

AN ETHNOGRAPHIC STUDY OF WASAN RICE FARM IN BRUNEI DARUSSALAM

By

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MARCH 2012

Thesis Presented to the Higher Degree Committee
of Ritsumeikan Asia Pacific University
in Partial Fulfillment of the Requirements for the Degree of
Master of Science in Asia Pacific Studies

ABSTRACT

This research explores the food security of Brunei Darussalam, particularly on how the state strives to be self-sufficient in rice production. It aims to understand the contemporary rice farming and discover the changes in the farming landscape. The fieldwork was conducted at Wasan Rice Farm which was the first large-scale mechanized wet rice cultivation in the country. An ethnographic method was used in the study with the use of unstructured interviews to discover the dynamics of Wasan and provide in-depth understanding of farming from the perception of the participants. The study discovered that the failure of Wasan project was attributed to the management problems and the socio-economic conditions of Brunei. The country is heavily dependant on oil and gas industry at the expense of agriculture. In addition, the local people have negative attitudes towards agriculture. It was seen as less prestigious compared to employment in the government and private sectors. The revival of Wasan had huge impacts on the agricultural landscape and renewed the hope for self-sufficiency in food. The research unraveled the roles of army personnel and village cooperatives at reviving the abandoned rice plots. These cooperatives improved the efficiency of the management of Wasan and restored the public confidence in rice farming. To a large extent, farming was no longer perceived as a 'second class' income. However, the government's intervention on the farm began to affect the farmers. The farmers felt some of the policies were unsuitable to Wasan and reduced the yield's quality. Nevertheless, Wasan is still at an experimental stage and there are more to discover in that farmland.

ORIGINALITY DECLARATION

I, Khairunnisa binti Yakub, hereby declare that the thesis is my own work that has not been submitted at any other university or educational institution for the award of degree or diploma.

All the information derived from other published or unpublished sources has been cited and acknowledged appropriately.

ACKNOWLEDGEMENTS

In writing up research materials, I am truly grateful for the patience, guidance and encouragement of Professor A. Mani.

Special thanks are due to my informants for providing me valuable data on rice farming and for their cooperation during the interviews.

I also would like to express my gratitude to MEXT scholarship for realizing my dream to study in Japan.

In addition, I want to thank my seminar colleagues for guiding and giving me ideas on my write up.

Lastly, special appreciation is due to my beloved family and friends in Brunei for their moral support.

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CHAPTER 1

INTRODUCTION

BACKGROUND

During the financial crisis of 2008-2009, the food market became highly volatile and supply of food disrupted. Even the rich and developed countries were on high alert and aware that they were no longer safe from famine and hunger. With the world population now increasingly concentrated in the cities and urban areas, the risk is larger than before. The urban population does not grow its own food and is highly dependent on the market system to get food supply. Imagine if suddenly they are cut off from food supply and flow of food into their areas is stopped. Perhaps their governments have their own food reserves, but this is only for a short term. How long can the reserve sustain the population? There is immense threat of socio-economic and political breakdown due to food riots that could lead the country into oblivion. This could happen if the government does not have enough preparation for future food crisis. Many global institutions such as the World Bank, the International Monetary Fund (IMF) and the World Trade Organization (WTO) are conscious of these threats. Food crisis is no longer confined to one country or region. Countries are interlinked by the food market and are highly dependant on one another. The rising prices or shortage of supply of one food commodity such as rice or wheat could affect millions of people, especially in the developing countries. The impact of the food crisis on the livelihood of people can be summarized as follows:

“Even the poorest fifth of households in the United States spend only 16 percent of their budget on food. In many other countries, it is [more than that]. Nigerian families spend 73 percent of their budgets to eat, Vietnamese 65 percent, Indonesians half. They are in trouble. Last year, the food import bill of developing countries rose by 25 percent as food prices rose to levels not seen in a generation. Corn doubled in price over the last two years. Wheat reached its highest price in 28 years. The increases are already sparking unrest from Haiti to Egypt. Many countries have imposed price controls on food or taxes on agricultural exports...Continued growth of the middle class in China and India, the push for renewable fuels and anticipated damage to agricultural production caused by global warming mean that food prices are likely to stay high. Millions of people, mainly in developing countries, could need aid to avoid malnutrition”¹

These global institutions have played active roles in combating food problems all over the world. They have implemented global measures in hoping to reduce world hunger and nutrition. Different governments and institutions at regional and global levels have organized conferences and meetings to increase cooperation between countries in handling food crisis. One of most commonly implemented policy is food security. In fact food security is not something new. Nations have implemented this policy long before the food crisis of 2008-2009. “The concept of food security emerged in the 20th century as post-WW II reconstruction efforts and the decolonization of many Third World countries created a global food regime that was managed through complex local, national, and international relations” (Schanbacher 2010: viii).

¹ The New York Times, April 10, 2008. From: <http://www.nytimes.com/2008/04/10/opinion/10thu1.html>.

Chapter 1 Introduction

Let's first understand the different dimensions of food security. When talking about food security, we have to know there are different meanings attached to it. The simplest meaning is availability of food to the people, at local or global level (Pinstrup-Andersen 2009). The second dimension is self-sufficiency; always tied with the national food strategy of a country concerned on producing food on its own or for the need of its population. "Again, it was seldom made clear whether self-sufficiency meant that all citizens had access to enough food to meet energy and nutritional requirements or whether meeting economic demand from domestic production was enough to claim self-sufficiency" (Pinstrup-Andersen 2009). This dimension also relates closely with demand and supply equation of food market. The third dimension is access to nutritious and preferred food, an extension of definition provided by Food and Agriculture Organization (FAO) at the World Food Summit 1996 in Rome. They define "food security at the individual, household, national, regional and global levels...exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Pottier 1999: 13). Through this meaning they emphasize people should not neglect food safety as well. In addition, Pinstrup Andersen (2009) also points out those "food preferences" changes the concept of food security from mere access to enough food, to access of the food preferred by the people. We need to consider culture and religious preferences of different food, and this acknowledgment would make a lot differences in implementing food policy. The fourth dimension concerns with the right of securing food; links to food sovereignty movement. This movement supports the rights of farmers in cultivating their own food with less interference from national governments or international organizations.

We also can see the complexity of the term food security itself, involving different dimensions. These meanings or dimensions either stand on their own or intertwine with each other, depending on the policy-makers in formulating strategies of food security. One theme is prevalent in this; food security is a global policy formulated by international organizations and adopted by nations across the world. “Within discussions pertaining to global hunger and malnutrition, the theme *food security* has emerged as a common concern for diverse groups of international financial and trade institutions, food rights activists, nongovernmental organizations, and national governments” (Schanbacher 2010: 1). He goes further by explaining different roles and strategies of global institutions such as the World Bank, IMF and WTO in eradicating world hunger and malnutrition. For instance, the World Bank concerns with economic development through world’s economic integration. Food security is one key strategy of economic development and thus, it is very crucial to integrate food commodity into the world’s market. They encourage trade liberation and nationalization of food commodity, allowing people especially local farmers to produce food in efficient ways as possible with the help of local governments and international organizations. The International Fund For Agriculture (IFAD) and Food and Agriculture Organization (FAO) challenge this approach. They argue that the emphasis need to be on the farmer – which food is deemed culturally importance to them – not what the World Bank, IMF or other world organizations want them to grow. They believe the farmers should be given the right to grow what they want and need, as well as not to give up their traditional farming (Schanbacher 2010: 4). In this sense, IFAD and FAO are different from the World Bank. However, at some point they are also similar with the World Bank in terms developmental efforts. “One common theme that pervades all of these institutional strategies is

the focus on the alleviating poverty through developmental growth, with specific focus on agricultural reforms, trade and technological progress” (Schanbacher 2010: 21).

This shows that the formulation of food security is constructed from the perceptions of these organizations. The opponents of global food security point out that the issue is not only within the practice of global policy-maker ignoring local needs, but also within the definition of food security itself. One of the main problems of their definition is how they heavily focus on the rural and the poor. With more population concentrated in the urban areas, food security concepts need to be broadened to include these urbanites. Since most urban population depends heavily on the market to get access to food, they become more vulnerable to the volatile food market. This means that even highly developed countries are at high risks nowadays. Teng and Escaler (2010) use Singapore food security as a model for new urban perspectives. They highlight the fact that “even a high-income country like Singapore is not immune to disruptions in the global food supply and to price fluctuations” (2010: 2). They propose four dimensions of food security: availability of food, physical access to food, economic access to food and food utilization (Teng and Escaler 2010: 4-5). This model is an expansion of earlier concept of food security, away from rural poor paradigm.

Each of these global organizations has their own agenda of economic growth and development. The formulation of food security allows them to categorize different countries and regions under the same policy. The result can be constructive or destructive on a particular country or region. The positive outcomes of food security implementation is that it enables government

interventions on farming practices at the local level and gives them necessary support for improving their production through agricultural reforms. In addition, it allows for more regional integration and cooperation in curbing food crisis within a region. For instance, since the 1970s there has been increasing regional cooperation in food security among ASEAN members. In 2009, the members developed ASEAN Integrated Food Security (AIFS) Framework to provide more long-term joint ventures among ASEAN nations in food security². Through this venture, ASEAN could provide financial and technological assistance for the farmers in the region. They hope to improve the livelihood of the farmers through this program.

However, food security does not necessarily bring desirable outcomes. Famine, poverty and malnutrition are still persistent in many parts of the world, especially in developing countries. Moreover, programs and policies brought by global organizations are not always welcome by the local people. They feel there are too many interferences from these organizations and governments, hindering their own progress (Pottier 1999). For these people, the world aid to local farming is actually destroying their traditional lives and pushing them further into poverty or famine. Even the local people feel the institutions and organizations are ignoring their voices and knowledge. Jon Moris (1991) recalls a testimony of a Kenyan woman regarding how officials look down at her agriculture knowledge:

“We had completed the formal questionnaire when the respondent, an old woman, asked if she could now please tell us some facts. She was, she claimed, the person most knowledgeable about growing yams in the community...These plants, she insisted,

² From: <http://aseanfoodsecurity.asean.org/background-documents>

were very important for poor women like herself who only had little land. Now she was old and would soon die: could we please convey [her] observations to the Agricultural Department so that other women might be helped?"

Moris describes the reply was disappointing. He further elaborates:

“[A]gricultural officials had no place in their programmes for yams. It was not, they explained, a priority crop. There was no-one to receive the old woman’s tape-recorded empirical observations, garnered over a lifetime spent growing yams. The extension system was entirely orientated towards receiving messages from its research scientists: there was at that time no means of conveying new observations upward into the formal system” (1991: 55)

The above case shows the current approach of many policy makers in local farming. By dismissing the woman’s knowledge, the policy makers might have less chance of implementing effective agricultural programme. Perhaps the woman’s knowledge could help them more in their food security formulation. From the statement, it seems the local perceive yam is more important than other crops and could be a solution for their hunger as well as poverty. Sadly, the officials do not take this into consideration. By ignoring the local’s want, this could lead to tension and new problems. If they are growing crops which are not needed by the local people, so who are going to eat that? By growing the wrong crop, how are they going to help the locals

from hunger and poverty? And this is only one case. It happens all over the world where there is more international interventions on local agriculture. This interventions always brings tension between the higher ups and the local population. The international aid, to a large extent, has good intentions for helping the people but their policy hampers the efforts. This makes us think of two spectrums: global versus local and policy versus practice. The global food security supposes to work at all levels of society, regardless where they come from. Or is it the case?

The opponents of global food security are always critical of international institutions approach to food problem. They fail to recognize the complexity of local environment and population. Different societies have their own perceptions on hunger, poverty and how to secure food for their own needs. Here is another case of how local views on hunger are different from how global institutions define it. Pottier (1994b, 1996) describes his fieldwork at Rwanda in 1994. At that time, the country was thrown into war and genocide followed by formation of a new government. For the outside experts, the conflicts more likely left the people into disarray and hunger. They thought the population lost entire crops and all seeds were virtually eaten. But his five weeks stay proved otherwise. From the conversations with farmers and observing their environment, famine did not break out. The market slowly recovered and seeds' supply was not depleted. Reality unfolded itself and worst fear of the 'experts' did not exactly happen (Pottier 1999: 2). This is just an extreme example. The point is, policy-makers should not blindly judge the situation of the local. Perhaps from their perspective, these people need help or more effective farming programme. But this is not necessarily the case. Without really understanding the local context, how will policy-makers know what they should or should not do? This is why global food security regimes keep on coming under attack due to their failures in understanding

the local's need. As what Schanbacher (2010: ix) mentions "ultimately, the food security model is founded on, and reinforces, a model of globalization that reduces human relationships to their economic value".

Therefore in implementing food security policy, we need to take into consideration what the local population want and need. In addition, we also need to investigate the unique landscape of the region or particular place, how the environment could affect the crops grown there. Considerable weightage should be given to the farmer and the farmland because this is where food policy can be contested. As what the above discussion has mentioned, ignorance of local farming could cost policy-makers. Carr (2006) and Pottier (1999) argue that in discussing food security, we should always emphasize the roles of social actors especially the farmers. The importance of local knowledge and perception of food security should not be ignored. By studying local landscape and livelihood, it is possible to implement effective programmes for food security.

This study is not trying to dismiss the global food security model entirely, but rather following the recent perspective of broadening the food security concept. It is an attempt to bridge the gap between government policy and local practices. "The challenge is to appreciate how the different actors involved (e.g. peasant smallholders, commercial farmers, transnational companies, policy-makers, banks and various agrarian organizations) struggle to negotiate outcomes" (Long 1996: 48). By understanding the farmers and farmland more, hopefully it would give policy makers

more insight on what countries really need in securing their own food and maximizing local production.

OVERVIEW OF BRUNEI'S ECONOMIC AND FOOD SECURITY

Brunei Darussalam has tried to diversify the economy and reduce over reliance on the oil and gas industry, and rice farming development is part of this national effort. It is a component of larger vision, named Brunei Vision 2035. This new vision is formulated in response to Brunei's recent recession in the 1990s. After enjoying steady growth in its economy since its independence, the country experienced downturn due to Asian financial crisis 1997. Although the impact was not as severe as in other Asian countries like Malaysia, Thailand, Taiwan and South Korea, the crisis did affect the economy and politics of Brunei. The Amedeo Corporation owned by Prince Jefri collapsed and left the country with huge debts, amounting to US\$30 billion (the exact figure is still unknown due to lack of transparency on Brunei Investment Agency). The public was not aware of this crisis as the state did not reveal them in order to avoid mass panic. It was a dire lesson for Brunei – not always to be in its comfort zone. Brunei is no longer spared from global downturn, and if the Sultanate is not prepared this could lead to massive socio-economic and political disaster in the future. That's why the government decided to reform and stimulates new economic development and face challenges. It is time for changes and Brunei Vision 2035 is the answer.

