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Navigating the Deluge: Unraveling the Multidimensional Food Security Challenges in Flood-Prone Malaysia with Maqasid Syariah

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Abstract

In recent years, Malaysia has seen an upward trend in food imports, surpassing exports and leading to a concerning trade imbalance. Despite the federal government's strategic efforts and budget allocations to ensure food security, the country has not yet achieved self-reliance and remains dependent on imports for basic household foodstuffs such as rice, poultry and meat. However, when considering the extent to which flooding, a common natural hazard in Malaysia, affects food security, it becomes more complex and pervasive. The objective of this study is to explore unravelments of food security challenges in flood-prone Malaysia through the lens of maqasid syariah. This study employs a content analysis methodology because of its ability to methodically and impartially discover distinct attributes within written material. The content analysis indicated seven (7) unravelments of food security challenges in flood-prone Malaysia through the lens of maqasid syariah: (a) *hifz al-nafs* in strategising flood-related food security; (b) *hifz al-din* in managing flood disaster efforts; (c) *hifz al-'aql* in developing climate-resilient agricultural strategies; (d) *hifz al-mal* in enhancing agricultural self-sufficiency; (e) *hifz al-nasb* in ensuring food security amidst climate adversities; (f) *hifz al-'aql* and *hifz al-mal* in resilienting agriculture against uncertainties; and (g) *hifz al-nafs* in safeguarding food security in extreme weather. In conclusion, the maqasid syariah provides a thorough framework for navigating the issues of food security in Malaysia's flood-prone areas. Future research directions could include a deeper investigation of the implementation of maqasid syariah principles in disaster-prone areas.

Keywords: Food Security, Flood Disasters, Malaysia, Climate Change, Agricultural Challenges, Maqasid Syariah

Introduction

In recent years, Malaysia has seen an upward trend in food imports, surpassing exports and leading to a concerning trade imbalance. Despite the federal government's strategic efforts and budget allocations to ensure food security, the country has not yet achieved self-reliance

and remains dependent on imports for basic household foodstuffs such as rice, poultry and meat. The National Agrofood Policy 2021-2030 (NAP 2.0) represents the most ambitious effort yet to address these food security issues, taking into account four dimensions: availability, access, usage, and stability (MAFS, 2024). However, smallholder farmers, who constitute the majority of the agricultural industry, often face low incomes and limited access to resources, hindering their ability to provide an adequate base for food production. The issue, therefore, extends beyond mere production. Despite the government's commendable budget commitments, questions have arisen about its full commitment to introducing necessary agricultural technologies. Furthermore, Malaysia faces challenges in achieving food security due to its increasing dependence on food imports, declining agricultural productivity, and widening income disparity (Mohamed, 2024). Therefore, efforts to achieve food security in Malaysia must consist of an integrated approach that goes beyond merely increasing food production, addressing socio-economic issues and promoting sustainable farming practices.
However, when considering the extent to which flooding, a common natural hazard in Malaysia, affects food security, it becomes more complex and pervasive. In other words, floods have the potential to seriously impact food security by disrupting the food supply chain and leading to food insecurity (Rehan, 2020). The main aim of this study is to better understand how flooding affects food security and find solutions to these issues within the maqasid syariah paradigm, which consists of five components: religion, life, intellect, progeny, and wealth. This study expects these maqasid syariah components to provide a robust framework for exploring food security issues, particularly in flood-prone areas of Malaysia. Despite various initiatives enacted by the government to improve food security, there exists a glaring gap in research studies on flood disasters, food security and Islamic principles (Miles, 2017). In fact, the economic cost of water-related disasters in Malaysia each year, as well as the lack of comprehensive analysis to address this crisis, present a critical theoretical gap. This theoretical lacuna and the obvious lack of depth in exploring food security disaster management within the maqasid syariah discourse highlight the need for further research in this area, finally putting the pieces together. Addressing this gap in the existing literature will add value to the existing discourse on food security, which is an important concern for Malaysia as it battles climate change.

The objective of this study is to explore unravelments of food security challenges in flood-prone Malaysia through the lens of maqasid syariah. This study presents a thorough and enduring method for tackling these problems. Maqasid syariah, a principle that places utmost importance on the preservation of religion, life, intellect, progeny, and wealth (Amin, 2020), can offer a comprehensive framework for improving food security in the midst of recurring flood disasters. This technique can contribute to ensuring food presence, ease of access, and excellence, which are fundamental elements of food security. Additionally, it can improve resilience, which refers to a system's ability to endure disturbances and bounce back while ensuring a consistent and dependable provision of nourishing sustenance. In Malaysia, it is crucial to prioritise household financial capabilities, nutritional status, and resilience when addressing food security, rather than merely focusing on national production and self-sufficiency. In addition, the principles of maqasid syariah can provide guidance for the implementation of sustainable farming methods and the modernization of the food system (Harahap, 2023). Implementing these steps can effectively diminish Malaysia's growing reliance on food imports, tackle the decline in agricultural production, and alleviate income

inequality. Thus, the application of maqasid syariah to food security concerns in Malaysia can result in the development of more robust and enduring food systems.

