

## Food Security and Rural Development in Malaysia: An Overview

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### Abstract

Food security is a pressing global issue requiring robust strategies to ensure the availability, accessibility, and utilization of nutritious food for all. The Food Security Policy Action Plan 2021-2025 (DSMN Action Plan) addresses challenges along the food supply chain, from agricultural inputs to food waste management. This paper aims to establish a connection between the DSMN Action Plan and rural development efforts in Malaysia, emphasizing its alignment with Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) principles to ensure sustainable and resilient food systems.

**Keywords:** Food security, DSMN Action Plan, Sustainable Development Goals, ESG principles, agricultural sustainability, rural development

### 1.0 Introduction

The Food Security Policy Action Plan 2021-2025 (DSMN Action Plan) endeavors to fortify national food security by addressing challenges across the food supply chain, from agricultural inputs to food waste management. With its comprehensive approach, including five strategic cores, fifteen strategies, and ninety-six initiatives, the plan aims to ensure a continuous and reliable food supply, particularly in unforeseen circumstances. This paper discusses the importance of food security, considering the pressures exerted by a growing global population and the imperative of a resilient and sustainable national food system.

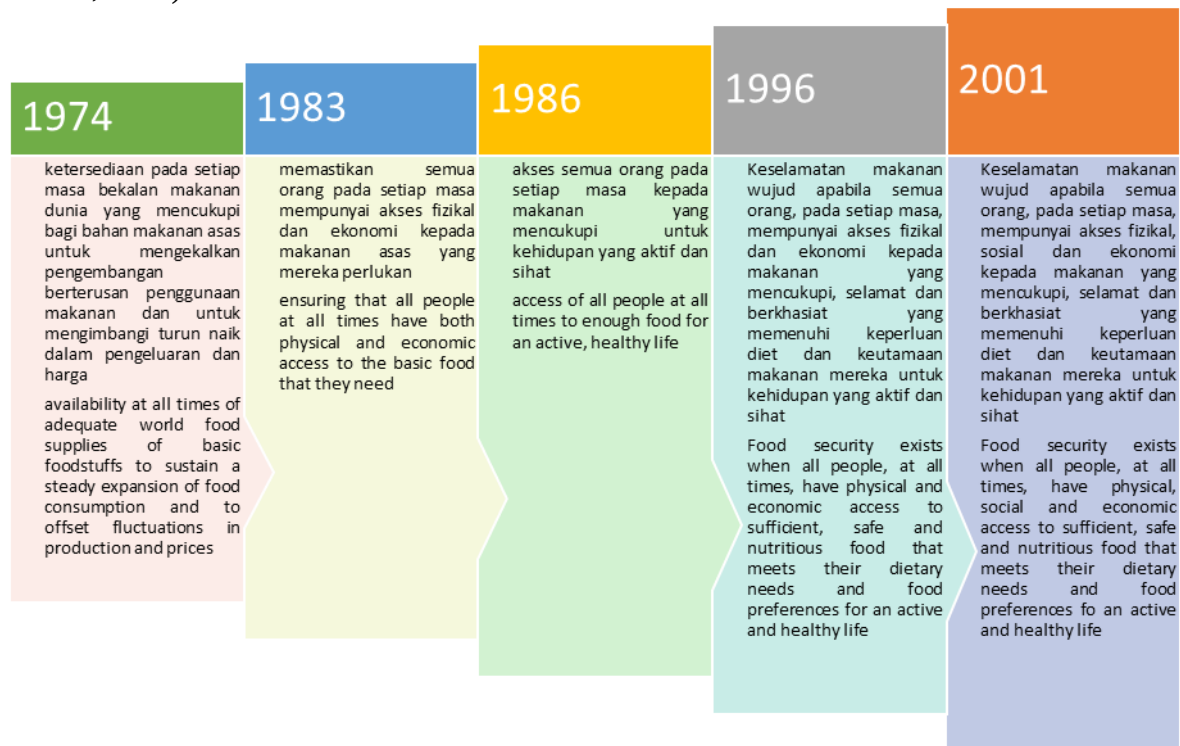
#### 1.1 Food Security: Definition and Importance