By the year 2035 Brunei wants to be recognized as a country with exceptionally skilled citizens, high quality of life and sustainable economy. This vision would ensure Brunei's survival and continuity as a free nation. Indeed, the Sultanate is prosperous with the help of oil and gas industry. The citizens enjoy high living standards with extensive welfare benefits – free education and health, as well as no tax on income. But



Figure 1.1. Pulau Muara Besar Project; the government will transform it into a high class international shipping port. Source: <http://www.bedb.com.bn/keyindustrialsites.html>.

these should not be taken for granted. Anything can happen in the future, or even now. Brunei needs to change and adapt to the competitive world market. Hence, the state now begins to explore the full potential of socio-economic and environmental landscapes of the country which could provide new markets and employment not only to citizens, but also to foreign investors. Through the current 9th National Development Plan (2007-2012), Brunei has already begun its mega industrial projects such as Sungai Liang Industrial Park and Pulau Muara Besar. Both projects would cater to the growth of petrochemical industries and attract more foreign investors into the country. At the same time, this would enable the Sultanate to emerge as an important international business and finance hub in Asia. Attention is also given to other sectors especially housing, information technology (IT), finance and ecotourism. In the housing sector, the state has opened new lands for housing schemes. In addition, the education system also emphasizes leadership and professionalism; hoping to produce future leaders and skilled labor force who will

lead the country. In finance, the Islamic banking system expands their services in areas such as credit cards and student loans in order to reach the international banking standards. For ecotourism, the Tourism Board has made relentless promotion and efforts to attract more and more visitors to Brunei. Under the slogan “Kingdom of Unexpected Treasures”, Brunei is set to be an exotic destination for tourists who are seeking natural havens. Extensive forest reserve is still intact and not exploited yet, so the government turns them into popular resorts and recreational parks. Here we can see how Brunei tries to balance their development programs; preserving the environment is as important as developing new industries. By this, the country hopes to achieve better socio-economic and political stability as well as security.

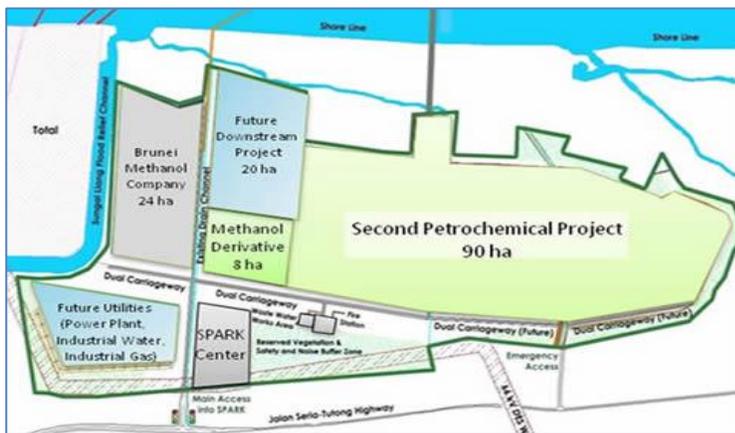


Figure 1.2. SPARK Development Plan – how the site is going to be structured. SPARK Center will host multi-purpose functions - administrative offices, exhibition hall, retail shops and spaces for rent. Source: <http://www.bedb.com.bn/keyindustrial sites.html>.

Figure 1.3. An aerial view of 271-hectare Sungai Liang Industrial Park (SPARK), located next to Brunei LNG. The project is a joint venture between Brunei Petroleum and Mitsubishi Gas Chemical Co Inc plus Itochu Corporation. It is approved by His Majesty The Sultan himself. Source: <http://www.bedb.com.bn/keyindustrials ites.html>.





Figure 1.4. A map shows major industry development sites in all districts proposed under 9th National Development Plan, ranging from energy industries to ecotourism and agriculture. Source: <http://www.bedb.com.bn/keyindustrialsites.html>.

The map above shows major development areas under the 9th National Development Plan and one step closer to Brunei Vision 2035. In order to achieve this vision, socio-economic and political stability as well as security are vital for progresses mentioned above. One of the vital aspects to stability and security is food. National development would be nothing if the people are starved and malnourished. Food security becomes significant agenda for the country. The state has been raising public awareness of food security issue and the need to develop Brunei agriculture. As shown in Figure 1.4, the Agrotech Park is also one of the major development landscapes. By placing the Agrotech Park on that map, it shows government's determination to expand the agricultural industry. This is a significant turning point for the Sultanate because for a long time they have struggled to develop their own agricultural sector. Food is important for the

survival and continuity of a country, and yet Brunei mostly does not produce its own food. In fact, they import 80 per cent of their food requirements and the state subsidizes certain staples such as rice, milk and sugar³. With its oil revenue, the Sultanate has enough capital to buy food from other countries. However, with the increasing volatility of the food market, ensuring constant supply of staples into the country could be challenging. The risk is higher if Brunei does not produce its own staples.

During the food crisis 2008-2009, the price of basic foodstuffs like flour and onions increased dramatically. The public whined and complained about it on newspapers and internet. They were really worried this problem would affect rice as well, but the government ensured they would keep the subsidy and the rice price as usual. Bruneians felt blessed with this. For the state, they

Table 1.1. Place of Agriculture in Brunei.

| GDP at current prices, 2006-2008 (BN\$ m) | | | | |
|--|----------|----------|----------|------------------------|
| | 2006 | 2007 | 2008 | % value in GDP in 2008 |
| GDP at current prices | 18,225.8 | 18,458.8 | 20,397.9 | 100% |
| % change | n/a | 1% | 11% | - |
| Agriculture, forestry and fishery | 128.7 | 127.3 | 129.7 | 1% |
| Services | 4760 | 5169.4 | 5150.7 | 25% |
| Industry (including hydrocarbon) | 13,336.9 | 13,161.7 | 15,117.5 | 74% |

Source: The Department of Economic Planning and Development (JPKE)

³ Brunei Economic Development Board 2011.

realize agriculture changes were needed. The government is worried what if someday Brunei is cut off from rice supply or other food imports. The Sultanate would be in a big trouble. The question now is not ‘what if’, but rather ‘when’. They need to act now.

The Table 1.1 above shows Brunei’s GDP between 2006 and 2008. There was a huge increase in GDP, from 1 per cent in 2007 to 11 per cent in 2008. However, much of this growth came from the industrial sectors such as oil and gas. By far, they were the highest contributor to the economy. Although there was some improvement in agriculture, forestry and fishery, they were only 1 per cent of the GDP in 2008 – the lowest. This is why the government is concerned with agriculture. It has a long way to go.

Table 1.2. Agricultural Production and Consumption in 2009. Source: Department of Agriculture and Agrifood 2009

| AGRICULTURE | Total Consumption | Local Production | Import (%) | Self-Sufficiency(%) |
|------------------------|--------------------------|-------------------------|-------------------|----------------------------|
| Egg | 125.68 mil* | 124.48 mil | 1 | 99.0 |
| Broiler chicken | 21,176.62 mt** | 19,536.2 mt | 7.7 | 92.3 |
| Vegetable | 20,564.2 mt | 12,183.4 mt | 37.7 | 62.3 |
| Fruits | 18,703.8 mt | 4,473.3 mt | 76.6 | 23.40 |
| Goat | 23.09 mt | 0.81 mt | 96.5 | 3.5 |
| Rice | 31,786 mt | 891.4 mt | 97.2 | 2.8 |
| Beef | 2775.59 mt | 29.98 mt | 99.14 | 0.86 |
| Diary | 831,070 l*** | 2,118 l | 99.7 | 0.3 |

*million **metric tonnes ***litres. Source: The Department of Agriculture and Agrifood 2009.

Table 1.2 shows that self-sufficiency rate for egg, broiler chicken and vegetables is very high, while fruits are at medium level. On the other hand, self-sufficiency for rice, beef and dairy products are very low; meaning Brunei mostly does not produce these staples and rely on imports. For beef, the Sultan owns a large buffalo and cattle ranch in Australia and this ensures the steady supply of beef to meet the demand of the country. For dairy products, it is not the main staple food of Bruneian compared to others. Rice is a big problem here. The consumption rate (in terms of metric tonnes) of rice is the highest compare to other food items such as broiler chicken and beef. With a high consumption pattern, only 2.8 per cent of rice is locally produced. Most rice is imported from Thailand. The country does not produce its own rice. This is why for agricultural development, rice has become one of the main agenda. Indeed the government also focuses on other staple food, but for them rice needs more urgent attention because Bruneians consume it the most. The people could not live without rice. Rice is a key to Brunei's stability and security. Even His Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam in 2008 urged:

“If a rice producing country that already has the capability to achieve 70 percent of its domestic requirement and is still striving to formulate policies to achieve 100 percent self-sufficiency, why is it that we, only achieving three per cent, are not exerting enough efforts to increase our national rice production? If I may recall, I have been emphasizing on this matter for the past few years. It is most appropriate now that we should have our own strategic plan and national agricultural policy that will guarantee national food security as one of its key strategies” (His Majesty's birthday address 2008, Borneo Bulletin Yearbook 2010: 34)

With the Sultan himself calling for the urgent need to be self-sufficient in rice, the people began to realize how vital local rice production is for the future. Rice imports should not be taken for granted anymore and the country must develop its rice farming in order to achieve Brunei Vision 2035. Oil and gas industry has transformed the Sultanate into a modern state with extensive welfare system and high GDP. The people enjoy free education and health as well as no income tax. In fact, this is not a new phenomenon. The country has struggled to develop its agriculture sector for a long time, even during the British colonial era. This is not the first time the state has called for self-sufficiency in rice production.

The government embarked on a National Rice Production project in 2009. The main aim of this project was to raise the level of self-sufficiency in these aspects: to ensure that the level of local commodity production is adequate, available and sustainable; to ensure a reasonable market price so that all levels of society can afford to purchase rice; and to ensure the continuous and accessible supply of food (Borneo Bulletin Yearbook 2010: 32). Brunei's food strategy is concerned mostly with self-sufficiency; how the country could produce its own food and maintain the supply without depending much on imports. Self-sufficiency is echoed over and over again on the media so that the public become aware of it, to the point the term is synonymous to food security. What the public is less aware is that there are different dimensions of food security (refer to earlier discussion), not only self-sufficiency. Nutritional dimensions of food security, to a large extent, has less emphasis here. The food security here is more market-driven; the government does not only concern with steady supply of rice, at the same time they try to promote new business opportunities based on the agrarian sector. For this purpose, the

Department of Agriculture was now expanded into Department of Agriculture and Agrifood in November 2009. Two major functions of Agrifood division are:

- “Marketing and Information Management – Collecting and analyzing marketing informations, doing marketing analysis on agricultural projects, disseminating local and international projects information in relations to agriculture, promoting agricultural investment, undertaking surveys and research on agricultural commodities, compiling, preparing and distributing annual statistics on agriculture.
- Agribusiness Advisory – Encouraging active participation of agricultural entrepreneurs, facilitating agribusiness entrepreneurs for development and exploiting their potentials in the agribusiness sector, assisting agribusiness entrepreneurs competency through capacity building, creation of partnership and better communication, delivering advisory/consultancy services in relation to information and opportunities in agribusiness, financial assistance, and business networking in the agribusiness sector. “
(Department of Agriculture: 2009. From :http://www.agriculture.gov.bn/DOA2009/contents/agribusiness_development.html)

The functions of the new department show how agriculture has become market driven. The state believes that with the right policy, technology and policy execution, rice alone could become a profitable industry. Not only it could feed the people, it would also guarantee the survival and continuity of the country.

Summary

This chapter outlined the background of the study and Brunei's concern with food security. The different dimensions and problems of food security definition, to large extent, reflect the interest and perspectives of international organizations or national governments. They tend to oversimplify the complexity of local landscapes and people, and think they all have the same problems so that they could implement the same policy for everybody. Different places and people have different needs and food preferences. Thus those food security policies could not be for everybody. Implementing wrong policy could antagonize the local people and hamper efforts to produce more food. This is why we need to recognize the variations among people and understand food security issues from their perspectives. By doing this, we could narrow down the gap between policy-makers and the local people, thus resulting in more positive outcomes.

In the case of Brunei, although the country is oil-rich, is susceptible to the volatility of the global market. For survival and continuity, the Sultanate has put forward a futuristic vision named Brunei Vision 2035. The Vision is based on ideal world where the country achieves sustainable development and high quality life. But can be just wishful thinking visions if the country does not have enough food to feed the future population. The government is highly concerned of this issue and sees the need to implement effective food security policy. Brunei's food security here is mainly market-orientated and concerned with self-sufficiency. Rice production becomes one of the key agenda in this policy. The government sees the potential of mechanized rice farming. Besides being the main staple food of the population, rice also could open up a new lucrative market and technological advancement. With it, agriculture could be one of the largest industries

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in Brunei and perhaps could guarantee the survival of the country when oil resources become depleted in the future. The new rice policy has profound impact on agriculture and people. It transforms the socio-economic landscape of the country, and this is where this study hopes to contribute to a comprehensive understanding.

CHAPTER 2

METHODOLOGY

Methodology

An ethnographic method was used for the study. The research will try to understand and discover mechanized rice cultivation from the perspectives of the people. The earlier chapter had discussed the need to recognize the roles of farmers in national food security policy, as well as highlight the variations of local farming landscapes. Pottier (1999) describes how anthropology is in search of relevance in this world; trying to fit into the formulation of policies. Traditional anthropologists always distance themselves and critical of policy-makers. His study on food security is an exciting attempt to narrow down the bridge between anthropology and policy-making, and so does this research. This does not mean the research will go against the food security or the policy-makers, rather it goes along within food security framework and at the same time attempt to incorporate anthropological elements in the analysis; particularly in explaining the findings based from fieldwork than from the perspectives of policy-makers. By doing this, it could provide a greater understanding of contemporary rice cultivation as well as recognize the rights of the farmers. We should acknowledge that farmers hold extensive knowledge about rice farming that is different from the policy-makers. This knowledge could make a difference and perhaps it could help to improve the agrarian situation of Brunei.

Research Objectives

The objectives of this research are to understand the contemporary, rice cultivation in Brunei and to discover the continuity as well as changes in the farming landscape. There have been ethnographic studies on rice farming, but many of them focus on traditional practices (cf: J. H., Ellen and Bantong Antaran: 1997, Maxwell: 1980). Some ethnographic research has been made on extensive, modern wet-rice cultivation in the country, as well as the roles of modern farmers who use the latest technology. But they focus more on formulating policy and management perspectives. For the former, these researches are largely following village-study discourse of Southeast Asia which has been prominent since the 1960s. They tend to lean towards certain ethnic groups (majority or minority) and villages. In the case of Brunei, the studies are based on the Brunei Malays, Kedayan, Murut, Dusun, Bisaya and Iban villages. The first five groups are the prominent ethnic groups in the country, while Iban is considered to be the minority. There have been significant studies made on these groups, especially by sociologists and anthropologists. By learning those villages and groups, students or scholars always uncover the traditional farming practices there. Rice cultivation tends to be small-scale and kinship based.

