

The Development of Agricultural Land Conversion: Legal Culture and Comparative Law in Indonesia and Nigeria

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Abstract

Land conversion is an important issue in Indonesia and Nigeria, with significant economic, social and environmental impacts. The problem-solving approach to uncovering farmers' legal culture is done through a sociolegal approach, where the law is seen not limited to the text but also its context in reality in society. With the sociolegal approach, the values, attitudes and views (NSP) of farmers towards their agricultural land, towards LP2B policies, and the behaviour of farmers in the use and utilization of their agricultural land designated as sustainable food agricultural land can be revealed and constructed appropriately and adequately. This research aims to uncover how farmers' legal culture can be better integrated in the law enforcement of food agricultural land protection, as well as find ways to harmonize formal laws with local practices in order to

achieve more effective and equitable land protection, in addition to comparing factors affecting land conversion in both countries, including urbanization, infrastructure and industrial development, and government policies. The economic impacts of land conversion include economic growth and job creation, but also threaten food security and farmers' livelihoods. Social impacts include land conflicts and changes in people's lifestyles, while environmental impacts include deforestation, erosion and flooding. Proposed solutions include stronger monitoring and law enforcement, community participation, and sustainable policies and empowerment programs for farmers. In conclusion, wise policies and active participation from all parties are needed to sustainably manage land conversion in Indonesia and Nigeria.

KEYWORDS *Land Conversion, Legal Culture, Agricultural Land, Indonesia, Nigeria*

Introduction

The Central Java Agriculture and Plantation Office reports that in recent years, the conversion of agricultural land is estimated to reach between 600 to 1,000 hectares (Ha) per year. As one of the provinces that has an area of 3,254,412 Ha, and is projected as an area with significantly increased industrial sector development, changes in the function of a land greatly affect the government in the policy-making process. This change in composition has encouraged the Central Java Provincial Government to review the 2009-2029 of Spatial and Regional Planning (*Rencana Tata Ruang Tata Wilayah* hereinafter as RTRW) by including an analysis of Environmental Support and Capacity in determining the potential for regional development.¹

Land damage in Central Java due to land conversion, significantly occurs in various regions in Central Java, administratively there are 29 regencies and 6 cities, 573 sub-districts covering 7,809 villages and 769 sub-districts in Central

¹ Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, *Ringkasan Eksekutif Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Provinsi Jawa Tengah Tahun 2018* (Semarang: Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, 2018), 1.

Java.² Soil damage also occurs in Central Java Province, especially in Sukoharjo and Grobogan Regencies due to water erosion with a soil thickness of 100 cm and has exceeded the threshold limit. Land degradation also occurred in several areas where most of the parameters exceeded the threshold of land degradation, such as Purworejo District, Magelang District, Grobogan District, Kudus District, Kendal District, Pemalang District, Magelang City, and Semarang City. As a province directly adjacent to the sea, Central Java has vast coastal potential and is rich in natural resources.³ Among this wealth, we find:

1. Mangrove cover is spread across 13 districts and 2 cities, of which 75% are in good condition, while the rest are in moderate to damaged condition;
2. Seagrass meadows are found in 4 districts of Rembang, Jepara, Batang, and Kebumen with an area of 1,054.25 Ha, where the most severe damage occurred in Batang District;
3. Coral reefs covering 11,105.56 hectares distributed in 9 districts Tegal, Pemalang, Pekalongan, Batang, Kendal, Jepara, Pati, Rembang, and Kebumen with most of them in damaged condition.
4. The phenomenon of abrasion covering an area of 8,672.28 hectares and accretion covering 3,709.71 hectares, especially in Demak Regency, Brebes Regency, Semarang City and Cilacap Regency, has posed various challenges. Abrasion that turns land into sea has the potential to lead to lawsuits from residents who still hold letters or land certificates that have now been submerged.

Recognizing these potentials and challenges, it is important that we manage and protect coastal resources with care and commitment, so that they can be passed on to future generations in better condition.⁴

The background is that the protection of food agricultural land has not been effective, which is characterized by the high rate of conversion of agricultural land into non-agricultural land. It can be described that:

1. Legal Culture of Farmers

² Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, *Ringkasan Eksekutif Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Provinsi Jawa Tengah Tahun 2018*.

³ Suchatiningsih Dian Wisika Prajanti et al., "Economy of Central Java Coastal Communities : Strengths , Weaknesses, Opportunities and Threats," *Advances In Natural And Applied Sciences Research* 14, no. 2 (2020): 173–79, <https://doi.org/10.22587/anas.2020.14.2.23>.

⁴ Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, *Ringkasan Eksekutif Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Provinsi Jawa Tengah Tahun 2018*.

This term refers to how farmers understand and apply the law in managing and protecting their land. This includes their knowledge of the rights they have over the land, the applicable regulations, as well as how they apply the law in their daily activities. In other words, it is about how farmers integrate legal knowledge into their practices to safeguard and utilize farmland effectively.

2. Protection of Sustainable Food Agricultural Land

Protection of sustainable food agricultural land is an effort to ensure that agricultural land remains productive and is not converted to other uses that do not support food security. This involves careful management of soil, water and environmental quality, and ensuring that the land remains optimally used for agricultural purposes. With this approach, we seek to maintain the balance of the ecosystem and ensure the sustainability of agricultural resources for the future.

3. Ineffective Land Protection

Although various regulations and policies have been implemented to protect agricultural land, their implementation and supervision have not been optimal. This shows that, although the existing legal and policy frameworks are designed to protect agricultural land, their effectiveness in preventing the conversion of agricultural land to non-agricultural uses is still insufficient. As a result, agricultural land often remains threatened by conversions that can be detrimental to food security.

4. High Rate of Agricultural Land Conversion to Non-Agricultural Land

This phenomenon indicates a significant trend where land previously used for agriculture is being converted to other uses, such as residential, industrial or commercial. This land conversion has the potential to threaten the availability of necessary agricultural land, and could ultimately affect food security and the availability of agricultural products.

Research conducted by Sutrisno, Sugihardjo, and Barokah reported that the average rate of agricultural land conversion reached about 40,000 hectares per year. In Central Java, between 2000 and 2010, the conversion of paddy fields reached 14,830 hectares, which is equivalent to about 4.12 hectares per day. Kendal Regency, in particular, is listed as one of the regions in Central Java with a high rate of agricultural land conversion, ranging from 1,230 to 1,521 hectares per year.⁵

⁵ Joko Sutrisno, Umi Barokah, and Sugihardjo, "Pengembangan Model Insentif Disinsentif Untuk Mengurangi Laju Alih Fungsi Lahan Pertanian Dalam Rangka Mempertahankan Swasembada Beras Di Propinsi Jawa Tengah" (Surakarta, 2012).

Conversion of agricultural land is a serious threat to national food security, as it has permanent, cumulative and progressive impacts.⁶ There are at least three main factors both individually and simultaneously that determine the conversion of paddy fields, namely:

1. Scarcity of Land and Water Resources: The shortage of these resources encourages land conversion for other purposes that are considered more profitable or urgent.
2. Development Dynamics: The continuous process of development often leads to the conversion of agricultural land into areas for housing, industry or infrastructure.
3. Increase in Population: Rapid population growth increases the demand for land for housing and other needs, which often leads to conversion of agricultural land.

Therefore, a comprehensive agricultural land protection policy is needed. One way to control the rate of agricultural land conversion is through legal means. Law as a system consists of elements of legal substance, legal structure and legal culture. The elements of legal substance and structure are Law No. 41/2009 on the Protection of Sustainable Food Agricultural Land, hereinafter referred to as the LP2B Law, its implementing regulations, and the existence of ministries and agencies that have the authority to protect LP2B. However, Rusono et al stated that the LP2B Law has not been implemented properly.⁷

The planning and establishment of LP2B was not done thoroughly, with most of the stipulations being in the RTRW rather than the RDTR. LP2B development is still largely a routine program and not a special LP2B initiative. From a total of 9 districts, 5 districts have conducted LP2B research, 1 district will conduct it, while 3 districts have not conducted research. LP2B utilization and development tend to be part of the routine and not a special LP2B program. In addition, incentives have not been linked to LP2B, and there is no reporting system or information system specifically for LP2B. Farmer protection and empowerment are also more often routine programs and not part of LP2B. Funding for LP2B research comes from the APBD in 3 districts, but the community has not been involved in this program, and no administrative sanctions have been applied in the context of LP2B. Handari et al. showed that

⁶ E. Pasandaran, "Alternatif Kebijakan Pengendalian Konversi Lahan Sawah Beririgasi Di Indonesia," *Jurnal Litbang Pertanian* 25, no. 4 (2006).

