, S. T., & Ghebru, H. (2016). Land Tenure Reforms, Tenure Security and Food Security in Poor Agrarian Economies: Causal Linkages and Research Gaps. *Global Food Security*, *10*, 21–28. https://doi.org/10.1016/j.gfs.2016.07.002.

Hunsberger, C., Corbera, E., Borras, S. M., Franco, J. C., Woods, K., Work, C., de la Rosa, R., Eang, V., Herre, R., Kham, S. S., Park, C., Sokheng, S., Spoor, M., Thein, S., Aung, K. T., Thuon, R., & Vaddhanaphuti, C. (2017). Climate Change Mitigation, Land Grabbing and Conflict: Towards a Landscape-Based and Collaborative Action Research Agenda. *Canadian Journal of Development Studies*, *38*(3), 305–324. https://doi.org/10.1080/02255189.2016.1250617.

Iska, S., David, Renie, E., & Nengsih, I. (2022). Implications of the Pagang Gadai Contract on Disharmony Social Actors in Minangkabau Community. *Juris: Jurnal Ilmiah Syariah*, *21*(1), 27–37. https://doi.org/10.31958/juris.v21i1.5647.

Jack Reardon, J. R. (2018). Rethinking and Reconceptualizing Economics to Eradicate Inequality and Poverty. *Journal of King Abdulaziz University Islamic Economics*, *31*(1), 105–114. https://doi.org/10.4197/islec.31-1.6.

Jerneck, A., & Olsson, L. (2013). More Than Trees! Understanding the Agroforestry Adoption Gap in Subsistence Agriculture: Insights from Narrative Walks in Kenya. *Journal of Rural Studies*, *32*, 114–125. https://doi.org/10.1016/j.jrurstud.2013.04.004.

King, T. (2013). The Inconvenient Indian: A Curious Account of Native People in North America. In *University of Minnesota Press*.

Kirui, O. K., Mirzabaev, A., & von Braun, J. (2021). Assessment of Land Degradation 'on the Ground' and from 'Above'. *SN Applied Sciences*, *3*(3), 318. https://doi.org/10.1007/s42452-021-04314-z.

Laila, N. Q., & Abdullah, I. (2022). Questioning Fiqh Muamalah of Toleration: Religious Spatial Segregation in the Urban Area of Yogyakarta. *Al-Ihkam: Jurnal Hukum Dan Pranata Sosial*, *17*(1), 28–59. https://doi.org/10.19105/al-lhkam.v17i1.5419.

Lapola, D. M., Pinho, P., Barlow, J., Aragão, L. E. O. C., Berenguer, E., Carmenta, R., Liddy, H. M., Seixas, H., Silva, C. V. J., Silva, C. H. L., Alencar, A. A. C., Anderson, L. O., Armenteras, D., Brovkin, V., Calders, K., Chambers, J., Chini, L., Costa, M. H., Faria, B. L., … Walker, W. S. (2023). The Drivers and Impacts of Amazon Forest Degradation. *Science*, *379*(6630), eabp8622. https://doi.org/10.1126/science.abp8622.

Larsen, A. F., & Lilleør, H. B. (2014). Beyond the Field: The Impact of Farmer Field Schools on Food Security and Poverty Alleviation. *World Development*, *64*, 843–859. https://doi.org/10.1016/j.worlddev.2014.07.003.

Le, H. C., & Le, T. H. (2023). Effects of Economic, Social, and Political Globalization on Environmental Quality: International Evidence. *Environment, Development and Sustainability*, *25*(5), 4269–4299. https://doi.org/10.1007/s10668-022-02243-4.

Mariane, I., Sumanto, L., Probondaru, I. P., & Idris, S. H. B. (2024). Problems of Converting Agricultural Land and the Need to Anticipate Its Control After the Enactment of the Job Creation Law. *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, *7*(1), 177–198. https://doi.org/10.24090/volksgeist.v7i1.10473.

Martin, W. G., & Palat, R. A. (2014). Asian Land Acquisitions in Africa: Beyond the 'New Bandung' or a 'New Colonialism'? *Agrarian South*, *3*(1), 125–150. https://doi.org/10.1177/2277976014530221.

Meckelburg, R., & Wardana, A. (2024). The Political Economy of Land Acquisition for Development in the Public Interest: The Case of Indonesia. *Land Use Policy*, *137*, 107017. https://doi.org/10.1016/j.landusepol.2023.107017.

Mirzabaev, A. (2016). Land Degradation and Sustainable Land Management Innovations in Central Asia. In *Technological and Institutional Innovations for Marginalized Smallholders in Agricultural Development* (pp. 213–224). Springer International Publishing. https://doi.org/10.1007/978-3-319-25718-1_13.

Mirzabaev, A., & von Braun, J. (2022). True Cost of Food and Land Degradation. *Russian Journal of Economics*, *8*(1), 7–15. https://doi.org/10.32609/j.ruje.8.78376.

Mokhomole, T. D. (2023). The Role and Impact of Forensic Investigations Unit in the Fight Against Fraud, Corruption, Irregularities, Financial Misconduct and Maladministration in the Public Sector

of South Africa. *Khazanah Hukum*, *5*(1), 18–32. https://doi.org/10.15575/kh.v5i1.22605.