However, the government is moving fast towards Brunei Vision 2035 and encourages the practice of modern farming techniques, especially the use of hybrid rice and the latest machinery. More and more local farmers participate in mechanized farming projects, and integrate their rice production into the food market. They produce rice not for themselves, but in surplus for the market. It would be interesting to observe how far rice farming has changed and to what extent the traditional methods persist. In addition, through this study we could recognize the impact of

mechanized farming on socio-economic life of Brunei, as well as uncover challenges in the development of the modern rice farm.

Research Questions

These are the research questions for this study:

1. What is the pattern of rice farming in Brunei?
2. Why rice cultivation is undeveloped?
3. What are the socio-economic and political implications of farming to the country?
4. What are the impacts of the opening of Wasan to an agricultural landscape?
5. Who are the social actors responsible for Wasan?
6. How is Wasan Farm managed and how far it has improved under the new management?
7. What are the problems faced by farmers at Wasan?

Data Collection

There two types of data here: primary and secondary. The primary data comes from unstructured interviews, average 1-2 hours per person. There are total 21 informants here; 9 are farmers (middle age and old) and 12 are non-farmers (age ranged from 23 to 50). By conducting unstructured interviews on these participants, it gave them liberty to express themselves. This makes the research environment more casual and the participants feel relaxed to tell stories of their farming activities and experience. For non-farmer informants, their opinions and feelings on

rice cultivation do matter. They are very useful to analyze the socio-economic condition that influences the pattern of rice production.

Table 2.1. The Data of Farmers

| Farmers | Age | Active* | Full Time** | Rice Farm Area |
|----------------|------------|----------------|--------------------|-----------------------|
| <i>Male</i> | | | | |
| 1 | <50 | Yes | No | Wasan |
| 2 | <50 | Yes | No | Wasan |
| 3 | <50 | Yes | No | Wasan |
| 4 | <50 | Yes | No | Wasan |
| 5 | <50 | No | No | Wasan |
| <i>Female</i> | | | | |
| 7 | <50 | Yes | No | Wasan |
| 8 | <50 | Yes | No | Wasan |
| 9 | <50 | Yes | No | Perdayan |

* Active – Still owned plot of rice farm and cultivate it by the time this research was conducted

** Full time – Economic income purely based on farming, not from other jobs or business

All of these farmers are local Bruneians and part-time rice farmers; meaning they have other source of income derived from non-farming jobs such as at government's offices and private businesses. Only one of them is no longer active due to commitment to his other job and this informant has given up farm land to his relative. They employ foreign workers (most are Indonesians and a few from Malaysia) to work on their fields. From these farmers, I was able to gather information on the structure of the rice farm and how it is managed. Each of them belonged to different farming cooperative or association that has operated the farm since 2006. Through the interviews, they unraveled so many stories of the farm ranging from the history of its establishment to social or environmental issues. On the other hand, one female farmer from the list does not belong to Wasan, but rather comes from Perdayan Farm at Temburong District.

The reason I include her because this would enable me to get an overview of rice farming from other districts and correlate it with the pattern in Wasan.

Table 2.2. The Data on Non-Farmers

| Non-farmers | Age | Job (Sector) | Rice farming experience and skills |
|--------------------|------------|---------------------|---|
| <i>Male</i> | | | |
| 1 | 49 | Government | Yes |
| 2 | 23 | Unemployed | Yes |
| 3 | <50 | Government | Yes |
| 4 | 25 | Government | No |
| 5 | 24 | Government | No |
| 6 | <50 | Government | Yes |
| 7 | <50 | Government | Yes |
| <i>Female</i> | | | |
| 8 | 40s | Private | Yes |
| 9 | 40s | Private | Yes |
| 10 | 40s | Government | Yes |
| 11 | 24 | Government | No |
| 12 | 26 | Government | No |

For the second group, most of them have farming skills and experience especially among those who are above the age of 40. They come from a generation of rice-growers in the 1960s and the 1970s, periods during which rice production reached its peak. This explains why all of them have farming knowledge and techniques, although they are no longer involved in rice cultivation. They are now fully employed at the government sector or doing their own business such as operating retail shops. For younger informants, all of them (except one) have no experience on rice farming or even have not seen rice fields at all. These younger informants are also very crucial because their perspective on rice farming could uncover how far agriculture has changed

from the past. Only one is exceptional – he has rice farming experience from a young age, which is very rare in contemporary Brunei. This informant studied agriculture at secondary school - a subject which no longer exists since its abolition from the school curriculum in 2005. He never pursued any other career than agriculture until today.

Hence by expanding the age range for this study, we could get more comparative analysis of farming patterns, between old and young generations. This could explain why rice cultivation was stagnant for a long time, even though it was booming in 1970s.

In addition to data from the interviews, this research also relied on secondary data – statistics. Most of these statistics are published by the Department of Agriculture and Agrifood as well as the Brunei Economic Development Board. For this study, the focus of the statistics will be industrial development, agricultural output, food imports and consumption. These could show the agricultural pattern and development of Brunei for the past twenty years or more.

Apart from the people, this study also used a specific rice farm. Here it will employ social landscape perspectives. By landscape here, it does not only mean a surface on the earth but also connotes certain space and place that has social, cultural, economic and political meanings (Jacobson 1984). He also emphasizes that in studying landscape, visibility is important (1984: 31). Landscape has hidden stories behind it. By digging through these stories, we would uncover the actors, events and conditions that affect the formation or changes of the landscape. Hence

this is why focusing on specific rice farming place would enable us to understand the dynamics of Brunei agriculture.

The area of study here is Wasan Rice Farm Project; located at Wasan Village and about 30 minutes drive from the capital city, Bandar Seri Begawan. Figure 2.1 below shows the map of Brunei and the location of Wasan.

Figure 2.1. The Location of Wasan



Source: <http://www.maptown.com/geos/brunei.html>.

Figure 2.2.View of Wasan rice fields



Picture was taken in April, 2011.

I chose Wasan is due to its accessibility and importance. The place is easily accessible and can be seen from the main road leading to Kuala Lurah Immigration Post and Limbang (a district of Sarawak, Malaysia). The farm is surrounded by five villages: Wasan, Pancur Murai, Limau Manis, Bebuloh and Batu Ampar. The name Wasan Rice Farm is in fact derived from Wasan Village due to its location. The area of the farm is 202 hectares; first opened by the government in 1978. It is very significant because the farm was the first large-scale mechanized wet-rice cultivation in the country. There was political pressure leading to its opening (Chapter 2 will describe this in detail) and since then, and has become an icon of agriculture. The study of Wasan could reveal the history of farming in Brunei and how far socio-economic conditions of the people affect the dynamics of the farm.

There are limitations on this research. Because it is people-oriented, it may be biased against government policy-makers. The analysis will be mostly descriptive; reflecting the perspectives of the informants. Moreover, there are other major farming areas such as Perdayan Farm in Temburong District, Lamunin Farm in Tutong District and Lot Sengkuang in Belait District. Due to insufficient time, I was not able to cover one of these farms. The focus is narrowed down to one particular place (Wasan), so it will be less comparative. The findings on Wasan will generalize the farming patterns in Brunei. Perhaps the case of Wasan might or might not reflect the whole rice farming patterns and trends across the country.

In addition, I was not able to interview one important group of farmers in Wasan — the foreign workers — due to limited time. These foreign workers were reluctant to be interviewed during my fieldwork there, so it took a lot of time to gain their trust. Everytime I tried to ask them questions, their replies were “We do not know much and only do our jobs. If you want more information, please ask our employers. They know better than us”. Sometimes they did not talk at all, only gave a few gestures that indicated they were unwilling for the interview. Another reason was security. I personally had an uncomfortable incident with a few of foreign workers there. I was taking photos of rice fields when one employee greeted me from his small hut. I politely returned his greeting and asked for an interview. He gestured me to come to his hut. As I approached the hut, suddenly another five men appeared at the window. They were topless and waved lecherously at me. I was scared and ran back to my car, 20 meters away. My 18 years old brother who was waiting inside the car was oblivious to it. Later, my family discouraged me from conducting fieldwork alone or with my younger brother. They were concerned with my personal safety and advised me not to take risks. I had to distance myself a bit from the foreign

workers. As a young female researcher I was aware of my own limitation and inconvenience in conducting interviews on the rice field without any adult male companions.

Regardless of these limitations, I hope this study could still represent the reality of modern rice farming in Brunei. In addition, it is not my intent to give a negative picture of foreign workers here.

Summary

This research is hoping to provide an insight of modern rice farming in Brunei. The country is at a turning point now, and it is very interesting how modern agriculture fits in and plays its role in this new development program. One way to understand it is from Bruneian perspectives and that is why the study employs ethnography. It is rather fascinating and intriguing to know the experience of farming experiences from the perspectives of people involved in rice farming.

The next two chapters will discuss Brunei rice farming in more detail. Chapter 3 will analyze the dynamics of the Wasan Rice Farm and illustrate how the case of Wasan reflects agricultural trends in Brunei. It will reflect on the history of wet rice farming, development of modern agriculture and how it became stagnant. It will employ the perspective of social landscape and try to uncover hidden meanings behind Wasan. Chapter 4 will examine the roles of farmers in Wasan and their farming practices. It will focus on the social interactions in Wasan and how the farmers adapt to new farming techniques. The chapter will also try to look into socio-economic

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and environmental issues pertaining to Wasan and how the government responds to them. Finally, Chapter 5 will be the conclusion and examine the overall discussions in the former chapters.

CHAPTER 3

THE DYNAMICS OF WASAN

Introduction

There is a saying in Brunei “*alah ku lauk lain, nasi labih penting*”, literally translated as “no other food is as important as rice”. Like in many other Asian countries, rice is a staple food in Brunei. People value it highly and even the old generation teaches youngsters to value rice. They say “*jangan buang nasi, nanti kana sumpah rezeki*” or “*nasi yang kamu buang menangis tu*”, which mean “do not throw away rice, or you shall be cursed” and “rice which you have thrown is crying right now”. This truly shows how integral rice is to everyday life of Bruneians. The population could not live without rice. Rice is everything. *Beras Wangi* (“Fragrant Rice”) is the main rice eaten and sold in the country. Even there are increasing number of Malaysians (from Sabah and Sarawak) who buy rice from Brunei due to its cheap price and delicious taste. They say Brunei’s *Beras Wangi* taste better than their local rice. Yet, the Sultanate does not grow any of *Beras Wangi*. It is well known that the other name for *Beras Wangi* is Thai rice, because it is in fact jasmine rice imported from Thailand. That is the irony.

For most Bruneians the source of their rice is not a major concern. They do not see this as a big issue. Why? This is because for a long time, the country relied heavily on rice imports, especially from Thailand. They easily get access to rice from the market and do not need to grow it on their own. Since the population of the country is very small, estimated around 414,000 (Brunei

Economic Development Board: 2010), and the wealth from oil and gas industry mean that the government could afford to import rice for a long time. In addition, the government provides subsidy for rice. They buy rice from Thailand at B\$25 per kilogram and sell it to public at B\$11.80 per kilo. This price is quite cheaper than the neighboring countries like Malaysia. It could be said that the Bruneians are blessed with this cheap price. The main question is how long Brunei is going to depend on rice imports? The table below shows how far Brunei's rice production fared against other ASEAN countries:

Table 3.1. Compound Annual Growth Rate Of Rice Production and Population (%). 1961-2007

| | Rice Production | Population |
|---------------|-----------------|------------|
| Laos | 3.7 | 2.3 |
| Myanmar | 3.5 | 1.8 |
| Indonesia | 3.4 | 1.8 |
| Philippines | 3.1 | 2.5 |
| Vietnam | 3.0 | 1.9 |
| Thailand | 2.2 | 1.7 |
| Cambodia | 2.0 | 2.1 |
| Malaysia | 1.6 | 2.5 |
| Brunei | -3.0 | 3.3 |

Source: FAO, <http://faostat.fao.org/>⁴.

As shown in Table 3.1, while other ASEAN countries have positive growth on rice production between 1961 and 2007, Brunei shows a reverse trend. As one of the richest countries in Asia and well-known for its vast oil and gas resources, Brunei's rice farming has remained undeveloped and has fallen far behind many Asian nations. While it is really a peculiar sight for a country with extensive financial resources like Brunei spend heavily on food imports, we

⁴ Cited in Lim, Chong-Yah 2004: 69.

would wonder why they do not do the same for growing adequate. The economies of scale have been favorable to Brunei in allowing it to be in a peaceful region where money can buy adequate amount of rice from neighboring countries.

In order to understand this phenomenon, one aspect we could look at is the farming landscape in the country. One of most important rice farming area is Wasan; the first area for large-scale mechanized wet rice cultivation. By understanding the dynamics of Wasan, we could unravel the socio-economic and political conditions of Brunei that led to the Wasan project. Wasan is not just a physical site. It has its own story. When asked about what they know about Wasan, one of my male respondent, aged 25, answered:

“I don’t know much about it, except it is one of the main rice farms in Brunei. Where? I don’t really know the exact location. Yes, I know about *Kampong Wasan* (Wasan Village) and the rice farm is supposed to be there right? For a long time, I’ve been wondering the exact location of it. Besides, I only know about Wasan because it is mentioned in the school textbook“

The ignorance about the Wasan rice growing area is common among Bruneians. Rice growing is one of the least concerns in Brunei. When this researcher pointed out the exact location of Wasan rice farm, another respondent replied as follows:

“Oh really?! That’s Wasan? Yes, I saw a rice farm on the way to Limbang. I really didn’t expect that’s Wasan. So that rice farm truly exists. I thought it is only a name and

nothing more. Well, I don't really understand why people make a huge deal of Wasan these days. It is only a rice farm, so what?"

An older female respondent, in her 40s, recollected her memories of the histories of rice growing in Brunei. She recounted her memories:

"I don't remember much about Wasan. Back in the early 1990s, there were lots of farming activities there. Big tractors were working on the farm and smoke due to burning were there. After that, I don't know what happened. The farming just disappeared and the area became covered in bush. Now they clear the land again for farming. I know about the reopening of Wasan since it was a big event on the news. It's been a while I've seen activities there..."

These were some of the response that I got when I asked interviewees what they knew about Wasan. Young people were largely clueless about it, while older respondents had vague memories of farming activities there. The place was hailed as the first mechanized rice farm in the Sultanate, yet this fact has been largely forgotten by the public. Only recently Wasan appeared back on Brunei farming landscape after being forgotten for quite some time. After the farm was reopened in 2006, people began to be aware of the existence of Wasan again.

Why was Wasan forgotten? What happened to Brunei agriculture at that time? This chapter seeks to answer these questions, particularly in understanding the evolution of Wasan. The dynamics

of Wasan reflects the socio-economic history of Brunei particularly how the country has been struggling to develop its non-oil and gas sectors.

The first part of this chapter will analyze the brief history of farming in Brunei and “how the policy of self-sufficiency was a reflection of the Government’s concern on Brunei’s dependency on external supply for food” (Hajah Gayah 1995, 1996: 62). It will describe how Wasan brought hope and promise to Brunei’s agriculture in achieving its self-sufficiency level, just to be hampered by bureaucratic and environmental problems. The second part will explain the social and economic implications of the failure of Wasan. Since there is limited data on Wasan during this period, the section will largely focus on interviews. The third part will briefly describe the reopening of Wasan and how far it could bring more prospects to Brunei. After being abandoned for a long time, Wasan reappears on Brunei’s socio-economic map once again.

