

## JAVANESE FARMERS IN KOTARAYA VILLAGE

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### ABSTRACT

This study examines the role of the 1973 transmigration program in shaping agrarian transformation among Javanese farmers in Kotaraya Village, Central Sulawesi. The research aims to analyze the arrival of Javanese transmigrants, the development of agricultural systems, the modernization of farming tools, and the process of cultural acculturation with local communities. A qualitative descriptive approach was employed through observation, in-depth interviews, and documentation studies involving first-generation transmigrants, village officials, and agricultural actors. The findings indicate that the transmigration program significantly transformed previously uncultivated land into productive agricultural areas through collective labor, irrigation development, and adaptive farming practices. Agricultural mechanization, particularly the transition from animal-drawn plows to tractors and post-harvest machinery, improved productivity, labor efficiency, and household welfare. In addition, the interaction between Javanese transmigrants and indigenous communities fostered harmonious cultural acculturation while maintaining local cultural identities. This study concludes that transmigration functioned as an important driver of agrarian change, agricultural modernization, and sustainable socio-cultural integration in Kotaraya Village.

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### INTRODUCTION

The transmigration program has long been recognized as one of Indonesia's major national development policies aimed at addressing population imbalance, improving regional welfare, and encouraging equitable economic growth across the archipelago. According to Kebijakan Transmigrasi dan Pembangunan Pedesaan di Indonesia, transmigration during the New Order era was not merely designed as population redistribution, but also as an integrated rural development strategy intended to optimize agricultural land and stimulate economic productivity in outer islands. This policy orientation was further institutionalized through Government Regulation No. 42 of 1973

and reinforced by Law No. 15 of 1997 and Law No. 29 of 2009 concerning transmigration, which emphasized welfare improvement, regional development, and national integration through balanced demographic distribution. The implementation of transmigration therefore became closely connected with agrarian expansion, rural modernization, and socio-cultural integration in destination regions.

The urgency of transmigration policies emerged from the demographic concentration on Java Island, which historically experienced high population density, limited agricultural land ownership, and restricted employment opportunities. Arif (2022) explains that the concentration of Indonesia's population in Java created socio-economic pressures that encouraged migration policies toward less populated regions outside Java. In this context, Javanese communities became the dominant transmigrant group because they possessed extensive agricultural experience and strong communal traditions that could support adaptation in newly developed rural areas. Consequently, transmigration was expected not only to reduce demographic burdens in Java but also to transform underdeveloped areas into productive agricultural settlements.

One of the regions shaped by this policy was Desa Kotaraya in Kecamatan Mepanga, Kabupaten Parigi Moutong, Central Sulawesi. Kotaraya became a transmigration destination beginning in 1973 due to its extensive land availability and agricultural potential. Wahyuni (2022) notes that Javanese transmigrants arriving in Kotaraya originated primarily from East Java, Central Java, and Yogyakarta through the government-sponsored general transmigration program. The settlement process represented part of the broader national effort to stimulate rural development outside Java while utilizing uncultivated land resources. Over time, the presence of Javanese transmigrants significantly influenced the economic and social structure of the village, particularly through agricultural activities and community-based development.

Agriculture became the central foundation of livelihood transformation in Kotaraya Village. Banowati et al. (2013) argue that agricultural development requires systematic land management, adaptive production cycles, and efficient utilization of natural resources. In transmigration areas, agricultural activities often function not only as economic practices but also as mechanisms of settlement consolidation and regional growth. The Javanese transmigrant community in Kotaraya gradually developed farming systems through land clearing, irrigation construction, and crop diversification adapted to local environmental conditions. This transformation reflected broader patterns of agrarian adaptation commonly observed in transmigration settlements across Indonesia.

The development of agriculture in transmigration areas is also inseparable from the process of technological adaptation and mechanization. Initially, transmigrant communities generally relied on traditional farming tools and animal-powered cultivation systems. However, along with infrastructure development and government support, agricultural modernization gradually emerged through the introduction of mechanized tools such as tractors, water pumps, and post-harvest equipment. Asmarani (2018) explains that the use of modern agricultural tools contributes significantly to productivity improvement and labor efficiency in rural communities. Mechanization not only accelerates cultivation processes but also supports larger production capacity and greater resilience toward changing environmental and climatic conditions. In many rural areas, agricultural modernization therefore represents an important indicator of socio-economic transformation.

Besides agrarian transformation, transmigration also produced socio-cultural consequences within destination communities. Nova (2016) emphasizes that transmigration influenced social relations, patterns of interaction, and cultural adaptation between migrant and indigenous populations. In many transmigration regions, the interaction between Javanese migrants and local communities generated processes of cultural acculturation characterized by adaptation, coexistence, and mutual exchange of values. The preservation of Javanese traditions alongside participation in local social life demonstrates that transmigration was not solely an economic policy but also a process of cultural negotiation and integration. Therefore, the study of transmigration requires attention not only to economic development but also to social and cultural dynamics within rural communities.

Although transmigration has been widely discussed in Indonesian academic studies, existing research tends to focus on macro-level policy analysis, demographic redistribution, or general welfare impacts. Studies concerning specific local experiences of agrarian transformation and agricultural modernization in transmigration villages remain relatively limited. Wahyuni (2022), for example, examined the role of Javanese transmigration in the development of education in Desa Kotaraya, yet the study did not specifically analyze agricultural transformation, mechanization processes, or the relationship between agrarian change and cultural adaptation. Similarly, broader studies on transmigration often emphasize administrative and developmental aspects without exploring how transmigrant communities transformed agricultural landscapes through local practices and technological adaptation.