Literature Review

Several studies in the global context have applied the concept of maqasid syariah to address food security challenges, particularly flood disasters during the challenging times of the COVID pandemic. These studies place significant emphasis on the production of Fatwa and legal decrees to address issues related to halal and tayyib food products in Malaysia. For instance, Awang (2023), explored the importance of maqasid syariah in formulating legal decrees and Fatwa rulings related to food issues, particularly in promoting halal and tayyib food products to address food security challenges in Malaysia. Another good example of dealing with food security from the perspective of drought, floods and desertification is Omar et al. (2024), which reflects the imperative of maqasid syariah to produce the optimal sustainable practice for addressing climate change challenges. In the midst of a flood disaster in Malaysia, Shukri (2023), detailed and tackled the disaster risk reduction strategy for food security within the Sendai Framework. Baharuddin (2021), also assembled the literature of maqasid syariah in a global context, including Malaysia. The development of maqasid syariah literature in Malaysia has continued to grow exponentially up to the present day. Interestingly, many scholars, academicians, and research entities emphasised the importance of maqasid syariah in 2019, leading to the publication of the majority of these articles.

However, food insecurity problems caused by flooding in flood-prone areas, such as in the case of Malaysia, are a complex flood-food security nexus. Delineating the bogus from the real requires a systematic understanding of flooding events and food security measures. Floods in Malaysia, especially throughout the monsoon season, are an annual natural catastrophe. Monsoon changes remain the primary cause of annual floods, with severe incidents such as the 2010 flood in Kedah and Perlis states (Shukri, 2024). Floods on Malaysia's map go beyond monsoonal floods; flash floods, mud floods, and monsoon floods are possibilities. Notably painful are the flash floods in the urban areas, mainly in Kuala Lumpur and Kajang (Bari, 2021; Sufiyan, 2019). The Northeast monsoon occurs between the months of October and March and contributes to heightening the country’s vulnerability to flooding (Shith, 2021) Malaysia's flood management efforts are structural in nature and environmentally focused (Rosedi & Ishak, 2023). These efforts include assessing the vulnerability and resilience of communities (Ridzuan, 2022), evaluating the effectiveness of public policies (Nawi, 2021), and conducting post-event analysis (Sufian, 2022). In reality, residents are largely unprepared despite efforts to communicate the local government’s disaster preparedness. Nonetheless, for at least a decade, floods have remained a nightmare for many affected people in Malaysia. Given the added risks of environmental change, particularly in agricultural production, this country requires urgent research and effective disaster risk management. Floods in Malaysia, however, remain a daunting challenge to food security; they have the potential to disrupt food supplies and distribution systems.

Furthermore, research on food security challenges in flood-affected areas often emphasises the crucial need to collect dedicated data that helps understand the role of floods in affecting food security across different scales. These are key to informed preparedness, response and recovery efforts (Reed, 2022). Evidence-based approaches are essential to addressing food security challenges exacerbated by floods. Research from various flood-prone areas, including

Kenya, Nigeria, Pakistan, and others, highlights the significance of bolstering community resilience through social protection enhancement to alleviate food and nutrition insecurity among vulnerable groups (Odida & Nabiswa, 2020). This study recommends adopting smart agriculture practices and structural interventions like building dams and drainages to address food insecurity and the socioeconomic impacts of floods (Week & Wizor, 2020). These findings highlight the importance of proactive approaches to enhancing food security resilience in flood-prone areas.

Further evidence on the exact role of flooding on food security comes from research in Ghana that sheds light on the extent to which flooding affects food security, finding that flooding exacerbates food insecurity by increasing the number of food-insecure households (Atanga & Tankpa, 2021). Similarly, studies from both Nigeria and Ethiopia found a clear causal relationship between flood hazards and food insecurity, demonstrating how more severe floods lead to a more severe food security situation for indigenist farming households (Achoja, 2019). This evidence clearly highlights the importance of interventions that specifically address the complexity of this double climate challenge. Innovation, like flood-based farming, plays a crucial role in enhancing food security and enhancing environmental resilience in flood-dependent communities (Desta, 2024). Farmers in flood-prone areas enhance food security by harvesting crops using the floodwaters. This is a way to also reduce the impact of flooding on traditional farming systems. Finally, research in flood-prone areas in Bangladesh highlights the role of sanitation in reducing the incidence of diseases such as diarrhoea that can easily affect food security in vulnerable populations (Kikuchi, 2023).

