

Malaysia's Public Institutional Architecture, Rural Agriculture - SMEs and Food Security

National Report



UNGKU AZIZ
CENTRE FOR DEVELOPMENT STUDIES

In partnership with



Acknowledgments

This report addresses issues in Malaysia's public institutional architecture pertaining to agriculture and agro-based SMEs. It investigates the inability of numerous policies to increase Malaysia's agricultural production and food security. This project thoroughly scrutinizes the roadblocks in delivering policies effectively to farmers and livestock owners as current and past agricultural policies lack effective implementation due to structural issues.

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Needless to say, the final responsibility for all information, data, analysis, conclusions, and policy recommendations rests solely with the authors of this report.

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EXECUTIVE SUMMARY

Although Malaysia's food security level is high by international standards, the import of food has been consistently increasing. This suggests a serious problem with the planning and implementation of policies related to the agriculture sector. This is also evident in Malaysia's low productivity levels compared to high-income countries. Government intervention and investment in agriculture can be categorised into two areas. The first is investment in industrial crops such as palm oil and rubber and the other is in agro-food products such as fruits and vegetables. Malaysia's focus on agriculture can be traced to the 1970s, when the government, having adopted a highly interventionist approach to economic development, increased investments, implemented policies, and introduced institutional reforms to promote palm oil cultivation. Later, agro-food-based policies were actively promulgated. For example, when the National Agro-Food Policy 2011-2020 (NAP) was instituted, its focus was on food security by enhancing productive capacity in the agro-food sector. However, a decade later, the improvements envisaged by the NAP have not been achieved, with the non-rice agricultural food sub-sector in particular requiring further attention due to low performance. Despite having in place a well-constructed public infrastructure and numerous mechanisms to channel support to agricultural SMEs, the public delivery system has been in decline for some time. This indicates the need for the government to review its institutional infrastructure, including to revamp institutional bottlenecks that hamper production of food and the creation of domestic and transnational supply chains.

This project investigates the structural impediments that have hindered the growth of the agricultural sector in Malaysia. Focus group discussions (FGDs) and interviews were conducted in 2021-2022 in four states of Malaysia: Kelantan, Terengganu, Sabah, and Sarawak. This study involved three different groups of informants – public agencies, SMEs, and the farmers/communities. Each group was selected using purposeful sampling with three characteristics to choose from as a study informant. First, we mapped the policy promulgation landscape, identifying ministries, departments, and statutory bodies that are responsible for overseeing the sectors considered. We also investigated specific federal and state-level policies in place to promote food security and then evaluated if they overlapped in terms of implementation and target groups. The promulgation state-level agriculture policies was greatly influenced by the direction of national agriculture policies. Second, we analysed the policy implementation framework, as well as impact assessments, to determine if agencies have adequate capacity to implement policies. We found evidence of a patronage system where political ties between government organisations, SMEs, and farmers are rather significant. Third, we reviewed the policy outcomes on rural economies, including assessing how federal and state level policies were implemented in terms of decision-making processes,

budget allocation, and overall management of a policy. Finally, in the fourth stage, this project attempted to understand the scope of improvement and provide key lessons.

Land is the main resource in agricultural development, so the state government must dare to zone agricultural land for food-based production without any interference from other development activities. The nature of the linkages between public institutions and SMEs that emerge from these policies can be characterized as dependent, leading to poor food production levels. There is an evident lack of coordination in the implementation of policies by government agencies, one not seen in the social market economy where there is much emphasis on ensuring state capacity to create a 'responsive state' capable of instituting an effective public delivery system. Finally, we analyse the scope of improvements and some key lessons that Malaysia needs to implement, including revamping piecemeal and disjointed policies and replacing them with one holistic policy.

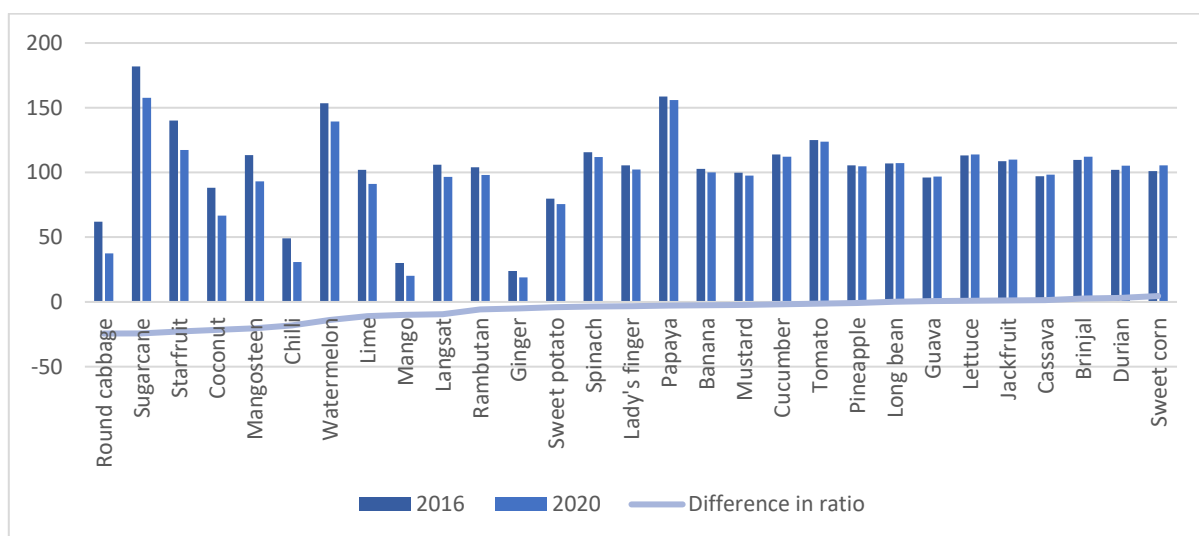
Data from the ground showed major holdbacks to the expansion of local food production include problems to expand land ownership to increase output, the absence of an effective marketing system to reach consumers, an inability to control price of inputs and outputs, and poor training to enhance production capacity. Poor coordination between federal agencies and between federal and state agencies severely hamper implementation of policies. One strategy that could provide a remedy to these problems is the creation of a one-stop (publicly managed) centre for producers, particularly small and mid-sized producers, to market their products locally and globally, which also creates new marketing opportunities for rural food producers, regulates farm input and output prices, and provides training for farmers.

INTRODUCTION

The agricultural sector has contributed to the growth of the Malaysian economy. This sector was a foundation of economic growth and was the main contributor to the national economy prior to the 1970s. The rapid growth in the agricultural sector was initially derived from the increase in the production of livestock, fisheries, and other crops. This sector provides a livelihood for farmers, fishermen, and agro-based industry employees, while also ensuring sufficient food supply for the country. Currently, this industry is moving to more valuable cash crops owing to the increase in earnings from major commodities such as palm oil, rubber, and food commodities. However, the increasing demand for food, due to urbanization and population growth has increased the country's import bill.

Accordingly to the latest available supply and utilization accounts of Malaysian agriculture, in 2021, 26 out of the 50 commodities considered recorded a self-sufficiency ratio (SSR) more than 100 per cent which is similar to the situation in 2019 when Malaysia recorded SSR in 25 products. However, the SSR of commodities considerably dipped in 2020 and only 19 products recorded SSR of more than 100 per cent. The products for which Malaysia is still self-sufficient have also witnessed a drop in ratio or with only a negligible improvement in some cases (Figure 1). This increased dependency has led to higher vulnerability of food prices in Malaysia, due also to global market fluctuations. The COVID-19 pandemic – since 2020 – and the recent Ukraine-Russia war exposed the fragility of supply chains leading to food shortages and rising prices of agricultural products.

Figure 1 : Self-sufficiency ratio of selected agricultural food products



Source : DOSM, 2021

Currently, the already low share of arable land is now at a dangerously low level (2.5 per cent in 2018). Accordingly, food imports have been increasing and was RM55.5 billion in August 2021. Food supply shocks have led to inflation, even for products that Malaysia was termed to be self-sufficient. The recent example is that of chicken, whose rising price has compelled the government to impose a price ceiling to ensure affordability is maintained. The price increase of chicken is not due to poor supply of this product but the cost of imported feed. The main component of chicken feed is wheat whose supply chain has been highly disrupted by the war. Another issue is the export ban of wheat by major wheat-exporting countries like India. Due to the decline in self-sufficiency of products, low volume of arable land, and sky rocketing price levels, Malaysian policy-makers have been focusing on policies to improve this situation.

Following the dip in economic activities and massive losses to the farmers, the government announced stimulus packages to support the effected groups. Committees were created to ensure proper implementation of the proposed actions and disbursement of funds. In May 2022, the government abolished Approved Permits (AP) for five agricultural products to mitigate the price pressure in the agricultural sector.

Despite these remedial measures by the government and the numerous policies formulated over the past 38 years, when the first national agriculture policy was announced, Malaysia's food affordability and self-sufficiency are in a poor state.

The agriculture sector in Malaysia has been developed in two forms. The first is the plantation sector and the second is food production. The focus on agriculture developed during the late 1960s and 1970s under the leadership of the then Prime Minister Tun Abdul Razak Hussein. The first federal level agricultural policy was developed in 1984 and was known as the *National Agricultural Policy 1 (NAP1)*. This policy was implemented over 1986-1990. Consequently, National Agricultural Policy 2, National Agricultural Policy 3, and National Agro-food Policy (NAP4) (also known as NAP 1.0) were announced in 1992, 1998, and 2010 respectively. The latest federal-level agro policy is the National Agro-food Policy 2.0 for 2021-2030 which builds on NAP4.

One of the fundamental reasons for Malaysia's low food production levels is that the volume of entrepreneurial small- and medium-scale enterprises (SMEs) in the agriculture sector is still extremely minuscule. Only 1.1% of Malaysia's 1.176 million SMEs are in the agriculture sector, with no domestic firm emerging as a major public-listed enterprise. Domestic SMEs do not have a significant presence in global food supply chains, another indication that Malaysia has not been able to foster the rise of highly productive and competitive agro-based enterprises as envisioned in the NAP. With the unanticipated emergence of the Covid-19 global pandemic in 2020, which will deeply impair Malaysia's import of food products, coupled with the serious structural problems in the agro-food sector, the country is confronted with an economic

disruption that will have severe repercussions on producers as well as consumers. Meanwhile, domestic supply chain disruptions due to the pandemic have emerged in the crop and processed food clusters.

In an unprecedented crisis of this sort, which has deeply impaired the activities of the private sector, the government has no alternative but to intervene far more effectively in the economy to prevent excessive economic disarray and sustain the functioning of essential services, including that of food production. What is in Malaysia's favour is that the government has in place an institutional infrastructure that can be more effectively deployed to deal with a potentially debilitating food crisis.

Malaysia's problem is that this institutional infrastructure has deteriorated over time resulting in unachieved policy targets and endeavours. This is an indication of the need for the government to review its model of development, including the links between the state, industries, and labour. It is, therefore, imperative to review Malaysia's model of development, including to unclog or revamp institutional bottlenecks that hamper production of food and the creation of domestic and transnational supply chains that can foster the rise of SMEs.

Confronted as Malaysia was with a health pandemic that has severely undermined the economy and since the government's response has been a stimulus package (Bantuan Prihatin Nasional 2020), through which RM1 billion was allocated to a Food Security Fund, these scarce resources were channelled to SMEs. However, whether these funds can be productively used by SMEs would depend on a variety of factors of which an efficient public delivery system is of paramount importance.

In this project, what is clear is that the nature of the linkages between public institutions and SMEs that emerged from these policies can be characterised as dependent, not one that can be seen as developmental. In development models such as the social market economy, the aim of government policies and incentives is to foster the rise of highly entrepreneurial, or developmental-type, SMEs. However, in the Malaysian case, one serious issue is that the nature of government-SME linkages has been more dependent than developmental, a reason for poor food production levels. The other – and more immediate concern – is an evident lack of coordination in the implementation of policies by government agencies, one not seen in the social market economy where there is much emphasis on ensuring state capacity to create a 'responsive state' capable of instituting an effective public delivery system.

This is not the case in Malaysia. Currently, the agro-food sector is under the governance of the Ministry of Agriculture & Food Security (MAFI). The institutional framework for promoting the development of this sector is well laid out by MAFI, particularly through the Federal Agricultural Marketing Authority (FAMA). FAMA broadly offers three main services to SMEs in the agricultural sector, namely marketing, human resources, and product development.

There are, however, other public institutions, beyond the ambit of the MAFI, that play a key role in nurturing domestic enterprises, including agro-food industries.

A review of Malaysia's large public institutional structure would reveal an impressive architecture with a broad array of SME assistance programmes and mechanisms. This institutional architecture comprises ministries, statutory bodies, and development financial institutions (DFIs) that have linkages with SMEs operating in urban and rural areas, reaching all corners of the peninsula and the two Borneo states. For example, the Ministry of Rural Development has a range of statutory bodies such as KESEDAR, KETENGAH, and KEDA which aid the development of SMEs in rural areas, most of which function in the agriculture and fisheries sectors.

In the agro-food sector, for effective development of highly entrepreneurial firms, a financial-agricultural linkage is crucial. The government has long sponsored an array of programmes to assist small firms. The Credit Guarantee Corporation (CCC) helps SMEs lacking collateral to obtain loans. The SME Credit Bureau provides information to facilitate loan acquisition and a Micro Enterprise Fund offers financing facilities. Since SMEs, including those in the agro-food sector, lack internal R&D capacity and funding necessary to translate innovative ideas into concrete business projects, programmes are in place to deal with this issue. The role of DFIs such as the Agro Bank – and SME Bank – is to nurture SMEs in the agriculture sector. An assessment is required of these financial-agricultural linkages to understand why they have not been able to nurture thriving agro-food SMEs. Tekun Nasional, a funding-based agency under the Ministry of Entrepreneurial and Cooperative Development, has been identified under the Bantuan Prihatin 2020 stimulus package as a key institution to aid SMEs. Tekun's primary function is provide quick financing facilities to domestic enterprises, though it simultaneously functions as a strategic entrepreneur development partner. There appears to be no links between the agencies in these different ministries, or with FAMA, though they all serve to nurture the rise of SMEs, including those in the agro-based sector.

Another aspect of this institutional architecture, where government-SME linkages are a constituent component, is vendor supply ties between domestic small firms and large enterprises including multinational hypermarkets, created by public agencies. The government's longstanding Global Supplier Programme (GSP) has strived to link SMEs, particularly those producing food products in rural areas, to urban-based hypermarkets. Institutions such as SME Corporation, Matrade, and the Halal Development Corporation (HDC) have cooperated in programmes to expand local supplier sales, including into the export market through the global networks of multinational hypermarkets such as Tesco. The need to reinforce such SME-big business linkages are urgent in order to allow rural SMEs to secure access to major retail hypermarkets, a means also for them to generate revenue that can be channelled to R&D to improve production capacity. Such SME-large enterprise linkages

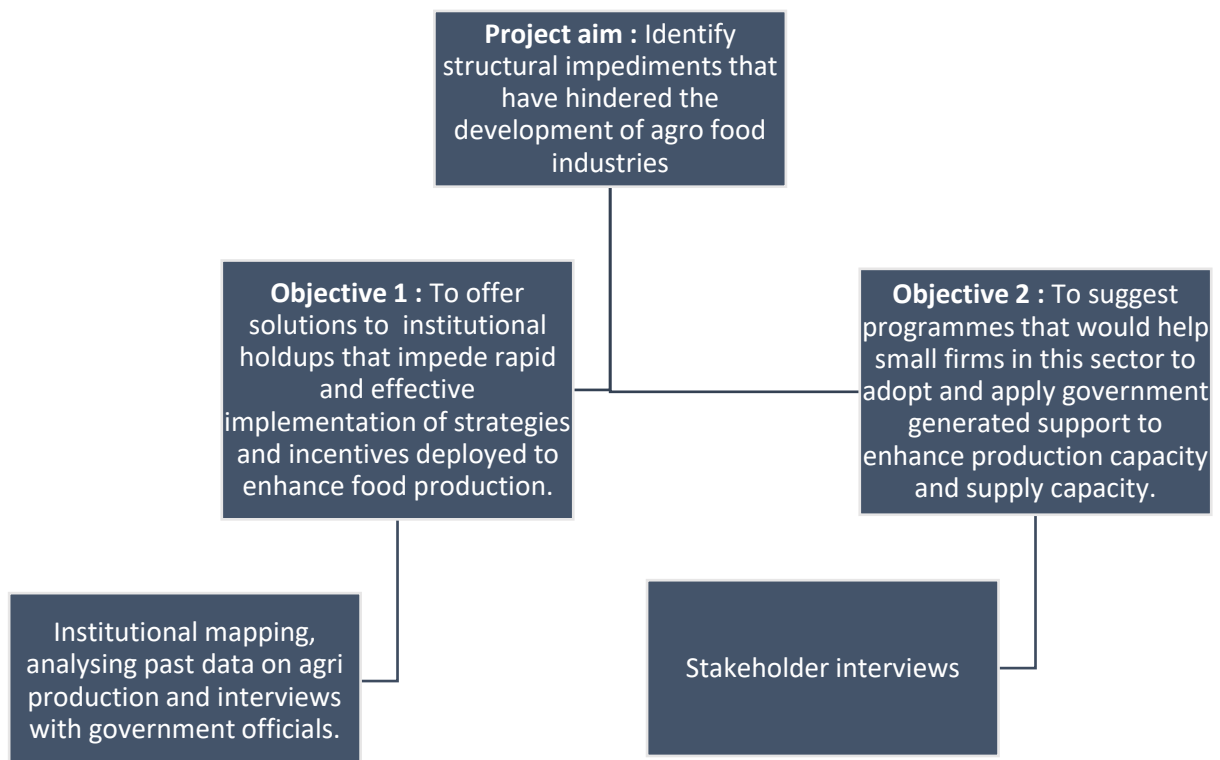
are imperative because the MAFI's attempts through FAMA to match farmers to trade, by conducting programmes such as Pasar Tani, appear to have been ineffective, seen so evidently in the state of agricultural marketing in Malaysia.

Given the severity of the Covid-19 crisis and the Ukraine-Russia war, Malaysia's implementation of its emergency response plan to ensure food security would require various ministries and their institutions being in complete tandem to coordinate public aid to agro-based SMEs, with particular focus on the producers, i.e., the farmers. Agencies such as MAFI's FAMA, along with the Ministry of Entrepreneurial and Cooperative Development's numerous statutory bodies, and funding institutions such as Tekun and the AgroBank, need to collaborate effectively to ensure that grassroots-level farmers are assisted to secure access to the variety of government assistance plans announced by the Prime Minister.

METHODOLOGY OF THE RESEARCH

To investigate the project, aim of identifying the structural impediments in the agro food industry, this research project uses a combination of qualitative and quantitative data from primary and secondary sources. The aim of the project was addressed under two research objectives. (Figure 2).

Figure 2 : Linking aim, objectives, and related activities

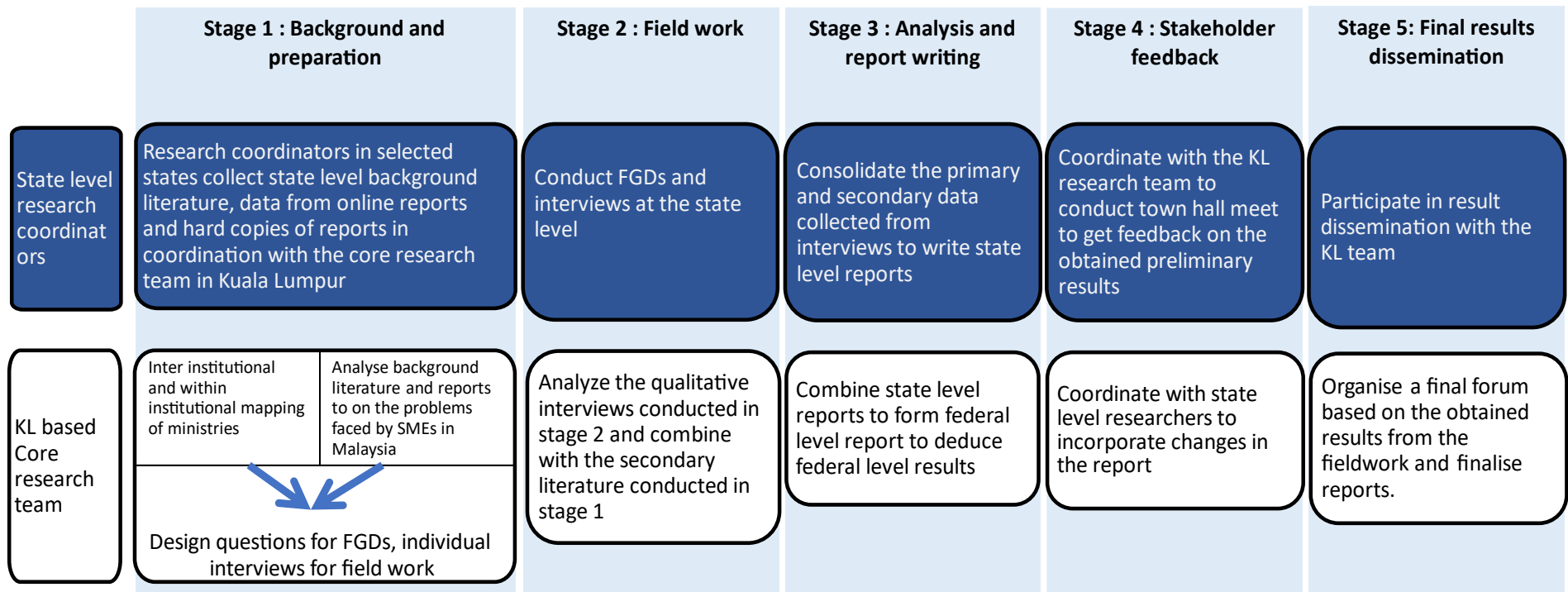


This focused on the Prime Minister’s Office (PMO), along with the Economic Affairs Ministry under PMO, the Ministry of Finance (MoF), the Ministry of Rural Development (MRD), the Ministry of Entrepreneurial and Cooperative Development (MECD), and the Ministry of Agriculture & Food Security (MAFI). Some preliminary work was done of some ministries, that is of PMO, MoF, MAFI, MRD, and MECD. Apart from a detailed mapping of the institutions under these ministries, a review was also done of MAFI’s institutional architecture at the state and federal level.

After this mapping was done, fieldwork in key areas in Kelantan, Terengganu, Sabah, and Sarawak were conducted to determine the impact of the public delivery system on SMEs. The focus of the fieldwork was primarily on rural and semi-rural areas, to identify the impediments encountered by SMEs in these locales in their attempt to increase production, market their products, and participate in supply chains.

The project was carried out simultaneously in these four states where primary and secondary data were collected. The research project followed five stages which included intermediate results feedback (Figure 3)

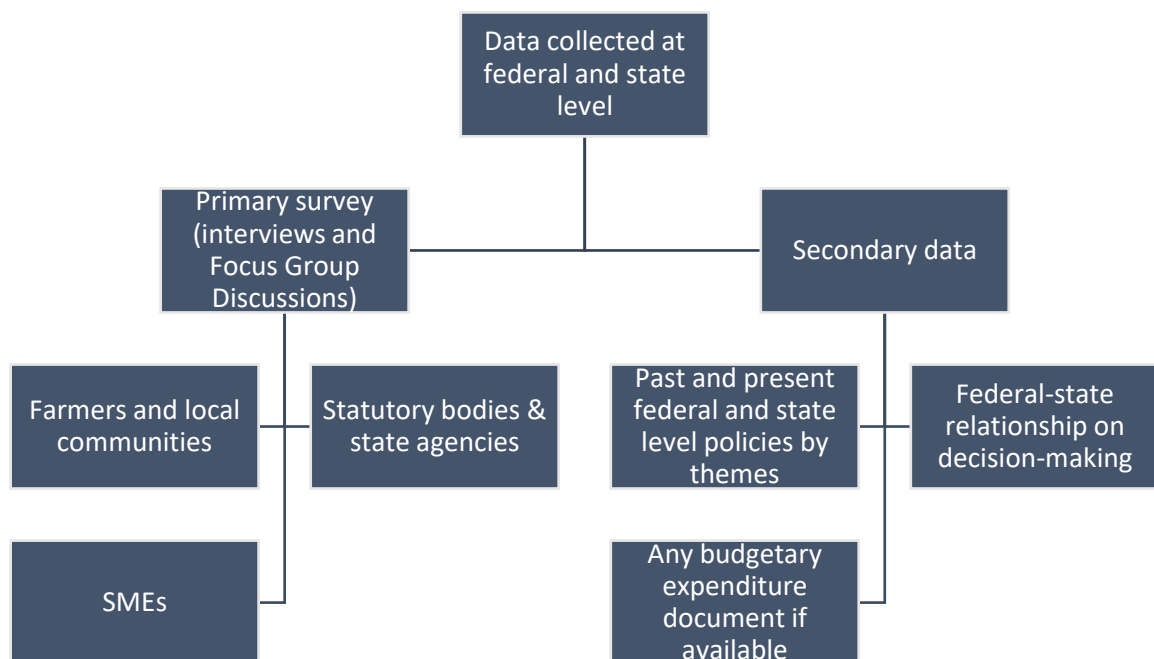
Figure 3 : Stages of the research project



Background research was conducted in these four states and at the federal level which included extensive review of literature on the problems faced by agro food sector SMEs and SMEs in general in Malaysia. In the initial months of the project, information collected was only secondary and in the form of existing literature and data from reports and journals. To assess how the public delivery system can be improved, a review of the government’s institutional architecture as a part of the background research was conducted. A mapping of few selected ministries was done.

The review of existing literature and the institutional architecture mapping formed the basis of formulating the interview questions used in the primary data collection. Therefore, scope of data collection included a multi layered approach as depicted in Figure 4.

Figure 4 : Multi-layered approach of data collection

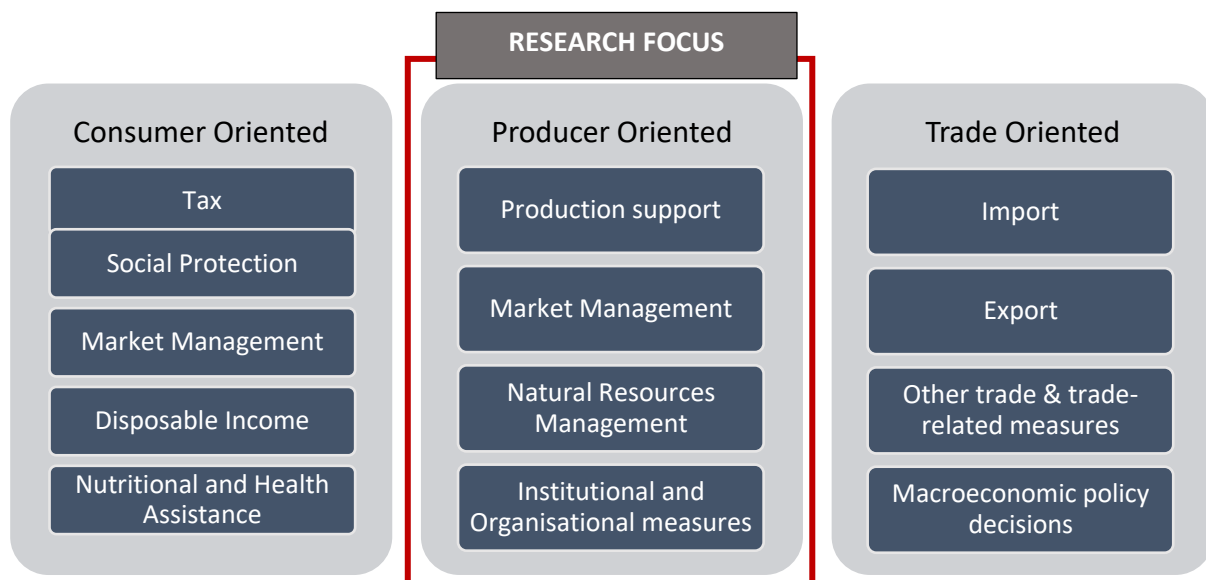


Once the data needed was identified, then the key stakeholders and the relevant documents were determined in the second layer of data collection. They key stakeholders identified were the agro-based SMEs, farmers and communities, and the government agencies.

The interview questions and the framework for the primary survey of farmers, SMEs, and government agencies were framed according to the Food and Agriculture Policy Decision Analysis (FAPDA) framework. FAPDA aims at promoting evidence-based decision making through an online platform. The framework classifies policies under three categories depending on the targeted area/group and the tag. The three groups are namely consumer, producer, and trade oriented (Figure 5). The consumer-oriented policy category includes

decisions that are aimed at improving food security and nutrition outcomes. The trade-oriented policies consider the policy decisions aimed at supporting consumers and/or producers using measures such as trade measures and macroeconomic policies. The producer-oriented category deals with policies related to actions such as public procurement from farmers, reinforcement of extension services, market support policies, natural resources management and regulations, and overarching institutional and organizational changes and settings etc. Since this project focuses on agricultural production, the sub sections under producer were taken. The sub section of producer-oriented category has four parts as illustrated in the figure below (Figure 5)

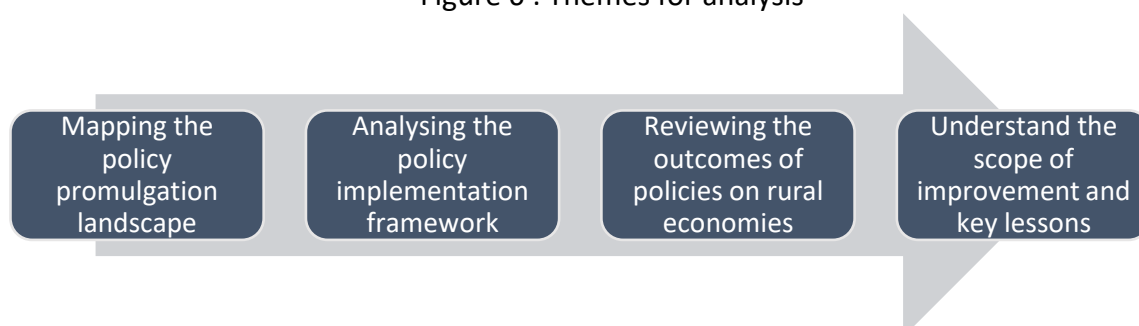
Figure 5 : FAPDA Policy Classification



Source : - Food and Agriculture Policy Decision Analysis, FAO

Under the producer-oriented policy analysis classification (Figure 5), questions were framed as per four themes (Figure 6).

Figure 6 : Themes for analysis



Under respective themes identified in Figure 6, each state collected primary and secondary data for analysis. These questions were based on FAO's framework on strengthening sector policies for better food security and nutrition results, as well as FAO's regional Technical Cooperation Programme (TCP) on creating enabling environments for nutrition-sensitive food and agriculture to address malnutrition. Details of questions under each theme can be found in Annexure 1.

Sample were selected according to the Industrial Classification of All Economic Activities (ISIC) rev 4. The agricultural sector is categorized under sector 1 : agriculture, forestry, and fishing. Under which we have three subcategories namely, Crop and animal production, hunting, and related service activities: Forestry and logging and Fishing and aquaculture. We focused only on the first subcategory under sector 1. Since this project also identifies SMEs to be major stakeholders therefore few segments of manufacturing sector were also included. More specifically – manufacture of food products as indicated below.

Sector 1: Agriculture

Division: Crop and animal production,
hunting and related activities

Groups: Growing of non-perennial
crops

Growing of perennial crops

Plant propagation

Mixed Farming

Support activities to agriculture and
post-harvest crops activities

Sector 2: Manufacturing

Division: Manufacture of food products

Groups: Processing and preserving of
meat

Processing and preserving of fish,
crustaceans and molluscs

Processing and preserving of fruits
and vegetables

Manufacture of vegetable and
animal oils and fats

Manufacture of dairy products

Manufacture of grain mill products,
starches and starch products

Manufacture of other food products

Manufacture of prepared animal
feeds

Focus Group Discussions (FGDs) were conducted in the four states under review. These FGDs included stakeholders from the SMEs, farmers, and the government agencies. Selected regions in Kelantan, Terengganu, Sabah and Sarawak were included in the analysis (Figure 7). The selection criteria for these four states and the regions within them were primarily geographical spread, i.e. covering both the peninsula and the two Borneo states. Our intention was also to include states which have established statutory bodies to tackle rural development issues such as KESEDAR (Kelantan) and KETENGAH (Terengganu).

Figure 7 : Sampled states of Malaysia



Areas selected within each state were based on mass production of agricultural commodities and areas which have a great potential for development but have not shown much progress. The selected for regions within states was done by our respective state collaborators.

The focus of the fieldwork was primarily on rural and semi-rural areas, with a focus on the impediments encountered by SMEs in these locales in their attempt to increase production, market their products, and participate in supply chains. The project uses an entirely qualitative approach, specifically using two study methods: the Focus Group Discussion (FGD) and a structured interview guided by a semi-structured interview. The sample selection of the individuals in each state followed the ISIC categories included in research framework. Under each ISIC sub-categories, sample recruitment took place on a random basis on the convenience of finding interview participants. The sample selection in each state according to the stakeholder category is given in Table 1.

Table 1 : Sample size in each selected state by category

	Kelantan	Terengganu	Sabah	Sarawak	Total
Farmers	15	10	12	33	70
SMEs	20	20	20	19	79
Agencies	10	15	7	10	42

PROJECT EVENTS

The project field work included trips to the fields in two stages. The field work was followed by an international online forum to disseminate final results and engage with public.