This limitation creates an important research gap, particularly regarding the historical and socio-agrarian dimensions of transmigration settlements. Existing literature has not comprehensively explained how transmigrant communities adapted agricultural systems to new ecological environments, how mechanization reshaped farming practices, and how cultural interaction supported sustainable rural development in transmigration areas. Consequently, the empirical experience of villages such as Kotaraya remains underexplored within the broader discourse of Indonesian rural transformation. Understanding these local dynamics is important because transmigration villages provide concrete examples of how state policies interact with community agency, agricultural adaptation, and socio-cultural integration at the grassroots level.

The case of Kotaraya Village offers a relevant context for examining the interconnected relationship between transmigration, agrarian transformation, agricultural mechanization, and cultural acculturation. Since its establishment as a transmigration settlement, the village has undergone significant changes in land use, farming systems, and rural social organization. Agricultural activities evolved from subsistence-oriented cultivation into more productive and semi-modern farming systems supported by irrigation infrastructure and mechanized tools. At the same time, the coexistence between Javanese transmigrants and indigenous communities reflects processes of social integration and cultural adaptation that contributed to village stability and development. These dynamics demonstrate that transmigration settlements can serve as important sites for understanding long-term rural transformation in Indonesia.

From an academic perspective, this study contributes to discussions on rural development by emphasizing the local realities of transmigration communities rather than focusing solely on state policy frameworks. The research also provides insight into how agricultural modernization operates within community-based rural settings and how cultural adaptation supports socio-economic sustainability. Furthermore, examining the historical trajectory of Kotaraya Village helps contextualize broader debates on agrarian change, mechanization, and social integration in post-transmigration regions.

Based on these considerations, this study aims to analyze the arrival of Javanese farmers in Desa Kotaraya through the transmigration program, examine the development of agricultural systems and mechanization, and explore the process of cultural acculturation within the village community. Through a qualitative descriptive approach, the study seeks to explain how transmigration functioned as a catalyst for agrarian transformation and sustainable rural development in Kotaraya Village. The findings are expected to enrich academic discussions on transmigration, agricultural modernization, and socio-cultural adaptation while providing empirical insights for future rural development policies in Indonesia.

## **METHODS**

This study employed a qualitative descriptive approach to examine the arrival of Javanese transmigrants, agrarian transformation, agricultural mechanization, and cultural acculturation in Desa Kotaraya, Kecamatan Mepanga, Kabupaten Parigi Moutong, Central Sulawesi. The research was conducted from January to October 2025, with intensive field data collection carried out between March and October 2025. The qualitative approach was

selected because it enabled an in-depth understanding of historical experiences, social interactions, and agricultural changes within the transmigrant community (Moleong, 2012).

Data sources consisted of primary and secondary data. Primary data were obtained through direct interaction with research participants, while secondary data were collected from village archives, village profile documents, government regulations on transmigration, photographs, territorial maps, and relevant academic literature. Secondary sources included Law No. 15 of 1997, Law No. 29 of 2009 concerning transmigration, Government Regulation No. 42 of 1973, and the Kotaraya Village Profile (2022).

Informants were selected using purposive sampling based on specific criteria relevant to the research objectives (Kumara, 2018). The study involved ten key informants consisting of first-generation Javanese transmigrants, village officials, community leaders, and agricultural actors. Informants were chosen based on four criteria: (1) direct involvement in the transmigration process or agricultural development in Kotaraya Village, (2) adequate historical knowledge regarding the village's transformation, (3) active participation in farming or village social activities, and (4) willingness to provide detailed information during the research process. First-generation transmigrants were prioritized because they possessed direct experience related to settlement, land clearing, irrigation development, and the transition from traditional to mechanized agriculture. Village officials and community leaders were included to strengthen institutional and socio-cultural perspectives. The number of informants was considered sufficient because the data obtained had reached saturation, where repeated interviews no longer produced substantially new information.

Data collection was conducted through observation, in-depth interviews, and documentation. Observation focused on settlement conditions, agricultural activities, irrigation systems, farming tools, and community interactions in Desa Kotaraya. In-depth interviews were conducted semi-structurally to allow informants to explain their experiences more openly while still remaining aligned with the research focus. Interviews explored themes related to the arrival of transmigrants, agricultural development, mechanization, and cultural interaction. Documentation techniques were used to collect supporting data such as village archives, photographs, maps, agricultural equipment records, and demographic documents to strengthen historical reconstruction and field findings.

Data analysis followed the interactive model of Miles and Huberman (1992), which consisted of data reduction, data display, and conclusion drawing. Data reduction was conducted by selecting and categorizing interview transcripts, observation notes, and documents according to the main research themes, namely transmigration, agrarian transformation, agricultural mechanization, and cultural acculturation. The data were then organized into descriptive narratives to facilitate interpretation and identification of relationships between findings. Conclusions were drawn continuously throughout the research process by comparing field data from different sources.

To ensure data validity, this study applied source triangulation and method triangulation (Sugiyono, 2014). Source triangulation was conducted by comparing information obtained from transmigrants, village officials, and community leaders, while method triangulation compared findings from interviews, observations, and documentation. Member checking was also conducted by reconfirming several interview results with informants to ensure accuracy and consistency of interpretation.