The presence of fertile agricultural land in flood-prone areas presents difficulties for food production, as evidenced in the Alpine regions of Austria (Junger, 2022). This highlights the necessity of implementing efficient land use planning and flood risk management measures to protect agricultural output and guarantee food security in susceptible regions. Furthermore, studies conducted in Nigeria and Bangladesh have underscored the economic impact of flood disasters on food security. Research has observed a decline in food security for farming households following flood events (Jonathan, 2020). Gender plays a significant role in shaping food security and consumption behaviours in flood-prone regions, as demonstrated by research conducted in Bangladesh (Rahman, 2021). An in-depth comprehension of how gender dynamics intersect with food security concerns can provide valuable insights for developing more focused and inclusive interventions to meet the needs of vulnerable groups, especially in the aftermath of flooding occurrences. Furthermore, research conducted in Tigray highlights the significance of addressing all aspects of food security, including availability, access, utilisation, and stability, in order to effectively combat food poverty in rural areas that are prone to drought (Gebre, 2024).

Ultimately, addressing food security challenges in flooded areas in Malaysia must be approached holistically by including the principles of maqasid syariah in data-based rationalities, community resilience, innovative ways of farming, and the empowerment of women. Recognising the interactions between flooding events and food security interventions will allow policymakers to design climate change measures that benefit food security resilience while safeguarding the maqasid goals of protecting and safeguarding life, intellect, lineage, wealth, and faith. These goals can drive the design of food security measures based on cross-sectoral collaborations at all levels, from central governments all the way to

local villages, involving specialists with expertise in climate science, agriculture, and social policy, among others. This can include the use of technological solutions such as remote sensing and predictive modelling to monitor flood patterns and anticipate their impact on food security in order to serve maqasid syariah's goals of protecting the public interest. To ensure the empowerment of local communities through collective action initiatives, education and capacity-building must also enable them to better respond to and recover from food security crises during and after flooding, preserving human dignity and community welfare.

Methodology

This study employs a content analysis methodology because of its ability to methodically and impartially discover distinct attributes within written material. The initial stage of this procedure entails conducting a thorough keyword search. This study employs the keywords "food security," "flood disasters," "Malaysia," "climate change," "agricultural challenges," and "maqasid syariah" to refine the selection of pertinent literature. This study selected these keywords based on their direct relevance to the research subject, utilising them in various combinations to ensure a comprehensive search. The last stage is choosing suitable databases for the literature exploration. This study utilises academic databases such as JSTOR, ScienceDirect, Springer, and Google Scholar due to their extensive collection of scholarly materials. This study limits the search to articles published within the last ten years to ensure the inclusion of the most recent and relevant findings. This study determines the inclusion of literature based on its pertinence to the research issue, its contribution to the area, and its methodological rigour. On the other hand, this study disregards literature that is outdated, does not undergo peer review, or does not directly relate to the research subject. The rigorous selection and exclusion process ensures that the content analysis is based on the exceptional quality and relevance of the literature.

The final stage entails a meticulous content analysis procedure. This task entails comprehending the chosen material and categorising the information using predetermined classifications that are relevant to the research subject. The categories encompass the effects of flood disasters on food security, difficulties in managing disasters, the contribution of climate change, reliance on food imports, harm to agriculture, the necessity for enhanced resilience, and the impact of maqasid syariah principles. This study examines each piece of literature to determine its contribution to these categories and records the results. The study examines patterns and trends in the literature to derive conclusions on the food security challenges in flood-prone Malaysia, using the perspective of maqasid syariah. This rigorous and unbiased study enables a thorough comprehension of the research subject. Furthermore, the analysis takes into account the potential remedies suggested in the literature to tackle these difficulties. This includes strategies for strengthening resilience, implementing sustainable farming methods, and applying maqasid syariah principles to policy formulation. In conclusion, this thorough examination of content not only sheds light on the present condition of food security in Malaysia, but also offers valuable perspectives for future research and policy formulation.