Development of Wasan and Brunei’s Agriculture

During the grand opening of Wasan Rice Farming Project in 2008, it was made into a national media event. Bruneians welcomed it with an open heart and proud of the country’s achievement. The young generation thought this was the first time they saw such a spectacular event on agriculture. But many Bruneians forgot that this was not the first time the Sultanate strived for a national rice policy and self-sufficiency in food production. The call was made way back before the independence of Brunei, even during the British administration.

During the colonial era in Brunei, the British were aware of the importance of rice to the colony. They implemented strategies to improve rice production between early 1900s and post Second World War. For instance in early 1900s, the British encouraged the people of *Kampong Ayer* (“Water Village”) to move inland and start wet rice cultivation (Horton 1984:21). They also made the same call to the hill people in remote areas of Temburong, Belait and Tutong districts. The British administration hoped the opening of new lands for wet rice cultivation could improve rice production as well as increase self-sufficiency level. The traditional occupations of these people were mostly craftsmen and fishermen, hence wet rice cultivation was something new to them. Most of them were not familiar with the new farming methods, but the British were willing to train them through the establishment of an agricultural centre, such as Kilanas Agricultural Centre (the first one in Brunei). Although rice production began, it was far from satisfactory. Between the First and Second World War years, the country only produced between one-third and one-sixth of its own rice (Pengiran Mohamad 1998:5). Rice production fluctuated overtime and could not meet the demand of the population. The country had to import rice from neighboring countries with the wealth from the oil industry (which was discovered in 1929). In 1952, Brunei was the second largest oil producer in the British Commonwealth, with 103,000 barrels per day from 220 oil wells (Pengiran Mohamad 1998: 6). A good sign for oil industry, yet this did not do much for Brunei’s agriculture. The Sultanate was heavily dependant on oil industry for survival.

Due to technological advances in the 1960s, new oil sites have been found offshore. Brunei Liquefied National Gas (BLNG) was established and they made large scale national gas plant at offshore sites. With the advancement of oil and gas industry, the Sultanate hoped this could

stimulate the agricultural sector. They were worried that over reliance on oil would cost other industries, particularly agriculture, forestry and fishery. Through the Second National Development Plan (NDP 2) 1962-1968, the country formulated diversification efforts with emphasis on agriculture. “Rice production was therefore one of the strategies adopted not only to realize the goals of self-sufficiency policy, but also those of the economic diversification policy” (Hajah Gayah 1995, 1996: 8). In order to realize this dream, the state spent millions of dollars in agricultural projects. They set up national census and research on farming with the help of Brunei Shell Petroleum Company. They even employed an expert from Taiwan in this project. In addition, The Association of Brunei’s Farmers (which was set up by the British in 1919) supported this vision and encouraged their members to join the rice projects set up by the government. This association had 2,040 members in 1967 (*Pelita Brunei* 1967: 6)⁵ and increased to 3,642 members in 1968 (*Pelita Brunei* 1968: 5)⁶.

Almost at the same time of this period, the Green Revolution took off in Indonesia and the Philippines with the planting of high yield varieties (HYVs) rice. For Brunei, farmers still planted traditional rice such as *adan* and *pusu*. These varieties were initially from *baras bukit* (hill paddy) before they were adopted to wet rice cultivation. Compared with HYVs, it took longer to harvest – around 6 months – and the yield was twice a year. Nevertheless, Brunei rice farming took off during this period. In 1970, the rice production reached 35 per cent (FAO 2008) and by 1975, it peaked at 37.8 per cent (Department of Agriculture 1990).

⁵ Cited in Pengiran Mohamad 1998: 15

⁶ Cited in Pengiran Mohamad 1998: 15

One female interviewee remembered that rice farming was part of her childhood memories. She described her farming experience with fondness and a great sense of nostalgia. All of her family members – parents and nine siblings – worked together at the rice farm in Muara between 1969 and 1978. The farm was about eleven hectares, and each family was given a small plot of land. They planted *baras bukit* (hill paddy) such as *adan*, *bario* and *pusu* for wet rice cultivation. The paddy took around six months to mature and they harvested the yields twice a year. They kept most of the rice for their own consumption. Surplus rice was used as an exchange commodity for other food such as fruits and *belacan* (shrimp paste) with other villages. Almost everybody in her village was involved with farming. But they also did other jobs such as fishing, construction and even in the government offices. Her father was a construction worker at Bandar Seri Begawan as well. Nevertheless, farming was still central to their lives as source of food.

Figure 3.1. *Bario* rice



Source: Hurul 'Ain 2010: 7.

Figure 3.2. *Pusu* rice



Source: Hurul Ain 2010: 26.

However, even the spectacular depiction above did not fully represent the real picture of agriculture's contribution to the country. Reality was still grim. Hajah Gayah (1995,1996: 18) describes the real picture of agriculture:

“Agriculture, fisheries and forestry combined, contributed only to 11% to Brunei’s non-oil GDP in 1974, and thereafter declines to 8.2% and 5.4% in 1975 and 1980 consecutively...The agricultural activity was described as ‘a lagging sector’[,r]ice has been traditionally grown on small-holdings, either as swamp or hill rice. Although, about 41,000 hectares of land throughout the state are suitable for rice cultivation, only a small fraction of this area is used. Even this began to decline in 1977 with consequent decrease in local output”.

During this period, rice production went downhill rapidly. Table 3.2 illustrates this dramatic decrease:

| Table 3.2. Rice Production and Consumption in Brunei Darussalam, 1974-1978 | | | | | |
|--|---------------------|---------------------------------------|---------|----------|---------------------------|
| Year | Harvested Area (ha) | Rice Requirement (metric ton of rice) | | | Self-Sufficiency Rate (%) |
| | | Total | Locally | Imported | |
| 1974 | 3,365 | 16,946 | 6,348 | 10,600 | 37.5 |
| 1975 | 3,637 | 16,966 | 6,423 | 10,573 | 37.8 |
| 1976 | 3,680 | 15,440 | 4,700 | 10,740 | 30.4 |
| 1977 | 2,835 | 19,018 | 2,768 | 16,250 | 14.6 |
| 1978 | 2,410 | 18,168 | 2,493 | 15,675 | 13.7 |

Source: Department of Agriculture 1990.

The total area harvested, local rice production and self-sufficiency dropped significantly by 1977. Local output decreased from 6,348 tonnes in 1974 to 2,493 metric tonnes in 1978. Self-sufficiency level fell from 37.5 per cent in 1974 to 13.7 per cent in 1978. On the other hand, rice import increased from 10,600 to 15, 675 metric tonnes in 1974 and 1978 respectively. This

proved that rice farming was declining rapidly. Social and economic conditions affected this pattern.

One of social issue here was the attitude of farmers themselves. A survey conducted by ULG Consultants Ltd (1982) discovered that most of the farmers were part-time farmers (Hajah Gayah 1995, 1996: 18). Farming was only carried out when they were not engaged in their main employment. This meant that they were not fully committed to rice cultivation and the project lacked the push and motivation they needed to reach the target of self-sufficiency. In addition, there were groups of farmers who joined the project not because they were interested, but rather they saw this as an opportunity to secure more land for themselves (Pengiran Mohamad 1998: 15). At that time, in order to encourage more people to participate in rice projects, the government granted Temporary Occupation License of farmed land to those who worked on it. Subsequently, within 20 years or more, they could obtain have full access to these lands under government's grant.



Figures 3.3 and 3.4. The Kilanas Agricultural Center. One of the oldest agricultural sites in Brunei and established by the British administrators.





Figure 3.5. Mulaut River at Mulaut Village. This village was initially consisted of rice farming lots developed by the government in 1960s. The area was fertile and this river irrigated the farm. But the project failed. Eventually people took over the lots and settled on them. Today, there is no trace of farming here anymore.

Moreover, due to oil boom in the 1970s, the Sultanate experienced rapid expansion of state welfare benefits. More and more people were attracted to jobs in the government, Brunei Shell Petroleum Company (BSP) and private sectors. Government and BSP gave incentives such as easy loan for buying cars and houses, as well as free passage for pilgrimage to Mecca. For Bruneians, these were good opportunities to improve their living standards. Parents sent their children to schools and

encouraged them to be government officers or BSP employees. Even in the private sector, they could get good salaries and easy promotions. After graduating from schools and higher institutions, young people preferred to do jobs which were not related to agriculture at all. For them, agriculture would not bring good income and better future. Although government spent millions of dollars on agriculture, this industry had lost its appeal. Almost no one wanted to go there. Gradually, the number of farmers working on the rice fields decreased and plots of land were abandoned. This pattern also occurred in the rural areas. People in the remote villages

moved to urban areas looking for better employment. Rural hill farming also had lost its own farmers.

Though the support and interest on agriculture were waning, the government did not give up. Following the success of Green Revolution in other neighboring countries like Indonesia and the Philippines the state was determined to catch up and revolutionize rice cultivation. They wanted



Figure 3.6. The original site of Mulaut Agricultural Unit. Now it becomes a warehouse for storing local rice seeds. Farming here has been ceased since mid1980s.

to achieve the goal of self-sufficiency of 30% by 1990 (Hajah Gayah 1995, 1996: 19). In 1974, the government set up small-scale a mechanized rice farm at Mulaut Agricultural Unit to experiment with new farming techniques. Many villagers were involved in this project and mechanized rice planting was successfully adopted. Then the government moved to bigger projects than Mulaut Farm. Wasan Rice Project (WRP) — a large-scale mechanized wetland rice farm — was

proposed in 1974. At that time, it was “the only one of its kind in Brunei” (Wan Mohd Don 1982: unpublished)⁷. It was a joint project between the Public Works Department (PWD) and the Department of Agriculture (DOA). Staffs from both departments were dispatched to work on Wasan. The organizational structure was as follows: 1. The PWD was responsible for all aspects to develop the area ready for planting, 2. the production side was entrusted to the DOA. It was to provide seed preparation, land-preparation, planting, on-farm distribution of water, harvesting,

⁷ Cited in Hajah Gayah 1995, 1996: 19

crop-handling and processing, and other production related services such as to mill and transport the final product to State Store, to conduct research, to recommend and produce the seeds for use in the WRP fields, to advice on cultivation methods, and to provide assistance in pest and disease control as well as the use of pesticides” (Hajah Gayah 1995, 1996: 24). So, there were dual authorities on the project.

The government believed that by combining the two departments on the project would increase the efficiency in management and production. There was so many stakes in this project. The state hoped that the establishment of the first large-scale mechanized rice farm in Brunei could boost agricultural production and attract local interests as well as private firms to invest on the farming. It was one of national pride during that time and so many hypes were given on Wasan. In 1978, the project started; irrigation and drainage systems were built. By April 1979, 300 hectares of lands was officially opened and the government thought they could achieved a milestone with the mechanized farm, only later to be hampered by so many problems that affected the output. One of the biggest problems turned out to be the management.

There was no clear organizational structure; both departments still worked independent from each other and there was lack of communication between the two. Because Wasan depended heavily on machineries and high soil maintenance, it needed effective supervision and coordination from both sides. However, both departments failed to accomplish it. There were so many red tapes that slowed down the farming processes. Transplanting was often delayed. Equipment was in adequate supply. The officials were less informed on the problems of rice

fields and drainage. Moreover, unclear authority on the farm caused confusion for the farmers. They did not know exactly which departments they should report for any problems arising on the farm. The farmers reported that machineries were unsuitable for the land and made things more complicated. These machineries slowed them down. Moreover, both departments always gave conflicting information on mechanized rice techniques and this led to frustration among the farmers. As a result of this inefficient management, Wasan suffered from mechanical and environmental problems. Pests destroyed the paddy. Drainage problems arose. Some plots were neglected and the machineries' breakdown persisted. Overtime, Wasan production continued to stagnate and the departments could not handle it anymore. Table 3.3 below shows the inconsistencies of Wasan production.

| Table 3.3. Planted Area and Output of Wasan | | |
|---|--------------------|--------------------|
| Season | Area Planted (ha) | Output (tonnes) |
| 1979/80 | 130 | 101 |
| 1980/81 | 174 | 164 |
| 1981/82 | 210 | 276 |
| 1982/83 | 280 | 196 |
| 1983/84 | 204 | 144 |
| 1984/85 | 135 | 64 |
| 1985/86 | 305 | 173 |
| 1986/87 | 141 | 282 |
| 1987/88 | Data not available | Data not available |
| 1988/89 | Data not available | Data not available |
| 1989/90 | Data not available | Data not available |

Source: Department of Agriculture 1987/88

From the table, we can see the fluctuation of area planted and the output of rice. Cultivated area increased dramatically from 130 hectares in 1979 to 280 hectares in 1982. Then it fell in the two following seasons. The figure climbed again in 1985 before dropping sharply in 1986. The rice output followed a similar pattern. It started off very well and the output reached 276 tonnes in 1981. After that, it took a dramatic downturn to its lowest – 64 tonnes in 1984. The production recovered again in the following two seasons. By 1987, data from the departments was unavailable because they were not in charge on the project anymore. The government privatized the farm in order to save it from falling apart.

In 1987, some private companies began to take interest in Wasan. After some bidding, the project was granted to INROM Sdn Bhd, a Taiwanese-Brunei joint venture company. It was hoped that privatization would improve the condition of Wasan. Instead the situation worsened with this new management. They also could not handle problems on the farm due to lack of expertise and limited budget. Environmental and mechanical issues reduced the quality of yields and production. During the period of INROM takeover until the early 1990s, production hit its lowest. Only 80 hectares were cultivated with an output of 1.2 tons, compared to average 197 hectares and 155 tons output under government management (Hajah Gayah 1995, 1996: 21). INROM's directors gave up the project and resigned from their position. Wasan was in disarray just within a few years of its privatization. This was another blow to the government.