Muttaqin, A. A., Samsudin, M. A., Salleh, A. D., & Ahmad, A. A. (2023). The Relationship of Disaster to the Islamic Economic System: An Analysis on Aspect of Maqāsid Shari'āh Framework. *Samarah*, *7*(1), 216–238. https://doi.org/10.22373/sjhk.v7i1.16014.

Mwaijande, F., & Mwakalikamo, J. (2024). Potential of Social Protection Policy Interventions for Breaking Poverty Cycle in Tanzania. *Journal of Social and Policy Issues*, 34–39. https://doi.org/10.58835/jspi.v4i1.306.

Naisabur, N., Putra, H. M., Ahyani, H., Novita, D., & Kurniati, P. (2024). The Prohibition of Social E-Commerce on TikTok Shop: A Fiqh Examination Based on Sharia Compliance and Economic Justice. *Al-Manahij: Jurnal Kajian Hukum Islam*, *18*(1), 59–78. https://doi.org/10.24090/mnh.v18i1.9674.

Nkonya, E., Johnson, T., Kwon, H. Y., & Kato, E. (2015). Economics of land Degradation in sub-Saharan Africa. In *Economics of Land Degradation and Improvement - A Global Assessment for Sustainable Development* (pp. 215–259). Springer International Publishing. https://doi.org/10.1007/978-3-319-19168-3_9.

Obayelu, A. E., Arowolo, A. O., Oyawole, F. P., Aminu, R. O., & Ibrahim, S. B. (2020). The Linkage between Agricultural Input Subsidies, Productivity, Food Security, and Nutrition. In *Food Security and Nutrition* (pp. 107–124). Elsevier. https://doi.org/10.1016/B978-0-12-820521-1.00005-8.

Olabisi, M., Tschirley, D. L., Nyange, D., & Awokuse, T. (2021). Does Trade Protectionism Promote Domestic Food Security? Evidence from Tanzanian Edible Oil Imports. *Global Food Security*, *28*, 100470. https://doi.org/10.1016/j.gfs.2020.100470.

Olsson, L., & Jerneck, A. (2010). Farmers Fighting Climate Change-from Victims to Agents in Subsistence Livelihoods. *Wiley Interdisciplinary Reviews: Climate Change*, *1*(3), 363–373. https://doi.org/10.1002/wcc.44.

Pauzi, M., Arianti, F., Masum, A., & Rani, M. (2024). Actualizing Islamic Economic Law in the Digital Era: A Study of the Application of Khiyar al-Majlis in Electronic Contracts. *Juris: Jurnal Ilmiah Syariah*, *23*(2), 205–214. https://doi.org/10.31958/juris.v23i2.11573.

Pratama, N. B., Purnomo, E. P., & Agustiyara, A. (2020). Sustainable Development Goals (SDGs) dan Pengentasan Kemiskinan di Daerah

Istimewa Yogyakarta. *Sosiohumaniora: Jurnal Ilmiah Ilmu Sosial Dan Humaniora*, *6*(2), 64–74. https://doi.org/10.30738/sosio.v6i2.8045.

Prihatin, P. S., Setiawan, R., & Wedayanti, M. D. (2024). Evaluation of the Implementation of Corporate Social Responsibility (CSR) Policies in Dumai City, Riau Province, Indonesia. *Jurnal Ilmiah Peuradeun*, *12*(1), 273–292. https://doi.org/10.26811/peuradeun.v12i1.972.

Ragasa, C., & Chapoto, A. (2017). Moving in the Right Direction? The Role of Price Subsidies in Fertilizer use and Maize Productivity in Ghana. *Food Security*, *9*(2), 329–353. https://doi.org/10.1007/s12571-017-0661-7.

Raharjo, J. T., Fauzi, R., Hadiyan, Y., Andriyani, E. P., & Mulyono, B. T. (2023). Feasibility Study of Zero Burning Peatland Agriculture in Mempawah District, West Kalimantan. *IOP Conference Series: Earth and Environmental Science*, *1168*(1), 012006. https://doi.org/10.1088/1755-1315/1168/1/012006.

Rahmah, S., Jalil, H., & Kadir, M. Y. A. (2024). Legal Dilemma for Land Deed Officials in Transferring Land Title Within Agrarian Reform in Indonesia: A Study in Aceh, Indonesia. *Samarah*, *8*(1), 556–578. https://doi.org/10.22373/sjhk.v8i1.16898.

Rahman, S., Anik, A. R., & Sarker, J. R. (2022). Climate, Environment and Socio-Economic Drivers of Global Agricultural Productivity Growth. *Land*, *11*(4), 512. https://doi.org/10.3390/land11040512

Ramamurthy, V., Singh, S. K., Chattaraj, S., Reddy, G. P. O., & Ramesh Kumar, S. C. (2017). Land Resource Inventory towards Village Level Agricultural Land use Planning. *Sustainable Management of Land Resources: An Indian Perspective*, 643–668. https://doi.org/10.1201/9781315365565.