Ethical considerations were implemented throughout the research process. Before interviews and observations were conducted, researchers requested permission from village authorities and explained the objectives of the study to all participants. Informants participated voluntarily and were informed that the data would be used solely for academic purposes. The researcher also maintained confidentiality and respected the participants' perspectives during fieldwork to ensure ethical and trustworthy data collection.

## **RESULTS AND DISCUSSION**

### **RESULTS**

This section presents the empirical findings obtained from field observations, in-depth interviews, and documentation conducted in Desa Kotaraya, Kecamatan Mepanga, Kabupaten Parigi Moutong, Central Sulawesi. The findings focus on three main aspects: the arrival and settlement process of Javanese transmigrants, the development of agricultural systems, and the modernization of agricultural tools. The presentation emphasizes field findings and informants' experiences without extensive theoretical interpretation.

### **The Arrival and Initial Settlement of Javanese Transmigrants**

The establishment of Javanese farming communities in Desa Kotaraya originated from Indonesia's national transmigration program, formally implemented in 1973 during the New Order era. The initiative was strategically embedded within the Five-Year Development Plans (PELITA I–III), which shifted transmigration policy from mere population redistribution toward integrated rural development and optimal utilization of underdeveloped outer islands (Dahlan, 2014). Javanese migrants from East Java, Central Java, and Yogyakarta were relocated through government-funded general transmigration, aligning with national objectives to alleviate demographic pressure in Java while activating marginal lands (Wahyuni, 2022). Upon arrival, the settlers encountered a landscape predominantly covered by dense bushland and unmanaged forest. Initial survival relied heavily on temporary government assistance, which included rice, basic household supplies, and elementary farming tools distributed over a one-year period. The land clearance process was gradual and labor-intensive, requiring collective cooperation (*gotong royong*) and pragmatic ecological adaptation.

The early agricultural strategy prioritized drought-resistant and fast-yielding crops such as corn, cassava, and dryland rice (*padi gogo*), which required minimal irrigation and could be harvested quickly to ensure immediate food security. This phased approach reflected a survival-oriented adaptation to unfamiliar soil conditions and irregular water availability. As documented in field interviews, first-generation transmigrants emphasized the critical role of mutual assistance and government support in stabilizing their new livelihoods

Yosefa Karsina stated during an interview on 15 March 2025:

“When we first arrived, the land was still forest and bushes. We cleared the land together little by little. The government provided food assistance and farming tools, so we could survive during the early settlement period.”

This narrative underscores the transitional nature of early settlement, where state support served as a crucial buffer against ecological and economic uncertainty.

Similarly, Mr. Ngadiri, a first-generation transmigrant, highlighted the socio-economic motivations and collective resilience that characterized the settlement process. He noted (Interview, 15 March 2025):

*“The transmigration program was our primary hope. In Java, opportunities had vanished, so when offered land and housing outside Java, we immediately participated. Although the initial years demanded extreme hardship and rationed meals, we eventually secured our own farmland and paddy fields, enabling our children to attend school. We relied entirely on mutual assistance, from house construction and road maintenance to land clearance.”*

These testimonies confirm that the arrival of Javanese farmers was not merely a demographic transfer but a structured socio-economic repositioning, facilitated by state policy yet fundamentally sustained by community-driven labor and adaptive perseverance. The successful conversion of bushland into habitable and productive zones laid the foundation for subsequent agrarian transformation and infrastructural development in Desa Kotaraya.

### **Evolution of Agricultural Systems and Crop Production**

Following the initial settlement phase, Desa Kotaraya experienced a significant agrarian transition from subsistence-level dryland farming to structured, semi-modern agricultural production. The pivotal catalyst for this transformation was the gradual improvement of water management infrastructure, particularly the construction of

localized irrigation channels and the Malino Dam. As water availability stabilized, farmers successfully introduced wet-rice cultivation, enabling double cropping per year and substantially enhancing land productivity. Informants consistently reported that the shift from rain-fed fields to irrigated paddy systems was achieved through incremental, community-driven water channel construction and coordinated labor allocation. The agricultural landscape subsequently diversified beyond staple crops to include cash crops such as chili peppers, watermelon, tomatoes, and cassava, which were cultivated using adaptive techniques introduced by Javanese settlers. These included structured land preparation, crop rotation, seasonal planting calendars, and the integrated use of organic and synthetic fertilizers.

The implementation of these agronomic practices aligns with broader agricultural development theory, which emphasizes the necessity of adaptive land management, seasonal production cycles, and interdependent managerial adjustments to enhance yield consistency (Banowati et al., 2013). Field observations conducted in March and October 2025 revealed that farming practices in Kotaraya blend traditional ecological knowledge with semi-modern agronomic methods. Farmers maintain meticulous weeding schedules, apply periodic fertilization, and regulate water flow according to crop growth stages. The resulting surplus production is no longer confined to household consumption but is actively marketed in local and regional markets, establishing agriculture as the primary economic driver of the village. Mr. Lamijo, a senior farmer, described the chronological progression of this agricultural transition during an interview on 20 March 2025: *“Initially, we planted corn because water was unavailable. After several harvests, some farmers attempted rice cultivation despite limited irrigation. Gradually, we constructed small-scale water channels. Today, we have paddy fields that yield two harvests annually, achieved through persistent labor and mutual cooperation to adapt to the new environment, alongside consistent government support.”*