First stage of data collection

The first stage was the main data collection stage which included visits to the rural areas of Kelantan, Terengganu, Sabah, and Sarawak. Some of the data collection was completed online during the travel restrictions. This first stage was completed by the state-based collaborators between May 2021 to March 2022. The dates of data collection varied according to availability of stakeholders for the interviews and travel restrictions across Malaysia during COVID 19 lock down.

a. Terengganu

- a. **Field work date** : July and October 2021
- b. **Conducted by** : INSPEK head by Prof. Dr. Wan Ahmad Amir Zal Bin Wan Ismail
- c. **Participating sample areas** : Central Terengganu Development Authority (KETENGAH) region
- d. **Mode of data collection** : Online FGDs for the SMEs, individual field face to face interviews for the community/farmers and the agencies



b. Kelantan

- a. **Field work date** : July and October 2021
- b. **Conducted by** : INSPEK head by Prof. Dr. Wan Ahmad Amir Zal Bin Wan Ismail
- c. **Participating sample areas** : South Kelantan Development Authority (KESEDAR) region
- d. **Mode of data collection** : Online FGDs for the SMEs, individual field face to face interviews for the community/farmers and the agencies



c. Sabah

- a. **Field work date** : July 2021-April 2022
- b. **Conducted by** : UMS headed by Dr Firdausi Suffian
- c. **Participating sample areas** : 1) Kota Belud, 2) Tambunan and 3) Kundasang
- d. **Mode of data collection** : Individual face to face field interviews and online interviews for the community/farmers, SMEs and the agencies



d. Sarawak

- e. **Field work date** : July 2021-March 2022
- f. **Conducted by** : UNIMAS headed by Dr. Rosita Hamdan
- g. **Participating sample areas** : The northern region of Sarawak and the rural agricultural region of Sarawak are represented by Bario and Long Seridan. Kota Samarahan, Siburan, and Lundu are chosen for Southern Sarawak due to their locations in urban or sub-urban areas
- h. **Mode of data collection** : Individual and grouped face to face field interviews with the community/farmers, SMEs and the agencies



Second stage of data collection

After the data collection in the first stage, detailed thematic analysis was conducted based on the main themes discussed under methodology section. The detailed analysis was then presented back to the stakeholders for analysis and further feedback. This formed the second stage of data collection. The feedback was included in the final report submitted at the state level. The town hall meetings conducted included a collective meeting of the farmers, SMEs, and government level agencies. The meetings were conducted by Universiti Malaya physically in the respective locations. The second layer of data collection through townhalls was followed by individual field visits by the Universiti Malaya team.

1. Terengganu

The townhall meeting and visit in Terengganu was held on 7-9 September 2022. The townhall meeting conducted in KETENGAH College, Terengganu. About 30 participants attended the townhall meeting including SME's, agencies and farmers. The townhall meeting was followed by field visits to SMES and farms.



Town hall meeting



Chicken-based product factory



Pineapple farm



Mushroom farm



Honey-based farm and factory



2. Kelantan

The townhall meeting and visit to Kelantan was held on 10-12 September 2022. The townhall meeting conducted in Universiti Malaysia Kelantan (UMK), Cawangan Jeli, Kelantan. About 29 participants attended the townhall meeting including SME's, agencies and farmers.



Town hall meeting



Pineapple farm



Limau Chokun farm





Corn Farm



Durian fruit nursery



Visit and having discussion at KESEDAR Headquarters in Gua Musang, Kelantan

3. Sabah

The townhall meeting and field visits in Sabah was held on 19 – 21 August 2022. The townhall meeting conducted in community hall, Kampung Tambatuon, Kota Belud Sabah. A total of 22 participants attended the townhall meeting including farmers and representatives from SMEs and federal and state agencies.



Town hall meeting



Route to the paddy farm that located near to the village



Paddy keladi produced by the farmers from Kg. Tambatuon, Kota Belud, Sabah resident



Photo of site visit with collaborator and the head of Kg. Tambatuon

4. Sarawak

The townhall meeting in Sarawak placed from 21 – 23 August 2022. About 19 participants attended the townhall meeting including farmers and representatives from SMEs and federal and state agencies.



Town hall meeting



Multi-products farm



Paddy farm



International Online Forum

The online forum on *Rethinking the Institutional Architecture of Malaysia's Agriculture Sector* was held on 16 December 2022 at 2.45pm – 5.30pm. This final forum witnessed participants from across the globe, from countries such as India, Indonesia, Britain, and Germany. There were a total of 77 attendees and a total of 101 registrations for the event. The participants included a wide gamut of stakeholders and general public such as farmers, SMEs, government agencies, and academics participated in this forum. The forum was held online using MS teams and each state collaborator presented their findings.

The speakers in this forum are Dr. Deboshree Ghosh, Dr. Firdausi Suffian, Dr. Rosita Hamdan, Prof. Dr. Wan Ahmad Amir Zal Wan Ahmad, Dr. Nurulhuda Mohd. Satar, Dr. Edmund Terence Gomez. Dr. Diana Abdul Wahab served as an emcee at the event.



The introductory forum presentation was presented by Dr. Deboshree Ghosh and it covered the structure and methodology of the research project.



The first state collaborator who presented his findings is Dr. Firdausi Suffian who covers on Sabah state agriculture.

Rethinking of the Institutional Architecture of Malaysia's Agricultural Sector

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UNGKU AZIZ **KONRAD ADENAUER STIFTUNG**

SARAWAK

The next presenter was Dr. Rosita Hamdan, covering Sarawak state agriculture.

FORUM MALAYSIA'S PUBLIC INSTITUTIONAL ARCHITECTURE, RURAL AGRICULTURE - SMES AND FOOD SECURITY IN KELANTAN

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16 DECEMBER 2022 | **FRIDAY**
14:45-17:00

FORUM MALAYSIA'S PUBLIC INSTITUTIONAL ARCHITECTURE, RURAL AGRICULTURE - SMES AND FOOD SECURITY IN TERENGGANU

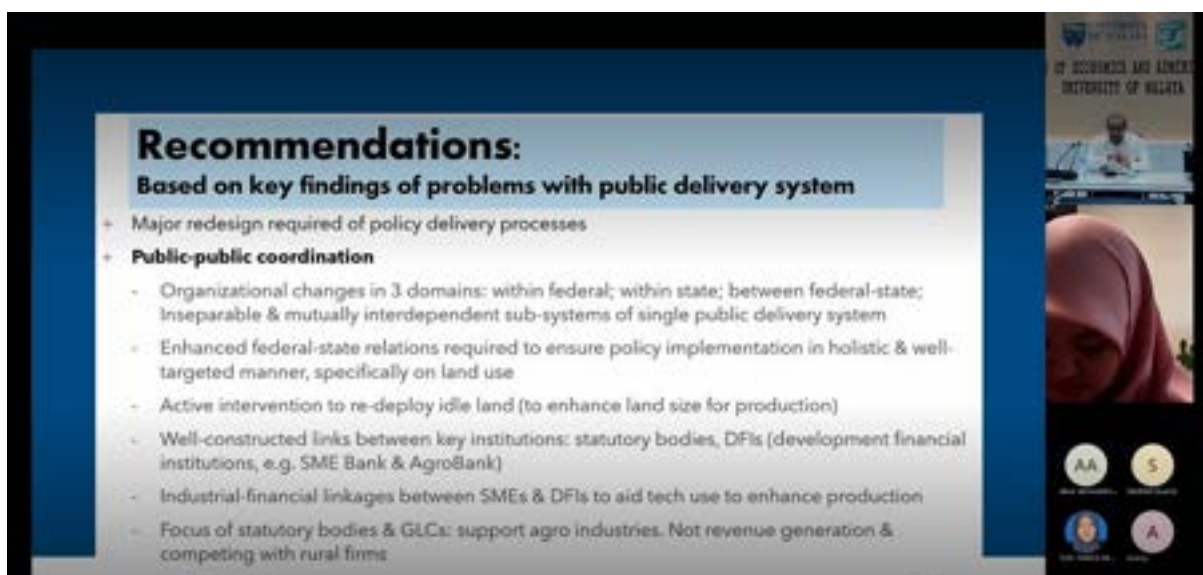
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Prof. Dr. Wan Ahmad Amir Zal Wan Ismail presented the Kelantan and Terengganu state report.



Dr. Nurulhuda concluded with the key findings from the second stage of the field work. This included the visit of the Universiti Malaya team to the four states. The main issues discussed by Dr. Nurul included land, marketing, and federal-state coordination.



The forum concluded with the presentation by Dr. Edmund Terence Gomez. He suggested recommendations based on key findings of problems with the public delivery system involving agro-based policies.

The presentations were followed by question-and-answer session from the general public and the stakeholders.



Question and answer session.

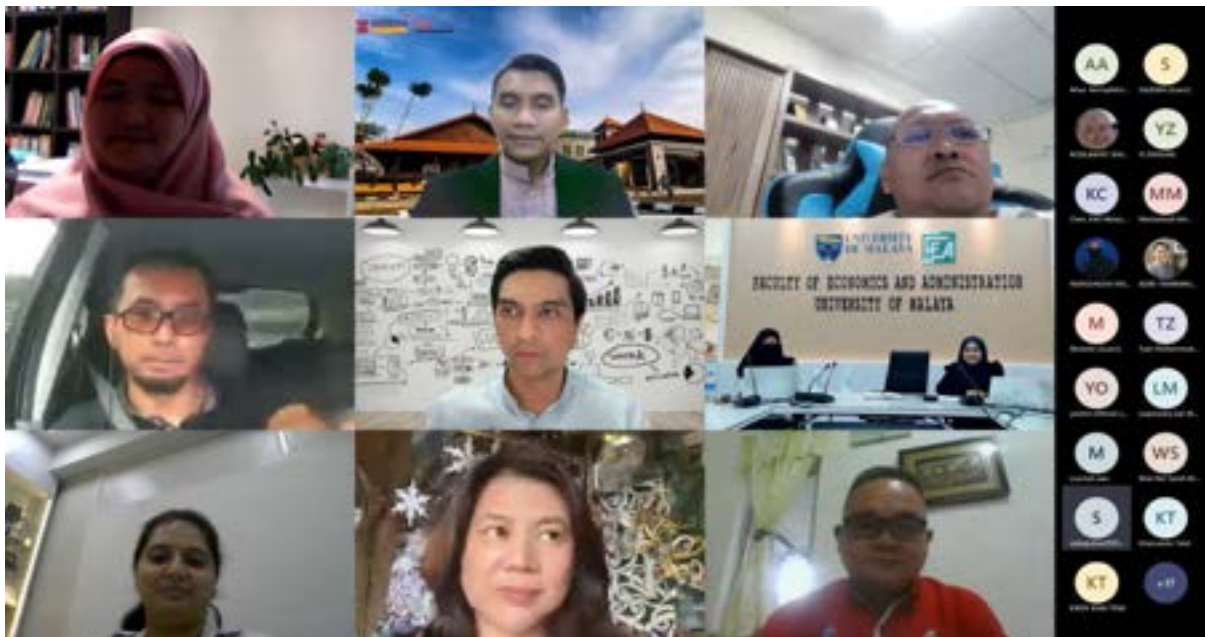


Photo session at the end of the forum.

For an overall analysis of the four states, see the attached Public Policy Brief which also provides the key findings of the project and more details about the reform recommendations. An in-depth review of the implementation of agro-based policies in these four states are provided below.

STATE LEVEL FINDINGS : TERENGANNU CHAPTER

Introduction

Malaysia's food security level is high by international standards. The country ranks 28th in the Global Food Security Index 2019, while it has achieved a high level of rice production. However, in spite of these factors, Malaysia's import of food has been consistently increasing, suggesting a serious problem with planning and implementation of policies related to the agriculture sector. In fact, according to the World Bank, Malaysia's productivity levels rank lowly compared to high-income countries.

Government intervention and investment in agriculture can be categorised into two areas. The first is investment in industrial crops such as palm oil and rubber and the other is in agro-food products such as fruits and vegetables. Malaysia's focus on agriculture can be traced to the 1970s, when the government, having adopted a highly interventionist approach to economy development, increased investments, implemented policies, and introduced institutional reforms to promote palm oil cultivation. Later, agro-food-based policies were actively promulgated.

For example, when the National Agro-Food Policy 2011-2020 (NAP) was instituted, its focus was on food security by enhancing productive capacity in the agro-food sector. However, a decade later, the improvements envisaged by the NAP have not been achieved, with the non-rice agricultural food sub-sector in particular requiring further attention due to low performance.

A fundamental reason for Malaysia's low food production levels is that the volume of entrepreneurial small- and medium-scale enterprises (SMEs) in the agriculture sector is still extremely minuscule. Only 1.1% of Malaysia's 1.176 million SMEs are in the agriculture sector, with no domestic firm emerging as a major public-listed enterprise. Domestic SMEs do not have a significant presence in global food supply chains, another indication that Malaysia has not been able to foster the rise of highly productive and competitive agro-based enterprises as envisioned in the NAP. With the unanticipated emergence of the Covid-19 global pandemic, which will deeply impair Malaysia's import of food products, coupled with the serious structural problems in the agro-food sector, the country may soon be confronted with an economic disruption that will have severe repercussions on producers as well as consumers. Meanwhile, domestic supply chain disruptions due to the pandemic have emerged in the crop and processed food clusters.

Methodology

Data collection was carried out in July and October 2021 involving the Central Terengganu Development Authority (KETENGAH) region. However, this study does not focus on assessing the agricultural ecosystem and food security in the KETENGAH region. Instead, it becomes a case study as the area has farmers and breeders consistently involved in farming and animal husbandry activities.

The study uses an entirely qualitative approach, specifically using two study methods: the Focus Group Discussion (FGD) method and a structured interview guided by a semi-structured interview. This study involved three (3) different groups of informants, namely 1) agencies, 2) SMEs and 3) communities. Each group is selected using a purposeful sampling with three (3) characteristics to choose from as a study informant.

The three characteristics are 1) Being in the KETENGAH region, 2) directly involved with agricultural or animal husbandry activities, and 3) assuming that they have exposure to policies related to agriculture, animal husbandry and food security. Here are the sample sizes by category of informants:

No.	Category	Sample size
1.	Agencies	10 agencies
2.	Small Medium Enterprises	20 persons
3.	Farmers and community	15 persons
Total		45

Agency informants and SMEs were interviewed using the FGD method online due to Covid-19 pandemic constraints. At the same time, community informants are interviewed face-to-face. The agencies are grouped into two (2) groups, while the SME groups are grouped into four (4) different. The data in each FGD and interview is recorded, then verbatim transcribed. The verbatim data is then entered and analyzed using NVivo software. The data is coordinated using a specific theme based on the semi-structured interview protocol.

Concerning ethics, this study collects data on informants without coercion and their involvement in knowledge and own willingness. Researchers informed that they could withdraw if they felt uncomfortable with the study. Their information is also protected and not disclosed to the audience.

Findings

- a. The results were categorised into four (4) dimensions, namely 1) mapping the policy promulgation landscape, 2) analysing the policy implementation framework, 3) reviewing the outcomes of policies on rural economies, and 4) analysing the scope of

improvement and critical lessons. Each dimension is divided into domains that exhibit in-depth and concrete research results.

Dimension 1: Mapping the policy promulgation landscape

a. Ministry or department oversees food security issues

Based on the study results, it was found that the participants were somewhat confused about who was responsible for the food security issue. This ambiguity is evident in the obscurity of the participation of the community and SME groups. However, this is clear on behalf of the agency, whether at the Federal or state level. For this group, it is clear that the agriculture ministry is the party responsible for assessing, monitoring and subsequently planning issues related to food security.

On the other hand, the SME group only makes a guess and indeterminately replaces the issue of food security with MOE. Similarly, community groups identify the keyword 'agriculture' to be associated with MOE. This obscurity occurs due to five (5) factors, namely:

- I. They lack information related to food security. Often they use only perceptual arguments.
- II. Misunderstanding of what food security means. Some in the sector, especially among SMEs and the community, misunderstand the true meaning of food security. For example, food security is related to food poisoning.
- III. Information does not reach them because their focus is on producing products only. The products they make are intended to earn income for survival.
- IV. Poor interaction between SMEs, communities, and food security-related agencies. Usually, agencies only share the potential or opportunities of agricultural projects they can venture into. They do not detail the source of the initiative of the project.
- V. SMEs or farmers do not care about food security for various reasons. Either it is unimportant for them, or they only focus on activities that can generate their income only.

Nevertheless, the SME group and the community are related to the issue of food security. They understand the country is faced with the insufficiency of staple foods. They not only look at the availability of specific products but also at the aspects of services to produce such food as halal food service and food quality.

"From my observations and readings, indeed, the food in our country is not enough. For example, finding even a cow slaughterer in the districts is difficult. So even the food supply is not enough, forcing it to ask for help from foreign countries. Even in our area today, whereas it can be said that it is a rich area of cattle farming, that is still not enough."

b. Policies related to food security especially to increase a production of staple foods (Federal and State)

The agency is aware that there is a particular policy for food security, the National Agrofood Policy (2011-2020), aimed at guaranteeing safe food supplies to the people. However, the agency recognizes that the federal government is drafting a policy to replace the policy, which ended in 2020, the National Agrofood Policy 2021-2030 (NAP 2.0)¹.

From a farming perspective, the agency is aware that the federal and state governments are mindful of the importance of the food security issue. In particular, their actions are controlled and performed based on the feed act 2009. This act is about to establish the Feed Board, to regulate feed quality by controlling the importation, manufacture, sale and use of feed and feed additives to ensure that meal satisfies the nutritional requirement of animals, is not harmful to animals and is not contaminated so that animals and animal products are safe for human consumption and another usage, and other matters incidental to that.

“We’ve done many activities and production focusing on food safety. We have the Animal Feed Act, the element of disease control, and the Slaughter Act, which means from farm to place of sale, which is indeed under the supervision of the department. We have also monitored the use of antibiotics against livestock”.

The community groups know it is a shared responsibility between the federal and state governments to realize this. This includes that at the Terengganu state level, they are responsible for providing provisions to promote the adequacy of agricultural and animal husbandry-based foodstuffs.

At the community level, this translates into encouraging the community to engage in various courses such as animal husbandry and agriculture. The group said the courses were related to livestock and sensational farming. It's not about fundamental food security issues or staple foods like rice and other foods. They know the government through its planning department. Yet there are times when they find it difficult to understand. On the other hand, community groups are aware that the government has always focused more on really needed food or staple foods. There should be reduced reliance on imports, including vegetable products.

The state government focuses more on food crops such as vegetables. This is evident through the observation in the mass media (Facebook) of the agriculture department, which focuses on food crops such as cucumbers, eggplants, chillies and so on.

“The state government focuses more on food crops such as vegetables. This is evident based on my observation through the agriculture department’s mass media (Facebook). Which is (they) focuses on food crops such as cucumbers, eggplants, chillies and so on”.

¹ To date this study was carried out, this policy had not been announced to the public yet.

But at the federal level, food security-related policies are translated through actions by specific departments that work routinely with state governments. In terms of food production, it is found that the agency knows the source of food security used in Malaysia, especially in Terengganu. As for involvement in research, agencies are aware that they will refer to the Food Act, specifically the Food Act 1983 and the Food Regulations 1985. However, they agree the act is long-standing and needs improvement, including assessing current issues at home and abroad.

At the same time, food security-related policies should be looked at in conjunction with policies available to other ministries, including the Ministry of Health (MoH). The joint research will enable the issue of food security to be seen from a broader aspect, including in terms of producing a value-added process involving four food-related fundamentals, namely:

- I. Makanan Selamat Tanggungjawab Industri (MeSTI): A minimum responsibility should be obtained from Malaysian entrepreneurs.
- II. Halal label: Same as MeSTI practice, but more emphasis on halal and good products.
- III. Good Manufacturing Practice (GMP): A system for ensuring that products are consistently produced and controlled according to quality standards.
- IV. Hazard Analysis Critical Control Point (HACCP): Management system in which food safety is addressed through specific analysis.

There are SMEs and communities that dispute the capabilities of the food security policy. They think that the policy spirit is a bit weak. They do not know what food security policies are being implemented by state or federal agencies.

“The spirit in the policy is weak. I will give you a few examples of Terengganu not having the right blueprint for the direction of agriculture in Terengganu. We don’t have a clear policy. This opens the question of channelling aid only and food security implementation. Blueprints can come with policy implementation, and when we see the policy isn’t there, we don’t have the blueprint.”

c. Overlapping federal and state policies in terms of policy objectives and target groups

The issue of overlapping of food security was found to occur in the study area, either from the objective or participants. Objective duplication is seen as a positive form as it allows the focus to be given jointly between the state and federal governments in addressing the issue of food security.

As asserted by ECERDC representatives, in the event of overlap, the state and federal governments have a mutual agreement and try to complement each other. It is the thing that facilitates the work in the field. This representative of the ECEDC implies that if the opposite situation occurs, the state and federal governments have different objectives. Many joint

actions cannot be carried out. It will lead to more activities that waste time and provision solely to achieve other goals. Only the implementation is done on a different scale, whether small-scale or large.

“So basically we focus on the holding company based, we give it infrastructure, and they’re going to developing on their own, and we’re monitoring it monthly. We also involve with other agencies, (such as) the Department of Agriculture (DOE) and the Malaysian Agricultural Research and Development Institute (MARDI). For example, in Muazzam, we (ECERDC and MARDI) are working together, complement each other to achieve the same objective”.

Even the agency believes that having the same objective is vital to achieving greater heights in food security. An example of a successful project like Farm Fresh is the impact of a multi-party collaboration with a common objective. All agents agree that food security-related movements should have the same target and be monitored by the specialized ministry, the Ministry of Agriculture and Food Industries (MAFI). Then it is followed by other agencies, either at the state or federal level, including ECERDC, KETENGAH and others.

Although it has the same objectives, each party has different niches according to their respective agencies. The agency believes it can complete other processes in the country's food security mission. For example, some agencies focus on crop or livestock-based seed providers, including the basic materials of the sector. However, other agencies do the job for added value, such as packaging. The same goes for marketing and other agencies that play a role, such as the Federal Agricultural Marketing Authority (FAMA).

For KETENGAH, the term stacked is inaccurate. On the other hand, if it has the same focus and objectives, a food security project will be much more impactful and effective. This action is always practised by KETENGAH, particularly by working with the district office to implement a project. Similarly, with the view of the district office, they are more comfortable with having the same objectives, and each agency will be able to work harmoniously without prejudice.

“So far, there has been no overlap. (For instance) This swiftlet nest company is under the KETENGAH and the district office, (involving) two (different) departments, which is beneficial. So, it’s natural to get help from KETENGAH only, and if it’s from this other department, they’ll visit where I look at the bird’s nest farming, and they share their experiences and methods of working on it. With this, I once got help from KETENGAH to enlarge the swiftlet nest building”.

From a community point of view, they are very comfortable when state and federal governments have the same objectives. Many things facilitate their food security work, especially when they face problems such as needing capital, monitoring and advice.

However, two (2) other issues arise between the old approach and the same participants. The point of using the same method is that a handful of officials follow without giving creative input to food security policymakers. They do not speak much out but rather accept the

technique. This is because they are concerned that their views are incompatible or comfortable with the existing situation.

“Yes. They use the same method. Some officers in an agency don’t dare to change policy. Otherwise, they won’t get a promotion... The current policy system needs to be changed.”

The second issue is the overlapping of participants. If from the point of view of the participants for them, it is a good thing because they will benefit from different agencies, whether state or federal government agencies. Community groups, namely, confess this:

“(Project) me under a project from the federation. I can get (help) from both () farming and equipment. From the state, there is also help such as grass seeds, where we can plant grass for our farming and grow grass plantings to make food, cooper machines, (and) barrels... We can get help from the federation, whether we know it or not. Most importantly, the effort to get it is not easy.”

The overlap of participants occurred by four (4) factors, among which were 1) their eligibility, 2) database issues, 3) participant seriousness, and 4) relationships with the agency. Concerning eligibility, not all communities are eligible for assistance or facilities provided. They must meet specific requirements such as group implementation, experience, duration of existing projects, etc.

The second factor is the absence of the latest database by the relevant agencies. Related agencies find it challenging to acquire qualified applicants, except within their reach alone. Their space means that they only know applicants who regularly meet with them. Such frequency can build good relations between applicants and agency representatives.

The lack of this overlap results in only specific individuals getting assistance or services the agency provides. Other individuals, meanwhile, need to be self-employed and will begin to give a wrong perception of the government’s efforts on the issue of food security.

“(the state agency) does want to help farmers... (But) those aids (only given) after a year of operation. For those who have nothing (just to start) they will not receive (help)”.

d. The state-level policy objectives challenges

In Terengganu, a unique body serves as a medium to discuss food security issues, namely the Terengganu State Executive Council (TSEC). Membership in TSEC is diverse and chaired by the Agriculture Exco. Among their main tasks is to decide on the policy to use the state of Terengganu. It includes efforts to form policies that can have implications for the well-being of the people, such as fishermen, farmers and breeders. The TSEC also involves in solving undeveloped idle lands. This committee is set up to achieve two objectives, namely, to help farmers and solve food security issues.

Besides that, there is also a subsidiary of the state of Terengganu that focuses on food security issues, specifically related to agriculture, namely Terengganu Agrotech Development Corporation Sdn Bhd (TADC). His role is to increase production and ensure the safety of food.

The TADC carry on a state policy to help on the bottom line to help farmers. However, they have a problem in terms of production. They acknowledge that they got high demand on a local product like melons. But they have restraints and are unable to meet market demand. As a short-term solution, they are trying to implement contract farming, and provide incentives to melon farming entrepreneurs. By this strategy, the TADC believe that the capable to meet the market demand and help entrepreneurs increase more income.

As for KETENGAH, they also focus on the issue of food security directly and indirectly. Although sometimes they are aware of the overlap between the state and federal governments on food security, they will try to resolve this by coordinating the movement between agencies. The aim is to ensure that the agency's actions can positively impact the community.

“At KETENGAH level, there is no overlap, and if we can identify duplication, we will propose that coordination at the level of the agencies. For the sake of benefits of the farmers or livestock”.

But often, agencies have trouble finding suitable participants to get their agency's services. This includes an overlap of the same applicant or participant. If this happens, they try to discuss it with agencies, such as the Department of Veterinary Services (JPV), Department of Fisheries Malaysia (JPM) and state government agencies.

e. The complementary elements in state policies

The state and federal governments have introduced many strategies and initiatives to implement food security, including the Malaysian Good Agricultural Practices Scheme (myGAP). Summary of myGAP is a certification scheme drafted by the Department of Agriculture in 2002 to give recognition to farms that practice APB with an environmentally friendly concept, safeguarding the welfare and safety of workers to produce quality, safe and suitable consumption products. myGAP is a rebranding to replace the Malaysian Good Farm Practices Scheme (SALM).

myGAP was developed following the Malaysian Standard MS 1784:2005 Crop Commodities-Good Agricultural Practice (GAP). myGAP has two objectives: to be an aid tool in the Department of Agriculture's Agricultural Techno Development System (SPTP) and to be the practice of entrepreneurs in carrying out activities on the farm to produce fresh produce that is of higher quality and safe to eat.

Although myGAP is an initiative used by the federal government, myGAP is one of the main encouraging tools in producing agriculture for the food security in Terengganu. In fact, farmers are encouraged to register and have a certificate as myGAP farmers to obtain a

special incentive, which is FAMA will pay RM0.10 for their products. myGAP also issued a special certification to work on bio-security aspect in systematic management system.

In addition, federal government agencies, particularly FAMA, will purchase farmers' products with a specific price guarantee. The goal is to ensure that farmers keep producing agricultural products and get a fair price.

““We have a new initiative which is an agreement in the agreement. For example, when the watermelon price falls by RM0.40, FAMA will still buy at the original price of RM0.80. The current watermelon price is RM2.00 per kilo, meaning watermelon farmers are in good condition. This agreement is not subject to watermelons nor other produce such as pumpkins, duku, or seasonal fruits”.

This incentive is welcomed by state government-linked agencies, through TADC. Among the other approaches, TADC is trying to create entrepreneurs among the farmers known as 'Agripreneur". In the early stages, TADC gives some support, which will then be monitored. Once TADC confirms that the agripreneur is independent, the TADC will bring them to another step: continue watching to see the development and increase in production.

On behalf of FELDA, at the state level, they discussed a lot with HQ to implement the appropriate project. At the same time, they also adapt to existing policies at the state level. Federal government agencies are also actively conducting technology-related studies for consumers and farmers in terms of research to support food security. Typically, the technology produced is for use 1) for public use and 2) technology for commercialization. And 85% of the technology built for farmers includes advisory, course and training technology.

The federal government also provides enormous innovation finance to universities through certain agencies. However, these efforts have no impact because they do not produce valuable products or technologies. Hence, the SME group has questioned the extent to which the research can be used for farmers, including the research produced by the university.

“The university didn't even go down to the field. Therefore, policies should be established and not based on innovation. Universities should go down to the bottom field (society) more aggressively. This shows that there are complementary and properly equipped skills and impactful skills.”

From the community's perspective, they only look at food security from the most basic and related aspects of production resources. For them, a sign of the agency's determination to come together in food security translates into their efforts to provide capital assistance, production resources, equipment and monitor projects. Still, it is too tied to KPIs and across agencies.

So, the results found that not many elements can help food security policy at the state level except only depending on strategies, initiatives and incentives and research from the federal

government. If anything, it is left to the state government subsidiary to be better organized to help with the issue of food security at the state level.

f. The understanding of recipient on the jurisdiction of each agency

The farmers are divided into two groups to understand the agency's role and focus on food security. The first group understands each agency's different parts and focus of each agency. The second group they are not clear and gives only perception-based interpretations.

Concerning the first group, they know that each agency does not just have a different focus, scope and functions. They even know each agency has its Key Performance Indicators (KPIs). By understanding this situation, they are not inclined to blame government agencies if the agency cannot meet their needs. However, farmers see the KPIs as making many agencies less competent.

"I believe every agency has its own KPI, but their KPIs have flaws or incompleteness. I do not deny that government agencies provide a lot of financial aid but only about funding. But they did not target how much revenue should be released based on the amount of fund provided."

The meaning of incompetence is that they interpret that agencies work to meet their KPIs only. If their KPIs have been met, certain agencies are beginning to slow down their services. As for the farmers. Their work culture is different. They're not tied to KPIs rigidly. They strive to produce as long as possible and want income within that target. This situation often provokes an uncomfortable relationship between the farmer and the agency.

However, the group can tell a straightforward story in the event of an inter-agency overlap on food security issues. That knowledge will help them in many aspects, including talking to the proper agencies to solve problems or fill their needs. At the same time, it can convey accurate information to relevant agencies to improve agency services.

As for the farmers' groups, they are not transparent with the role and focus of the relevant agencies. All government-linked agencies should focus on anything related to their farming or animal husbandry efforts. This knowledge has a difficult impression on them, particularly when making references and asking for appropriate guidance and help. More unfortunate, they generalize that government agencies are incompetent and unprepared to help them.

On the other hand, if they get any necessary assistance, they also assume that it is the assistance that any agency should provide regardless of the agency's background. At the same time, they find it challenging to share whether or not there is an overlap between agencies regarding food security issues.

g. The approach undertaken in formulating policies related to agricultural development and food security

The results found two methods commonly used to formulate food security policies, namely the top-down and partnership approach. The top-down approach refers to authorities or agencies using their resources to make decisions and guide their partners to a minimum.

Among the examples of the process shared are from KETENGAH. They usually form a policy with the same framework, which is presented to the board of KETENGAH. Board members are represented by the state government, professionals, and federal agencies such as the Economic Planning Unit, Prime Minister's Department (EPU, PMO), Ministry of Rural Development (KPLB) and Ministry of Finance (MoF). THE KETENGAH still refers to what the target group wants in a particular context.

While the TADC also uses the same approach, which TADC is to draft policies for the state level. But they still have a contact with and stakeholder, especially a farmer. The TADC believe that the stakeholders will accept the policy is implemented bilateral communication.

At the MARDI level, for example, especially regarding research, they believe they have experts in related fields. Hence, they will discuss each other to plan. And this method is always used, but to be included in the federal government's grand plan, the Malaysian plan.

As for the community, they think that food security policies mostly use a purely top-down approach. If referencing the community, though, is very minimal, especially regarding the 'high standards' of a policy that does not seem to require input from community groups, including farmers and breeders. For SMEs, they build the impression that their views are not too important and do not need to be consulted.

However, they still think that it is possible that they will not be invited, and there may be other SMEs asked to build a food security policy jointly. At the same time, they call for their views to be seriously heard. They believe that the one who is knowledgeable about the state of food security is themselves.

"I had proposed the same issue to the minister of agriculture (Datuk Sabri Chik) when manufacturers, buying raw materials, i.e., grain corn at a low price compared to the production costs incurred by corn growers in Malaysia, were high. This is very detrimental to them. In conclusion, the government should set up a special body to study and monitor the cost of production of a product in Malaysia, such as feed for livestock, milk, etc. So, they should hear our voice".

h. Main objectives of federal or state initiatives related to agriculture or food security

At the agency level, either the federal or state level, it is clear to achieve the fundamental objective of food security, which is the availability and accessibility of food supply within the country. They prioritise that the food supply is adequate, and, at the same time, it is also a

source of income for the people, especially the rural communities. This effort is in line with the rural position where there is still plenty of room for agriculture and animal husbandry projects. At the same time, it can generate income through the entrepreneurial efforts of farmers and animal husbandry, producing agricultural-based chain employment opportunities.

“We also emphasize entrepreneurs who are increasing their income to agripreneurs. For example, the price of watermelon, we know the market price, so we encourage agripreneurs to diversify crops and take advantage when the market price is good and increase income.”

The agency also believes that through food security, it can control production and production resources to protect the country from the problem of food security issues. This includes encouraging farmers to be involved in the national agenda. At the state agency level, they see the same thing: to protect the country from food security issues and, at the same time, generate income for farmers and breeders. The TADC they are trying to diversify production resources.

