Online at www.e-iph.co.uk
Indexed in Clarivate Analytics WoS, and ScienceOPEN

E-B Environment - Behaviour Proceedings Journal

KICSS2024

Kedah International Conference on Social Sciences:
https://kicss2024.wixsite.com/kicss2024

e-IPH e-International Publishing House Ltd., United Kingdom

BizFame 2024: 3rd International Conference on Business Finance Management & Economics
Suan Sunandha Rajabath University, Bangkok, Thailand, 24 & 25 October 2024

Organised by: Universiti Teknologi MARA, Kedah, Malaysia

A Strategic Proposal for Enhancing Malaysia's Economy through National Food Security Initiatives

Rahmawati Mohd Yusoff[1*], Sharifah Zubaidah Syed Abdul Kader[2], Azhani Arshad[3], Siti Mahfudzoh Mohd Hafiz[4]
**Corresponding Author*

[1] Senior Lecturer, Department of Law, Universiti Teknologi MARA, Cawangan Johor, Kampus Segamat, 85000 Segamat, Johor, Malaysia
[2] Professor Dr., Ahmad Ibrahim Kulliyyah of Laws, International Islamic University Malaysia, Jln Gombak, 53100 Kuala Lumpur, Selangor, Malaysia
[3] Associate Professor Dr., Faculty of Law, Universiti Teknologi MARA Shah Alam, 40450 Shah Alam, Selangor, Malaysia
[4] Postgraduate Student, Universiti Kebangsaan Malaysia, 43600 UKM Bangi, Selangor, Malaysia

rahmawatimy@uitm.edu.my, sharifahz@iium.edu.my, azhani_arshad@uitm.edu.my, mahfudzohhafiz@gmail.com
Tel: +601158673713

Abstract
Malaysia's economy depends on food security, but it struggles because its agricultural GDP is low, climate change is affecting the country, and global issues are disrupting the market. This study examines food security issues using qualitative methods and points out the main problems while suggesting solutions such as smart farming, local production, and strong supply chains. Focusing on food security appears to support the economy during times of global uncertainty.

Keywords: National Food Security; Malaysia; Economic Development; Resilience and Innovation.

DOI: https://doi.org/10.21834/e-bpj.v10iSI28.6965

1.0 Introduction

Food security is essential for economic growth and stability, especially in Malaysia, which is developing rapidly. The population is expected to exceed 33.7 million by 2023, making food supply a significant issue. Malaysia's agricultural Gross Domestic Product (GDP) has declined, raising concerns about its ability to meet food needs in the face of climate change, global economic uncertainty, and food supply chain disruptions (Riani & Fatoni, 2022). Malaysia's food security relies on imports, resulting in a large food trade deficit that threatens economic resilience. Innovative food production and distribution solutions are needed to overcome these issues. Hence, this research analyses Malaysia's food security situation, identifies critical obstacles, and proposes local resource and community-engagement-based solutions.

Many nations now see ensuring food security as a key strategy to deal with pandemics, conflicts and climate problems. This demonstrates that people should be able to grow and source their food. Alternatively, smart agriculture, local food production, and resilient supply networks can improve Malaysia's food security. These methods increase food availability and economic resilience to

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (http://c5eativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers
DOI: https://doi.org/10.21834/e-bpj.v10iSI28.6965

help the nation weather global economic volatility (Ali et al., 2022). Therefore, the qualitative research suggests innovative food security strategies, policies, and community involvement can boost Malaysia's economy. This means that national food security matters for humanitarian reasons and supports economic development by helping reduce poverty, revitalise rural areas and ensure sustainable growth. Malaysia can create a more sustainable and resilient food system using waqf land and modern agriculture technologies.

