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Role of the Organic Agriculture Market in Achieving Sustainable Development Goals in Indonesia: A Systematic Literature Review

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Received: 08-19-2025 **Revised:** 11-05-2025 **Accepted:** 11-13-2025

Citation: Nendissa, D. R., Tamelan, P. G., Winarno, S. T., Lerik, M. D. C., & Ratu, J. M. (2026). Role of the organic agriculture market in achieving Sustainable Development Goals in Indonesia: A systematic literature review. *Org. Farming*, *12*(1), 11–29. https://doi.org/10.56578/of120102.

Abstract: This study explored the role of the organic agriculture market in advancing the Sustainable Development Goals (SDGs) in Indonesia through a systematic literature review (SLR) of global and national academic publications. The review included 90 peer-reviewed articles covering the period from 1998 to 2025 from the Scopus database, based on the selection criteria of thematic relevance, methodological rigor, and theoretical alignment. Results indicated that organic agriculture contributed to environmental sustainability, rural income diversification, and inclusive market development, yet persistent challenges remained in certification systems and institutional coordination. Integration with national data from Statistik Pertanian Organik Indonesia (SPOI) 2023 revealed that organic rice, coffee, and vegetables dominated land use, but production and certification were geographically concentrated in Java and Bali. The synthesis highlighted that limited adoption of Participatory Guarantee Systems (PGS) and weak inter-ministerial collaboration constrained market expansion and SDG alignment. The study concluded that achieving the SDGs through organic agriculture in Indonesia required stronger policy coherence, enhanced digital and institutional infrastructure, and public–private partnerships to improve certification efficiency, traceability, and market access.

Keywords: Organic agriculture; SDGs; Market development; Policy; Certification

1. Introduction

The global agricultural sector is increasingly under pressure to meet the dual imperatives of feeding a growing population and mitigating environmental degradation. As conventional farming practices have contributed to soil depletion, biodiversity loss, and chemical contamination, the call for a more sustainable, equitable, and ecologically sound food system has intensified. In this context, organic agriculture has gained global attention as a promising alternative that promotes long-term sustainability. Endorsed by 2030 Agenda for Sustainable Development delineated by the United Nations, agriculture plays a pivotal role in achieving several Sustainable Development Goals (SDGs), especially SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), and SDG 15 (Life on Land). Organic farming contributes to these objectives by enhancing biodiversity, improving soil health, and minimizing the use of synthetic chemicals (Eyhorn et al., 2019; Pânzaru et al., 2023).

Globally, the organic agriculture sector has experienced steady expansion, with over 76 million hectares now cultivated organically and more than 3.7 million producers involved (Setboonsarng & Gregorio, 2017). This growth reflects increasing institutional trust and consumer demand for sustainable food systems. In developing

countries, organic farming serves not only as a response to environmental concerns but also as a tool for rural development and economic resilience. It empowers smallholder farmers by reducing input costs, diversifying incomes through niche markets, and reinforcing traditional ecological knowledge (Kumar et al., 2025; Mahedi et al., 2025; Rozaki et al., 2024; Šeremešić et al., 2021).

Organic agriculture continues to expand globally, both in terms of cultivated land and market value. According to the Research Institute of Organic Agriculture (FiBL) and International Federation of Organic Agriculture Movements (IFOAM)–Organics International, the total certified organic farmland reached approximately 96.4 million hectares in 2022 and increased to nearly 99 million hectares by the end of 2023, thus representing a sustained upward trajectory across all continents (Willer et al., 2024). This growth is complemented by robust market performance: the global organic food market was valued at USD 102.73 billion in 2024 and is projected to reach nearly USD 298 billion by 2034; this reflects a compound annual growth rate of approximately 11% (Zion Market Research, 2024).

Policy frameworks have increasingly aligned with this expansion. Within the European Union, the Farm-to-Fork Strategy establishes a target of 25% agricultural land to be managed organically by 2030, and supported by direct payments, certification subsidies, as well as national organic action plans (BMLEH, 2023). This commitment positions the EU as a global frontrunner in organic transition, followed by rapidly growing markets such as India, China, and Russia, where government incentives and consumer awareness have accelerated organic adoption (Willer et al., 2024).

Despite these advances, significant structural challenges persist, particularly in developing economies where organic agriculture expansion is constrained by high certification costs, limited technical infrastructure, and insufficient market data (FAO, 2023). Addressing these barriers requires context-specific policy instruments, evidence-based interventions, and investments in logistics and certification systems to ensure that the global organic sector grows inclusively and sustainably.

In Asia, particularly in countries like China, India, and Indonesia, the organic agriculture movement is gaining traction as a result of policy alignment, ecological imperatives, and shifting consumer preferences (Khoruzhy et al., 2024). For Indonesia, a megadiverse archipelagic state with a predominantly agrarian economy, this trend is notably significant. Since the introduction of the Statistik Pertanian Organik Indonesia (SPOI) in 2019, the country has become capable of monitoring the growth of its organic sector through longitudinal data. These national datasets indicate increasing organic farmland, wider farmer participation, and initial steps toward institutional recognition. Yet, the empirical link between this growth and the progress of Indonesia toward the SDGs remains underexplored.A comprehensive review that evaluates whether the organic agriculture market in Indonesia is advancing SDG implementation is urgently needed. Most existing research either lacked empirical depth or remained localized without broader contextualization in national development policy or sustainability science (Markandya et al., 2015). These resulted in limited integration of organic agriculture into formal policy frameworks, hence reducing its visibility as a transformative tool for development.

The conceptual framework of this study was grounded in agroecology, ecological modernization theory, food sovereignty, and the three pillars of sustainability: environmental, social, and economic. The IFOAMdefined organic agriculture as a production system that sustains the health of soils, ecosystems, and people by relying on ecological processes and local biodiversity rather than synthetic inputs (Akhuli, 2025). Agroecology serves as the epistemological foundation, merging local wisdom with scientific knowledge to promote resource efficiency and resilience (Manida & Nedumaran, 2021). The Participatory Guarantee System (PGS), now increasingly adopted in Indonesia, exemplifies how organic agriculture can foster inclusive certification models that empower local communities (Darmawan et al., 2024).

Research showed that organic systems offered multiple benefits beyond environmental gains. These include increased soil fertility, improved water retention, biodiversity protection, and socio-economic improvements in rural areas (Roljević et al., 2012; Terziev & Arabska, 2016). However, these impacts remain largely unmeasured or unsynthesized in the Indonesian context. The SPOI database offers an opportunity to fill this gap but has yet to be effectively linked with SDG indicators or development planning.

Two critical research gaps emerged from this context. First is the absence of longitudinal and systemic evaluations connecting organic agriculture metrics such as land conversion, yields, or market participation with indicators of sustainable development like food security, gender equity, or biodiversity conservation (Polushkina et al., 2020). Second is the underutilization of national organic data in both scholarly discourse and policy design, which limits the ability of Indonesia to demonstrate its progress or contribute meaningfully to global sustainability dialogues (El Chami, 2020). This research seeks to bridge theory, data, and policy by answering the central question: To what extent does the development of the organic agriculture market contribute to achieving the SDGs in Indonesia?

In this connection, this study was guided by three interrelated research objectives:

1. To synthesize the current state of organic agriculture in SPOI and assess its alignment with relevant SDG indicators, particularly those related to environmental sustainability, food security, and responsible consumption.

2. To identify market-related constraints, policy gaps, and enabling factors that influence the performance and sustainability of the organic agriculture sector in Indonesia, including certification systems, consumer awareness, and market access.
3. To provide policy recommendations for better integration of organic agriculture into the national SDG strategies in Indonesia, with an emphasis on inclusive rural development, value-added trade potential, and resilience against ecological and economic shocks.

2. Methodology

This study employed a systematic literature review (SLR) to examine the current state of knowledge concerning the role of organic agriculture in supporting the SDGs and its integration into market systems. The SLR approach was adopted as it could provide a structured, transparent, and replicable method for identifying, evaluating, and synthesizing relevant research. The methodological framework follows the proposed guidelines, in order to ensure scientific rigor and systematic coverage of the research landscape.