⁷ Nono Rusono et al., *Evaluasi Implementasi Kebijakan Lahan Pertanian Pangan Berkelanjutan (LP2B)*, ed. Ali Muharam and Dini Maghfirra (Jakarta Pusat: Direktorat Pangan dan Pertanian, Badan Perencanaan Pembangunan Nasional, 2015), vi.

the implementation of LP2B protection policy was limited to the land identification process.⁸

The general elucidation of Law No. 41/2009 states that conversion of agricultural land poses a significant threat to the achievement of food security and sovereignty. Land conversion has serious implications for food production, the physical environment, and the welfare of land-dependent agricultural and rural communities. While the conversion of fertile agricultural lands continues to occur, integrated efforts to develop potential new agricultural lands are still lacking. As a result, the conversion of food agricultural land leads to an increasingly narrow area of cultivable land, often resulting in a decline in the welfare of farmers. Therefore, controlling the conversion of food agricultural land through the protection of food agricultural land is very important as an effort to realize food security and sovereignty, as well as to increase the prosperity and welfare of farmers and society in general.

The increase in the number of farming households has not been matched by available agricultural land, resulting in an increase in the number of landless or small farmers and farm laborers in Java. This situation complicates efforts to improve farmers' welfare and overcome rural poverty. Meanwhile, uncontrolled urbanization has caused urban activities to expand and encroach on agricultural land in rural areas adjacent to cities. Conversion of agricultural land leads to loss of access to essential resources for rural communities, reducing their livelihood opportunities. As a result, many rural residents are forced to migrate to urban areas, often without adequate employment opportunities. Threats to food security are becoming increasingly evident, necessitating the importation of food products to meet domestic needs. As the population continues to grow, there are serious concerns about potential food insecurity in the future. Therefore, Indonesia urgently needs to find solutions to increase food availability and expand agricultural land in order to overcome these challenges in the future.

The formulation of this research problem is that the legal culture of farmers has not been sufficiently revealed in the law enforcement of food agricultural land protection, even though farmers act as both subjects and objects in the protection. In more depth, this issue covers several important aspects:⁹

⁸ MF. Anita Widhy Handari, "Implementasi Kebijakan Perlindungan Lahan Pertanian Pangan Berkelanjutan Di Kabupaten Magelang" (Universitas Diponegoro, 2012), 48.

⁹ Sandra Contzen and Isabel Häberli, "Exploring Dairy Farmers' Quality of Life Perceptions – A Swiss Case Study," *Journal of Rural Studies* 88 (2021), <https://doi.org/10.1016/j.jrurstud.2021.11.007>; Coline Perrin and Brigitte Nougaredes,

1. Lack of Recognition of Farmers' Legal Culture: Farmers' legal culture, i.e. the values, norms and legal practices developed in agricultural communities, is often overlooked in the law enforcement process related to the protection of food agricultural land. This means that the way farmers understand and practice the law in their context has not been fully considered by policy makers and law implementers.
2. Farmers' Dual Role: Farmers are not only the actors that need to be protected, but also an integral part of the legal system that regulates agricultural land. As subjects, farmers are involved in the application and understanding of the law, while as objects, they are the ones that the food farmland protection law addresses. Law enforcement must consider this dual position for effectiveness.
3. Mismatch between Formal Law and Local Praxis: There is a gap between formal laws implemented by the government and local legal practices accepted by farmers. Enforcement of food agricultural land protection laws often does not take into account local ways of managing and protecting land, which can lead to the ineffectiveness of such laws on the ground.
4. The Need for a Participatory Approach: Effective law enforcement must involve farmers in the decision-making process and law implementation. Without involving farmers' perspectives and legal culture, policies to protect food agricultural land may not be in line with local needs and realities.
5. Limited Law Implementation and Socialization: There is a need to improve farmers' understanding of their rights and obligations in the context of land protection. Better socialization of the law and involvement of farmers in the policy formulation process can improve this situation.

In addition, this research aims to reveal how farmers' legal culture can be better integrated in the enforcement of food agricultural land protection law, as

“An Analytical Framework to Consider Social Justice Issues in Farmland Preservation on the Urban Fringe. Insights from Three French Cases,” *Journal of Rural Studies* 93 (2022), <https://doi.org/10.1016/j.jrurstud.2020.07.007>; Irwan Irwan and Hasruddin Nur, “Peran Ganda Perempuan Pekerja Rumput Laut Dalam Keluarga Di Kabupaten Bantaeng,” *Phinisi Integration Review* 4, no. 1 (2021), <https://doi.org/10.26858/pir.v4i1.19354>; Darrell D. Jackson, “Sander, the Mismatch Theory, and Affirmative Action: Critiquing the Absence of Praxis in Policy,” *Denver University Law Review* 89, no. 1 (2011); Maryam Mallakin et al., “From Design to Action: Participatory Approach to Capacity Building Needs for Local Overdose Response Plans,” *BMC Public Health* 23, no. 1 (2023), <https://doi.org/10.1186/s12889-023-15414-3>; Firdaus M Yunus, Azwarfajri Azwarfajri, and Muhammad Yusuf, “Penerapan Dan Tantangan Pelaksanaan Syariat Islam Di Aceh,” *Jurnal Sosiologi USK (Media Pemikiran & Aplikasi)* 17, no. 1 (2023), <https://doi.org/10.24815/jsu.v17i1.32865>.

well as to find ways to harmonize formal law with local practices in order to achieve more effective and equitable land protection. The research was conducted in Kendal District, with purposive site selection. The selection criteria include a) villages whose agricultural areas have been designated as Sustainable Food Agricultural Land (LP2B) according to a Regional Regulation that has been in effect for quite some time, and b) villages with a majority of the population working as farmers. Therefore, this research focuses on Penjalin Village, Brangsong Sub-district, Kendal District.

The problem-solving approach to uncovering farmers' legal culture in this study was conducted through a sociolegal approach,¹⁰ which is a combination of methodologies from the social sciences, including political science, economics, culture, history, anthropology, communication, and other related fields, integrated with legal science approaches such as examining principles, doctrines, and hierarchies of legislation, but also in the context of real life in society. With this approach, it is possible to explore farmers' values, attitudes and views (NSP) towards their farmland, as well as towards Sustainable Food Agriculture Land (*Lahan Pertanian Pangan Berkelanjutan*, hereinafter as LP2B) policies.¹¹ The sociolegal approach also allows us to understand farmers' behavior in the use and utilization of land that has been designated as sustainable food agricultural land. Through this approach, research can uncover and construct more accurately and adequately how farmers' legal culture affects and is affected by agricultural land protection policies and practices. This allows us to design solutions that are more relevant and effective in the real context of farmers' lives.

Sustainable Food Agriculture Land Area in Kendal District

¹⁰ Reza Banakar, *Normativity in Legal Sociology: Methodological Reflections on Law and Regulation in Late Modernity*, *Normativity in Legal Sociology: Methodological Reflections on Law and Regulation in Late Modernity*, 2015, <https://doi.org/10.1007/978-3-319-09650-6>; Reza Banakar and Max Travers, "Theory and Method in Socio-Legal Research," *Oñati International Series in Law and Society*, 2005.

¹¹ Sarash Amalia Pridasari and Luthfi Muta'ali, "Carrying Capacity of Agricultural Land and Determination of Sustainable Food Agriculture Land in Bantul Regency," *Jurnal Bumi Indonesia* 7 (2) (2018); K. E. Sari and F. V. Deswita, "The Mapping of Sustainable Food Agriculture Land in Kediri City," in *IOP Conference Series: Earth and Environmental Science*, vol. 361, 2019, <https://doi.org/10.1088/1755-1315/361/1/012027>; Zidney Ilma Fazaada Emha, et al. "Legal Policy and Challenges in Protecting Sustainable Food Agricultural Land in Indonesia: A Constitutional and Criminal Law Perspective." *The Indonesian Journal of International Clinical Legal Education* 6, no. 3 (2024): 287-318..

Kendal Regency has an area of 1,002.23 km².¹² The geographical location of Kendal Regency includes the following boundaries: to the north is bordered by the Java Sea, to the east by Semarang City, to the south by Temanggung Regency and Semarang Regency, and to the west by Batang Regency.