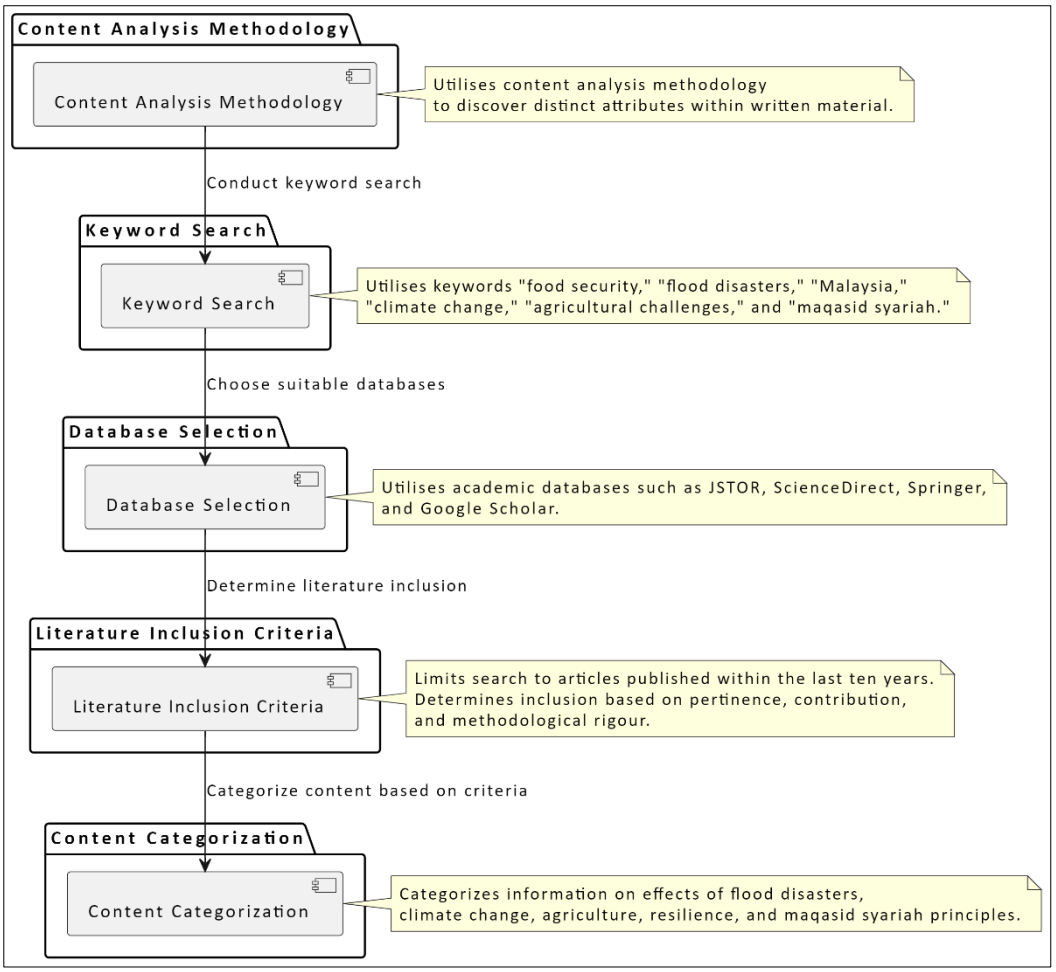

Figure 1: The Process of Content Analysis

Results and Discussion

The content analysis indicated seven (7) unravelments of food security challenges in flood-prone Malaysia through the lens of maqasid syariah (Figure 2): (a) *hifz al-nafs* in strategising flood-related food security; (b) *hifz al-din* in managing flood disaster efforts; (c) *hifz al-'aql* in developing climate-resilient agricultural strategies; (d) *hifz al-mal* in enhancing agricultural self-sufficiency; (e) *hifz al-nasb* in ensuring food security amidst climate adversities; (f) *hifz al-'aql* and *hifz al-mal* in resilienting agriculture against uncertainties; and (g) *hifz al-nafs* in safeguarding food security in extreme weather.