2.0 Literature Review

The Department of Statistics Malaysia (DOSM) estimates Malaysia's population to be 33.7 million in 2023, up 1 million from 2022's 32.7 million, growing 0.3 per cent annually. Due to the growing population, Malaysia must improve its halal food security preparations. Malaysia has a food trade deficit of about RM18 billion in 2022 due to its RM45.4 billion in food imports and RM27 billion in exports (Rashidi et al., 2022). This trend is predicted to worsen as population and food demand rise, which is shown in Fig. 1 below:

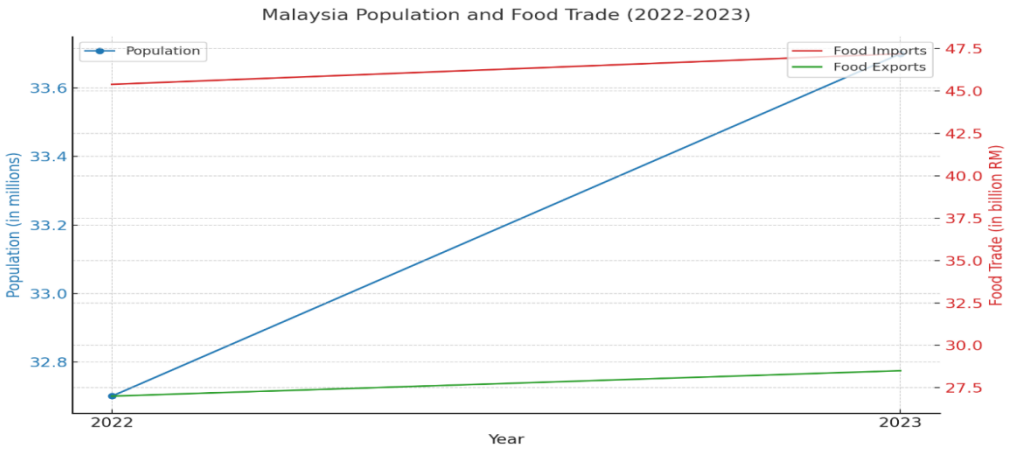

Fig. 1: Malaysia Population and Food Trade (2022-2023)
(Department of Statistics Malaysia)

The illustration above shows the population growth in Malaysia from 2022 to 2023 alongside the country's food imports and exports (in billion RM). The graph highlights the population increase from 32.7 million in 2022 to 33.7 million in 2023 and the widening food trade deficit due to rising imports, which grew from RM45.4 billion to an estimated RM47.2 billion, while exports increased modestly from RM27 billion to RM28.5 billion.

Consequently, economic growth and stability depend on food security, especially in developing nations like Malaysia. Climate change, economic instability, and supply chain disruptions affect Malaysia's food security. Climate change affects Malaysia's staple crops like rice, maise and palm oil, making agricultural production vulnerable. Temperature and precipitation variations in Malaysia's tropical environment impact agricultural productivity. The local irrigation programs reduce rainfall variability's impact on paddy output. The significance of technical adaptation to sustain food production in a changing climate is highlighted. Due to the close link between climate change and food security, Firdaus et al. (2020) recommend revamping paddy and rice intervention programs. These studies show that effective environmental adaptation requires technical changes and policy and planning reforms.

Besides environmental issues, socioeconomic factors affect food security. Haini et al. (2022) analyse income inequality, unemployment, and food security and find that urbanisation diverts labour from agriculture, worsening food supply issues. This supports the idea that economic inequality and labour market dynamics affect food availability. The result is consistent with the earlier discussion on climate problems, suggesting that food insecurity in Malaysia is caused by ecological and economic reasons. Working on only one aspect can bring only partial benefits.

Plus, food security is also threatened by Malaysia's ageing farmer population. The average age of Malaysian farmers is 60, highlighting the need to draw younger generations into agriculture (FAO, 2021). Without revitalising the farming population, the sector risks decline. Innovative agribusiness and technology education could involve youth in sustainable farming. Yet, there is not much research on what youth are currently doing in politics, which may mean we do not know enough about how these efforts are working.

Notably, Malaysia faces complex food security issues. The COVID-19 pandemic has exacerbated food supply chain vulnerability. Saxena and Suman (2021) claim that pandemic supply chain disruptions disproportionately affected long-distance products, causing food price inflation and shortages. Tan et al. (2023) stress that the pandemic has affected agricultural output and supply chains, emphasising the necessity for robust systems to survive future shocks. Urbanisation also poses food security issues. Ishak et al. (2022) study urban garden efforts in Kuala Lumpur and claim they could increase food access and fresh vegetable consumption. These programs struggle to address urban food insecurity due to space and resource constraints. This shows that building food systems that rely on local communities makes them more resistant to shocks, though it is unclear how they could be expanded and included in nationwide policy.