2.1 Data Source and Search Strategy

This study employed a comprehensive search strategy through the Scopus database, chosen for its extensive coverage of peer-reviewed literature across scientific disciplines. The search query was constructed to identify journal articles that included the keywords “organic”, “agriculture”, “sustainable”, “goals”, and “market” within their titles, abstracts, or keywords. The publication window was set from 1998 to 2025 to capture a broad range of literature across nearly three decades, thus allowing an analysis of both foundational works and recent developments. The search was further refined by limiting results to publications in English and categorized strictly as journal articles, so as to ensure the inclusion of academically rigorous and comparable sources. The final Scopus search was conducted on 19 August 2025, immediately prior to submission.

2.2 Screening and Inclusion Criteria

Following the initial search, a total of 101 articles were identified as potentially relevant to the research topic on the role of the organic agriculture market in achieving the SDGs in Indonesia (Figure 1). These articles underwent a two-tiered screening process to ensure their thematic relevance, methodological rigor, and conceptual contribution to the broader discourse on sustainable agricultural development.

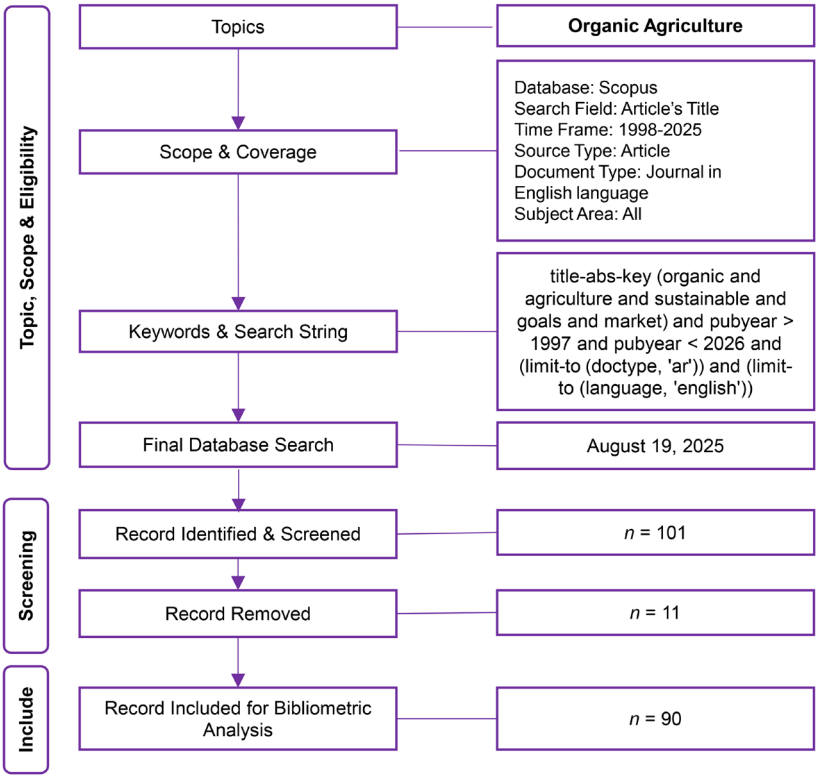

Figure 1. Flow diagram of the search strategy

In the first stage, titles and abstracts were reviewed to evaluate their alignment with the three core dimensions of this study: (1) organic agricultural practices; (2) linkages to the SDGs; and (3) market dimensions, including certification, supply chains, and trade integration. Articles that did not explicitly address the interrelation between organic agriculture and sustainable development and those focused primarily on other sustainability sectors such as renewable energy, forestry, or fisheries were eliminated from the initial pool.

In the second stage, a comprehensive full-text review was conducted to evaluate the methodological rigor, theoretical robustness, and empirical relevance of each study to the research topic. Articles were excluded if they (1) lacked methodological transparency or did not provide empirical evidence relevant to the dynamics of organic agricultural markets; (2) exhibited duplication or substantial overlap with previously included studies; (3) were purely conceptual without offering measurable or context-specific analysis for Indonesia; or (4) had inaccessible full-text versions despite repeated retrieval attempts.

At this stage, the initial pool consisted of 91 articles. During the full-text screening, one study by Ercoskun published in 2022 was identified as a republished version of the same book chapter originally published in 2018 (Ercoskun, 2018). To avoid double counting in the SLR dataset, the duplicate record was removed and only the original source (Ercoskun, 2018) was retained. Consequently, 90 articles were included in the final synthesis, ensuring methodological consistency and providing empirically grounded insights into Indonesia's position within the organic agriculture market under the SDGs framework.

2.3 Data Extraction and Thematic Synthesis

The selected 90 articles were subject to a systematic data extraction process designed to ensure consistency and analytical rigor. For each study, key attributes were recorded, including the research objectives, methodological approach, geographical context, principal findings, and theoretical or conceptual contributions. The extracted data were subsequently analyzed thematically to identify recurring patterns, conceptual linkages, and emerging trends across the literature.

The thematic synthesis revealed several predominant domains of discussion. A central theme concerned the policy frameworks and institutional arrangements that could facilitate the advancement of organic agriculture in alignment with the SDGs. Another major focus was related to the development of organic markets and the integration of organic products into local, regional, and global value chains. Numerous studies emphasized the environmental benefits and public health outcomes associated with organic farming systems. Additional themes encompassed the socioeconomic factors influencing farmers' transitions to organic practices, as well as consumer attitudes, motivations, and behavioral responses to certification, labeling, and pricing mechanisms. Collectively, these thematic insights offered a comprehensive and integrative understanding of how organic agriculture interacted with sustainability imperatives and market dynamics on a global scale.

To ensure the transparency and integrity of the review process, the study adhered to the standards outlined by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Each stage of the review starting from the database search to the synthesis of findings was carefully documented and systematically conducted. Having used a single and reliable database like Scopus, the study maintained high standards of methodological rigor via clear inclusion and exclusion criteria, and adopted a transparent coding process for thematic analysis. This approach ensured the reproducibility of findings and strengthened the reliability of the review. Ultimately, this methodology supported the objective of generating a robust synthesis of global academic discourse on organic agriculture and provided a solid foundation for interpreting and contextualizing current developments in Indonesia's national organic agriculture strategy and its contribution to the SDGs.

3. Results

3.1 Trends in Organic Agriculture Development in Indonesia Based on SPOI 2023

Based on the data from the SPOI 2023 (David et al., 2023), the organic agriculture sector in Indonesia exhibited a range of growth patterns, reflecting both progress and ongoing structural challenges.

Table 1 shows a concentration of specific commodities such as organic rice, coffee, coconut, and spices, each with relatively significant land area, production volume, and farmer participation. For example, organic rice led farmer involvement, with 12,752 farmers managing over 4,766 hectares and producing over 40,000 tons in 2022, indicating strong market and cultivation support for staple organic products.

Organic coffee dominated in land use, reaching 31,772.96 hectares, supported by 13,666 farmers and yielding over 33,000 tons. This indicates the long-term value seen in organic coffee for both domestic consumption and export potential. Likewise, coconut and spices maintained strong positions in land and production metrics, demonstrating that perennial and high-demand crops have become the backbone of Indonesia's organic agriculture. In contrast, some organic sectors remained underdeveloped. Organic banana, orange, and tea cultivation showed relatively limited expansion with each less than 200 hectares in the total area. Organic orange farming, for instance,

sharply declined to just 7.2 hectares in 2022. Its low farmer participation and declining land area suggest that either consumer demand or technical capacity has not supported their scalability, despite their high per capita consumption rates in conventional markets.

Table 1. Key organic commodities in Indonesia in 2022

Organic Commodity	Land Area (hectares) in 2022	Production (ton) in 2022	Farmers/Operators in 2022
Organic rice	4766.107	40376.58	12752
Organic coconut	21542.0	23296.0	10239
Organic banana	57.7	265.25	53
Organic coffee	31772.96	33302.805	13666
Organic orange	7.2	25.0	19
Organic tea	178.51	104.664	70
Organic cocoa	563.93	2,141.754	429
Organic aren (sugar palm)	507.03	16,451.51	910
Organic spices	4860.397	8002.094	1574
Organic tropical fruits	1092.419	9658.939	2109
Organic mushroom			1
Organic legumes		110.682	
Organic tubers		683.236	
Organic vegetables		3043.58	
Organic honey (wild)		23.4	
Organic honeycomb		0.057	
Organic livestock		41898.042	16
Organic fertilizer		757131.779	124
Organic market operators		7795.984	48
Organic processed products		4795.287	99

Source: David et al. (2023)

The organic livestock and processed food sectors showed promising developments. Organic livestock products reached over 41,000 tons in 2022, while organic processed goods hit nearly 4,800 tons with 99 registered operators. These data suggest a maturing industry that is extending beyond raw agricultural output toward value-added goods. The organic fertilizer sector is especially notable, reaching over 757,000 tons in production and involving 124 operators. This highlights the essential role of input sustainability in supporting organic farming ecosystems.