Food security is defined as the condition where all individuals have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and preferences for an active and healthy life (FAO, 2001). The definition changes based on era (Figure1). Ensuring food security is vital for economic and social development, directly impacting health, productivity, and overall well-being. The DSMN Action Plan aligns with Sustainable Development Goals (SDGs), particularly Goal 2: Zero Hunger, aiming to end

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hunger, achieve food security, improve nutrition, and promote sustainable agriculture (United Nations, 2022).



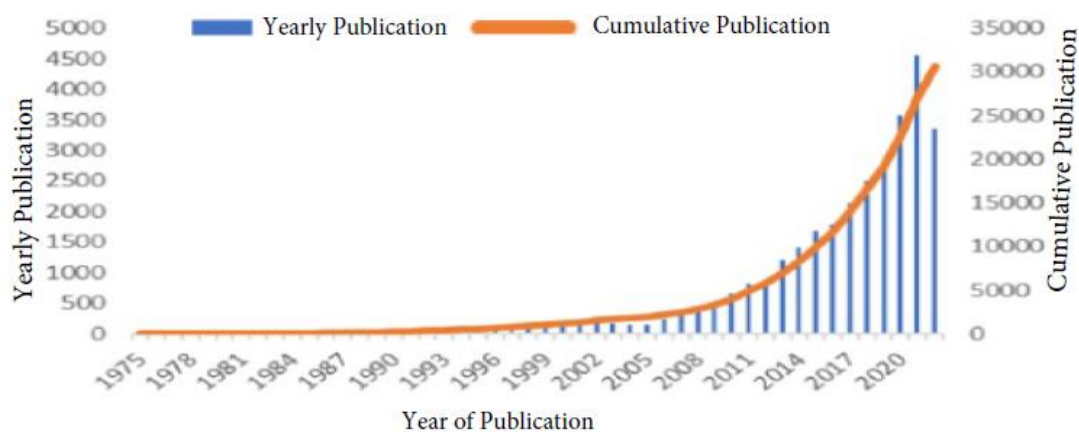
Source: Gibson (2012) and United Nations (2003)

Figure 1: Definitions and Timeline

## 2.0 Bibliometric Analysis

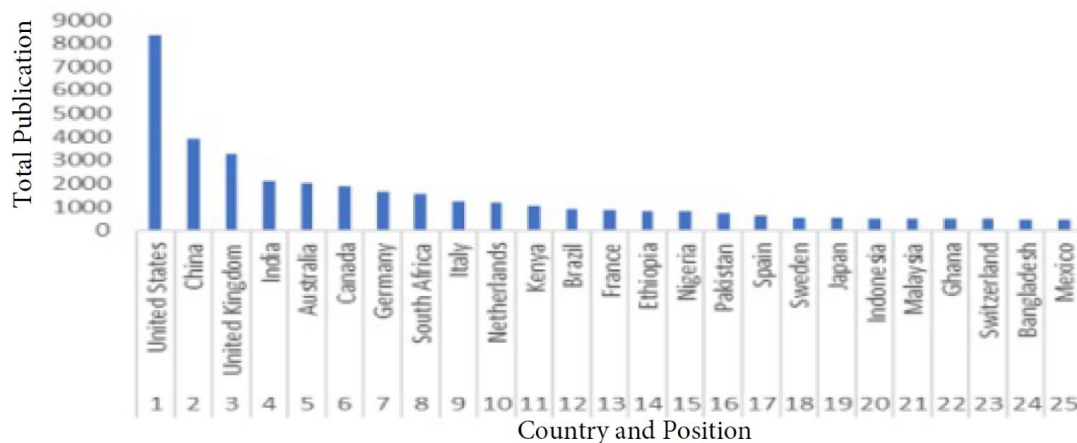
A bibliometric analysis conducted in this study assists in comparing trends and identifying current research topics related to food security. As of September 23, 2022, 30,588 articles on food security have been published over the past 48 years. The growing interest in food security research became evident in 2006, leading to a rapid increase in publications from that year onwards. The number of annual publications is expected to continue rising beyond 2022, highlighting the ongoing relevance of food security as a topic of discussion and debate among experts and researchers in the field (Table 1).