The seriousness of Kendal district in managing its natural resources has been proven since the creation of Kendal District Regional Regulation No. 20/2011 regulating the Regional Spatial Plan (RTRW) of Kendal District for the period 2011-2031. One of the important aspects regulated in this regulation is the area of Sustainable Food Agricultural Land (LP2B) and the standard area of paddy fields. Based on the data listed in the regulation, the LP2B area in Kendal District is 22,666.00 hectares.¹³ Meanwhile, the audit results show that the standard area of paddy fields reaches 26,177.29 hectares. From the comparison of the two data, there is a difference of 3,511.29 hectares between the standard area of paddy fields and the LP2B area.¹⁴ This difference indicates the existence of paddy fields that have not been categorized as LP2B. LP2B is agricultural land that is determined to be protected and maintained so as not to change its function, in order to ensure the availability of food agricultural land in a sustainable manner. Therefore, it is important to identify and include paddy fields that have not been registered in LP2B so that they can be protected from land conversion that is not in accordance with their designation. This regulation also covers various other aspects of regional spatial planning, including spatial planning objectives, policies, and strategies, as well as directions for utilization and control of spatial utilization. The main objective of the RTRW is to create a balance in the use of regional space, improve community welfare, and maintain regional security and defense.¹⁵ In the

¹² Fitrian Adiyaksa and Prijono Nugroho Djojomartono, Ph.D., "Evaluasi Alih Fungsi Lahan Pertanian Menjadi Lahan Industri Di Kabupaten Kendal Tahun 2014 - 2018," *JGISE: Journal of Geospatial Information Science and Engineering* 3, no. 1 (2020), <https://doi.org/10.22146/jgise.55519>.

¹³ Khoirul Isnaini Aulia, Sawitri Subiyanto, and Bambang Sudarsono, "Analisis Arah Perkembangan Fisik Wilayah Kabupaten Kendal Menggunakan Sistem Informasi Geografis," *Jurnal Geodesi Undip* 8, no. 1 (2019).

¹⁴ Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, *Ringkasan Eksekutif Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Provinsi Jawa Tengah Tahun 2018*.

¹⁵ Nurlia Ayu Pratama et al., "Evaluation of Environment Carrying Capacity Based on Land Capability in Batu City," *Jurnal Sumberdaya Alam Dan Lingkungan* 2, no. 1 (2015); Ruslan Wirosoedarmo, Jhohanes Bambang Rahadi Widiatmono, and Yoni Widyoseno, "Rencana Tata Ruang Wilayah (RTRW) Berdasarkan Daya Dukung Lingkungan Berbasis Kemampuan Lahan," *ARTITECH* 34, no. 4 (2014).

context of agriculture, the protection of paddy fields is very important given its role in food security. Productive paddy fields must be maintained so that they do not convert into non-agricultural land. This is in line with national policies that emphasize the importance of protecting sustainable food agricultural land. In addition, the Kendal District RTRW also regulates the establishment of strategic areas, community rights and obligations, and dispute resolution related to spatial utilization. With this regulation, it is expected that development in Kendal Regency can run in an efficient, effective, harmonious, balanced, and sustainable manner. Overall, Kendal District Regulation No. 20/2011 is an important step in effectively regulating and managing regional spatial utilization. With this regulation, it is expected that a balance between development and environmental preservation can be created, as well as the availability of sustainable food agricultural land.

According to Kendal District Regional Regulation No. 13/2013 on the Protection of Sustainable Food Agricultural Land, which has been updated by Kendal District Regional Regulation No. 11/2020, sustainable food agricultural land in Kendal District is defined as agricultural areas that are designated to be protected and developed consistently. The aim is to ensure staple food production that supports national food independence, security, and sovereignty.

Kendal District Regulation No. 13/2013 underscores the importance of sustainable food agricultural land protection in Kendal District. The main objectives of this regulation are to protect food agricultural areas and land in a sustainable manner, ensure the availability of food agricultural land in a sustainable manner, realize food independence, security, and sovereignty, and protect the ownership of food agricultural land owned by farmers. In addition, this regulation also aims to increase the prosperity and welfare of farmers and communities, increase the protection and empowerment of farmers, increase the provision of employment for a decent life, maintain ecological balance, and realize agricultural revitalization.

The coverage of sustainable food agricultural land in this regulation consists of three main components, namely Sustainable Food Agricultural Areas (KP2B), Sustainable Food Agricultural Land (LP2B), and Sustainable Food Agricultural Reserve Land (LCP2B)¹. KP2B is an area designated for food agriculture activities that is protected and maintained from conversion. LP2B is land used for food agriculture activities that is protected and maintained from conversion. LCP2B is land prepared for food agriculture activities that will be protected and maintained so as not to shift functions in the future.

Kendal District Regional Regulation Number 11 of 2020 amends several provisions in Kendal District Regional Regulation Number 13 of 2013. One important change is the determination of the area of sustainable food agricultural land (KLP2B) in Kendal District. The KLP2B area stipulated in this regulation is 22,666.00 hectares, consisting of 21,839 hectares of wetland and 827 hectares of dryland. This change aims to ensure that all food agricultural land in Kendal Regency can be protected and maintained from conversion.¹⁶

The protection of sustainable food agricultural land is very important in the context of national food security. Food agricultural land is a natural resource that must be protected and managed properly in order to provide optimal benefits for the community. This protection is also important to maintain ecological balance and prevent environmental degradation.

In addition, the protection of sustainable food agricultural land also aims to improve the welfare of farmers and communities. With this protection, farmers can feel more secure and protected in managing their agricultural land. This can also increase agricultural productivity and make a significant contribution to the regional economy.

Kendal District Regulation No. 13/2013 and Kendal District Regulation No. 11/2020 also regulate various other aspects related to the protection of sustainable food agricultural land.¹⁷ Some of the aspects regulated in these regulations include the determination of sustainable food agricultural land, development, research, utilization, guidance, control, conversion of sustainable food agricultural land, information systems, protection and empowerment of farmers, financing, community participation, and supervision.¹⁸

¹⁶ Dinas Lingkungan Hidup dan Kehutanan Pemerintah Provinsi Jawa Tengah, *Ringkasan Eksekutif Dokumen Informasi Kinerja Pengelolaan Lingkungan Hidup Daerah Provinsi Jawa Tengah Tahun 2018*.

¹⁷ Widya Kusuma Harniawati, Kismartini Kismartini, and Hartuti Purnaweni, "Evaluasi Kebijakan Spasial Perlindungan Lahan Pertanian Pangan Berkelanjutan Di Kecamatan Kaliwungu Kabupaten Kendal," *PERSPEKTIF* 10, no. 1 (2021), <https://doi.org/10.31289/perspektif.v10i1.4149>.

¹⁸ Rodhi Agung Saputra et al., "Agricultural Land Conversion for Housing Development and Sustainable Food Agricultural Land," *Technium Social Sciences Journal* 37 (2022), <https://doi.org/10.47577/tssj.v37i1.7600>; Haris Retno Susmiyati and Rahmawati Al-Hidayah, "The Legal Protection of Agricultural Land Sustainable Food in Mining Coal Area of East Kalimantan," *Pattimura Law Journal* 5, no. 1 (2020), <https://doi.org/10.47268/palau.v5i1.478>; Cláudia M. Viana et al., "Agricultural Land Systems Importance for Supporting Food Security and Sustainable Development Goals:

1. The designation of sustainable food agricultural land is carried out through a process that involves various relevant parties, including the local government, farmers, and communities. This process aims to ensure that all food agricultural land in Kendal District can be protected and maintained from conversion.
2. Sustainable food agricultural land development is carried out by taking into account various aspects, including economic, social and environmental aspects. This development aims to increase agricultural productivity and provide optimal benefits for the community.
3. Research and utilization of sustainable food agricultural land is carried out using appropriate and environmentally friendly technology. This research aims to develop various innovations that can increase agricultural productivity and maintain ecological balance.
4. Development and control of sustainable food agricultural land is carried out by the local government by involving various related parties. This guidance aims to increase the capacity of farmers in managing their agricultural land and ensure that all food agricultural land in Kendal District can be protected and maintained from conversion.
5. The conversion of sustainable food agricultural land is strictly regulated in this regulation. Land conversion can only be done with approval from the local government and must fulfill various predetermined requirements.
6. The sustainable food agricultural land information system was developed to facilitate the management and monitoring of food agricultural land in Kendal District. This information system also aims to increase transparency and accountability in the management of food agricultural land.
7. Farmer protection and empowerment is carried out through various programs and activities aimed at improving the capacity and welfare of farmers. These programs include training, counseling, and technical and financial assistance.
8. Financing of sustainable food agricultural land is done through various sources, including local government budgets, assistance from the central government, and community participation. This financing aims to ensure that all programs and activities related to the protection of sustainable food agricultural land can run well.
9. Community participation in the protection of sustainable food agricultural land is very important. The community is expected to actively participate

in various programs and activities related to the protection of sustainable food agricultural land.