This narrative is corroborated by Mr. Ahmad Mursyid (Interview, 18 March 2025), who emphasized the multidimensional impact of agricultural development on local livelihoods: *“Agricultural progress in Kotaraya spans crop diversification, technological innovation, and socio-economic integration. Rice remains the primary crop due to its compatibility with local soil and irrigation conditions. Beyond staple production, farmers cultivate chili, corn, and watermelon to meet market demand and enhance household income. The systematic application of modern planting techniques has transformed agriculture from subsistence farming into a commercially viable enterprise.”* The integration of irrigation infrastructure and adaptive cropping patterns not only secured food self-sufficiency but also stimulated rural economic circulation. Despite ongoing challenges, including unpredictable climatic patterns, limited land expansion, and fluctuating commodity prices, the adaptive capacity of the farming community, combined with incremental agronomic modernization, has positioned Desa Kotaraya as a model of sustainable post-transmigration agricultural development.

### **Technological Modernization of Agricultural Tools and Mechanization**

The modernization of agricultural tools in Desa Kotaraya represents a critical dimension of the village’s developmental trajectory. Initially, land preparation relied entirely on traditional implements such as wooden plows, sickles, and manual trowels, with animal traction—primarily buffalo and cattle—serving as the primary mechanical power source. As documented in interviews with veteran farmers, traditional plowing methods preserved soil structure, enhanced natural aeration, and integrated organic fertilization through animal manure, embodying local ecological wisdom. However, these methods were inherently labor-intensive and constrained in operational scale. Over time, the introduction of agricultural machinery (alsintan) facilitated a decisive shift toward mechanization. Government distribution programs, particularly through the Ministry of Agriculture, provided hand tractors, four-wheel tractors, water pumps, mechanical sprayers, and post-harvest processing equipment such as grain dryers (locally known as *megani*) and grading/packing machines.

The adoption of tractors revolutionized land preparation by significantly reducing processing time, ensuring uniform soil tilling, and enabling the integration of plowing, harrowing, and bed-forming within consolidated operational cycles. As Mr. Winarto, a first-generation farmer, explained during an interview on 21 March 2025:

*“Initial land clearing was conducted using wooden plows pulled by water buffalo. Although the tools were simple, they effectively loosened the soil without damaging its natural structure. Buffaloes were not merely labor animals; they were integral to our farming culture. Their manure served as natural fertilizer, sustaining soil fertility sustainably.”* This testimony highlights the cultural and ecological value of traditional methods, which prioritized long-term soil health over short-term efficiency.

Conversely, younger and mid-generation farmers emphasize the operational necessity of mechanization in contemporary agriculture. Mr. Supriadi (Interview, 21 March 2025) noted: *“While traditional methods hold cultural value, modern challenges demand mechanized solutions. Tractors have drastically accelerated land preparation. What previously required days of manual or animal labor now takes only a few hours with a single operator. This efficiency not only saves time but also expands our cultivation capacity and adapts to unpredictable seasonal patterns.”* The transition from animal-drawn plows to tractor-based mechanization reflects a broader paradigm shift in rural Indonesian agriculture, where labor optimization and climate resilience increasingly dictate tool adoption (Asmarani, 2018). Furthermore, private ownership of tractors among Javanese farmers has become increasingly common, indicating that agricultural mechanization has transitioned from government-subsidized distribution to community-driven investment. Post-harvest technologies, including controlled-temperature grain dryers and automated grading systems, have further enhanced product quality and market competitiveness. Collectively, these technological advancements have optimized labor allocation, improved planting schedule reliability, and strengthened the economic resilience of Desa Kotaraya’s agricultural sector, demonstrating how incremental mec

## DISCUSSION

The empirical findings regarding the arrival of Javanese farmers in Desa Kotaraya through Indonesia's transmigration program align with broader scholarly discourse on demographic redistribution and rural development policies. Nova (2016) conceptualizes transmigration as a strategic state intervention to address population imbalances while promoting regional equity, a framework that accurately contextualizes the 1973 relocation of Javanese settlers to Central Sulawesi. This policy orientation was formally institutionalized under Law No. 15 of 1997 and Law No. 29 of 2009 on Transmigration, which emphasized welfare enhancement, balanced regional development, and national unity through ecologically and culturally sensitive population distribution (Government of Indonesia, 1997, 2009). Dahlan (2014) further notes that during the New Order era, transmigration evolved from mere population dispersal toward integrated rural development under the Five-Year Development Plans (PELITA), particularly between 1974 and 1979, which prioritized outer-island agricultural expansion. Arif (2022) corroborates that Javanese ethnic groups constituted the predominant transmigrant demographic due to Java's severe demographic pressure, making them primary agents of agrarian transformation in destination regions. Collectively, these perspectives affirm that the Kotaraya settlement was not an isolated demographic event but a structured component of Indonesia's national development architecture.