Table 1: Number of annual publications



The analysis also showcases the 25 most productive countries contributing to the growth of food security research globally. The United States is the largest contributor, with 8,366 articles, while Malaysia ranks 21st, with 503 articles (Table 2). Current research focuses on Malaysia include studies on the challenges posed by anthropogenic activities and climate change to future food security, the dynamic relationship between climate variables and agricultural production, rice production efficiency for food safety policy planning, and issues surrounding wasteland and food safety.

Table 2: Publications of food security research globally



Given the significant disparity between the United States and Malaysia in terms of the number of publications on food security, more studies should be conducted in Malaysia to provide valuable insights for stakeholders, policymakers, and the academic community.

## 2.1 National Food Security Framework (KSMN)

To strengthen the country's food security, the National Food Security Framework (KSMN) has been developed, encompassing four main components: availability, access, utilization, and stability and sustainability. These components align with the latest concepts recommended by the Food and Agriculture Organization of the United Nations (FAO). The framework is supported by key, supporting, and enabling strategies focusing on political, social, economic, environmental, and technological factors, as well as aspects of energy use, resource sustainability, climate change, investment, research, and food security governance across agencies and ministries.

## 3.0 Rural Development

The DSMN Action Plan significantly impacts rural development in Malaysia, particularly in food security and agricultural entrepreneurship. Malaysia's focus on achieving self-sufficiency in rice and paddy production underscores the critical role of agricultural policies in ensuring food security. Firdaus et al. (2020) highlights the impacts of climate change on paddy, rice, and food security, emphasizing the need for adaptive strategies in agricultural practices. Additionally, engaging youth in agricultural entrepreneurship is crucial for bolstering food security, driving economic growth, and promoting environmental sustainability, as emphasized by Bakar et al. (2022). This focus aligns with the National Food Security policy 2.0 and the 12th Malaysia Plan, which aim to ensure a consistent food supply for both rural and urban populations.

Moreover, Alam et al. (2015) discuss strategies such as setting self-sufficiency levels and maintaining rice stocks domestically and internationally. These strategies are crucial for safeguarding food security and ensuring a consistent food supply. The involvement of various stakeholders in rural landscape planning is vital for sustainable development, emphasizing the interconnectedness of food production, landscape quality, and community well-being.

The significance of rural infrastructure development in Malaysia's rural development policies is fundamental for enhancing agricultural productivity, connectivity, and overall rural livelihoods. Community participation is essential for poverty alleviation and fostering inclusive rural development. Decentralization policies can also play a pivotal role in rural development by encouraging greater community participation and local governance. Empowering local communities to actively participate in planning and implementation processes can result in tailored and effective development strategies that address the specific needs of rural areas.

The concept of rural resilience highlights the importance of community engagement and preparedness in building resilience to various challenges, including those related to food security and rural development. In the context of rural tourism and sustainable development, emphasizing the positive impacts of tourism on rural economies, employment, and infrastructure development. Leveraging cultural and natural assets, rural areas can diversify their economic base and attract visitors, contributing to overall rural prosperity.

#### **4.0 Strategic Framework of the DSMN Action Plan**

In the context of rural development, the Strategic Framework of the DSMN Action Plan plays a pivotal role in shaping policies and initiatives aimed at bolstering food security and promoting sustainable agriculture in Malaysia's rural areas.