Several gaps remained evident. Commodities like organic legumes, tubers, vegetables, and mushrooms lacked complete data, thus pointing to either limited formal cultivation or insufficient reporting structures. The mushroom sector reported only one operator for example, while vegetables, despite being top in consumer preference, were not captured in production or land area data. This discrepancy highlights the need for improved data collection and farmer inclusion.

Moreover, market integration is advancing. The number of market operators increased from 9 in 2019 to 48 in 2022, with marketed organic production rising from just 491.4 tons to 7,795.984 tons (David et al., 2023), thus underscoring rapid growth in commercial activity. Online consumer trends and preferences, as revealed by supporting surveys, further indicate a rising interest in digital access to organic products, particularly fresh vegetables, fruits, and rice.

3.2 Overview of Articles Obtained from the Systematic Literature Review Protocol

While core commodities like rice, coffee, and coconut drive the organic agriculture sector forward in Indonesia, data gaps and underdeveloped subsectors suggest the need for targeted support in underrepresented crops. Strengthening reporting systems, investing in value-added production, and enhancing market infrastructure are key strategies to ensure inclusive and sustainable growth.

Figure 2 shows the global distribution of publications related to the organic agriculture market and its connection to the SDGs. For more than two decades between 1998 and 2019, the number of publications remained extremely low and stagnant. This suggests that, at the global level, the topic did not initially receive much academic attention. The organic agriculture market may have been considered a niche subtopic within broader agricultural studies during this period.

A significant shift began in 2020, marked by a sharp rise in the number of documents published and reached a peak in 2024. This indicates a growing global awareness of sustainable food systems, healthy consumption patterns, and the need for environmentally friendly agricultural practices. The COVID-19 pandemic may have also influenced this trend, as it sparked greater interest in local food systems and organic products, which then became the focus of increased research activity.

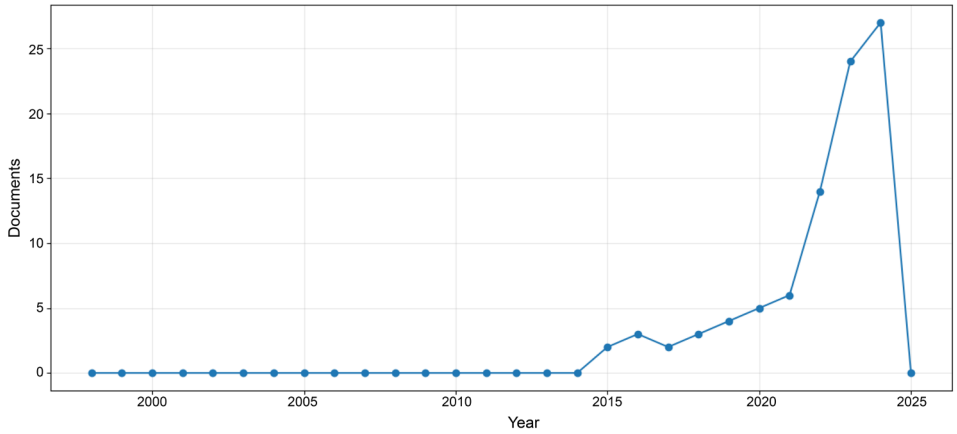

Figure 2. Documents by year

The growing volume of publications in the international academic community reflects the recognition of the organic agriculture market as an important tool for achieving various SDGs. The market is now being viewed not only from a farming perspective but also through the lenses of green economy strategies, climate change mitigation, and rural development. This aligns with global development priorities emphasizing SDG 12 (Responsible Consumption), SDG 2 (Food Security), and SDG 13 (Climate Action).

This trend also suggests that the organic agriculture market has become a new frontier for interdisciplinary research, involving fields such as economics, environmental science, sociology, and public policy. The increasing number of studies indicates high demand for data-driven insights, theoretical frameworks, and policy analysis that can guide the role of the market in sustainable development efforts.

The review of the 90 articles offered a comprehensive view of the role played by organic agriculture in achieving the SDGs, particularly in relation to food security, environmental sustainability, and economic empowerment in developing countries such as Indonesia. However, while these articles provided valuable insights, they often lack a deeper and critical examination of the challenges faced by organic agriculture markets, especially in Indonesia. Therefore, a more detailed synthesis and critical analysis are essential to understand how organic agriculture can effectively contribute to the SDGs, specifically in the Indonesian context. Selected studies from the included articles are summarized in Table 2.

Table 2. Selected studies from the systematic literature review (SLR) and their thematic focus

No.	Researcher(s) and Year	Discussion in the Research	Trend of Topic
1	Han et al. (2021)	Investigates motivations, goals, and benefits associated with organic grain farming by producers in Iowa, U.S.	Organic farming practices
2	Ercoskun (2018)	Discusses organic markets, participatory guarantee systems, and community-supported agriculture for sustainable food communities.	Community-supported agriculture
3	Cristiano (2021)	Examines organic vegetables from community-supported agriculture in Italy, with an emphasis on emergy assessment for sustainable, just, and resilient urban-rural local food production.	Local food production
4	Eyhorn et al. (2019)	Examines sustainability in global agriculture driven by organic farming.	Sustainability in agriculture
5	Markandya et al. (2015)	Discusses organic agriculture and its role in achieving post-2015 development goals.	Post-2015 development goals
6	Ahmad et al. (2024)	Investigates how AI can empower agriculture for global food security, especially in developing nations.	AI and global food security
7	Batra et al. (2024)	Focuses on achieving Zero Hunger through organic agriculture under the SDGs.	SDG 2 (Zero Hunger)
8	Khoruzhy et al. (2024)	Examines the development of organic agriculture in Asian countries.	Organic agriculture in Asia
9	Feuerbacher et al. (2018)	Assesses the economy-wide effects of Bhutan's large-scale conversion to 100% organic farming.	Large-scale organic conversion
10	Alkon (2008)	Explores sustainable consumption in farmer markets and the shift from value to values in agricultural markets.	Sustainable consumption

Several studies, such as Han et al. (2021) highlighted the motivations, goals, and benefits associated with organic grain farming, with a focus on producers in Iowa, U.S. These studies contribute significantly to the understanding of organic farming practices and their related benefits to sustainability. However, while the focus of organic

farming in the U.S. is valuable, it fails to critically assess how these practices translate into the Indonesian context, where challenges such as limited access to organic certification and market infrastructure remain significant. Further research is required to adapt these findings to Indonesia, where such barriers hinder smallholder participation in organic agriculture.

In addition, Ercoskun (2018) explored the role of participatory guaranteed systems and community-supported agriculture in promoting sustainable food communities. While these studies offered valuable perspectives on the social and community-driven aspects of organic agriculture, they did not fully address the specific challenges of implementing such systems in Indonesia. In regions like Indonesia, where community infrastructure is often fragmented, a more in-depth exploration of how participatory systems can be effectively scaled is crucial to achieving the desired social and economic benefits.

The study by Cristiano (2021) emphasized the role of community-supported agriculture in Italy, particularly focusing on the assessment of sustainable urban-rural food production. While this work is important in showing how local food production can be made more resilient, the study did not consider the complexities involved in replicating this model in Indonesia, where urban-rural dynamics and access to resources differ significantly. A more critical analysis of how the Italian model can be adapted to Indonesia would offer valuable insights for local food production strategies.

On the global stage, Eyhorn et al. (2019) provided an important overview of the sustainability impacts of organic farming. They discussed the role of organic agriculture in improving soil health and enhancing biodiversity. While these findings are significant for understanding the environmental benefits of organic farming, they do not sufficiently address the economic challenges faced by developing nations like Indonesia. High production costs and a reliance on external inputs in organic farming remain to be substantial obstacles in Indonesia; therefore, a more critical evaluation is required to examine how these barriers can be overcome while maintaining ecological integrity.