10. Supervision of the implementation of sustainable food agricultural land protection is carried out by the local government by involving various related parties. This supervision aims to ensure that all programs and activities related to the protection of sustainable food agricultural land can run well and in accordance with predetermined provisions.

Overall, Kendal District Regulation No. 13/2013 and Kendal District Regulation No. 11/2020 are important steps in effectively regulating and managing the utilization of food agricultural land. With these regulations, it is hoped that a balance between development and environmental preservation can be created, as well as the availability of sustainable food agricultural land.¹⁹

The LP2B policy is also equipped with a set of rules that regulate the rights and obligations of farmers in maintaining their land for production. In the LP2B stretch, the government has an obligation to ensure that food land commodities do not change. Therefore, the government should guarantee continuous access to inputs, access to agricultural research, marketing networks, land titling opportunities, and tax incentives. The LP2B Regional Regulation of Kendal District has regulated matters that must be considered and carried out by the community as the addressee of the regulation. These provisions normatively regulate the obligations and participation contained in Article 34 of Local Regulation No. 13 of 2013 as follows. 1) Every person who has rights to land designated as sustainable agricultural land is obliged to utilize the land according to its designation and prevent damage to irrigation. 2) Such obligations apply to other parties in accordance with the provisions of laws and regulations. 3) Every person who owns rights to land designated as sustainable agricultural land shall participate in maintaining and improving soil fertility, preventing land damage and maintaining environmental sustainability. 4) The provision of utilizing land according to its designation and preventing damage to irrigation shall be the obligation of the Government and Regional Governments in accordance with the provisions of laws and regulations. In addition to containing obligations, the LP2B Regional Regulation of Kendal

¹⁹ M. Arpitha, S. A. Ahmed, and N. Harishnaika, "Land Use and Land Cover Classification Using Machine Learning Algorithms in Google Earth Engine," *Earth Science Informatics*, 2023, <https://doi.org/10.1007/s12145-023-01073-w>; Arpitha M, S A Ahmed, and N Harishnaika, "Correction to: Land Use and Land Cover Classification Using Machine Learning Algorithms in Google Earth Engine," *Earth Science Informatics* 16, no. 4 (2023), <https://doi.org/10.1007/s12145-023-01113-5>.

Regency also contains provisions for sanctions.²⁰ Any person who has a right to land designated as sustainable food agricultural land who does not carry out his/her obligations and causes damage to agricultural land, is obliged to repair the damage. The obligation of every person who owns land rights designated as sustainable agricultural land to utilize the land according to the designation has not been implemented as specified. The conversion of agricultural land in Kendal Regency after the enactment of agricultural land protection legislation continues to occur. Data from the Kendal Regency Central Bureau of Statistics shows changes to agricultural land as follows: in 2018 there were 240.53 km² of land for agriculture and 248.46 km² for non-agriculture, in 2019 there were 240.27 km² for agriculture and 247.58 km² for non-agriculture, in 2020 there were 240.88 km² for agriculture and 252.00 km² for non-agriculture.

TABLE 1. Land Use in Kendal District 2019-2021

Details	2021	2020	2019
Paddy Land	240,88	240,27	240,53
Farmland	220,42	247,35	224,85
Forest	162,64	139,22	161,14
Plantation	78,68	78,68	78,68
Non-agricultural land	252,00	247,58	248,46
Miscellaneous	47,61	49,13	48,57
TOTAL	1.002,23	1.001,73	1002,23

Sustainable Food Agricultural Land covering an area of ± 22,666 (twenty-two thousand six hundred and sixty-six) hectares consists of ± 21,839 (twenty-one thousand eight hundred and thirty-nine) hectares of wet land and ± 827 (eight hundred and twenty-seven) hectares of dry land spread across 19 (nineteen) sub-districts. With details of data per sub-district as shown on Table 2.²¹

TABLE 2. Sustainable Food Agricultural Land in Kendal District

No.	District	Wetland (Ha)	Dry Land (Ha)	Total (Ha)
1	Plantungan	1.049,91	0	1.049,91
2	Pageruyung	855,72	0	855,72

²⁰ Yunita Fenditia Astiti and Riesta Yogahastama, "Protection Of Sustainable Food Agricultural Land Against The Conversion Of Agricultural Land To Non-Agricultural (Study In Bangkalan)," *Trunojoyo Law Review* 4, no. 1 (2022), <https://doi.org/10.21107/tlr.v4i1.16236>.

²¹ Harun Syamsudin Nur Hidayah et al., "Kajian Perubahan Tutupan Lahan Terbangun Di Daerah Peri Urban Kabupaten Kendal," *Uniplan: Journal of Urban and Regional Planning* 4, no. 2 (2023), <https://doi.org/10.26418/uniplan.v4i2.68456>.

No.	District	Wetland (Ha)	Dry Land (Ha)	Total (Ha)
3	Sukorejo	813,74	0	813,74
4	Patean	1.052,03	303,05	1.052,03
5	Singorojo	595,60	86,58	595,60
6	Limbangan	934,92	0	934,92
7	Boja	1.613,41	14,47	1.613,41
8	Brangsong	1.030,33	0	1.030,33
9	Pegandon	897,79	0	897,79
10	Gemuh	1.629,87	16,62	1.629,87
11	Weleri	1.108,58	0	1.108,58
12	Cepiring	1.386,25	0	1.386,25
13	Patebon	1.337,25	0	1.337,25
14	Kendal	1.049,91	0	1.049,91
15	Rowosari	1.852,81	42,36	1.852,81
16	Kale	1.974,16	364,04	1.974,16
17	Ringinarum	1.201,17	0	1.201,17
18	Ngampel	1.197,00	0	1.197,00
19	Kaliwungu	501,10	0	501,10
TOTAL		21.839,00	827,00	22.666,00

Implementation of Agricultural Legal Culture in The Implementation of an Agrarian State Based on The Rule of Law

Legal culture is the same general response of a particular society to legal symptoms. This response is a unified view of the values of legal behavior. In other words, legal culture shows patterns of individual behavior as members of society that illustrate the same orientation response to legal life lived by the community concerned. Legal culture or legal culture is related to human attitudes towards law and the legal system which includes beliefs, values, thoughts, and expectations. Legal culture is a cultural component of law, which consists of ideas, attitudes, expectations, and opinions about law.

According to Lawrence M. Friedman, legal culture can be divided into two, namely internal legal culture and external legal culture.²² Internal legal culture is the legal culture owned by lawyers and judges, while external legal culture is the legal culture owned by society in general. In other words, legal

²² Lawrence M Friedman, *Law and Society* (Englewood Cliffs: N.J, Prantice Hall, 1997); Lawrence M. Friedman, "Legal Culture and Social Development," *Verfassung in Recht Und Übersee* 2, no. 3 (1969), <https://doi.org/10.5771/0506-7286-1969-3-261>; Vira Kachur et al., "Legal Culture as a Condition for Sustainable Development of Ukrainian Society," *European Journal of Sustainable Development* 9, no. 4 (2020), <https://doi.org/10.14207/ejsd.2020.v9n4p211>.

culture is related to the legal culture of law enforcement officials and the legal culture of society. The legal culture of the law enforcement apparatus will be closely related to the main tasks and functions of the regulated legal field, so that this legal apparatus is not always the same between one legal field and another. Likewise, the legal culture of the community will be determined by the legal field discussed, and the community in this context is the community that is indeed the address of the enactment of the legal field in question.

Lawrence M. Friedman defines legal culture as the network of values and attitudes relating to law,²³ which determine when, why, and where people turn to the law or government, or away from it. This legal culture includes people's beliefs, values, thoughts, and expectations of the law and legal system. Friedman also emphasized that without a legal culture, the legal system would be as inert as a dead fish lying in a basket, not a live fish swimming in the sea.