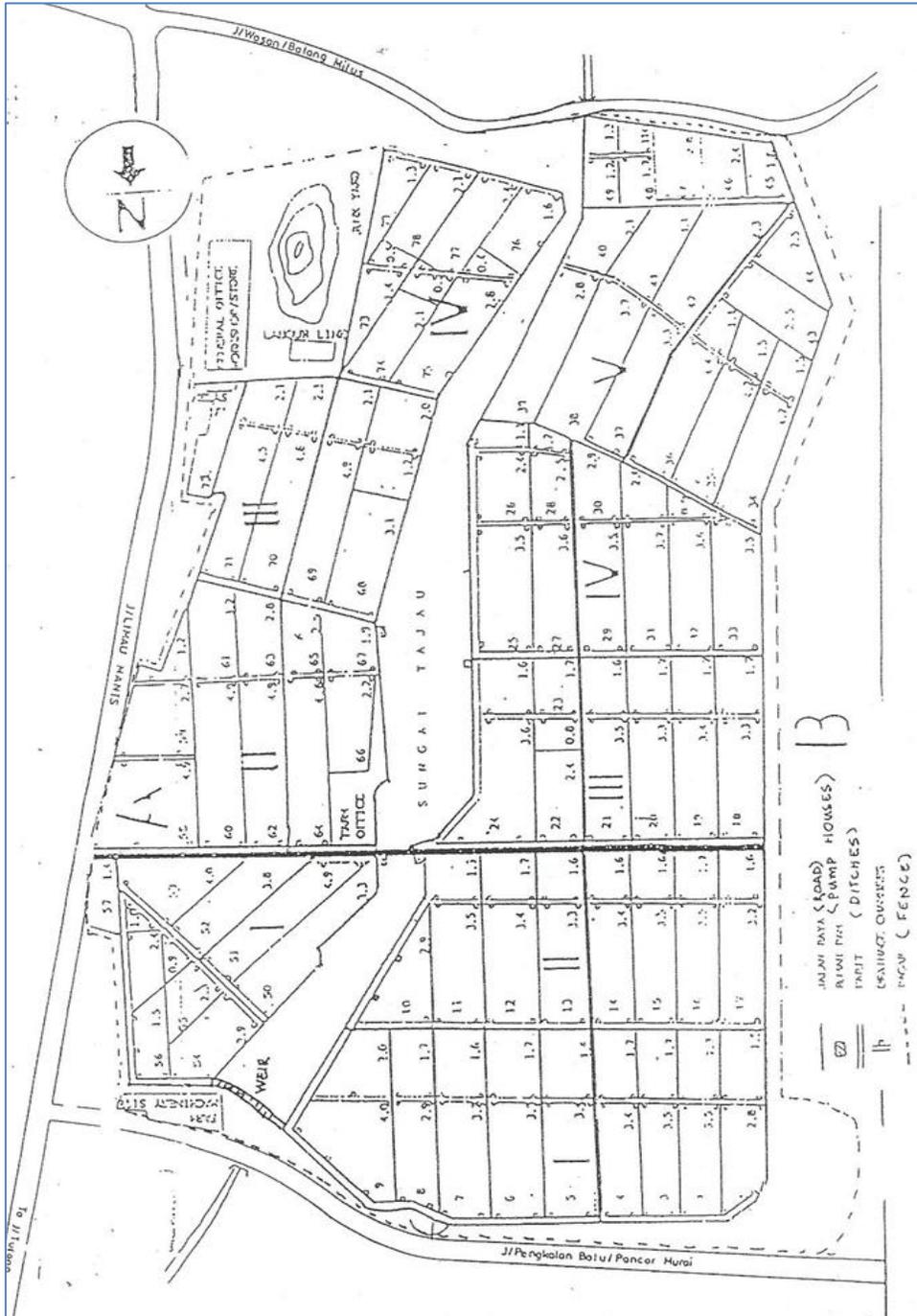


Figure 3.7. The Layout of Wasan.
 Source: The Department of Agriculture 1986.

After this period, there is no record of what was happening at Wasan. From some of my informants, they just vaguely remember some activities on the farm. They mentioned that around early 2000s, a village association took over the project and tried to revive it. It lasted only a short while, and soon after no one was working on Wasan rice fields. It was not easy to get data of Wasan during its stagnation period. Most Bruneians forgot about the existence of the farm. Day by day, activities at Wasan dwindled. Farmers came and left. They just left the place, and long before people realized Wasan became a barren land. Trees and long grass grew on plots of abandoned fields and from the main road, no traces of farming were visible anymore. Wasan was now considered to be a wasteland. Wasan faced uncertain future during its darkest time, even many people believed it was impossible to recover it. The farm seemed to have disappeared from the social map.

The Social and Economic Implications of Wasan's Failure

The decline of Wasan showed the government to be struggling in the agricultural sector, especially in securing self-sufficiency in food production. The country had done greatly in oil and gas industry, which continued to be the main source of economic income. Around that time, Brunei had just gained its independence from the British (in 1984) and faced a huge amount of socio-economic and political challenges to survive in the global market. Oil and gas were great assets to the country and provided long-term life insurance for survival. This came at the expense of agriculture and other sectors such as fisheries and forestry, and Wasan was one of the most visible remainder of this. How the locals viewed it? The description below illustrates the situation.

A male informant (age 25) who lived near the farm had scant memories of farming there. His family moved to the place in the early 1990s. For almost his entire life, he knew Wasan as a bush in front of his house. The place was full of long grass and trees. He was aware that the place used to be an important landscape in Brunei, and yet he did not see much evidence of it. When I asked whether he had any pictures of Wasan when he was a kid, the informant just laughed it off:

“For what reason should I take photo of a bush in front of my house? That would be very funny. The place was nothing before, it was just a barren land. So quiet and lonely, and sometimes I felt eerie looking at it during nighttime. I grew up with zero knowledge of rice farming and I couldn’t imagine that the bush used to be a farm.”

The above description shows the condition of Wasan at its lowest. It was a terrible blow to the agricultural sector that such high-profile farmland could fall into such fate. Not only that, this meant the country failed again to realize its vision to secure self-sufficiency in rice. Hajah Gayah (1195, 1996: ix) emphasized that the failure of realizing national self-sufficiency policy could not be attributed to Wasan alone. This failure had wider implications for the country. It showed that the government needed to implement policies that were suitable to socio-economic conditions of the people. Many farmers, even during 1960s-1970s, were not full-timers. They were doing other jobs besides farming, such as being government civil servants or employed in private companies. That meant, they only could do farming whenever they had time to do so. Since Wasan rice varieties at that time required all year maintenance and more manpower, part-time rice farming would not have been able to cope with these requirements. They were not

available on rice fields all year round. Wasan policy should identify the farmers first and try to adapt to their conditions. Perhaps by doing this, the Department of Agriculture could figure out how to retain steady flow of labor into the rice fields without losing much of them.

Moreover during the development of Wasan, agriculture had already lost its appeal to Bruneians. Brunei entered a rapid period of modernization and industrialization. Many jobs were available in government and manufacturing sectors. Working in the government would enable them to gain privileges for car and housing loans, allowances for children, easy promotions and stable income. As the people moved forward into modernization, Wasan was falling behind. People thought the government, especially Department of Agriculture, would handle Wasan on their own and catch up with Brunei's rapid development. But this did not mean that all people totally lost interest on rice cultivation. There were some individuals who expressed their desires for rice cultivation in Wasan. They were just hampered by bureaucratic and management problems of Wasan. Still, the numbers of such individuals were dwindling overtime. There was not enough human capacity to keep up with rice farming there. Initiatives were made by some private companies and village communes to revive the project towards the end of the 1990s. People were less motivated and gave up the project midway. Their lack of interest and increasing ignorance of rice farming had worsened the situation at Wasan. With the lack of local support, the state had to struggle on their own at rice growing efforts.

Since the 1970s, the government did try to promote agriculture through the establishment of Agricultural Science as a subject at secondary schools and Sinaut Agriculture Center (for further

studies). Through this subject, the government hoped to raise interest and awareness of agriculture among young people. This in return was expected to improve rice farming conditions in the country. Initially, they got positive response from Bruneians. Many students took the course prior to its introduction. A few prospective students were sent to the United Kingdom, Canada, the Philippines and Malaysia under government scholarship. But overtime, with the competitiveness of market and job opportunities in Brunei by the middle 1980s, Agricultural Science gradually lost its values in favor of courses which were regarded as more 'important' - mathematics, chemistry, biology, physics, accounting, geography, computer and history. The latter were highly valued than Agricultural Science because they could provide better job opportunities after school graduation.

In addition, the stratification of the school curriculum before 2006 reflected how people perceived agriculture. Upon entering Secondary One, students were allocated according to their Primary School Certificate of Examination (PCE) results which were taken during Primary Six. Students with best PCE grades would enter top classes. Besides taking compulsory subjects (Mathematics, Science, Malay, English, History, Geography and Islamic Studies), students must take one optional subject at Lower Secondary level. 'Best' optional subjects such as Computer Studies and Commerce were granted for the top classes. The bottom classes were reserved for students with poor grades. They were only given 'low' and easy subjects – Home Science for females (cooking and sewing) and Agricultural Science for males (gardening and rearing chicken). These subjects were looked down by many and students who took them were regarded as less smart. Students of Agricultural Science belonged to this category and were always treated as the 'lower group' at school.

My male informant (aged 23) recalled his experience studying Agricultural Science in school. He was one of the last batch of students who undertook the course before it was abolished from the school curriculum in 2006. Since he got poor grades during PCE exams, he was allocated to the bottom classes and given Agricultural Science. This made him self-conscious of his position as a student. His parent also said “Because you did not study hard, you got agriculture. You missed the chance to study computer science or economics. What can you do with agriculture? Becoming a farmer won’t bring much future for you. Lucky you only have to take agriculture until Form 3, otherwise you will have troubles finding a good job”. Despite this, he enjoyed Agricultural Science. The course taught him how to do gardening and rearing animals properly. He even learned practical rice farming from it. After passing Secondary 3, he was devastated that the course was not offered for Higher Secondary Level. He had to take other optional subjects – History or Art. He felt he had learnt agriculture for nothing. All 3 years seemed to be wasted. At least his parents were happy that he enrolled at ‘better’ courses than agriculture. But deep down, he wished the school offered higher learning for agriculture.

The case above shows the public perceptions on agriculture. It was regarded as a low prestige subject and did not bring much economic income. Many young people felt they went nowhere with agricultural skills and rather opted for government or service sectors. This negative attitude on agriculture hampered government efforts to develop rice farming in Brunei. The country had lost new generations of students who could have transformed farming, including Wasan.

The Revival of Wasan

Initially there was buzz about a group of villagers and retired army personnel clearing the wasteland in 2006. Many people just did not believe it and thought this initiative would not last long. They were skeptical because they knew that in the past Wasan had failed. Even the groups that managed to re-cultivate the land would just die out sooner or later. The public just shrugged it off and moved along. There was nothing to make a big deal about it.

Then against all the odds, these groups stayed longer on Wasan. In fact, they managed to clear most of the bushes and re-opened the land. The wasteland disappeared and now plots of abandoned rice fields became more visible. They re-cultivated these empty plots and gradually, filled up all of them. The media began to pay attention to it and the public began to wonder what was going on with the farming world. The government saw this as great opportunity to revive the stagnant agriculture and provided full support to these groups. Their efforts paid off. By 2007, Wasan was no longer a wasteland and was back on the socio-economic landscape of Brunei. In April 2009, His Majesty himself officially harvested the new hybrid rice called Laila on Wasan field. This marked a new era not only for Wasan, but for agriculture as a whole in Brunei. Below is the excerpt from a newspaper article reporting the event:

“[In a] major step forward in Brunei's march towards achieving food security HIS Majesty the Sultan and Yang Di-Pertuan of Brunei Darussalam yesterday inaugurated the first harvest of Brunei's new Laila padi, a move which could signify a turning point in the country's march towards self-sufficiency. This was a goal

envisioned nearly half a century ago... Equipped with traditional harvesting tools, His Majesty and the Royal Family reaped the first few padi stalks, which were planted about three months ago. In a show of triumph against the odds and after years of multiple attempts to boost local rice production, His Majesty symbolically held the padi in the air, amid loud cheers from a large crowd who turned up to witness the historic event” (The Brunei Times 2009).

Figure 3.8. His Majesty The Sultan harvested *Laila*, the hybrid rice, at Wasan on August 2009. It was a national televised event. This was an iconic image for agriculture and marked a new era for the country. Source: Borneo Bulletin Yearbook 2010: 35.



Figure 3.9. His Majesty used a tractor to harvest the paddy. Source: <http://news.brunei.fm/2010/01/06/2009-year-in-review-sowing-the-seeds-of-bruneis-future-food-security-with-laila/>.

Within a short time of its reopening, Wasan had regained its status as an important farming landscape and gave new hope for agriculture. Not only that, the farm also has become a vital agricultural institution with the establishment of Wasan Vocational School in 2009. This establishment gave students a chance of pursuing a professional career in agriculture. The government increasingly collaborated with foreign rice experts such as with International Rice Research Institute (IRRI) based in the Philippines, South Korea, Singapore, Japan and China. With the involvement of foreign experts, Wasan became the centre for Brunei agricultural revolution and advancement. The ‘wasteland’ of Wasan now officially became a part of history.

This was a moment that the state had been waiting for almost two decades. Their relentless efforts at promoting agriculture and pushing the locals towards agriculture bore success. The army personnel and a village association stepped forward to answer the state’s calling. With the government’s strong support, they transformed Wasan’s wasteland into a farmland once again. Their roles will be discussed further in the following chapter.

Summary

The history of rice farming in Brunei shows that for a long time the country had been struggling to achieve its self-sufficiency vision. Agriculture started to take off by the end of the 1960s and early 1970s. At that time, many Bruneians responded enthusiastically with the new agricultural projects. Many families involved in rice farming managed to secure their rice for consumption. Generations who were born in the 1940s-1960s recall vividly how farming was part of their

childhood and family activities. Some ethnic groups particularly the Kedayans even managed to secure their own lands through farming. After peaking for some period of time, farming entered recession towards the end of the 1970s. Due to political pressure for gaining self-sufficiency in rice, government decided to open Wasan Rice Project as one of the main solution to the problem. So many stakes and dollars had been invested in the project. Instead of realizing the vision, Wasan had become one of the biggest failures.

The failure of Wasan project illustrates government's weaknesses in handling an extensive wet-rice project. They were less trained on how to deal with environmental and mechanical problems at the farm. In addition, the existence of two departments on the project caused confusion over the real authority. The farmers did not know which one they should really rely on. These two departments could not work side by side. Inefficient bureaucracy and administration affected the output of rice production. The government privatized the farm hoping to improve the management of the project. But it also failed. In the following years, Wasan continued to fall apart until it transformed into a wasteland.

Wasan was a victim of socio-economic and political conditions in Brunei at that time. At the state level, they were battling with how to come up with an effective national policy that could improve farming and attract locals to participate in it. This was worsened by an inefficient bureaucracy and management of agriculture. At local levels, many people were just not interested in farming anymore. Young generations wanted to pursue better career in non-agricultural sectors.

Chapter 3 The Dynamics of Wasan

Therefore here we could see the significance of Wasan. The farm was a huge economic and political landmark for the country, marking the government's determination to realize the self-sufficiency vision. The dynamics of Wasan unravels the socio-economic conditions of the people, especially on their negative attitude towards agriculture. Its revival became a triumphant story of battling against the odds.

CHAPTER 4

FARMING LIFE IN WASAN

Introduction

It was 6.00 pm in the evening and would be dark sooner. Many rice fields had already been irrigated and transplating of new seedlings would begin in the next day. Some had even already started it. They parked the tractors at the side, packed up all their equipments and called it a day. As they walked towards sulap (small hut), a popular Indonesian song was playing on the radio. They chatted happily and looked forward for the diner time and sleep. It was a long tiring day, but so far they had done most the work. The next day, their employers would come and bring another new seed for cultivation. The Department of Agriculture and Agrifood would monitor the development of this new seed. The stakes were high because they would begin planting two seed varieties at the same time, Laila and Bibit. Both were derived from local words; the former was a common name among Brunei Malay and the latter was translated as 'pinch' in English. By the time they cleaned themselves, call for Magrib prayer from the nearby mosque filled the air. Evening settled itself and Wasan would sleep.