Furthermore, Markandya et al. (2015) explored the role of organic agriculture in achieving post-2015 development goals. They emphasized its potential to drive sustainable development. While the theoretical framework provided in this study is valuable, it did not delve into the practical policy frameworks required in countries like Indonesia, where policies supporting organic agriculture are often fragmented. More detailed research into how coherent and supportive policies can be developed to promote organic farming in Indonesia is essential.

The recent study by Ahmad et al. (2024) introduced the potential of artificial intelligence (AI) in empowering agriculture for global food security, particularly in developing nations. This work offered new insights into how technology can enhance organic farming practices. However, further studies should be done to explore the applicability of AI-driven solutions in the context of Indonesia's organic agriculture market, where technological access and infrastructure can be limited.

Moreover, Batra et al. (2024) investigated the role of organic agriculture in achieving SDG 2 (Zero Hunger) through sustainable farming practices in India. While the study emphasized the importance of organic farming in addressing hunger, it did not sufficiently explore the specific barriers that might exist in Indonesia, such as insufficient market access for organic products. Understanding these challenges is crucial for determining how organic agriculture can play a role in achieving food security in Indonesia.

Khoruzhy et al. (2024) focused on the development of organic agriculture in Asian countries, which has relevance for Indonesia. However, while this study provided useful insights, it did not fully address the specific regional challenges in Indonesia, such as the need for more inclusive market access and stronger supply chains. An in-depth exploration of these issues in the Indonesian context would be valuable for strengthening the organic agriculture sector in the region.

Finally, Feuerbacher et al. (2018) explored the economy-wide effects of Bhutan's conversion to 100% organic farming, in order to provide a comprehensive analysis of the potential impacts of large-scale organic conversion. Though this study offered useful insights, further investigation was required to tackle the challenges of implementing similar large-scale organic farming policies in Indonesia, where agricultural practices vary widely and market dynamics are different.

While the review of these studies offered valuable global insights into the role of organic agriculture in achieving SDGs, they often failed to critically address the unique challenges faced by developing countries, particularly Indonesia. More localized and nuanced research is required to fully understand how organic agriculture can contribute to sustainable development in Indonesia, with a particular focus on overcoming the specific barriers faced by smallholder farmers, improving market infrastructure, and developing coherent policy frameworks.

Thus, it reveals that the topic of the organic agriculture market and its relevance to the SDGs is experiencing exponential growth in global research. The post-2020 surge highlights how the academic world is responding to the broader global challenges of transforming food systems and supporting sustainability transitions, hence a timely and significant area of study.

3.3 Author Productivity

Figure 3 presents the number of documents published per author on this topic at a global level. Notably, there is no dominant author; most authors have contributed only one document. A few authors such as Arbuckle, J. G. and Spiller, M. appear twice, but no single scholar or institution clearly leads the field. This suggests that the topic remains relatively new and open to contributions from a broad range of researchers across disciplines and regions.

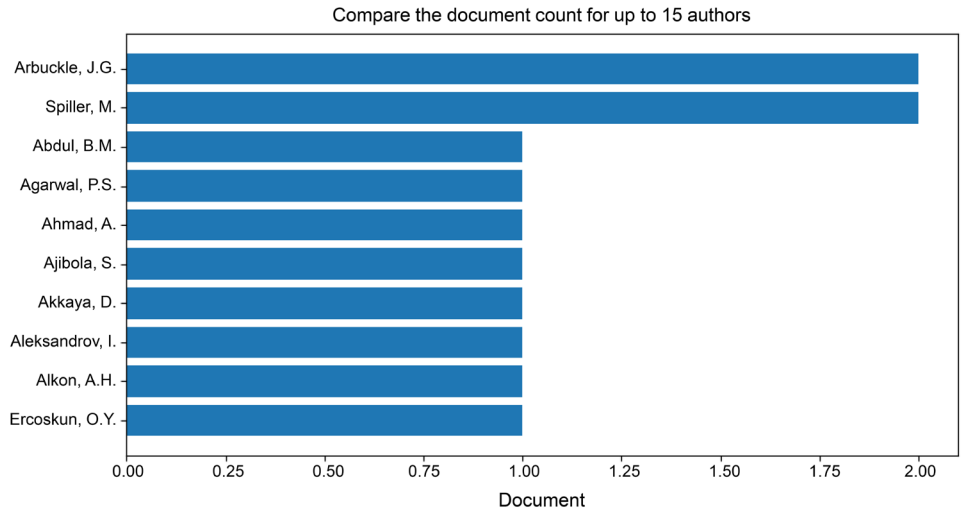

Figure 3. Documents by author

This widespread distribution indicates that research on the organic agriculture market has not yet formed around core research groups or centers of excellence. The absence of dominant authors also suggests that the topic is still in an exploratory phase, with scholars from various fields dipping into the conversation from their unique disciplinary perspectives. The field is thus dynamic but also somewhat fragmented.

Given that the organic agriculture market intersects with numerous global challenges such as environmental protection, food system reform, and market access for smallholder farmers, it naturally draws scholars from various disciplines. This diversity is reflected in a wide range of authorship across studies. However, it also highlights the need for greater integration and coherence in the existing body of work. Systematic literature reviews, such as the one proposed in our study, can play a crucial role in organizing and synthesizing the fragmented findings, to offer clearer insights and direction.

The broad distribution of authorship also indicates significant opportunities for emerging researchers worldwide to contribute to this growing field. Unlike more established areas of study, the organic agriculture market is still developing to offer fertile ground for fresh theoretical perspectives and empirical case studies, particularly from regions that have been historically underrepresented in the literature. Global research in this domain is further enriched when it draws on diverse socio-political and ecological contexts.

Overall, it emphasizes that research on the organic agriculture market in relation to the SDGs is still in its formative stages on a global scale. It is an open and evolving field, presenting ample opportunities for collaboration and further academic growth. The dispersed nature of authorship reflects the interdisciplinary character of this area and its relatively early stage of development in the academic community.

3.4 Journal Impact Trends Based on SCImago Journal Rank

Figure 4 shows the SCImago Journal Rank (SJR) trends for various key international journals. *Journal of Cleaner Production* stands out with a strong and steady rise in its SJR score, now nearing 2.5, positioning it as the top-ranked journal in this group. This highlights the growing reputation and influence of the journal in publishing high-impact research related to sustainability transitions and eco-innovation.

Other journals such as *Environment, Development and Sustainability*, *Nutrient Cycling in Agroecosystems*, and *Agriculture (Switzerland)* also show a positive upward trend though at different rates. This diversification in journal ranking suggests that research on the organic agriculture market is being published across a variety of journals focused on environmental sustainability, agroecology, and development. This dispersion reflects the wide-reaching nature of the topic and its relevance across academic domains.

The steady rise in journal rankings may also be a response to increasing global concern about food security, climate change, and sustainable land management. As these issues become central to international policy agendas, the demand for rigorous and evidence-based publications grows. This is reflected in the rising impact and prestige

of journals that host such research.

For the global academic community, this trend signals that research on the organic agriculture market is no longer viewed as peripheral but is instead contributing to mainstream academic discussions about system-wide sustainability transformations. The fact that highly ranked journals are now prioritizing this area shows its growing theoretical and policy significance, in order to attract interdisciplinary and policy-oriented research.

This line chart demonstrates that journals publishing on organic agriculture and sustainability are steadily gaining influence. This adds legitimacy to the field and encourages researchers to aim for high-impact contributions. The rise in journal quality reinforces the importance of systematic and high-quality studies that can advance both scientific understanding and practical solutions.