The legal culture of law enforcement officials is very important in carrying out their duties and functions. Law enforcement officials, such as police, prosecutors and judges, must have a deep understanding of the law and the applicable legal system. They must also have a professional attitude and high integrity in carrying out their duties. The legal culture of these law enforcement officials will greatly affect how the law is applied and enforced in society.

On the other hand, the legal culture of society is also very important in determining how the law is accepted and respected by society. People who have a good legal culture will be more likely to obey the law and respect the legal system in place. They will also be more active in participating in the legal process and providing support to law enforcement officials.

People's legal culture can be influenced by various factors, including education, media and personal experience. Good legal education can help people understand the importance of law and the legal system in their lives. The media also plays an important role in shaping people's legal culture by providing accurate and objective information about the law and legal system. Personal experiences, such as experiences of dealing with law enforcement officials or experiences of being a victim of crime, can also influence people's attitudes and views towards the law.

A good legal culture will help create a more just and harmonious society. People who have a good legal culture will be more likely to obey the law and respect the rights of others. They will also be more active in participating in the

²³ David Nelken, "200Rethinking Legal Culture," ed. Michael Freeman, *Law and Sociology* (Oxford University Press, March 2006), <https://doi.org/10.1093/acprof:oso/9780199282548.003.0012>.

legal process and providing support to law enforcement officials.²⁴ Conversely, a poor legal culture can lead to injustice and instability in society. People who do not respect the law and the legal system will be more likely to break the law and harm others.

In the Indonesian context, legal culture remains a major challenge. Many people still have a low understanding of the law and the legal system. They also often distrust law enforcement officials and feel that the law is not always enforced fairly. This can lead to disobedience to the law and instability in society.

To improve the legal culture in Indonesia, serious efforts are needed from various parties. The government must improve legal education and provide accurate and objective information about the law and legal system to the public. The media must also play an active role in providing accurate and objective information about the law and legal system. Law enforcement officials must improve their professionalism and integrity in carrying out their duties. The public should also be more active in participating in the legal process and providing support to law enforcement officials.

Overall, legal culture is an important component of the legal system that reflects people's attitudes and views towards the law and the legal system. A good legal culture will help create a more just and harmonious society, while a poor legal culture can lead to injustice and instability in society. Therefore, it is important to continuously improve the legal culture in society so that the law can be applied and enforced properly.

In the context of sustainable food agricultural land protection, the law targets two main groups: law enforcement officials and agricultural landowners. The law enforcement apparatus is tasked with enforcing the regulation on the protection of sustainable food agricultural land in order to achieve the set objectives. In Kendal District, this law enforcement apparatus includes various agencies, including the Agriculture and Food Office, the Public Works and Spatial Planning Office, the Land Office, the Investment and One Stop Integrated Service Office, the Statistics Office, the Environment Office, the Kendal District Planning, Research and Development Agency, and other relevant agencies.

The community, as the addressee of LP2B protection regulations, consists of parties who own or control parcels of land designated as LP2B. The legal culture of law enforcement officials in the protection of LP2B can be seen from

²⁴ Sarah A. El Sayed et al., "A Blue Step Forward: An Exploratory Study of Law Enforcement Perceptions of Intimate Partner Violence in the Southern United States," *Journal of Interpersonal Violence* 37, no. 9–10 (2022), <https://doi.org/10.1177/0886260520966675>.

various efforts made in the context of the development and construction of sustainable food agricultural areas and the utilization of sustainable food agricultural land. The development and construction of LP2B areas can be seen from efforts to intensify and extend the area.²⁵

Intensification of sustainable food agricultural areas involves increasing land productivity through the use of better agricultural technologies, improved soil quality and efficient water management. Extensification, on the other hand, involves expanding agricultural land by opening up new land suitable for food farming.

The protection of sustainable food agricultural land in Kendal Regency is regulated in Kendal Regency Regional Regulation No. 13/2013 and updated with Kendal Regency Regional Regulation No. 11/2020. This regulation aims to protect food agricultural areas and land in a sustainable manner, ensure the availability of food agricultural land in a sustainable manner, realize food independence, security, and sovereignty, and protect farmers' ownership of food agricultural land.²⁶

In addition, this regulation also aims to increase the prosperity and welfare of farmers and the community, increase the protection and empowerment of farmers, increase the provision of employment for a decent life, maintain ecological balance, and realize the revitalization of agriculture.

The legal culture of law enforcement officials in LP2B protection is crucial to ensure that these regulations can be effectively implemented. Law enforcement officials must have a deep understanding of the applicable regulations and have a professional attitude and high integrity in carrying out their duties. They must also be able to cooperate with various relevant parties to achieve the goal of protecting sustainable food agricultural land.

On the other hand, the legal culture of the community is also very important in determining how these regulations are accepted and respected by the community. People who have a good legal culture will be more likely to comply with regulations and respect the applicable legal system. They will also

²⁵ Santosa Raharjo, Santun R. P. Sitorus, and Suwandi Suwandi, "Analisis Potensi Lahan Dan Strategi Pengembangan Sawah Baru Secara Berkelanjutan Di Kecamatan Jatigede, Kabupaten Sumedang, Provinsi Jawa Barat," *Jurnal Pengelolaan Sumberdaya Alam Dan Lingkungan (Journal of Natural Resources and Environmental Management)* 8, no. 1 (2018), <https://doi.org/10.29244/jpsl.8.1.26-35>.

²⁶ Kamrussamad et al., "Indonesian Food Policy: The Programs For Strengthening Food Self-Sufficiency In Reformation Era," *Russian Journal of Agricultural and Socio-Economic Sciences* 76, no. 4 (2018), <https://doi.org/10.18551/rjoas.2018-04.04>.

be more active in participating in the legal process and providing support to law enforcement officials.

To improve legal culture in society, serious efforts are needed from various parties. The government must improve legal education and provide accurate and objective information about the law and legal system to the public.²⁷ The media must also play an active role in providing accurate and objective information about the law and legal system. Law enforcement officials must improve their professionalism and integrity in carrying out their duties. The public should also be more active in participating in the legal process and providing support to law enforcement officials.

The protection of sustainable food agricultural land is an important component of the legal system that reflects people's attitudes and views towards the law and the legal system. A good legal culture will help create a more just and harmonious society, while a poor legal culture can lead to injustice and instability in society. Therefore, it is important to continuously improve the legal culture in society so that the law can be properly applied and enforced.

Indonesia is known as an agrarian country because most of the population works in the agricultural sector or earns a living as farmers, ranchers, and fishermen. This is supported by Indonesia's tropical climate, high rainfall, and fertile soil. As an agricultural country, Indonesia has vast and fertile agricultural land, which is suitable for various types of food and horticultural crops. In the context of the rule of law, Indonesia has a legal framework that regulates agrarian and forestry. The 1945 Constitution affirms that all natural resources, including land, biological resources and water, are controlled by the state. The government is responsible for properly managing these natural resources and ensuring that the proceeds are used to improve the welfare of all Indonesians.

One of the important regulations in agrarian law in Indonesia is the Basic Agrarian Law Number 5 of 1960 (UUPA). UUPA aims to lay the foundations for the preparation of a National Agrarian Law that is a tool to bring prosperity, happiness, and justice to the country and the people, especially the peasantry. UUPA also aims to establish unity and simplicity in Land Law and provide legal certainty regarding land rights for all the people.

In addition to the UUPA, there is also the Forestry Law No. 41/1999 which regulates the management and distribution of forest resources. These two

²⁷ Henryk Nowicki, "Public-Law Nature of Public Procurement Law," *Studia Iuridica Lublinensia* 31, no. 4 (2022), <https://doi.org/10.17951/sil.2022.31.4.205-220>; Firdaus Muhamad Iqbal, "Kontribusi Sistem Civil Law (Eropa Kontinental) Terhadap Perkembangan Sistem Hukum Di Indonesia," *Jurnal Dialektika Hukum* 4, no. 2 (2022), <https://doi.org/10.36859/jdh.v4i2.1120>.

laws are important legal foundations for natural resource management in Indonesia.

However, in practice, there is a dualistic system of land administration in Indonesia. About 39% of the land is under the jurisdiction of the National Land Agency (BPN), while the other 61% is administered by the Forestry Department. This dualism often leads to conflicts over land tenure, especially within forest areas.²⁸ To address this problem, TAP MPR IX of 2001 on Agrarian Reform and Natural Resource Management requires the state to review, revoke and revise all laws and regulations concerning land and other agrarian resources. It also requires the resolution of existing agrarian conflicts in a fair and sustainable manner.