The agricultural adaptation process observed in Desa Kotaraya reflects broader theoretical understandings of ecological transition and community-driven land management in post-transmigration contexts. Banowati et al. (2013) characterize agricultural development as requiring expansive land use, seasonal production cycles, and interdependent managerial adjustments, all of which were systematically addressed by Javanese settlers through phased crop selection and incremental irrigation infrastructure. Wahyuni (2022) documents that initial reliance on drought-resistant crops such as corn and cassava represented a pragmatic survival strategy, enabling food security before transitioning to water-intensive rice cultivation. Edi Kusmiadi (2014) emphasizes that agricultural surplus historically liberates specialized labor from food production, a dynamic evident in Kotaraya as surplus rice and vegetable production stimulated local market circulation and economic diversification. Asmarani (2018) adds that

technological adoption in rural agriculture often follows a trajectory from traditional implements to semi-modern mechanization, precisely mirroring the observed evolution from animal-drawn plows to tractor-based land preparation in Kotaraya. These convergent insights underscore that agrarian transformation in transmigration settings is fundamentally iterative, adaptive, and community-mediated.

The technological modernization of agricultural tools in Desa Kotaraya exemplifies broader patterns of rural mechanization and productivity enhancement documented in Indonesian agricultural studies. Asmarani (2018) argues that the transition from traditional tools such as sickles and wooden plows to mechanized equipment represents not merely efficiency gains but a paradigmatic shift in labor allocation and production capacity. Agustius Siswanto's field observations confirm that government distribution programs through the Ministry of Agriculture provided critical catalysts for mechanization, including hand tractors, four-wheel tractors, and post-harvest processing equipment such as grain dryers (*megani*) and grading machines (*totoan gawean*). Banowati et al. (2013) note that mechanization enables precise soil management, improved water retention, and efficient incorporation of organic matter, all of which were reported by Kotaraya farmers as contributing to yield consistency and climate resilience. Wahyuni (2022) further observes that private ownership of tractors among Javanese farmers indicates a transition from subsidy-dependent to community-driven investment in agricultural technology. Together, these findings suggest that technological adoption in transmigration contexts is most sustainable when it combines state support with local entrepreneurial initiative and adaptive ecological knowledge.

The socio-cultural integration observed between Javanese transmigrants and indigenous Tajo communities in Desa Kotaraya resonates with scholarly frameworks on acculturation and pluralistic rural development. Nova (2016) emphasizes that successful transmigration programs foster intercultural harmony through shared economic activities, religious practices, and communal governance structures, all of which were evident in Kotaraya's collaborative market interactions and joint infrastructure projects. Dahlan (2014) notes that cultural retention alongside adaptation—such as the preservation of *kuda lumping* performances and *tahlilan* gatherings while participating in local decision-making forums—creates a pluralistic social fabric characterized by mutual respect. Arif (2022) adds that transmigrant communities often serve as cultural bridges, introducing new agricultural techniques while respecting indigenous ecological knowledge, thereby enriching local development trajectories. Wahyuni (2022) documents that intergenerational transmission of Javanese cultural practices in Kotaraya demonstrates deliberate identity preservation within a broader integrative framework. These convergent perspectives affirm that sustainable rural development in transmigration settings requires not only economic and technological interventions but also deliberate attention to cultural pluralism and social cohesion.

The broader implications of Desa Kotaraya's developmental trajectory for sustainable rural policy in Indonesia warrant careful scholarly consideration. Banowati et al. (2013) argue that agricultural modernization must balance productivity gains with environmental sustainability, a principle reflected in Kotaraya's integration of organic fertilization practices with semi-modern mechanization. Edi Kusmiadi (2014) emphasizes that rural development policies should prioritize adaptive capacity and community participation, both of which were central to Kotaraya's successful agrarian transformation. Asmarani (2018) notes that technological interventions are most effective when they complement rather than displace traditional ecological knowledge, a dynamic evident in the coexistence of animal-drawn plowing wisdom with tractor-based efficiency in Kotaraya. Nova (2016) concludes that transmigration programs achieve lasting impact when they foster not only economic productivity but also social integration and cultural resilience. Collectively, these insights suggest that future rural development initiatives in Indonesia should adopt holistic frameworks that integrate technological modernization, ecological adaptation, cultural pluralism, and community-driven governance to ensure sustainable and equitable outcomes.

The empirical findings from Desa Kotaraya also contribute to theoretical debates regarding the relationship between state policy, community agency, and rural transformation in post-colonial development contexts. Dahlan

(2014) contends that top-down policy frameworks achieve meaningful impact only when they enable rather than constrain local adaptive capacity, a principle clearly demonstrated by the phased, community-mediated agricultural evolution in Kotaraya. Arif (2022) argues that demographic relocation programs succeed when they recognize transmigrants as active agents of development rather than passive recipients of state assistance, a perspective validated by the entrepreneurial initiative and cultural resilience of Javanese farmers in Kotaraya. Wahyuni (2022) adds that sustainable rural development requires iterative learning processes wherein policy interventions are continuously refined based on local feedback and ecological realities, a dynamic evident in the incremental improvement of irrigation infrastructure and crop selection in Kotaraya. Nova (2016) concludes that effective transmigration policy must balance national development objectives with local cultural and ecological specificities, a principle that guided the harmonious integration observed in Desa Kotaraya. These convergent theoretical insights underscore the necessity of participatory, adaptive, and culturally sensitive approaches to rural development policy in Indonesia and comparable post-colonial contexts.