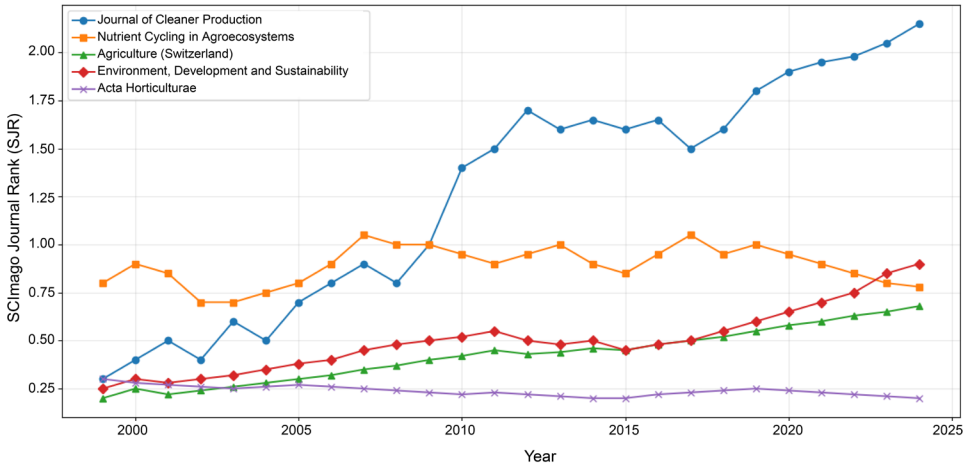

Figure 4. SCImago journal rank by year

3.5 Institutional Participation

Figure 5 displays the global distribution of documents based on institutional affiliation. Notably, the document contributions are widely distributed across institutions such as Wageningen University & Research, University of Maine, Indian Institute of Technology Guwahati, and the University of Melbourne. Each of these institutions contributed a similar number of documents, typically one to two, to indicate a balanced but relatively low output per institution. No single university stands out as a dominant center for research on the organic agriculture market and SDGs.

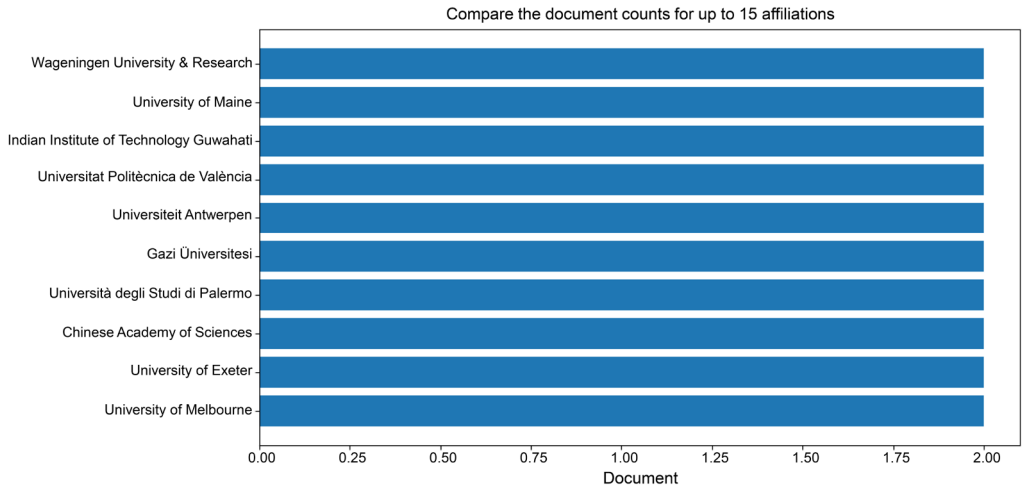

Figure 5. Documents by affiliation

The broad spread across institutions reflects a decentralized research landscape. Rather than being led by a few specialized hubs, research in this area appears to be emerging simultaneously across many parts of the world. This supports the idea that the organic agriculture market is a globally relevant issue, thus prompting responses from institutions in both developed and developing countries.

It also suggests that the topic has yet to be institutionalized within specific research programs or long-term

university projects. While some institutions like Wageningen are well known for agricultural studies, their output in this specific niche, linking organic markets and sustainable development, remains relatively modest. This presents an opportunity for targeted research investments or the formation of global research consortia.

The lack of concentration in affiliations also highlights the need for more international collaboration. Since different institutions are contributing isolated studies, there is potential value in forming global networks to integrate findings and compare regional market dynamics, policy impacts, and consumer behavior. Such collaborations could strengthen the theoretical and empirical foundations of the field.

Generally, it shows that while global academic interest is growing, the institutional capacity to lead and consolidate research on organic agriculture markets remains dispersed. This presents both a challenge and an opportunity for research institutions to take leadership roles and foster coordinated as well as high-impact research efforts.

3.6 Geographic Contribution of Publicationsby Country/Territory

Figure 6 shows the number of research documents published by country or territory, highlighting the global distribution of scholarly output related to the organic agriculture market and SDGs. The United States ranks highest with 25 documents, followed by India with approximately 18, and Italy. These top contributors suggest that research in this area is heavily concentrated in developed nations and emerging economies with strong agricultural research traditions. Meanwhile, Indonesia is placed in the mid-to-lower range, with around 4 to 5 documents. Though not among the top contributors, the presence of Indonesia on the list is notable, taking into account its significant agricultural base and growing interest in organic farming.

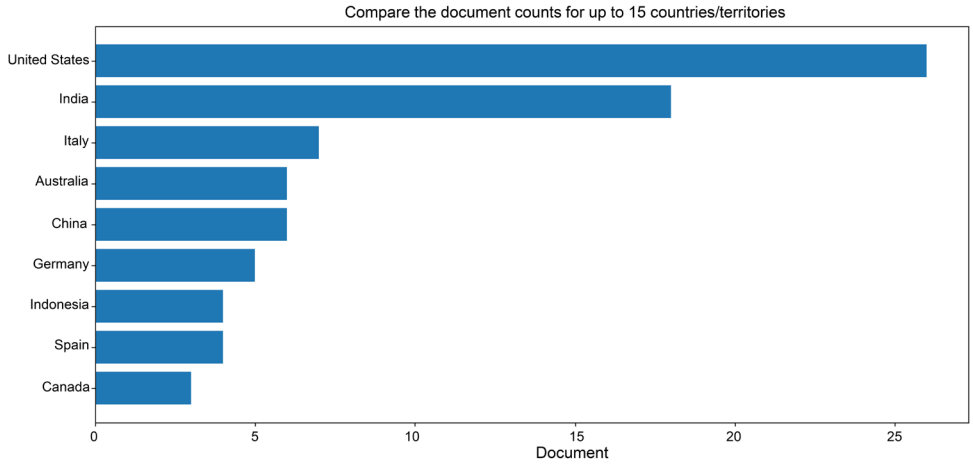

Figure 6. Documents by country or territory

The inclusion of Indonesia indicates a growing engagement with sustainability-oriented agricultural research. As one of the largest agrarian economies in the world, the country has vast potential to become a key player in global organic agriculture. The relatively modest number of publications, however, highlights that Indonesia is still at an early stage in leveraging academic research to inform the development of its organic agriculture market. This gap presents both a challenge and a significant opportunity for Indonesian researchers, institutions, and policymakers to invest more deeply in this area.

Several factors might explain the limited publication count in Indonesia. These include constraints in research funding, a lack of international research collaboration, or limited access to high-impact publication platforms. While organic agriculture is growing in Indonesia, much of it may still operate at the grassroots level without formal documentation or academic study. Bridging the gap between practice and scholarship will be crucial if Indonesia is to expand its presence and influence in the global academic discourse on sustainable agriculture.

Despite the relatively low output, the strategic position in Indonesia in Southeast Asia and its diverse agroecological systems constitute an important case study for the role of organic markets in sustainable development. There is increasing interest in organic certification, domestic market development, and the use of organic methods in smallholder systems. By strengthening data collection through the National Organic Statistics, Indonesia can provide empirical evidence that adds unique regional insights to the global literature.

While Indonesia currently contributes modestly to global research on organic agriculture and the SDGs, it holds significantly untapped potential. With targeted policy support, enhanced academic collaboration, and increased dissemination of local experiences, Indonesia could become a regional leader and global reference point for sustainable and market-driven organic agriculture.

3.7 Publication Type

Figure 7 provides insights into the types of documents contributing to the global literature. Articles make up the largest portion (53.39%), followed by conference papers (14.87%), book chapters (13.87%), and reviews (13.87%). The remainder consists of books, editorials, and notes. The dominance of journal articles indicates that peer-reviewed and data-driven research is the primary mode of contribution in this area.