Besides that, the Shared Prosperity Vision 2030 is a contemporary Malaysian government policy that promotes sustainable agriculture. One of the proposed Key Economic Growth Activities (KEGA) is innovative and high-value farming. The October 2021 National Agrofood Policy 2.0 prioritises economic, social, and environmental sustainability. It promotes sustainable food consumption and production to keep the agro-food sector competitive, boost economic growth, and protect the environment (Ahmad, 2023). This policy will enable the agro-food sector in Malaysia to remain competitive, thus contributing to national economic growth while ensuring environmental sustainability. All of these policies can catalyse and drive the national agriculture industry towards sustainability and expand to meet the community's demands.

Hence, Malaysia must focus on locally manufactured items to minimise costs and market pricing (Baharuddin, 2023). The Ministry of Rural Development (KPLB) wants to build chicken farms for local needs (Sabri, 2023). To ensure cheaper supplies, all cooperatives in the country are encouraged to import livestock and chicken. The Ministry of Entrepreneur Development and Cooperatives (KUSKOP) has also requested that Bank Rakyat provide special funding to agricultural cooperatives and firms to improve the agro-food chain (Sabri, 2023).

As a result, Malaysia needs innovative food security solutions. Smart agriculture uses technology and data analytics to optimise resource utilisation and crop yields. Kasim (2023) notes that the National Agrofood Policy 2021-2030 emphasises agro-food industry modernisation and technology advancement to improve food security. Food security is also enhanced via urban agriculture and communal gardens. Malaysia can boost community resilience and fresh produce availability by supporting these efforts. Mok et al. (2013) show how urban agriculture reduces commuting and improves community well-being.

Urban agriculture and communal gardens also encourage food production in cities. These approaches cut food transportation costs and improve food access in towns with limited farming space. Improving food security also requires reducing food waste. Jereme et al. (2016) claim that public awareness of food waste can affect behaviour to increase sustainability and food availability. Policies that promote responsible consumption and prevent waste can boost food security. In addition, the Malaysian agriculture sector must use new finance methods like crowdfunding to support food production and fulfil rising demand. This method will boost food security and economic resilience.

This study uses the Sustainable Livelihoods Framework and Food Systems Approach to explain that food security is influenced by production, access, governance, resilience, and sustainability. These frameworks show how environmental, social, and economic factors shape national food security strategies. Although several strategies have been suggested, more analysis is required to decide which will work best in Malaysia. More studies should assess the results of these strategies to find out which practices work best.

3.0 Research Methodology

The study uses qualitative research to cover content analysis. Reviewing published works on how national food security initiatives can boost the economy and spending much time in the library are both parts of the content analysis. It reviews all main and supporting materials on how Malaysia and other countries build their economies through food security. Since content analysis is suitable for finding patterns, themes and strategies in qualitative data, it was chosen for studying policy documents and academic literature on food security. Content analysis is different from grounded theory because it lets researchers examine existing knowledge and policies in a more structured way, which fits the goal of combining current strategies from various contexts. The Department of Statistics Malaysia was used to gather information on food production, import and export and economic indicators.

The analysis examined documents such as National Agrofood Policy 2.0, Shared Prosperity Vision 2030, FAO and World Bank reports, and scholarly articles from 2010 and 2023. The research chose studies for this review based on how they relate to Malaysia's food security strategies, their economic effects, their contribution to policy, and their data availability. Only papers that clearly explain the relationship between food security and economic development were considered. The analysis was based on a thematic framework, which helped the study group data into themes such as climate-resilient farming, city food systems, new technologies and food trading. It makes the study easier to check and repeat. This method aims to review how the economy can be made stronger through national food security efforts in Malaysia.