1. **Enhancing Food Production:** The DSMN Action Plan emphasizes improving agricultural practices to enhance food production. In rural areas, where agriculture is a significant economic activity, initiatives under this strategic core can lead to increased yields and productivity. For instance, investing in research and development tailored to rural farming practices can equip farmers with innovative techniques to optimize production.
2. **Strengthening Food Supply Chains:** Robust food supply chains are essential for rural development, as they ensure seamless distribution of agricultural produce to markets. In rural areas, where infrastructure may be limited, efforts to strengthen supply chains can involve investments in transportation networks, storage facilities, and market access. By reducing post-harvest losses and improving market access, rural farmers can benefit from enhanced income and livelihoods.
3. **Ensuring Food Safety and Quality:** Rural development efforts must also focus on ensuring food safety and quality standards. The DSMN Action Plan's emphasis on food safety aligns with the needs of rural communities, where access to safe and nutritious food is paramount. Initiatives to promote safe agricultural practices and provide training on food handling and storage can enhance the quality of produce in rural areas, thereby safeguarding public health and consumer confidence.
4. **Promoting Sustainable Practices:** Sustainable agricultural practices are essential for the long-term viability of rural economies. The DSMN Action Plan encourages the adoption of environmentally friendly farming methods that minimize the impact on natural resources. In rural communities, where dependence on agriculture is high, promoting sustainable practices such as organic farming, crop rotation, and water conservation can contribute to ecosystem health and resilience.

5. **Enhancing Food Security Governance:** Effective governance is critical for ensuring that rural development policies and programs are implemented successfully. The DSMN Action Plan's focus on governance aligns with efforts to strengthen institutions and regulatory frameworks in rural areas. By enhancing coordination among government agencies, civil society organizations, and other stakeholders, rural development initiatives can be more effectively planned, implemented, and monitored.
6. The Strategic Framework of the DSMN Action Plan can be seen as a comprehensive roadmap for integrating food security objectives into rural development efforts. By aligning policies and initiatives with the needs and priorities of rural communities, Malaysia can achieve sustainable rural development while ensuring food security for all its citizens.

#### **4.1 Global and National Challenges**

DSMN Action Plan recognizes the impact of global events such as the COVID-19 pandemic, the Ukraine-Russia conflict, and climate change on food security. These events have disrupted supply chains and highlighted the vulnerability of global food systems. For example, the Ukraine-Russia conflict has significantly affected the global supply of wheat, corn, and sunflower seeds, which are essential for many countries, including Malaysia. This demonstrates the importance of a robust food security policy that can adapt to and mitigate the effects of such disruptions.

#### **4.2 Alignment with Sustainable Development Goals (SDGs) and ESG Principles**

The DSMN Action Plan is closely aligned with the SDGs, particularly Goal 2: Zero Hunger. This alignment underscores the plan's commitment to ending hunger, achieving food security, improving nutrition, and promoting sustainable agriculture. Furthermore, the plan emphasizes adherence to ESG principles, recognizing that ESG-oriented investments can drive sustainable and resilient food systems. According to McKinsey (2019), ESG-oriented investments have gained substantial traction, reaching USD 30 trillion by the end of 2019. These investments are not only financially beneficial but also help mitigate risks and enhance the long-term success of companies involved in the food sector.

#### **5.0 Conclusion**

The Food Security Policy Action Plan 2021-2025 is a comprehensive strategy designed to address the multifaceted challenges of ensuring national food security and fostering rural development. By focusing on enhancing food production, strengthening supply chains, ensuring food safety, promoting sustainable practices, and improving governance, the plan aims to create a resilient and sustainable food system that supports rural communities. Alignment with SDGs and ESG principles further reinforces the plan's commitment to achieving long-term food security and sustainability while promoting rural development. Implementing these strategies and initiatives is crucial for maintaining a continuous and adequate food supply for Malaysia, ensuring economic growth, social development, and prosperity in rural areas amidst global challenges.

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