It was found that the agency is focused on increasing production to reduce reliance on external resources. For them, it is not the profit needed, but rather the food source for the country is sufficient that is the priority. However, in the same mas, they want the profits to be returned to local entrepreneurs. Including if they are in the poor category, their involvement in food security can get them out of poverty.

“For example, we do not have enough commodity (for food security) in Terengganu. So, we need resources from the outside. But (unfortunately), that commodity isn’t suitable for us... For example, there is a difference in the price of local mustard and mustard from Thailand. Sometimes these users are more about the margins. If you want to be cheap, take that from Thailand. If it’s local, it’s a little margin.”

The agency is also trying to ensure adequate production in the market. For example, is the issue of the supply of broilers, the issue of food security needs to concentrate sufficient output at a reasonable price. At the same time, they are trying to diversify the resources further, as stated by the TADC earlier.

On the other hand, the agency also attaches importance to implementing food security and generating income for the country. Not only is it a contribution to the country's gross domestic product (GDP), but it can be an essential source of its growth and is no longer viewed as an unproductive country.

“The desire when making policy at the planning level is good. Plan to produce a variety of food in the country and make agricultural economic resources the main economic source of the country. Even the government wants to make farmers a hefty source of income and no longer as a third-class source of economy.”

The government's focus is also on the adequacy of the food itself, for which they consider the self-Sufficiency Ratio (SSR) element. It also finds the accessibility elements of food in terms of price, including price control in the market.

On the other hand, the agency acknowledges that sometimes the government loses focus on food security. Losing focus means they are not clear on what to achieve, whether it is supply adequacy, profit generation or according to market needs. This situation causes agencies sometimes to find it challenging to implement them at the community level.

In terms of add-ons to food security, the agency sees that Malaysia is trying to improve the food security element in terms of technology. But acknowledging the technology for food security is still far away. Moreover, the previous policy overemphasized the industrial element over the agricultural element, causing us to rely too much on the manufacturing industry. And cause the farm sector, including the country's food security, to weaken.

“As in Malaysia, hydroponics is considered a new technology in agriculture whereas in other countries it has long been using the technology. Our country is far behind other countries because Malaysia often considers this agricultural sector insignificant compared to industrial sectors such as factories. Until now, our country is lagging in developing the agricultural industry, including guarantees to food security.”

As for SMEs, it is unclear what precisely the objectives are to achieve by the government through food security. They also raise the issue of the direction of food security which seems to fail to be understood by the community, especially SMEs and farmers. It's worse when they think the effort is only politically motivated to such an extent that there is a failed white elephant project. Even many other projects in food security have failed, although the capital released is significant. SMEs also see agencies as more 'try and error' in implementing food security.

“For example, in Terengganu itself, they have many projects that are just "*hangat-hangat tahi ayam*" (not taken seriously). For example, they did the Kaprima Goat project, said to have run out of millions, and eventually failed and remained silent.”

From a community point of view, they believe that in food security, the government is more about wanting every effort that farmers make to bring results. It's not just done for a certain period. Even for the community, the agency is giving a lot of impetus to the efforts that are being done.

Even in terms of openness of action, it is a good thing for the community because the agency only encourages what it can do. But from another point of view, it is unclear what the agency's objective of encouragement is. Is it in line with the food security goals, or is their agricultural project originally going well? The community also assumes that the government wants to create jobs instead of focusing too much on the issue of food security.

If the objective of food security, the government is to increase agricultural production in the market without relying too much on import sources. So, the community questioned the stability of the farming resource market. This is because the market is unstable for them, and sometimes they are forced to sell themselves with minimal profit.

However, SMEs and the community interpret the government through large companies such as government-linked corporation (GLC) to focus more on profit making than food security issues. They exemplify a large concentration of oil palm plantations, which is not for food security for SMEs and the community. They noted that the government focuses on non-critical matters for food security, such as cooking oil, but food security-related products are heavily imported from outside.

"Nowadays, food safety depends on the individuals who produce food by breeding and planting. In the agricultural industry, Malaysia produces a lot of oil palm. So, this industry is growing. But in terms of foodstuffs, we import a lot from the outside. My view is, we need to change this policy. (For instance) Those large GLCs must spend 5% of their allocation or land to be involved in agriculture or livestock."

Dimension 2: Analysing the policy implementation framework

a. The extent of federal agriculture policies implemented in the state

At the agency level, it is clear to distinguish between food security policies at the federal and state levels. Therefore, assessing the food security policy's success is much easier. For example, FELDA, which is a federal agency, they are proud of the success of its policy of implementing the food security policy in their settlers.

They are aware that their approach is practical with the 3-in-1 concept, which is to open up land for large scales in groups, reduce poverty rates and produce revenue for the country, including for food security.

But the SME group practices the success of food security policies at the state level. For some SMEs, all are the same either at the federal or state level. The support, monitoring, and officers on the ground are of great importance to them.

"My question is, where the support from the state and federal governments is? It looks like they have already closed this project. This is my comment on execution. Large-scale project of goat farming, why has that project not continued? Even those involved have been disappointed and unwilling to continue. So, it doesn't see what the government is planning."

The SME group also questioned the implementation of the food security project, which is said to be slow to implement. It is unclear what caused the problem, whether it was due to

bureaucratic problems or limited budgets or the agency's difficulty making decisions. If the policy on food security is clear for SMEs, then the agency should only implement it at the state or federal level.

SMEs see federal agencies more aggressively implementing food security policies, particularly KETENGAH. In their opinion, KETENGAH has assisted entrepreneurs from various sectors, including helping farmers in the KETENGAH region. Another example of an SME is KETENGAH's partnership with the Malaysian Pepper Board (LLM), which shows seriousness in managing the black pepper plant.

Some SMEs dispute the ability of state agencies to perform their duties in preserving food security at the implementation stage. They questioned where the relevant agencies were in promoting, implementing, and monitoring food security-related projects. They compare with federal agencies that are better at implementing food security.

“For me, KETENGAH is the federal government is better. I’ve never known, or any state officer has never approached me. My project is aid come from the federal government. I was very close to the duty officers from the federal. They came to see us and ask about the project progress.”

b. An agency has the right capacity to ensure policy implementation is successful

From the agency's point of view, agencies acknowledge that they have constraints to ensure the successful implementation of food security policies. There are seven (7) main reasons, namely 1) lack of workforce, 2) Area of responsibility, 3) competition of imported products, 4) Cooperation, seriousness and capability of farmers or breeders, 5) infrastructure facilities, 6) research and development (R&D), and 7) the capabilities of officers outside the field.

In connection with the lack of workforce, certain agencies have a limited number of officers to maintain a large area. The lack of officer power left many foods security projects unworkable as planned. Many of the projects implemented cannot be fully monitored.

“We have constraints in terms of implementation from the agency level to the community. With our current capacity being our constraint to deliver to the community, we are striving to deliver at least 85% of our planning. During my 20 years of service here, we have experienced inadequate staff and transport constraints at our level.”

The second constraint is a limited area. Representatives from the KETENGAH agency acknowledge a lot of potential that can be explored and implemented in food security projects within their territory. However, more are outside their region. Projects within their area are already quite saturated with existing projects, such as palm plantations. If anything,

the side projects are not so big an impact. Thus, the real potential of KETENGAH cannot be highlighted to implement food security-related projects.

The third constraint is related to competition with imported products. Although it is not directly related to the ability of agency officials to implement food security, the influx of cheaper imported products has made local products less in demand. This has implications for the income of local farmers. The subsequent effect gives the impression that agency officials are incapable and there is no capacity to manage food security issues in the local well. Although agency officials desire to implement food security plans, the constraints of import competition have led them to think about better strategies and their ability to implement them.

The fourth constraint is that officials face issues of cooperation, seriousness and capabilities of local farmers or breeders. They are aware that local farmers and breeders have many problems that make them unable to cooperate with agency officials fully. The relationship between them is sometimes more of an interest association to obtain the project's material.

They understand most farmers cannot afford to buy specific equipment and are sometimes faced with the ability to get round capital. Therefore, among the farmers' targets is to get help from the officers. However, if the officers could not fully help, their relationship with the farmers became more strained.

The fifth constraint is the ability of infrastructure facilities that leave officials unable to function fully. The facilities available within the food security project area are limited. This renders the real potential of the locality unworkable at total capacity.

“The farming industry in Terengganu is quite backwards and lacks progress. In terms of infrastructure and development. Farmers may have constraints such as capital problems, unsuitable areas, and clashing agricultural crops. Therefore, issues like this need to be looked at and reviewed.”

The agency also admits they are lacking in terms of research and development (R&D). They recognise that there are relevant results of studies obtained from other agencies and including universities. However, not all the study's results are suitable for use in their area. This situation has caused many foods security-related projects to appear to be 'try and error'.

The last constraint that causes it to look as if agency officials don't have the capacity is the ability of officers outside their field. New projects are being worked on that are beyond the expertise of officers. So, they only know better from the theoretical aspect and realise not much can help. However, from other parts of the administration, they can help farmers to implement food security.

From the point of view of SMEs, they see the agencies as less trusting them to determine and implement agricultural projects. One reason is that they do not have the appropriate technology to compete with more prominent industry players. As it relates to agencies, SME state agencies are not so serious about helping them. Among the reasons are the financial or budget constraints faced by the agency. This makes agencies seem incapable of performing their duties.

“Our current agencies seem to have no confidence in the people... When it comes to vegetables, many will focus on Cameroon Highland. Why not in Dungun, Kemaman and so on? This is not due to climate factors alone; we do not have the technology to produce the crops. It’s like we have no effort to create a vegetable farm. Therefore, this needs to be given attention and action.”

SMEs also expressed the view that there is a need for agriculture-related agencies to be restructured to ensure that more technology can be leveraged for food security and that more collaboration between stakeholders is made. This should be clearly stated in the strategic plan or policy. They believe the joint role with stakeholders is essential to ensure that SME participation in food security is genuinely relevant.

“Our government needs to restructure it, especially in this agriculture. Perhaps the government can set up poultry, cattle, duck livestock in an area involving universities and R&D to spark innovation to improve agricultural practices and increase livestock production.”

SME is also of the view the agency is aware of the abundance of derelict land that can be used for local food security activities. However, they have constraints on access to such land for bureaucratic reasons. However, SMEs believe such efforts can be made with agencies more serious, focused and collaborative across agencies. But SMEs realize it's not easy for agencies to work across agencies. This is because they found that each agency has its KPI that needs to be fulfilled and is concerned with achieving the KPI rather than working with other agencies.

Some SMEs think it is appropriate that there is no issue of agency expertise as they are regularly sent to courses in various places. Therefore, they should be better able to guide the farmer. In fact, through such techniques, for SMEs, agencies have more networks to help penetrate local agricultural products abroad and not only accept imported products.

SMEs also see the agency's constraints to facilitate agricultural-related raw materials and animal husbandry to be brought in for the use of local farmers. Especially concerning livestock feed, SMEs admit they face the problem of high production resource prices. For example, the price of soy as a feedstock. For them, the agency should be able to import this material

because local farmers need it. At the very least, there is a plan to self-produce this kind of primary material that causes the issue of food security.

“We can produce our food, but we have constraints in supplying raw materials in large capacities such as soy. To further enhance the Ayam kampung industry, we need to reduce production costs instead of raising the price of goods.”

More uncomfortable and doubtful of the agency's capacity is that they do not interact much to solve food security-related problems. The relationship between them is also not strong, and there are not many opportunities to get off the field. Although they know that it is due to constraints on the part of the agency, SMEs believe the agency should commit, especially when specific issues arise. If this can be done, then there will be no issue of whether the agency gets off the field or not.

Some SMEs also state specific agencies that are active together with farmers or breeders. In particular, the Department of Veterinary Services (DVS) faucet fits their focus. However, it is notable that they are faced with the constraints of the workforce, which is that not many officers can move into the field due to many issues. This situation left the agency unable to provide its best services and had to give priority to specific agricultural projects only.

As for the community's views, doubt the agency's ability to help them on the ground. However, in-depth, the level of officers is mostly not the one that specializes in the field. On the other hand, they know more in general and theoretically only. Thus, this can relate to farmers in the area who will ultimately produce better productivity.

“I’m not sure if they have farming practices, are they diligent in improving the practice of these farmers, and there are follow-ups to the next level until they are truly successful. From my point of view, those who come to monitor certainly know. But in fact, the knowledge of animal husbandry is more owned by breeders. This is because breeders have experience in the field. So, we combine the knowledge that we have with the knowledge that is from the department.”

In addition, SMEs also raise questions about the latest knowledge and technology-based guidance. They found that they were still taught to use long-standing sources of reference. At the same time, they were aware that many changes had occurred, including recent discoveries, diseases, and more cost-effective technologies.

“For example, based on the pineapple industrial handbook, we were still based on the guidance 30 years ago. The past and present methods are different. Nowadays, the pineapple industry has new technologies.”

c. The conflicts and complementarities between sector objectives and food security and nutrition objectives

Not many agencies, SMEs and communities can explain the conflict between sector objectives and food security. However, the agency believes that they have no problem following any plan set by Malaysia. Including what is contained in the policy, the agency's job is to meet those objectives. The same goes for the state agencies' view of federal agencies, which have no problem coordinating each other's goals, mainly cooperating on food security issues. For example, when the COVID-19 pandemic hit Malaysia, each agency tried to help each other across agencies, whether at the state or federal level.

Federal agencies also think they can come together to achieve the goal of food security by ensuring their agency's main objectives are not ignored. This is because, for them, the issue of food security is a national plan, and every agency that has to do with agriculture and animal husbandry should take this matter seriously. In fact, in recent times, many agencies have been asked to re-evaluate their strategies and initiatives to support the country's food security objectives jointly.

Since food security-related products are also related to staple foods, they can also be a source of income as revenue generation for the agency. Some agencies suggest that the country's food security objectives should be looked at more deeply, especially having added value for the revenue generation of agencies and governments.

In addition, the focus should be on harnessing the neglected potential. In particular, the use of derelict land, whereas the land has the potential to be developed and thus becomes the primary source of food security in the country. They also do not deny the importance of the government's primary industry, oil palm plantations. However, additional efforts should also be made to leverage the land and space available to produce food security products.

In addition to food security products used for critical needs, it is also a source of income for farmers. Therefore, the objective that needs to be adjusted is to include the marketing elements of the farmers' products. Among the causes, farmers regularly give up on their crops is marketing. They periodically sell produce to middlemen, and the middlemen try to make maximum profit. Thus, other agencies have suggested that the role of FAMA be strengthened.

“The role of the middleman is essential. I was involved in vegetable farming. Through the middlemen, I could send vegetables to the wholesale market. Now we’re heavily involved with FAMA as middlemen. FAMA is a complement to prevent farmers from suffering losses. Middlemen are also needed to facilitate the marketing of agricultural products.”

From an SME's point of view, they judge that they are trying to follow what the agency proposes. They try to avoid the occurrence of conflicts between themselves and the agency. This is because, for them, the agency has the relevant facts to determine whether a project is justified or not implemented. Agencies own essential resources such as capital and production input. So, SMEs and the community try to avoid conflicts with agencies.

Concerning the objective, the primary purpose of SMEs and communities involved in agricultural or animal husbandry projects is to obtain income. They are generally aware of the goals of food security. But for them, it's more important to increase their income. Also, they consider their capabilities from the point of view of the cost of project implementation. Significant capital for them can only be done if they have the support of funds and include agricultural input from the government.

“We’re still talking about the issue of food costs (for livestock). That’s a critical issue to discuss. If food costs increase, we will not be able to survive regardless of the agriculture sector or the livestock sector... Then we will need assistance from the government.”

On the other hand, for SMEs and the community, the coordination of food security objectives can only be done by large companies, whether private companies or government-linked corporations (GLCs) such as Guthrie, Sime Darby, Tabung Haji Plantation and others.

For SMEs, coordinating objectives between state and federal agencies is necessary across interests, including KPIs. However, it is also essential that adjustments are made for GLCs and private companies in Malaysia so that they do not just pursue profits. This includes mega projects that should be focused on food security-related projects. SMEs are aware that their capacity is limited to produce food security-related products. Hence the larger parties in terms of project scale need to be more precise with food security objectives.

As for the community, they cause a sense of annoyance because the agency's focus on projects is often changing. Sometimes such changes occur at the micro level, depending on who the officer is or the change of leadership in an agency. The transformation of the project raises the question to the community, what is the objective of the food security of the agency?

“Once upon a time, the government said that they didn’t want to focus on sheep and wanted to focus on goats. In comparison, there is a demand for sheep meat. So, the implementing officer is less concerned about sheep farming when the policy does. But suddenly, they change to another project then.”

The changes make it challenging to implement at the community level. They give another example: there were times when the agency proposed to implement a salted egg project that required them to raise laying ducks. Then, they recently encouraged the community to be

involved in the '*sado*' cow (a cow breed) project. They acknowledge that the new focus is changing according to the current situation and has attracted young people as it generates lucrative income. However, once again, they questioned what the fundamental objective of food security from the agency was.

For the community, again, the change of focus is not that far away. According to the community, it involves changing agencies, including developing existing agencies and replacing new ones. There was even a time when it created a new agency where it seemed to overlap its functions for the community. Even for them, some agencies do not fully function.

Dimension 3: Reviewing the outcomes of policies on rural economies

a. The way federal and state level policy implemented in terms of decision of beneficiaries, budget allocation and overall management of the policy

Among the most important points raised by agencies is that whatever their actions are to achieve the KPIs set to them. They stressed the importance of the KPI because they acknowledged the existence of their agency because of all the KPIs.

However, between state and federal agencies, they are always trying to streamline their KPIs. That way, they will be able to reduce costs due to focusing on needed projects, and there is no overlap. Therefore, they must have the proper structure to perform their tasks to meet their KPIs.

The study results found that some SMEs are concerned about spending on agricultural activities at the national level. They argue the budget allocated to food security activities is small compared to other budgets, including the military budget. For them, it gives a clue to the government's seriousness on the issue of food security. As for them, the government's budget for food security must be a priority.

“We see this year’s budget (2021) for the agriculture sector, which is RM5 billion. Meanwhile, the military has RM16 billion. So, we can see a huge gap. When the budget is reduced, this will give constraints to agricultural entrepreneurs to produce something new and to use new technologies that can improve our food safety guarantee.”

Subsequently, in the context of the state government, they know that certain agencies have already been given certain costs to realize this food security. For example, they found Terengganu State Government has channelled funds through the Agro-Based Capital Assistance Scheme (BMT) about RM5 million a year. PELADANG Terengganu manages the scheme. However, the provisions must meet certain conditions, such as being a farmer's member first. With that, they can get special assistance of up to RM50,000.00.

For SMEs and the community, one of the issues they often face is the overhead cost of capital to carry out their cultivation activities. This includes costs for specific equipment, machinery, machinery and so on. As for the enormous needs, they usually do not try to own it because they can borrow or rent from certain parties, including the relevant government agencies. However, they are often faced with related problems.

“Machinery facilities (equipment) are becoming a problem for those new to agriculture. Farmers can’t afford to buy. The agency does not provide machinery (equipment) to assist farmers working on new plantations. The agency also has no machinery drivers to be hired to clean the farms.”

However, the reliance on machinery from other parties previously caused them many problems. It is not just the related machinery that is insufficient and has to follow a particular turn schedule. But they are also faced with frequently damaged machinery, and the cost of renting is also increasing. Therefore, for them, the agency should focus on this element in management and budget.

As for SMEs, they also suggested that agencies focus their budget on training and increasing the capacity of their officers. This is because they believe that having competent officers will directly help the government to make the food security plan a success. Including will help SMEs and the community to come together regarding food security.

It's not just training for officers. The community is questioning the allocation of exercise for them. Training should also be in a new form and not only in class. But it includes visits to other successful farmers' places. This is because such training will not only provide new knowledge and skills. But it can also increase the motivation of farmers to engage in agriculture.

b. Public-private collaboration in this sector

Among the things that are given attention is that the government wants to ensure that the issue of agriculture and food security impacts the country and society. Agencies are aware that they need to strengthen their relationship with the private sector to address market price manipulation issues that are detrimental to the country and farmers or breeders. Among the ways is that the government is consistent with the approach of fighting the middlemen. The content of this strategy is to empower government agencies related to marketing, such as FAMA and enhance collaboration with the private sector.

“Regarding the middlemen, long ago, ministers wanted to declare war toward middlemen. The people will also struggle with the middlemen. Then there will be alliances through agencies, and FAMA will start doing business and replace middlemen. In terms of competence, there will be weaknesses”.

At the same time, the agency is also aware that the role of middlemen at the community level is necessary. This is because farmers can usually only afford to produce their products. On the other hand, they often have trouble marketing their products. So, the role of a middleman cannot be rejected entirely.

“In my opinion, the relationship with the middleman is necessary. This is because many mushroom producers are skilled in mushroom cultivation but are not proficient in how to market mushrooms. Nowadays, many ventures into mushroom farming are not very good at marketing and are not trained in putting the selling price of mushrooms, resulting in low mushroom prices in the market. Most new mushroom producers sell at a low price in the market.”

However, they are aware that the effort is still weak, and another approach is to try with the local market to buy farmers' or breeders' products at a reasonable price. Farmers are also faced with problems without any middlemen when the issue of dumping in the market arises.

“The government has recently implemented a business matching program to supply products to supermarkets. To date, the program has remained unsuccessful, and mostly I have made a lot of effort on sales.”

The agency believes that government-linked companies (GLCs) involvement is essential in agricultural or food security issues. This is because GLCs not only have significant funds but also usually have a business and commercial ecosystem that can really help farmers and communities. In such a way, some agencies believe that the issue of agriculture can be addressed in a form that can generate income for the peasant community.

“The changes to be made have been taken advantage of based on privatisation. On that basis, a subsidiary was established, a consortium under the government to carry out the execution. The models in Japan, Indonesia and Thailand, especially when the policies formed are to reduce the balance, with an allocation of RM500 million, will do their best to develop their people (the people themselves implemented), not the government in business. The funds are used for business when the government doesn't make it. Then create various central subsidiaries. It can be stated that everything has failed.”

The agency also believes that the complete reliance on government agencies, especially concerning marketing, is unjustified. The agency has a specific assignment scope and requires private parties to be involved. It is appropriate for them that the agency does not interfere too much in such matters but should be given to the market to determine. The government, on the other hand, controls the policy, and for them, that should happen.

In connection with inter-private relations, some agencies are constantly trying to improve. According to TADC, relationships are formed not only about the market. But it involves the necessary sharing and exchange of technologies in the market. They believe, in such a way, that inter-agency and private relationships are more impactful and have a long-term impact.

“We also collaborate with SBP with a company that uses a modern technology - “Smart Wing” technology to suck saltwater from the sea to our fishing grounds. From the cost of the private sector, just a return to them may take some time to stabilize the transfer of technology to us, and the livestock producers’ acceptance to a new technological system has some problems.”

SMEs think that government and private relations are weak. Such a fragile relationship does little to help SMEs in agriculture and food security. If any help is in the form of a proposed list of private parties that they can work with. However, the list provided is insufficient and does not fully assist SMEs facing food security-related issues.

Some SMEs think that the government does not explain the issue of food security to the private sector so much that the private sector is only thinking about profit and not to be together about food security.

“I believe it is not due to lack of cooperation because there is a relationship between government agencies and private sectors. I think that the factors that caused the weakness in food security are that we do not see that food security is not on par with national security”.

SMEs exemplify the strength of cooperation with the private sector and illustrate the Indonesian state. They have given the government great emphasis on banks actively engaging in food security issues and providing incentives for the private sector to be involved in agriculture and food security.

“I take an example in Indonesia. The Indonesian government issues a policy to the national banks that they must engage in one of the matters listed by their Prime Minister. First the rice industry. Secondly, the chilli industry. Third, the milk industry and the four meat industries”.

However, SMEs do not state that the agency is not fully helpful. Some SMEs state how agencies such as KETENGAH help connect them with the private sector, thus increasing their demand and income. SMEs are aware that each agency has its scope and cannot be changed overnight according to the needs of SMEs.

“To date, there have been no private discussions organised by the government and discussed with farmers or breeders to expand the product market. I am also an entrepreneur under KETENGAH. They have set up sales centres in any area they have specialised in. They found us to put the product at the centre of the sale.”

Among the reasons for the lack of cooperation between the government and the private sector is the issue of funds. For them, the priority for the private is that they have the big ones and the government has limited funds. Even funds are deducted annually. But another issue is that the private is too focused on profit and the issue of food security is not their priority.

“I have also spoken to TADC (Terengganu Agrotech Development Corporation) to develop a halal hub. But I’m still a constraint on funds. If I have the funds, Insya Allah will be able to help Terengganu state livestock obtain halal approval, and we will also take their product for marketing purposes”.

For SMEs, the private focus on profit is not a problem. It helps SMEs to encourage them to produce more products. This will undoubtedly benefit the farmer. So, among the efforts made by SMEs is to find opportunities for cooperation with the private sector. They are aware that one of the significant issues they face in working with the private sector is being able to produce production as desired by the private consistently and with their desired quality. This is a big issue facing SMEs.

As for farmers, they cannot afford to focus on all aspects of agricultural production or animal husbandry. They need middlemen or other parties who can market their products. However, they hope that the government should help them avoid the issue of price manipulation in the market, including the case of too cheap purchased prices and unfair competition.

For farmers, this is one of the essential roles of government. They need not only to connect the peasants with the private but the control the exploited peasants. Otherwise, they know that more and more farmers are inconsistently engaged in agricultural activities.

c. Mechanism of a periodic dialogue between the regional government officials and the affected stakeholders to understand the problems and identify possible opportunities for improvement in the sector

The agency communicates with the farming community for two reasons, which is 1) a routine community to listen to the issues faced and get input from farmers. This includes hearing comments from farmers regarding the agency's services. This issue covers a variety of matters, including issues related to agricultural fundamentals and legal matters such as land issues and so on.

“If we deal with the villagers and farmers, we will receive many complaints of problems, especially regarding land ownership rights and the policies we want to shape and put them to follow. There are many challenges, but alhamdulillah so far, what the results of the designation and brought down, they (the farmers) can accept.”

The second reason is that the interagency-farmer community is focused on delivering current and current information that the agency thinks the data needs to know. This includes explaining the functions of their agencies as well as the scope of what they can perform.

Through it, the agencies explained that their agencies are always serious about helping the persecutors solve the issues raised. Field officials are encouraged to communicate consistently with farmers at the agency level. Some agencies always hold discussions and dialogues with farmers to ensure that the projects implemented, especially under the agency's responsibility, run smoothly and are well executed. Another point is to ensure that the project, which is implemented at its initial stage, can run properly.

“On the TADC side, we have regular discussions, especially when the planting process starts. We have to look at the timing. Let’s say there are 100 hectares, so we don’t grow one crop at once to control the market”.

A lot varies between agency and SME information. For SMEs, the agency did not manage to establish good communication between them. It was not even using the latest mediums, such as the WhatsApp app, to establish communication between them. This causes much information not to be conveyed, there is a misunderstanding and even provokes various wrong speculations in labelling agencies and policies as not SME-friendly.

“I have no information. They never came to talk about it. But I want to emphasize that they have failed in planning and implementation.”

SMEs also blamed the lack of these interactions as they were unclear about the policies related to agriculture and food security. For them, dialogue is essential to allow them to receive the latest information necessary at the state and state levels.

They even need agencies to help them provide the necessary information, specifically related to the production process and marketing of products. If anything, such communication takes place very limitedly and is intended to collect data only. Whereas SEM requires more than that, including opportunities to grow their enterprises and the sources of capital they can get.

SMEs envision agencies as fearless in having face-to-face discussions because of the many unresolved issues. With this situation, SMEs are very concerned about understanding the policy and implementing and evaluating the policy concerning agriculture and food security.

There are similarities between SMEs and communities, and they agree that there is no interaction that helps them on the ground. Also, communication between them is inconsistent. As for the community, that's what they want. Although the community labelled their communication weak, they agreed that the input they got from the interaction with the agency was helpful to them.

The community needs information about the production process, assistance, market and expansion capital. However, many things or issues cannot be resolved with limited

communication. The community acknowledges that agencies are down to the field, but usually, when there are issues, they need information for agency use.

For example, they face problems related to land, capital, assistance, livestock, markets and collaboration with the private sector. However, they repeat that, in the absence of consistent interaction, this issue cannot be resolved.

Dimension 4: Analysing the scope of improvement and key lessons

a. Main strengths of agricultural strategy policy at the state level

Concerning the strength of policy at the state level, agencies insist that they have power in the policy. They are confident that the policies that are currently and have been introduced will meet the country's agricultural needs, including food security issues. Among the other strengths is that the agency believes that existing agencies related to agriculture and animal husbandry are relevant for policy needs. They even regularly work together to meet policy requirements. At the same time, they are confident that the various initiatives introduced will be able to boost the agricultural potential and food security issues.

In contrast to the SME view, they think that agencies have more weaknesses than strengths. Among the key issues is the availability of information related to policy. For them, much important information related to agricultural policy and food security does not reach SMEs.

On the other hand, SMEs are not clear on how the formed policies benefit the environmental resources of agricultural or animal husbandry areas. SMEs judge that agencies are not creative in evaluating and do little to recommend innovative products for local agricultural development. This includes harnessing the strength of halal products, which SMEs say have great potential due to the enormous demand domestically and internationally.

“What I want to share is that we need to look at our strengths. We have the power that we earn, and there is also a strength that God gives us naturally. Therefore, it is necessary to develop policies that can further optimize the strengths we have. For example, our country is already too focused on commodities; we lag in nutrition. But we are not left behind in oil palms or rubber. We already have technology with more optimal use to develop other agricultural sectors.”

On the other hand, they see a lot of agency weaknesses over the agency's strengths. The community's findings are similar to those of SMEs where they look at the issue of disseminating policy-related information to the community. Concerning initiatives, the community thinks initiatives need to be redefined because many of the initiatives given are

in one-off form only rather than consistently as the community needs. However, for them, this is the agency's strength to encourage them to engage in agriculture.

"One of them is an agropreneur program with one-off assistance. In addition to the help from the government that provides interest-free service, i.e., the agricultural capital assistance scheme even though the amount given is less than the amount applied."

b. Policy domains are missing and need to be included in state level policies

The agency believes that the policies made are constantly being improved over time. They do not deny that there were flaws in the previous policy. However, they also did not rule out the success of the earlier policies. However, they believe, based on the last food security policies, it is expected that the new policy will complement the previous element of weakness. This includes the coverage aspect and focuses on the latest food security issues. The agency believes it is appropriate to do so because not only is Malaysia facing the food security issue, but it is a worldwide issue.

As for SMEs, they expressed much disappointment with the past policy. They reiterate that the previous policy was only beautiful on paper alone. However, in terms of implementation, there were too many significant flaws. Among them is that there is little to consider the local strength to propose agricultural or animal husbandry projects. On the other hand, the focus is more on making a profit solely by focusing on the country's strategic commodity crops, such as oil palm and rubber plantations.

SEM also assumes that the government is not focusing adequately on the issue of food, agriculture food security. Even more unfortunate for SMEs, the policy focus is often variable. The changes are inconvenient for implementing the field as it will involve a change of strategy, initiative, and seriousness.

"For me, to produce a product in Malaysia, we must first consider the production costs that we have to bear because the production costs for the protein sources we are trying to produce ourselves are much higher than the costs imported from overseas. Why don't we take examples from foreign countries like Thailand that use tapioca, an existing plant in their country, to be used as an alternative source of protein to produce their livestock feed? So why is the government taking steps to provide something unproductive and requires higher costs than ever before."

SMEs suggest that the policy focuses on young people or local youth. Not only do the youths have a lot of energy, but they are also more committed and able to innovate if opportunities are given. Brain drain issues and outbound migration can also be avoided by focusing on youth

and will undoubtedly benefit the local community. For SMEs, this is because the construction of policies is not based on a precise model as required for the country's food security.

“I disagree with the youths of the current generation going out and working in the city and being workers to all the work programs in the city. And to young people these days, we need models, like integrated models. So he can use the resources we have in the village, and if there is no land, he can rent other people’s land so that our young people can adapt to the situation and be more creative. So, we need to develop models so that more people can see and make them a guide to developing their crops.”

Another element SMEs propose to be included in the policy is to strengthen further networking and collaboration with the private sector and universities. Private parties are serious about doing business and will directly help farmers market their products. At the same time, university involvement needs to be more serious. This is because the university not only has the necessary specialities for food security but also has the latest necessary innovations.

“Supposedly to build a policy, the main thing needs to be guided on how to develop a rural agriculture-based economy. A great insight. How should the government ensure that rural young people like to get involved in agriculture, and if university people can help, how can it encourage young people to stay in the village and develop their economy? But maybe the policy already exists. So it is necessary to focus on how to strengthen the implementation. Otherwise, do it in stages according to livestock or agriculture in an area. Focus until it’s successful and can sustain.”

As for the community, one of the things that dropped out of the policy was the lack of seriousness in trying to market the product. They repeated many times that success in agriculture is not only related to the production of products but depends on the market. The government needs to be more severe about this marketing issue, including empowering relevant agencies and connecting them to the industry.

Concerning production, they need more support from the government. They agree that it is challenging to implement agriculture without the help of the state. Therefore, the government needs to create more elements of this support. Including certain aspects of training. Especially if it involves new agricultural products that the government wants them to focus on and new products that they feel have potential in the future.

"It's the same that's the support system. The support system needs to change in total rather than just half. The country's food security is still insufficient if it doesn't arrive at any time. Frankly, I can say what the government has done from the past to the present. Many have

failed. The food supply did not undergo an increase. Worrying the next generation is in a critical situation. The policy is beautiful, but the support is fragile".

c. The way stakeholder participation in the review or revision process be made effective and efficient

The agency does not rule out the importance of other stakeholders' involvement in evaluating policies. Among the methods used are routine meetings with relevant agencies to obtain input and issues related to agriculture and food security. Usually, these agencies cooperate well and are ready to share information in evaluating policy implementation. However, these have had standard processes in practice over the years.