Overall, as an agricultural country in the context of the rule of law, Indonesia has a comprehensive legal framework to regulate and manage its natural resources. However, challenges in implementation and the dualism of the land administration system show that there is still much work to be done to achieve the goal of prosperity and justice for all Indonesians.

Regulation and Land Use Change in Nigeria: A Comparison

Nigeria, as Africa's most populous country, faces major challenges in land management. Nigeria, whose population is expected to increase to over 250 million by 2050, is mostly dependent on its agriculture industry for both food security and economic stability. Nonetheless, the quick conversion of fertile land for mining, commercial development, and urban growth decreases the amount of land accessible for farming, making the problems associated with food production worse²⁹.

Land regulation and land conversion are important issues that affect economic, social and environmental development. Land regulation in Nigeria is governed by various laws and policies aimed at regulating land ownership, use

²⁸ Chip Fay and Martua Sirait Icrat, "Mempertanyakan Sistem Ganda Kewenangan Atas Penguasaan," 2001, 713–23.

²⁹ Rufus O Akinyemi et al., "Land Use Policy and Agricultural Land Protection in Nigeria: Challenges and Prospects," n.d.; Celestine Udoka Ugonabo, Charles Chukwunwike Egolum, and Raphael Oshiobugie Sado, "Nigerian Land Policy: Issues, Challenges and The Way Forward," *Global Journal of Politics and Law Research* 11, no. 4 (2023): 57–77, <https://doi.org/10.37745/gjplr.2013/vol11n45777>.

and management. One of the key laws is the Land Use Act 1978.³⁰ This act authorizes the government to control and manage all land in Nigeria. State governments have the right to grant titles to individuals and companies. The Land Use Act 1978 aims to reduce land conflicts and ensure equitable distribution of land. However, its implementation often faces challenges, including cumbersome bureaucracy and corruption. Many Nigerians find it difficult to obtain title deeds due to the lengthy and expensive process. In addition, there are other policies such as the National Housing Policy and the National Urban Development Policy that aim to regulate land use for housing and urban development. These policies seek to address the increasingly pressing housing problems in major cities such as Lagos and Abuja.

Land conversion is the process of changing land use from one function to another, such as from agricultural land to residential or industrial land. In Nigeria, land conversion often occurs due to rapid urbanization and rapid population growth.³¹ One significant example of land conversion is the conversion of agricultural land to residential land in urban areas. Rapid population growth in large cities has led to an increased demand for housing. As a result, many fertile agricultural lands are converted into housing to meet the needs of the population. Land conversion also occurs in the industrial sector. Many forest lands are converted into industrial lands to support economic development.

Nigeria's agricultural land has not been effectively protected because of a number of institutional, socioeconomic, and policy issues. The absence of legally binding land use policies and regulations is a significant problem. Even though there are a number of land preservation laws, including the Land Use Act of 1978, these rules are frequently not properly implemented because of

³⁰ Muhammad Bashir Alkali, "Legal Framework on Land Administration in Nigeria," *ABUAD Law Journal* 10, no. 1 (2022): 44–58, <https://doi.org/10.53982/alj.2022.1001.03-j>.

³¹ Solomon Dyachia Zakka et al., "Urban Greenery a Pathway to Environmental Sustainability in Sub Saharan Africa: A Case of Northern Nigeria Cities," *International Journal of Built Environment and Sustainability* 4, no. 3 (2017), <https://doi.org/10.11113/ijbes.v4.n3.211>; Akue Leka- Oscar, Weje Ikezam Innocent, and Ibama Brown, "Socio-Economic Impacts of Wetland Conversion on Residents of Port Harcourt Municipality, Rivers State, Nigeria," *International Journal of Hydrology* 7, no. 3 (2023), <https://doi.org/10.15406/ijh.2023.07.00350>; Bola Olusola Adeleke, "Residents' Perception of Tourism Impact on the Physical Environment of Redemption Camp, Ogun State, Nigeria," *Quality - Access to Success* 15 (2014).

institutional weakness and corruption³². The inadequate incorporation of land management techniques into local governance frameworks is another important problem³³. The resources and knowledge required for efficient land-use planning and enforcement are often lacking in local administrations³⁴. Furthermore, the acquisition of agricultural land sometimes occurs through unofficial means, which makes attempts to control and safeguard these fields more difficult³⁵. The issue is made worse by socioeconomic forces that lead to the conversion of agricultural land for other uses, such as poverty and fast population increase³⁶. As a result, solving these issues calls for a multifaceted strategy that includes improved institutional capacity, stronger legal frameworks, and greater integration of land management techniques.

Nigerian local farming operations have the potential to seriously impede the efficient preservation of agricultural land, weakening the advantages of attaining sustainable land use and agricultural productivity. Some of the major factors driving land conversion in Nigeria include:³⁷

1. Urbanization: Population growth in major cities such as Lagos and Abuja has led to increased demand for housing land. Agricultural land is often converted into housing to meet this need.
2. Industrial Development: To support economic growth, much forest and agricultural land is converted into industrial areas. This is often done without considering the long-term environmental impacts.
3. Government Policy: Inconsistent policies and lack of oversight often lead to uncontrolled land conversion. For example, aggressive infrastructure development policies can come at the expense of agricultural and forest land.

³² Akinyemi et al., “Land Use Policy and Agricultural Land Protection in Nigeria: Challenges and Prospects.”

³³ Andrew Onokerhoraye, “Urban Land Use in Nigeria: Problems and Implications for Policy,” *The Town Planning Review* 48, no. 1 (September 7, 1977): 59–72, <http://www.jstor.org/stable/40103246>.

³⁴ I. B Oluwatayo, “Local Government and Agricultural Land Management in Nigeria,” *International Journal of Environmental Science and Technology* 16, no. 8 (2019): 4987–5000.

³⁵ G. T Iremiren, “Informal Land Acquisition and Its Impact on Agricultural Land Protection in Nigeria,” *African Journal of Agricultural Research* 16, no. 5 (2021): 807–18.

³⁶ B. W Adeoye, “Agricultural Land Conversion in Nigeria: An Overview,” *Journal of Rural Studies* 72 (2020): 189–99.

³⁷ John Olayemi Afolayan et al., “A Fuzzy Synthetic Evaluation Analysis of the Drivers of Urban Expansion on Peri-Urban Lands in Ilorin, Nigeria,” *Asian Research Journal of Arts & Social Sciences* 21, no. 3 (2023), <https://doi.org/10.9734/arjass/2023/v21i3477>; W.J. McConnell, “Land Use and Cover Change,” in *International Encyclopedia of the Social & Behavioral Sciences*, 2001, <https://doi.org/10.1016/b0-08-043076-7/04161-9>.

4. Unsustainable Farming Practices: Slash-and-burn agriculture, overgrazing, and monocropping are only a few examples of the unsustainable farming methods used by many of the local farmers. The long-term viability of agricultural lands is weakened by these methods, which also lower land fertility, deteriorate soil quality, and exacerbate land erosion³⁸. By hastening the shift of farmland into less productive uses, such degradation undercuts the efficacy of land conservation policies.
5. Land Encroachment: Under pressure from poverty and population increase, local farmers frequently extend their agricultural operations into protected areas or environmentally sensitive zones. In addition to causing biodiversity loss, this invasion interferes with conservation initiatives and protected land designations³⁹.
6. Informal Land Transactions: Local farmers may acquire and utilize agricultural land informally, including through land grabs and unapproved land use modifications, eluding government land management programs. This undercuts official land protection objectives and makes it more challenging for law enforcement to properly enforce restrictions⁴⁰.
7. Low education and Awareness: Many of the farmers in the area are ignorant of the advantages of sustainable land management techniques as well as the legislative protections afforded by agricultural land protection laws. Due to this knowledge gap, actions may be taken that are harmful to efforts to conserve land⁴¹.

However, this often leads to negative environmental impacts, such as deforestation and loss of habitat for flora and fauna.⁴²

1. Economic and Social Impact

Land conversion has significant economic and social impacts. On the one hand, land conversion can boost economic growth by providing land for housing, industry and infrastructure development. This can create jobs and

³⁸ A. A. Adediran and Et.al, "Sustainable Farming Practices and Soil Fertility Management in Nigeria," *Soil and Tillage Research*, 2020.