Sachs, J. D., & McCord, G. C. (2018). Extreme Poverty. In *The New Palgrave Dictionary of Economics* (pp. 4337–4346). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-349-95189-5_2662.

Santantonio, N., & Robbins, K. (2020). A Hybrid Optimal Contribution Approach to Drive Short-Term Gains while Maintaining Long-Term Sustainability in a Modern Plant Breeding Program. In *bioRxiv*. https://doi.org/10.1101/2020.01.08.899039.

Saputra, A., Nurkhalis, N., Sempena, I. D., Muaf, M. J., & Marefanda, N. (2022). Food Security in the Face of the COVID-19 Pandemic: The Simeulue Community's Strategies. *Jurnal Public Policy*, *8*(4), 239-243. https://doi.org/10.35308/jpp.v8i4.6192.

Schwartzman, G. (2022). Climate Rentierism After Coal: Forests, Carbon Offsets, and Post-Coal Politics in the Appalachian coalfields. *Journal of Peasant Studies*, *49*(5), 924–944. https://doi.org/10.1080/03066150.2022.2078710.

Shah, A. R. (2023). Land Degradation. In *Dictionary of Ecological Economics: Terms for the New Millennium* (pp. 314–315). https://doi.org/10.4337/9781788974912.L.4.

Singh, N. (2023). *Gender, Environment Degradation, and Bioenergy Trajectories: Eco-Feminist Perspective* (pp. 1–20). https://doi.org/10.1007/978-3-030-91262-8_1-1

Soeprobowati, T. R., Suedy, S. W. A., Lubis, A. A., & Miller, J. (2020). Pollen and Diatom Evidence of Sea Water Intrusion, East Flood Canal (Banjir Kanal Timur), Semarang, Indonesia. *Environmental Earth Sciences*, *79*(19), 462. https://doi.org/10.1007/s12665-020-09186-x.

Stierl, M. (2018). Migrant Resistance in Contemporary Europe. In *Migrant Resistance in Contemporary Europe*. https://doi.org/10.4324/9781351270489.

Suryani, I., Muhtar, M. H., Rahman, Y. M., Jaya, B. P. M., & Khalaf, A. A. (2023). Integration of Islamic Law in Regional Development in Indonesia. *Juris: Jurnal Ilmiah Syariah*, *22*(1), 1–11. https://doi.org/10.31958/juris.v22i1.8770.

Suryono Hadi, Y., Khusaisni, M., Fadli, M., & Kusumaningrum, A. (2024). Utilizing System Dynamics for Border Area Development in Napan Village, North Bikomi, East Nusa Tenggara. *Journal of Social and Policy Issues*, 4(2), 99–104. https://doi.org/10.58835/jspi.v4i2.323.

Syufa'at, Zaidi, S. M. S., & Mutholaah. (2023). Sandwich Generation in Contemporary Indonesia: Determining Responsibility in Caring for Elderly under Islamic Law and Positive Law. *Al-Manahij: Jurnal Kajian Hukum Islam*, *17*(2), 167–181. https://doi.org/10.24090/mnh.v17i2.9371.

Thierfelder, C., & Mhlanga, B. (2022). Short-Term Yield Gains or Long-Term Sustainability? – A Synthesis of Conservation Agriculture Long-Term Experiments in Southern Africa. *Agriculture, Ecosystems and Environment*, *326*, 107812. https://doi.org/10.1016/j.agee.2021.107812.

Walker, W. S., Gorelik, S. R., Baccini, A., Aragon-Osejo, J. L., Josse, C., Meyer, C., Macedo, M. N., Augusto, C., Rios, S., Katan, T., de Souza, A. A., Cuellar, S., Llanos, A., Zager, I., Mirabal, G. D., Solvik, K. K., Farina, M. K., Moutinho, P., & Schwartzman, S. (2020). The Role of Forest

Conversion, Degradation, and Disturbance in the Carbon Dynamics of Amazon Indigenous Territories and Protected Areas. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(6), 3015–3025. https://doi.org/10.1073/pnas.1913321117.

Zainal, S., Ilham, I., Fakhrurrazi, Arifin, A., & Aulia, F. (2024). Conflict Resolution in Aceh: A Sociological Study of Ecological Sustainability and Palm Oil. *Samarah*, *8*(3), 1928–1947. https://doi.org/10.22373/sjhk.v8i3.21069.

Zanabazar, A., Ukhnaa, M., Xuexi, H., Bira, S., Jigjiddorj, S., & Pagvajav, O. (2017). The Current Situation and Trend of the Labor Force of Mining Sector in Mongolia. *Jurnal Ilmiah Peuradeun*, *5*(3), 341-350. https://doi.org/10.26811/peuradeun.v5i3.175.

Zwarteveen, M. Z., & Boelens, R. (2014). Defining, Researching and Struggling for Water Justice: Some Conceptual Building Blocks for Research and Action. In *Water International*, *39*(2), 143-158. https://doi.org/10.1080/02508060.2014.891168.

p-ISSN: 2338-8617
e-ISSN: 2443-2067