"At the state level, we have involved all parties. For example, LPP, each state will be with LPP Kuala Lumpur. Policies brought in from the state level will be brought to the federal (central) level, and those policies will be brought to the ministry level".

But engaging outside stakeholders of the agency is rarely implemented. Usually, the necessary information is related to the project's development and considers the issues they face. However, the agency does not deny the importance of obtaining information from them.

For SMEs, one of the methods used by agencies to evaluate policies is to visit their project sites. Usually involves informal conversations, and SMEs can provide information based on the questions asked. However, such a way will not have the necessary effect on SMEs. On the other hand, agencies need to be more severe about engaging SMEs in the discussion of assessing the policy. This includes regularly having a series of formal talks; in this way, SMEs know where their voices are getting to.

SMEs suggest that agencies should be more proactive in involving SMEs as they are more knowledgeable in the field and implement agriculture. So, the information they provide in the future is a reality that happens and will be different from just being in the office. However, SMEs do not deny that many officers come down to the field to be with SMEs in solving problems and asking for input for organizational improvement.

"The officers on duty should be more proactive with the list of farmers in certain areas. They need to approach each entrepreneur and provide information on what assistance schemes are eligible to be given. They (officers) can gather all the entrepreneurs in an area by providing a briefing on the assistance scheme and how to apply. So, I don't think there will be any drops in this information."

Communities have the same views as SMEs. They don't feel directly involved in assessing agricultural policies and food security. Agencies are more likely to obtain information than

specific individuals alone. On the other hand, data from the community seems insignificant. Whereas for the community, their information is essential, and the reality happens as needed to evaluate the policy.

STATE LEVEL FINDINGS : KELANTAN CHAPTER

Introduction

Malaysia's food security level is high by international standards. The country ranks 28th in the Global Food Security Index 2019, while it has achieved a high level of rice production. However, despite these factors, Malaysia's import of food has been consistently increasing, suggesting a serious problem with planning and implementing policies related to the agriculture sector. In fact, according to the World Bank, Malaysia's productivity levels rank low compared to high-income countries.

Government intervention and investment in agriculture can be categorised into two areas. The first is an investment in industrial crops such as palm oil and rubber, and the other is in agro-food products such as fruits and vegetables. Malaysia's focus on agriculture can be traced to the 1970s, when the government adopted a highly interventionist approach to economic development, increased investments, implemented policies, and introduced institutional reforms to promote palm oil cultivation. Later, agro-food-based policies were actively promulgated.

For example, when the National Agro-Food Policy 2011-2020 (NAP) was instituted, its focus was on food security by enhancing productive capacity in the agro-food sector. However, a decade later, the improvements envisaged by the NAP have not been achieved, with the non-rice agricultural food sub-sector requiring further attention due to low performance.

A fundamental reason for Malaysia's low food production levels is that the volume of entrepreneurial small- and medium-scale enterprises (SMEs) in agriculture is still highly minuscule. Only 1.1% of Malaysia's 1.176 million SMEs are in the agriculture sector, with no domestic firm emerging as a major public-listed enterprise. Domestic SMEs do not have a significant presence in global food supply chains, another indication that Malaysia has not been able to foster the rise of highly productive and competitive agro-based enterprises as envisioned in the NAP. With the unanticipated emergence of the Covid-19 global pandemic, which will profoundly impair Malaysia's import of food products, coupled with the serious structural problems in the agro-food sector, the country may soon be confronted with an economic disruption that will have severe repercussions on producers as well as consumers. Meanwhile, domestic supply chain disruptions due to the pandemic have emerged in the crop and processed food clusters.

In an unprecedented crisis of this sort, which has profoundly impaired the activities of the private sector, the government has no alternative but to intervene far more effectively in the economy to prevent excessive economic disarray and sustain the functioning of essential services, including that of food production. What is in Malaysia's favour is that the

government has in place an institutional infrastructure that can be more effectively deployed to deal with a potentially debilitating food crisis.

Methodology

Data collection was carried out in July and October 2021 involving the South Kelantan Development Authority (KESEDAR) region. However, this study does not focus on assessing the agricultural ecosystem and food security in the KESEDAR region. Instead, it becomes a case study as the area has farmers and breeders consistently involved in farming and animal husbandry activities.

The study uses an entirely qualitative approach, specifically using two study methods: the Focus Group Discussion (FGD) method and a structured interview guided by a semi-structured interview. This study involved three (3) different groups of informants, namely 1) agencies, 2) SMEs and 3) communities. Each group is selected using a purposeful sampling with three (3) characteristics to choose from as a study informant.

The three characteristics are 1) Being in the KESEDAR region, 2) directly involved with agricultural or animal husbandry activities, and 3) assuming that they have exposure to policies related to agriculture, animal husbandry and food security. Here are the sample sizes by category of informants:

No.	Category	Sample size
1.	Agencies	10 agencies
2.	Small Medium Enterprises	20 persons
3.	Farmers and community	15 persons
Total		45

Agency informants and SMEs were interviewed using the FGD method online due to Covid-19 pandemic constraints. At the same time, community informants are interviewed face-to-face. The agencies are grouped into two (2) groups, while the SME groups are grouped into four (4) different. The data in each FGD and interview is recorded, then verbatim transcribed. The verbatim data is then entered and analysed using NVivo software. The data is coordinated using a specific theme based on the semi-structured interview protocol.

Concerning ethics, this study collects data on informants without coercion and their involvement in knowledge and own willingness. Researchers informed that they could withdraw if they felt uncomfortable with the study. Their information is also protected and not disclosed to the audience.

Findings

The results were categorised into four (4) dimensions, namely 1) mapping the policy promulgation landscape, 2) analysing the policy implementation framework, 3) reviewing the outcomes of policies on rural economies, and 4) analysing the scope of improvement and critical lessons. Each dimension is divided into domains that exhibit in-depth and concrete research results.

Dimension 1: Mapping the policy promulgation landscape

Ministry or department oversees food security issues

This study found that the agency knows which ministries lead agriculture and food security activities. They mention the Ministry of Agriculture (MAFI), which forms, plans, implements, coordinates and monitors agricultural policies and food security. The agency is transparent that every agency under MAFI has a role to play in implementing agricultural and food security policies. Without an interagency part, agricultural policy and food security inevitably cannot be implemented. As stated by representatives of the following agencies:

“Our goal in all agencies (under MAFI) is the same: to ensure secure food to be given to consumers.”

Even the agencies hold that their agencies are created to implement the relevant policies. However, it is implemented according to their respective scopes, functions and objectives.

MARDI representatives clarified that their policy-related task is to produce new technologies through studies. This study develops not only standard technologies only for routine use but also includes those related to countering diseases and other specific threats to secure food security issues.

“We (MARDI) produce technologies and quality food disease-resistant foods and create new technologies through R&D to produce products that will be provided to consumers”.

The same is stated by Malaysian Quarantine and Inspection Services (MAQIS), which is that their scope is to ensure that food security issues run smoothly through the performance of their main tasks. Namely quarantine, inspection and enforcement services to ensure that plants, animals, carcasses, fish, agricultural products, soil, microorganisms and food imported and exported are free from the threat of pests, diseases, and contaminants. Those issues do not affect the country’s agricultural sector and comply with human, animal and plant health, plant, fish and food safety aspects.

Padiberas Nasional Berhad (BERNAS), on the other hand, is of the view that although they are not a government entity, they play a critical role in food security. They are the agency that oversees the development of the country’s rice and rice industry, representing the

government in managing and paying subsidies to farmers, buying rice from farmers at minimum prices and acting as the last buyer of rice from farmers.

While the Department of Agriculture (DOA), also under MAFI, is responsible for advising farmers to carry out agricultural activities, including overcoming food security issues and ensuring that their policies run smoothly. While at the SME level, they know which agencies manage agriculture-related activities, which are all agencies under MAFI. However, regarding food security, they think it is across ministries and does not involve only MAFI.

As for the community, their views are similar to SMEs. However, concerning food security, the community has minimal knowledge. Among the reasons is that they are not clear on the meaning of food security and think they need to know only a few things, especially about their production.

Policies related to food security especially to increase the production of staple foods (Federal and State)

Each of their agencies recognises that they play a role in realising agricultural policy and food security. The implementation is with their respective areas of reference. For MARDI, their task is to produce new technologies and encourage innovation in agricultural activities. MARDI also recognises that they play a role in leading innovation in agriculture and promoting competition in making quality agricultural produce in Malaysia. This includes the production of essential national products such as staple foods as an example of better quality and disease-resistant rice seeds.

The agency was also tasked with improving three (3) key aspects of agriculture: increasing the quantity of staple foods, increasing staple food substitutes and increasing technology related to staple foods. These three focuses were emphasised in the previous agricultural and food security policies. However, it is not clear to what extent at the state level this matter is emphasised.

Other agencies, such as ECER, believe that their work is to support government plans within their scope. But they usually try to implement large-scale projects, impact the country's food security, and increase the income of farmers or breeders. For example, they focus on a mega goat project involving the production of 10,000 goats. The aim is to work with the country to provide adequate sources of meat and thus generate income, including for export purposes. They insist they work with the level, including state agencies, to work together on national agriculture and food security issues.

"I believe what ECER is doing is in line with the policy. Part of the ECER project plans to work with the State Government, like the dairy project defined by Mr Zubir, which focuses on the adequacy of meat supply".

The agency believes that the action to focus on agriculture and animal husbandry is in line with MAFI's goal of producing an adequate food supply for the people. And the effort is in

line with the Agro-Food Policy (DAM) 2.0, which in the period 2021-2030 aims to ensure adequate food supply to the people.

Nevertheless, the agency is aware that other staples are not enough, that Malaysia is forced to import from abroad. However, at the same time, the government also tries to emphasise the profit element of each project implemented.

SMEs know the existence of agricultural policies and believe all agencies act according to the policy. For them, the federal government implements agriculture and food security policies. This is because all agencies in the field are related to federal agencies. It is not clear what is the state government's policy for agriculture, other than regularly listening to the slogan "agriculture is worship". They questioned the extent to which the state government was serious about the issue of agriculture which translates through particular policies in the state government.

Kelantan has excellent potential for SMEs and can be an effective agricultural hub. This is because Kelantan was once known as "jelapang makanan" (food granary) which can collect all agricultural produce. The concept can be 3 in 1, which can produce abundant and focused agricultural resources, secure food security issues in the states of Kelantan and Malaysia, and generate income, whether it is for the state or the farmers. However, the federal government's policy is clear for SMEs, unlike state agencies that do not know which direction to bring agriculture and food security to Kelantan.

"The government has recommended Kelantan as Jelapang Makanan Negara (National Food Granary), one of the initiatives that Kelantan has done. So, Jelapang Makanan is to ensure food safety in Kelantan is guaranteed. To me, the government is working to create a food presence first. I have seen the Exco and the Kelantan state government are more likely to do agricultural expos to increase the food supply first. The initiative is there, but I think the guidelines are not clear. To me, this Jelapang Makanan Negara is an effort from the Kelantan State Government itself to make this state one of the major contributors to the country's food resources."

As for the community, they are not clear what the agricultural policy is except for farmers who are used to being exposed to policy-related information. For them, the policies are primarily from the federal government. The policy depends on what sector to focus on, whether for agriculture or animal husbandry. For them, the most important thing is to bring income for agriculture based on staple or non-eating products.

Overlapping federal and state policies in terms of policy objectives and target groups

Overlap does not occur, including in efforts to deliver staple foods to any channel. There are no problems that lead to a reduction in the delivery of agricultural products to the market.

"It has never happened, especially of overlap (between agencies). There has also never been any duplication in terms of the supply of staple food to be channelled."

However, the agency knows many things must be corrected, especially during the Movement Control Order (MCO). Three (3) matters need to be improved, i.e. 1) information sharing between agencies, 2) sharing of infrastructure between agencies specifically related to transportation, and 3) reducing interagency bureaucratic elements. This includes issues related to safety controls involving safety agencies where they need to understand those food products are perishable and need to be marketed immediately, especially the market problems that make it difficult for them to acquire buyers.

“There is a need to improve further the understanding and cooperation between the agencies and the ministry. During the MCO, the harvest was plentiful, but the production to go abroad was hampered, and products were dumped. The problem is not because there were no buyers, but the main problem is the movement obstacle from the authorities. For example, for movement outside the district when reaching roadblocks (SJR), a cross-district or state permission letter from MPIB becomes irrelevant; SJR staff said they need a letter from MITI to be allowed to cross the district. So on, that is why there is the dumping of harvested produce. The fruit becomes damaged, and as a result, the price falls, and the quality of the fruit becomes no longer fresh. So here, there is an inconsistency between agencies or departments.”

Under normal circumstances, agencies don't see any problems between state and federal agency policies. Even the objectives are the same if associated with food security. At the state level, they are trying to organise programs for the development of farmers' efforts or known as agropreneuers. However, this is implemented in conjunction with federal agencies that have more initiatives and more funding.

State-linked agencies are also more likely to focus on individual development rather than on large-scale projects for reasons of financial capability. They are also more likely to support family enterprises that, for them, are better able to be sustainable.

Each agency, whether state or federal, is the same for SMEs. They have a pre-determined objective and will not change it without changes or instructions from their superiors. The process starts with a policy formed by the federal government, then shared with state agencies, and their work is to perform that function or focus only. They believe that this way, policy and food security matters become easy and smooth. Even for SMEs, each agency of different levels has its strengths. For example, federal agencies have extensive financial resources, while state agencies have abundant and potential land.

The community is unclear and indistinguishable between state and federal agencies. For them, each agency has its role. However, for agricultural policy and food security, agencies are more discerning for them. The farmers' level is to produce; if necessary, they need guidance and support for agricultural input.

“I'm not sure; even the officials I've met aren't sure from the state or central government.”

The state-level policy objectives challenges

The agency explained that not many of the problems they faced. They were explicitly related to cooperation across agencies and states or federations. All agencies have clear objectives, and they move to implement those objectives according to their respective scopes. However, their biggest challenge is the inadequacy of staff to maintain a large area and many farmers or breeders. The agency not only takes care of the area in the KESEDAR region alone but also involves other areas that cause them to have a significant commitment with insufficient staff.

In terms of performing food security-based tasks, they are still waiting to launch a plan or policy related to food security. According to the agency, the food security-related policy has expired in the current year and is currently awaiting a new policy known as National Food Security Policy Action Plan 2021-2025 (has not yet been launched when this study was conducted).

According to the agency, they are always looking for genuinely competent participants and able to work with agencies to meet the market's needs. This includes finding participants who can work with agencies to achieve a particular scale for a long time.

“For food security, the government should ensure we have the food supply for a specific time. We can see our food stocks; are they able to last another 7 to 10 years? So, it's a long-term policy. As in Indonesia, they have a vast cohort of farms in Kalimantan”.

On the other hand, they are too much of the only agency conducting studies at the ministry level to acquire new technologies, namely MARDI. They agree there are strengths and weaknesses centred on MARDI. Among them, its power is under the same ministry. Lacking that, there are times when the results of the studies are not based on what they need.

For SMEs, the main challenge of the agency to achieve its objectives is the agency's ability to manage stocks of agricultural produce, primarily to compete with imported products. Among the issues is the agency's ability to control the price of imported products cheaper than local products and the frequent dumping of local products.

“From my understanding in this field of agriculture, this food security is our food supply without relying on food sources from foreign countries such as Thailand, Vietnam, Indonesia and India”.

SMEs questioned the agency's ability to increase local products in the market, reducing reliance on imported products. To realise this, SMEs believe agencies need to have a clear strategy to implement.

“The policy on food security and safety is the best policy that the government has ever made to ensure food supply for the people, namely through adequate food supply without relying on imported food.”

This includes the agency's ability to use local capabilities to ensure that food stocks are sufficient for long periods, ranging from 7 to 10 years. The last point raised by SMEs is the agency's ability to increase training and guidance to new farmers and agricultural products. For SMEs, it is essential but requires active involvement from agencies.

For the community, among the challenges they seem to face in agencies to come together on the food security plan is the ability for agencies to communicate consistent information to them, in particular, related to government planning and initiatives introduced. This is a critical matter for the community, and the agency does not provide information that allows the community to engage more seriously.

"Yes. Agencies need to play an important role in communicating information to farmers. When information from the federation can be well conveyed to the state level, then the district later to the peasants, any assistance can be channelled to needy farmers. They should have done that."

In addition, they also evoke the agency's ability to encourage farmers to engage in activities that significantly impact them. They acknowledge that their involvement in agricultural activities is more about subsistence activities. The mission for the nation's food security is not their primary agenda. However, they are confident that with the agency's guidance and rules, they will be able to engage on a larger scale.

The community also expressed concern raised by SMEs: to achieve the food security objective, the agency needs to reduce the influx of imported products. Instead, prioritise local products. The community believes that the quality of local products is the same as that of imported products. In fact, at the same time, agencies need to harness local strengths, such as using derelict land to enlarge the production of local products.

In addition, the community believes that the agency should help them so that the products produced can provide a decent income, such as other commodity products such as palm. Another community concern is the agency's ability to help them resolve the issue of dumping products in the market, which often causes farmers to suffer losses. Again, this problem occurs for the community due to interaction that does not arrive or the community does not have enough information to make a decision. It can even lead to conclusions contrary to food security's wishes.

"This policy is good. But this village farmer doesn't understand the policy. They should have come to see the farmer's activity. For example, if there are many cucumbers, let's note that the cucumber crop is abundant. But because farmers use their own capital, not government aid, those officials can't interfere. If not well supervised, the planting is now according to the trend. For example, now the price of oil palm is high, and everyone is planting oil palm trees."

The understanding of the recipient on the jurisdiction of each agency. An effort to explain the overlap of different agencies

Agencies are clear with different agency roles, whether fellow ministries, between state agencies or with agencies at the federal level. They are also aware of the scope and focus of each agency. There is a lot of cooperation between agencies based in the area. For them, the content shows the strength of an agency.

However, they are aware that at the community and SME level, some are unclear about the functions and scope of the agency, especially if detailed about what stages the agency is in. Either at the state level or the federal level. This misconception is usually seated in the form of applications for assistance related to the production and distribution of information.

“Our society does not understand the scope, role, clear function for all government agencies and departments... So, to the new farmers who come to the office, we will explain (the difference between each agency)”.

Concerning the overlap of tasks, agencies don't see it happening. This is because each agency has established its purpose and scope. Even the establishment of each agency is intended to complement other agencies rather than stack up that compete with each other.

SMEs know the role of each agency. This allows them to easily connect with which agency suits the needs of their enterprise. However, what SEM is most concerned about is that it is not an issue of overlapping the scope between agencies. On the other hand, it is the coordination of tasks between agencies that go beyond their duties.

The point is they know that each agency has a specific scope, and SMEs should contact other agencies if something is outside their area. Getting other agencies is what there will usually be problems with. This means there is a problem connecting SMEs with other agencies if they need to contact different agencies.

Among the issues raised are inter-agency bureaucracy and not the case overlap as the main issue. For example, the Department of Agriculture is usually a critical party and is regularly contacted to produce agricultural products. However, when it comes to marketing issues, FAMA is responsible. Connecting the Department of Agriculture and FAMA is not easy. This is due to the absence of inter-agency interaction or bureaucratic issues between agencies.

The community shares the same thing as SMEs. For them, the issue of interagency overlap does not occur, but they are clear about the role of each agency. For example, in producing agricultural products, they know that the Department of Agriculture and FAMA are among the agencies involved in the PELADANG organisation. The roles of each such agency are different. For them, if there is an obscure community with the part of each such agency signifies that he is not used to connecting.

Frequent interactions allow them to know what each agency has and its responsibilities. This includes solving their problems or issues. Concerning assistance, they are aware that each agency is trying to help differently. But at the same time, they don't deny there's a problem for agencies to pay serious attention to helping them.

"In this Jeli area, it isn't easy to apply for help. Despite a lot of effort I've tried to prove, their officers seem to pick people. The helpless farmers they're helping, we're the ones who are active, not getting that help. At least they've given me enough steel aid. But nothing. They last visited the area in the eighth month (August). Their officers did not come to discuss or campaign on the latest plans or projects".

For the community, the big issue that deserves attention is bureaucratic issues and interagency relationships if they need to relate to different agencies. Usually, problems occur at this stage.

The approach was undertaken in formulating policies related to agricultural development and food security (top-down or bottom-up)

The agency said they were diversifying resources to produce policies that could be formulated from three primary sources: the agency's internal resources, second sources and references from the field. Internal sources will use resources in the form of past project reports and reports from officials in the area. For them, this input is critical, especially since it is the agency's internal data.

"We have an agri-portal system, where we (DOA) take all production data information from farmers under the supervision of JPN and other agencies. In policy formulation, indeed, we take from the point of view of all aspects, both operations and involving financial factors. To me, it's like we need to take the opinions of engineers, accountants, and operators. These aspects must be combined, and each must be mutually understood and in line. From all the inputs of each other's point of view, we need someone to set the uniformity or the direction we are going together.

They also regularly use secondary data, such as reports from other agencies like DOSM. For them, such data is essential to ensure that they obtain data of a greater scope and enable them to be aware of the need for more comprehensive planning.

"I see that the government will use the data from any agency before determining the importation of a food product. I admit that it is impossible to get accurate data from the agency at the departmental level. We (DOA) ourselves try to get data from FAMA and other agencies to ensure that our data is 80-90% accurate".

Concerning data from the community, they also take resources from the field, such as meeting with farmers. They don't deny that input from farmers is essential for them to form more effective policies. As for SMEs, they are not sure what approach the agency uses to shape the policy. Whether it involves them depends on who the officer is concerned with. SMEs do not deny that they have ever been consulted for input for improvement in the implementation of production activities, whether for agriculture or animal husbandry. However, they are unsure how much the agency uses the information they provide to shape the policy.

They are concerned that there are few severe and formal discussions between SMEs and agencies to form policies. SMEs agree that if a partnership approach is used, i.e. information supplied by the agency is discussed or evaluated by SMEs. With that approach, the policy will be formed based on the prevailing reality.

“We haven’t approached the whole district yet. I have personally brought this issue to the Agriculture Exco. When I proposed to him, the State Government could not do anything like help market these agricultural products. When there is a project under the state government, they ask for a guarantee to market agricultural products... Sometimes they do it according to their wishes; sometimes, they listen to the opinions of farmers or entrepreneurs”.

Communities have the same views as SMEs and don't know what approach agencies use to shape policies. They don't deny it; agencies come down to the field and ask about developments or problems they face. However, they are uncertain how agencies use such inputs to form policies. The community usually listens to agencies' advice and consents to their enterprise-related views.

Main objectives of federal or state initiatives related to agriculture or food security (production, profit, cost, quality or value added). The objectives either in line with the current need or development of the sector or main player

Among the objectives of the agencies involved in agricultural and animal husbandry activities and food security, the prominent role is to produce agricultural produce at the maximum level and always be present in the market to meet the market demand. They know Malaysia still imports many certain products and has a high dependence. More troubling to them is if it involves primary food products such as rice and essential vegetables. Hence, they have to encourage farmers and SMEs to produce products related to the encompassing.

“The Department of Agriculture is creating a competitive industry, producing quality products, safe and environmentally friendly, and export-oriented”.

Among the approaches used include continuing existing training programmes, helping farmers to increase their production on a larger scale to produce quality products and at the same time, encouraging more people to be involved in agriculture, especially for the young.

“Within food security and safety, we will supervise and manage the agriculture sector to the maximum level. We also ensure continuous production. We encourage more farmers to increase livestock capacity, create collection centres and make grazing fields, provide marketing assistance, and so on. So, it will provide opportunities to the local community”.

The agency also acknowledges that they are faced with various issues, including ensuring that the products reach a certain level of quality to compete with imported products. This is always emphasised so that all parties recognise the products made.

“In addition, we enhance the quality control program to ensure the quality of pineapple production... Using training and expansion on the farm, identifying and monitoring farmers so as not to use excessive pesticides, for example, to ensure and avoid contaminated crops”

Apart from replacing imports, the most important thing for the agency is that the production of local products can ensure the adequacy of food for the country's needs. In this way, Malaysia no longer has to worry about food adequacy issues in unexpected problems such as wars and global outbreaks.

“... for us at the district level, we are more focused on advisory services and outreach to farmers to ensure that every aspect of agricultural activities carried out by farmers is based on food security and safety”.

The agency also emphasises that every production at the community level is expanded to be larger and can genuinely meet domestic and foreign needs. Their goal is that every farmer who has become accustomed to producing products needs to focus on further enlarging their enterprise.

“The same goes for small-scale meat production, namely the sheep project. We have an agropolitan project that focuses on the production of 10,000 sheep; our focus is on the adequacy of meat supply”.

SMEs know that each agency has its own agriculture and animal husbandry objectives. Among the things that the agency emphasises to SMEs is to highlight the commercial element to generate SME revenue. This includes using local potential, such as using vacant land to increase the production capacity of products. However, the reality is not that simple. SMEs agree that there is a lot of empty and unused land in their area. However, the bureaucratic issue of acquiring land is a complicated issue to resolve. Moreover, according to SMEs, the land issue in Kelantan is very complex and takes time to decide.

“To me, in Kelantan, we have a lot of idle lands, and resources are very plentiful. It's just that there is no development yet. But, the procedure (to get the land) is not easy, but complicated”.

The agency also emphasises SMEs strive to meet the needs and demands of the market. However, many government projects have been unsuccessful for SMEs due to monitoring, farming and agency-focus factors. SMEs complain that the approach used by the government is frequently changing and sometimes more 'try-and-error'. For example, once the government called for agriculture to be done in groups. But there are times when it's called to be done individually.

“Our policies (state and federal policies) do much individual development. For example, Young Agropreneur allocates funds individually. The Federal or state government, in fact, only want to produce farmers, give grants and so on. But the final follow-up was not done. I can say, on average, of these government projects, about 90% have failed. We have done our

survey, and most participants have been given grants, courses, and follow-ups. Most do not implement the grant or project, keep the items given, some do it once they leave the project.”

More sceptically, the agency's objective for SMEs is to meet their KPIs only. This is because many issues exist, such as aid and unfinished markets. Finally, for SMEs, the issue of food security will not be appropriately resolved.

“I see most other projects from the state government itself failed. I have also told for improvement that there should be follow-up until the end of the project. We can't let individuals move independently; we need to help and teach marketing. To me, this one needs to be re-evaluated. Don't just give grants, funds, courses, and equipment; leave. Most are just one-off projects, whether federal or state projects... What we see is they are just distributing subsidies”.

At the community level, they are not sure what the government's objectives are on agriculture or animal husbandry issues. For them, their rank is to replenish production and income level. They also rely on the agency's advice to focus on what enterprises are.

This is because various initiatives and incentives, including assistance, usually follow advice from agencies. However, some farmers do not care what the government wants. For them, agriculture or animal husbandry is the source of their income, and they depend on it. Hence, they choose only profitable agriculture or animal husbandry.

“To me, the direction of our agricultural and animal husbandry policy is less clear. Young people venture into agriculture and animal husbandry due to interest and income. Who knows if you're going to say, follow that agricultural policy? Who doesn't know? They do it for jobs, income and subsistence”.

Some communities argue that the government's objectives are unclear especially when they do not use resources or potential in the community, such as young people engaging in agriculture.

Dimension 2: Analysing the policy implementation framework

a. The extent of federal agriculture policies implemented in the state

For federal agencies, the policy implementation is precise because almost all actions, including strategies and initiatives developed, are under the policies developed. Similarly, with KPIs, all of which are to achieve pre-determined KPIs for their agencies. To ensure that federal policies are well implemented, it is their role to work with agencies at the state level.

“Another aspect of food security, we at BERNAS also have plans for large-scale crops with a combination of agencies such as KESEDAR, KADA, IADA and KETARA. This cooperation is for us to increase our country's rice yield”.

However, their job is operational for those usually federal agencies stationed at the state or county level. This means implementing all the plans and monitoring them to be reported to the top level. At this stage, they can be directly involved with local farmers.

They know that the success of policy implementation depends on cooperation between federal agencies, state governments and other parties in the field. They cannot afford to make a success of the national policy agenda only with the capabilities of their agencies alone. For example, during the COVID-19 pandemic, all agencies at all levels work together to ensure that food supply issues do not arise. From this case, it is clear that cooperation between agencies and other parties is needed.

“The issue of insufficient rice at the beginning of the PKP was due to “panic buying”. We always cooperate with MARDI, especially with the National Paddy Rice Regulatory Cost. So, exporting rice to the whole country is not a matter. As far as I know, we are not experiencing the problem of an insufficient rice supply in the country”.

The agency agrees that there must be cooperation with the state government for greater scope, especially if it involves food security agencies. Moreover, it requires land development and the content of state government related to agriculture. Otherwise, food security only moves in silos and will not be able to achieve the desired impact.

“Our initiative is working with the State Government to identify undeveloped lands to be developed with food-based projects such as coconut and black pepper for future food supply preparation”.

As for SMEs, see that the policy implementation at the state level follows the federal plan. Rarely is it different because the execution is mostly from federal agencies in the state? But for SMEs, implementation is usually variable. Including repeating a group or individual approach, often changing. Now SMEs see more individual development approaches. Hence, they increase the number of training focusing on personal training. This includes rising incentives and guidance. However, for SMEs, the big problem is poor monitoring.

“It’s like if the government makes the ceiling price. But sometimes, people don’t know, or sellers can still manipulate prices. So, if the government wants to set the cost of the ceiling, there should also be officials coming down the field for monitoring. Similarly, in the case of chicken prices, the government says not to sell more than RM 8, but there are still sellers who sell more than that price. Whatever it is is too strict monitoring and enforcement if it is to make price controls”.

The community states the same. Notably, agencies carry out weak policy monitoring at the state or federal levels. The lack of this monitoring is also involved in terms of control and

seriousness for the market. The community gives an example regarding price control of chicken feed, fertiliser and poison.

At the same time, engagement at the state level is sometimes interrupted for specific political mileages, especially regarding the intervention of local elected representatives and state assembly offices.

“The Federal or state government, in fact, only want to produce farmers, give grants and so on. But the final follow-up was not done. I can say, on average, of these government projects, about 90% have failed. We have done our survey, and most participants have been given grants and courses and done follow-up. Most do not implement the budget or project; they keep the items that have been given. Some do it once after that leave the project, and I can say when I made the final report for this project, out of 50 participants, only four were consistent”.

b. An agency has the suitable capacity to ensure policy implementation is successful

Concerning the agency's capacity to implement agricultural, animal husbandry and food security policies, agencies generally state that they can implement them. However, significantly they faced six significant issues, namely 1) an insufficient number of field officers, 2) the need for new technologies, 3) new disease issues, 4) bureaucracy across agencies, 5) marketing issues, and 6) databases.

They acknowledge that their area and coverage are extensive and have many farmers or breeders. With the officers available, they couldn't focus more seriously because they needed to take care of a large community. They also acknowledge field officials also need constant new knowledge and skills. This is because agricultural and animal husbandry technology is now rapidly developing. So, officials must also know the matter to ensure that they can help farmers and breeders with new knowledge.

“We lack the staff and movement restrictions, and if we want to visit beneficiary target, we cannot do it completely. That is a problem which leads to bureaucracy. Regarding the capacity, in MPIB, only eight officers, including me, are in the Kelantan State branch. I am the one who visits the field; I am also the one to find the beneficiary group; if I say we lack staff, it is indeed because there are only eight staff to take care of 10 districts. I am the one who provides information, provides guidance, and delivers development technology. With this lack of Prof, we are eight staff, and there are only two vehicles: a pickup truck and a truck and a driver. This is the shortcoming that occurs. So, in terms of cross-border pineapple control, we even lack staff for enforcement. MPIB is a leader in the pineapple industry globally, but we at the state level also have problems.”

They also do not deny that diseases related to agriculture and animal husbandry can be expected. But there are also times when new variants of the disease make them unable to help the community. Another issue that makes them less able to implement policies well is bureaucratic issues across agencies. They admit that working with other agencies is expected. But there's also a bureaucracy they need to face. And this issue can slow down their actions.

The most significant issue that occurred was the issue of marketing the production of farmers. It's a big issue, and it's not easy to solve. Unless there is a need for more severe planning collaboration across private agencies and farmers, an issue that undermines the agency's capacity to implement policies is related to less data. They acknowledged that farmers were working in agriculture and did not inform the agency. This makes efforts to help and monitor unworkable well.

“There are also disadvantages when farmers who grow independently, privately, individually, and so on are outside our supervision, so we do not have their data. This is what happens if farmers are planting without planning. When they have produced and harvested, they come and refer to us. We can't do anything, so we talk to them and explain to them that they need to consult with us before starting planting to avoid dumping such crops from happening.”

As for SMEs, agencies do have the capacity to perform their duties. But now their approach is beginning to change a lot. For example, they began to introduce certain charges for their services. Especially if it involves animal husbandry activities, this charge is said to be the agency's revenue generation. For SMEs, it is inappropriate because it is the agency's duty to provide services to the community.

On the other hand, SMEs are concerned that there are 'payroll eating symptoms' among officers. This makes their affairs on the field not serious. At the same time, consider the agency to lack a commercial mentality, in particular for the marketing of manufactured products.

“There is no adequate marketing guarantee, where is the role of FAMA? FAMA is given an allocation, do it right, change the schedule, and don't just sit in the office from 8 am until 5 pm; work until 7 o'clock this durian season. For example, FAMA has an allocation abroad for marketing programs; they follow the program. What would have happened otherwise? No returns”.