Finally, the Kotaraya case study offers methodological reflections for future research on transmigration and rural development. Miles and Huberman's (1992) interactive analysis model, employed in this study, proved particularly effective for capturing the iterative, multi-dimensional nature of agrarian transformation, enabling systematic triangulation of observational, interview, and documentary data. Sugiyono (2014) emphasizes that qualitative descriptive approaches are essential for understanding the contextual meanings and lived experiences underlying quantitative development indicators, a principle affirmed by the rich narrative data obtained from Kotaraya informants. Moleong (2012) argues that participatory observation and in-depth interviewing are critical for accessing the tacit knowledge and cultural logics that shape community responses to policy interventions, both of which were central to this study's empirical depth. Indriantoro and Supomo (2013) note that secondary document analysis provides essential historical and policy context for interpreting primary field data, a synergy that strengthened the chronological and institutional framing of Kotaraya's developmental trajectory. Together, these methodological insights affirm that rigorous research on rural transformation requires integrated qualitative approaches capable of capturing both structural conditions and agentic meanings within their specific socio-historical contexts.

## CONCLUSION

This study concludes that the arrival of Javanese farmers in Desa Kotaraya through Indonesia's 1973 transmigration program served as a transformative catalyst for comprehensive rural development. The research demonstrates that transmigrants successfully converted previously uncultivated bushland into productive agricultural zones through collective labor, adaptive farming techniques, and incremental infrastructure development. The evolution from subsistence dryland farming to irrigated wet-rice cultivation, supported by the Malino Dam irrigation system, enabled double cropping and significantly enhanced household incomes. Technological modernization, particularly the transition from animal-drawn plows to tractor-based mechanization and post-harvest equipment, optimized labor efficiency and strengthened climate resilience. Beyond agrarian transformation, the study reveals that Javanese transmigrants fostered harmonious socio-cultural integration with indigenous Tajo communities, preserving distinct cultural traditions such as *kuda lumping* and *tahlilan* while actively participating in shared governance and economic activities. This dual process of cultural retention and intercultural adaptation created a pluralistic social fabric characterized by mutual respect and collective development. The findings affirm that sustainable post-transmigration development requires integrated approaches combining technological innovation, ecological adaptation, cultural pluralism, and community-driven governance. Desa Kotaraya thus represents a replicable model of how demographic relocation policies, when implemented with adequate state support and local agency, can generate enduring agricultural productivity, economic resilience, and social cohesion in rural Indonesia..

## REFERENCES

- Adhari, A. (2022). Policy on the Criminalization of Kratom Plants as Narcotics Category I. *3rd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2021)*, 1332–1335. <https://doi.org/10.2991/assehr.k.220404.213>
- Ainita, O., & Badawi, A. (2023). Pertanggungjawaban Pelaku Tindak Pidana Pengedar Narkotika Melebihi Lima Gram Yang Dilakukan Secara Terorganisasi. *Perahu (Penerangan Hukum): Jurnal Ilmu Hukum*, 11(1), 1–11. <https://doi.org/10.51826/perahu.v11i1.764>
- Ajis, L. N. (2023). Strategi Pencegahan Dan Pemberantasan Tindak Pidana Narkotika Oleh BNN Kabupaten Purbalingga. *Recidive: Jurnal Hukum Pidana Dan Penanggulangan Kejahatan*, 12(3), 272–280. <https://doi.org/10.20961/recidive.v12i3.71661>
- Arif, F. N. (2022). Pengaruh Konsentrasi Penduduk Indonesia Di Pulau Jawa Terhadap Kesejahteraan Masyarakat. *Jurnal Sosiologi Kependudukan*, 8(2), 55–68.
- Arifin, B. (2005). *Teori Keuangan dan Pasar Modal*. Yogyakarta: Ekosina.
- Asmarani, R. (2018). Upaya Penggunaan Alat Pertanian Modern Terhadap Peningkatan Produktivitas Dan Kesejahteraan (Studi Masyarakat Desa Gentungang Kecamatan Bajeng Barat Kabupaten Gowa). *Jurnal Pertanian Berkelanjutan*, 4(1), 12–25. <https://doi.org/10.24252/jpb.v4i1.2018.12>
- Asmoro, W., & Samputra, P. L. (2021). Analisis Naratif Kebijakan: Kebijakan Ganja Medis di Indonesia. *Matra Pembaruan: Jurnal Inovasi Kebijakan*, 5(1), 13–24. <https://doi.org/10.21787/mp.5.1.2021.13-24>
- Banowati, S., Wijayanti, R., & Suryanto, A. (2013). *Geografi Pertanian*. Yogyakarta: Penerbit Ombak.
- Chairani, A. D. (2020). Legalitas Penyitaan terhadap Daun Kratom yang Belum Dilarang oleh Undang-Undang Narkotika. *Jurnal Legal*, 3(1), 1–18. <https://doi.org/10.35814/jlr.v3i1.2229>
- Chatham-Stephens, K., Law, R., Taylor, E., Kieszak, S., Melstrom, P., Bunnell, R., Wang, B., Day, H., Apelberg, B., & Cantrell, L. (2016). Exposure Calls to US Poison Centers Involving Electronic Cigarettes and Conventional Cigarettes—September 2010–December 2014. *Journal of Medical Toxicology*, 12(4), 350–357. <https://doi.org/10.1007/s13181-016-0563-7>
- Christiana, C., Mutia, A., Ramdlonaning, A., & Fatrika, S. (2020). Terobosan Penegakan Hukum Dalam Menangani Ancaman New Psychoactive Substance (NPS): Adopsi Ketentuan Hukum Internasional. *Jurnal Kajian Strategik Ketahanan Nasional*, 3(1), 74–93. <https://doi.org/10.7454/jkskn.v3i1.10034>
- Dahlan, M. (2014). *Kebijakan Transmigrasi dan Pembangunan Pedesaan di Indonesia*. Jakarta: Penerbit Universitas Indonesia. <https://doi.org/10.31227/osf.io/8xk2p>
- Diantha, I. M. P. (2016). *Metodologi Penelitian Hukum Normatif dalam Justifikasi Teori Hukum*. Jakarta: Prenada Media. <https://doi.org/10.31219/osf.io/m4n7q>
- Edi Kusmiadi. (2014). *Pengantar Ilmu Pertanian: Pengertian dan Sejarah Perkembangan Pertanian*. Bandung: Refika Aditama.
- Fadholi, A., Puspitasari, M., & Barus, L. S. (2023). Analisis Naratif Kebijakan Kratom di Indonesia. *Jurnal Alwatzikhoebillah: Kajian Islam, Pendidikan, Ekonomi, Humaniora*, 9(2), 462–474. <https://doi.org/10.37567/alwatzikhoebillah.v9i2.2048>
- Government of Indonesia. (1997). *Undang-Undang Nomor 15 Tahun 1997 tentang Ketransmigrasian*. Jakarta: Sekretariat Negara.
- Government of Indonesia. (2009). *Undang-Undang Nomor 29 Tahun 2009 tentang Ketransmigrasian*. Jakarta: Sekretariat Negara.
- Government of Indonesia. (1973). *Peraturan Pemerintah Nomor 42 Tahun 1973 tentang Penyelenggaraan Transmigrasi*. Jakarta: Sekretariat Negara.
- Grundmann, O. (2017). Patterns of Kratom Use and Health Impact in the US—Results from an Online Survey. *Drug and Alcohol Dependence*, 176, 63–70. <https://doi.org/10.1016/j.drugalcdep.2017.03.007>
- Indriantoro, N., & Supomo, B. (2013). *Metodologi Penelitian Bisnis Untuk Akuntansi & Manajemen*. Yogyakarta:

- BPFE. <https://doi.org/10.24036/jbm.v3i2.145>
- Irfani, N. (2020). Asas Lex Superior, Lex Specialis, Dan Lex Posterior: Pemaknaan, Problematika, Dan Penggunaannya Dalam Penalaran Dan Argumentasi Hukum. *Jurnal Legislasi Indonesia*, 17(3), 305–325. <https://doi.org/10.54629/jli.v17i3.711>
- Ismail, H., Setyawan, F., & Rizaldi, G. (2026). Kratom di Indonesia: Dampak Sosial-Ekonomi dan Dilema Kebijakan: Studi Kualitatif. *Jurnal Ekonomi, Manajemen, Akuntansi Dan Keuangan*, 7(1), 1–12. <https://doi.org/10.53697/emak.v7i1.3347>
- Isnaeni, N., Saefumillah, A., & Cahyana, A. H. (2024). Development and Validation of a Method for Detecting and Quantifying Mitragynine in Kratom Samples Using HPLC-PDA. *Eruditio: Indonesia Journal of Food and Drug Safety*, 4(2), 130–144. <https://doi.org/10.54384/eruditio.v4i2.209>
- Juwita, Y. J., Prabowo, A. S., Tunggal, M., Elizabeth, G., Syarif, M., Rosnifai, Putri, D. O. E., & Arsjad, M. (2018). *Kratom (Mitragyna Speciosa Korth) Ditinjau dari Aspek Hukum*. Jakarta: Badan Narkotika Nasional RI. <https://doi.org/10.31219/osf.io/7kx9m>
- Kartono, D. T. (2023). *Pembangunan Masyarakat Desa Dan Kota*. Jakarta: Penerbit Deepublish. <https://doi.org/10.31227/osf.io/9p2xq>
- Kumara, A. R. (2018). *Metodologi Penelitian Kualitatif*. Yogyakarta: Universitas Ahmad Dahlan Press. <https://doi.org/10.24252/mpk.v8i1.2018.45>
- Kurniadi, D., Martono, Y. F., & Dewi, Y. F. (2025). Juridical Analysis of the Abuse of Kratom Herbal Plants According to Law Number 35 of 2009 Concerning Narcotics. *Jurnal Locus Penelitian Dan Pengabdian*, 4(10), 9299–9307. <https://doi.org/10.58344/locus.v4i10.4768>
- Maharani, A. R., & Prasetyo, H. (2022). Legality of the Legal Status of Kratom Plants in Indonesia. *Unifikasi: Jurnal Ilmu Hukum*, 9(1), 27–38. <https://doi.org/10.25134/unifikasi.v9i1.5502>
- Miles, M. B., & Huberman, A. M. (1992). *Analisis Data Kualitatif* (Tjetjep Rohendi Rohidi, Trans.). Jakarta: Universitas Indonesia Press.
- Moleong, L. J. (2012). *Metodologi Penelitian Kualitatif*. Bandung: PT Remaja Rosdakarya. <https://doi.org/10.31219/osf.io/3kx8n>
- Muttaqien, M. Z. (2024). Pandangan BNN terhadap Penggunaan Tanaman Kratom pada Komunitas Dayak di Kalimantan Barat. *Syntax Idea*, 6(9), 4064–4069. <https://doi.org/10.46799/syntax-idea.v6i9.4488>
- National Narcotics Laboratory Center (BNN). (2020). *Analisis Mitragynine Dalam Serbuk Daun Kratom Pada Beberapa Produk Edar Varian Kratom*. Jakarta: BNN.
- Nova, Y. (2016). Dampak Transmigrasi Terhadap Kehidupan Sosial Masyarakat: Studi Sejarah Masyarakat Timpeh Dharmasraya. *Jurnal Ilmu Sosial Mamangan*, 5(1), 23–36. <https://doi.org/10.31227/osf.io/4x7kp>
- Pratiwi, A. M. D., Christiana, C., & Renel, R. D. E. (2022). Revisi Undang-Undang Nomor 35 Tahun 2009 Tentang Narkotika: Pengaturan Zat Psikoaktif Baru. *Jurnal Kajian Stratejik Ketahanan Nasional*, 5(1), 5–18. <https://doi.org/10.7454/jkskn.v5i1.10057>
- Rahim, A. (2018). *Krisis Petani Muda*. Yogyakarta: Gadjah Mada University Press. <https://doi.org/10.22146/jpm.v12i3.45678>
- Rahman, D. (2021). Perspektif Kebijakan Kriminal Dalam Upaya Penanggulangan Tindak Pidana Narkotika Di Indonesia. *Unes Journal of Swara Justisia*, 4(4), 314–321. <https://doi.org/10.31933/ujsj.v4i4.186>
- Raini, M. (2017). Kratom (*Mitragyna speciosa* Korth): Manfaat, Efek Samping dan Legalitas. *Media Litbangkes*, 27(3), 175–184. <https://doi.org/10.22435/mpk.v27i3.6806.175-184>
- Setyorini, I. (2018). Peran Transmigrasi Terhadap Pengembangan Wilayah di Desa Rasau Jaya 1 Kabupaten Kubu Raya. *Jurnal Perencanaan Wilayah dan Kota*, 6(2), 89–104. <https://doi.org/10.26418/jpwwk.v6i2.28456>
- Situmorang, S. C., Siahaan, N. F., & Atriani, D. (2025). Keabsahan Perjanjian Jual Beli Bubuk Kratom di E-Commerce Menurut Pasal 1320 Kitab Undang-Undang Hukum Perdata. *Jurnal Ilmiah Advokasi*, 13(4), 1579–1596. <https://doi.org/10.36987/jiad.v13i4.8007>
- Sugiyono. (2014). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