³⁹ Akinyemi et al., "Land Use Policy and Agricultural Land Protection in Nigeria: Challenges and Prospects."

⁴⁰ Iremiren, "Informal Land Acquisition and Its Impact on Agricultural Land Protection in Nigeria."

⁴¹ Oluwatayo, "Local Government and Agricultural Land Management in Nigeria."

⁴² Sutehrea Hermhuk et al., "Land Use and Above-Ground Biomass Changes in a Mountain Ecosystem, Northern Thailand," *Journal of Forestry Research* 31, no. 5 (2020), <https://doi.org/10.1007/s11676-019-00924-x>; R. K. Mishra, "Fresh Water Availability and It's Global Challenge," *Journal of Marine Science and Research* 2, no. 1 (2023), <https://doi.org/10.58489/2836-5933/004>.

increase people's income. However, on the other hand, land conversion can also cause social problems. For example, farmers who lose their agricultural land often find it difficult to find new livelihoods. In addition, poorly planned land conversion can lead to social instability and land conflicts.

2. Environmental Impact⁴³

Land conversion also has serious environmental impacts. Deforestation for industrial and residential purposes can lead to biodiversity loss and environmental degradation. In addition, land use change can lead to soil erosion, flooding and local climate change. In Nigeria, land conversion is often done without considering the long-term environmental impacts. This causes irreversible environmental damage and threatens the sustainability of natural resources.

3. Management Efforts and Solutions

To address the issue of land conversion, the Nigerian government needs to implement more sustainable and environmentally sound policies. One of the steps that can be taken is to strengthen monitoring and law enforcement related to land conversion. The government also needs to encourage community participation in land use decision-making. In addition, it is important to develop training and empowerment programs for farmers affected by land conversion. These programs can help them adapt to changes and find new livelihoods. Land regulation and land conversion in Nigeria are complex issues that require serious attention. While land conversion can promote economic growth, its negative impact on the environment and society should not be overlooked. Therefore, sustainable policies and active participation from all parties are needed to manage land wisely and ensure the sustainability of natural resources in Nigeria.⁴⁴

Furthermore, land use change is a complex phenomenon driven by various interconnected factors, particularly in rapidly developing countries such as Indonesia and Nigeria. These factors include urbanization, infrastructure development, industrial expansion, and policy dynamics, all of which contribute to significant shifts in land allocation and usage.

In Indonesia, rapid urbanization in major cities like Jakarta and Surabaya has escalated the demand for residential land, often at the expense of agricultural

⁴³ Temidayo Olowoyeye, "A Review of the Environmental Impact of Deforestation and Industrial Activities in Nigeria," *Preprint*, no. January (2021), <https://doi.org/10.13140/RG.2.2.12984.98564>.

⁴⁴ Ogochukwu Okanya and Ifeoma Nwakoby, "Managing Nigeria's Natural Resources for Sustainable Development," *International Journal of Academic Management Science Research (IJAMSR)* 3, no. 1 (2019): 46–52.

areas. The expansion of infrastructure, including large-scale projects like toll roads and airports, further accelerates the conversion of farmland. Government policies, marked by inconsistencies and limited oversight, sometimes exacerbate uncontrolled land conversion, intensifying the challenges of sustainable land management. Similarly, in Nigeria, urban growth in cities such as Lagos and Abuja drives the transformation of agricultural and forested land into residential and commercial zones. Industrial development, a key pillar of economic growth, has led to the widespread conversion of green spaces into industrial hubs. Aggressive development policies, coupled with insufficient regulatory supervision, contribute to rapid and often unregulated land transformation.

The economic consequences of land use change are multifaceted, bringing both opportunities and challenges. In Indonesia, land conversion can stimulate economic development by creating space for housing, industry, and infrastructure. However, this transformation can have adverse effects, as farmers who lose their land often face difficulties in securing alternative livelihoods, and the reduction of agricultural areas may threaten national food security. In Nigeria, land conversion has the potential to generate employment and increase community income, yet the loss of agricultural land poses a serious threat to food security and can trigger social instability, particularly for farmers displaced by development projects.

The social repercussions of land use change are profound, often manifesting in conflict and shifts in community dynamics. In Indonesia, land conversion can provoke social unrest and disputes over land ownership. Changes in land use also alter traditional lifestyles, especially in urban settings, where the transition from rural to urban landscapes reshapes community interactions and cultural practices. In Nigeria, land conflicts frequently arise between farmers and developers, as competing interests over land usage spark tensions. The transformation of open spaces into commercial areas can diminish public spaces, impacting community cohesion and altering local ways of life.⁴⁵

In addition, environmental degradation is also recognized as a significant consequence of unchecked land conversion. In Indonesia, deforestation driven by the expansion of industrial and residential areas results in biodiversity loss

⁴⁵ See also and compare with Fergi Firoso Akbar, "Judge Decision Analysis on Civil Cases Against Counterfeiting Land Deed Decision Number 350 K/Pdt/2017 Mataram District Court." *Indonesian Journal of Environmental Law and Sustainable Development* 1, no. 1 (2022): 69-92; Radhityas Kharisma Nuryasinta, and Yohana Puspitasari Wardoyo. "Escalation of Community Legal Literacy in Resolving Land Disputes in Bumiaji Village, Batu City." *Jurnal Pengabdian Hukum Indonesia JPHI* 7, no. 2 (2024): 191-212.

and ecosystem disruption.⁴⁶ Additionally, changes in land use contribute to soil erosion and increased flooding risks, as natural buffers are replaced by impermeable surfaces. Nigeria faces similar environmental challenges, with forest clearance for industrial purposes leading to habitat destruction and loss of biodiversity. The absence of sustainable land management practices often exacerbates soil erosion and heightens the likelihood of flooding, further intensifying environmental vulnerabilities.

Addressing the impacts of land use change requires a combination of policy reform, community engagement, and sustainable development practices. In Indonesia, strengthening monitoring mechanisms and enforcing land conversion regulations are crucial steps towards sustainable land governance.⁴⁷ Encouraging community participation in land use decision-making processes can foster more balanced and locally relevant outcomes. In Nigeria, adopting environmentally conscious policies and promoting sustainable land use practices are essential for mitigating negative impacts. Empowering farmers through training and development programs can enhance their resilience and provide alternative livelihood opportunities, contributing to more equitable and sustainable development.

By understanding the intricate interplay of economic, social, and environmental factors, policymakers and stakeholders can design more effective strategies to manage land use change, ensuring that development aligns with long-term sustainability and community well-being. Land conversion in Indonesia and Nigeria is a complex issue that requires serious attention. While land conversion can promote economic growth, its negative impacts on the environment and society should not be overlooked. Therefore, sustainable policies and active participation from all parties are needed to manage land wisely and ensure the sustainability of natural resources in both countries.⁴⁸

⁴⁶ Adi Wijayanto, Hatta Acarya Wiraraja, and Siti Aminah Idris. "Forest Fire and Environmental Damage: The Indonesian Legal Policy and Law Enforcement." *Unnes Law Journal* 8, no. 1 (2022): 105-132.

⁴⁷ See also Abdul Kadir Jaelani, et al. "Green Tourism Regulation on Sustainable Development: Droning from Indonesia and China." *Journal of Indonesian Legal Studies* 8, no. 2 (2023): 663-706.

⁴⁸ Lisa-Maria Glass and Jens Newig, "Governance for Achieving the Sustainable Development Goals: How Important Are Participation, Policy Coherence, Reflexivity, Adaptation and Democratic Institutions?," *Earth System Governance* 2 (2019), <https://doi.org/10.1016/j.esg.2019.100031>; UNESCAP, "Effective Stakeholder Engagement for the 2030 Agenda - Training Reference Material," 2018, 108.

Food Security Challenges and Agricultural Strategies

A. Indonesian Context

Indonesia, as an upper-middle-income country, has made significant progress in reducing poverty and inequality. However, malnutrition remains a major concern, with stunting rates among children under five reaching 21.5% in 2023. Despite decreasing levels of nutritional deficiency, 68 out of 514 regencies/cities are still vulnerable to food security issues. While GDP growth and low inflation indicate economic stability, fluctuating food prices and the potential impacts of El Niño add further challenges to food security.