As mentioned earlier, Malaysia's need for food imports, its sensitivity to climate change, and the ageing of its farmers mean that a review of current policies and a comparison with other countries are needed. As a result, content analysis provides a practical and theory-based approach to studying these complex issues. The research lays the groundwork for a food system that is both sustainable and strong, helping everyone in Malaysia.

4.0 Findings and Discussion

Recent studies show the importance of food security in Malaysia's economy, especially as the country struggles to feed its rising population. Climate change, agriculture's dwindling significance in the economy, and food supply chain disruptions threaten Malaysia's food security. Agriculture has historically been a key to food security, so its declining GDP contribution is concerning. According to Sukereman et al. (2022), the pandemic has increased domestic supply chain vulnerabilities, which could lead to trade obstacles and food inflation. Malaysia must urgently evaluate its food security plans to become more robust to local and global threats.

The results are organised into three main areas: the environment, the economy and institutions' ability. This framework makes it easier to see how different problems impact Malaysia's efforts to achieve long-term food security. Climate change's impact on agricultural productivity is also essential. Research shows that climate variability considerably impacts rice yield (Saxena & Suman, 2021). Malaysia's food imports worsen this problem because global market fluctuations can raise prices and reduce the availability of essentials

(Osabohien, 2024). This dependency emphasises the need for domestic food production and self-sufficiency. According to food sovereignty, lowering our dependence on imports is important for our economy and helps us manage our food systems.

For this reason, Malaysia faces many food security challenges. Urbanisation displaces farmworkers and increases food insecurity. Haini et al. (2022) note that income inequality and unemployment worsen food insecurity, especially in low-income households. Due to labour shortages and reduced investments, the agricultural sector struggles to meet rising food demand in urban areas. Malaysia has a food waste problem. Many food items are lost or wasted in the supply chain, hindering food security (Sun et al., 2022). This issue must be addressed because reducing food waste can increase food availability without increasing production.

Therefore, Malaysia needs new food security strategies. One solution is smart agriculture, which uses precision farming and data analytics. Optimising resource use boosts crop yields. Loginov (2023) advises Malaysia to invest in modern agricultural practices to boost productivity and food security through scientific and technical cooperation. Local food production efforts like urban agriculture improve food security. Kasim (2023) addresses the National Agrofood Policy 2021-2030, emphasising agro-food technology to enhance food security. This policy fosters government, business, and community collaboration to improve national food security. These findings together highlight the main points of resilience theory: food systems can handle shocks, adjust to new problems and change when conditions change. As a result, Malaysia's approach to food security planning should move from responding to problems to planning and considering the whole system.

Plus, these studies emphasise the need to invest in modern agricultural infrastructure. Some government investments in rural agricultural technology, such as automated irrigation systems and drone farming, have paid off (FAO, 2023). However, applying these innovations to rural areas could improve food security nationwide. Finally, food waste awareness and legislative initiatives are crucial. Sun et al. (2022) suggest that food waste awareness can change behaviour for sustainability. Responsible consumption and waste reduction policies could boost food security. The summary of the findings is shown in Fig. 2 below:

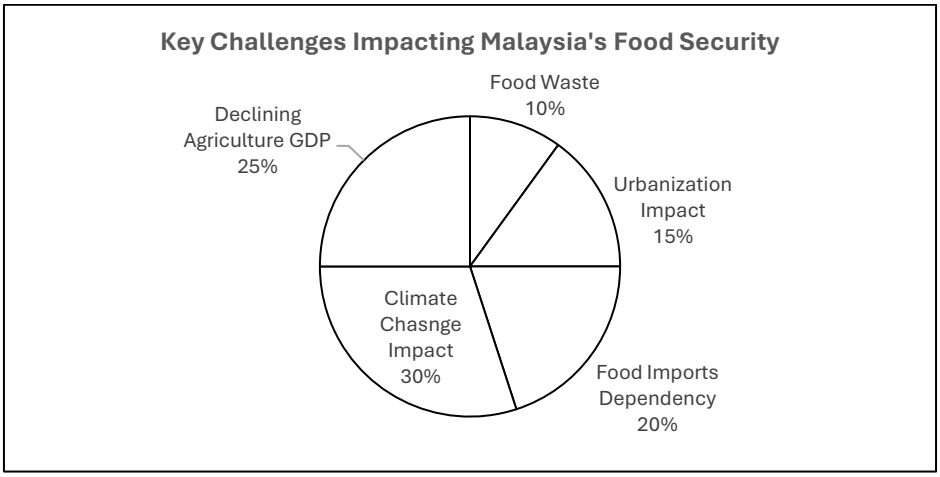

Fig 2: Key Challenges Impacting Malaysia's Food Security

To summarise, the pie chart above illustrates the key challenges impacting Malaysia's food security based on hypothetical data reflecting the severity of each issue. These challenges include:

1). Declining Agriculture GDP (25%): The shrinking role of agriculture in contributing to Malaysia's GDP, which has traditionally supported food security.

2). Climate Change Impact (30%): Climate variability significantly affects agricultural yields, especially for staple crops like rice.

3). Food Imports Dependency (20%): Malaysia's reliance on food imports exposes the country to fluctuations in global markets and potential food shortages.

4). Urbanization Impact (15%): Urbanisation diverts labour away from agriculture and exacerbates food accessibility challenges.

5). Food Waste (10%): Substantial amounts of food are wasted throughout the supply chain, further stressing food security.

The results match the study's original research objective of analysing Malaysia's food security issues and finding locally based solutions. The analysis above provides a strong structure for planning strategic actions.

For comparative analysis, Indonesia has improved its agricultural productivity through government-supported food self-sufficiency programs. Indonesian food security has increased due to government programs encouraging local food production and sustainable agriculture (Yusuf, 2024). Unlike Malaysia, which imports, indigenous production capacities must be improved (Yusuf, 2024).

Next, Thailand's agriculture industry emphasises exports, especially rice and fish. The Thai government has substantially invested in agriculture R&D, increasing production and climate resilience (Sampaothong & Attavanich, 2021). This investment has positioned Thailand as one of the leading rice exporters globally, contributing significantly to its economy. However, Malaysia's agricultural research and development (R&D) spending has declined, hindering its ability to innovate and adapt. This disparity shows that Malaysia must prioritise agricultural R&D to improve food security (Sampaothong & Attavanich, 2021).

Additionally, Vietnam went from a food shortage to one of the world's major rice and seafood exporters. Government policies promoted agricultural modernisation and infrastructure investment, causing this change. Malaysia might follow Vietnam's lead by promoting the modernisation of the agro-food industry and investing in improving local output and minimising imports (Duong, 2020).

Like Malaysia, the Philippines is vulnerable to climate change and imports food. However, the country features community-based programs that empower local farmers and promote sustainable agriculture. These programs have improved local food security and can help Malaysia increase community food production (Lee, 2020).

Lastly, India has invested heavily in agricultural technology and infrastructure, increasing food production and security. The Indian government has supported smallholder farmers and promoted sustainable methods to strengthen its food systems (Pandey et al., 2021). Malaysia's focus on smart agriculture and local food production matches these ideas, although smallholder farmers need more help to attain similar results. Case studies from different countries indicate that boosting agricultural R&D, encouraging local food systems and supporting farmers improves the economy and the system's ability to handle challenges identified in the study's objectives. The five countries use different strategies to improve food security: Indonesia stresses halal food and self-sufficiency, Thailand grows its exports with research and development help, Vietnam and India concentrate on modernisation and infrastructure, and the Philippines relies on community engagement. All countries experience different problems, such as import dependency and climate change, which underlines the need to adapt strategies to each place. The comparison helps Malaysia develop targeted policies that work for their situation, help them become less dependent on imports, strengthen their food systems, and increase their long-term resilience. The summary for the comparative analysis is shown in Table 1 below:

Table 1: Comparison of Nation's Food Security Strategies

No.	Country	Focus Areas	Food Security Status	Key Challenges
1.	Indonesia	Halal food production, self-sufficiency	Improved due to local policies	Reliance on imports still exists
2.	Thailand	Export-oriented (rice, seafood), strong R&D	High resilience, focus on export	Requires continuous R&D investment
3.	Vietnam	Agricultural modernisation, infrastructure investment	Top exporter of rice, seafood	Maintaining infrastructure investment
4.	Philippines	Community-based farming, sustainable agriculture	Challenges in climate and imports, but local engagement improving	Vulnerability to climate change
5.	India	Agriculture technology, support for smallholder	Improved food production through technology investments	Supporting smallholder farmers at scale