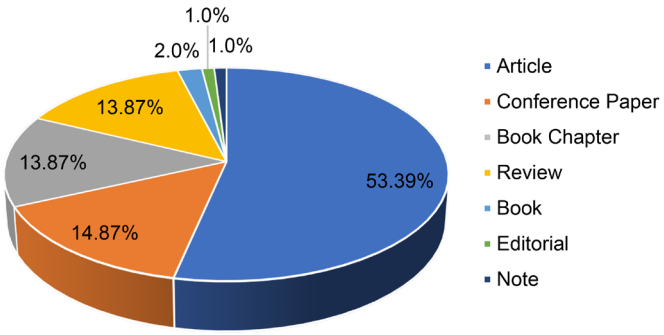

Figure 7. Documents by type

The significant presence of conference papers suggests that the field is still in a phase of academic dialogue and knowledge exchange. Researchers are actively presenting preliminary findings, theoretical frameworks, or regional case studies before publishing final articles. This helps foster collaboration and refine methodologies within the global academic community.

Book chapters and reviews also play an important role in establishing conceptual understanding and synthesizing existing knowledge. The relatively high percentage of reviews is particularly relevant for emerging fields, as it helps identify research gaps, map thematic clusters, and assess methodological strengths and weaknesses. This supports the value of conducting systematic literature reviews.

The presence of book chapters and monographs, though small in extent, reflects the interdisciplinary and policy-oriented nature of the topic. Books allow researchers to delve deeply into specific aspects of organic agriculture not fitting the limitations of journal articles, whether institutional, economic, or environmental. This suggests a growing effort to integrate broader narratives around sustainability and food systems.

The diversity in document types confirms that research on the organic agriculture market is both expanding and maturing. While empirical studies dominate, the field also accommodates conceptual work, reflective reviews, and public-facing scholarship, thus contributing to a well-rounded body of global literature.

3.8 Disciplinary Profile of the Literature

Figure 8 displays the composition of disciplines in the global research landscape on organic agriculture and SDGs. The most prominent fields are Agricultural and Biological Sciences (20.8%), Environmental Science (16.9%), and Social Sciences (12.6%), followed by Business and Management, Engineering, and Economics. These proportions highlight the multidisciplinary nature of the topic, spanning both natural and social sciences.

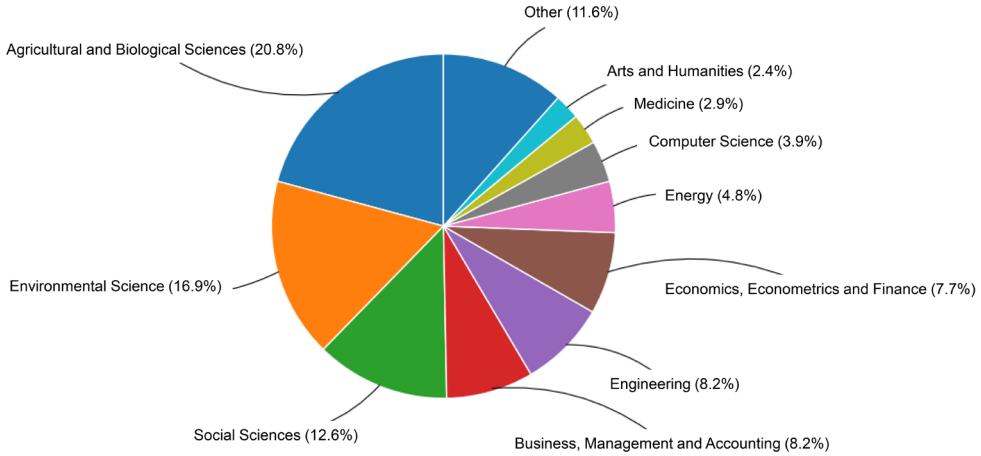

Figure 8. Documents by subject area

The leading share of Agricultural and Biological Sciences is expected, given the subject matter. However, the substantial representation of Environmental Science underscores the ecological dimension of organic farming, such as soil health, biodiversity, and sustainable land use. These are key concerns in evaluating the environmental impact of market-oriented organic practices.

The strong presence of Social Sciences, including Business and Economics, points to an increasing interest in the socio-economic aspects of the organic market. Issues like consumer behavior, price dynamics, supply chains, market access, and policy incentives are becoming central to the academic discourse. This shift shows that the field is expanding beyond agronomic efficiency toward market mechanisms and governance frameworks.

Interestingly, fields like Energy, Medicine, Computer Science, Arts and Humanities are also represented, though to a lesser extent. This may indicate niche areas such as the energy efficiency of organic systems, health benefits of organic diets, use of AI in market prediction, or cultural narratives around sustainable consumption. These cross-cutting perspectives help enrich the field by introducing alternative angles of analysis.

These results reinforce that organic agriculture markets intersect with a wide range of disciplines, rendering the topic highly integrative. Future research may benefit from transdisciplinary approaches that bridge Environmental Science, Agribusiness, Economics, and Social Policy to generate holistic insights.

3.9 Funding Sponsor Distribution

Figure 9 shows the institutions that funded global research in these areas. The top sponsors include the National Natural Science Foundation of China, European Commission, Iowa Agriculture and Home Economics Experiment Station, and the National Institute of Food and Agriculture. Each of these agencies has supported at least two documents, while several others, including Bayer CropScience and Amity University, have supported at least one.

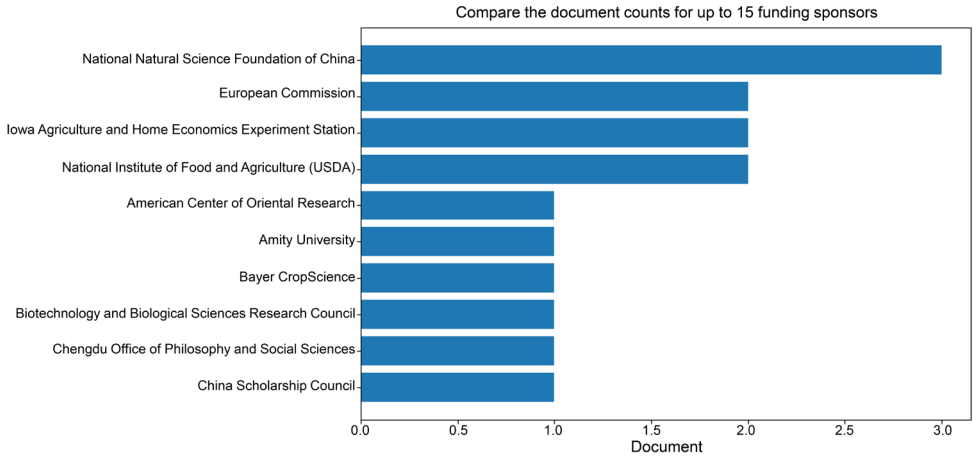

Figure 9. Documents supported by funding sponsors

The distribution of funding reflects a blend of support coming from the public sector, international organizations, and private sector. Government science foundations and intergovernmental bodies (e.g., the European Commission) are leading their way in funding research on organic agriculture and sustainability. This signals strong institutional backing for work that connects agriculture with environmental and social goals.

Involvement of the private sector, such as Bayer CropScience, is noteworthy but relatively limited. It suggests that while agribusiness companies are beginning to engage with organic markets, public funding remains the primary driver of academic research. This may reflect differing agendas: public funding supports broader sustainability goals while corporate funding may focus on specific technologies or product development.

The geographic diversity of funders spanning China, the U.S., Europe, and parts of Asia, demonstrates global interest in this research domain. However, the relatively small number of sponsors per institution suggests that funding is still sporadic and may not yet be part of long-term and large-scale research programs.

In sum, the funding landscape shows growing but fragmented support for global research on organic agriculture markets. As the field matures and proves its relevance to SDG implementation, more coordinated and multi-year funding schemes may be required to sustain impactful research across continents.

4. Discussion

4.1 Global Trends and SDG Linkages

The systematic literature review, spanning publications from 1998 to 2025, demonstrates a rapid increase in

global academic interest in the organic agriculture market, particularly after 2020. This growth is evident not only in developed countries but also in emerging economies. Indonesia emerges in this conversation, with increasing scholarly participation and national data such as SPOI. This trend aligns with SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action), as organic agriculture contributes to sustainable food systems through ecological farming practices and responsible production.