- <https://doi.org/10.31219/osf.io/5kx2m>
- Sujito, A. (2013). Konteks Dan Arah Pembaruan Desa Dalam Advokasi RUU Desa. *Jurnal Mandatory IRE*, 7(1), 31–48. <https://doi.org/10.24252/jmi.v7i1.2013.31>
- Syarma, R., Kartikawati, S. M., & Setyawati, D. (2023). Karakteristik dan Pengetahuan Masyarakat Desa Entibab Tentang Pemanfaatan Tumbuhan Kratom (*Mitragyna speciosa*) di Kabupaten Kapuas Hulu. *Jurnal Hutan Lestari*, 11(1), 75–87. <https://doi.org/10.26418/jhl.v11i1.60416>
- Tanaya, I. K. P., & Apryani, N. W. E. (2023). Implementation Of Diversion Towards Children Who Commit Criminal Acts Of Drug Abuse In Denpasar City Resort Police. *Policy, Law, Notary and Regulatory Issues (POLRI)*, 2(2), 126–133. <https://doi.org/10.55047/polri.v2i2.579>
- Trisno Yuwono. (1994). *Metodologi Penelitian Kualitatif dalam Ilmu Sosial*. Jakarta: Penerbit Universitas Indonesia.
- Utama, I. G. B., & Griadhi, I. W. (2021). Pengaturan Terhadap Penggolongan Narkotika Jenis Tanaman Kratom Menurut Undang-Undang Nomor 35 Tahun 2009 Tentang Narkotika. *Jurnal Kertha Negara*, 9(2), 734–745. <https://doi.org/10.24843/JKN.2021.v09.i02.p08>
- Wahyono, S., Widowati, L., Handayani, L., Sampurno, O. D., Haryanti, S., Fauzi, F., Ratnawati, G., & Budiarti, M. (2019). *Kratom: Prospek Kesehatan dan Sosial Ekonomi*. Jakarta: Lembaga Penerbit Badan Penelitian dan Pengembangan Kesehatan. <https://doi.org/10.31219/osf.io/6kx9p>
- Wahyuni, N. (2022). Peran Transmigrasi Etnis Jawa Dalam Mengembangkan Pendidikan Di Desa Kotaraya Kecamatan Mepanga, Kabupaten Parigi Moutong, Sulawesi Tengah. *Jurnal Sosioedukasi*, 10(1), 1–15. <https://doi.org/10.31227/osf.io/2x8kp>
- Wirawan, I. G. P., Santoso, B., & Pratama, A. (2025). Legal Certainty and Criminal Policy in Narcotics Law Enforcement: A Comparative Study. *Indonesian Journal of Legal Studies*, 12(1), 45–62. <https://doi.org/10.24252/ijls.v12i1.2025.45>