Figure 4.1. The sunset scenery at Wasan.

That was just another ordinary day at Wasan Rice Farm. No more bushes. No more empty lands. And no more waste landscapes. Wasan had been revived and now tractors, farmers, paddy fields, smoke and water are ordinary sight there. All the hard work had paid off. Those farmers should deserve the credit and the Department of Agriculture owes a lot to them. Without them, it might take forever to recover Wasan. Out of nowhere, these farmers just came and worked together to improve the condition of Wasan. Unlike their predecessors, they stayed longer on the farm and showed their determination to the government. In return, they have the full support from the state through the Department of Agriculture and Agrifood. They work hand in hand for development of rice farming, not only at Wasan, but also in Brunei. Who are these farmers? How do they manage the farm?



Figure 4.2. A farmer sprays a pesticide on the field to kill pests and worms.

These will be the central theme of this chapter – interactions and management at Wasan Rice Farm. The first part will discuss the farmers and their social interactions on the farm. It will identify different groups of farmers, their socio-economic conditions and their contributions to the development of Wasan. Second part will examine the roles of the Department of Agriculture and Agrifood. This section will highlight the intervention of the state on the farm and how the farmers cope with the high expectation from the state. Final part will analyze problems and issues on the farm, and to what extent these could hinder or slow down self-sufficiency of agricultural production.

Wasan Farmers and Their Social Structures

I asked these farmers, why they were doing it? What motivated them? They said it was because of His Majesty The Sultan's calling. Since 2003, His Majesty had been urging the citizens to be self-reliant and not to depend too much on the government. As mentioned in Chapter 2, Brunei is under an extensive welfare system (free education, health, no income tax and great prospects in government's civil service). Due to these privileges, many Bruneian became overly dependent on the government and less motivated on starting their own initiatives. There is a saying in Brunei "*inda dikurik, inda berasin*" (if you do not pick your nose, you will not sneeze); implying that if no one ordered or told them to do something, they would just sit back and do nothing. This was applicable to Wasan. According to the farmers I interviewed, in the past there were some initiatives made by village councils to revive the farm but they did not last long. They cited that the main reason was the lack of interests from many villagers and for those who were involved; they just gave up halfway due to environmental and management problems. Rice cultivation in Wasan was very challenging because the place was not meant to be for wet-rice cultivation. It was surrounded by jungle and the soil was not swampy enough for planting wet rice. Efficient irrigation system was needed to flood the land, but so far none had succeeded in sustaining effective irrigation. The previous farmers were less motivated due to these problems.

For the contemporary farmers, they were truly inspired by His Majesty and roused up to the challenges. They wanted to show that they could do it. They also stated that rice farming ran through their blood and they had many great memories of it when they were younger. Most of them have rice farming experience in their early childhood or as teenagers. They remembered

rice cultivation as central to their families in the 1960s and 1970s. As they retired from paid jobs, they felt very nostalgic of rice farming and did not want it to be buried in history. Brunei rice farming was not be wasted and younger generation needed to know about it. With this passion and interest, they embarked on a mission. Hence, a group of retired army personnel under Major Colonel Haji Sahlan started their task of clearing the ‘wasteland’ in 2006. They said they had the physical and financial capacities to do so. They used their army training and resources to clean Wasan. Soon after, a village council responded and encouraged villagers to join the initiative. Word spread across villages surrounding Wasan and gathered positive response from many villagers to join the army group. Together, they began mounting tasks of cutting down the trees, removing the huge trunks and burning down the long grass. There were no big machineries being used, only with their bare hands and equipments such as *parang*, *cangkul*, axe and chainsaw.

However things did not always run smoothly. From stories that I had gathered, there were some clashes between the villagers and retired army personnel on the land division. After clearing the lands, all the participants needed to register their plots to the Department of Agriculture. Initially, many of the plots were still owned by the villagers as they used to be farms there before Wasan became a wasteland. But during land transfer process, some of these villagers did not attend. Hence the retired army group just took the plots. After cultivation started, these villagers came forward and tried to reclaim their lands. The army group refused to give them back and this led to high tension. Eventually, they managed to settle the land disputes but the rift was not fully gone.

That was how Wasan came into being in 2006. Then, the same leaders led these groups of farmers and began rice cultivation on the farm. Initially, they planted traditional rice – *adan* and *pusu*. These traditional rice took 6 months to mature and therefore, harvested only twice a year. Nevertheless, these farmers reaped what they sowed and all their efforts were not wasted. The state recognized their achievement and saw this as a great opportunity to revive agriculture. After Wasan re-appeared on the farming landscape, the public also paid attention to it. More and more people are now interested to be part of Wasan rice farm because they see the place as no more the same. The success of Wasan inspired more people to revive wet-rice cultivation in Brunei. Not only villagers are now interested in the project, but also private companies. The re-opening of Wasan in 2006 slowly opened up the agriculture market in Brunei. With the right investment and technology, Wasan can be profitable. Moreover, His Majesty too openly declared his support for Wasan and even planted the first batch of mechanized rice seedlings on Wasan in 2009. The official opening of Wasan in 2009 became one of the biggest event that year and even in the history of farming in Brunei.

For the government side, the Department of Agriculture and Agrifood takes the responsibility for overseeing the farming. After having tried promoting rice farming for so many years, the Department now sees a great opportunity to continue what they started in the 1980s. In the past, many people were less motivated to do farming and the Department struggled to cope with it. Now, with the right leadership and support the Department believes their dream of rice self-sufficiency would come true. They set a target of 20 per cent and 60 per cent self-sufficiency by 2010 and 2015 respectively. The Department re-invests on Wasan project and the farmers

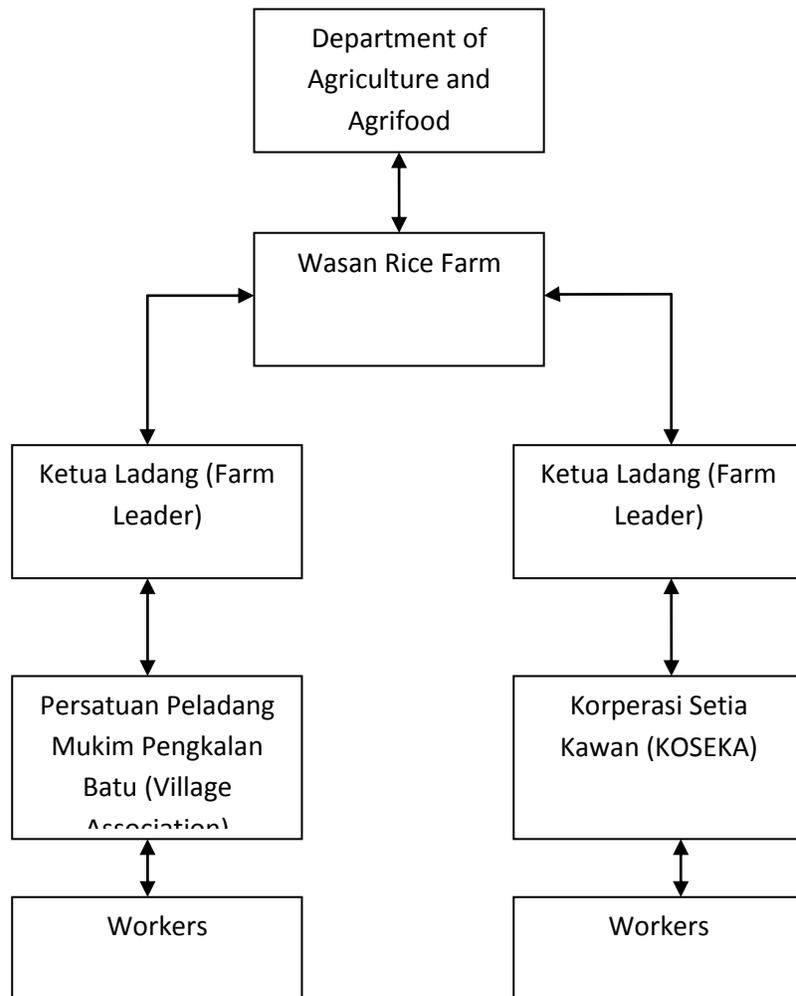
increase their production. Wasan became an experimental arena for Brunei's agriculture. For the farmers, they are now organized by co-operatives.



Figures 4.3 and 4.4. The Department of Agriculture and Agrifood office at Wasan.

Currently, there are two co-operatives at Wasan: Village Co-operative and Army Co-operative. Each group has a *ketua ladang* (farm leader) who is the intermediary between farmers and the Department of Agriculture and Agrifood. The chart here shows how Wasan is structured according to these co-operatives:

Figures 4.5 Structure of Co-operatives at Wasan.



KOSEKA

It stands for *Korperasi Setia Kawan* (Co-operative of Loyal Friends) and consists of retired army personnel. Many of them had been high-ranking officers and have enough financial capability for rice farming. Some even have high titles given by His Majesty. By the time of my fieldwork, there were about 50 of them and the total amount of land they owned is about 200 lots. All of

them are Malays. It can be said that this group is dominated by the elites who have power and capital.

Figure 4.6. The KOSEKA site.



Figure 4.7. A farm lot owned by a KOSEKA member.



Village Cooperative

It can be called *Persatuan Peladang Mukim Pengkalan Batu* (The Association of Pengkalan Batu Village Council). They consist of ordinary villagers, around 70 in total. Though their number is larger than KOSEKA, they own less land; only around 90 lots. This group is mixed, consisting of retired government officers and villagers. For the villagers, many of them are still working in the government or owning business. From my fieldwork, they were all Malays.

Figures 4.8. The Village Cooperative's signboard.



Workers

These are the workers who are employed by KOSEKA and the Village Cooperative to carry out farming activities on the lots. Many of them are foreign workers especially from Indonesia. Some come from Malaysia, especially Limbang District of Sarawak. Each farmer usually

Figure 4.9. A migrant worker.



employs around 2-5 workers, depending on the size of their lots. They are the ones who are responsible for planting and harvesting the rice. From my observation, it seems that KOSEKA depends on more workers than the villagers. Some villagers work on the farm themselves, with the help of their relatives. Still, these workers are very crucial because they are the ones who really do the jobs. Most of them particularly the Indonesians live on the farm while some live with their employers. The employers build *sulap* (small hut) with basic facilities such as water and electricity. At this *sulap*, the workers eat, pray, sleep and work. Occasionally, their employers bring food for them. Otherwise they cook themselves or go to restaurants across the street.

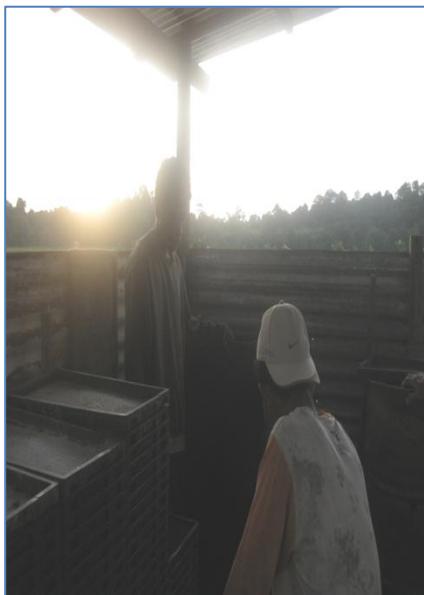


Figure 4.10. Two Indonesian workers wash seed trays. After finishing the work, their employer would pick them up to take them to his house. They did not live on the sulap.

Figure 4.11. Close-up view of a sulap.



Figure 4.12. A minangkabau style sulap.



Figure 4.13. A better built sulap.



Figure 4.14. Paddy storage inside a sulap.



Ketua Ladang (Farm Leader)

Each group has one farm leader who is the intermediary between the farm and the bureaucracy; the Department of Agriculture and Agrifood. The leader is responsible for monitoring the activities on the plot, relaying latest information to and from the Department, collecting farming data, managing disputes and complain and organizing meetings for the farmers. The leader is responsible for everything about the farm. He is the voice of the farmers, making sure things run smoothly. With the existence of these two leaders, the authority on the farm becomes clearer than before. People know whom they can consult and get information. The creation of farm leader here is the significant improvement of Wasan’s management.

Figure 4.15. At the sulap of the leader of Village Cooperative. He was pasting a new document sent by the Department.



Figure 4.16. A notice board at the leader’s sulap. He kept track on all farmers under his management.

| | 100kg/Ha | 750kg/Ha | RUMPAI | UAT | SERA | NOTA |
|------|----------|----------|--------|-----|------|--|
| 2CF | 25/4 | 5/7 | | | 30% | SILA PANA HERICIDE with perception ulat Gulung daun 90ml → 70L 1L |
| 36A | 5/6/4 | 15/6/4 | | | 30% | |
| 3-3 | 12/6 | | | | 30% | |
| 3-2 | 15/6 | 25/6 | | | 30% | |
| 3-1 | 15/6 | 25/6 | | | 30% | |
| 4-1 | 15/6 | 25/6 | | | 30% | |
| 4-2 | 15/6 | 25/6 | | | 30% | |
| 3-2r | 13/6 | 25/6 | | | 30% | |
| 3-1r | 21/6 | 1/7 | | | 30% | |
| 4-2 | 21/6 | 1/7 | | | 30% | |

As mentioned in Chapter 2, there was confusion over Wasan’s management structure when it was under the government in the 1980s and 1990s. Unclear power structure became the major reason why Wasan ended up in failure. My informants admitted that the efficiency of the farm depends highly on these two leaders, and how far they could communicate with the Department

as well as the farmers. There are better interactions at present between the bureaucracy and farmers than in the past. These two leaders have power in decision-making and could negotiate with the Department. It seems that the farmers have more control of their lands, for instance they can decide themselves whether to build a *sulap* or not and how many workers they want to employ.

One of the crucial functions of the leader is in organizing meetings between farmers and the Department. Each group holds its meetings separately. For the villagers, the meeting takes place at a meeting hall in Parit Village Recreational Park. For the army personnel, they hold it at the Agricultural Centre in Lampaki, Mulaut Village. Usually they meet at least twice at month. They discuss matters pertaining to farming and identify problems faced by the farmers. Officers from the Department are also present at both meetings. Local or foreign experts also give lectures on modern rice farming techniques. Through these meetings, farmers can improve their knowledge and skills on the latest rice farming technologies. They also could address complaint directly to the Department. In theory, all farmers are required to attend these meetings. However, some villagers admitted that they rarely attend meetings unless they felt it was really important. They claimed that those meetings were more important to new farmers because they needed to know more about Wasan and mechanized rice farming techniques. Senior farmers could get away with it. On the other hand, for KOSEKA members could not skip it at all due the rigid discipline developed among them in their army days. Even in retirement, the ex-army personnel follow their command structure.