4.2 Indonesia's Organic Agriculture: Evidence from SPOI

Data from SPOI revealed positive trends in Indonesia's organic agriculture sector, evidenced from the rising area of land under organic cultivation and greater farmer involvement. For example, the area dedicated to organic coffee in Indonesia significantly increased from 500 hectares in 2019 to over 31,000 hectares by 2022, with nearly more than 1,100 farmers involved. In spite of this, organic coffee production has stagnated or even declined slightly in certain years, thus indicating challenges in scaling up production. This reflects structural challenges in Indonesia's organic coffee sector, influenced not only by local factors, such as pest and disease management, but also by global challenges related to certification costs and climate change. In line with global literature, studies showed that organic coffee faced significant barriers in terms of disease management and increasingly unpredictable climatic conditions (David et al., 2023; Jones et al., 2025; Putri et al., 2025). The data from SPOI also reflects similar challenges; despite land expansion, stagnant productivity indicates that the adoption of more efficient organic farming practices in coffee production is still limited.

While the production of organic bananas in Indonesia shows moderate growth, reaching 265.25 tons by 2022, the planted area fluctuates and shows inconsistent growth. This fluctuation in organic banana production is highly relevant to the global challenges faced in the production of perennial crops. Crops like bananas require long maturation periods and are highly susceptible to diseases, such as Panama disease, which also affects global banana production (Wang et al., 2019). Global literature indicates that perennial crops tend to experience slower adoption in organic farming due to longer transition times and higher risks of diseases, which also slow the adoption of organic banana farming in Indonesia.

The organic coconut sector demonstrates a different pattern. The area planted with organic coconut grew by 2.6% from 2019 to 2022, and production increased by 10.5% (David et al., 2023). This increase is largely driven by the rising global demand for coconut products, such as coconut oil and water, which have gained popularity in health-conscious markets. This shows that organic coconut farming in Indonesia is more easily integrated into the global market, where demand for coconut and its by-products continues to grow rapidly. In this context, data from SPOI shows that organic coconut farming in Indonesia is more responsive to international market demand, mirroring global trends where coconut-based products are increasingly in demand (David et al., 2023).

On the other hand, organic rice shows significant adoption, with the number of involved farmers rising from 7,398 in 2019 to 12,752 in 2022. The area dedicated to organic rice also increased from 3,350 hectares in 2019 to over 4,700 hectares by 2022. The challenges faced by organic rice in Indonesia, such as land conversion and soil infertility, align with global literature on the constraints in organic rice production. According to global studies, organic rice production is often hindered by soil fertility management and pest control, which require higher investment in environmentally friendly agricultural technologies (Rozaki et al., 2024). In Indonesia, although there has been an increase in land area and farmer involvement, productivity remains constrained, thus reflecting significant challenges in consistently increasing organic rice yield.

However, the organic orange sector has shown limited development. Despite overall expansion in fruit orchards, in 2022 the area dedicated to organic oranges only reached 7.2 hectares, much smaller than the growth seen in conventional orange farming. The limited growth of organic oranges may stem from challenges of pest control and high conversion costs, which are also problems encountered by other global orange producers (Cuevas et al., 2019; Turra et al., 2011).

Organic tea production, while showing slight increases in land area, remains limited in production, reaching only 104.6 tons by 2022. The limited production of organic tea is closely related to the challenges faced by other global tea producers, such as the strict certification requirements and high transition costs. Globally speaking, significant challenges in organic tea production include the need for a transition from conventional to organic farming, which requires considerable time and investment, as well as intensive pest management (Srinivasan et al., 2017). Data from SPOI reflects similar issues in Indonesia, where the transition to organic tea farming is still hindered by costs and certification barriers.

4.3 Research Gaps and Policy Implications for Indonesia

Overall, while Indonesia has made significant progress in organic agriculture, challenges such as conversion costs, disease management, and limited market access for organic products remain major obstacles to accelerating organic adoption in certain sectors. This mirrors the gaps still present between the domestic and global markets, which need to be addressed through stronger policy support and better integration of national data with global

research findings. Furthermore, analyzing the publication trends related to organic agriculture revealed a significant content gap between Indonesia, where there are 4 to 5 publications, and countries with more prominent research output like the U.S. or India. This underscores the importance of strengthening organic agriculture research in Indonesia to better contribute to global discussions and benefit from a wider exchange of knowledge. David & Ardiansyah (2017) highlighted that while the organic agriculture sector in Indonesia has experienced growth in both land area and participation, significant hurdles remain, particularly in terms of market accessibility, certification processes, and limited knowledge dissemination. Further research emphasized that these barriers prevented Indonesia from fully tapping into global organic markets and positioning itself as a key player in sustainable agriculture. Effendi et al. (2015) added that consumer behavior towards organic products in Indonesia was often hindered by the higher costs associated with organic goods, compounded by insufficient public awareness of the long-term health and environmental benefits. Together, these studies revealed a critical need for more focused research in Indonesia to overcome these barriers and enhance its participation in global organic agriculture discussions**.**

The analysis of authorship and institutional affiliations revealed a fragmented and globally dispersed research landscape, with no dominant institutions leading the discourse. This decentralized pattern suggests an opportunity for Indonesia to take a more active role in shaping regional and global organic agriculture policy. In the bibliometric chart, Indonesia appears with only a modest number of publications compared to countries like India, China, and the U.S., indicating limited but emerging academic engagement in the field (Brumă et al., 2023). Despite this modest academic footprint, the Indonesian-affiliated publications offer insight into structural constraints affecting the organic sector. A key constraint is the lack of accessible and credible certification systems. Many smallholder farmers face high costs, bureaucratic hurdles, and limited local certifiers recognized internationally and these are conditions that hinder their participation in premium export markets (Cook, 2019; Ercoskun, 2018). These constraints also echo findings in Uganda and Italy, where efficient certification systems play a decisive role in improving market access and sustainability (Cristiano, 2021; Ssebunya et al., 2019).

Consumer awareness is another major barrier. Based on country-specific data visualized in the keyword and subject co-occurrence charts, topics like “consumer education”, “organic labeling”, and “market trust” remain underrepresented in the Indonesian context. While urban upper-income consumers show growing interest in organic products, the wider public still lacks sufficient understanding of their benefits (Alkon, 2008; Getz & Shreck, 2006). Other countries have successfully tackled this through public awareness campaigns, labeling initiatives, and PGS which promote transparency and local engagement (Ercoskun, 2018). From an enabling environment perspective, there is growing global momentum in funding organic agriculture research. However, the representation of Indonesia in international funding charts remains low. This highlights the need for stronger collaboration with major international funding bodies, such as the European Commission and National Natural Science Foundation of China (NSFC), which have been supporting capacity-building in sustainable farming elsewhere (Ahmad et al., 2024).

Increasing the visibility of Indonesia in such networks could enhance domestic research capacity and access to knowledge flows. Multi-stakeholder collaboration is identified as a critical enabler for success. Globally, partnerships among farmers, non-governmental organizations, universities, and government actors have fostered development of organic ecosystem (Cristiano, 2021; Feuerbacher et al., 2018). In Indonesia, such collaborations exist in West Java and Bali but remain fragmented and localized. Stronger institutional frameworks are required to scale innovations from community level to national policy. Another significant policy gap lies in integration. Despite the potential of organic agriculture to improve rural livelihoods and promote gender equity, it is rarely integrated into national rural development or poverty reduction policies (Barbieri & Bocchi, 2015; Lawrey, 2013). For instance, the bibliometric cluster analysis showed weak linkages between “organic agriculture” and “poverty alleviation” or “inclusive development” in Indonesia-authored publications. Digital infrastructure and literacy also pose a structural barrier. Many Indonesian smallholders lack access to the digital tools necessary for traceability, mobile certification, and e-commerce platforms. In contrast, regions that have implemented such technologies like parts of Australia and South Asia have shown improved farmer market participation and efficiency (Najib et al., 2021; Taghikhah et al., 2020). Developing rural internet access and promoting digital education can be game changers for the organic supply chain in Indonesia. In conclusion, while the organic sector in Indonesia faces persistent challenges, particularly in certification, market infrastructure, consumer awareness, and policy coherence, the literature and bibliometric data revealed actionable solutions.