The World Food Programme (WFP) collaborates with various stakeholders in Indonesia to address these food security and nutrition challenges. In East Nusa Tenggara, WFP promotes the integration of the CLEAR+ resilience analysis into local development plans. In Yogyakarta, they are developing an Anticipatory Action Protocol for Tropical Cyclones and holding workshops with the National Disaster Mitigation Agency to align anticipatory actions with existing disaster management practices. WFP's strategic plan for 2021-2025 includes various activities aimed at enhancing government and partner capacities in tackling food security and nutrition issues. These activities encompass technical assistance, advocacy, and policy engagement, with a strong emphasis on promoting healthy diets and preventing malnutrition through diverse programs and campaigns. Support from donors like the Australian and German governments, as well as other organizations, is crucial for the successful implementation of this strategic plan.

From a political agrarian law perspective, Indonesia's current food security strategy faces multifaceted challenges. The persistence of malnutrition and stunting amidst economic progress suggests a systemic issue within agricultural policy and land management. The need for diversified cropping systems and the management of marginal lands indicates a potential misalignment between existing agricultural practices and the urgent need for sustainable development. Furthermore, the fluctuating food prices and external factors like climate change underscore the necessity for robust legal frameworks that protect agricultural land and ensure fair access to resources.

In this context, the role of WFP and its strategic collaborations with local governments and disaster management agencies highlight the importance of integrated approaches to food security. The focus on educational initiatives for farmers aligns with a broader imperative to empower local communities, ensuring that they are equipped to navigate both market and environmental

challenges. For these strategies to be effective, it will be crucial to implement comprehensive legal reforms that support sustainable agricultural practices while safeguarding food sovereignty. Additionally, enhancing stakeholder engagement and fostering public-private partnerships will be vital in building resilient food systems in Indonesia. Effective food security heavily relies on the availability and management of agricultural land. Here are several key strategies that can be implemented:⁴⁹

1. Crop Diversification

Reducing reliance on a single staple crop, such as rice, by promoting the consumption and cultivation of local crops like corn, cassava, and tubers. This diversification not only enhances food security but also mitigates risks of crop failure due to pests or climate change.

2. Agricultural Intensification

Increasing the productivity of existing agricultural land through modern agricultural technologies, superior seeds, and organic fertilizers. Sustainable agricultural practices can enhance yields without harming the environment.

3. Management of Suboptimal Land

Utilizing suboptimal or marginal lands, such as rain-fed areas, acidic dry land, and swamp land for agriculture. With appropriate technologies and practices, these lands can be transformed into productive areas that support food security.

4. Development of Agricultural Infrastructure

Building and improving agricultural infrastructure, such as irrigation networks, farm roads, and storage facilities. Good infrastructure enhances production and distribution efficiency while reducing post-harvest losses.

5. Strengthening Policies and Regulations

Developing policies and regulations that support food security, including protecting agricultural land from conversion to non-agricultural uses. These policies should also provide incentives for farmers to increase production and adopt new technologies.

⁴⁹ Anny Mulyani, S Ritung, and Irsal Las, "Potensi Dan Ketersediaan Sumber Daya Lahan Untuk Mendukung Ketahanan Pangan," *Jurnal Litbang Pertanian* 30, no. 12 (2011); Handewi Purwati Saliem and Mewa Ariani, "Ketahanan Pangan: Konsep, Pengukuran Dan Strategi," *Forum Penelitian Agro Ekonomi* 20, no. 1 (2016), <https://doi.org/10.21082/fae.v20n1.2002.12-24>.

6. Farmer Education and Training

Providing education and training to farmers on sustainable agricultural practices, land management, and the latest agricultural technologies. Adequate knowledge and skills will help farmers improve productivity and food security.⁵⁰

B. Nigeria's National Food Security

Nigeria's national food security is seriously threatened by the quick conversion of agricultural land to non-agricultural purposes including urbanization and industrial development. This land conversion affects agricultural output and jeopardizes the livelihoods of millions of farmers, undermining the nation's capacity to provide enough food. It is imperative to put into action a number of strategic recommendations targeted at improving land management systems, encouraging sustainable farming practices, and fortifying land use policies in order to effectively address these issues. Nigeria can protect its agricultural resources, promote sustainable growth, and guarantee long-term food security for its expanding population by concentrating on three important sectors. The proposals that follow offer a thorough strategy for addressing the problems associated with land conversion and strengthening the agriculture sector's resilience.

1. Boost enforcement of Land Use Policies

To successfully address infractions, land use policies must be greatly enhanced in terms of enforcement. Within two years, a target of 30% more land use infractions detected and prosecuted should be set. To do this, more funding must be allocated, and relevant government entities must receive specialized training. This strategy helps protect priceless agricultural lands for future use and guarantees tighter adherence to land use laws.

2. Create a Thorough Land Use Plan

To balance development with agricultural demands, create and implement comprehensive land use plans at the local and national levels. Make plans in a predetermined amount of time for all significant rural and urban locations. Involve stakeholders in the process to guarantee sustainable land use and safeguard agricultural zones, such as the local community and specialists.

3. Encourage the use of Sustainable Farming Methods

To increase land production and lessen degradation, the government and pertinent stakeholders are urged to introduce and promote sustainable

⁵⁰ See Aris Slamet Widodo, et al. "The Influence of Welfare Level on Food Security in Farmer Households." *E3S Web of Conferences*. Vol. 595. EDP Sciences, 2024.

farming practices. This should be carried out with a target timeframe in mind to raise the percentage of farmers who embrace sustainable methods by a noteworthy amount. There should be robust training, incentives, and resources to farmers for adopting these practices to enhance the resilience of agricultural lands which ultimately improves food security.

4. Install Systems for Monitoring and Land Registration

Within a set time frame, establish a nationwide land registration and monitoring system to keep track of changes in land usage to checkmate stop unauthorized land conversions. The use of technology should be deployed to help land monitoring, such as Geographic Information Systems, in order to prevent unwanted conversions and keep an eye on efficient land usage.⁵¹

5. Boost Participation from the Community and Local Governance

By providing resources and training, local governments should be better equipped to manage and safeguard agricultural areas. This can be accomplished by giving local officials financial help and technical training. In other words, it gives local government's additional authority to more successfully enforce land use laws.

6. Increase Stakeholder Education and Outreach to the Public

Raise awareness of the value of preserving agricultural lands and the effects of land conversion, start a national campaign. These could be accomplished by holding media workshops and using community outreach to spread knowledge. Public and stakeholder education regarding sustainable land use policies and practices is the goal.

Nigeria's food security can be strengthened and the negative consequences of agricultural land conversion can be lessened by putting these ideas into practice.

⁵¹ See also Sekar Arum Rahmawati, Gassa Hadibroto, and Ana Silviana. "Implementation of Registration of Ex-Customary Land through Complete Systemic Land Registration in Pemalang Regency." *Journal of Law and Legal Reform* 3, no. 4 (2022): 431-456; Taufiq, Fida Nabilah, Mohammad Hamidi Masykur, and Supriyadi Supriyadi. "Challenges Arising from Article 22 (2) of Ministerial Regulation ATR/BPN No. 6/2018 on Complete Systematic Land Registration (PTSL) Pertaining to Insufficient or Missing Evidence of Community Land Ownership." *Unnes Law Journal* 9, no. 2 (2023): 419-440; Fairus Augustina Rachmawati, Shafa Amalia Choirinnisa, and Latif Latif. "Integrated Land Registration System: Between Legal Certainty and Challenges (Case of Semarang City)." *Indonesian Journal of Advocacy and Legal Services* 3, no. 2 (2021): 217-232.

Conclusion

Agricultural land for farmers is not just a source of livelihood, but a source of life, a source of values and identity. Farmers will be farmers if agricultural land remains sustainable, so the value of farmers' attitudes and views towards their agricultural land is strong. Agricultural land protection policies outlined in LP2B legislation are not adequately known by farmers. Most farmers do not know that there is a policy that designates their farmland as sustainable food agricultural land. Farmers work and cultivate their farmland as much as possible with the various limitations they experience. These limitations are in the form of uneven water sources for irrigating rice fields due to the absence of sluice gates that go directly to their farmland. Another limitation is the lack of fertilizer supply as needed, so fertilizer must be distributed evenly to a number of farmer group members, resulting in not optimal production. Land conversion in Indonesia and Nigeria is a complex issue that requires serious attention. While land conversion can promote economic growth, its negative impact on the environment and society should not be ignored. Therefore, sustainable policies and active participation from all parties are needed to manage land wisely and ensure the sustainability of natural resources in both countries.

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