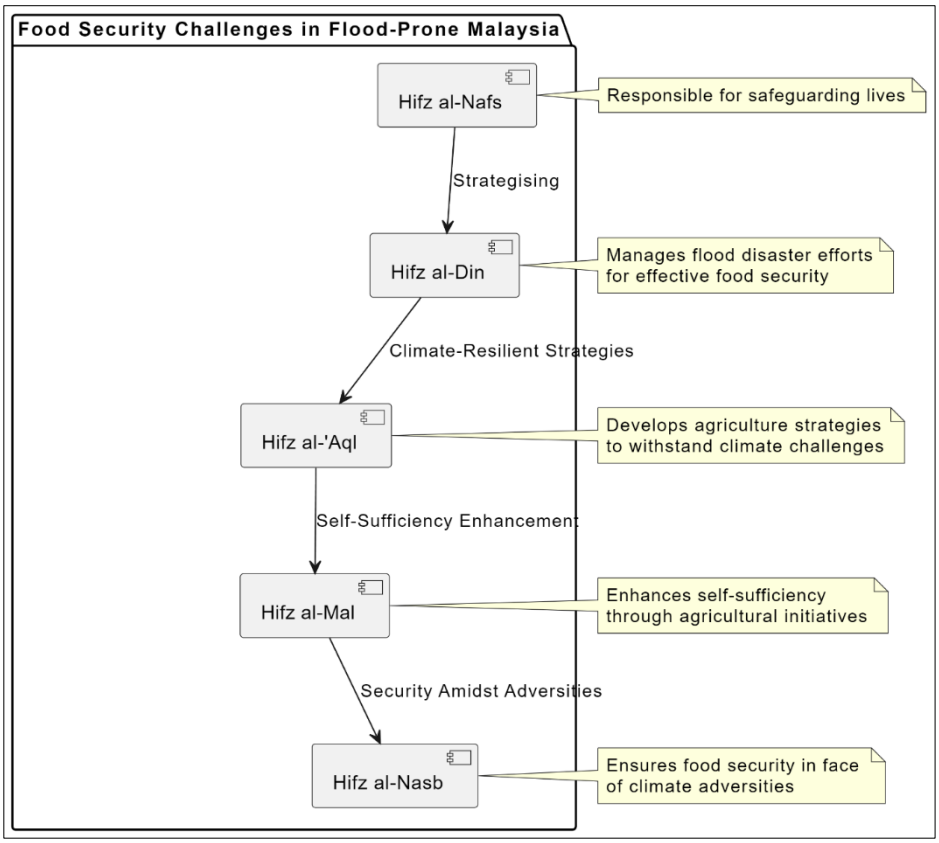

Figure 2: The Framework of Food Security Challenges in Flood-Prone Malaysia Through the Lens of Maqasid Syariah

(a) *Hifz al-Nafs* in Strategising Flood-Related Food Security

Malaysia frequently experiences flood disasters, particularly during the monsoon seasons. These natural disasters have severe implications for food security, disrupting both food production and distribution. In Islam, the maqasid syariah principle of *hifz al-nafs* is critical to food security because it emphasises the protection of human life. Specifically, during torrential floods, everyone has the right to secure food, as a sufficient quantity and variety for a healthy and dignified life. Proactive efforts are necessary under *hifz al-nafs* to safeguard food supplies and infrastructure from flood damage, ensuring the safe and secure production and distribution of food to uphold the fundamental human right to life. This involves advocating for enhanced food security measures and robust disaster management systems, establishing resilient agricultural systems, fostering community resilience, and promoting a culture of preparedness and selfless assistance, as exemplified by local food banks and distribution centres. It also encourages the pursuit of knowledge and innovation in finding solutions to these challenges, such as improved flood prediction systems, flood-resistant crops, and sustainable farming practices. *Hifz al-nafs* serves as a guiding principle for navigating the complexities of flood disasters and food security challenges in Malaysia.

Hifz al-nafs, a concept related to protecting individuals from psychological and social problems, can be applied as a strategy for flood-related food security. Floods disrupt agricultural production, impacting livelihoods and subsequently household food security (Ahmad, 2022; Atubiga & Donkor, 2022). Implementing non-continuous flooding strategies can reduce greenhouse gas emissions and water use without compromising rice production, offering a sustainable approach (Bo, 2022). Studies have shown that flood adaptation

practices significantly influence farm households' food security, emphasizing the importance of analyzing on-farm and non-farm strategies (Alhassan, 2020). By integrating the Islamic principle of *hifz al-nafs*, which protects life, with strategies like flood adaptation and indigenous knowledge, communities can enhance resilience and ensure food security in the face of climate-related disasters (Dahlan, 2021; Sohail & Chen, 2022; Atubiga & Donkor, 2022). Consequently, the application of *hifz al-nafs* in strategising flood-related food security becomes a critical consideration. It encourages the development of resilient and sustainable strategies to minimise the downstream impacts of floods on food availability, as well as the longer-term, forward-looking objective of achieving a secure food supply despite the likelihood of recurrent flood events.

(b) *Hifz al-Din* in Managing Flood Disaster Efforts

Efficient disaster management is essential for minimising the consequences of floods. Nevertheless, Malaysia encounters difficulties in terms of coordination, communication, manpower, and public knowledge regarding catastrophe preparedness. The principle of preservation of religion (*hifz al-din*) promotes the idea that communities should maintain their religious obligations, which include the responsibility to assist people who require support. This idea can provide guidance for enhancing disaster management, promoting a collective feeling of accountability and unity in the midst of challenges. This idea has the potential to drive the development of comprehensive education and awareness programs that not only inform the public about flood dangers and the importance of preparedness, but also cultivate a shared sense of responsibility in disaster response. Moreover, it can inspire the creation of efficient communication networks that provide prompt distribution of information in times of crisis. Furthermore, it can facilitate resource and personnel allocation, promoting community involvement in disaster management efforts. Incorporating *hifz al-din* into disaster management has the potential to transform Malaysia's difficulties into opportunities for community development and adaptability.