In addition, the SME statement is also in line with the agency regarding the availability of agencies to assist if involved in new products. They seem discerning and won't do much to help the community.

“In my experience for four years, from fertigation to goat farming, making small rubber plantations, and lastly, I ventured into meat rabbit farming with durian crops. Based on what I see, all the needs that farmers want and no monitoring from agencies. If we market to agencies, they take it at too low a price. So, in terms of agencies, there is no monitoring to control this price increase.”

At the same time, if farming or agricultural activities are not the agency's focus, they will not help much. This includes assistance in terms of advice and guidance. However, SMEs acknowledge that the most significant issue SMEs face is insufficient field officers. The situation caused SMEs to give up on agencies and not based on them being able to rely on agencies to continue to grow in agricultural activities.

“My advice is don’t rely on the government. I do not want to doubt the government, but they will not help us. If you have started planting, you must learn to find your market. Sometimes in the management of fertiliser distribution, there is leakage.”

As for the community's view, they acknowledge that the agency has helped them a lot. The ability to help the community depends a lot on the officer himself. If the officer is well versed in certain agricultural activities, they can help. Otherwise, there won't be much help except the administrative aspect, like other assistance.

“Another problem in terms of the ability to instruct a farmer. Those who came to me and learned with me how to fertilise or poison. I don’t even understand why they came. They just came to review. If they see the bushes, they’re going to have to cut it off. No one has come to give us guidance or opinions, or suggestions.”

The community also acknowledges that many officers know only better theoretically and are not discerning in usable form. Whereas farmers need proper advice and guidance, the field's most significant issue is inadequate officers. For the community, the agency should more often and more seriously come to review the issues and needs of farmers. This weakness causes the community to face other issues, such as dumping issues and idle outcomes.

“Their knowledge is deficient when compared to the villagers. It’s like the villagers learned a lot about agriculture with the Siamese. Examples like wanting to know a disease. I want to tell you that if our officers come to see, they say they must do some research and then find out the condition. But when the officers from Thailand came to see the tree only knew what pain it was. That’s how excellent their knowledge is. They (the Siamese agriculture officials) say that agriculture in Malaysia is all at my fingertips. Their level of expertise is very high.”

c. The conflicts and complementarities between sector objectives and food security and nutrition objectives

For agencies, there is no conflict between agencies in carrying out their tasks. However, what worries them a little is its functions beyond the agency because of bureaucratic problems. The bureaucracy caused cross-agency affairs to slow down. Therefore, for them, inter-agency coordination involving cross-agency should be given attention.

“We lack staff and movement restrictions, and if we want to visit beneficiary targets, we cannot do it thoroughly. That is a problem which leads to bureaucracy.”

However, for agencies, inter-agency affairs are more complementary. There is no conflict, but there is always an effort to solve the problem if it is outside the scope of the agency. For example, when the COVID-19 pandemic hits the country, it is noticeable that agencies are working together to resolve the issues that arise.

SMEs agree on the same. For them, the bureaucratic issues that cross between agencies are especially noticeable. It's as if, for them, there is no interaction between agencies to solve problems if they exist from other agencies. For example, SMEs exemplify that during the COVID-19 pandemic, it was difficult for SMEs to cross borders to deliver their products because of the police's arrest. In contrast, the matter is in the knowledge of agricultural-related agencies.

“Many of us are asking for help from the government because we desperately need support and assistance from the government. But what we get is so much bureaucracy that it is difficult to get help.”

The same is true when it comes to marketing as if there was no coordination between agencies causing the marketing process not to go smoothly.

“The problem arises in marketing due to the lack of exploration of downstream industries. Why don't we take the initiative? Why can't we produce local fruit-based products? This is because even if there is dumping, we can supply to SMEs. In Kelantan, we have many contracts farming, and the company that manages contract farming is a Chinese company”.

The community states the same, interagency interaction; there is a problem. Although the agency conflict did not occur for them, it was not smooth either. There was no coordination between agencies. This issue happens from the production stage to marketing.

“As a farmer, I see it is in terms of marketing, how do we want to compete with the market from outside. In my view, it is an issue of market competition. For example, cucumbers,

chillies, and so on have become a trend, and many farmers are trying to plant and successfully bring in the harvest. So, if the crop yields a lot, we have to sell at a low price.”

Dimension 3: Reviewing the outcomes of policies on rural economies

a. The way federal and state level policy implemented in terms of decision of beneficiaries, budget allocation and overall management of the policy

The agency has its routine in making decisions and managing policies related to food security and agriculture. This includes providing provisions for activities related to food security. For them, among the sources of their allocation are the agency's focus, the existing policy-based planning and towards achieving the agency's KPIs. The agency confirms that each of its actions aims to achieve the KPIs. KPIs are not only a working target but are an image of the agency's success in the year.

In addition, they need many other inputs, including their internal resources, inter-agency, secondary resources and farmers' needs to determine the appropriate budget. For them, choosing a budget is not easy and requires a lot of consideration.

“Agencies under MAFI are a determinant of what we need to plant for such a period. In the meeting body, there is an emphasis on food security and safety. We are also implementing a project and evaluating the self-sufficiency ratio (SSR) that needs attention. What we see at the moment in agriculture, rice and coconut itself is only 70%. Local milk production of 60% and 40% is imported. So here, we will focus on the needs of the people first.”

In addition, providing provisions for policy programs or initiatives is one of the considerations the agency needs to examine successful projects. This includes focusing on the participants involved. Usually, successful projects will continue with the next budget. Similarly, to provide additional assistance or introduce new initiatives, the agency also looks at track records of programs and applicants. Other potential projects depend on recommendations or assessments made by officials at the relevant agencies.

From the perspective of SMEs, they are proposing that existing agricultural activities be continued and injected with more outstanding funds. They argue that to reach the next level, is to need new funding. Only then will the result be obtained later. Among them is to provide for the increase of agricultural products in the market and thus reduce the dependence on imported products.

“Today government policy, state and district departments give projects to the people to implement. They only provide allocations to farmers who have failed; on the other hand,

farmers who have succeeded do not want to give allocations. Why did they choose to provide allocations to only failing farmers?”

Apart from injecting funds, it is appropriate for SMEs and agencies to encourage or incentivise farmers or breeders to engage on a larger scale. That way, not only will the products grow, but they will also earn a higher income. Special for SMEs, they urged the government to provide more funds as they need additional capital after being affected by the previous MCO.

From a community point of view, it is unclear how the government makes plans for annual allocations. They are also not clear in their entirety what funds are used for. But they are often told that the budget is dwindling and requires effort and own capital from farmers or breeders. They also see that the government has continued its previous methods: to provide routine assistance such as poisons, fertilisers, and food subsidies, also in the form of incentives, capital assistance and other agricultural inputs.

For them, introducing a new product requires considerable costs. So, it is appropriate that the government focus on existing products and expand to a greater extent. Including helping farmers to expand their markets. This is because introducing new agricultural products requires other more significant costs.

b. Public-private collaboration in this sector

Concerning collaboration with private and corporate parties, the agency always strives and looks forward to cooperation. They have always adopted a door policy for the private sector to engage in agricultural activities.

“Indeed, at FAMA, we had made various public-private cooperation efforts when I started working ten years ago if we look at durians at a price of RM3-5/piece. So, at that time, it emerged how to deal with the problem by establishing collaboration with the private sector. Now we (FAMA) are thinking about how to frame cooperation with the private sector to facilitate the people and benefit and increase our results.”

For them, private participation is crucial for all agricultural production and animal husbandry stages, especially for marketing products.

“To me, we desperately need private involvement. Because of the market, we significantly involve the private sector in revenue. In contract farming, such as poultry farming, and vegetable crops, we also use third parties to increase agricultural inputs.”

This is because they are aware that the critical issue facing farmers and breeders is the market. The strategies to reduce dependence on middlemen also require the involvement of

the private sector. In addition, they are also needed to help share new technologies with agencies and communities to be together on food security issues.

“Although we are towards high-impact and fully 100% commercial projects, we also look at both aspects. The framework of the project proposal not only involves the private sector. However, this ECER is under government agencies, but most of these projects affect the public sector, and it runs commercially as it involves estate investment from the private sector.”

In contrast to SMEs' view, agencies do not help to connect them with private parties. On the other hand, SMEs need to find and explore their own, especially concerning marketing, if there is even a little help, that is, by giving a list of potential company names.

“They could not help finding a market in terms of marketing. Even so, they only give us phone numbers and ask us to take care of ourselves.”

Efforts to establish more severe cooperation between private agencies and entrepreneurs did not occur. As for SMEs, the government has the authority to do just that.

“In my experience, there has been no effort to collaborate with the private sector: all marketing and processing we do ourselves. We need to do a market study first; then, we can start planting. Because if we want to think about dependence on the government, we will not get any results.”

The community relies heavily on the government if they are desperate to market its products. There are not many initiatives of their own to connect with the private sector. If anything, it's just a relationship with a small private party. Among the reasons is that the community is not convinced to engage with the private parties, especially when it comes to production on a large scale. They worry that they can't afford to meet the demand. This includes the lack of quality and cost of rounding. However, they believe that the agency needs to be a liaison for interaction with the private sector.

c. Mechanism of a periodic dialogue between the regional government officials and the affected stakeholders to understand the problems and identify possible opportunities for improvement in the sector

The agency shares that interagency interactions are regularly implemented in various platforms. Especially if there is the implementation of the same project, focus, location or community. Frequent interactions are encouraged to facilitate administrative and operational affairs in the field.

“If at the state level, FAMA cooperates with KESEDAR through the state level Contract Farm committee meeting to ensure food supply. For example, many lands have not been developed and have not been determined for crops. So, we discussed with KESEDAR the possibility that we will lack banana stocks in the next six months, so with the undeveloped land, we will start planting bananas; if there is less watermelon, we will plant watermelon and so on.”

However, interactions with other parties, particularly with SMEs, communities or stakeholders, are carried out for specific needs. This includes monitoring and listening to the problems faced by them. In addition, their interaction with the groups they guide to implement projects is also frequent.

As for SMEs, label agency interactions with other parties, including with SMEs, are very weak. Their interactions are more one-way, and there is rarely a genuinely effective dialogue between agencies and SMEs. As for SMEs, regular conversation is essential for many things. This includes sharing information, monitoring, and troubleshooting. On the other hand, the reality for SMEs, many unresolved issues due to a lack of dialogue or interaction.

“After I planted, they did not come down to the field to discuss the problem with us; I called them to come down to the area. So far, no government agencies have come forward. I take care of everything myself. In my opinion, they need to improve communication with the community. Previously, some agencies had issues of misunderstandings with the villagers involved in the agricultural project. Therefore, the agency no longer affected the farmers who had already planned to participate in the meeting to re-implement the project.”

Communities also say the same thing, which they say often there are hidden conflicts between the community and the agency, especially with project operations, assistance and marketing. Especially in marketing, responsible agencies tend to take low prices and choose certain qualities. As for the community, they care about the approach they get through producing their agricultural products or animal husbandry.

“Once in the meeting, I was angry at the PELADANG Organisation. I planted honey lime and subtracted the price from a wholesaler for RM3.50. But the PELADANG Organisation marketing team wants to ask for a contract signing for grade A honey lime for RM2.50. It was 2004-2006. This happened during a meeting at the lower level involving the PELADANG Organisation and FAMA.”

The community also states that interaction with agencies only takes place if needed. Even for them, most interactions only occur informally, and on the other hand, formal interaction is scarce. Sometimes only certain people are selected to interact formally with the agency

through a particular medium. This includes incidentally if they attend a specific course managed by the relevant agency.

“There’s no dialogue—regular this dialogue in the name of unity. An association will select a decent and capable person to go into dialogue. But if the association doesn’t exist, how to send a representative to the dialogue? You can’t choose indiscriminate people to talk.”

Dimension 4: Analysing the scope of improvement and key lessons

a. Main strengths of agricultural strategy policy at the state level

For agencies, one of the strengths that the agency has is the policy itself. This is because, with the policy in place, each agency is aware and knows its direction for a certain period. And then, it is translated data, a form of KPI that the agency needs to achieve. At the same time, the policies being formed for agencies are also constantly improving compared to the previous policy. It is adapted to earlier achievements and needs in the future.

To implement the policy, he noted that, among other strengths, there is a collaboration between agencies. Whether at the federal level or the state level. They acknowledge the bureaucratic red tape, but it can be solved well.

In addition, among the other strengths is that the agency always strives to increase innovation through research conducted by a specialized organization, MARDI. MARDI shares with other agencies at various levels to use their inventions.

As for SMEs, the main strength of the agency is good policy. They have significant funds to implement the policies that are formed. They even have specialized agencies and officials to ensure their planning is feasible. Even for SMEs, the agency also has an agency organizational structure as well as excellent and structured.

“The first strength is funding. To me, the structure and policies of our government are good enough. For example, the Local Farmer’s Organisation Authority (LPPK) is the best community development. At the policy level, it is good, only inappropriate in terms of policy enforcement”.

However, SMEs still need to focus on implementing and monitoring projects. At the same time, agencies also need competent officers who can give them the right advice to implement projects and profit from them. In that way, not only can food security policies be realized, and communities benefit, but they will also be able to explore the internal resources of the expandable community.

“In community development, we need to develop local resources. For example, we can focus on backyard farming; each family can farm, grow fodder, and create a community-based processing place, one centre for one community. Suppose the government makes each zone have its own agricultural production identity, for example, in the Bachok district. In that case, the chilli planting area, the paddy plantation in the Tanah Merah area, does not plant chillies but makes other vegetables. In the Kuala Krai district, make other unique plants as well. So, the effect is that each zone has crop rotation, and there will be no crop overlap. So, to me, if we do it this way, the guarantee and supply for us will be enough.”

As for the community, the main strength of the agency is that they have a lot of funds and are constantly working to help the community by introducing various incentives. This action will directly strengthen the community's spirit to continue to engage in agricultural activities and further expand their enterprises. However, for the community, another factor that helps to develop agriculture and animal husbandry at the community level is the existence of clubs among farmers or breeders. Clubs like this will provide support to farmers and breeders if they are faced with a problem and find the correct information.

“So far it’s easy because we have a club. All members join no matter from any place. For example, if it’s time to enter the seed, the people of Kota Bharu can’t come, we can find the Rantau Panjang people.”

b. Policy domains are missing and need to be included in state level policies

Agencies are aware that they need to improve their work. Concerning policy, they are confident that policies will continuously improve based on the input provided and the potential in the future. However, in reality, three things are lacking in existing policies. First, the accessibility of information. Agencies realize that most of the target groups or stakeholders are not aware and may not even know in depth about the policies being implemented by the government. Among the reasons is the information that did not arrive. This for the agency should be improved in the future.

The second drawback is a collaboration with stakeholders, especially with the private sector. They are well aware that it is not easy to collaborate with this party, among which is the readiness of farmers or breeders. Specifically, marketing issues need severe and consistent farmers to engage with the private sector, especially to meet the market's needs.

And the third drawback is the monitoring of the project. They reiterate their shortcomings, among which is the lack of staff to monitor large farmers or breeders in a large area. This shortfall makes the policy seem weak and challenging to achieve.

The SME view acknowledges that many parties like to move alone and not in groups. Many of the reasons, among them, are the experience of group ventures that can quickly fail due to lack of spirit of cooperation and non-cooperation.

“There is a way, but there is a problem with most Kelantan farmers running solo, and what I want to do is unite the farmers. Only in that way can we monopolise prices and markets. We cannot let individuals (farmers) move independently; we need to help and teach marketing. To me, this one needs to be re-evaluated.”

Among the other shortcomings in implementing the policy is the difficulty of breaking the monopoly. SME mentions that among the critical issues in marketing is the monopoly of certain parties. For them, it's not a middleman issue that needs to be paid attention to. But there are groups of individuals interested in controlling resources and market flows to make maximum profit. This for SMEs is lacking in the existing policy.

“Government agencies may need to take over the Chinese companies caring for these farming contracts. So that the government can curb the problem to protect the fate of the village farmers because most of them can only afford the lowered crop prices.”

In addition, for SMEs, the policy is weak in determining who has the potential to be involved in agriculture or animal husbandry and has the potential to expand further. On the other hand, policies are more likely to adopt a try-and-error approach that ultimately causes the government to lose commitment, focus and funding.

About middlemen the government's approach to fighting middlemen is accurate. It is better to create more middlemen in the community, mainly to deal with dumping issues and the product market. Thus, the lack of policy is not to harmonize relations with middlemen but rather hostile to them.

“Instead of the government spending money on marketing of various kinds, it is better for the private sector to do marketing more effectively. Because government officials are profit-oriented, they (officers) are monthly oriented and get a monthly salary; otherwise, they do not do their work and still get a monthly salary.”

Finally, for SMEs, the policy focuses less on impactful research, which results from studies that can help farmers or breeders. Instead of conducting a survey that is in the form of its shock.

“The government departments and the central government must consider, for example, 2 million pineapple crops, so where is the direction of these 2 million pineapples? What do you want to do with the rest besides being sold? It should be able to be taken to the factory for

processing. Even if the price is low, it is better than the result of being left spoiled and wasted. I suggest and recommend UMK as a catalyst for agricultural research, especially under the Faculty of Agro-Based Industry.”

For the community, notably lacking in government policy or planning is the delivery of information, implementation and monitoring. The community acknowledges that planning is good, but all three things are weak, making policies ineffective to help farmers and breeders address food security issues. Significantly, the community is unaware of the existing or new plans the government plans. Finally, many missed opportunities.

“The policy made by the government is pretty good just in terms of unsatisfactory implementation. We never know what problems they’re facing so much that they don’t come to visit us. We’re just waiting for them to come.”

In addition, for the community, the policy is to choose only successful projects. Whereas a failed project or a troubled farmer, they did little to help him. On the other hand, if there is a successful project, the government will regularly contact the project to obtain credit from it. Significantly for the community, policies are always exchanged. This includes constantly converting an existing project to a new one. This makes current projects poorly implemented.

“I’m a little disappointed with what happened because the government has an allocation of resources to help farmers, but it’s not informed. It’s supposed to be like it’s for help. They do not consider from the beginning, and we begin to plant. They come after we’ve made it. That one we don’t want. For me, they all want names.”

c. The way stakeholder participation in the review or revision process be made effective and efficient

The agency has a wide range of resources to make the assessment and improvement of existing policies more efficient. Agencies have certain groups that constantly evaluate implementation at the field level. This includes obtaining resources from specific target groups, agencies and participants involved. They also involve special committees from the same or different ministries.

“At the DOA level, we also need to look at the target group for food security and commercial food. Under FAMA, there is a special committee under MAFI. Their role is to monitor what food resources are in short supply this month, so under MAFI, there are complete agencies such as LPP, JPN, KADA and MADA. Once we identify what foods are in short supply, we inform this department of which food sources are in short supply.”

However, they admit that there are times when they do not have enough data from farmers or breeders. Among the reasons is that there are some farmers or breeders who do not share the correct information with them.

“At the departmental level, we do not get accurate farmer data from the agency. What I found after they got the MyGAP certificate, they kept it at home only.”

As for SMEs, they are involved in agencies that need to include people who are indeed experts and are practically applied. SMEs do not deny that agencies have their records and field reports. However, they still need to consult entrepreneurs involved in agricultural or animal husbandry activities for a long time to ensure that their policies are well-evaluated and ultimately efficient.

“I suggest, if you want to do it right, look for participants who have ventured into the industry, and we help expand their farms and farm capacity; we develop the potential that they already have.”

SMEs inform that the agency regularly refers only selected individuals. Especially for people with no conflict with agencies and people who have succeeded only. On the larger side, the SMEs found that the agency failed to compare with the prosperous country. They are more comfortable with the existing approach and don't want much change.

“So far, there has not been any action from department officials. They never get off the ground explaining any government's policies, policies, or plans to farmers or breeders. To me, they don't work. They do not perform the proper duties and only eat the salary. If they understand the role, they've come down to visit us all because theoretical and practical have to do it in the field.”

The community, on the other hand, has a lot of input. Including the reality of operations on the ground, complex issues and more. However, they are not consulted much by the agency. Even the community is cynical about the data obtained by the agency, from which they are not sure where their source is derived. This is because not many agencies refer communities to get data.

“I don't know about the review. For me, it doesn't work. They're supposed to collect information from the villagers. If such a situation drags on, our peasant economy will not prosper.”

STATE LEVEL FINDINGS : SABAH CHAPTER

Introduction

Sabah, one of the thirteen states in the federation of Malaysia, is a resource-rich state. The primary sector comprising agriculture, plantation, forestry and petroleum is one of the main contributors to the economy. Given its resource abundance, Sabah contributes significantly to the country's gross domestic product (GDP), and Sabah is ranked the fifth highest contributor to the Malaysian GDP for the past decades. This state also contributes significantly to agriculture sector primary palm oil. Although the state contributes vastly to the country's agriculture sector, the focus is mainly on industrial commodities. Sabah continues to rely upon imports on food crops, though not all but rice constitute one of the major imports in these states.

The paddy and rice sectors in Sabah have always remained as one of the important agendas in Sabah's agricultural development. Compared to Peninsular Malaysia, Sabah's paddy and rice industries are still underdeveloped. This mainly due to the priority of the government focusing on industrial crops, particularly palm oil, timber, and cocoa. In general, close to 70 percent of the land uses planting industrial crops. Prioritising industrial crops, especially palm oil has made the state a primary contributor to the industry in Malaysia. When palm oil is deemed a key export earner, vast land has been converted for palm oil plantation. Converting land for industrial crops makes less land for food crop production especially paddy, pitting with paddy plantation, which requires a longer period to yield as compared to palm oil, most companies ventured into the palm oil industry. Conversion of land putting strain on food crops especially paddy.

Despite this situation, the state government has always increased the effort and measures to boost domestic production and aim to raise the self-sufficiency level (SSL) of rice in Sabah due to its nature as the state's staple food. Various programs were rolled out for the past decades to improve paddy production and capacity, but effort to expand this sector remains lacklustre, in fact the objectives to achieve 60 percent SSL since 1990s until now has yet attained. The current rice SSL is 22.8 percent. The pandemic-induced crisis alone has disrupted food production chains. Lockdown and trade restrictions have disrupted the food production supply chain and raised the concern over accessibility of food supply, especially Sabah which depends on rice import. The state government reiterates the importance of food security, putting emphasis on expanding the food sector in order to achieve the intended SSL for the state.

Methodology

This section discussed on the data collection of this study. In moving toward achieving the research objectives, the focus group discussion (FDGs) has been conducted in three districts known as 1) Kota Belud, 2) Tambunan and 3) Kundasang. Kota Belud and Tambunan are two districts that largely contribute to the paddy production in Sabah. Most of the citizen are highly depends on the paddy as their source of living. The paddy production in Sabah is dominated by Kota Belud which produced almost 60% and also under the project of Jelapang Padi (paddy granary) that manage by the Integrated Agriculture Development Area (IADA) Kota Belud. This program allocated with RM350 million in the 11th Malaysia Plan (RMK11) that involves an area of 5,700 hectares cultivated by more than 3,600 farmers. Additionally, Tambunan district is also known as the “rice bowl” district in Sabah. Tambunan has high potential for paddy development since most of the areas are categorized as K1 (DID irrigation facilities available) and K2 (DID irrigation facilities available but insufficient supply). Kundasang on the other hand is the largest contributor to the vegetable production in Sabah due to the suitable climate. Therefore, the informants were chosen among the farmers and SMEs in the three districts and stated below:-

No.	Category	Sample Size
1	Agencies	7
2	Small Medium Enterprises	20
3	Farmers and community	12
Total		39

Findings

This section is categorised into four dimensions: 1) mapping the policy promulgation landscape; 2) analysing the policy implementation framework; 3) reviewing the outcomes of policies on rural economies; and 4) analysing the scope of improvement and critical lessons.

Dimension 1: Mapping the policy promulgation landscape

a. Ministries and departments that oversee food security issues

State Level Agencies

Ministry of Agriculture and Fisheries Sabah (MAF)

The agriculture sector in Sabah is under the purview of the Sabah Ministry of Agriculture and Fisheries (MAF). The ministry advises the state government on matters related to development and the agricultural industry, and as administrator, it oversees the allocation of

supplies and the development of departments and agencies under its jurisdiction. Departments and agencies under MAF include the Department of Agriculture (DOA), the Department of Veterinary Services (DVS), the Department of Fisheries (DOF), the Department of Irrigation and Drainage (DID), the Sabah Rubber Industry Board (LIGS), the Rural Development Corporation (KPD), and the Sabah Fisheries and Fishermen's Progress Cooperative (Ko-Nelayan). The ministry is responsible for collecting and updating agricultural information resources for planning purposes and ensuring that state resources are utilised efficiently and optimally. It is the ministry that is responsible for formulating the state's agriculture policy and ensuring the implementation of the policy is carried out to achieve policy objectives. For this study's purpose, in the food crop subsector, namely paddy and vegetables, only the DOA is involved in the data collection processes.

Sabah Department of Agriculture (DOA)

The Department of Agriculture (DOA) is responsible for matters related to food crop production and development. Findings revealed that DOA oversees paddy plantation development in terms of crop production, soil survey and investigation, agricultural extension services, seed production, plant protection, and agricultural subsidy schemes other than the fertiliser scheme. There is a section specifically focusing on paddy, which is the Paddy Plantation Development Section under the Development and Expansion Division. The section is responsible for planning, implementing, and coordinating subsidy programmes for paddy field ploughing, rehabilitation of abandoned paddy field projects, coordination, and monitoring of paddy hills, as well as state and federal ad hoc programs. One unanticipated finding was that the section has only four staff, which consists of one assistant director of agriculture, assisted by one agricultural officer, a senior assistant agricultural officer, and one support staff member to oversee paddy plantation development in the state.

It was found that DOA is undertaken on all food crop agricultural research and development, and there are four agricultural research centres located in Tuaran, Bukit Quoin Tawau, Lagud Seberang Tenom, and Ulu Dusun Sandakan, but only the Tuaran research centre is focusing on paddy and vegetable plantation crops. While Pusat Pengeluaran Benih Padi (PPBP) in Timbang Menggaris, Kota Belud is responsible for producing and supplying paddy seeds to the farmers in the state.

Federal Agencies in Sabah

Farmers Organization Board (LPP)

LPP is an agency under the federal government that is responsible for managing the organization's resources, its members' socioeconomic development, and legislative matters. Important findings revealed that LPP is providing assistance schemes and agricultural

incentives in the paddy plantation sector, including the federal government's paddy fertiliser scheme and paddy pesticide scheme for paddy plantation development. Additionally, LPP provides ploughing and harvesting machinery assistance that is channelled through the Pertubuhan Peladang Negeri (PPN) and Pertubuhan Peladang Kawasan (PPK). There are a total of 26 PPKs in Sabah. These PPN and PPK are in charge of distributing fertiliser and pesticides, as well as providing ploughing and harvesting services to farmers and small- to medium-sized enterprises (SMEs) who have registered as members. In addition, DOA supplies their machinery and gives it to LPP for execution.

Integrated Agriculture Development Area (IADA)

IADA, which is based in Kota Belud, is another federal agency focused on paddy plantation development in Sabah. IADA has been operating since 2013. It is a collaborative effort between the federal and state governments with the aim of expanding paddy production and the rice industry in the state. The area encompasses 10,000 hectares of paddy plantation land and is only responsible for coordinating the paddy granary area in Kota Belud.

Their main functions are to enhance agricultural infrastructure, especially irrigation and drainage systems in agricultural areas, strengthen agriculture support services and systematic agriculture management, and coordinate advisory and extension services to paddy farmers in Kota Belud through the development program. Initially, the state government allocated 10,000 acres of paddy plantations; however, a change of government has caused the decision to be revised. According to the findings, IADA is only in charge of 7,500 hectares of paddy planted area in Kota Belud.

b. Policies related to food security at federal and state level

Sabah is one of the federation states in Malaysia. The Malaysian federation, unlike those in Indonesia, the Philippines, and the United States, is centrally organized, which is known as an asymmetrical federation. Most economic planning and development plans are under the purview of the central government. The federal constitutions provide the federal and state functions, respectively, under the Ninth Schedule. The Tenth Schedule detailed the revenue collection based on the jurisdiction of the federal and state governments. It is obvious that the federal government has a broader scope for revenue collection than the states. When compared to state governments, the federal government has more responsibilities and functions. This gives the central government broad administrative functions and fiscal centralization. Therefore, most policies are decided by the federal government and extended to the states.

Although power is concentrated at the federal level, to a certain extent the state has its own autonomy (such as in land issues, religious issues, agriculture, and immigration, among others), thus there is a policy space for the state government to formulate its own policy terms. Sabah formulated its first agricultural policy in 1992. The development of the state agriculture policies is greatly influenced by the direction of the national agriculture policies, i.e., the First National Agricultural Policy (NAP1), Second National Agricultural Policy (NAP2), Third National Agricultural Policy (NAP3), National Agrofood Policy (NAFP), and National Agrofood Policy 2.0 (NAFP2). Sabah's agricultural sector has always followed national trends while taking advantage of local resources. The state has formulated four agricultural policies to promote the sector, which include the Sabah Agriculture Policy (SAP1), Second Sabah Agriculture Policy (SAP2), Third Sabah Agriculture Policy (SAP3), and Sabah Agriculture Blueprint (SAB).

First Sabah Agriculture Policy (1992-1998) (SAP1)

This policy combines the new development philosophy and direction as contained in the Second Long-Term Plan Framework (Rangka Rancangan Jangka Panjang Kedua, 1991–2000), Vision 2020, and the Sabah Long-Term Plan Framework. This policy is to replace the "Policy Recommendations on the Orderly Development of Agriculture in Sabah" (PRODAS) of 1984, which was advised by Sabah's Agricultural Advisory Council. PRODAS was implemented while Sabah's economy was growing at a rate of 6 percent per year. The contribution of agricultural and livestock production to the state's GDP increased from 12.6 percent in 1980 to 25.4 percent in 1990, while the fisheries sector decreased from 2.1 percent to 1.9 percent. The overall increase in the contribution of agricultural production was largely due to the rapid development of commodity crops such as cocoa, palm oil, and rubber production as well as the steady increase in livestock production. Overall, PRODAS has been successful in accelerating agricultural growth and increasing the sector's GDP contribution. However, the development of agriculture-based industries is relatively slow, to the point that part of the export of agricultural products is in primary form. The development of the agricultural sector is also more in favour of exporting commodities, while food production grows only slightly.

The aim of SAP1 was to address the significant shortcomings of PRODAS in addition to continuing efforts to accelerate the transformation of the agricultural sector, livestock, and fisheries towards a modern, commercial, and sustainable sector, which was aligned with the Second National Agriculture Policy (NAP2) to transform the agricultural sector into a modernized, commercialized, dynamic, and competitive sector, which anticipated the creation of a market-led and efficient agribusiness, farms and enterprises producing innovative products and processes, and to expand food production in the state. The main objective of this policy is to maximise income through the optimal use of agricultural,

livestock, and fisheries resources to contribute to the GDP and economic growth of the state. The specific objectives include increasing productivity and the ability of farmers and fishermen to earn income, increasing the growth rate and efficiency of the agriculture, livestock, and fishery industries, and increasing the level of food production.

Second Sabah Agriculture Policy (1999-2010) (SAP2)

SAP2 has been formulated to ensure that the state's agricultural development policy is in line with the new Third National Agricultural Policy (1998-2010) or NAP3. The overarching goal of SAP2 is to maximise income by making the best use of the sector's resources in order to sustain and enhance their performance. The objectives of SAP2 is to transform the smallholders into a more commercial and dynamic sector, to increase efficiency and productivity of the agriculture sector, to increase the level of domestic food production, to accelerate the development and growth of local agro-based downstream, to enhance processing and manufacturing industries, to promote a globally competitive agriculture, to strengthen essential economic foundation and basic support services, and to adopt a sustainable development. Five fundamental approaches were applied to realise the policy goals, which includes (i) optimum utilization of the sector's resources; (ii) acceleration of agro-based industries development; (iii) intensified research and development; (iv) human resource development; and (v) development of efficient marketing systems and strategies.

Third Sabah Agriculture Policy (2015-2025) (SAP3)

SAP3 retained the basic principles of SAP2. The state came out with nine "key focus" agriculture areas, with paddy and vegetables being the primary focus. The focus of policy is to enhance food security, strengthen production output, and sustain the economy's resources and environment. The objectives of SAP3 are to enhance food security by achieving a minimum production growth rate of 3 percent SSL annually for food crops, livestock, and fisheries products, thus increasing farmers' and producers' income to RM4,000 per month per household.

The current study found that SAP3 has started to emphasise sustainability in food production and increasing farmer's income to achieve food security. The policy document is presented with a more comprehensive approach as compared to the previous two policy documents. Specific sectoral policies for the key focus areas of the SAP3 were identified after taking into consideration the overall key issues and challenges, prospects, and the formulated policy's strategic goals. Food crops, industrial and other economic crops, agroindustry, livestock, fisheries, and agrotourism are the primary agricultural areas of focus. The highlighted food crops are paddy, vegetables and fruits, coconut, maize, mushrooms, herbs, and apiculture. It was found that paddy remained the agricultural sector's most significant crop. The state

government continues its efforts to increase paddy production in order to achieve 60 percent rice SSL by concentrating on strengthening 14 enablers, which include infrastructure, manpower training and development, mechanisation and technology, agricultural R&D, agriculture extension, land development and management, processing facilities, marketing, IP and regulations, credit assistance, the environment, inter-agency collaboration, subsidy, and biosecurity.

Despite all the strategies implemented by the state government, findings revealed that paddy production is still growing at a slow rate. SSL was recorded at 22.8 percent in 2020, and Sabah continues to import approximately 70 percent of its rice to meet the local demand.