5.0 Conclusion and Recommendation

In conclusion, strengthening Malaysia's economy through national food security initiatives requires a multifaceted approach that addresses current challenges and future opportunities. By prioritising smart agriculture, local food production, and effective waste management, Malaysia can enhance its food security and resilience against global economic fluctuations. Integrating innovative strategies, supported by robust policies and community engagement, will ensure that Malaysia can sustainably feed its growing population while fostering economic stability. The comparative analysis of agricultural practices in Indonesia, Thailand, Vietnam, the Philippines, and India reveals critical insights for Malaysia. Malaysia can enhance its food security and reduce its reliance on imports by investing in agricultural R&D, promoting sustainable practices, and empowering local farmers. The experiences of these countries highlight the importance of government policies in shaping agricultural outcomes and addressing the challenges posed by climate change and global food market dynamics.

However, this study has several limitations because it relies on secondary sources, and policy documents may overlook nuanced, on-the-ground stakeholder perspectives. Next, the study uses published research which may not capture the latest changes in each country's policies. Future studies should include interviews with farmers, policymakers and industry professionals to improve the findings. In addition, measuring the effects of smart agriculture and community-based initiatives over time would allow us to see how well they work. In addition, using models to evaluate the financial results of different strategies under various climate and market conditions could guide policymakers more effectively.

Acknowledgements

The authors fully acknowledge the sponsorship from the Institut Penilaian Negara (INSPEN) under the NAPREC no. 3/2024 Grant Scheme (100-TNCPI/GOV 16/6/2 (049/2024) entitled "Assessing the Efficacy and Acceptance of Waqf Legal Framework to Maximise Waqf Real Estate Resources in Contributing of National Food Security Initiatives: A Comprehensive Study" for the completion of this research project.

Paper Contribution to Related Field of Study

This study generates a new finding related to economic development and food security by comprehensively analysing how Malaysia can strengthen its economy through national food security initiatives. This contribution is precious as it aligns with the broader goals of ensuring long-term food security while supporting Malaysia's growth and economic resilience.

References

Ahmad, Z. (2023). Harmony In Halal: Understanding Stakeholder Views Analyzing Products And Evaluating Policies In Malaysia. *West Science Business and Management*, 1(05), 495–508.

Ali, S., Mokhtar, S., Arshad, H., Fauzi, N., & Ahmad@Mohamed, N. (2022). Analysing The Role Of Waqf And Zakat In The Economy Through A Case Study Of Agricultural And Livestock Projects. *International Journal of Academic Research in Business and Social Sciences*, 12(12).

Baharuddin, A. (2023). Interdisciplinary Insights Into Syariah And Legal Discourse: Navigating Critical Dimensions, Contemporary Challenges, And Global Impact. *Malaysian Journal of Syariah and Law*, 11(2), v-x.

Department of Statistics Malaysia. (2023). Malaysia Population Statistics. Retrieved from https://open.dosm.gov.my/dashboard/population.

Duong, D. (2020). Sustainable Development For Vietnam Agriculture. *E3s Web of Conferences*, 175, 01015.

Food and Agriculture Organization (FAO). (2021). *Rejuvenating the Aging Farming Population in Malaysia*. FAO Reports. Retrieved from https://www.fao.org.

Food and Agriculture Organization (FAO). (2023). *Agricultural Innovation and Technology in Malaysia: Enhancing Food Security through Modern Infrastructure*. FAO Malaysia Country Report.

Firdaus, R., Tan, M., Rahmat, S., & Gunaratne, M. (2020). Paddy, Rice And Food Security In Malaysia: A Review Of Climate Change Impacts. *Cogent Social Sciences*, 6(1).