Strengthening research networks, scaling up stakeholder collaboration, investing in digital access, and integrating organic strategies into national development plans can significantly enhance the contribution of Indonesia to global sustainable agriculture and SDG fulfillment. Drawing from synthesized global literature and Indonesia-specific data such as SPOI, several actionable policy recommendations can enhance the integration of organic agriculture into sustainable development strategy of Indonesia. First, the government should institutionalize organic agriculture as a central component of national rural development planning. For example, Bhutan’s goal of becoming 100% organic has been instrumental in guiding intersectoral alignment and long-term investment in organic systems (Feuerbacher et al., 2018). Indonesia could adopt a similar model by embedding

organic farming targets into the National Medium-Term Development Plan (RPJMN) and aligning them with relevant SDG indicators.

To support inclusive rural development, policies should prioritize smallholder farmers, women, and indigenous communities in organic initiatives. Evidence showed that inclusive organic farming models could increase household income, improve food security, and strengthen community resilience (Barlett, 2011; Han et al., 2021). In Indonesia, this can be advanced through localized training programs, access to microfinance, and cooperative market networks, especially in underserved areas such as East Nusa Tenggara, Papua, and remote parts of Java and Sumatra.

Improving access to both domestic and international markets represent a critical focal point for advancing organic agriculture in Indonesia. To enhance market participation, it is essential to streamline certification systems, thus ensuring alignment with international benchmarks and supporting local certifiers, while simultaneously simplifying the export documentation process. Infrastructure investments, such as the development of cold storage facilities and the establishment of organic hubs in key agricultural regions, are necessary to mitigate post-harvest losses and improve export readiness. Fiscal incentives, such as tax breaks or subsidies for certified producers, have proven to be effective in stimulating organic market engagement in other countries (Nikonov, 2023). A similar approach in Indonesia could significantly boost participation within organic clusters.

Equally vital is addressing the public awareness and consumer education gap. In Indonesia, organic product consumption remains largely confined to urban middle- and upper-income groups. National educational campaigns highlighting the health and environmental benefits of organic products, along with clear labeling and trust-building initiatives, are crucial for expanding the consumer base. Incorporating organic food into public procurement programs, such as those for school lunches and hospital meals, would normalize organic consumption, in order to create a steady demand and increasing market size (Arora et al., 2024).

Digital transformation serves as a high-potential lever for improving the organic sector. Many smallholder farmers in rural Indonesia lack access to platforms that enable organic certification, e-commerce, and price transparency. However, countries like Australia and regions in South Asia have successfully implemented mobile platforms that directly connect farmers with markets and buyers (Najib et al., 2021). To support this transition, Indonesia must expand digital literacy initiatives and rural internet infrastructure, thus enhancing traceability, marketing, and real-time data collection for farm operations.

To foster resilience against climate and economic shocks, Indonesia should prioritize diversified cropping systems, regenerative agriculture, and strengthening of local seed systems. These practices will contribute to ecological sustainability while reducing exposure to external risks. Besides, financial mechanisms such as green bonds and crop insurance have been identified as effective tools to buffer organic farmers from environmental and economic stresses (Taghikhah et al., 2020).

Successful implementation of these strategies requires policy coherence. In Indonesia, organic agriculture spans multiple ministries like agriculture, trade, environment, and health, yet coordination remains fragmented. To address this, we recommend the establishment of a national inter-ministerial task force dedicated to organic agriculture and the SDGs. This body would centralize strategy development, coordinate funding, and oversee progress monitoring, to ensure that policies are implemented effectively across various sectors (Burlakoti et al., 2012).

Finally, it is imperative for Indonesia to enhance its presence in international organic research and policy platforms. By engaging in global trade negotiations, participating in certification standard-setting processes, and collaborating on international research initiatives, Indonesia can ensure that its tropical agricultural context is well-represented in global discussions. Organic agriculture holds transformative potential for the sustainable development in Indonesia, but realizing this potential requires a coherent, market-responsive, and inclusive policy framework. Through investments in institutional reform, rural capacity building, market access, and digital infrastructure, Indonesia can position organic agriculture as a central tool for achieving both national and global sustainability goals.

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5. Conclusions

This study set out to investigate the current landscape, structural constraints, and policy pathways for strengthening the organic agriculture market in Indonesia, in alignment with the SDGs. The first objective revealed

that scholarly interest in organic agriculture and its link to sustainability has grown exponentially since 2020, thus reflecting broader global concerns over food security, environmental health, and sustainable consumption. Within this context, the organic agriculture sector in Indonesia is showing signs of convergence with SDG 2 (Zero Hunger), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action), as evidenced by national data indicating increased organic crop production, participation of smallholder farmers, and expansion of certified systems. However, the presence of Indonesia in global academic literature remains modest, suggesting the need for stronger integration between national data systems like SPOI, and internationally recognized research and policy platforms.

Building on this, the second objective focused on identifying constraints and enabling conditions that could influence the performance of the organic sector in Indonesia. Analysis revealed that barriers such as inaccessible and costly certification processes, limited consumer education, and underdeveloped digital infrastructure continued to restrict the participation of smallholders in both domestic and export-oriented organic markets. At the same time, the organic movement in Indonesia benefits from emerging international research collaborations and grassroots innovations, though these remain fragmented and poorly institutionalized. The bibliometric findings confirmed a lack of dominant research clusters and globally leading institutions, hence creating a strategic opening for Indonesia to play a more proactive role in regional knowledge generation and policy design.

Finally, the third objective sought to propose market-oriented policy strategies for embedding organic agriculture within Indonesia's SDG agenda. The findings suggested that a shift toward institutionalizing organic farming within nationally rural development frameworks was urgently needed. Policy interventions should emphasize inclusivity, particularly by supporting women, indigenous groups, and smallholders through financial incentives, digital support systems, and cooperative networks. Furthermore, aligning local certification standards with global benchmarks and investing in logistics and public awareness campaigns would enhance both market access and consumer trust. The potential of digital technologies to bridge geographic and logistical gaps is especially promising, provided rural infrastructure and farmer literacy are simultaneously addressed. The unique ecological and social landscape of Indonesia creates a compelling case for positioning organic agriculture as a tool not only for sustainability, but also for climate resilience and economic transformation in underserved regions.

6. Recommendations

To advance organic agriculture in Indonesia, it is recommended that the government should prioritize the promotion of PGS for the domestic market, hence providing financial support and training for farmers to ease certification costs. For exports, focusing on third-party certification, such as EU Organic or U.S. Department of Agriculture (USDA) Organic, is essential to meet international standards and increase competitiveness. A national inter-ministerial task force should be established with an initial step of organizing a roundtable discussion among key ministries to coordinate efforts, streamline certification processes, and improve market access. To address the need for digital infrastructure, collaboration with telecommunications companies is necessary to expand 4G networks in rural farming areas and develop a mobile application to facilitate PGS certification, market pricing, and farming resources provision. Furthermore, future research should prioritize empirical case studies across the diverse agro-ecological zones in Indonesia to gain deeper insights into local organic practices and innovations, to ensure that policies are tailored to regional needs. Strengthening the participation of Indonesia in international organic standards through organizations like IFOAM will also be crucial for positioning the country as a leader in sustainable agriculture. These strategic actions will support the growth of organic agriculture, boost economic resilience, and help achieve the goals set out in the SDGs.

Author Contributions

Conceptualization, D.R.N. and P.G.T.; methodology, D.R.N. and P.G.T.; software, P.G.T.; validation, D.R.N., P.G.T., S.T.W., M.D.C.L., and J.M.R.; formal analysis, D.R.N., P.G.T., S.T.W., M.D.C.L., and J.M.R.; investigation, P.G.T.; resources, D.R.N.; data curation, S.T.W., M.D.C.L., and J.M.R.; writing—original draft preparation, D.R.N. and P.G.T.; writing—review and editing, S.T.W. and M.D.C.L.; visualization, P.G.T.; supervision, D.R.N.; project administration, S.T.W. and M.D.C.L.; funding acquisition, D.R.N. All authors have read and agreed to the published version of the manuscript.

Data Availability

The data used to support the findings of this study are available from the authors upon request.

Conflicts of Interest

The authors declare no conflicts of interest.

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