Sabah Agriculture Blueprint (2020-2030) (SAB)

The Sabah Agriculture Blueprint is the aspiration of the new government. The blueprint was launched in 2020, and the direction is aligned with the objectives of SAP 3. The objectives of SAB are to increase productivity, quality, and revenue of Sabah's agricultural industry by promoting and investing in innovation, research and development, and expansion; to support a competitive and productive food industry, to increase access to high-value global markets by acquiring new markets, maintaining existing markets, and addressing barriers to trade; to recommend the sustainable management of Sabah's natural resources; and to develop programmes and incentives that will encourage the participation of young agropreneurs in the agricultural industry. It was found that SAB is a mirror of SAP3, and the policy document is presented in an infographic approach with visualisation-like images and minimal texts for an easy-to-understand overview of the policy document.

It is important to highlight that the four state agricultural policies are in line with the direction of national agricultural policies. Historically, Malaysia has prioritised the development of industrial commodities with higher export values, specifically oil palm, rubber, and cocoa. Sabah, as a state under the Federation of Malaysia, is not excluded. In the 1980s, vast areas of degraded forests in Sabah were degazetted and cleared for oil palm cultivation. In the context of agriculture plantations, vast land has been prioritised for industrial crops, specifically oil palm. It covers 87.8 percent, or two thirds, of the agricultural land in Sabah. The analysis' most obvious findings are that a lack of land to cultivate food crops, as well as the state government's limited focus, have contributed to a lack of supply and increased reliance on imports. This could make it challenging for the state to achieve higher levels of self-sufficiency.

In the context of rice, all the state policies were intended to achieve 60 percent rice SSL. According to the policy document, it was identified and acknowledged that issues and challenges related to land, infrastructure, machinery, extension services, research and

development, and technology advancement were the causes of slow growth in the sector. However, reports have shown that throughout the policy implementation period, the rice SSL decreased to 33.3 percent in 1992, 33 percent in 2000, 25 percent in 2015, and dropped to 22.8 percent in 2020, while Sabah achieved the highest SSL in 1980 (51.2 percent). These figures further support the idea that the country shifted its focus to industrialization and thus sidelined the food crop subsector's development.

When the focus shifted to other lucrative crops, the investment in supporting infrastructure such as drainage and irrigation, research and development, extension services, and machinery became limited. For instance, the total area of paddy plantations that have good irrigation and water supply availability is only 11,649.95 hectares (or 32 percent), while another 11,933.34 hectares (33 percent) have basic irrigation and drainage facilities but water is not always available, and 12,927.17 hectares (35 percent) are dependent on rain fall.

It was revealed that the available paddy seed varieties are too old. TR8 and TR9 have been around for more than 20 years, in contrast to Peninsular Malaysia, which frequently produces new varieties. Findings showed that the state government forbids seeds from other states to avoid disease but is not producing new varieties timely enough to support the sector as well. A possible explanation for these may be the lack of funding for research and development due to the lack of priority in the paddy sector.

“Seeds are provided by the agriculture department. The state government has a policy not to allow seeds from outside of Sabah. The seeds that are available now are also too old. TR 8 and TR 9 have been in use for over 20 years. There are new seeds every three years on the Peninsular, but not in Sabah. Moreover, the state government policy does not allow seeds from outside because they fear diseases”

Additionally, another finding was that the number of machines provided by the state agency is still inadequate. In Sabah, Persatuan Peladang Negeri (PPN) (under LPP) is given responsibility to handle the machinery and is divided into three branches, each of which is responsible for providing ploughing and harvesting services to the farmers in approximately nine districts (Kota Belud, Kota Marudu, Pitas, Papar, Kuala Penyu Keningau, Tambunan, Tenom, and Nabawan) in Sabah. Obviously, the limited number of machines cannot cover all of the areas. The outcome indicated that the state government made little concerted effort to develop the rice industry and limited investment in all areas of the rice production system. Thus, the impact led to low production, low rice SSL.

c. The understanding of beneficiaries on the jurisdiction of each agency

The informants mentioned that historically, the assistance and subsidies that they have been receiving are the same, such as subsidies for paddy field ploughing and fertilizers. The policy emphasises the use of mechanization, but most farmers do not receive this kind of assistance from government agencies.

“... I’m 47 years old, the government provides the same pesticide ever since I know what pesticide is ...”

In terms of machinery and technology, farmers have not used technology for paddy production, and there are only a few ploughing and harvesting tractors available.

“As for now, I’ve never received any technologies and machinery services from the government, we manually harvest our rice, we work together...”

In terms of extension services and technical advice, the extension officers should act as the "solution provider" between farmers and agencies. The research revealed that farmers were not given instructions on how to fill out applications for the Young Agropreneur Grant (Geran Agropreneur Muda), which is a government programme that provides funding for farm expansion. The government officers only provide the application form; they do not take on the responsibilities of assisting and guiding them to ensure the application is submitted in order to be eligible for government aid. The farmers didn't insist on approaching the government officers for assistance either.

“...the staff in the agriculture office in this district asked me to fill up form to apply for financial assistance, but they don’t guide me how to fill up, they said this is from head office, head office will process, we just being asked to distribute this form, anything you ask the head office, so I did not apply...”

In some cases, farmers are asked to pay delivery fees for fertilisers delivered to their farm, despite their lack of knowledge about their rights or the role of the government agency in distributing government subsidies.

“They will deliver the fertilizer and pesticide, but they will charge for the delivery services ...”

Based on the findings, farmers and SMEs are unaware of the role of federal and state government agencies. The farmers are depending on their representatives as a medium for spreading the information or assistance from the agencies. Although extension services are emphasised in the agriculture policy, farmers seldom receive "proper" assistance from government agencies.

d. Policies formulation approach

Findings show that most policy initiatives come from top management. Although state officials conduct talks or seminars, which are seen as a bottom-up approach to getting policy input, the platform for giving input and sharing ideas is not where real decisions are exercised but rather where most policy preferences and ideas come from the top management.

“...if we plan our program but there is no support from the federation, it will not succeed, especially if it involves the federal interests.”

“We suggested to the state government, a new area for paddy plantation to increase local production and SSL... We are not decision maker, not policy maker. We don’t have the strength and that is our weakness. We have suggested, but we cannot enforce, because we need the strength of the state government...but everyone want to plant oil palm, so they approved the area for oil palm plantation instead”

These findings support the notion that the political setting is crucial in policy making processes. For agriculture policy, the political leader plays a significant role in setting preferences for industrial crop or agri-food crop expansion. This includes land negotiation and the channelling of resources, especially funding for agricultural development (for example, infrastructure projects related to agricultural development). In the case of Sabah's agriculture sector, the agro-food policy tends to be superseded by industrial crops, which are deemed more lucrative.

Dimension 2: Analysing the policy implementation framework

a. Have food security and nutrition considerations been explicitly included in the different recent and past federal and state agriculture policies?

Every state policy developed, as discussed in Dimension 1, supplements federal policies. Findings showed that the national and state-level policies formulated are aimed at increasing food production for local consumption. Sabah's first agriculture policy was formulated in 1992, which is in line with the Second National Agriculture Policy (1992–1997). SAP1 emphasised the importance of increasing domestic rice production (to a minimum 60% SSL) to meet local consumption needs and increasing fruit and vegetable production for local and export markets. However, during NAP1 and NAP2 (between 1985 and 1995), the government's policy was going towards an industrial economy and aspired to realise the long-term policy of Vision 2020. Findings showed that to realise the vision, government policy had to shift from an agricultural to an industrial economy. So, when the priority has shifted, the

investment is focused on agriculture commodities that would support industrial growth and bring higher export values, while food crop production has been neglected.

The Sabah Second Agriculture Policy (1999-2010), or SAP2, is based on NAP3. Following the financial crisis of 1997, NAP3 was introduced. The national agriculture policy started to mention food security during NAP3. The goal of NAP3 is to maximise farmer income through optimal resource utilization, improve food security, increase sector productivity and competitiveness, deepen links with other sectors, create new sources of growth within the sector, and conserve and use natural resources on a sustainable basis. It was mentioned that food security should be given prioritisation, but in NAP3, the food production is encouraged to be large-scale and for commercialization, meaning that the production is focusing on export purposes rather than local consumption to increase self-sufficiency. SAP2 also recognises the important role of the private sector, specifically in commercial food production and in the development of locally based agro- and resource-based downstream and manufacturing industries.

However, findings revealed that during the implementation of SAP2, Sabah has made significant progress in terms of industrial crops such as oil palm, cocoa, and rubber, with oil palm being the most widely planted crop compared to rubber and cocoa. In contrast, it was observed that the development of agricultural food crops was rather slow and was left behind, such as rice, fruits, and vegetables, in terms of their self-sufficiency level. During SAP2, our findings showed that the average rice SSL was 32.23 percent, which was below the minimum 60 percent target. SSL of vegetables was reduced to only 50% in 2012, and it was discovered that vegetable plantations are made up of 80 percent of small farmers who dominate the industry. While fruits maintained a high level of SSL (90.19 percent), it was discovered in this study that exports of fruits have decreased and local preferences for temperate fruits have caused imports to increase.

The Third Sabah Agriculture Policy (2015-2024), or SAP3, was then established to address the shortcomings of SAP2. Findings showed that the SAP3 was developed in accordance with the National Agro-Food Policy (2011–2020), the National Commodity Policy (2011–2020), the Government Transformation Programmes (GTPs), and the Economic Transformation Programmes (ETPs). The agriculture sector is one of the key sectors driving economic growth and development in Sabah, especially in alleviating poverty, creating jobs, and ensuring food security. At the national level, food security became a concern following the 2007-2008 food crisis, which resulted in high food prices. Similarly, according to the SAP3 document, the policy has food security as its main objective, along with strengthening productivity growth and competitiveness of selected agricultural focus areas and ensuring long-term economic

resources and environmental sustainability of food crops, fisheries, livestock, industrial crops, and other economic crops, including agrotourism.

In this study, it was found that the issues and challenges during SAP2 (1999–2010), such as poor infrastructure and facilities, the growing limitation of agricultural land, the lack of adequate water resources for agricultural production, and the lack of coordination and collaboration among implementing agencies, were the cause of financial constraints and other development priorities of the state. Therefore, the state government created strategies to address these problems and continue to emphasise the development of the subsectors, including paddy and rice production, fruits and vegetables, fisheries, and livestock.

b. Has there been any impact assessment of these federal and state policies? If yes, the to what extent have these policies been implemented? And what has been their impact?

Findings from this study found that in 2021, the state Department of Agriculture had implemented a programme on technology adoption geared towards increasing the yield of paddy production. It was the first programme that served as a guideline for farmers on the method of applying technology and good agriculture practices on wet paddy plantation. The DOA has implemented seven (7) programmes in six (6) districts, including Kota Belud at Kampung Piasau; among others are Kota Marudu, Beaufort, Papar, and Tenom. The allocation for the one-off programme was funded by the state government. It was a one-off programme and not a programme under the Malaysia Plan. The programme consists of introducing the use of drones in paddy plantations for spraying pesticides and liquid fertilizers. This method could help to spray the paddy evenly, avoid stepping on the paddy that could cause damage, and make it safer for the elderly to go down to the rice fields. Apart from that, guide the farmers on the usage of rice input sufficiently; currently, they only use subsidised input from LPP. It was revealed that the result is encouraging; the crop yields produced are between 3-7.5 metric tonnes. Therefore, DOA has planned and presented the project of using drones in paddy plantations to be implemented in the 12th Malaysian Plan.

“I have planned and the department has agreed to introduce drone technology on dry land paddy projects. Only, now it has not yet been approved.”

c. What are the conflicts and or complementarities between sector objectives and food security and nutrition objectives?

As discussed earlier, state agriculture policies are in line with the national agriculture policy at the federal level. The policies complement the federal-level policies' objectives and directions. However, during SAP1 and SAP2, the federal government is focusing on the industrial economy, and the priority is on the industrial commodities, namely oil palm, rubber,

and cocoa, as these commodities contribute to the industrial sector and provide a higher economic return. Since industrial crops and food crops share the same resources, such as land, the priority crops are given an allocation of land to expand their plantations. This has resulted in less land for food crops.

During SAP3, food security has been emphasized, which complements the National Agro Food Policy 1.0. It is past time for the government to increase food production and reduce reliance on food imports. During SAP1 and SAP2, however, oil palm dominated two-thirds of agricultural land, covering 87.7% of the land, followed by rubber at 9% and cocoa at 0.2%. While agro-food crops, such as paddy on 39,426 hectares (2%), vegetables on 4,312 hectares (0.2%), and fruits on 19,108 hectares (1%), are left with a smaller area for cultivation due to land competition. The small area of food crop plantations obviously does not support the sector's expansion, resulting in lower production and a continued dependence on imports, especially rice. The self-sufficiency level for rice is only 22.8 percent; for vegetables, it is 86 percent; and for fruits, it is 117 percent.

d. To what extent are federal agriculture policies implemented in this state? Are they more or less successful than the state agri policies?

Findings revealed that federal policies are being implemented, but lack of financial support and political interference limit their development and thus their impact. For example, the development of infrastructure in Kota Belud is under the jurisdiction of the federal agency, IADA, and the projects were supposed to be completed within the 11th Malaysia Plan. The projects are the result of collaboration between the state and federal governments to increase paddy production in the country and in Sabah specifically. However, due to financial limitations, the projects are delayed, thus slowing the development of the paddy plantation area that was supposed to boost the production of paddy in the Kota Belud area. In this study, the problem was found to be caused by changes in government that disrupted the development of the area.

“All these projects should have completed during RMK11... but only 6 have been completed. The others are still continuous, during the covid-19 pandemic it is still stuck but we still do it, but when the government changes, the project is told to stop first... when he asked to stop, everything is disturbed...”

e. Does the agency have the right capacity to ensure policy implementation is successful?

According to the study's findings, land is a critical resource for any agricultural development.

“The main resource is land. State governments must dare to do zoning for huge area of food production. We have done it that similar with TKPM but does not affect food security. In Sabah most people want to plant oil palm, but nobody wants to plant vegetables...Once proposed ulu Bol at Sipitang as the second Kundasang for vegetable cultivation, with the full support of the government, build infrastructure, water, to shift the economy so it is not concentrated in Kundasang, but political will not exist.”

“Planting rice must have the spirit and the soul then can sustain, it has many challenges, many issues...If follows our planning we can achieve 60 percent SSL, it all depending on the financial allocation... It depends on the decision maker... it will affect the decision.”

Agriculture is an important sector in Sabah, the Ministry of Agriculture and Fisheries (MAF) is among the ministries that received a considerable amount of allocation from the state government and federal government. Another important finding was that, besides physical capital such as land, political will is the most important to ensure policy implementation effectiveness as they are responsible for the distribution of resources such as financial allocation for investment to develop the sector.

f. Policies priorities

The agriculture sector is one of the major sectors that contributes significantly to Sabah's economy. The state has huge land that is suitable for agricultural activities. Findings showed that the total agricultural land in Sabah is 2.1 million hectares, and the land is dominated by industrial commodities which dominated by oil palm 1,814,223 hectares (87.8%), followed by rubber 187,666 hectares (9%), cocoa 3,340 hectares (0.2%). While agro-food crops are left smaller area for cultivation due to land competition such as paddy 39,426 hectares (2%), vegetables 4,312 hectares (0.2%) and fruits 19,108 (1%).

In this study, the state government prioritised industrial commodities, specifically oil palm, over food crops, which were found to cause a smaller area of food crop plantations as they bring a higher return, have a higher demand, and easily attract investors to venture into the plantation. As a result, the state government places little emphasis on the development of food crops, specifically paddy.

Dimension 3: Reviewing the outcomes of policies on rural economies

a. Public-private collaborator in this sector

Public-private collaboration in agriculture development is essential to promote food security sustainability in Sabah, particularly the paddy industry. The role of public-private collaboration in this sector supposedly helps to increase the investment toward agriculture

development such as technology and machineries. The link from both parties can help the farmers and SMEs to widen the link to the market. However, findings indicated that the existence of the middlemen in the paddy industry has overshadow the role of state government in helping the farmers and SMEs to commercialize their production. Whereby, in Sabah, the farmers have high dependency towards the roles of middlemen in terms of providing ploughing and harvesting services on credit basis. Although it seems like the role of middlemen is significant to paddy development in Sabah, it has negative implications for the farmers, as they need to sell their production to middlemen. Therefore, the farmers do not have opportunity to commercialize their product to the market.

“...We must sell our paddy production to the rice mill because they assist us to plough and harvest the farm on a credit basis. So, the rice mill will deduct the cost of service from our production.”

Price control is another issue concerning middlemen's intervention in paddy development. The role of the state government is expected to be critical in this case. Based on the focus group discussions with the farmers in the three studied areas, the price of paddy offered by the rice mill is very cheap. According to the rice mill owner, the price at their level is determined by all of the rice mill owners and has been agreed upon in the meeting without the intervention of federal and state agencies.

“The price has already been agreed upon during our meeting with all rice mill owners in Kota Belud. So, we’re offering the same price to the farmers. Moreover, they still can claim paddy subsidy from BERNAS. BERNAS will be in all rice mill in Sabah so that after they sell the paddy to us, they can bring the receipt to BERNAS and receive their rice subsidy”

Additionally, the intervention of non-governmental organisations such as PACOS and SRI MAS also has a significant role for the farmers and SMEs in Kota Belud. The NGOs provide the farmers and SMEs with upskilling and training services to develop their farms and promote organic paddy plantations. Nonetheless, they are providing processing machines to one of the paddy SMEs in Kota Belud so that they can participate in an innovation programme.

“The NGOs (PACOS and Sri Mas) assist us in many things, such as using organic methods to avoid the use of pesticides and fertilizers. Sri Mas also provides me with the machine to process my products, such as flour and milk made from Beras Keladi”

Hence, it clearly shows that public-private collaboration in this industry is very crucial. Undeniably, the role of private agencies is important, but the state agencies must make a concerted effort to establish an effective link with private agencies. In nature, the state agencies must be the driving force behind any initiative by the government, and they should

not fully trust the role of the private agencies in helping the farmers and SMEs sustain the agro-food production in Sabah.

b. Mechanism to spread awareness on the policies

Communication and a good relationship between the agencies, farmers, and SMEs are very important to ensure the policies can be effectively implemented. In the federal level, the agency claimed that there are two approaches to communicating or spreading awareness about the policies. The two approaches are: 1) the association leader; and 2) an online platform such as WhatsApp. For instance, in the Lembaga Pertubuhan Perladang, they have appointed association leaders in each district and zone. The association leader acted as the middleman between the agencies and the farmers to distribute any information relating to the program, subsidy, assistance, and others. The role of the association leader is very important, especially to communicate with the farmers who have limitations in terms of the online platform. Although the application of online platforms such as WhatsApp, email, and the official website is more convenient, findings indicate that it is not effectively implemented by the agencies. It is because farmers and SMEs stated that the information provided on the platform is out of date and awaiting response. Meanwhile, for the state agencies, the effort to spread awareness about the policies is not active because the farmers and SMEs need to visit the office if they have any inquiries relating to the farm or to report their progress.

Dimension 4: Analysing the scope of improvement and key lessons

a. Strengths and weaknesses of current agriculture strategies

Lack of implementation and coordination – Implementation and coordination are essential tools to meet the objectives of the agriculture policy. This study found that the government's role in terms of this aspect has been done through extension services. In Sabah's paddy sector, the extension officers who are knowledgeable and well-equipped are anticipated to play an essential part as implementers, information disseminators, links between agencies, farmers, and providers of solution. However, findings showed that it is difficult to implement the services due to a lack of strategic collaboration for effective implementation of development programmes that affecting the agricultural development in the state. The state government does not have a strategic plan document to strategically plan the processes to spearhead the development of the agriculture sector in Sabah. The strategic plan should reflect high-level commitment to long-term policies such as the Sabah Agriculture Policies (SAP1, SAP2, SAP3). The policy indicated that the state needed to achieve 60 percent rice SSL and to reduce the dependency on imports. However, there were no clear directions and strategies for achieving the intended goal. The policy documents (SAP1, SAP2, and SAP3) acknowledged low productivity, limited adoption of technology and mechanization, and a lack

of irrigation and drainage facilities, but targeted SSL has not yet been achieved (SSL 2020: 22.81 percent). Moreover, even the implementing agency finds that the goal of achieving 60 percent rice SSL is challenging to attain.

“I wouldn't have the guts to claim that 60% SSL couldn't be achieved. We need to have a very effective irrigation system, increase paddy yields and improve farm management. In 2004, we conducted a workshop. The outcome made us aware that achieving 60% rice SSL was impractical. But the SSL was not changed. It hasn't changed up to now. Perhaps we are reluctant to change.”

Nevertheless, the state government is negotiating with Felda to develop 11,000 hectares of land in the Dent Peninsula of Lahad Datu that was identified as suitable for rice cultivation as the state government is targeting 60% rice SSL by 2030. With the increase of land area for paddy cultivation, the state's overall rice production is projected to rise.

As one of the states in the federation of Malaysia, strategic planning by the state government will need to involve federal and state, inter-ministry, and inter-agency in identifying objectives and decision making in the allocation of resources. A strategic plan will bring all the stakeholders to work together to define monitoring key indicators that align with the national and state agriculture policy agenda. This study identified that there is no strategic plan being designed, therefore, strategic collaboration is difficult to achieve and has affecting the effectiveness of policy implementation.

“The state government is not serious about this rice cultivation. Maybe it's because the state government is more focused on palm oil. There are many rice plantation areas, such as Papar, Keningau, and Kota Belud, but the situation now looks like the government doesn't invest much in this sector. One of the reasons may be that the cost of developing paddy areas is indeed high, but the return is low compared to palm oil. So, for them, importing is thus more cost-effective than planting the paddy ourselves.”

Data indicated that the government has always prioritized the development of commodity crops over food crops, specifically oil palm, and less priority is given to the development of food crop sub-sectors such as paddy, vegetables, and fruits is because the state government is not serious in overcoming the food production issue. Thus, the investment in the food crops sub sector is less expensive as compared to commodity crops. The majority of agricultural land in the state is covered with oil palm, which is owned by the state and private companies such as Yayasan Sabah and Sawit Kinabalu, as well as big plantation companies including Hap Seng and IOI. Oil palm is among the top export commodities that bring high revenue to the state. The smallholders have support from the anchor company to sell their produce, but not

food crops. The food crops sub sector remains at slow growth and is cultivated by smallholders and Small Medium Enterprise (SME).

In 2013, the state government approved the Integrated Agricultural Development Area (IADA) under the federal agency to coordinate the Kota Belud paddy granary area with the aim to increase domestic rice production. But, when the government changes, disruption happens, which affects the IADA's development policy. Thus, slow down the development process.

“The tender should have been released, but the state government told the federal government to stop. So, the federal government listened to the minister. The ruling political party claimed that IADA is a failure, and the development project is a waste.”

The federal government has approved RM350 million allocated in the 11th Malaysia Plan (RMK11) for the infrastructure development in Kota Belud paddy granary area. IADA has spent RM159 million, of which the remaining funds will be continued in the 12th Malaysia Plan (RMK12).

According to the implementing agency, various development programmes receive limited funding including insufficient numbers of extension and technical staff members to support the needs of farmers throughout the state. The numbers of extension officers of the respective agencies must serve a large number of smallholders who are widely scattered throughout the state. For example, the current ratio of extension officers to total rice growing area is 2 to 3 officers in one district for all types of food crops.

“Monitoring is seldom due to lack of staff, as there is only one officer available in two or three districts who monitors all types of crops.”

Adequate extension and technical staff are needed not only to disseminate essential information, but also to deal with monitoring, licensing, and providing technical knowledge and advisory services to farmers and producers. Extension services, which are provided by the department of agriculture, are one of the methods of channelling information and technology to farmers and entrepreneurs, especially in rural areas. The fundamental purpose of the service is to help farmers through the education, training, and seminar, which is carried out systematically in providing services and encourages the acceptance of new techniques, technologies, and information in accordance with the farmers' needs and abilities. They play an important role in ensuring beneficiaries get the benefits and impact of the services provided. Limited extension officers resulted in a lack of monitoring, for example, monitoring the usage of pesticides on vegetables in Ranau and hill paddy farmers in rural areas.

“The relevant department has issued a warning to the farmers in Ranau over excessive usage of pesticides on vegetables and to adhere to the permissible level of pesticides. However, the

farmers will only temporally follow. Importing countries will start to voice their complaints and the department will be held accountable.”

The cause of improper agricultural practices such as overuse of pesticides are potentially toxic to humans and have effects on the soil. Additionally, in this context, it will affect bilateral trade relations.

For the paddy sub-sector, the policy that the government implemented has always been the same for several decades (since the First Sabah Agriculture Policy, 1992). The rice self-sufficiency level is targeted to achieve 60% since the first SAP. The Sabah Department of Agriculture (DOA) is responsible for implementing the policy formulated by the Sabah Ministry of Agriculture and Fisheries (previously known as Ministry of Agriculture and Food Industries-MAFI). DOA’s role is to oversee the whole rice industry’s development in Sabah to improve the crop production as well as increase the income of rice farmers. The mechanisms that have been implemented to help the farmers are through subsidy programmes such as paddy ploughing subsidies at the rate of RM494 per hectare or RM200 per acre (no area limit), rehabilitation of abandoned paddy land, extension services and advisory services, and research and development on rice varieties. Throughout the implementation period of the policy, the planted area of major food crops showed a decreasing trend. For example, the planted area of rice decreased from 51,327 hectares in 1995 to 43,168 hectares in 2010, and 30,000 hectares in 2018 to 25,000 hectares in 2020. In 2004, rice SSL used to achieve 40%, then started decreasing to an average of between 26% and 27%, and the current SSL is 24.8%, which means the targeted SSL has never been achieved.

It is important to have adequate infrastructure and facilities, including farm roads, water resources, power supply, and storage, to accelerate the development of the state’s agricultural sector. However, it is inadequately provided, particularly in rural areas. For example, inadequate drainage and irrigation facilities in potential paddy areas continue to be critical issues for the growth of the paddy and rice industries.

“We didn't get the water from the irrigation system. We all work together to dig a trench for the drainage system for our paddy.”

Only 11,649.95 hectares (or 32% of the total paddy area of 36,510.4 hectares) have good irrigation and drainage facilities and are classified as K1, while another 11,933.34 hectares (33%) have basic irrigation and drainage facilities and are classified as K2, and 12,927.17 hectares (35%) are K3.

Poor road networks and basic facilities have affected not only the marketing of agricultural products but also the delivery of farm inputs and other services, including extension services.

This has resulted in a lack of monitoring due to accessibility difficulties to the farm in rural areas.

“Most of these dryland paddy fields are hundreds of meters away from the main road, it causes difficulty for farmers and extension officers to commute, thus rarely getting extension services.”

A significant problem in Sabah is the lack of equipment and contractors for ploughing and harvesting particularly when it comes to paddy farming. Moreover, frequent machine breakdowns disrupted the paddy planting schedule. Thus, staggered planting by individual farmers cannot be avoided. Therefore, scheduling and synchronizing the planting pattern were unsuccessful.

“Lack of machinery for ploughing and harvesting is a major issue in Sabah paddy plantation sector, farmers need to wait for their turn due to limited harvesting machinery available, and no expert to repair it if it's broken.”

This situation has created a major pest and disease outbreak, ineffective water management, and ineffective crop harvesting. Besides, the high cost of machinery and the high cost of high maintenance constrain the farmers' ability to own them. Additionally, there is limited expertise who can perform repair and maintenance locally to keep the equipment in good working condition. So, when the machinery is lacking maintenance, it can worsen the machinery conditions. When it is broken down, it will be left unattended and will incur higher cost to repair.

Farmers - The role of farmers is essential in determining the success of policy objectives. Having said that, government support is crucial to the farmers. Although most of the people in Sabah owned suitable land for agriculture development, most of the land is not cultivated on a huge scale. Finding indicates that most of the paddy farmers in Sabah are categorized as B40 group (low-income level group) and highly dependent on agriculture to maintain their daily needs, particularly on the paddy production.

“we do not sell or commercialize the rice because it is not enough, we plant and harvest for our daily consumption ...”

“No. However, if the government encourage us, we are happy to produce in large scale. As for now, we only sell in IKS (a SMEs market that located in Tambunan). It is part of our income. If we need money, we will sell in IKS”

“We will sell the rice if we have extra because we need the rice as our daily consumption”

However, the income of the farmers can adversely affect the agriculture cultivation because most of the farmers are not able to purchase sufficient fertilizer, pesticide, technologies, and machineries. The farmers are highly relying on the limited assistance provided by the government. It has become a challenge to the farmers in developing their farm and unable to apply modern farming methods. Hence, in this context, the government role in providing sufficient assistance is crucial if the paddy production has to be increased.

“... Uria (type of pesticide) is no longer effective for our farm. The government will provide two types of pesticide, namely Uria and Sebastian ... now, I’m 47 years old, the government provides the same pesticide ever since I know what pesticide is ...”

For over decades, the assistance given to the farmers remained the same in which the farmers only received subsidies, fertilizer, and pesticide. In terms of technology and machinery, the strategy is underlined in the policies but most of the farmers do not receive this kind of assistance from the government agencies.

“As for now, I’ve never received any technologies and machinery services from the government”

“... we only received machinery assistance from the non-governmental organization (NGO), the government never provide us with that assistance ...”

To that extent, it creates the opportunity for the middleman in providing the assistance that is needed by the farmers such as ploughing and harvesting on credit basis. The farmers are bound to the agreement to supply their paddy production to the rice mill. The existence of middlemen has hindered the farmers from participating in the commercial industry.

“We can receive the rice mill owner to provide ploughing and harvesting services in credit basis. After harvest, we must sell the production to the rice mill owner ... however, the price is so cheap ...”

Based on the findings, it is observed that they lack knowledge on the role or function of federal and state government agencies. The farmers are relying on the role of their representative in spreading the information or assistance from the agencies. Although the agriculture policies underlined extension services as one of their strategies to develop the agriculture industry, the farmers seldom received this assistance from the government agencies. The gap of implementation by government agencies filled by NGOs such as PACOS and Sri Mas. For example, the NGOs provide courses and training to the farmers on organic farming methods. findings from FDGs with the farmers in Kg Tambatuon Kota Belud revealed that the NGOs introduced organic pesticide to avoid paddy disease. Their roles have also facilitated the majority of the SMEs from Kg Tambatuon that has commercialized her milk

powder that is made of organic paddy rice and Penjaram Beras Merah. These SMEs also received a processing machine to make the milk powder from the Sri Mas.

“PACOS, from Penampang ... they taught us to make organic fertilizer”

“Yes, because the government quite slow in term of this. NGO is faster. They spent 3 days and they will also keep on monitoring us. However, they’ve stop to monitor us after IADA took over.”

“Sri Mas provided me with processing machine to produce my Beras Keladi milk powder.”

Predominantly, extension services should be provided by the state agencies. Strengthening extension services can help to increase productivity and encourage the farmers to be involved in commercial industry or export trade. Based on the finding, the state agencies are lacking in terms of encouraging the farmers to get involved in the market. For example, indigenous rice has high demand and value, but the marketing support offered by the state agencies is very limited. Aging population is another issue in the agriculture industry, especially in paddy cultivation. In this modern era, the farmers are facing difficulty to adapt with the technologies such as advertisement through social media (i.e. Facebook, Instagram, Shoppe, TikTok, Lazada etc.), the application of drones for fertilizer and pesticide and others. At worst, during the FDGs, the farmers issued orders that they have to stop selling their paddy rice to Peninsular because they are not gaining any profit from that as they have to cover the postage fee around RM30. In this matter, the agencies must inform and develop the knowledge of the farmers so that they can gain profit from the paddy production.

“My future hope, my organic product is known in Peninsular Malaysia and has high demand, but the postage is so expensive. The postage is expensive than the price of the rice. I’m selling the rice for RM20 in Peninsular, but the postage is RM20 plus. The postage cost is more expensive ... people from Peninsular request directly from me. Imagine if I want to deliver 3kg, I need to pay RM60 plus. I will cover the postage fee.”

Small Medium Enterprises (SMEs) - The involvement in SME is another essential key toward agriculture development, especially in Sabah. Whereas the encouragement to participate in the SME industry can help to boost the competence of the farmers by upgrading their skills. It can be done by strengthening modern agriculture training, good networking and improving the access to information. The application of modern technology and machineries is crucial to help the farmers in boosting agricultural production. Throughout the focus group discussion with some of the hydroponic and aquaponic SMEs in Sabah, they are facing huge challenges in starting up their farm and business. Due to the fact that, there are few issues mentioned by the SMEs such as expensive raw material, limited knowledge on modern

farming among the farmers and the authorities as well as no support from the state government.

First and foremost, the price of raw material to develop the hydroponic or aquaponic farming system is very expensive and there is no subsidy given by the government. Although the SMEs can request for the assistance such as fertilizer and pesticide but, it is not suitable for the modern agriculture crops. It is because, the modern farming SMEs are using organic fertilizer and pesticide to prevent the crops from pest disease. Findings claimed that the current assistances provided by the state government is not relevant for the development of modern farming.

“Yes, we want to upgrade to modern farming, but capital? If we really want to upgrade, we need to apply for loan from the Agro Bank ...”

In order to receive the financial grant from the government, the SMEs need to participate in innovation competition and pitching.

“... In terms of financial grant, I think the easiest way to secure the fund is by participating in Young Agroprenuer Grant that introduced by Ministry of Agriculture. The grant allocated at maximum of RM20,000 dan in product based such as agriculture or fishery tools for young entrepreneur that willing to give full commitment in the field ... we need to prepare a proposal and have already start up the farm.”

“...the hardest way to secure fund is by participating in Malaysia Social Innovation. This grant, I managed to receive RM200,000 and I need to compete with people in national level ... some received about RM400,000 ... I need to prepare proposal, proper cashflow, prototype and pitching ... quotation ... you have to go through a lot of process.”