This brings about another dimension of the leadership: regulations. Each cooperative has different rules. One of my informants pointed out that KOSEKA imposed stricter rules than the Village Cooperative. For instance, the members must use pesticides and fertilizers provided by the Department. If they refuse, subsidy on those two would not be given. Moreover, KOSEKA members could not skip meetings while the villages could do so. For the villagers, they could be more flexible and have their own choices. My male informant told me that he did not like to use pesticides from the Department but rather go to Limbang or Sipitang (Malaysia) to buy them. In addition, KOSEKA members are prohibited from lending any machinery to villagers and vice versa. Machinery is available in limited numbers, so farmers need to book it in advance from the Department. Members should rent it for themselves, not for other people especially to the opposite group. The leaders govern their groups differently setting each group apart from each other. How far their boundary could affect the social interactions between farmers on Wasan?

From the stories of the informants, it seems there is some competition between KOSEKA and Village Cooperative members especially at the production level, land ownership and status. Each group claims they do better than their counterpart. For instance, ex-army personnel thought that KOSEKA produced higher amount of rice than the villagers based on metric tonnes. On the other hand, villagers felt they fared better than KOSEKA in terms of quality of rice yields despite having smaller lots. They pointed out that KOSEKA produced more because they owned more land than the villagers. With the absence of official statistics from the Department, it is hard to justify their claims. However, this suggests that there is rivalry between these groups.

In addition, there have been tensions in the way cultivable land was acquired. Due to this, the villagers are more cautious of the KOSEKA and critical of their intentions. They try to protect their rights and do not want KOSEKA to take more land. Farming land in Wasan can be secured through different ways. The first is through active participations in farming. The farmers must actively cultivate their lots for all seasons throughout a year. The leaders will keep on monitoring their activities and any inactive land would be reported to the Department. The ownership of these lands would be revoked and granted to other farmers or new applicants. The second way is through application to the Department. They will inform via the Department's notice board or website regarding new applications for Wasan lots. Anyone could apply and they would be

Figure 4.17. Inactive plots. The ownership of these fields would be revoked.



screened further. The third way is through informal deals with land owners. If the land owners are no longer willing to farm the lots, an interested party would make a deal and pay some money to take over. This is where land rivalry could intensify. Some farmers accuse others of backstabbing. For new applicants, sometimes it is not easy to get lots due to the

domination of current farmers. They say connections are important in order to enter Wasan's 'circles'.

Although there are some rivalries, personal level friendship can be good due to kinship ties. Brunei is a very close-knit society and ‘everybody knows everybody’. Kinship ties can be useful to overcome boundaries between KOSEKA and Village Cooperative. For instance, one female informant from the Village Cooperative admitted she worked closely with her male relative in KOSEKA. The male KOSEKA member is borrowing her foreign workers and she even helped him to get more from the agency. She did it without any material benefits, only for the sake of their kinship ties. Sometimes, KOSEKA members lend machines to the villagers and vice versa. There is also some degree of cooperation in accessing irrigation among the two groups. When a villager could not get water from the nearby river due to the location of his lot, his friend from KOSEKA dragged a pipe from his field and irrigated the dry lot. In theory, they are breaking the rules. But in practice, the farmers cross the boundaries due to kinship ties. Most of them know each other and they make use of their kinship tie for wider benefits.

The Role of The Department of Agriculture and Agrifood

Now let us focus on the role of the government via the Department of Agriculture and Agrifood. The Department is one of most important agricultural institutions that help the current development of rice farming. Although they struggled in the past, to improve rice farming in Wasan, they learnt from their mistakes (to a large extent). They let the practical management of Wasan run by the leaders of both cooperatives and in return, the officers provide intel and support to the farmers. This two way communication proves to be effective on Wasan and it seems the farmers have more rights as well as liberty on their lots.

However in practice, Wasan belongs to the Department no matter what and the usage of land needs their permission. Initially, they let the farmers do anything during the re-opening of Wasan in 2006-2007. At this time, farmers decided the type of rice they wanted to cultivate and how they were going to manage the land. The Department gave them some technical support such as providing machinery for farming and buying rice from the farmers. As reported by informants, farmers were more independent in 2006-2007 and there was less state intervention compared to today. They could cultivate *adan* and *pusu* rice freely. They experienced less pressure to meet the government's quota. Managing *adan* and *pusu* rice was not easy. These local seeds took at least 6 months to harvest and the farmers struggled a lot to keep up the yields. Since many of them had other jobs, they had to adjust their time for the farms. If they did not have time, they just employed relatives or migrant workers to take care of it. Despite all the difficulties, they loved to spend time on the farm. It was like reliving their old memories of farming. It became part of their life again.

Then the Department saw how Wasan progressed within a short period time. The farmers actually performed better than expected. Wasan was not only a hope to Brunei's agriculture, but also shows that Brunei Vision 2035 will become true. There are mounting political pressures to speed up local rice production and Wasan once again has become an important agricultural landscape where rice experiments and research would be based upon. The government hopes that the success of Wasan would advance the development of rice farming in other districts. To increase rice production and achieve self-sufficiency that the country has dreamt of, the Department formulates policies for rice farming in Wasan and works hand in hand with the farmers. These policies are crucial towards achieving self-sufficiency of 10 per cent and 60 per

cent by 2010 and 2015 respectively. Through the new assistance efforts, the government could intervene more with Wasan activities. Support and intervention are interchangeable here. Without intervention into Wasan, the Department could not give intellectual or technical support to the farmers. They need to impose some degree of influence so that Wasan could fit into their self-sufficiency agenda. At the same time, without giving knowledge or technical support to Wasan, they would not have great excuse to interfere with farming activities there. So support and intervention work both ways. There are different forms of government intervention or support here: introduction of genetically modified rice *Laila*, local and foreign experts, subsidy, facilities and agricultural institutions.

The first policy is to cultivate genetically modified rice which could produce higher yields within a year. *Adan* and *pusu*, despite closely resembling the taste and quality of fragrant rice, take longer time to harvest. Because it is time consuming, the rice production level does not increase significantly. The government needs more than that. They want Wasan's production to rise up faster so that 60 per cent self-sufficiency could be achieved in 2015. Due to this vision, the Department works closely with the International Rice Research Institute (IRRI) in the Philippines to find suitable rice seeds that not only produce extremely high yields, but also suit the taste of the locals. Bruneians are very picky on rice. They demand the taste to be as good as the fragrant rice. For this, during the agricultural exhibition at International Convention Center (ICC), the Department made a display of seed varieties. These seeds were developed by IRRI based on their research of Brunei environmental conditions. The people were asked to choose which seeds they favored the most. From there, they found out most people picked BDRI

(Brunei Darussalam Rice One) variety. Hence, from this response the government decided to cultivate it on Wasan. Later, the seed was named as *Laila*.

Figure 4.18. Laila Rice. It takes 105-110 days to mature and ready for harvest. The nutrient contents are almost similar with the fragrant rice.



Source: Hurul Ain 2010:1.

The foundation of *Laila* rice became a milestone for the Department to achieve the self-sufficiency vision. In 2009, *Laila* officially replaced the local seeds on Wasan. Even His Majesty himself planted the first batch of the seedlings on a Wasan lot to show his encouragement and support to the farmers and the Department. Soon after, all the farmers on Wasan began to use *Laila*. The Department organized seminars and lectures to teach them how to plant the rice correctly. They hired foreign experts especially from IRRI to conduct the seminar and research. *Laila* has huge advantages over *adan* and *pusu* in terms of quality and management. *Laila* contains higher protein than fragrant rice. In addition, it does not require much water and could live without continually flooded fields. So, less irrigation is required. Within 3 months, it is ready to be harvested. Compared to local seeds, *Laila* is less time consuming because it cuts

harvest time by half. Rice production at Wasan increased drastically and the government was one step closer in realizing their dreams.

Local and foreign experts are also part of the Department. These researchers are hired to monitor the development of rice farming and studying the environmental conditions of Wasan. More and more foreign experts take their interest on the farm and government takes this opportunity to expand their ties with international agricultural institutions. For instance, in 2009 the government signed a Memorandum of Understanding (MoU) with China to extend their agricultural cooperation. Through this agreement, the government has opportunities to work with top level Chinese experts such as Professor Yuan Longping, the “Father of Hybrid Rice”. Companies from other countries such as South Korea, Japan, Malaysia and Singapore are also interested in Wasan and are willing to provide necessary technical support to the farmers. Through monthly meetings of KOSEKA and Village Cooperative, these foreign experts are invited to give lectures and teach the farmers how to cultivate hybrid rice. This is how the farmers could adapt to *Laila* easily.

Another crucial support of the Department is subsidy. This is one of main reasons why the farmers are motivated to do farming. Through subsidy, the farmers only pay half the costs or lower for:

- a) *Laila* seeds – B\$1.00 per tray
- b) Plough machine - B\$100 per lot
- c) Transplanting – B\$100 per lot
- d) Fertilizers – B\$2.00 per bag

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- e) Pesticides (for insects) – B\$15.00 per bottle
- f) Pesticides (for grass) – B\$15.00 per galloon
- g) Pesticides (for paddy) – B\$12.00 per galloon
- h) Harvest machine – B\$100 per lot

In total, it costs around B\$900-1000 (U\$700) for equipments. This amount is double if the government does not subsidize them. In addition, the government buys rice from the farmers for B\$1.60 per kilo and sells it to the public for B\$1.20 per kilo. The minimum rice production achieved by farmers is 2 tonnes, hence the government pay them B\$3200 per season. Many farmers exceed this amount up to 5 tonnes and receive B\$8000 per season. That payment is quite lucrative. Now the farmers see rice farming as a great business as long as they are willing to receive subsidies for basic necessities and equipment. Most of them are capable of hiring workers and let them do most of the works. Subsidy enables the farmers to invest on rice farming and earn income from it. This is what keeps the farmers happy.



Figure 4.19. A tractor used for harvesting.



Figure 4.20. A farmer was ploughing the field using machine. Water buffalo is no longer used.



Figure 4.21. A *surau* provided by the government for the farmers.

In addition, the Department also provides facilities such as *surau* (Muslim prayer house) and electricity on the farm. Roads are improved to make the place more accessible from the main road and villages. Special dams and large pipes are built to upgrade the irrigation. Electricity is provided to *sulap* that need it. But many farmers refuse electricity supply on their lot because they are afraid this could attract insects at night which destroy paddy. Toilets are also built. *Surau* is provided for prayers. Apart from these facilities, the government set up an important educational institution nearby in 2009. The Wasan Vocational School specializes in agriculture and has become an important research center for Wasan. The establishment of this school adds prestige not only to Wasan, but also agriculture landscape of Brunei. Now, agriculture is no longer a subject with low prestige. Instead, students could now pursue agricultural studies at higher levels. Even entry requirement for Wasan School is upgraded into Higher National Diploma (HND).

Thus the Department's roles have become important. They give support in Wasan and motivate farmers to achieve higher production. My informants agreed that the Department helped them a lot and improve the farming conditions far better than before. Most of them were pleased with the introduction of *Laila*. But the farmers still face problems at Wasan. This will be discussed in the next section: issues on Wasan.

Figure 4.22. The road and electricity at Wasan



Figure 4.23. A long pipe supplying water from Tajau River to Wasan



Figure 4.24. Wasan Vocational School

Issues on Wasan Farming

One of most common concern in Wasan is environment. With the introduction of *Laila*, farmers face new environmental problems and have adapted to it within a short period of time. *Laila* rice attracts different kinds of ‘enemies’ more than *adan* and *pusu*. The new hybrid rice has very strong fragrance and this smell invites those enemies to flock into Wasan. The enemies consist of sparrows, moths, rats, worms and bugs. The farmers struggle with these enemies and they have to use lots of pesticides to combat them. They claimed that they did not face this many challenges when they cultivated traditional rice. *Laila* proves to be a huge test for them.

Apart from those enemies, another problem is the machinery. Heavy tractors always sink down into the soil and slow down ploughing and harvesting processes. It requires five people to pull the tractor and place it back on track. The farmers pointed out that they need suitable machinery that operates well for the soil. The current tractors are deemed to be outdated and unsuitable anymore for Wasan.

Shortage of irrigation water is still prevalent in many fields, especially the ones that are located far away from the Tajau River. Constructing drainage which could flow directly to their fields and not cut across others’ lots is not easy. They have to use irrigation pipes which are limited in numbers. So they have to take turns for the usage and often this leads to tension. Farmers who have less access to irrigation could compete against one another to get more water. However, not all of them end up in feuds. Benevolent farmers help one another for the sake of preserving

friendship and kinship ties. Even the leaders work hand in hand to tackle irrigation problems. My informants said irrigation issues slow down farming processes and these need to be improved as soon as possible. Although farmers could share water, it is still not adequate.

Scarcity of land in Wasan also becomes a major social issue. Motivated farmers who want to produce more yields are hampered by the lack of available land for farming. The Department allocates one lot (2 hectares) per farmer, but still this is not enough. Two male interviewees said they were capable of cultivating more than 10 hectares of land as they had enough workers and money. But they were not able to do so due to land limitation. These high spirited farmers are competing to secure as many lots as possible. As soon as they are informed of inactive lots, they would scramble to get it for themselves. There were gossips about backstabbing and how they resorted to unethical pursuits.

Some farmers also complain about government intervention on the farm. Now they have to cope with government's expectations to fulfill their self-sufficiency policy. They need to cultivate rice which is on demand by the Department. One female informant admitted she cultivated both traditional rice and *Laila* on her field. She feared the Department would find out and probably withdraw the subsidy from her lot. I asked other farmers regarding this. For Village Cooperative members, although with less encouragement from the leader, they are still allowed to plant local seeds. For KOSEKA, the probability is lower due to the strict rules imposed on them. Nevertheless, most farmers do not think much of this anymore because *Laila* brings huge profits

to them. Many of them are not interested to cultivate local seeds because it is time consuming and produce lower yields than *Laila* rice.

But no matter how happy they are with *Laila*, to some degree, government does exert pressure on them. Production levels need to be increased dramatically within a short period of time. The farmers must meet the target set by the government no matter what. On the other hand, the farmers know the reality of the situation more than the administrators. As much as they want to realize the vision of the government, they feel that they need more time to adapt to *Laila*. Even now they admit the quality of *Laila* nutrients have decreased due to excessive usage of pesticides. During its early cultivation, the hybrid rice produced high quality nutrients and strong fragrant smell. They said the scent spread all over the farm and everybody loved it. The taste of *Laila* was used to be better than the imported Thai rice. But due to its strong smell, the animals and insects also flocked to Wasan. Their numbers kept on multiplying and they had to use more pesticides. This is why overtime, nutrient ingredients inside *Laila* decreased. The fragrant smell has gone and the taste is not as good as it used to be. Now, they feel traditional rice is better than *Laila*.