Haini, H., Musa, S., Loon, P., & Basir, K. (2022). Does Unemployment Affect The Relationship Between Income Inequality And Food Security? *International Journal of Sociology and Social Policy*, 43(1/2), 48-66.

Ishak, N., Abdullah, R., Rosli, N., Majid, H., Halim, N., & Ariffin, F. (2022). Challenges of Urban Garden Initiatives For Food Security In Kuala Lumpur, Malaysia. *Quaestiones Geographicae*, 41(4), 57–72.

Jereme, I., Siwar, C., Begum, R., & Talib, B. (2016). Addressing the Problems Of Food Waste Generation In Malaysia. *International Journal of Advanced and Applied Sciences*, 3(8), 68–77.

Kasim, S. (2023). Balancing The Scales: Achieving Food Security And Environmental Sustainability In Malaysia Through Integrated Approaches And Collaborative Governance. *Bio Web of Conferences, 73,* 03003.

Lee, S. (2021). In The Era Of Climate Change: Moving Beyond Conventional Agriculture In Thailand. *Asian Journal of Agriculture and Development*, 18(1), 1–14.

Loginov, D. (2023). Digital Platforms As A Factor In Strengthening National Food Security. *Bio Web of Conferences, 66*, 14010.

Mok, H., Williamson, V., Grove, J., Burry, K., Barker, F., & Hamilton, A. (2013). Strawberry Fields Forever? Urban Agriculture In Developed Countries: A Review. *Agronomy for Sustainable Development*, 34(1), 21–43.

Osabohien, R. (2024). Electricity Consumption And Food Production In Malaysia: Implication For The Sustainable Development Goal 2. *International Journal of Energy Economics and Policy*, 14(3), 119-126.

Pandey, D., Verma, N., Islam, T., Enbeyle, W., Pandey, B., & Patra, P. (2021). The Response Of Consumer Food Price Index (CFPI) Due To The Impact Of Pandemic Covid-19 On Indian Agriculture Sector. *Nass Journal of Agricultural Sciences*, 3(1).

Rashidi, N., Chai, Y., & Yusup, S. (2022). Biomass Energy In Malaysia: Current Scenario, Policies, And Implementation Challenges. *Bioenergy Research*, 15(3), 1371-1386.

Riani, R. and Fatoni, A. (2022). Waqf On Infrastructure: How Far Has Been Researched? *International Journal of Waqf*, 2(2).

Sabri, S. (2023). Importance Of Small Urban Parks Towards Becoming Low-Carbon Cities: Analysing Malaysian Policies And Strategies For Climate Change Mitigation. *Journal of Tropical Resources and Sustainable Science* (JTRSS), 11(2), 34–40.

Sampaothong, S. & Attavanich, W. (2021). Agricultural Production Factors And Their Effect On Agricultural Production And Carbon Emissions: Evidence From The Greater Mekong Subregion. *The Open Agriculture Journal*, 15(1), 75-81.

Saxena, A. & Suman, P. (2021). Food Supply Chain Disruptions Owing To Covid-19. *Alinteri Journal of Agricultural Sciences*, 36(2), 94-103.

Sukereman, A., Rahim, N., Zainol, N., Azmi, N., & Nordin, M. (2022). The State Of Food Security: A Comparative Study Between Malaysia, Singapore, And Indonesia. *IOP Conference Series Earth and Environmental Science*, 1067(1), 012009.

Sun, N., Tang, S., Zhang, J., Wu, J., & Wang, H. (2022). Food Security: 3d Dynamic Display And Early Warning Platform Construction And Security Strategy. *International Journal of Environmental Research and Public Health*, 19(18), 11169.

Tan, S., Ng, L., Lyndon, N., Aman, Z., Kannan, P., Hashim, K. & Ibrahim, M. (2023). A Review On Post-Covid-19 Impacts And Opportunities Of Agri-Food Supply Chain In Malaysia. *Peerj, 11*, e15228.

Yusuf, M., Sundari, S., Purwanto, I. D., & Kurnia, R. R. (2024). Rice Production, Policies, And Their Implications On Food Security Indonesia - Thailand Perspective. *Jurnal Multidisiplin Madani*, 4(1), 174-179.