“most of the time, the farmers must to start up with their own capital ...”

Moreover, the price of raw material for modern farming is continuously increase and it requires state government intervention in price control if the modern agriculture farming want to be promoted and expanded.

“I think, it is so difficult to upgrade the farm to modern farming because the cost to develop hydroponic is very expensive ...”

Nevertheless, finding observed that the state government is lack in terms of monitoring and coordinating, particularly on the modern farming. This is because the staff and authority have limited knowledge on the assessment of modern farming.

“... usually, we will request the authorities to examine whether our farm meet the government standard, quality, SOP, and we asked for their advice in terms of pest control ... however, this is only for conventional farming. If we asked them about the hydroponic farming, they don’t know. How to apply fertigation farming also they don’t know ... That’s why I mean with they are left behind in terms of modernizing the farm. The conventional farming has been conducted for more than 20 years and therefore, there are references, SOP on how the senior farmer do it. And, when we talk about the agriculture reform, it will never happen in department level.”

To that extend, the effort towards research and development shall be strengthen for the agriculture sustainability. Findings also indicate that the crops produced through modern farming meet high market demand. However, most of the SMEs cannot afford to adapt the technology and machineries whereby they are still applying traditional farming techniques such as fertigation.

Additionally, findings affirmed that there is no good collaborative relationship among the state government and the SMEs. In that case, the SMEs lack strategic marketing and effective distribution networks to assist them in marketing their harvested products. FDGs found that the marketing among the farmers and SMEs in Sabah is assisted by Integrated Agriculture Development Area (IADA), one of federal government agencies.

“... only IADA helps me to market my product. They provide me with proper packaging for my Beras Keladi.”

“If there is encouragement from the government, I want to sell my product in huge scale”

In order to increase agriculture export in Sabah, the commitment of the state government shall be strengthened. This is important to reduce the existence of middlemen such as rice mills and NGOs (PACOS and SRI MAS) if the price of agricultural crops need to be controlled.

Infrastructure and land affairs - Adequate basic facilities and good infrastructures are important to accelerate the development of the state’s agricultural growth. The Department of Irrigation and Drainage (DID) is the responsible department in providing irrigation facilities and infrastructures for the cultivation of paddy. The role of DID paddy cultivation is crucial in ensuring the efficiency in managing water resources effectively. In paddy cultivation activities, water is a major supply source to ensure productivity in paddy growth. Water management could increase the productivity level, thereby increasing the income of farmers. The source of water in paddy systems involves water input in the forms of rainfall and irrigation. In Sabah, the irrigation and drainage system is designed specifically for paddy cultivation. This is an advantage for paddy cultivation without sharing with household usage.

However, the efficiency of the management affects the effectiveness of the water management that resulted in the plantation activities.

The IADA has assigned its own technical experts to supervise the irrigation system entirely for the paddy farming activities in their area as the DID prioritises in addressing domestic issues.

“JPS has a lot of other work to do; so IADA will take care of the irrigation system for rice in our area. The JPS engineer has a lot of other work to do, so he doesn't focus on our work. JPS also has many more domestic issues like floods. While I only concentrate on rice.”

The farmers argue the effectiveness of the DID and efficiency of the officer in charge in their area in Tambunan.

“Yes, someone is monitoring and taking care of this area. If he can fix it quickly, there is water. Only one person maintains the water here. Sometimes he will close the drainage because of the accumulated sand, it will take a few days, so there is no water. It takes time to repair. But if it lasts for weeks, the paddies will be damaged and many pests, because there is no water.”

One of the fundamental issues that affects rice production is irrigation and drainage facilities. Inadequate drainage and irrigation facilities in potential paddy areas remain critical problems for growth of the paddy and rice industry. In Sabah, only 11,649.95 hectares (32 percent) have good irrigation and drainage facilities and are under the K1 category, while another 11,933.34 hectares (33 percent) with basic irrigation and drainage facilities are under K2, and 12,927.17 hectares (35 percent) are just rain-fed areas under K3. Inadequate water supply making it difficult for farmers to get enough water that is affecting rice production in the state.

“Now irrigation is only available during the planting season. Then they will close it. The minister wants to upgrade it, so that the water always flows. The irrigation system indeed is a challenge. Now I am planting rice in Kampung Lalapakon and the water supply there is cut off due to the effects of the upgrade. Farmers have problems with the water supply of rice fields. The minister wants to upgrade the system so that the water will always flow. But it caused many paddy fields that have been ploughed are now deserted and dry. I was lucky that my paddy land area had a small flow of water on the sides. That's the challenge if the irrigation system is broken.”

The paddy and rice sector continue to face serious challenges as a result of inadequate drainage and irrigation systems in potential paddy regions. Thus, causing losses to farmers.

The use of agricultural machinery and mechanisation is also relatively limited because of a number of problems, including the high cost of farm machinery, high maintenance expenses, and being uneconomical. Moreover, there is limited expertise that can perform repairs and

maintenance locally to keep the equipment in good working condition. So, when the machinery does not have proper and scheduled maintenance, it can worsen the machinery's conditions. When it breaks down, it will be left unattended and will incur a higher cost to repair.

In particular, for paddy production, there has been little use of relevant technologies among farmers, and the number of tractors available for land preparation and harvesting is also grossly inadequate. Lack of ploughing and harvesting machinery means farmers need to wait for their turn for ploughing and harvesting. This situation will affect the quantity and quality of their produce and disturb the paddy planting schedule. In some circumstances, farmers use traditional planting or manual planting alternatives for paddy harvesting by working together in a large workforce to collect the mature rice crop from the field.

Patronage system - In this context, the patronage system is related to technologies and machinery development, budget allocation, human capital development, etc. that have a direct impact on the agro-food sector. There is political interference in the distribution of aid that affects the development and implementation of agricultural projects. For example, in the development of infrastructure facilities allocated for the rice granary area, the project was delayed due to a change in government and the new government's favour. The political linkages between the state agencies and small and medium-sized enterprises and farmers are significantly important. If the farmers and SME have a strong linkage with the political elite or representatives of the relevant agencies, they can enjoy privileges such as extension services, incentives and subsidies, infrastructure, and technologies development that can help them to be competitive in the industry. For example, the paddy cultivation area owned by the village head, is well equipped with a good irrigation system and water supply (K1 category).

"... last time, the farmers in my area are facing insufficient of paddy seeds, so I listed their name and brought it to our politician, so he gave us two tonnes of paddy seeds ..."

"... the one who rent the machine is also received it from the Peladang. Only certain people can use the machine ..."

An SME who cultivates vegetables using a hydroponic approach is able to expand his farm as he easily gets financial assistance from the government because he has close relations with the political representative in his area. Compared with other SME, the expansion of their farms is slower due to financial factors. An officer who works with the relevant agency gets the subsidy to purchase a plough and harvesting machinery for his own use, while most of the farmers in the same area still use traditional methods in harvesting.

“when the machine breaks down, he will repair and at last become his personal belonging ... he worked with DOA ... we never received machinery assistance from the government ...”

In some cases, if you do not have a good relationship, then you need to make additional ‘effort’ to get their assistance. For example, if the person in charge from the agency that is responsible to deliver the subsidised fertilisers to the farmers, the farmers need to pay them delivery charges for delivering the fertilizers to their farm.

“They will deliver the fertilizer and pesticide, but they will charge for the delivery services ...”

According to a successful hydroponic farm owner, he is frequently visited by the extension officers from the relevant department for monitoring purposes. However, when he first started, it was difficult for him to get their services.

The need for good relations to get priority does exist. This situation leads to an unequal distribution of state allocation to the target group and inefficient policy implementation, thus resulting in unbalanced agricultural development. As a result, SMEs and farmers will face limited financial support to purchase farming machinery to develop their farm and a lack of knowledge in modern farming due to limited monitoring if they do not have strong relationships with the political elites or representatives from the relevant agencies.

b. Recommendation by the stakeholders on the current state strategies

This domain was categorized into three sub-domains, namely 1) recommendation by the stakeholders on formulation, implementation, and monitoring of policies, 2) recommendation by the stakeholder for better government-farmers-SMEs linkage and 3) recommendation by the stakeholder to support existing policies.

Recommendation by the stakeholders on formulation, implementation, and monitoring of policies – Data indicates that setting state agriculture priorities is the first recommendation mentioned throughout data collection process. In Sabah, although paddy is a staple food, but the priorities has been denied by the government as it is not giving high return on investment. Finding identified that the state government also overlook on the food security, therefore, the budget allocation for food crops is always insufficient. Moreover, finding also found that some of the paddy development projects were pending.

“... prioritising and should dare to decide, it depends on the leaders in the government, their direction, eg seeds project vs bridge project (pending)...”

“We planned it before (eg tanaman kelapa 10 years ago), but not given a chance to develop. Because The decision maker, policy maker yang decides on budget and they are prioritizing on others. Insufficient of budget because it has to be allocated to other crops”

“Kerajaan negeri sabah dia tak serius untuk padi ni”

Second recommendation that gathered throughout the data collection is by zoning land for food-based production. Land affairs is among the significant problem in agro-food development in Sabah because most of the land owned by the citizen and they have their rights on what to plant on the land.

“The government should be strict in policy implementation. They must effectively zone the land. Do not let the landowner to plant based on their interest”

However, finding observed the intention to zone the land is uneasy without proper strategic planning by the government. On top of this point, both state and federal government must make sure that they are able to provide adequate assistance to the farmers if zoning the land wants to be implemented. It is because, throughout the focus group discussion with paddy farmers, they have to convert their paddy land to plant cash crops such as corn and vegetable in other to sustain their daily needs. They decided to plant the cash crops because it not requires high maintenance such as ploughing, pesticide and fertilizer. As been mentioned above, most of the farmers in Sabah are coming from the low-income group and not afford to purchase expensive cost of pesticide, fertilizer, ploughing and harvesting services.

“The state government must dare to zone an area for food production specialised in huge scope. Once proposed ulu Bol, sipitang as second Kundasang for vegetable plantation, with full government support, build infra, water, divert the economy not concentrated in Kundasang, but no political will”

Findings claimed that zoning is not the serious issue for the vegetable plantation although the politician targeted to divert the economy and develop new land for vegetable plantation. It is because, the main issue for the vegetable plantation is on the import-export. The state government still import vegetable from other countries even Sabah has surplus production of local vegetable. Nowadays, the society has high awareness on healthy lifestyle and organic vegetable is on his demand. The society prefers to consume the import vegetable that is less pesticide and fertilizer. Otherwise, the state government should start to look into modern farming such as hydroponic and aquaponic method of farming. Price control over the cost to develop modern farming is the issue that need to be focused by the state government.

“... we wanted to convert our farm to modern, but the cost is quite expensive, and we're not afford to purchase ...”

Additionally, research and development are another aspect that shall be focused by the state government. The agencies need to enhance their research and development in terms of producing the high-quality planting materials and new product development. Based on the interview with the federal agency, findings indicated that Sabah does not have new variety of quality seeds as compared to in Peninsular Malaysia.

“...seeds that we have currently is too old. Over 20-year, TR 8, TR 9. We do not have new seeds like in the Peninsular”

“... supply for Sabah, but only 30% can be supplied. The balance needs to be taken from the rice mill. Sabah has a lot of variety such as 1 Malaysia, local seeds that process by the factory. But not verified seeds. Seed always an issue. We require more breeder to produce quality variety of seeds”

Recommendation by the stakeholders for better government- farmer-SME linkage – Communication and collaboration from various parties is essential to develop agriculture industry in Sabah, particularly the paddy. Increase the frequency and improve extension services are among the two recommendation that been identified throughout the data collection. In the state level, the agencies claimed that they have insufficient number of staff to provide extension services to the farmers and SMEs.

“If the farmers need advice from our technical staff, we’ll provide to them... we’ve technical staff in the districts ... it is not frequent because we’ve limitation in terms of the number. In 2 or 3 division, we only have 1 expertise that covered the whole crops”

Nonetheless, findings indicate that the agencies' technical staff has limited knowledge of modern farming methods. To that extent, the extension services provided to the farmers who established modern farming or organic farming methods are very weak. The role of public agencies in providing extension services to farmers and SMEs has been scrutinised by private agencies as they advance in terms of modernising the agriculture industry.

Recommendation by the stakeholder to support existing policies – Financial support is another recommendation determined throughout the data collection. Most of the farmers and SMEs only received government assistance in terms of fertilizer, pesticides, and subsidies. However, the government does not provide farmers and SMEs with financial support to develop their farms. On the vegetable farmers' side, there is no financial support given by the government to start up their farm. The farmers hope the government could provide them with financial support because it can help with operational expenses such as worker salaries, the purchase of raw materials, and so on.

“We need to use our own money to develop the hydroponic farm”

Additionally, the application of new technologies and machinery is also important. Findings indicate that the application of technologies and machinery in Sabah agriculture is still lacking. The worst case is that, in Tambunan, the paddy farmers still apply the traditional way of farming despite the existence of technologies and machinery in the area. Fortunately, in Kota Belud, a private company (paddy manufacturer SMEs) provides technologies and machinery to paddy farmers, but it is still unable to serve the large number of paddy farmers in the area. Other than that, the service provider also recommended that the government could help in terms of providing them with assistance to purchase the technologies and machinery so that they can help more farmers develop their farms.

“For me, I really need assistance in terms of machine for pest, fertilizer, seeds scatter and so on. Most of the farmers limited in terms of that. So far, we didn’t receive that kind of assistance”

Nonetheless, the government should strengthen their extension service to make sure the farmers and SMEs are aligned with the strategic planning, especially in terms of the systematic planting to produce more agro-food production. The adoption of modern farming must be taken seriously by the government as underlying in the agriculture policies. Extension services should be strengthened for both traditional and modern farming methods. Every limitation on the government side, such as limited knowledge of the new ways of farming and insufficient staff, must be overcome by the government if the objectives underlying in the agriculture policy want to be achieved.

“I do not take any courses, I learned by watching Youtube and try an error.”

STATE LEVEL FINDINGS : SARAWAK CHAPTER

Introduction

Food security is defined as the ability of everyone, at all times, have financial and physical access to adequate, secure, providing nourishing cuisine to fulfil their dietary requirements and eating preference for leading a healthy and active life. As rice is the staple food in Malaysia, the self-sufficiency level is still at 65% to 75% which required the imports of the remaining balance of rice from Thailand, Cambodia and Vietnam. To achieve food security, particularly for the lower income group, there are still numerous obstacles to be overcome. A permanent remedy is, obviously, to increase competitive local food production to meet our demands. Better and more efficient developmental R&D would be required, along with financial and human capital accessibility for organisations conducting food-based research. Similar to this, agricultural infrastructure needs to be improved for greater output. For the competitive food business to advance, long-term policy revisions, such as those related to direct subsidies, are also required.

In Sarawak, the agriculture sector has remained resilient as an important contributor to the state's Gross Domestic Product (GDP). Nevertheless, the recent growth in the agricultural sector has declined based on the Sarawak Socioeconomic Report 2020. To sustain the agriculture output, the state government continuously comes up with several measures and efforts to respond to issues related to this sector.

Methodology

The study involved both primary and secondary data collection. For primary data collection, the study conducted face to face interviews to three different groups of informants that are the officers from the related agricultural agencies, the Agro-SMEs owners and the farmers. There are 1 focus group discussion (FGD) and 3 different sessions of face-to-face interviews involving 10 representative of the agencies from district officer, penghulu and head of villages, Department of Agriculture, Bario Ceria Sdn Bhd, Integrated Agriculture Development Authority and Malaysia Pineapples Industry Board. Another series of interviews involving 19 SMEs owners from Bario, Lundu and Samarahan area and 33 paddy, pineapple and other types of agriculture farmers.

All recorded interviews and FGD have been transcribed and the information are grouping and follow the thematic analysis. In thematic analysis, the researcher will examine the data to

identify the common themes topics, patterns, ideas or meaning that often being called up repeatedly. Through focusing on meaning across a dataset, thematic analysis allows the researcher to see and make sense of collective or shared meanings and experiences (Braun & Clarke, 2012). Thematic analysis involving the practices of inductive reasoning, whereby themes and categories being examine carefully with constant comparison. There are five themes that have been indicated from the analysis include of 1) Subsidies; 2) Knowledge and understanding of the Policy; 3) Engagement in agricultural dialogue or discussion; 4) Communication channel to highlight agricultural issues; and 5) Marketing channels for agricultural products.

Study Area

The study area for this research has been chosen from a total of 5 locations. The northern and southern regions of Sarawak were selected to represent the various situations and reactions to the execution of the agriculture programme. The northern region of Sarawak and the rural agricultural region of Sarawak are represented by Bario and Long Seridan. Kota Samarahan, Siburan, and Lundu are chosen for Southern Sarawak due to their locations in urban or sub-urban areas. The similarities and inconsistencies in the execution and oversight of agricultural policies can be addressed by comparing these two distinct regions. Additionally, it can be a useful stand-in for other Sarawakian agricultural areas when assessing the state of the state's agricultural sector.

Northern Sarawak

The study's focus areas for agricultural activity in rural areas were the Bario District and Long Seridan. Both of the areas are located in the Miri division of Sarawak. The area of Bario, which is around 3,850 sq. km., is made up of 16 Kelabit satellite villages and two Penan villages. Bario had 305 families in total and 1487 residents according to information from the Bario Rural Clinic in 2003. There are basic services such a primary school (for grades 1 through 6) and lower secondary school (forms 1-3), a clinic, a small settlement, an airport, forestry, agricultural, and immigration offices, as well as a police and army station. The surrounding streams that are also utilised to irrigate their rice crops served as the locals' only supply of water in the Kelabit highlands. Before 2015, diesel-fueled generators served as the primary source of electricity for the people in the Kelabit Highland. Through the company's corporate social responsibility (CSR) programme, Sarawak Energy took the initiative to provide a stand-alone off-grid supply of renewable energy for the Bario Highland people. The villages now have solar-powered electricity available for 24 hours a day. Self-reliance is generally practised by the vast majority of Bario people. They engage in traditional farming practises like growing food for themselves, cultivating Bario pineapples, cultivating paddy fields and hills, and going fishing and hunting. Many travellers from within and outside of the country are eager to visit

the highlands since the Bario region is situated in highland regions with temperate temperatures.

Bario, known for producing Sarawak's famous rice and other renowned local products including salt and pineapple. The Slow Food Foundation of Italy presented Bario rice with an International Presidia Award in 2002, which would benefit Malaysia's rice industry. In cooler climates, bario rice is grown at elevations more than 1200 metres. Bario rice, which is farmed by the locals or Orang Ulu in the highlands of Sarawak, has long been acknowledged as one of the best rice grains in the world. Bario rice is well-liked both locally and internationally due to its soft texture, fine and elongated grains, pleasant and mild aroma, and superb taste. To guarantee the quality and production of the rice, from seed certification to end-product retailing and distribution, the Department of Agriculture, Sarawak, introduced the Bario Rice Certification Scheme (BRCS). The best possible way to get to Bario is to take a flight from Miri. Miri is a city in Sarawak that is about an hour's flight from Kuching. The flight from Miri to Bario will take about an hour. The type of aircraft used is a turboprop, 19-seat Twin Otter plane, operated by MAS Wings. Taking a flight to Bario is cheaper than driving for 14 hours on a logging road.

Long Seridan is a Kelabit settlement and one of the smaller villages that make up the Bario Highlands. It is located around 590 kilometres to the east-northeast of Kuching, the state capital. Currently, there are 200 people living in Long Seridan village and most of the young generations have migrated to the city areas. In terms of agriculture activity, hill rice farming is the major form of agriculture practised by the locals in Long Seridan. In addition to that, some locals cultivate coffee. Apart from farming activities, the villagers are also involved in fishing activities, for which Long Seridan is well known for its empurau and semah. To get access to Long Seridan, it needs to take a flight from Miri city or Marudi town. The flights to Long Seridan are not available on a daily basis; they are available only three times a week. Taking a flight is much cheaper than driving for eight hours along a logging road from Miri.

Southern Sarawak

Kota Samarahan is 30 kilometres south-east of Kuching and has an area of 407 kilometers square. Kota Samarahan had been designated as Sarawak's eighth division. Formerly known as the "Town of Knowledge," Kota Samarahan is being built as a centre for education in the state of Sarawak. Kota Samarahan's primary economic activity is agriculture because the area has ideal ground that is typically non-hilly, flat, and low-lying. The region with peat soils is good for oil palm, coconut, and pineapple plantations. The residential and commercial areas are growing more developed, which improves Kota Samarahan's retail operations. Samarahan, Simunjan, and Asajaya are the three districts that make up the Samarahan

Division, and Sebuyau and Sadong Jaya are the two subdistricts that fall within Simunjan Districts.

Figure 1.1 Sarawak map



Source: <http://www.geocities.ws/borneoroute/sarawak.html>

Siburan is a district and former sub-district in the state of Sarawak. It is part of the Serian Division which includes Serian, Siburan, Balai Ringin and Tebedu. Previously, the Siburan Sub-district was a small district in the Kuching Division, Sarawak and is now a full district in 2021. The majority of the residents living in this district are Bidayuh ethnic. The administrative town for this district is Siburan. Siburan District has an area of approximately 359.7 square kilometres (35,970.0 ha). The total population living in Siburan District was 72,148 people with a density of 200 people per square kilometre in 2015 which is categorized as a dense population distribution. Siburan is also well known with the agricultural activities in producing the paddy, vegetables and poultry.

The town and district of **Lundu** is located near to borders of Indonesian Province of West Kalimantan and the district is under the Kuching Division of Sarawak, Malaysia. Situated in the northwest of Kuching, lundu is 100km away from Kuching City can be reachable by car. The ferry services to and from Lundu through Batang Kayan were discontinued after the Batang Kayan Bridge was formally opened to traffic in the mid- to late 2000s. The primary economic activity in Lundu is agriculture, which produces fruits, paddy, cocoa, black pepper, and palm oil. This town is situated on the shore and has both aquaculture and fisheries activities. In Lundu, there are several tourist attractions that promote the development of the tourism sector. Examples include homestay programmes and the cottage industry, both of which are supported by the Department of Agriculture, FELCRA, and SALCRA. The final sample selected and interviewed is as below :

No.	Category	Sample Size
1	Agencies	10
2	Small Medium Enterprises	19
3	Farmers and community	33
Total		62

Findings

Dimension 1: Mapping the policy promulgation landscape

1. Agricultural Institutions in Sarawak

In Sarawak, planning for the agricultural sector is under the federal government and the state government. There are several different agencies as implementers of the plan at the central and state levels according to the scope of responsibility. Institution and agency details are as in table 1 and 2.

Table 1: Agricultural Institutions at the Federal Level

No.	Organization
1.	The Ministry of Agriculture and Food Industries (MAFI)
2.	Department of Agriculture (DOA)
3.	Department of Veterinary Services (DOVS)
4.	Department of Fishery (DOF)
5.	Department of Malaysian Quarantine Inspection Services (MAQIS)
6.	Malaysian Agricultural Research and Development Institute (MARDI)
7.	Farmers Organization Authority (FOA)
8.	Federal Agricultural Marketing Authority (FAMA)
9.	Fisheries Development Authority of Malaysia (FDAM)
10.	Malaysian Pineapple Industry Board (MPIB)
11.	Agrobank
12.	Integrated Agricultural Development Area (IADA)
13.	Agriculture College
14.	Paddy and Rice Regulatory Office (PRRO)

Table 2: Agricultural Institutions at the State Level

No.	State Agricultural Agency
1.	Department of Agriculture (DOA)
2.	Department of Veterinary Services (DVS)
3.	Sarawak Land Development Board (SLDB)
4.	Sarawak Land Consolidation and Rehabilitation Authority (SALCRA)

	Agriculture and Rural Economy Institutions
1.	Livestock Association
2.	Sarawak Oil Palm Plantation Owners Association (SOPPOA)
3.	Dayak Oil Palm Planters Association (DOPPA)
4.	Malaysia Palm Oil Association (MPOA)
	Regional Corridor Development Authority (RECODA)
1.	Ulu Rajang Development Agency (URDA)
2.	Highland Development Agency (HDA)
3.	Northern Region Development Agency (NRDA)

2. Agricultural Policies Reference in Sarawak

In Sarawak the direction of national agriculture policies has a significant impact on the development of state agriculture policies. Therefore, Sarawak's agricultural sector has always followed that lead. The main policy reference for Sarawak agriculture sector development is the National Agrofood policy, 2021-2030 (NAP 2.0) which is the latest policy after National Agrofood policy 2011 -2020. Before that the sector direction was guided by the National Agricultural policy and the latest was National Agricultural Policy 3 (NAP 3) implemented in 1998 – 2010. The first National Agricultural Policy was first implemented in 1984. Furthermore, other federal policy that has being referred to is National Commodity Policy (2011-2020) which for the commodity industry agricultural production

Table 3 Objectives of the various period of National Agricultural Policy

Objective of the Policies		
National Agricultural Policy (NAP3) (1998 – 2010)	National Agrofood Policy (2011 – 2020)	National Agrofood Policy 2.0 (2021 – 2030)
to enhance food security	To ensure adequate food supply and food safety	Higher income and good quality of life for food producers
to increase productivity and competitiveness of the sector	To develop the agrofood industry into a competitive and sustainable industry	Higher production with quality harvest through increased productivity
to deepen linkages with other sectors	To increase the income level of agricultural entrepreneurs	Agile and resilient value chains with high value added activities
to create new sources of growth for the sector		Economic, social and spatial inclusiveness for food producers
to conserve and utilize natural resources on a sustainable basis		Sustainable consumption and production fully embraced

So far has been concerned there is no specific agricultural policy developed by the state. Dandot (1994) stated that in Sarawak, economic and development policies are not officially written or documented. Only specific guidance on land use and ownership, forestry, mining and so on. Normally, the policies are only announced through speeches, announcements, and statements.

Recently the state government has introduced the Sarawak Digital Economy Strategy 2018-2022 to support the major economic sectors in Sarawak, including the agriculture sector. The anchor of the economic sector is supported in terms of several enablers, such as infrastructure, digital skills and talent development, research and development, digital innovation and entrepreneurship, technology transfer and commercialization, digital and data and cyber-security. It is timely for the state government to introduce smart farming and other advanced methods to help farmers increase productivity and income.

In addition to that, the state government has formulated a post COVID-19 development strategy 2030, which also provides the initiatives for the agriculture sector. Under this strategy, the commercial agriculture sector aims to capitalise on modern farming and global partnerships to accelerate productivity and growth to support higher value-added downstream food processing, especially for the export market. or the economic pandemic's recovery, the state has come up with standard operating procedure for the agriculture sector. Another recent plan to the agriculture sector is the for Sarawak.

According to Dato Sri Dr Stephen Rundi Anak Utom, the minister for Modernisation of Agriculture and Regional Development Sarawak, MANRED and the Department of Agriculture need to set up the agricultural plan comprehensive development and group farming to make sure all the plans and goals are achievable. He also emphasizes that DOA, as the implementing agency under MANRADE, should transform agricultural technology, agricultural research, and empower development activities to achieve the department's KPI to increase the income of farmers in Sarawak at the level of RM5000 per month.

The Comprehensive Agricultural Development Plan will also be supported by the Ministry of Food Industry, Commodity and Regional Development Sarawak (M-FICORD). M-FICORD is the ministry responsible for spearheading the development of agriculture and rural communities in Sarawak. The ministry aims to transform and sustain the agriculture and rural economy through modernization and commercialization and targets Sarawak to be the net exporter of food by 2030.

It is known that the policies implemented at the federal level is focusing on assisting the farmers to increase their income and upgrading their quality of life. While in Sarawak, the state level is focusing on the modernization of farming activities via the digital economy which more concentrating at the urban area. From the interviews conducted, it is understood that the focus is on the food production quantity rather than the quality, price control and profit-income based cultivation. Various of subsidy has been given to the certain farmers without considering the true needs of the farmers. It is known that there is no clear communication, dissemination information process and coordination between the agencies, farmers and the SMEs entrepreneur.

Besides, the geographical location influence to the management approach in agricultural sector. The top-down approach is implemented in the rural area while the bottom up approach is implemented at urban dan sub-urban area in monitor and control the sector production and activities. Thus, some of the farmers only received the subsidy or assistance and not fully utilised of the inputs for their farm's activities. This is contradicted to the assistance given to the agro-SMEs where the recipients were being asked what they need for the business and the allocation were given to is used to provide the equipment that they really need. Since the Sarawak agriculture sector followed the national policies, no overlap in the policies regulations. However, the farmers do not familiar with the policy statement and some of them mentioned that the policy contents are very well written but the implementation of the policy seem not effective.

Dimension 2: Analysing the policy implementation framework

1. The extend of federal agriculture policies implemented in Sarawak

The Department of Agriculture Sarawak plays an important role as a state level agency in coordinate and monitor any projects, subsidy allocations and assistance to the farmers. In Sarawak, the financial allocation for the projects is given by both federal and the state government. The biggest allocation is from the federal and adding up by the state allocation. However, due to the large agriculture area to be cover in Sarawak, the assistance amount are limited to certain numbers. Thus, potential participants are being identified and strictly screening by the agriculture assistants in every branch in Sarawak. Most of the agricultural assistance are in the term of input subsidy such as fertilizer, pesticides, and farming tools. There is also assistance in cash money especially for land clearing of the farms. These types of assistances are one-off and usually will be given for every year depends on the annual allocation of the year. In agro-entrepreneur project assistance, the DOA also provided for a fund to build the processing plant and for buying the machine and other tools and assist in packaging and indirectly promoting the products in their events. For this kind of assistance, DOA will normally monitor the entrepreneur's business progress for several years and record all progress from the project every month.

From our study, other federal agencies such as the Integrated Agricultural Development Authority and Malaysia Pineapple Industry Board also implementing the same agricultural assistance schemes to the farmers and agro-entrepreneurs. Although the given assistance is quite same as the DOA project, the difference is in term of the amount of allocation. To avoid the multiple assistance for a single recipient, the agencies are strictly check the status of the farmers and ensure that they are not receiving the assistance from other agencies.

The same agricultural assistance scheme for the same type of agriculture provided by state government agencies and federal government agencies sometimes causes confusion to farmers and even the agency's own officials. The assistance offered seems to clash with each other when the funds can be used to develop other types of agriculture. Thus, in this scenario, the bottom-up approach is appropriate and need to be implemented to provide more benefits and increase the value added in the development of agriculture.

2. The Agency Capacity and the Role of Farmers / SMEs in the Policy Implementation.

The study found that there is no strategic coordination between the federal-state agencies in the implementation of policies. Each agency runs the policy separately and according to their own way. Besides, officers of each agency are also sometimes confused about which policies should be prioritised and applied in their management activities. The policies are well written

on the paper but in term of the implementation, it is required many improvements and also active involvement from the stakeholders.

3. Knowledge and understanding of the Policy

There is neither direct information dissemination about policies from any agencies to the farmers and SMEs owner, nor dialogue invitation to them in sharing the information about policies and getting their feedback for the improvement of policies and especially the current monitoring practices. In current practice, the agriculture officer disseminates the information via the representative of the area or talk with the farmers and SMEs owner in their field visits.

There are farmers who know about policies related to agriculture, especially among farmers who are pensioners. At the farmers / SMEs level, their knowledge and understanding about policies are very limited and many of them only hear about it from the mass media. The information known about the policy was obtained from their own reading, TV broadcasts, social media, and news articles. Those with policy knowledge see a conflict between existing policies, such as the desire of a government to achieve something that does not anticipate the situation faced by farmers. In addition to that, there is overlap between federal and state policies. Few of the farmers in Siburan have a good memory of the past programme organised by UNDP, in which the farmer was encouraged to use organic fertilizers, improve their paddy growing methods, and manage their farms better. This kind of empowering programme can improve the farmers' crop yield and increase their income. On the other hand, most of the farmers do not fully understand the existing federal and state agriculture policies in terms of their objectives, strategies, implementations, and assistance as they were not given direct information about them. They are also unclear about the differences between the federal and state policies and the administering offices for the different portfolios. Some of the farmers also mentioned that sometimes they feel confused with so many programmes proposed by the government at one time. At the community level, some of the projects are given without stating any clear objectives or vision, and limited information is shared on the policy from the local agricultural office. Farmers, particularly those in the Bario district, demanded a local community strategic plan that included mapping and planning in line with federal and state policy. Also in the local community, the progress and accomplishments of an agricultural project should be communicated to the farmer involved by the agency in charge.

From the SMEs interviews, some of the owners thought that the food safety policies aim for the high production and quality of products. They understand that the SMEs fundings are coming from the state level as compared to federal agencies. The owners also believe that the state policies were more used in the sectoral activities. However, behind the perfect written policy they believe state – federal agencies should improve in many areas and especially in terms of the actions.

4. Engagement in Agricultural Dialogue or Discussion

For the engagement session there are farmers from the Bario, Lundu, Siburan and Kota Samarahan areas who have been invited to attend a dialogue session with certain parties such as MPOB, NAFAS and DOA. However, most of the farmers were never called to attend any discussion, especially those farmers in Long Seridan. In relation to that, there was no specific dialogue between the government or a private entity with the farmers and SMEs owner to understand any problems they faced. The agencies will only provide briefings on the plans that they want to carry out. At the local community level, there are frequent discussions to discuss the issues and later will be bring to the related agencies by the representative of village. Another common practise is that farmers will refer to the nearest Department of Agriculture office.

Dimension 3: Reviewing the outcomes of policies on rural economies

The findings of the field work have been summarised into several themes based on interviews with selected farmers and SMEs owner in Kota Samarahan, Siburan, Lundu, Bario and Long Seridan. Based on the themes it shows, different locations under study have a different situation. Overall, most of the farmers cultivate rice and pineapples for their own use, to sell, and to use as production inputs. From the SMEs group, the SMEs owner from Bario were involved in a very small scale of productions and mainly for the local market and consumption. In contrast, the SMEs owners at the Southern Sarawak (Lundu and Kota Samarahan) were actively sells at the local markets and expand their sales to other districts or states.