The concept of *hifz al-din*, which involves safeguarding religion, is of utmost importance in disaster management endeavours. Authorities can bolster community resilience by incorporating religious tenets into disaster preparedness programs. Research on flood disaster risk perception highlights the importance of engaging in flood disaster preparatory actions to ensure efficient flood disaster management (Qi, 2021). Implementing an integrated decision support system enables rapid and precise analysis of flood disaster data, facilitating well-informed decision-making in the field of disaster management (William, 2024). Moreover, evaluating the susceptibility of urban areas to floods using textual data establishes a fundamental basis for the implementation of flood control and management strategies in cities (Wu, 2019). By integrating the ideas of *hifz al-din* into disaster management techniques, communities can improve their preparedness and response to flood catastrophes, thereby mitigating their impact. Thus, the concept of *hifz al-din* has a crucial impact on the management of flood disasters, namely in the formulation of strategies to ensure food security. Communities can enhance their response to flood catastrophes by integrating disaster management tactics with religious concepts. This approach promotes unity and resilience while also respecting the religious views and traditions of the community.

(c) *Hifz al-'Aql* in Developing Climate-Resilient Agricultural Strategies

The implementation of climate-resilient agriculture practices has a crucial role in preservation of intellect (*hifz al-'aql*), a fundamental principle in maqasid syariah. This strategy fosters intellectual development by encouraging research and creativity. Additionally, it aids in the preservation of a steady mental state, which is necessary for lucid cognition and logical decision-making. These measures decrease the stress and anxiety caused by food poverty, promoting clearer thinking and helping individuals make informed decisions. Integrating traditional knowledge with scientific inquiry fosters intellectual variety and encourages critical thinking. Education and capacity building strengthen cognitive capacities, helping individuals to make well-informed decisions regarding their personal lives and communities. As a result, the implementation of climate-resilient agricultural policies not only addresses the tangible obstacles posed by climate change, but also plays a critical role in protecting mental health. This strategy makes a substantial contribution to the preservation of intellectual capacity, effectively addressing the difficulties presented by climate change and food security. Therefore, by implementing climate-resilient agricultural strategies based on the principle of *hifz al-'aql*, we can effectively tackle the physical challenges posed by climate change. Additionally, this approach also promotes mental well-being, aligning with the holistic approach of maqasid syariah in addressing food security challenges.

The concept of *hifz al-'aql* is fundamental to Climate-Smart Agriculture (CSA), a strategy that seeks to enhance agricultural productivity in a sustainable manner, enhance resistance to climate change, and mitigate greenhouse gas emissions (Etongo, 2023; Jones, 2021). This principle promotes intellectual advancement through research and innovation, exemplified by efforts such as the National Innovations in Climate-Adaptable Agriculture (NICRA) (Mishra et al., 2024) and the creation of crop varieties that are adaptable to climate change (Tabe-Ojong, 2023; Cacho, 2020). The text highlights the significance of embracing sustainable behaviours, advocating for biodiversity, and implementing climate adaptation approaches (Anitha, 2024; Sprunger, 2023). Policy interventions, which are the outcome of rigorous intellectual processes, have a substantial impact on promoting the implementation of these solutions (Oriekhoe, 2024; Whitfield, 2021). By incorporating climate change considerations into the process of planning and implementing agricultural practices, the agricultural sector may enhance its ability to withstand and adapt to climate variability. This will help to guarantee the security of food and livelihoods for farming communities (Ghosh, 2019). Therefore, *hifz al-'aql* not only safeguards the intellect but also utilises it to navigate and surmount problems, thereby making a substantial contribution to maqasid syariah.

(d) *Hifz al-Mal* in Enhancing Agricultural Self-Sufficiency

Malaysia's increasing reliance on imported food jeopardises its food security. Because of a decrease in agricultural output and income disparity, the country is more dependent on imported food. The concept of preservation of wealth (*hifz al-mal*) acknowledges the importance of protecting resources, including reducing reliance on imported food by enhancing local agricultural productivity. This philosophy advocates for economic policies and investments that bolster local farmers and advance sustainable agriculture. It encourages the development of infrastructure and technology that improve agricultural output and efficiency. Additionally, it promotes the expansion of agricultural products to decrease dependence on a limited number of basic crops and enhance nutritional variety. Furthermore, it underscores the need to establish fair trade practices and laws that ensure farmers receive

fair compensation for their agricultural products, thereby increasing their earnings and reducing income inequality. In conclusion, the implementation of *hifz al-mal* has the potential to enhance the growth of a robust and independent agricultural industry in Malaysia, guaranteeing the availability of food in light of escalating global uncertainties.