Moreover, some informants admit they rather have less interference from the Department, especially from their experts. One male informant thinks the experts do not help them much in improving the conditions on the fields. For instance, the experts suggested using certain types of pesticides to kill moths and bugs that they thought would be effective. This informant felt otherwise. He stated that the pesticides did not kill those insects. He rather drove all the way to

Limbang (Sarawak) or Sipitang (Sabah) to buy much more effective pesticides at lower prices.

Based on this, he said:

“Sometimes, I do not understand these so called experts. They think they know what they are doing, but in fact they are not as good as what they claim to be. I know more about the land than they do because I work on it. Last time they told me to use those pesticides. You know what happened? Those bugs and moths still crawl and fly on my field. I’m afraid I am the one who would be killed by the pesticides. Those guys just walk around the fields and do not notice the problems. Everytime I see them, I would just scold them. They are incompatible”.

A few informants from the Village Cooperative also shared the same feelings. They do not really trust the experts employed by the Department. So far, they relied on their local knowledge and skills for traditional rice farming and adapted it to *Laila*. For instance, one interviewee said rather than using fertilizers, she just burnt the field. By this way, she could save more on fertilizers. She also revealed that she did not understand fully what the foreign experts presented during the meetings which she attended a few times. Those researchers used English terms that she did not understand at all. At the end, she just figured out the *Laila* manual from trial and error practices. In addition, her friends on the farm taught her more than the expert did. These friends showed her how to cultivated *Laila* correctly.

It seems that the villagers are more flexible in adapting to the environment without following the advices from the Department. KOSEKA, on the other hand, seems to do as instructed by the

Department. This truly shows how contrasting they are. Subsidy on pesticides, fertilizer and machinery is really helpful, they admitted. But not all of them work the best for the land. They tried to address the problems to the Department, but their response was so slow and sometimes, they dismissed it. It seems the Department is favoring the local or foreign experts' feedback more than the farmers themselves.

Hence this section highlighted the current problems faced by Wasan farmers. So far, according to my informants, they did not reach 20 per cent self-sufficiency in 2010. These issues need to be addressed as soon as possible if the government seeks to reach its goals.

Summary

This chapter provides some glimpses of farming life in Wasan – who are the social actors, how the farm is managed and the social-environmental issues. The important actors here are KOSEKA and the Village Cooperative. There are significant differences between these two groups. KOSEKA mostly follows the instructions from their leader and the Department with less questions. This might be something to do with the nature of the army – loyalty to the group and obedience to the leader. On the other hand, Village Cooperative is more flexible. The farmers could adopt traditional farming approach without relying too much on the Department.

In addition, their motivation and hard work revived Wasan. This in turn inspired the government to formulate policies for achieving self-sufficiency in rice production. Overtime, there is more

and more government intervention on the land. The introduction of hybrid rice, *Laila* has profound impacts and changes on the farming landscape of Wasan. In some ways, the farmers are pleased with it and produce more rice. However, environmental and social issues are still prevalent on the land and hinder the progress. Wasan will continue to pose challenges for the farmers and the government, and hopefully they could reach a common ground on how to tackle the issues.

CHAPTER FIVE

CONCLUSION

Overall, this study sought to understand contemporary rice farming in Brunei. The case study of Wasan Rice Farm demonstrated the socio-economic and political conditions of Brunei's agriculture. Studying Wasan from the social landscape perspectives and from the perspectives of the farmers provided deeper insights into the changes in rice farming in the Sultanate.

The first part of Chapter 1 discussed the concept of food security and the problems with the definitions. Food security regime is designed by international organizations to fit into their developmental agenda. Their policy could alienate the farmers due to lack of understanding the local variations. Food problems are contextual and conditional, depending on the local environment and society. Hence this section showed how food security implementation should fit into the local needs so that the policy would work effectively. The second part briefly described the economic and food security condition of Brunei. It showed how Brunei is heavily dependent on oil and gas industries, at the expense of agriculture. For a long time, Brunei struggled to develop its agricultural sector and had to depend on food imports. Although Brunei has enough financial resources to import food for a long time, the volatility of food market forces the state to rethink its food strategy. Following the formulation of Brunei Vision 2035, the government is determined to include self-sufficiency of rice as one of their main agenda. Rice is a key component of Brunei for its survival and continuity. The third section discussed the

methodology of this research. It explained the reasons why this study employs ethnography and stresses the need to understand the social actors in farming landscape.

The study shows the main dimension for Brunei's food security as self-sufficiency. The world was thrown into chaos when food prices soared in 2008 and 2009, and many countries including the developed ones were affected. This made many governments across the world to look seriously into their national food security. Even the UN Secretary General, Ban Ki-moon called for "a single vision" to combat global hunger and malnutrition at the United Nations World Food Summit in November 2009. Development policies would be useless if the people could not secure food for themselves. Brunei acknowledges this. Indeed the impact of global food crisis can be truly felt although the Sultanate escaped the worst scenario – food riots and the breakdown of its political system and economy. As a small country with a small population, the Sultanate has enough financial resources to import food from other countries and feed the population. Food imports had been implemented long before the independence. The people are not concerned to produce food for themselves and they take food for granted. They think that food will always available despite global food crisis. But the state does not think so. It is time for a change, time for Brunei to produce their own rice. Judging from the statistics of staples (in Chapter 1), the country is self-sufficient in eggs, broiler chicken and to some extent, vegetables and fruits. While the other staples – rice and beef – are imported. Among these staples, rice is at the top of the agenda for self-sufficiency policy. A rich country is nothing without food. For this purpose, Brunei tremendously makes efforts to develop its rice economy. The country follows closely the food security paradigm defined by FAO "when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and

food preferences for an active and healthy life”.⁸This global definition becomes the basis for Brunei’s food security design. The country also actively participates in forums at regional and international levels, to have more integrated approach to food security with other countries. By doing so, Brunei could benefit from the cooperation and help to boost its agriculture. Regional and international cooperation could help countries to identify common problems and formulate common policy for wider benefits.

Indeed, food security has brought countries closer together in curbing food problems. However, countries need not to be carried away with global or regional contexts while ignoring their own local needs and preferences. FAO (1996) also acknowledges local’s “dietary needs and food preferences for an active and healthy life”, to emphasize how food needs are varied from one place to another. It is important to formulate policies based on this and understand the local people. In the case of Brunei, it is very crucial to identify the local environment and socio-economic and political conditions in order to understand how far its food security is different or similar from other countries. Why Brunei emphasizes self-sufficiency more than, let’s say, food sovereignty? Those socio-economic, political and environmental factors are important to understand this aspect. In some ways, Brunei’s concern for self-sufficiency is more similar to Singapore than with Malaysia and Indonesia. Both Brunei and Singapore are small countries, heavily dependent on food imports and small-scale local agriculture. Understanding local variations are crucial in order to formulate right policies and address the right issues. This is why this study employs localized approach of food security; trying to discover socio-economic and

⁸ Cited in Borneo Bulletin Yearbook 2010, pg. 34.

political conditions that affect farming landscapes in Brunei. An ethnographic study of one of the important farming areas and its farmers was expected to uncover these.

Chapter Three studied Wasan from social landscape perspectives. Wasan is not merely a place on the earth; it also has its own meanings. These meanings can be uncovered from the socio-economic and political situations of Brunei which alter the face of Wasan. The first part analyzed the history of rice farming in Brunei. It traced back to the British colonial era and showed how self-sufficiency policy is actually not a new phenomenon in the country. The discovery of oil was a turning point for Brunei. Consequently rapid modernization and industrialization occurred. But rice farming never achieved its self-sufficiency targets. It peaked in the 1960s and 1970s but dropped drastically by the 1980s. The government opened Wasan hoping to improve rice farming conditions but it failed. Bruneians turned their on agriculture because they felt it did not bring much prospects compared to jobs in government and private sectors. The decline of Wasan reflects the sad state of agriculture in Brunei. The second part describes how Wasan turned into a wasteland and neglected for a long time. This stemmed off from management problems and public perception of agriculture. There was continuous stigma on agriculture as providing low level income and could not provide better future for young generations. The third section briefly described how Wasan was revived and reappeared on Brunei's social landscape once again.

This chapter showed the overall the socio-economic as well as political circumstances that lead to the creation of Wasan. History of Brunei's agriculture has shown how the country strived to fulfill the vision of self-sufficiency in rice production, only to be hampered by the economic and

social conditions of the country. The failure could be attributed to heavy reliance on oil economy and the lack of interest from the locals. Oil production increased over time especially after the Second World War and the country thrived because of it. As a small state with small population, Brunei needed source of survival and continuity. Oil was the answer. Oil industry brought development and turned the country into one of the richest in Asia. Brunei once was almost gone from the map due territorial expansion by North Borneo Company and the Rajas of Sarawak, but oil discovery turned the table. It was a magnificent accomplishment. However, agriculture did not really share the limelight. Although rice production peaked in the 1970s, it went downhill by 1980s. During this period, rapid modernization took place; leading to the creation of new markets and new employment. People migrated to towns and industrial centers for better job opportunities. They began to move away from agriculture because they felt it no longer brought stable income and better life prospects. Employment in government and private sectors lured them more. This was why more and more locals abandoned rice farming in search for a better future.

This is where Wasan came into play. The government did not give up their self-sufficiency vision. They still wanted Brunei to produce its own rice. They established some new agricultural institutions and training centers in mid the 1970s. There was a lot of political pressure to accomplish the vision and hence, Wasan Rice Farm was opened in 1978 – the first large-scale mechanized rice farm in Brunei. With the establishment of Wasan, the government hoped that farming development would occur. Wasan embodied this dream. But reality was not the same. Wasan did not meet the expectations and rice production kept on declining over time. Even after the independence of Brunei in 1984, Wasan struggled to meet the target. Production was

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hampered by bureaucratic and environmental problems. Attempt to privatize it in 1990s also failed to boost Wasan.

Wasan began to fall out of grace and forgotten from the social landscape of the Sultanate. Again here, the local attitudes on agriculture came into play. While the younger generation had less awareness on the existence of Wasan, it was largely forgotten by the older generation. The country moved forward but Wasan declined. The situation worsened when fragrant rice from Thailand was introduced in the mid 1980s and quickly replaced local rice. People favored fragrant rice more and the demand for it increased dramatically. The country by this time had established itself as one of important producer of oil and gas in global market. The government had more capital to import and subsidize fragrant rice. The locals took it for granted and paid less attention to farming in Brunei. Wasan reverted back into a jungle, and with that large-scale wet-rice cultivation in Brunei virtually became extinct. It took more than twenty years for Wasan to regain its status as an agricultural center.

Chapter Three discussed the actors in the Wasan Rice Farm – the farmers and the Department of Agriculture and Agrifood. The farmers are divided into two –KOSEKA (retired army personnel) and Village Cooperative (villagers). The other group of farmer whom I am unable to cover that much is the workers hired by KOSEKA and Village Cooperative. The first part described how Wasan is structured according to these groups and their social interactions. The leaders set clear boundaries by imposing their own regulations. The second section explains the roles of the

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Department and how far they support as well as intervene in the farm. The last section analyzes environmental and social issues that prevail on Wasan.

The chapter illustrated the profound impact of the re-opening of Wasan. It sheds a new light on Brunei farming. The government, to a large degree, played indirect roles on the rebirth of Wasan. Since 2003, Brunei had tried to reform its economy by not heavily depended on oil and gas industry. This new awareness arose from the effects of 1997 Asian financial crisis. Although Brunei's economy was spared from collapse, the impacts were greatly felt. Amedeo Corporation owned by a member of royal family diminished, leading to political turmoil and economic debt. The state managed to keep most of the information from the public. This taught Brunei not to take everything for granted and the need for changes in order to survive. Diversification of economy is the solution for survival. They include agriculture in this agenda and began relentless efforts to promote it through expos and exhibitions. The state keeps on urging the public to become more business orientated and be a entrepreneurs. The people should not wait for the government anymore.

The government's efforts were not wasted. People slowly responded to it. The revival of Wasan is the answer to the government's call. The right leaders came forward to take the matters into their own hands. They cleaned Wasan and made it visible on Brunei's social and economic landscape once again. They proved to the government that they are willing to be part of the changes and realize the Brunei Vision 2035. By 2007, Wasan had begun to produce rice once again.

Chapter 5 Conclusion

One of most significant improvements of Wasan is management. The farm now manages groups of farmers – KOSEKA and Village Cooperative. Each has a leader who is the central figure on the farm and the intermediary between the government and farmers. The farm leaders ensure information from the Department reaches the farmers. It is also easy for the government to relay updates to the farmers. They set their own rules and conduct their own meetings. By this way, the farmers have more liberty on Wasan than before.

But in some areas, the government still has power and authority on Wasan in terms of ownership and policy design. The farm is a government property and in the end, they are the one who have final say on it. Those who want to work on the farm need to register with the Department first. Moreover, the farmers are subjected to government's policy and expectation especially in the cultivation of genetically modified seeds and subsidy. To a large extent, farmers now have less freedom to cultivate local seeds and must follow what the government asks them to do; otherwise they might lose the subsidy. If the government tells them to plant another new seed, then they must do it. By the time of my fieldwork, the farmers had already started planting a new variety of seed in addition to the current one, *Laila*. Hence, by now they cultivate double rice varieties on the fields.

The government intervention on the farming activities, to some extent, alienates the farmers particularly with the presence of foreign experts. The farmers, especially of the Village Cooperative, feel that these experts do not really understand the landscape of Wasan. These villagers have traditional farming experience and knowledge, but those experts tend to overlook

them. The farmers already see the problems with excessive use of pesticides and chemically modified fertilizers which reduce the nutrients inside *Laila* and less effective at killing the pests.

Apart from intervention issue, the current Wasan also experiences environmental and social problems. Most environmental problems are attributed to pests. Although *Laila* improved yield production and uses less water, it attracts a huge number of pests. The farmers struggle to cope with the endless influx of sparrows, moths, bugs and rats. Land competition also becomes an issue on Wasan. Motivated farmers compete against one another to secure more lands, and this could lead to feud and backstabbing.

Due to time constraint, I was unable to make comparative study between Wasan and other farms. Wasan is not the only rice farming center as other districts also have it and are larger than Wasan. In Belait District, there are two major rice farms there – Labi and Lot Sengkuang. In Tutong District, they have five and in Temburong District, three major farms. Some of these farms are old and some are new. Most of these farms still cultivate traditional rice – *adan*, *pusu*, *barrio* and *lamah liat*. The farmers here largely consume the rice rather than sell it to the local market. Perhaps Wasan could not generalize the agricultural phenomena in Brunei because there are variations of farming from one place to another. Comparative analysis is very helpful to provide further details of rice farming patterns in Brunei and how far they are similar or different from one another. It also could give us better understanding of the trend of local rice consumption in Brunei – how far people consume *Laila* more than other local rice.

Chapter 5 Conclusion

Finally, my study is just an explanatory attempt to bridge the gap between policy-makers and the farmers. By having a better understanding on Wasan, I hope this research could help the administrators to formulate effective policies on the land so that they do not alienate the motivated farmers.

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