1. Subsidy

In terms of subsidies, most of the assistance received in the form of fertilizers, pesticides and harvesting machine. The assistance was mostly received by the farmers who were actively engaged in paddy farming. In some places, like Siburan and Bario, agriculture officers constantly oversee and provide advice on the farmers' paddy farming activities, and the farmers in those areas get along well with the local agriculture officers. For the pineapple plantation in Kota Samarahan, IADA regularly monitors the participants in their scheme from time to time. However, there are some challenges faced by farmers related to the provision of subsidies. Some of the assistance given is not suitable for the farmers' needs or the nature of their crop cultivation. The farmers prefer the agencies involved get opinions from the farmers. For instance, in Long Seridan, no assistance was provided for paddy farming, despite the areas being best suited for paddy cultivation. Instead, the farmers were given a coffee subsidy, which is not suitable for some reasons, such as soil suitability; the process of making coffee is difficult; and there is no market. For the assistance application procedure, farmers feel that there are complicated processes in filling out the form, and besides that, they have to wait a certain period before receiving assistance. Some of the farmers, especially the

elderly, do not have a clear understanding of the subsidy recipe requirements, which need more attention from the relevant agencies. The farmers also have problems with the restricted age limit for the recipient of any assistance. They expected some flexibility for the age limit requirements. A constant monitoring system for agricultural activities and providing advisory services to farmers are needed to ensure the progress of the farmers is updated and to get good crop yields. Apart from that, farmers need assistance in terms of agricultural practices, for which they need a consistent training programme and knowledge regarding the latest technology that can help in the harvesting and planting process.

Since bottom-up approach has been practiced in distributing the subsidy to the SMEs owners, it is understood that the owners are satisfied with many aspects of assistance in their productions. Besides, DOA, IADA and MPIB, the owners also received various assistance from MARA, SEDC, RISDA and FAMA.

2. Communication Channel to highlight Agricultural Issues

Regarding the medium of communication, there is not an issue in Kota Samarahan, where the farmers always communicate with the Malaysian Pineapple Industry Board for their production problems. On the other hand, in other location most of the farmers highlighted, there are no specific channels to communicate issues or complaints. If a problem arises, they will notify the head of the village or find their own way to communicate the issue. As for agricultural problems, they will always refer to the Department of Agriculture. Lack of understanding of the proper channels and procedures for communicating any issues or problems encountered are another barrier. Overall, the farmers claimed to have a good relationship with the officers in charge of their farms' area. However, certain of the staff in charge are not capable of giving advice on handling the farming due to a lack of experience in the actual field.

For SMEs owner, the officers from the certain agencies have actively monitored on the progress and giving them some advice on how to improve the quality of products and promote their products. However, they mentioned that they cannot rely on the agencies too much and need to set their own strategies through trial-and-error experience so that they will be able to expand the market of their products.

Marketing Channels for Agricultural Products

For the product marketing, most of it was carried out and managed by the farmers themselves. The farmers usually sell their product, such as rice, pineapple, and pineapple-based products, directly to their contact, and sometimes the contact will assist them in marketing the products. In some cases, such as in Siburan, there are retailers who usually deal with the farmers during harvesting seasons to buy the rice produced by the locals. Thus, the farmers especially from the highlands such as Bario hope that the government can set up the

agriculture collection centre so that they can reduce the cost of transporting and sales the product to the nearest town or city. The farmers also revealed that they have no problem to produce a huge volume of agricultural products, however, with the poor distributions and marketing channel, they limit their production to the amount they can sell to avoid the food loss and agriculture wastage.

Dimension 4: Analysing the scope of improvement and key lessons

1. Policies action

Based on the interviews conducted to the farmers and SMEs owner, most of them agreed that only delivery stage can be considered moderately good compared to drafting, support, monitoring and implementation. However, delivery here means information delivered regarding the opening of subsidy scheme. However, in term of the policies objectives and contents the farmers cannot access for the information and have no idea at all. They farmers and SMEs owners suggested that the drafting of the policies should taking into accounts of their opinions and needs as they are the operators of the agriculture sector in the fields. More support also are needed especially when they need the advice on solving the issue in their agriculture production. Same also for monitoring, the hope that the agencies officers may involve more actively and going down to the field to indicate and understand the issue and assist in enhancing their production. In term, of implementation, more action are needed to be taken effectively to ensure that the agriculture programs or scheme achieving the objectives successfully.

2. Subsidy and allocation

Most of the farmers believe that the bottom-up approach will be the best policies implementation approach in indicating the needs of subsidy by the farmers. It can help the agency to provide the allocation in more effective, avoiding the assistance leakages during subsidy distributions such as selling the subsidy inputs to other persons illegally and promote to the farmers welfare. This will ensure that the assistance or subsidy will be fully utilize for maintaining the production. Furthermore, few farmers also suggested to the government to comes out with reward systems instead of giving the subsidy to farmers. This is good to transform the farmers from the subsidy dependent to a more competitive spirits in managing their farms and production.

3. Modernization of Agriculture, Attractive Package to Youth and Hands-on Training

One of the big challenges in agricultural activities in Sarawak is the very low involvement of young people in the sector. Since, most of the old generations who involved in the sector, thus modernization of agriculture for example the IOT programs can help to save the farmers' energy and promote the agriculture as the attractive job opportunity to the youth. Besides

the farmers also suggested that in future, the government may need to offer the job with fix salary and paid the youth who work and actively involve in agriculture. It is important to nurture the interests of youth in this field. Few of farmers believe that nurturing the interest must be starting by the parents as early age as they can. Furthermore, the farmers also mentioned that some improvement may need to be done in on the aspects of given training by the agencies. They suggested that it is good if agencies which offered for the training do more hands-on training and the farmers can feel and have direct experience on how to take care of the plant.

4. Collection and Distribution Center of Agriculture Outputs and Products

The rural area of Sarawak such as Bario has a great potential for a good quality of agriculture products. However, their location at the highlands has become big challenges where logging road with poor road accessibility and very far in distance from the city. To send the agriculture output via airplane is required for the high cost incurred. Thus, they believed if the government can provide the centre for agriculture output collection and distributions, this efforts will help and encourage them to produce more vegetables and fruits and fulfil the demand on the products at the big market. Furthermore, at the urban agriculture area, farmers also suggested that there is a need to built the agriculture processing plant such as for the pineapples so that the expansion of agriculture products can be done. The farmers also urge for the more effective marketing and distributions mechanisms from the state-federal agencies so that the agriculture production can cater the local market demand and exported to other countries

5. Proper Agriculture Extension Plan

It is known that the state agriculture agencies have actively encourage the farmers to involve in new types of agriculture such as 'Kristal' fruits and others via several project under the agencies. The farmers usually will be happy to try and they capable to produce the huge volume of output. However, the is no proper channel has been suggested by the government on how and where the products can be sale in local markets or export to outside. At the end, the farmers have to bear the great food lost and the agriculture wastage. Thus, when the agencies comes out with the new agriculture projects, a proper marketing and distributions plan must be comes together so that the agriculture can give a high return to the farmers and more sustainable and successful in future.

KEY CONCLUSIONS BY STATES

Terengganu

In conclusion, the results of this study are categorised into four (4) dimensions, namely 1) mapping the policy promulgation landscape, 2) analysing the policy implementation framework, 3) reviewing the outcomes of policies on rural economies, 4) analysing the scope of improvement and key lessons.

The result of the first dimension has seven (7) domains, of which the first domain is a related ministry or department that oversees food security issues. The results of the study found that, from the point of view of the agency, it was found that the agency policies related to food security implemented, agencies can distinguish between the state and federal government policy, agencies their role in food security policy, the agency is aware of the primary ministry in charge of food security policy. While from the SME point of view, they are no clear policies related to food security, SMEs are confused between policies at the state and federal levels. The findings from a community point of view found that the community does not know what food security is. If you know it, the community cannot distinguish between state and federal policy. The focus of the community is to produce products for income and survival, but food security is not a priority.

The second domain is related to policies related to food security, significantly increasing the production of staple foods. From the agency side, the agency is aware of the existence of a unique food security policy, the National Agrofood Policy (2011-2020), and realises that the federal government is drafting the old policy "National Agrofood Policy 2021-2030 (NAP 2.0)". As for SMEs, they suggest that food security policies should be looked at together with policies in other ministries such as the Ministry of Health, such as MeSTI, halal, MUST, GMP, HACCP and others. SMEs think the policy spirit is a bit weak. As a result of the community, the government is focused on agriculture or animal husbandry related to staple food. Including vegetable-based foods. Yet, for the community, the agency's focus is inconsistent.

The third domain is related to the issue of overlapping federal and state policies in terms of policy objectives and target groups. The objective overlap is happening for agencies and is considered a positive thing. However, coordination and cooperation and non-working in silos are implemented according to the agency's focus with coordination across state and federal agencies. Two (2) other issues arise for the community, namely the old approach and the same participants. It occurs due to 1) eligibility, 2) database issues, 3) the seriousness of the participants, and 4) the relationship with the agency.

The fourth domain is related to the state-level policy objectives challenges. The agency informs that the Terengganu State Executive Council (TSEC) is a medium to discuss food security issues or challenges in Terengganu. The stacking of food security projects is discussed

together. The agency [owns a separate subsidiary, "Agrotech Development Corporation Sdn Bhd (TADC)", which focuses on realizing food security. For SMEs, the main challenge is delivering food security policy information and monitoring and frequently changing the focus of food security projects. As for the community, they are not clear about the objectives of food security at the state level. They are often confused between state and federal objectives.

The fifth domain is related to complementary elements in state policies. The findings from the agency found that the agency introduced the Malaysian Good Agricultural Practices Scheme (myGAP), including initiatives from other agencies such as FAMA, for a certain fee. Meanwhile, TADC, on the other hand, creates a specific industry, 'Agripreneur,' by closely monitoring and researching findings in other agencies. As for SMEs, they questioned how far the initiatives reached eligible farmers and the impact and benefits of the results, including from the university. SMEs said most of the results were from federal agencies. As for the community, they found the agency was too attached to KPIs. They were not the latest initiative. Except for essential assistance or initiatives specifically related to capital and production input.

For the sixth domain, the approach undertaken in formulating policies related to agricultural development and food security (top down or bottom up) found that the agency stated two frequently used methods, 1) top-down and 2) partnership. However, most often used are top-downs, and agencies still require input from stakeholders. While the partnership is only used for 'expert groups' only, who are referred to make specific plans but are unsure whether it is for policy level or other purposes. SMEs, however, said they were not disclosed due to the discussion. For the community, their views are unimportant and should only focus on production. The agency decides all policies.

The seventh domain is related main objectives of federal or state initiatives related to agriculture or food security. The agency is transparent in achieving food security goals, which are the availability and accessibility of food supplies in the country. They found that the food supply was adequate and became the people's source of income. Food security also makes it possible to control production and production resources to protect the country. SMEs are different views where they are not clear what precisely the objectives to achieve, and the direction of food security fails to be understood by the community. Some consider it politically motivated rather than building a 'white elephant project'. The SME food security project is a 'try and error'.

On the other hand, the community believes their job is to help bring out revenue and earn income. Thus, the agency gives impetus for potential projects. The community doesn't care about the objectives as long as the project goes smoothly and continuously.

For the second dimension, analysing the policy implementation framework contains three (3) domains. The first domain is related to the extent of federal agriculture policies implemented in the state (More or less successful than the state agricultural policy. On the agency side,

they are aware that with the objectives of the food security policy, they can distinguish the impact on the state. They are proud of the implementation of the food security policy. For example, FELDA is 3 in 1 1) opening up land, 2) reducing the poverty rate and 3) producing revenue for the country. As for SMEs, they are rated as equal between states and federal ones. SMEs need support, monitoring and officers in the field performing their duties. SMEs acknowledge federal agencies are more apparent on the ground. As for the community's view, the community is confused between state and federal agencies, and they only connect with agencies that fit their projects.

In the second domain, the agency has the suitable capacity to ensure policy implementation is successful. The agency lists seven (7) agency constraints in the field, namely 1) Lack of workforce, 2) Area of responsibility, 3) Competition of imported products, 4) Cooperation, seriousness and capability of farmers or breeders, 5) infrastructure facilities, 6) research and development (R&D), and 7) the capabilities of officers outside the field. On the other hand, SMEs feel that agencies are less trusting. Even for them, certain agencies must be structured by focusing on specific technologies. At the same time, it is necessary to take advantage of local potentials, such as derelict land.

On the other hand, the community noted that they were unclear about the agency's capacity due to a lack of interaction. Society views not all agency officers who are proficient in the field but rather a theory. They are also faced with reference issues left behind, such as those related to pineapple crops.

The third domain focuses on the issue of conflicts and complementarities between sector objectives and food security and nutrition objectives. As a result of the study, the agency stated that they had no problem following the plan, including across agencies and states. Especially during the COVID-19 pandemic, every agency tried to help each other. Yet the agencies acknowledge that they face bureaucratic issues between agencies. On the other hand, SMEs raise revenue through marketing that requires coordination between agencies to avoid middlemen and dumping. SMEs also encourage GLCs to focus seriously and clearly on food security. SMEs also raised the issue of the need to reduce bureaucratic red tape and increase interaction between agencies. The community expressed annoyance because the agency's focus on projects changed frequently. Also, follow the leader in the agency. The changes implemented at the community level are challenging as they involve high costs and capital.

The third dimension, in turn, focuses on reviewing the outcomes of policies on rural economies. This dimension also has three (3) domains. The first relates to how federal and state level policy is implemented regarding the decision of beneficiaries, budget allocation and overall management of the policy. The agency insists all its actions are to meet the KPIs. Even all budgets towards achieving KPIs. In contrast, food security is given attention if it is contained in the KPI.

On the other hand, SMEs are not satisfied with the provision for food security which is in a small ratio. Therefore, for them, a small budget interprets as less critical. In comparison, agriculture and animal husbandry must bear high costs, overhead, agricultural input, etc. As for the community, the community is aware that the budget is getting smaller every year and perceives that the budget doesn't reach the right people. This affects the implementation of the project. Therefore, they believe that the subsidised element of production input is essential and should be added.

As for the second domain, which is public-private collaboration in this sector, the study found that the agency admits that relations with the private sector are still weak because they rely heavily on the involvement of GLCs. The agency is aware of the need for cooperation with the industry to further step up the 'jihad against middlemen' initiative. The agency is aware that the private has more capital that can help food security-related industries. As for SMEs, the relationship between agencies and the private sector is fragile. There's also an effort to connect with the nearest supermarket. Agencies can give up lists, but many have to find their own. Hence, SMEs are of the view to grow more, the need for industry and the need private work spirit. As for the community, they say that they need a middleman because they can only produce products. However, the middleman needs to be controlled by the government to reduce manipulation. This is because they cannot afford to concentrate simultaneously on production and market.

For the third domain, the mechanism of a periodic dialogue between the regional government officials, the agency states that interaction with the entrepreneur is welcome when an issue or input is required. Particular officials in the unique field collect data through regular interactions, a condition of the latest monitoring and information. However, SMEs are dissatisfied with the exchange of agency officials in the field. Even SMEs claim that some agencies do not 'bravely' come down to the area worried critically and ask for other help. As for the community, they express weak interaction with the agency, but there is still help. Need information about support and current issues. Without dialogue, the farmer will not know what is happening and will not be able to convey their wishes.

Concerning the last dimension, the fourth dimension is related to analysing the scope of improvement and critical lessons. This dimension has three (3) domains. The first domain is associated with the state's main strengths of agricultural strategy policy. Regarding the power of policy at the state level, agencies insist that they have strength in the policy. Among the other strengths is that the agency believes that existing agencies related to agriculture and animal husbandry are relevant for policy needs. They even regularly work together to meet policy requirements.

In contrast to the SME view, they think that agencies have more weaknesses than strengths. On the other hand, SMEs are not clear on how the formed policies benefit the environmental resources of agricultural or animal husbandry areas. On the other hand, they see a lot of agency weaknesses over the agency's strengths. The community's findings are similar to those

of SMEs where they look at the issue of disseminating policy-related information to the community. Concerning the initiative, the community thinks the initiative needs to be redefined as many of the initiatives given are in the form of one-offs only

While the second domain is policy-related, domains are missing and need to be included in state-level policies. For example, strengthening extension services, access to credit etc. The agency believes that the policies made are constantly being improved over time. They do not deny that there were flaws in the previous policy. However, they also did not rule out the success of the earlier policies. As for SMEs, they expressed much disappointment with the past policy. They reiterate that the previous policy was only beautiful on paper alone. However, in terms of implementation, there were too many significant flaws. Among them is that there is little to consider the local strength to propose agricultural or animal husbandry projects. As for the community, one of the things that dropped out of the policy was the lack of seriousness in trying to market the product. They repeated many times that success in agriculture is not only related to the production of products but depends on the market. The government needs to be more severe about this marketing issue, including empowering relevant agencies and connecting them to the industry.

For the third domain, the way stakeholder participation in the review or revision process be made effective and efficient, the findings found that the agency did not reject the importance of other stakeholders' involvement in evaluating policies. Usually, these agencies cooperate well and are ready to share information in evaluating policy implementation. But engaging outside stakeholders of the agency is rarely implemented. For SMEs, one of the methods used by agencies to assess policies is to visit their project sites. SMEs suggest that agencies should be more proactive in involving SMEs as they are more knowledgeable in the field and implement agriculture. Communities do not feel directly involved in assessing agricultural and food security policies. Agencies are more likely to obtain information than specific individuals alone.

Kelantan

In relation to the ministry or department overseeing food security issues, the agency is transparent and knows which ministries are leading agriculture and food security activities. Among them is MAFI responsible for forming, planning, implementing, coordinating and monitoring agricultural policies and food security. The agency explains that each agency is created to enforce the relevant policies according to their respective scopes, functions and objectives.

SMEs also know which agencies manage agriculture and food security-related activities. In particular, food security is a task that crosses the ministry and does not involve only MAFI. In contrast, the view of the community is equal to SMEs. However, the community has minimal knowledge concerning food security because they are not clear on the meaning of food security. Instead, they think that they need to know the basics.

The formula related to policies related to food security significantly increased the production of staple foods and found that agencies recognize their significant role in the realization of agricultural policy and food security. They explained three main aspects of agriculture: increasing the quantity of staple foods, increasing the substitute for staple foods and increasing staple food-related technologies.

As for SMEs, they know the existence of agricultural policies and all agencies act according to the policy. The federal government widely implements agriculture and food security policies, as almost all agencies in the field are federal agencies. SMEs said they were unclear on the state government's policy for agriculture because most of them were from the federal government. As for the community, they don't care about policy. The most important thing is to bring income for them.

A summary of the results related to federal overlapping and state policies regarding policy objectives and target groups was found; the agency said the overlap did not occur. Also, there are no problems that lead to a reduction in the delivery of agricultural products to the market. For agencies, three things need to be improved, namely the sharing of information between agencies, the sharing of interagency infrastructure, especially regarding transportation and reducing the bureaucratic elements between agencies.

As for SMEs, they believe that each different agency has its strengths. Federal agencies have ample financial resources. At the same time, state agencies have a lot of land and potential. On the other hand, the community is unclear and indistinguishable between state and federal agencies. For them, each agency has its role. For the community, what they need is guidance and support for agricultural input.

With the results of the state-level policy objectives challenges study, the agency stated they have no problem cooperating with state and federal agencies. On the other hand, the big issue is the adequacy of the staff to take care of a large area. At the same time, they are still waiting for a new plan after the end of the previous policy (National Food Security Policy Action Plan 2021-2025)- Not yet launched during the study). They are also always looking for projects and truly competent participants. Among other challenges is that R&D relies on only one entity, MARDI.

From the SME's point of view, the challenge of the agency is to manage imported products. To what extent is the ability of local products to compete, especially in terms of price? They also raised questions about the agency's ability to develop a clear strategy to be implemented to reduce reliance on imported agricultural produce. This includes the agency's ability to ensure adequate food stocks for long periods, ranging from 7 to 10 years. In addition, the agency's other challenge is that they promote agriculture and food security but are less guiding due to the lack of information for mutual engagement.

For the community, what is a challenge is to receive information from the agency. Also, the challenge of large-scale agriculture benefits farmers and overcomes food security issues.

These include challenges to reducing the influx of imported agricultural products and prioritising local agricultural products' marketing. Communities are also urging agencies to tackle challenges in harnessing farmers' local strengths, such as vacant land to scale agriculture.

Among the other challenges is that the agency's challenge is to ensure that agricultural produce provides a decent income and is comparable to other products such as palm oil. It is also necessary to help the farmer who is guided to cope with the issue of dumping. All of these challenges can be overcome by more bilateral interactions.

The findings related to the understanding of the recipient on each agency's jurisdiction found that the agency had no problem understanding the scope and different agencies in the joint agriculture and food security. They know that the community is not clear about the functions and range of the agency. But efforts to provide understanding depend on officers on the ground and relationships with the community.

As for SMEs, they are clear with the scope and duties of each agency. But the confusion is due to the primarily one-way partnership. According to the community, they know how to refer to which agency is right to help them, whether it is for agriculture or animal husbandry. They are also aware that agencies are trying to help and that the way assistance is provided consistent and different. But varies according to plans, officials and budgets.

Related to the results of the study of the approach undertaken in formulating policies related to agricultural development and food security, the agency stated that they used more 'top-down' approaches than 'partnership'. Also, they rely on data from various agencies such as DOSM (SSR), DoA, FAMA and others. At the same time, they rely on internal systems such as the Agri-Portal System.

According to SMEs, they are not sure what approach the agency is using. They know the agency has asked for agricultural or animal husbandry information but are unsure about policy development or monitoring purposes. But for sure, there's not much ongoing discussion.

Communities also state the same thing; they are unsure what approach is used. However, farmers usually only get along. Indeed, there are agencies in the field asking for developments and, if there is a problem, to provide advice.

With the main objectives of federal or state initiatives related to agriculture or food security, the agencies stated that their goal is to produce agricultural produce at the maximum level and always be present in the market to meet market demand. At the same time, ensure the quality of the manufactured products, whether for use local or in export. This includes ensuring the adequacy of food for the needs of the country and exports.

As for SMEs, the agency only follows the agency's plan. Among them is to focus on commercial activities to generate income. Meet the market, and many government projects were

unsuccessful due to monitoring factors and the farmers themselves. According to the community, they are unsure of the agency's objectives. But the habit is to increase the production and income level of the farmer. Farmers are given the option to decide what kind of agriculture or other animal husbandry is more profitable.

Regarding the study's results on the extent of federal agriculture policies implemented in the state, the agency stated that federal agencies should follow pre-determined policies and KPIs. Then it was implemented at the state level, where local farmers were equally involved. The question of which policy is more successful depends on cooperation between federal agencies, the state government and other parties on the ground.

For SMEs, implementation, either at the state or federal level, focuses heavily on development through individuals. Federal agencies are introduced and successful through grants and guidance. But weak in terms of monitoring. Similarly, both agencies have relatively weak control and seriousness for the market. For the community, policies are less effective due to a lack of monitoring, such as price control of chicken feed, fertilisers and poisons. Federal agencies implement most policies. While at the state level, it usually involves local representatives and state assembly offices.

With an agency has the suitable capacity to ensure policy implementation is successful, the agency states that officers and staff are inadequate. Five issues raise about agency capacity, namely 1) an insufficient number of field officers, 2) the need for new technologies, 3) new disease issues, 4) bureaucracy across agencies and 5) marketing issues.

As for SMEs, they raised the issue of agencies starting to charge services in the name of income generation. While SMEs are not satisfied with the 'salary-eating symptoms' and lack of commercial mentality, especially in marketing. They even noted that agencies are not ready, especially for new varieties of plants. But they acknowledged that most of the issues occurred because field officials were not doing enough.

From a community perspective, the issue of having capacity or not is dependent on the officer. Generally, for the community, agencies are more knowledgeable about administration and theory rather than practical in agriculture. The community also raises the issue of the number of officers and needs proper advice and guidance. This has led to the case of officers not being able to provide support and solve problems in the community, such as dumping issues and idle outcomes.

As a result of a study on the conflicts and complementarities between sector objectives and food security and nutrition objectives, the agency stated that there is no conflict. Still, it requires interagency coordination for out-of-scope processes. Even agencies understand each other, but bureaucratic issues slow down cross-agency affairs.

As for SMEs, there is an issue of inter-agency coordination. For example, during the MCO, external agencies from the Ministry of Agriculture must provide support to facilitate out-of-

district marketing and payload. As for the community, they are not sure whether or not there is a conflict. Yet they realize the process is not smooth, and there is no coordination from production to marketing if it is taken care of by different agencies.

With the way federal and state policy is implemented in terms of the decision of beneficiaries, budget allocation and overall management of the policy, the agency stated that spending planning is based on data and KPIs. In addition, consideration of funds is given for once successful projects and researching the applicant's track record.

As for SMEs, they want agricultural activities to continue and be injected with relevant funds. However, the budget should focus on increasing the market's agricultural produce. SMEs need additional capital, especially after the MCO. Communities see more funding in the form of incentive giving capital assistance and agricultural input. Introducing new agricultural products will require other, more significant costs. But they are often told by agencies that the budget is dwindling and needs its capital to grow.

Concerning public-private collaboration in this sector, the agency stated they are constantly working to build a network with the private sector. They very much welcome private participation. However, the reality is that not many farmers can meet the needs of industry or private. As for SMEs, they do not see the government's determination to connect with the private sector. On the other hand, SMEs are exploring the market with the private sector.

As for the community, they have more contact with government agencies than with the private sector. They only connect with other parties only when introduced by the agency. They are trying to get into the bigger market but lacking in quality and cost for the next cycle.

The results of a study on a mechanism of a periodic dialogue between regional government officials and the affected stakeholders to understand the problems and identify possible opportunities for improvement in the sector found that inter-agency interactions are frequent, especially for administrative and operational matters. Discussions with SMEs or the community depend on the issues that arise. In comparison, interactions with coaching participants are frequent. As for SMEs, interaction with agencies is fragile; most are one-way because they do not want a conflict to arise. Many issues were not resolved due to a lack of dialogue or interaction.

For the community, there are frequent conflicts with agencies. Especially regarding marketing, agencies tend to take low prices and choose certain qualities. Interaction with the agency occurs only when needed. For example, there is a visit from outside. At the same time, interactions with agencies informally and formally are infrequent, if even formal, only through attending courses.

The results of a study of the main strengths of agricultural strategy policy at the state level found that agencies believe that their strength is consistent policy and constantly improving. While for SMEs, the strength of the policy is on funding from the government and has a good

and structured agency organizational structure. But theoretically, the police are good, need to focus on implementation and monitoring. For the community, the strength is in the club between farmers or breeders. It becomes a medium for them to discuss and solve problems.

Concerning policy, domains are missing and need to be included in state-level policies; the agency should focus on disseminating information and monitoring the projects implemented. Resolving marketing issues and increasing collaboration with the private sector are also necessary. The case to note is that some SMEs prefer to move alone.

Among the other issues that need to be included in the policy are the difficulty of breaking the monopoly and harmonising relations with middlemen instead of eliminating middlemen. Policies should also focus on potential people rather than try and error. In addition, it is necessary to increase the impactful research instead of the shock itself.

For the community, policies should emphasise implementation, monitoring, and regular interactions, including information on policies and programs. The policy also needs to expand existing projects but is busy creating new programs.

The study's results on how stakeholder participation in the review or revision process is effective and efficient showed that agencies usually refer to special groups based on target groups through the agencies and participants involved. They also include committees from under the same and different ministries. Yet they admit that they do not have enough data from farmers or breeders. This is because some of them do not share the correct information.

For SMEs, the evaluation process needs to involve people who are experts and engaged in the field. The evaluation process is also said to be a lot of shocks and fails to compare with countries that have been successful. The community is of the view that they have beliefs and experiences. But unfortunately, it was not consulted by the agency. They are cynical about the agency's resources, from which they are not sure where their resources are getting from.

Sarawak

Although the agriculture is the fourth economics sector in Sarawak, the agriculture sector is still significant and important in Sarawak where many local labour force are involved in this sector. There are also many suitable lands have the potential to be developed for agriculture project in fulfilling the demand of the food safety. With the improvement of the policies action and implementation, marketing mechanisms and good basic facilities allocation of transportation from the rural to the urban area, Sarawak agriculture sector can be moving forward and more competitive in the future.

Sabah

This study has found that the state government has initiated various policies to develop the agriculture sector in the state including the commodities crops and food crops. The research has also shown that the MAF is among the ministries that received a large budget allocation

every year for the development purpose of agriculture sector but the state remain as a net importer of food having growing bill deficit. With rice as the highest food import commodities due to insufficiency of local production to meet the consumers demand. These findings suggest that in general the agricultural investments are focusing on industrial crops rather than food crops due to mismatch priority. These were found to cause lack of concerted effort in strategic planning by the state government concerning food crops development.

The second major finding was that patronage system does exist. This is one of the factors that has influenced how the industry has grown. Political ties between government organisations, SMEs, and farmers are rather significant. Farmers and SMEs can benefit from benefits including agricultural extension and subsidies if they have strong connections to the political elite. Political interference has led to disparity in assistance allocation, which has an impact on the creation and execution of agricultural programs.

The evidence from this study suggests that policymakers and decision-makers must prioritise the needs of the state. In the context of food security, the state government must shift its focus to food crop plantations. The investment in the food crops industry in terms of land allocation, human capital, and technology should be intensified to boost the industry's growth. The state government must first have a strategic vision for achieving food security. Land is the main resource in agricultural development, so the state government must dare to zone the agricultural land for food-based production without any interference from other development activities.

The ministry of agriculture (MAF) is responsible for managing the state's resources; any policy formulation and implementation should not be influenced by the ruling political parties as it will interfere with the development of the industry. The ministry should serve as the driver of agricultural development in the state. The state government must increase public funds for investment in infrastructure, research, and development to produce high-quality planting materials, strengthen their extension service to make sure the farmers and SMEs are aligned with the strategic planning, especially in terms of the systematic planting to produce more agro-food production to help farmers increase their income, and empower of farmers on their own farms to reduce unproductive middlemen.

Therefore, to enhance food security and the growth of the agro food industry, the state must first have a clear vision on food security, then recognise and understand the underlying causes of the issues. Only then better food policy will emerge.

Annexure 1

i. Mapping the policy promulgation landscape

- Which major ministries/departments, including statutory bodies, have oversight of the sectors under investigation?
- What are the main federal policies under each ministry that have a bearing on the outcomes in the agro sector?
- What are the main state-level policies under each department that have been promulgated for this sector?
- Are there specific federal- and state-level policies in place to promote food security, such as enhanced production of staple food?
- Do state policies overlap with the federal policies linked to food security?
- What is the history of these state-level policy measures (e.g., when enacted, why, level of engagement with different stakeholders)?
- What are the specific policy objectives of the identified state-level policies? What challenges do they address?
- Are there any overlapping federal and state policies in terms of policy objectives and target groups?
- Are there any complementarities in the state policies?
- Do the beneficiaries understand jurisdiction of each agency? Is there any effort to make it clear on the overlapping/complementarity nature of the different agencies?
- What is the approach undertaken in formulating policies related to agricultural development and food security? (top down/bottom up, are they evidence based)
- Main objectives of federal/state initiatives related to agriculture / food security (production/profit/cost/quality/value added), which one is given much more emphasis? Are the objectives in line with current need/development of the sector/main player?

ii. Analysing the policy implementation framework

- Have food security and nutrition considerations been explicitly included in the different recent and past federal and state agriculture policies?
- Has there been any impact assessment of these federal and state policies? If yes, then to what extent have these policies been implemented and what has been their impact?

- What are the conflicts and/or complementarities between sector objectives and food security and nutrition objectives? For example, more cash crops being grown rather than food crops?
- To what extent are federal agri policies implemented in this state? Are they more or less successful than the state agri policies?
- Do the agencies have the right capacity to ensure policy implementation is successful?

iii. Reviewing the outcomes of policies on rural economies

- How are the federal and state-level policies implemented in terms of decision of beneficiaries, budget allocation and overall management of the policies? Who are the influential stakeholders?
- Is there any public-private collaboration in this sector?
- What is the nature of interaction between the state government and federal government before any new policy is announced and implemented?
- Is there any mechanism of a periodic dialogue between the regional government officials and the affected stakeholders to understand the problems and identify possible opportunities of improvement in the sector? Any evidence?
- Is there any mechanism of spreading awareness of new policies / support from government to the affected stakeholders? Do the agencies have a close connection with local community/association leaders?
- Do the relevant agencies provide adequate support to ensure the objectives of certain policies/projects will be achieved?
- Is the progress, even goals, of policy objectives closely monitored and assessed with appropriate field inputs? Are the spill-over effects also taken into consideration?

iv. Analysing the scope of improvement and key lessons

- Identify and describe any existing or in pipeline state-level incentives / disincentives in favour of producing food crops / agro-food products which are currently heavily imported from other countries?
- What are the main strengths and weaknesses of the current agricultural state strategies/policies in terms of speed of implementation, access to beneficiaries and intended output?
- What policy domains are missing and need to be included in state-level policies? For example, strengthening extension services, access to credit, etc.
- How can the federal-state relationship be improved in terms of designing and implementing policies which have a bearing on food security of Malaysia?

- How can stakeholder participation in the review/ revision process be made effective and efficient?
- Which is the weakest/strongest point in the current policy from the perspective of the beneficiaries? (formulation/support/delivery/monitoring etc)?

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*Picture : A Terengganu farmer showing pineapple harvest.
June 2022. Taken by team at Universiti Malaya*