Enhancing agricultural self-sufficiency is essential for preserving wealth (*hifz al-mal*) by implementing sustainable practices that focus on soil conservation, resource management, and environmental protection. Conservation tillage practices help maintain soil properties, reduce greenhouse gas emissions, and improve soil fertility (Sadiq, 2024; Branco, 2022). Sustainable agriculture emphasizes the balance between meeting human needs and safeguarding environmental quality, ensuring the long-term preservation of natural resources (Jiang, 2023; Rahim, 2021). Processes like vacuum drying of crops post-harvest aid in preserving product properties during storage and processing, contributing to agricultural sustainability (Šooš, 2024). By utilising organic fertilisers, implementing no-dig cultivation, and promoting soil biodiversity, agricultural practices can enhance soil resilience and maintain productivity (Mazur-Pączka, 2024; Ordoñez, 2022). Overall, adopting circular agriculture, conservation tillage, and organic farming methods are essential for preserving soil fertility, enhancing agricultural self-sufficiency, and ensuring sustainable land management (ElJanati, 2021; Panfilova & Byelov, 2022; Hrameche, 2024).

(e) *Hifz al-Nasb* in Ensuring Food Security Amidst Climate Adversities

The unexpected occurrence of rainfall and flooding has led to severe damage to farmland and crops. *Hifz al-nasb* emphasises the importance of preserving the progeny (*nasb*) and passing on the blessings to the next generation, as this is equivalent to safeguarding future food security. This principle supports the idea of long-term planning and investments in infrastructure and protocols by settlers to shield agricultural areas from the adverse impacts of flooding. This promotes the adoption of eco-friendly farming methods and the development of resilient varieties designed to withstand harsh weather conditions. This also encourages farmers to implement effective land-management techniques to reduce soil erosion and increase soil fertility, which are necessary for producing good agricultural outputs. Moreover, this emphasises the necessity of establishing comprehensive insurance policies for the farmers that would financially compensate their losses in agriculture if such an occurrence (like flooding) manifests in the real world. This also plays a significant role in establishing early warning systems and emergency mitigation methods that could reduce the onslaught of floods in agriculture. Furthermore, it paves the way for conducting research in areas of innovation and the utilisation of existing and newly established technologies and tools to improve the overall functioning of ecology in the agricultural sector. In conclusion, policies based on *hifz al-nasb* may contribute to improving the agricultural sector's current sustainable footing. It may also pave the way for food security for future generations in Malaysia.

Ensuring food security in the face of climate adversities is crucial for preserving progeny. Tailored interventions, continuous data collection, and awareness campaigns are essential to enhance agricultural resilience (Kanu & Onyekwere, 2024). Sustainable agricultural practices and climate-smart agriculture are recommended to tackle the challenge of climate change on food security (Rani & Reddy, 2023). Climate change impacts pose challenges for food security globally, especially in developing countries (Leonard, 2022). Adaptation strategies at the

household level are necessary to cope with climate change's effects on food security (Zaw & Charoenratana, 2023). Climate-related disruptions in the food system can indirectly affect human health by diminishing food security (Schnitter & Berry, 2019). Addressing climate change is vital for sustainable agriculture and food security (Rosalia & Mulyaningsih, 2023). Climate variables directly impact food production and other food security indicators (Muleta & Negera, 2022). Climate change is a pressing issue affecting sustainable agriculture and food security (Sabola, 2024).

(f) *Hifz al-'Aql* and *Hifz al-Mal* in Resilienting Agriculture Against Uncertainties

There is a dire need for more investment and commitment to improve the efficiency and adaptability of agriculture production. This aligns with *hifz al-'aql* and *hifz al-mal*, which advocate for making sound decisions, and for preserving wealth, respectively. It encourages policies and practices that increase the agriculture sector's resilience in the face of floods and other disasters. It promotes scientific knowledge and technological progress to develop innovative sustainable agricultural methods and infrastructure that can withstand extreme weather conditions. Additionally, it calls for creating greater variety in agricultural products, and for investing in advancing sustainable agriculture techniques to ensure the sustainability of the agriculture sector. Furthermore, it highlights financial investments in agriculture, not just to upscale production, but also to provide an insurance for farmers when trouble strikes. It also calls for implementing just trade policies and regulations that provide farmers with a just reward for their agricultural products, so that the income disparity is lowered. In a nutshell, the implementation of *hifz al-'aql* and *hifz al-mal* can help in the development of a robust and self-sustaining agriculture sector, and food security given increasing global uncertainties.

Enhancing the agriculture industry's ability to withstand and endure risks will contribute to upholding the principles and ideals of protecting intellect and wealth in Islam. The objective is to offer advantages for both the person and society (Atabik, 2021; Sibyan, 2023; Setiawan, 2019; Muzammil, 2023; Wijaya, 2021). Enhancing societal resilience will strengthen the agriculture sector's ability to confront unpredictability while simultaneously preserving intellectual property and fostering dynamic and adaptable creativity. By adhering to the principles of maqasid syariah, the economics of sustainability can effectively fulfil its goals of safeguarding the agricultural economy and ensuring the availability of essential food resources. This study proposes the application of the maqasid syariah principle in economic activities, particularly zakat and profit-sharing systems, to contribute to poverty reduction and long-term growth (Isman, 2023a; Isman, 2023b; Purwanto, 2022; Fad & Imron, 2021). In addition, this will also yield several advantages, such as the implementation of agrarian reform (Herlindah, 2022), which encompasses a range of measures aimed at enhancing social cohesion and solidarity, promoting equality, and safeguarding property rights. The implementation of maqasid syariah is expected to lead to improved economic stability, reduced social inequities, and enhanced sustainable agricultural development.

(g) *Hifz al-Nafs* in Safeguarding Food Security in Extreme Weather

Different parts of the country have also faced extreme weather events, leading to severe flooding. The second principle of *hifz al-nafs* emphasises human life protection, including ensuring access to safe and nutritious foods during these difficult times. This principle encourages the use of emergency preparedness measures (such as food stockpiles, food

distribution networks, and so on) to secure food during extreme weather events. It further encourages the procurement of broad methods of disaster response and the use of early warning systems to buffer events and their impacts. It further encourages enhancing local communities via training and education to build skills that help them respond to such disasters. Moreover, it promotes coordination among the various groups involved, including governmental institutions, non-governmental organisations (NGOs) and local communities, to ensure a positive and coordinated response. It also encourages the use of research and innovation to develop new technologies and strategies that may improve the food system's resilience to the impacts of extreme weather events. Overall, through adherence to *hifz al-nafs*, there is potential to develop a resilient food system that is capable of responding to extreme weather events that affect the food system in terms of the food security of all individuals.

The principle of *hifz al-nafs*, meaning the preservation of life, dictates the preservation of food security during ecologically volatile and catastrophic situations (Jamaludin & Ramli, 2021; Sibyan, 2023; Wijaya, 2021). Other Maqasid al-Shari'ah, such as the *hifz al-din* and the *hifz al-mal*, maintain the foundation for humankind's welfare and social equilibrium (Hashi, 2022; Dahlan, 2021). Several scholarly conferences, electronic statements, and fatwas garner millions of views each, illustrating the implementation of *hifz al-nafs* in areas such as healthcare and the pandemic situation (Zahari, 2021; Rohman, 2021). By incorporating these principles into policies and practices, societies can effectively tackle issues such as poverty, healthcare, and social welfare while maintaining the core values of Islam (Fisol, 2019; Setiawan, 2019). In essence, the notion of *hifz al-nafs* emphasises the significance of giving priority to life and well-being while making decisions, with the aim of fostering sustainable development and resilience in times of crises.

Conclusion

In conclusion, the maqasid syariah provides a thorough framework for navigating the issues of food security in Malaysia's flood-prone areas. It is possible to guarantee everyone access to secure and nutritious food, even during times of calamity, by aligning tactics with these principles. The ideals of preserving religion, life, intellect, progeny, and wealth provide a comprehensive strategy for tackling the many issues presented by flood disasters. They support proactive actions, well-informed decision-making, safeguarding resources, strategic planning for the future, and fostering communal togetherness. Additionally, they emphasise the significance of doing research, fostering innovation, and utilising scientific knowledge and technology to strengthen the ability of the agricultural industry to withstand challenges and guarantee the availability of food. Furthermore, this study emphasises the need for more robust dedication and influential financial contributions in the agricultural industry, as well as the importance of education and skill development in providing communities with the essential abilities to adjust to changing conditions. The implementation of maqasid syariah principles has the potential to enhance Malaysia's food system's resilience and sustainability. It can withstand the effects of severe weather events and guarantee food security for everyone, both now and in the future.

Future research directions could include a deeper investigation of the implementation of maqasid syariah principles in disaster-prone areas. Comparative studies have the potential to inform us of the usefulness of implementing these principles in different contexts. An area for

study that can be of great significance is the participation of various stakeholders (mainly involving governmental agencies, non-governmental organisation and the corporate sector) in the implementation of these principles. For instance, food security is a crucial issue in various countries affected by climate change and natural disasters. An intriguing field of research can explore the impact of policy actions (informed by maqasid syariah) on food security. Longitudinal studies can better inform us of the long-term impact of intervening on agricultural productivity, community resilience and overall food security, respectively. Interdisciplinary research that combines environmental science, agricultural technology, and social sciences has the potential to find comprehensive solutions to important problems such as food security in the face of climate change and natural disasters. All of the research proposals above can help develop more resilient and sustainable food systems, not only in Malaysia, but also in many Asian countries facing similar challenges as a result of climate change, rising temperatures, and natural disasters.

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